



# The Scope

Central Michigan Amateur Radio Club

Lansing Civil Defense Repeater Association

April 2017  
Volume 17  
Issue 4

## 2017 Skywarn Training Session

We have already seen severe weather this Spring, but there is plenty more to come. Skywarn is the program created by the National Weather Service as a way for the general public to report severe weather to them. The NWS Radar system cannot pick up weather below a certain elevation, and they rely on trained Skywarn Storm Spotters to report what they see in the field.

### What Topics Are Covered in a Training Session?

During the Skywarn Training Session, you will learn the basics of how thunderstorms develop, the typical structure of a thunderstorm, how to pick out the severe weather features of a storm, what information you should be reporting to the NWS and the correct way to report that information, and basic severe weather safety.

**When: 10:00 AM to Noon  
Saturday, April 22, 2017**

**Where: Holt Christian Church  
2424 Washington Rd, Lansing, MI 48911**

**Pre-Registration is highly recommended to guarantee your seat, since seating is limited. Please plan to arrive prior to 10:00 AM, as this is when the presentation starts.**

**Please visit [www.lansingarp.com](http://www.lansingarp.com) to register and for more information.**



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## April Birthdays:

4/2 Ben Barker / WD8OVL  
4/7 Don Hunsaker / WB8PPB  
4/7 Jim Hannahs / KC8QWH  
4/7 Ken Kruger / W8AAX  
4/9 Erv Bates / W8ERV  
4/12 Alan Shaw / WB8YOX  
4/14 Bill Smith / KD8ZFR  
4/14 Erika Kahler / KD8KJU  
4/22 Dan Fuller / W8VVR  
4/27 Sharon Waite / KD8HHK  
4/28 Matt McCormick / KE8CRV  
4/30 Bill Rude / KE8BEN

## April Anniversaries:

4/2 Bob / K8RDN and Ann Berger

## Upcoming Meetings:

### CMARC

The next meeting for the Central Michigan Amateur Radio Club is Friday, **April 14th** at 7:00 pm at the Salvation Army South Corps, located at 701 West Jolly Road, near the corner of Washington Avenue & West Jolly Road in Lansing.

### ARPSC

The ARPSC meeting for the month of February is at 7:00pm on Monday, **April 17th**. We will be meeting at Ingham County Sherrif's Department off Curtis Road in Mason - Sgt. Cole Training Room. For more information about the ARPSC, please check out our website at [www.lansingarpssc.com](http://www.lansingarpssc.com)

## Treasurer's Report 2017

John Doornhaag / KD8NNQ - CMARC Treasurer

Bank Balances for March	
Beginning Balance	\$3,869.63
Total Monthly Income	\$101.00
Total Monthly Expenditures	(\$630.86)
Total Business Checking	\$3,339.77
Petty Cash	\$1.00
Sub Total	\$3,340.77
Primary Share Accounts	
Humphrey's Fund	\$1,093.63
Building Fund (Club Station)	\$19.09
Field Day	\$530.49
Total Net Worth	\$4,983.98
Youth Fund Balance*	\$253.98
* Separate from CMARC Funds	

## Ongoing License Plate Project for the Club Room:

By Russ Fitzgerald / N8FZ

The club is trying to collect as many ham call license plates as possible from our members for a display in the club shack redesign project. Check your garage, shed, or basement and see if you have an old plate kicking around. Year or condition doesn't matter. Can't find one but still would like to participate? No problem. Here's what you do. The State of Michigan will let you order a replacement plate at any time, you do not need to wait for a renewal. All you need is a copy of your license, Amateur Radio Operator form from the state (I have

plenty of these), and a check to the state for \$2.00 for the standard plate or \$7.00 for the graphic bridge plate. When it arrives you use the new plate on your vehicle and donate the old one or donate the new one.

If you have any questions please call 517-899-2622, or email [russf2211@aol.com](mailto:russf2211@aol.com), or see me at the next meeting. I have the forms with me.



## Ladies Night/Ziegenbein Award Banquet

**WHO:** All CMARC's Members, their Families  
and Friends are invited to attend!!

**WHAT:** CMARC's Annual Ladies Night & Ziegenbein Award Banquet

**WHEN:** Friday, May 12, 2017 – 5:30pm to about 8:30pm  
Please be seated by 6pm Sharp!!

**WHERE:** Delhi Café, 4625 Willoughby Rd. in Holt

**WHY:** To Honor our Ladies, Present the Ziegenbein Award, and Enjoy Good  
Food, Great Fellowship and Fantastic Entertainment by JONATHAN STARS!!

-----Cut Here-----

Reservations/Orders **MUST** be turned in by **Monday, May 1st!!** **SEND ORDERS ONLY, DO NOT**  
**SEND MONEY!!** **You pay Delhi Café** for your bill & your tip the night of the Banquet!!

**To RSVP:** **Call** Jane Hosford/KC8FSK at: (517) 515-7610,

**Email** me at: [jlhosford54@hotmail.com](mailto:jlhosford54@hotmail.com),  
or **Snail Mail** me at: 7057 Kieppes Court Lansing, MI 48911

Name & Callsign \_\_\_\_\_ Ph. # \_\_\_\_\_

Wife's Name & Callsign \_\_\_\_\_

Guest's Name & Callsign \_\_\_\_\_

Guest's Name & Callsign \_\_\_\_\_

**TO ORDER:** Please choose an Entrée for each person attending with you, by writing the  
number of meals requested, on the line in front of the Entrée you've selected. (Example: If two  
of you want Chicken Western put a number "2" on the line in front of that Entrée to show you  
want to order "2 Chicken Western meals".)

**OUR ENTRÉE CHOICES ARE:** (All dinners INCLUDE coffee or tea. Tax and tip are NOT  
included.)

- \_\_\_\_\_ 1.) Chicken Western served w/rice and salad - \$15.00
- \_\_\_\_\_ 2.) House Sizzler served w/baked potato and salad - \$15.25
- \_\_\_\_\_ 3.) Broiled Cod served w/baked potato and salad - \$15.00
- \_\_\_\_\_ 4.) Swiss Steak served w/mashed potato and salad - \$15.00
- \_\_\_\_\_ 5.) Veggie Stir Fry served over rice and salad - \$14.25
- \_\_\_\_\_ 6.) Off The Menu - special diets

**CHILDREN'S MENU:** (under 12) - (Tax and tip NOT included)

- \_\_\_\_\_ 1.) Grilled cheese with fries and drink - \$5.00
- \_\_\_\_\_ 2.) Chicken Fingers with fries and drink - \$5.00

# ARRL Volunteer Exams



## Ingham County VE Group   Ingham County VE Group

**Lansing Fire Station #44  
1435 E. Miller Rd.  
Lansing, MI 48911-5322**

Contact: Don McLain / KB8RAD  
(517) 930-7707  
KB8RAD@arrl.net

During the EVEN MONTHS, we meet on the  
first Thursday of the Month at 7:00 PM.

**June 1, August 3,  
October 5, and December 7**

**Lansing Fire Station #44  
1435 E. Miller Rd.  
Lansing, MI 48911-5322**

Contact: Don McLain / KB8RAD  
(517) 930-7707  
KB8RAD@arrl.net

During the ODD MONTHS, we meet on the  
second Saturday of the Month at 11:00 AM.

**May 13, July 8,  
September 8, and November 11**

## Eaton County ARC VE Sessions

**Charlotte Church of Christ  
64 Van Sickle Dr.  
Charlotte, MI 48813-9999**

Contact: Mark Korroch / WB8TGY  
(517) 645-2378  
wb8tgy@yahoo.com

All sessions begin at 12:00 PM and walk-ins are allowed.

**June 10,  
October 14, and December 9**

# Congratulations to our Successful March Exam Candidates!!

**Bob Crawford/K8ZAP**  
from Owosso passed his  
Extra Class Upgrade



**Charles Swieringa/AC8YO**  
from Lansing passed all three  
exams in one sitting!



**Jacob Emling/KE8GMB** from  
Dewitt passed his Technician.



**Joseph Chvojka/KE8GMD** from  
Elwell passed his Technician.

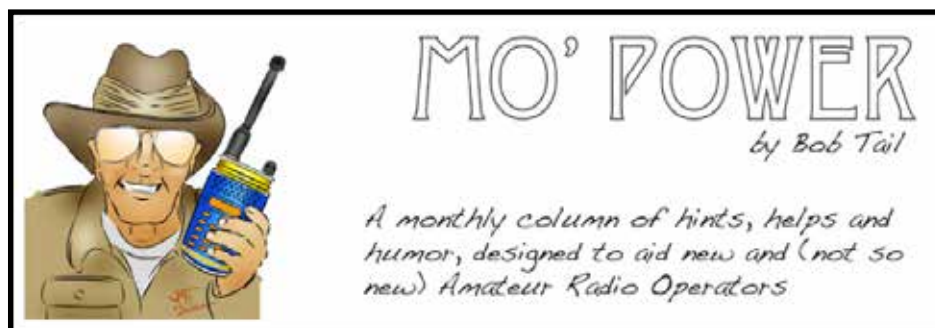


**Ryan Wilkinson/KE8GMC** from  
East Lansing passed his Technician.



**Ted Strassburg III/KE8DZW** from  
Grand Ledge passed his General.





G' Day Mates!

I went to a forum at one of the local swaps here in the Adelaide area. The presentation was on hints for the Hams who live in aerial restricted neighborhoods, condominiums, and apartments. Very timely information as an increasing number of Hams are facing some sort of antenna restriction when they move to a new local. I often wonder why a Ham would move into a home with antenna restrictions. For some, the XYL is the deciding factor. For others, it is a convenience of having all the outdoor work and gardening done for them. Many lament and whine about not being able to use their radio “ticket”, because they do not have room for an aerial, or are not allowed to put one up. More excuses than action.

There is a FB group of amateurs out there who are used to doing more with less. They call themselves QRPers. They enjoy the challenge of operating under less than ideal conditions, with low power and less than optimal aerials. So when I hear all of the gripes about not being able to get on the air for this reason or that, I say, “balderdash!” Where is that Ham spirit?

Now I know that operating with indoor antennas is not the way most Hams envision their stations. If you want to get on the air from a condo, you are going to have to use a bit of Ham ingenuity.

During the forum, several good choices were presented and then examined for pros and cons. First up was the “Mag Loop” antenna. A small diameter loop of wire held in shape by a stand, usually constructed of wood. Several variations can be used. Some use a single loop of wire or coax, others use a multi-turned loop of wire and tuned to resonance with a small capacitor. Mounted on a table top near a window or on a balcony, they may give good results with some direction in the plane of the loop. Research

“the Rock loop” by veteran QRP operator C.F. Rocky, for more information.

Another often overlooked aerial is the indoor dipole. Strung along the top of the ceiling and letting the ends droop down the corners following the shape of the room, can yield good results also. What about the “attic aerial”? Run in the rafters of the home and tuned through a tuner, they can be excellent radiators. I never had much luck with attic aerials, but I do know of several Hams that have FB signals with an attic skyhook.

What about an old mobile antenna? You know, with a magnet on the bottom? Stuck to the air conditioner in the evening, they can quite be effective.

Then we have outdoor “stealth” or hidden aerials. These will give you more bang for the buck than most any inside antenna, but disguising them is the trick.

First up is the end fed downspout antenna. Because of the shape and height of the condo, it may be quite long, or several different angles. Loaded with the use of an antenna coupler, they often will perform well on more than one band.

Then many have tried just running a small gauge wire up the side of the wall and snaked up over the rooftop and down to the end of the other side.

The half wave dipole cut from enameled copper wire, can be run vertically and “stapled” up the trunk of a tree and hidden in the branches. The coax feedline is spaded in slightly below the ground, no one will ever know it is there. You can try a vertical wire, fed at the base of the tree, and radials spaded in around the base. No trees?

Well, there’s an aerial that’s catching on all over disguised

as a flagpole. What homeowners officials would refuse the installation of a flagpole. They may be made of metal and fed at the base like a regular vertical, or they may be made of wood or PVC material with wire elements inside or wrapped around it. Put a pulley at the top, hoist up the “union jack” and everyone will be happy. Spade in some radials while no one is looking and you will be pleasantly surprised at the DX you will bag with this aerial.

It all comes down to experimentation. If one “wave magnet” doesn’t do the job, perhaps another one will. The secret is persistence. Don’t give up until you find an aerial that works for your situation. Oh, and please don’t waste your hard earned cash on a prefabricated model. A bit of wire and a pair of cutters, and a VSWR meter will get you going nicely. If you have one of those fancy antenna analyzers, that’s OK also, but not a necessity. Make it yourself and save time, money, and you will probably even learn a thing or two along the way. You will also gain some pride

in being able to say, “I made it myself.”

Well, there you have it. Don’t have room for a big tower and stacked Yagis at 30 meters? Antenna Police coming to arrest you? Give one of these “stealth” aerials a try and see where they can take you today. The RSGB puts out a few very fine reads when it comes to aerials. Look into a copy of the “Low Power Scrapbook” Chocked full of fantastic ideas to be utilized as radiators.

Remember aerial Rule # 1. If it did not come down during that last wind storm, it wasn’t up high enough!

Aerial rule # 2. If they can’t find an aerial, they can’t complain about one! Any of the local tribesmen will tell you, Camouflage is nature’s best friend. If you can’t see, it it’s not there. ■

‘Till next we meet, 73 , Bob Tail

## Surprise Visit by Veteran DXer Dave Collingham/K3LP

On March 29th, Dave Collingham/K3LP, current President of the Intrepid-DX Group, contacted a few of us to see if we would like to meet him for dinner and drinks. Dave was the Team Leader of the VP8SGI/VP8STI South Georgia and South Sandwich Island DXpeditions, the 5U5R DXpedition to Niger Africa, and to several other locations around the world. He happened to be in town visiting a client of his for work. Each time he comes to Michigan, he gets together with hams on the east side of the state, and asked a buddy of his if there were any clubs in the Lansing area. His friend directed him to our club website, and the rest is history. Thanks to Clyde Tompkins/K8CPT, John Hosford/KC8QZB, Steve Lyon/W8RQS, Tom Rocheleau/WA8WPI, and Chris Ranes/NS8Q for taking the time to meet with him. Dave had a great time and will make contact with us again in the future. He visits this area every six months or so.



**From Left to Right**

John/KC8QZB, Dave/K3LP, Steve/W8RQS, Clyde/K8CPT, Tom/WA8WPI, and Chris/NS8Q

# Interesting Gadgets I Wish I Had Time For

By Dan Romanchik, KB6NU

When he's not drooling over electronic gadgets, Dan blogs about amateur radio at KB6NU.Com, writes the "No Nonsense" amateur radio study guides, and teaches ham classes. You can contact him by e-mailing [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).



I'm on a lot of mailing lists and participate in a bunch of amateur radio forums. As a result, I see a lot of interesting gadgets that guys are buying or are thinking about buying. Here are three of the latest that look interesting to me. I wish I had time (and

money) to purchase all of these and try them out.

## Android antenna analyzer

On Reddit ([https://www.reddit.com/r/amateurradio/comments/6onnpi/finally\\_got\\_my\\_mini60\\_ebay\\_antenna\\_analyzer\\_time/](https://www.reddit.com/r/amateurradio/comments/6onnpi/finally_got_my_mini60_ebay_antenna_analyzer_time/)), some of the guys have been talking about the Mini60 Antenna Analyzer (<http://www.ebay.com/itm/CW-USB-Interface-Cable-WINKEYER-compatible-3-5mm-plug-/132121085623?hash=item1ec307c6b7:g:up8AAOSw24rYeTei>). Its frequency range is 1 – 60MHz, but the cool thing about this device is that you can use it standalone with the built-in LCD display or with some software ([http://www.jtelectronics.co.nz/information\\_links/MINI60/Add-Bluetooth-Module-To-MINI60-Antenna-Analyser.htm](http://www.jtelectronics.co.nz/information_links/MINI60/Add-Bluetooth-Module-To-MINI60-Antenna-Analyser.htm)) and a tablet with a Bluetooth interface to get fancy frequency vs. SWR plots.



Photo is of the Mini60 Antenna Analyzer being used with an Android tablet.

Of course, this is made in China, but how can you beat the price? It costs \$112 shipped.

## Multi-functional component tester

Here's another marvel of Chinese engineering and manufacture – a smart component tester ([http://www.banggood.com/3\\_5inch-Colorful-Display-Multi-functional-TFT-Backlight-Transistor-Tester-p-1083042.html](http://www.banggood.com/3_5inch-Colorful-Display-Multi-functional-TFT-Backlight-Transistor-Tester-p-1083042.html)) for only \$30, shipped. It identifies and characterizes

NPN and PNP transistors, capacitors, resistors, diodes (including Zener diodes), N-channel and P-channel MOSFET, IGBT, JFET, triacs, and batteries.



This isn't the first smart component tester to hit the market, but the unique thing about this unit is that it has a graphical display that not only identifies the type of component that you've connected to it, but also draws the schematic symbol of the part. You can see a video of this tester in action at <https://www.youtube.com/watch?v=o7FH6tjzwWg>.

## Make your Raspberry Pi into a desktop PC

Newark/element 14 will soon start selling a kit of part that will make it easier to turn your Raspberry Pi into a desktop PC ([https://www.element14.com/community/docs/DOC-83477?CMP=e-email-SEPO-210317-e14PI&et\\_cid=28941683&et rid=1231362216&cmp=](https://www.element14.com/community/docs/DOC-83477?CMP=e-email-SEPO-210317-e14PI&et_cid=28941683&et rid=1231362216&cmp=)).

The kit includes:



- Intelligent and Safe Power Controller
- Interface to connect mSATA SSD (upto 1TB)
- Real Time Clock to keep track of time
- Heat Sink
- Enclosure

They don't list the price just yet, but this might be what I need to actually make use of the Raspberry Pi 3 I bought several months ago.

If you have one of these gadgets, or buy one in the future, please let me know how you like it. I'll put your review up on my blog, so that everyone can benefit from your experience. ■



# Central Michigan Amateur Radio Club Board Meeting Minutes

**Date:** March 4, 2017

**Time:** 5:30 PM

**Location:** Denny's Restaurant on W. Saginaw Hwy.

## OPENING:

1. President Tom Rocheleau/WA8WPI called the meeting to order at 5:30 pm.
2. The following Board members were in attendance: Tom Rocheleau/WA8WPI, Russ Fitzgerald/N8FZ, John Doornhaag/KD8NNQ, Ted Sadilek/WA8MFQ, and Chris Ranes/NS8Q

## HAMFEST:

1. Clyde/K8CPT and Chris/NS8Q will tackle updating the new Hamfest flyer and Tom/WA8WPI will publish any changes to the club's website.

## SPEAKERS FOR THE GENERAL MEETING:

1. The speaker we had tentatively scheduled for the March meeting on Search and Rescue will be unable to make it due to other circumstances.
2. Tom/WA8WPI will attempt to contact Dan Burke/NE8K about doing another EchoLink presentation.

## 501(c)3 STATUS UPDATE:

1. John/KD8NNQ brought up the idea to use some of the money sitting in the Humphrey fund to pay for the application fees involved with filing our 501(c)3 paperwork.
2. Russ/N8FZ made a motion that we take the money out of the Humphrey fund, John/KD8NNQ seconded the motion, and the motion passes.
3. John/KD8NNQ made a second motion that we begin the application process now that the Board has approved the money. Russ/N8FZ seconded the motion, and the motion passes.

## FIELD DAY UPDATE:

1. The agreement we had with the City of Mason which allowed us to use Rayner Park for Field Day the past several years has expired.
2. Ed Hude/WA8QJE has begun negotiations with the City of Mason to try and lock down Rayner Park for another 3 years. Tom/WA8WPI will check with Ed for more updates.
3. Our website has been updated for this year's Field Day.

## CLUB STATION RELOCATION:

1. The Board found a possible location for our club station in Mason. The building is the training facility for the Lansing Mason Ambulance Service on Kerns Rd.
2. The second location is the LCC West Campus. A list of exploratory questions have been sent to former LCC Trustee Alex Azima and are currently waiting for a response from him.
3. The Board is exploring whether it would benefit the club more to have our monthly meetings at the same location of our club station.

## ADJOURNMENT:

1. With there being no further business, John/KD8NNQ made a motion to adjourn the meeting, Russ/N8FZ seconded, the motion passes.
2. Meeting adjourned at 6:55 pm.

Respectfully submitted by,

Chris Ranes - Secretary

# Central Michigan Amateur Radio Club Meeting Minutes

**Date:** March 10, 2017

**Time:** 7:00 PM

**Location:** Salvation Army South Corps

## OPENING:

1. President Tom Rocheleau/WA8WPI called the meeting to order at 7:06 pm.
2. All Board members present except for Russ/N8FZ and Sam/N8FPR.
3. Tom/WA8WPI held the flag for the Pledge of Allegiance.
4. Please be sure to sign the sign-in sheets attached to clipboards circulating the room. One for Visitors and the other for Members.

## CARDS & FLOWERS REPORT:

1. Nothing to report so a moment of silence was observed for our Silent Keys.

## ATTENDANCE:

1. 26 Members and 2 Visitors (Bob Berger/K8RDN and Ray Jenks/KD8ZDX).

## APPROVAL OF REPORTS:

1. **Treasurer's Report:** Bob/K8ZAP made a motion to accept the Treasurer's Report in the February Scope. Leota/KD8SQD seconded the motion, and the motion passes.
- Secretary's Report:** Bob/KB8DQQ made a motion to accept the Secretary's Reports in the February Scope. Ray/KD8ZDX seconded the motion, and the motion passes.

## INTERESTING DX:

1. Gregg Mulder/KB8LZG has worked several stations in Cuba. He said the Caribbean is open early on 40m and then jumps to 20m after the morning grayline passes.
2. Chris Ranes/NS8Q worked Fiji, Spain, and Israel on 40m., Morocco on 30m and 15m, St. Helena Island, the Netherlands, and Austral Islands on 20m, and Los Islands Guinea on 15m.

## GLARA M.I.S. HAMFEST:

1. October 7 & 8 at the Michigan International Speedway (MIS) in Brooklyn, MI

## CMARC OUTDOOR HAMFEST:

1. Clyde/K8CPT is looking for volunteers to help out this year.
2. If you are interested, please sign his form with you name, callsign, and contact information so he can contact you at a further date once plans are being finalized.

## FIELD DAY:

1. The agreement we had with the City of Mason to use Rayner Park has expired and a new agreement is needed.
2. Ed Hude/WA8QJE is in the process of drafting a letter to send to the City of Mason.
3. At this point we do not have permission to use the park overnight.
4. The City of Mason is still willing to work with us, but they need a second proposal sent through for the new Mayor to sign off on.
5. Ed is trying to get an agreement that lasts for the next 6 years.
6. John Hosford/KC8QZB mentioned we need somebody to operate the 6-meter station this year in light of recent Silent Keys. If you want to operate, but do not feel comfortable doing so, and would like some assistance, there will be other Hams on site who are willing to help you out.

### **501(C)3 UPDATE:**

1. John Doornhaag/KD8NNQ has tried to contact the Lawyer and said he has had difficulty reaching him. He will try again next week.
2. The total cost to officially become a 501(c)3 organization is \$622. Anything the club needs to purchase after becoming a non-profit will be tax exempt.
3. We will also be able to advertise that we can accept donations as an official non-profit.
4. Our goal is to have our non-profit status before Field Day, but it could take a couple of months.

### **RADIO ROOM RELOCATION:**

1. We are continuing to explore alternate locations for our club station.
2. One location is on the northend of Mason - the Lansing Mason EMS Training Facility. 807 Kerns Rd, behind Mason Autobody.
3. It is a fairly remote location with very few houses near it. There is plenty of property with room for erecting antennas.
4. Tom/WA8WPI and Clyde/K8CPT took a tour and it looks really nice.
5. The owners of the building are open to us installing our tower, but said we would have to go through the City of Mason for possible permits.
6. One downside is that we would not have our own room.
7. We would need to have a place to lock up our items.
8. There is a large storage room that we could use to store stuff, but it also doubles as the library area.
9. The owners will not charge us rent, but just ask us to pitch in a few dollars to cover electricity while we are there.
10. The owners are willing to give us keys to the building for key individuals.
11. There is a solid wifi connection they are willing to let us use.
12. Tom/WA8WPI hopes to have more information next month.

### **SKYWARN:**

1. Training will be April 22 at the Holt Christian Church from 10am-12pm. This is the same location as our outdoor Hamfest each July.
2. For those of you who are not aware, your Skywarn card is good for 2 years.

### **BUS TO DAYTON:**

1. If you are interested in taking the bus to Dayton this year, the cost is \$55 in advance and \$65 to sign up after the deadline. It does not include your ticket into Dayton however. There is plenty of room on the bus for any purchases you make. The bus will arrive in Dayton before the event officially opens.
2. See the two-page brochure in this publication for more information.

### **MISCELLANEOUS:**

1. Bob Strobel/KB8DQQ is selling candy bars to benefit LCDRA. They sell for \$1 each.
2. Bob Berger/K8RDN presented information on the Michigan State Police anniversary Special Event Station. It will run April 21, 22, & 23. They plan to operate SSB, Digital Modes, and VHF/UHF repeaters. Bob does have sign up sheets if you are interested in participating. They ask that you have your RACES certification with all background checks completed. If you did not have that done, bring your drivers license and they will run the background check before the event begins. Please sign up for a minimum of 2 hours. You will never be alone while operating. The event will be held at the New State Emergency Operations Center at the Seconday Complex off Canal Rd.

### **50/50 RAFFLE:**

1. Jerry/KD8GLN won \$15.00.

### **ADJOURNMENT:**

1. With there being no further business, Bob/K8ZAP made a motion to adjourn the meeting.
2. Mike/W8MKB seconded, and the motion passes.
3. Meeting adjourned at 7:46 pm.

Respectfully submitted by,

Chris Ranes - Secretary

# CMARC Puzzle Page

## 3x3 Sudoku - Varying Levels of Difficulty

Complete each grid so that every row, column, and every three-by-three box contains the digits 1 to 9. Have fun! ***The solution for these puzzles will be in next month's issue.***

### VERY EASY

	8	2	9			4	3	5
9				3				1
	3				4	7		
4	6			9		5		3
			3		5			
3		8		6			7	4
		9	8				4	
5				2				9
8	4	3			9	2	5	

### EASY

4	5		1		2		8	
			6	8		9		
8					4			
	8		5	4			7	
				6	3	8		
2	9			1				3
5			4				6	
	7			2	8			
	2	4				7	1	

### MEDIUM

	9		1	6	8			7
	1						4	
2			4			3		
			7		5	6		
	7			9			2	
		9	6		3			
		7			2			1
	2						7	
9			5	7	1		6	

### HARD

	9					5		
			4		2			
		8	7	5				1
1		4		3			8	
7								2
	8			4		1		7
8				7	6	4		
			8		3			
		3					6	

# Sudoku Solutions for March

VERY EASY

3	6	7	1	5	9	8	4	2
2	9	1	3	4	8	6	5	7
4	8	5	7	2	6	1	3	9
8	7	3	5	9	2	4	6	1
9	4	2	6	1	3	7	8	5
1	5	6	8	7	4	2	9	3
7	3	4	2	8	5	9	1	6
6	2	8	9	3	1	5	7	4
5	1	9	4	6	7	3	2	8

EASY

1	3	9	8	4	7	2	5	6
6	8	2	3	9	5	7	4	1
5	4	7	6	2	1	3	8	9
2	5	4	1	6	3	9	7	8
7	1	6	9	8	2	5	3	4
3	9	8	7	5	4	1	6	2
8	2	1	5	3	6	4	9	7
4	6	3	2	7	9	8	1	5
9	7	5	4	1	8	6	2	3

MEDIUM

4	9	3	8	2	6	7	1	5
2	7	1	5	3	9	6	4	8
5	6	8	1	4	7	3	9	2
3	8	2	6	9	4	5	7	1
9	5	6	7	1	2	8	3	4
1	4	7	3	8	5	2	6	9
8	1	5	9	6	3	4	2	7
6	2	9	4	7	8	1	5	3
7	3	4	2	5	1	9	8	6

HARD

8	7	6	9	1	5	4	3	2
1	3	5	7	2	4	8	9	6
9	2	4	3	6	8	5	7	1
2	4	1	8	3	7	9	6	5
6	8	7	5	9	2	1	4	3
5	9	3	6	4	1	7	2	8
7	1	2	4	8	3	6	5	9
3	5	9	1	7	6	2	8	4
4	6	8	2	5	9	3	1	7



# CLASSIFIEDS

**Gregg Mulder / WB8LZG**  
(517) 646-6257 after 5pm

**\$85**

Kent single lever paddle:  
Black base and adorned with  
Spalted Beech finger pieces.

**\$70**

Bencher paddle: Black base  
adorned with custom Burl  
Maple finger pieces.

**\$40**

Four State QRP club QRP watt-  
meter/ dummy load. Built into  
a handsome maple case.

**\$5 Each**

Cleaning off the book shelves in  
the shack. I have the following  
books available. Many are  
in "brand new" condition.

Good time to stock your  
library at a big savings!

- The Joy of QRP by Ade Weiss (autographed copy)
- Your QRP Operating Companion
- The Secret Wireless War by Geoff Pidgeon
- The History of QRP 1924-1960 by Ade Weiss
- Interference Handbook by Nelson
- The Contest Cookbook
- Keys II the Emporium by Dave Ingram
- International QRP Collection by George Dobbs
- Radio Projects for the Radio Amateur Vols 2, 3, & 4
- 2007 ARRL Handbook
- 2010 ARRL Handbook

**Ed Oxe / W8EO**  
[eaoyer@gmail.com](mailto:eaoyer@gmail.com)

**\$90 or Best Offer**

Alinco DJ-V57T HT for 2 meters  
and 70 cm. Radio includes a  
speaker mic and car battery  
charger. It runs 5 watts max  
and has 200 memories.

**Gregg Wesley / KD8PA**  
(517) 614-6573

Aluminum Tubing, Masts,  
and other odds and ends  
for antenna building.

**Jason McLaughlin / KC8RBK**  
(517) 712-0478 or  
[kc8rrrbk@gmail.com](mailto:kc8rrrbk@gmail.com)

**\$150 Ea.**  
(2) Tytera MD-380 DMR  
Handheld Radios

**Brian Monaghan / KC8QWJ**  
(517) 219-8183

**FREE**  
(4) 1.2 meter Satellite Dishes

**Jim Hein / K8UHF**  
[k8uhf@sbcglobal.net](mailto:k8uhf@sbcglobal.net)

**\$675**

Icom IC-746 Transceiver HF/6/2  
meters, all mode, 100 watts  
on all bands, includes hand  
mic HM-36, Voice Synthesizer  
UT-102, power cable, built-in  
auto tuner, Owners and Service  
Manuals, and Original Box.

**\$100**

Icom IC-SM-8 Desk Microphone,  
includes two cables, original  
box, and manual.

**\$750**

Both Radio and Desk  
Microphone together.

**\$12**

Radio Shack 21-533 SWR,  
Field-Strength Meter, 3-30  
MHz, Handles up to 1,000  
Watts, Like New with  
original box and manual.

**\$300**

PC Electronics ATV Transceiver  
TC70-20S, 20 watts, includes  
video generator for playing  
video from USB, SD Flash  
Cards, etc., Color Camera  
and 12vdc power cube, with  
a Verifocal lens, wall mount,  
5" color TV/monitor, will run on  
AC or DC, cables, and manuals.

**\$550**

For the entire ATC Transceiver  
package above plus a Mirage  
D1010 ATVN Amplifier. 100watt  
amp, 50 watt average, video  
output with only 1 watt drive.

# CLASSIFIEDS

**Ed Hude / WA8QJE**

[WA8QJE@arri.net](mailto:WA8QJE@arri.net)

517-676-4480 until 7:30 pm OK.

## \$300 Ea.

2 - Radio Shack PRO-652 Desktop Scanners. They are unused, new in the box, and recently programmed for Ingham, Eaton, Clinton Fire, the State Digital radio system and more.

## \$300

1 - Radio Shack PRO-651 Handheld Scanner. This is new in the box except for recent programming, which is the same as the PRO-652.

THE FOLLOWING EQUIPMENT LIST IS FOR SALE. THE EQUIPMENT SALE IS FOR (AAR5CA) - JIM HARVEY'S ESTATE

MANUFACTURER	EQUIPMENT	DESCRIPTION	SERIAL NO.	YR MANUF.	SALE PRICE	NOTES
KENWOOD	TS-570S	160-6M HF XTR	90400014	2007	\$ 700	
KENWOOD	TS-570D	160-10M HF XTR	60700019	2004	\$ 600	
KENWOOD	TS-480 DSP SAT	160-6M HF XTR	300059	2008	\$ 1,000	
KENWOOD	TR-9000	2M ALL MODE XTR	110344	1982	\$ 195	
KENWOOD	TM-2550A	2M FM XTR	80383	2006	\$ 95	
KENWOOD	TM-D700 (DATA)	144/440 MHZ FM XTR	60100177	2004	\$ 200	
KENWOOD	TH-D72A	2M XTR W/ CHARGER & SPEAKER MIC	B1900040	2013	\$ 335	
KENWOOD	TH-79A	DUAL BAND W/ CHARGER	10900005	1995	\$ 180	
KENWOOD	TH-315A	220 FM XTR	10500038	1990	\$ 65	NO ANTENNA, NO CHARGER, GOOD BATTERY
KENWOOD	SH2P4	SPEAKERS	NA	NA	\$ 10	
ICOM	IC-2200H	2M FM TX, FM & AM RX XTR	510990	2012	\$ 110	
ICOM	IC-2100H	2M FM XTR	66904	2006	\$ 95	
ALINCO	DR-235T	220 FM XTR	T10073	2006	\$ 195	
MIRAGE	B108	2M 10-80W FM-SSB AMP	2397-480	1992	\$ 125	
SCS	PTC II USB	MODEM	NA	2007	\$ 750	
TIGERTRONICS	SIGNALINK USB	AUDIO MODEM	NA	2012	\$ 75	??
TIGERTRONICS	SIGNALINK USB	AUDIO MODEM	NA	2012	\$ 75	
HEIL	HEADSET	HEADSET	NA	NA	\$ 50	ROUGH SHAPE
MFJ	MFJ-941E	VERSA TUNER 2	NA	4/2/1996	\$ 75	

**If you are interested in purchasing any of this equipment or would like more information on a specific piece, please contact Geff / N8CE at 517-626-6044 or [richard0g@frontier.com](mailto:richard0g@frontier.com).**

**If you are calling Geff, please make sure you are calling from a line that has a name attached to it, and not one that is "blocked". He will not be able to receive the call if you do.**

**The best way to get to  
Dayton is with  
ARROW**

- NO PARKING FEES
- NO SHUTTLE BUS  
FARE
- NO CAR OR GAS  
EXPENSES
- CONTINENTAL  
BREAKFAST ON  
BOARD
- SELL YOUR GEAR AT  
OUR FLEA MARKET  
BOOTH

**We're expecting  
a sell-out trip,  
so make your  
reservations early!**

Arrow Communication Association  
2545 S. Lima Center Rd.  
Chelsea, MI 48118

**Take the bus with us!**

# **Dayton Hamvention Bus Trip**



## **Saturday May 20, 2017**

**Sponsored by the  
ARROW  
Communication  
Association**

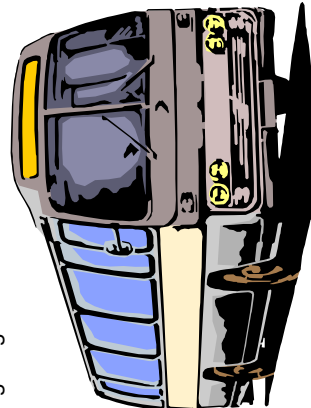
The **ARROW Communication Association (W8RP)**, Ann Arbor, MI (146.96- Open) is once again proud to sponsor a motor coach trip to the **2017 Dayton Hamvention** at its *new and improved* location: Greene County Fairgrounds and Expo Center in Xenia, Ohio. Started in 2002, this annual club activity has grown in size and reputation with hams across Michigan. We have been host to over 600 hams for this event.

Join us on **Saturday, May 20, 2017**, when we depart from the park-and-ride lot beside Ann Arbor Pioneer High School (601 W. Stadium Blvd, Ann Arbor, MI) at **4:00 a.m.**, arriving in Xenia around 8:00 a.m. **Please note the earlier starting time!** On board, you can stretch out, relax, take a nap, chat with other hams, and enjoy a continental breakfast with coffee as the coach takes you directly to the country's largest amateur radio event!

**We arrive at Dayton early enough so that you can enjoy a full day!**

- Visit exhibits
- See what's new from major manufacturers
- Attend seminars
- Take license tests
- Shop the largest outdoor swap meet in the United States

When Hamvention closes at 5:00 p.m., return to the bus with your purchases for the ride back home. No standing in lines waiting for a shuttle bus or fighting traffic!



## Got stuff to sell? We can help!

We will have a booth in the flea market. If you buy a bus ticket, you can sell your stuff at our booth. All we ask is that you limit it to a reasonable amount and that you volunteer for one hour at the booth. The cost of a booth alone is \$70, more than the cost of our ticket, which makes the ARROW trip a GREAT value!

## For our out-of-town guests!

If your QTH is too far away to drive to meet our bus which leaves at **4:00 a.m.**, and you need information about hotels in Ann Arbor, contact us at the information listed below for details.

## This is no ordinary bus trip – it's an ADVENTURE!

Tickets are \$55 before April 1. This increases to \$65 April 1 and after. This does **NOT** include your admission to the Hamvention. We suggest that you purchase your 2017 Dayton Hamvention ticket(s) in advance to take advantage of the discount and enjoy the day without waiting in line for your tickets.

In years past, we have offered a variety of door prizes. The number and value varies from year to year as we depend on the generosity of donors.

**For those of you who are not ARROW members, please consider joining up and supporting our goals, such as our newly-purchased 440 MHz DMR repeater.**

When you add it all up, taking the bus with the ARROW is the most economical and relaxing way to attend Dayton. For more information on the 2017 trip, go to our website and click the Dayton bus trip link under Activities.

## Contact information:

John Wasciuk, WA8TON  
616 560-3365  
E-mail: [jwasciuk@gmail.com](mailto:jwasciuk@gmail.com)

## Yes!!! Sign me up!!!

Name/Call Sign	_____
Address	_____
City/State/Zip	_____
Telephone	_____
E-mail (correspondence via e-mail) <i>PLEASE!</i>	_____
Will you need hotel information for the night of 5/19/17?	_____
How did you hear about us?	_____
# of tickets	_____ \$ amount enclosed

☐ **I would like to join and support the ARROW for \$20.00 a year.**

Make check/money order payable to:  
**ARROW Communication Association**

Send Order Form and payment to:  
**ARROW Communication Association**  
2545 S. Lima Center Rd.  
Chelsea, MI 48118

PayPal is available through the website:  
**[www.w8rp.org](http://www.w8rp.org)**

## Prices

Ticket Price \$55 before April 1\*

Ticket Price \$65 as of April 1 or after

**ARROW Yearly Membership \$20**

\*If received/postmarked before 4/1/2017.



Home of the 2017 Great Lakes Division Convention

Michigan International Speedway

Brooklyn, MI

October 7&8, 2017

Indoor Commercial Vendors

Forums

Huge Paved Flea Market

Workshops

Loads of Parking

Camping

Unique Location - Room to Grow

Door Prizes

KB6NU's One-Day Tech Class

VE Testing

Food

Fox Hunt

Mobility Scooters Available



[www.glhamcon.org](http://www.glhamcon.org)

[Info@glhamcon.org](mailto:Info@glhamcon.org)



Fellow ham,

Plans for the Great Lakes HamCon at Michigan International Speedway are moving forward. The event has recently been approved as the site of the 2017 ARRL Great Lakes Division Convention. Volunteer help is needed, Event preparation has started and the pace will pick up as October grows closer.

Your skills and expertise are needed. Marketing and promotion is just one area. Do you have expertise in social media, website design, videography, graphic design or similar? We will have a presence at Dayton and many other hamfests over the summer. A robust program of forums will be staged at the event. Help will be needed staging the venue as well as setup and event day activities. Do you have contacts or relationships in the commercial side of ham radio that can help ensure an exhibitor comes to the event?

The success of Great Lakes HamCon depends on the engagement of the area hams and their clubs. Let us know how you can help. Send an email to [volunteer@GLHamCon.org](mailto:volunteer@GLHamCon.org). Include where your interests lay and the skills and experiences you bring with you. Don't hold back, include those ideas that will make the event unique and special. If you just want to help out in general, that's fine, we need you.

Please forward this email to other hams. Include this in your club newsletter. Spread the word.

Thanks in advance for your help.

73,

Glen Ohlemacher - K8GO

President - Great Lakes Amateur Radio Association

The Great Lakes Amateur Radio Association, a consortium of clubs formed to host Great Lakes HamCon

[volunteer@GLHamCon.org](mailto:volunteer@GLHamCon.org)

# Greater Lansing Nets

The **"Central Michigan Slow Scan TV Net"** meets every Sunday evening from 7:00- 8:30pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Carl Canfield/K8YHH. EVERYONE is welcome to join in and have fun learning and using this interesting and useful mode of communication. Other digital modes will be explored from time to time. For more information, call Carl at: (517) 755 6627.

The **"Ladies Tea Time Net"** meets every Tuesday night at 7:00 pm on the 145.39 repeater (PL 100.0), with Net Coordinator Janine Lieber/KK6GYM.

The **"Quarter Century Wireless Association Net"** also meets every Tuesday night but at 8pm and on the 146.70 repeater (PL 107.2 Hz), with Net Coordinator Don Tillitson/WB8NUS.

The **"Mid-Michigan Information & Trader's Net"** meets every Wednesday evening at 7:00pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Clyde Tompkins/K8CPT.

The **"MSUARC Friends and Info Net"** meets every Thursday evening at 7:00pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Gregg Mulder/WB8LZG. The first half of the net is time for chatting, while the second half is for Morse Code practice. If you wanted to learn Morse Code, but didn't know how to go about doing it, then please join us. The speeds are kept down to a minimum, to make it easier to learn.

**ALL are welcome on these nets, so be sure to check in to show your support. And as with all Nets, 3rd party check-ins are welcome, but must have Control Operator present at check-in time.**

## CMARC Officers and Appointees

**President / Webmaster**  
Tom Rocheleau, WA8WPI

**Vice President / Youth Liaison**  
Russ Fitzgerald, N8FZ

**Treasurer**  
John Doornhaag, KD8NNQ  
(517) 672-2759

**Secretary / Scope Editor**  
Chris Ranes, NS8Q  
(517) 487-8376

**Director**  
Ted Sadilek, WA8MFQ  
(517) 881-6093

**Director / Salvation Army Liaison**  
Clyde Tompkins, K8CPT  
(517) 927-3801

**Under 22 Director**  
Sam Fitzgerald, N8FRP

**Cards & Flowers**  
Jane Hosford, KC8FSK  
(517) 515-7610

**Club Contact**  
Don McLain, KB8RAD  
(517) 930-7707

**Club Historian**  
William Cote, WD8NYW

**Antenna Projects Chairman**  
Gregg Mulder, WB8LZG

**Lansing ARPSC Liaison**  
Jim Hannahs, KC8QWH

**QSL/Awards Manager**  
Don DeFeyter, KC8CY  
(517) 641-4533

**Photographer**  
Kenneth Hazlett, N8BVV  
(517) 348-5513

**Meetings**  
**Held Monthly on the second Friday of the month at:**  
Salvation Army-Capital Area,  
701 W. Jolly Rd, Lansing  
at 7:00 PM.

Board Meetings are held the first Saturday of the month at Denny's beginning at 5:30 pm.

**CMARC Calls:**  
**W8MAA & W8PLP**

## LCDRA Officers and Appointees

**President**  
John Imeson, N8JI  
(517) 449-1517

**Vice President**  
Don Tillitson, WB8NUS  
(517) 321-2004

**Secretary**  
Ron Harger, WD8BCS  
wd8bcs@arrl.net

**Treasurer**  
Jeff Oberg, KB8SXX

**Director**  
Jan Bradfield, KC8BFB  
(517) 202-1779

**Director**  
Don McLain, KB8RAD  
(517) 930-7707

**Director / Membership Chair**  
Michael Boensch, W8MKB

**Repeater Trustee**  
Dennis Boone, KB8ZQZ

**Meetings**  
**Held Quarterly on the third Thursday of the month at:**  
Fire Station #48,  
Marshall St, Lansing  
at 7:00 PM.

**LCDRA Call:**  
**W8BCI**

The Scope is a monthly joint publication of The Central Michigan Amateur Radio Club and the Lansing Civil Defense Repeater Association. Please send all articles, classified ads, or other information to the editor, Chris Ranes, NS8Q, at [cmarcscope@gmail.com](mailto:cmarcscope@gmail.com). **The deadline for each issue is midnight on the 20th of the preceding month.**



# Central Michigan Amateur Radio Club

## W8PLP/W8MAA

### Membership Form



For new CMARC applicants: Please complete all sections.

For existing CMARC members: Please include your Name and Call Sign along with only the information you would like changed.

Mail completed form to Membership Chairman (see address below) or take to Club meeting for processing. Please include payment if applicable. (Checks or Money Orders should be made payable to 'CMARC').

John Doornhaag | 1165 S. Ainger Rd. | Charlotte, MI 48813-9540

Membership Type		<input type="checkbox"/> New	<input type="checkbox"/> Renewal
<b>Full:</b>	<input type="checkbox"/> Annual Dues: \$20.00 <i>Includes voting rights and an annual subscription to The Scope.</i>		
<b>Associate:</b>	<input type="checkbox"/> Annual Dues: \$5.00 <i>Includes an annual subscription to The Scope but NO voting rights.</i>		
<b>New Licensee:</b>	<input type="checkbox"/> Annual Dues: 1st Year Free		
<b>Under 18:</b>	<input type="checkbox"/> Annual Dues: Free		

Contact Information	
<b>First Name:</b> _____	<b>Last Name:</b> _____
<b>Call Sign:</b> _____	<b>License Class:</b> _____ <b>Phone #:</b> _____
<b>Address:</b> _____	<b>Apt/Unit:</b> _____
<b>City:</b> _____	<b>State:</b> _____ <b>Zip Code:</b> _____
<b>Birthday:</b> _____	<b>Anniversary:</b> _____
<b>Email:</b> _____	<b>Sign up for the List Serv:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Note: Email is used by club officers to communicate club business and may appear in the club directory for use by club members. CMARC does not share/sell contact information to other parties.</i>	

Club Communications	
<b>Newsletter Preference</b> (select only one option)	<input type="checkbox"/> I will download from the web site.
	<input type="checkbox"/> Please mail to my address (Note: Direct mailing increases postage costs.)
<b>ARRL Affiliation</b>	<input type="checkbox"/> I am an ARRL member



# Lansing Civil Defense Repeater Association

## Membership Form

For new LCDRA applicants: Please complete all sections.

For existing LCDRA members: Please include your Name and Call Sign along with only the information you would like changed.

LCDRA oversees the operation and maintenance of all Lansing Area repeaters. Use of the repeaters does NOT require LCDRA or CMARC membership, but your support is welcome and appreciated.

Mail completed form to Membership Chairman (see address below) or take to a meeting for processing. Please include payment if applicable. (Checks or Money Orders should be made payable to 'LCDRA').

**Michael Boensch | 1897 Sunnymede Ln | Lansing, MI 48906-1356**

Membership Type		<input type="checkbox"/> New	<input type="checkbox"/> Renewal
<b>Full:</b>	<input type="checkbox"/> Annual Dues: \$15.00 <i>Includes voting rights and an annual subscription to The SCOPE.</i>		
<b>Family Mbrs:</b>	<input type="checkbox"/> Annual Dues: \$7.50 ea. <b>No. of Family Members:</b> _____		
<b>ARRL Affiliation</b>	<input type="checkbox"/> I am an ARRL member		

Contact Information	
<b>First Name:</b> _____	<b>Last Name:</b> _____
<b>Call Sign:</b> _____	<b>License Class:</b> _____ <b>Phone #:</b> _____
<b>Address:</b> _____	<b>Apt/Unit:</b> _____
<b>City:</b> _____	<b>State:</b> _____ <b>Zip Code:</b> _____
<b>Birthday:</b> _____	<b>Anniversary:</b> _____
<b>Email:</b> _____	
<i>Note: Email is used by club officers to communicate club business and may appear in the club directory for use by club members. <u>LCDRA does not share/sell contact information to other parties.</u></i>	

Central Michigan Amateur Radio Club  
P.O. BOX 27321  
Lansing, MI 48909-7321

Central Michigan Amateur Radio Club



# THE SCOPE



Lansing Civil Defense Repeater Association

centralmiarc.com      Serving Our Community Since 1921      lcdra.net

CMARC	ARPSC	LCDRA
		
<a href="http://WWW.CENTRALMIARC.COM/">WWW.CENTRALMIARC.COM/</a>	<a href="http://WWW.LANSINGARPSC.COM/">WWW.LANSINGARPSC.COM/</a>	<a href="http://WWW.LCDRA.NET">WWW.LCDRA.NET</a>