



MIDLAND AMATEUR RADIO CLUB  
PO BOX 1049, MIDLAND, MICHIGAN 48641  
www.w8kea.org

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Club Historian	Stan Rowe K6VWE	(989) 837-7252
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	Pat Mullet KC8RTW	(989) 828-6657
Swap Committee	Mark Rodgers KC8GRQ/Ch	(517) 672-1060
	Pat Mullet KC8RTW	(989) 828-6657

#### LIFE MEMBERS

Don W8WOJ, Lee KC8ITI, Dennis N8ERF, Larry N8CGP, Denny WD8BPT, John WB8RCR

Midland County Public Service Net, Thursdays at 9 PM  
W8KEA Repeater — 147.000 MHz+ PL 103.5 • W8QN Repeater — 443.325 MHz+ PL 103.5  
W8KEA Digipeater — 145.090 MHz

Next ARES®/RACES Meeting — Thursday May 7, 2015, 6:00 PM  
Law Enforcement Center, 2727 Rodd St.  
Next CLUB Meeting — Thursday May 7, 2015, 7:30 PM  
Salvation Army Building, 330 Waldo.  
Talk-in 147.000+

May 2015

## Static Discharge

Kevin Martin, KD8QAM

The Michigan QSO party was this past weekend. A few club members were able to get together and operate. It sounds as if they were able to make over 400 contacts. Good job guys. Some of the club membership was able to participate in the thermometer kit build over the weekend as well. It appeared that everyone had a good time making those. There are still opportunities to help with the GLB Marathon and the MS walk; if you would like to volunteer, contact John, W8QN and Chris, KB8UIH, respectively.

Kevin KD8QAM

**When all else fails...  
...Amateur Radio!**



## MARC Minutes

Linda Hodges, KC8MUD

Mark KC8GRQ called the meeting to order at 7:35 P.M. with 20 in attendance. A sign-in sheet was passed around and introductions were made.

- John-WB8RCR started the meeting with a presentation on Firmware. (C Programming) The date for the PIC Thermometer

Build is on April 18<sup>th</sup> at 9:00 A.M. at the Salvation Army Building.

- Steve-WA8Y followed with a presentation on *DXLab Suite*.

- No news for the 2015 Dow Run (5/16) yet.

- Chris KB8UIH needs operators from 11:00 a.m. until 2:00 p.m. for the MS Walk on April 25<sup>th</sup>. Please contact Chris if you can help.

- Operators are needed in Frankenmuth on May 9<sup>th</sup> at 8:30a.m. for their annual MS Walk.

- Operators are needed for the

Great Lakes Marathon on May 17<sup>th</sup> from 6:30a.m. until 2:00 p.m.

- There is no news on Field Day or the Swap.

NET Control

April 9<sup>th</sup> Ryan KC8RCR

April 16<sup>th</sup> Ryan KC8RCR

April 23<sup>rd</sup> Chris KB8UIH

April 30<sup>th</sup> John N8XA

A motion to adjourn.

Meeting ended at 9:35 p.m.

Minutes taken by Dorie N8WTQ

Typed by Linda KC8MUD

### MARC MEETINGS

Mark Rodgers KC8GRQ, is in charge of special events and topics for the MARC monthly meetings. If you have any agenda items, or topics for the meetings, please contact Mark at (517 672-1060), or via e-mail: [kc8grq@yahoo.com](mailto:kc8grq@yahoo.com)

### COMMUNICATIONS

Pat Mullet, KC8RTW, is in charge of communications and publicity for the club. If you have any questions or ideas regarding these areas, please contact Pat at [kc8rtw@arrrl.net](mailto:kc8rtw@arrrl.net)

### EXAMINATION SCHEDULE

Saginaw - All future VE testing will be done on an appointment basis only.

Corunna - Contact Thomas Carpenter (517) 579-0599 [ki8as@charter.net](mailto:ki8as@charter.net).

Bay City - All future VE testing will be done on an appointment basis only.

Isabella/Clare Counties - Contact Gus Glass, K8GUS at [k8gus@arrrl.net](mailto:k8gus@arrrl.net)

With all examinations, your original license, a copy of that license, a second photo identification (drivers license, etc.) and a check or money order for \$15.00 made out to "ARRL/VEC" are required.

The address listed below gives testing sessions scheduled for Michigan. <http://www.arrrl.org/arrrlvec/exam-search.phtml?State=MI>

### SUBMISSIONS FOR NEWSLETTER

Contact Pat Mullet, KC8RTW at [kc8rtw@arrrl.net](mailto:kc8rtw@arrrl.net) if you want to submit anything for the newsletter.

I need your items by the 15th of the month. Anything received after that may not make it into the newsletter for that month.

If you prefer to download the MARC newsletter from our web site, or have trouble with delivery via USPS, contact John, W8QN at [w8qn@arrrl.net](mailto:w8qn@arrrl.net).

### MEDIA HITS!

Have you seen or heard mention of the Midland Amateur Radio Club in the news or in the paper? If so, please forward it, or mention of it to either Pat, KC8RTW ([kc8rtw@arrrl.net](mailto:kc8rtw@arrrl.net)) or Kevin ([cherryredirocz@sbcglobal.net](mailto:cherryredirocz@sbcglobal.net))

## My Two Cents

Now that the weather's turned, I spent some time last month checking out my antennas. It seems that they all survived the winter, though my APRS antenna needed to be stood back up. My APRS antenna is a temporary antenna consisting of a homebrew twin lead J-Pole in a PVC radome on a short mast attached to a clothesline pole. The winter winds had caught both the antenna and coax and pulled it over. After pushing it back into place, a simple guy line insured it would stay in place. Now, I just have to get my APRS station back online.

When I started having trouble hearing the Midland repeater last year, I swapped out the VHF/UHF for the 2 meter rig I'd been using for APRS, as it had a bit better receiver, but the signal was still marginal. Time to normal everything up, I think, and get the APRS station back on the air.

I spent part of last Saturday playing in the Michigan QSO party. One of my goals for this year was trying to make contacts on both 15 and 10 meters, but both bands seemed dead. Twenty meters was open, but few were

## Pat Mullet, KC8RTW

working the QSO party, so I spent the rest of my time running back and forth between 40 and 80 meters. I worked Steve, WA8Y on 80, and the W8GN station on all three bands. I also worked Gratiot, Isabella, Mecosta and Gladwin counties, but that was it for the near-by counties.

Playing in the QSO parties is fun, and a lot more laid back than either Field Day or the big contests, and are a great way to gain experience without stress. If you're interested in working HF and want get your toes wet in contesting without getting in over your head, give any of the QSO parties a try.

Lastly, I've had some inquiries as to whether or not MARC is having a Swap this year, and have had it confirmed by Mark Rodger, KC8GRQ, the Swap Chairman, that the building is reserved and the paperwork has been filled out with the ARRL, though it hasn't been posted on the ARRL website as of yet. You'll note that flyers for both the Swap and Field Day are in the current newsletter; feel free to copy them and pass them out as needed.

# Amateur Radio is a Contact Sport!

Guess that's enough for this time, get out and enjoy the spring weather and spend some time on

the air enjoying ham radio

73, Pat, KC8RTW

## Midland HS ARC News

A lot has happened since the last report. The club continues to be very busy with lots of things happening. We have had a couple of visitors. First was Gordon Baldwin, W8CT. Gordon is the ARRL Michigan Section Youth Coordinator. Gordon is new to the position last fall and we invited him to come down and visit with us. We are hoping that he can foster some type of competition events between the various school clubs in the state of Michigan. Most school clubs participate in some form of competition with other schools in the area. There are a total of 8 school amateur radio clubs in the state of Michigan. Four of them in the Lower Peninsula and 4 in the upper. Gordon has hinted that there might be a *QST* article in the offing about our school club!

We also had a visit from Dan, W2PUT. Dan is from Milan and is working on installing some network communications equipment for the area to link our local government into a statewide communications network. It was great for the students to hear about a career in the electronics field from someone living it. Thanks for the visit, Dan.

The students continue to work on the 4 bit computer under Lee's direction. Unfortunately, Lee discovered a few minor glitches in the unit and has been making good progress in solving the issues. While Lee has been working brilliantly on that, John, WB8RCR, gave a presentation on the PIC Thermometer project. Since the students are pretty good programmers already, John focused more on that part of the project than he did when he made the presentation at the MARC club meeting. John will return for the April 22<sup>nd</sup> club meeting and we will do the build for this project. Will, K8VFO,

mentioned at our last meeting that he is thinking about taking that PIC Thermometer project and turning it into a controller for a solder reflow oven he made from an old toaster oven. What a great idea.

Mixed in with all of that we started the high altitude balloon project. Each student was given an assignment on this complex project. For instance, Max is responsible for programming the [Byonics MT-RTG-FA](#) tracker that will be in the payload, as well as learning how to track the balloon on aprs.fi and learning how to retrieve our telemetry. Zach has taken on the responsibility of learning the [APRSISCE/32](#) software program, which will be interfaced to a Yaesu FTM-350 APRS radio. This combination will be used to track the balloon in flight while we are chasing it and to help us locate it should it land at a site where the tracker cannot reach a digipeater and the data does not show up on aprs.fi. With this set up the APRS data is received directly by the FTM-350 and is plotted on the APRSISCE/32 software. Thanks to a lead from Chris, KB8UIH, we also have a very portable unit that will do the same thing. This set up uses an HT, in our case a Baofeng UV-5RE, and an Android Cell Phone. Bluetooth communication between the radio and the phone is provided by a [Mobilinkd](#) (not misspelled) TNC2 modem. The rest of the work is done by an app on the cell phone called [APRSdroid](#). This is extremely portable and does not rely on an internet connection, although there are extra features that do use the internet. Ethan has taken on the critical responsibility of flight path prediction. This is important if we don't want to land in the middle of Lake Huron. Abhi has taken on the role of payload specialist. He is responsible for

### Upcoming Events

4/25	MS Walk
5/16	Dow Run
5/17	GLB Marathon
6/27-28	Field Day
7/9-12	MI Section Family Outing

### Michigan Hamfests

5/2	Cadillac
5/9	Chassell
6/6	Hudsonville
6/7	Chelsea
6/13	Newberry
6/21	Monroe
6/20	Midland*
7/18	Shelby Township
7/25	Lansing
8/1	Escanaba
9/19	Shelby Township
9/20	Adrian
10/17	Muskegon
10/18	Kalamazoo
10/25	Madison Heights

### Area Nets

SVARA; Mn, 147.24 MHz, 2100 ET  
 Gladwin; Tu, 147.18 MHz, 2000 ET  
 BAARC; Tu, 145.31 MHz, 2100 ET  
 Isabella Co EOC 146.72 Mhz, 1900 ET  
 Canadian Lks, Wed, 146.8, 2100 ET  
 Edmore, Th, 146.8, 2000 ET  
 MARC; Th, 147.00 MHz, 2100 ET  
 District 3 ARPSC; Su, 145.31 MHz, 1830 ET  
 Mi VHF Trffc Net; MWF, 145.15 MHz, 0900 ET  
 TMMTN; Mon-Sat, 147.30 MHz, 2130 ET  
 MACS; Sun-Sat, 3953 kHz 1100 ET  
 MIARPSC; Su, 3932 kHz, 17:00 ET  
 UPN; Sun-Sat, 3920 KHz, 17:00 ET  
 MITN; Sun-Sat, 3952 kHz, 1800 ET  
 QMN; Sun-Fri, 3563 kHz, 1830 & 2200 ET  
 WSSBN, 3932 kHz, 1900 ET  
 UP-ARES; Fr, 3932 kHz, 1930 ET  
 GLETN; Sun-Sat, 3932 kHz, 2030 ET  
 SEMTN; Sun-Sat, 145.33, 2215 ET  
 MIDTN - 1900 local Tu, Th, Sat 3.583  
 +waterfall, Oivia 8/500

### MARC MERCHANDISE

T-Shirt	S- XL	\$10
	2X - 3X	\$12
Long-Sleeve Tee	S- XL	\$12
	2X - 3X	\$15
Crew Sweatshirt	S- XL	\$18
	2X - 3X	\$20
Hoodie	S- XL	\$24
	2X - 3X	\$26
Zipper Hoodie	S- 3X	\$30
Winter Coat	S- XL	\$42
	2X - 3X	\$45
Spring Jacket	S- XL	\$32
	2X - 3X	\$35
Hat		\$10

All garments are royal blue with white print and embroidered name and number. Extended sizes available.

Please call Bill Lee at B&C Sportswear with questions @ (989) 839-4537.



constructing the payload as well the rest of the balloon system. Mitch will be assisting him with this and will be responsible for constructing the radar reflector, which is an FAA requirement. In addition, Mitch is our Mission Control. He is developing a pre-launch checklist to ensure that everything gets done before launch. His approval is required before lift-off can happen. It is going to be a great adventure.

Will, John, AC8QF, and Art, K0ACP continue to make progress with the satellite communications project. John has done an outstanding job of increasing our knowledge base and putting together an equipment summary and options. Will has brought new knowledge and insights as well. He had already built an azimuth/elevation controller and motor set. It is a little light to carry our antennas but now we have the technology. Art is busy working on putting together an application for an ARRL/AMSAT sponsored contact with the International

Space Station. By the way, Jackie and I just watched the ISS fly right over the top of our house. I have an app that notifies me when certain satellites come within viewing range. It was very cool to be able to see it rise over the horizon and track right toward us, before it disappeared into Earth's shadow.

We have missed Dennis, WD8BPT, who is recovering from heart surgery. Hopefully, he will be back in the meetings soon. Dennis, we miss your humor and out of the box thinking!

We have had some new students show up that are not seniors and who are likely to be with us next year. I have also been talking with a few other students who are likely to join us next year. For me it has been very exciting and extremely gratifying to see all of the engagement and participation of the students.

Finally, we made a trip down to the University of Michigan over spring break with a couple of the students. We visited the labs

of Prof. Jamie Cutler, who is developing satellites for launch into space. They again renewed their desire to work with us and help us with any of our projects! That is way cool. We also visited with Prof. Ganago, who was responsible for the donation of some equipment to our club from the University of Michigan. He invited us to sit in on his lecture, which we did. The really cool part of that experience is that our students already knew everything that Prof. Ganago presented in his lecture! Afterwards Max said, "I can do this." This past week we had a former student, Bilbo, KD8ZAP, drop in for a visit. It was great to see him again!

My sincere thanks to KC8ITI, WD8BPT, KD8ULJ, W8QN, K0ACP, K8VFO and AC8QF for their continued involvement in MHS ARC. This has been and continues to be a great adventure.

Best Regards,  
Dennis, N8ERF

## Dow Run Volunteers Wanted

The Dow Run will occur on Saturday May 16<sup>th</sup>. This is our biggest public service event of the year, and requires the greatest number of bodies to pull it off. It is also our best opportunity to

give a favorable impression of ourselves, promoting ourselves while serving the community.

Volunteers will need to be in place around the course by 7:30 am, and the event will run until

approximately 11:00 am. If you wish to help with communications at the run please contact John Wolters at [w8qn@arrl.net](mailto:w8qn@arrl.net).

## Volunteers Needed for GLB Marathon

Help is still needed for the Great Lakes Bay Marathon. I sent an email recently that only 3 people responded to concerning their ability to help me. If you got the email and ignored it, please respond now to let me know if you can or cannot help. I assume

several of you are coming but without a verbal or electronic yes or no, I don't know if help is going to be there or not. Attempting to plan events isn't easy and if you don't communicate (which is something we are supposed to be able to do) it leaves me in a lurch.

Please let me know if you are going to assist this event. These events don't go on by themselves. Dedicated volunteers make them happen. Please be one of them.

Thank you,  
Chris Rose

## Yes, Virginia, There Will be a Swap!

As things currently stand, the Midland ARC will be holding our

Hamfest at the Salvation Army building, 330 Waldo Avenue on

Saturday, June 20<sup>th</sup>. Doors will open at 8:00 am. Tickets will be

# It's Not Your Grandfather's Amateur Radio!

\$5.00 and tables are available at \$5.00 each. Space will be set aside outside for trunk sales. License testing will be at 11:00 am.

Volunteers are needed for set-up and tear-down, and to work the floors. Call Mark Rogers at (517) 672-1060 to volunteer.

VEs are needed for the exam session. Contact Dennis Klipa at (989) 636-7704 to volunteer.

## Plans in Motion for Field Day, June 27-28

MARC will be returning to the Chippawassee Park again for Field Day this year. We're hoping to spread out the antennas a bit more to minimize interference between modes. Details such as layout of the site and parking are still being worked out by the Field Day committee.

The Committee will need volunteers to help set up and tear down, as well as those willing to volunteer to operate or bring their gear to help in the cause. Volun-

teers will be needed to help show folks around and explain things, as well as make certain no one gets into trouble by grabbing the wrong wire. If you'd like to help out, contact Mark Rodgers, KC8GRQ. And don't forget our traditional pot luck dinner Saturday night!

In 2014, 2632 clubs, groups and individuals across the US and Canada submitted score-sheets to the ARRL, who sanctions and conducts the exercise. These logs

recorded participation by 47,428 individuals all over the world—1,285,589 two-way contacts were reported during the all-too-short 24-hours of the event. Last year, MARC made 358 contacts and received a score of 2,148, working as a 5A (five radios, emergency power.) With any luck, the bands will be in better shape this year so our score should be a bit more impressive.

See you during Field Day!

## Michigan Summer Family Outing July 9-12

The Michigan Summer Family Outing is a 4-day fun-filled event hosted by your ARRL Michigan Section Staff and paid for totally from donations, involving fun events for the whole family! Camping, RVing, Canoeing, Horseshoes, Water Slide, Rock Climbing Wall, Hiking, Volleyball, Softball, Boating, Swimming facilities are available all day every day of the outing for your pleasure (canoeing, swim-

ming and boating involve safety issues that will be addressed at the outing). Hayrides around the 420 beautiful acres will be arranged and announced. There will be games, campfires, and sing-alongs for all to enjoy. And of course, there will be ARPSC training and other informative seminars available on both Friday and Saturday for any who wish to participate.

The Michigan Summer Fam-

ily Outing will again be held at the Woodlands Conference Center and Campgrounds, 318 S. Sage Lake Road, Hale, Michigan.

Come join your fellow Hams and their families for one, two, three, or all four days!

For more information contact:

Jay Nugent WB8TKL

1316 Oak Street, Ypsilanti, MI 48198

wb8tkl@arrl.net

(734)484-5105 (until midnight)

## Broadband-Hamnet Issues New Release of Firmware

(ARES E-Letter for April 15, 2015) Broadband-Hamnet (BBHN) has released version 3.1.0 firmware for the Linksys WRT54G and Ubiquiti families of products. This firmware returns to the use of patch updates, while also supporting add-on tools such as HamChat created by VE3NKL and a tunneling solution optimized by K5DLQ. This firmware release continues support for emergency communications data

networking in the 2.4 GHz, 5 GHz and 900 MHz bands using Ubiquiti equipment and in the 2.4 GHz band using Linksys equipment. By creating solutions with Commercial Off The Shelf (COTS) hardware and Broadband-Hamnet firmware, a high-speed IP network can be deployed in the time required to set it in place and power it on.

There have been many requests for tunneling capability to

allow interaction between remote Broadband-Hamnet networks. While this has been done before, the resources and complexity were quite high. With the new VTUN capability this feature becomes feasible for all Broadband-Hamnet users.

The HamChat server is a real innovation that allows keyboard-to-keyboard chats between any connected users on the same mesh. By using your web browser

# Explore the World with Amateur Radio!


instead of chat client software, the complexity is reduced and the speed to deploy is increased. The HamChat server is not installed but is a downloadable package op-

tion for the Broadband-Hamnet 3.1.0 firmware.

The organization hopes that hams interested in high-speed data networks will look at the new

Broadband-Hamnet 3.1.0 firmware. For more information, click on the group's website: [www.Broadband-Hamnet.org](http://www.Broadband-Hamnet.org)

## Technical Topics and Information

(ARRL Contest Update—March 25, 2015) How noisy is it? James, KK6MC, a.k.a. "Dr Megacycle" reports that "NTIA/ITS had a recently active program measuring surveying the spectrum at various US sites, including Chicago, Denver and San Diego quite recently." The NTIA/ITS technical reports/memos/papers are available [online](#), including this April 2014  [prt](#) on the Chicago area.

♦ How many inventions or discoveries of amazing new materials are heralded as "changing the course of civilization"? Of course they all do by definition, but [graphene's interesting properties](#) certainly seem capable of justifying the hyperbole - perhaps as much as concrete and steel. Keep an eye on this stuff!

♦ Dennis N6KI has discovered more interesting gadgets from cy-

berspace, such as the world's first [fully digital radio transmitter](#) built purely from microprocessor technology and a company that [repurposes old iPhones](#) as vintage radios.

♦ You know how your dentist wants you to floss regularly? Well, Tom W2SC/8P5A found another great use for disposable flossing brushes. Since his gear is frequently idle in the island air, corrosion and dust can cause aggravating intermittents or open contacts. Time for a good flossing? "The idea is to take *Interdent* brushes...dip them in alcohol and clean the inside of the connector...There were bristles for some wiping action, but they were flexible enough not to bend the contacts. For me, this instantly brought some connectors back to life (with) no intermittents all weekend." I love being part of a

worldwide community that involves everything from interplanetary science to using dental accessories for cleaning connectors - at the same time.

♦ Gerry, W1VE recommends the [AP800 or XAP800 Conferencing Microphone Mixer](#) with 8 inputs, 8 outputs, digital controls, and an RS-232 interface. He also likes the macros that can be keyed to a footswitch contact closure. The price is certainly right at around \$30 to \$50 online.

**Technical Web Site of the Week** - The [Magnetospheric Multiscale Mission satellites](#) - all four of them - launched on March 12<sup>th</sup>. Soon they will begin an interesting experiment. After all, "Magnetic reconnection could be the Universe's favorite way to make things explode." Hams are on the front lines of experiencing those effects, too!

## More Technical Topics and Information

(ARRL Contest Update—April 8, 2015) So - you have interested someone in ham radio through your description of technical adventures on the airwaves. There are lots of individual specialty websites - here's a new [tech portal](#) from the ARRL that opens doors to many ARRL technical resources, even for non-members. Its goal is to introduce ham radio from the techie's perspective while not drowning them with a "ham radio firehose" - at least not right away. Send those proto-hams right over!

♦ From the latest [ARRL Propagation Bulletin](#), ARLP014, comes this link to a graphic [comparison](#) of the latest four solar

cycles. The site has plenty of solar analysis, data, and images to keep the most ardent and solar-philic ham enthralled. Not more than a click away, you can also find this interesting site which maintains a worldwide [digital ionogram database](#). Check the station list for the location of each project or facility. (Thanks, Perry WY1O)

♦ To be sure you follow rules about self-spotting via a [CW Skimmer](#), both *CW Skimmer* and *Skimmer Server* software have built-in protection against self-spotting, so long as you enter your call sign on the Operator tab in either program. Because of the change in the design of *RTTY Skimmer Server*, this easy solution

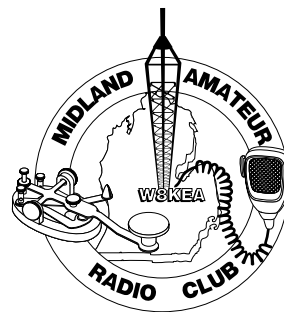
is not available. Happily, there are two quick and easy solutions: (1) Enter your own call in the Bad Call list on the Filters tab of the Aggregator and (2) Add your call to the black.lst text file found in C:\Users\[your login]\App-data\Roaming\Afrete\Reference (Thanks, Pete N4ZR)

♦ In the latest issue of the [DKARS Magazine](#) shares news of *RXGen*, a signal source with stable and calibrated output, flat from 2MHz to 2400MHz with an absolute level accuracy of +/- 0.5dB. This is a valuable aid for aligning receivers and preamplifiers, cable and accessory testing, filter response measurement and more.



Michigan Hamfest Weekend  
June 20, Midland / June 21, Monroe

# Midland Amateur Radio Club



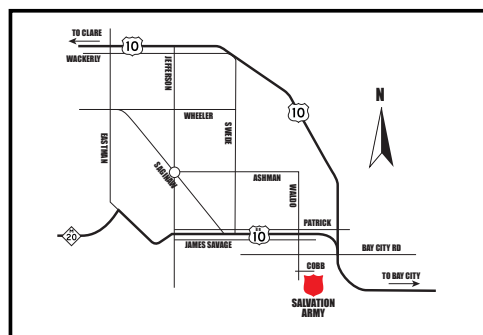
June 20, 2015  
Salvation Army Building  
330 Waldo Ave.  
Midland, Mi

Set-Up at 6:30 AM  
Show Runs 8:00 AM - Noon

Admission \$5.00  
Tables \$5.00  
Trunk Sales \$5.00

## Featuring:

- FCC Exam
- New & Used Amateur Radio Equipment
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- Large Selection of Vacuum Tubes
- Seminars/Demos
- Refreshments



An ARRL  
Sanctioned  
Hamfest

Talk-in: 147.00 MHz - Midland Repeater  
For More Information & Reservations Mail

MARC Hamfest, PO Box 1049, Midland, MI 48642  
or Contact

Mark Rodgers, KC8GRQ at (517) 672-1060 email: kc8grq@yahoo.com

2015 **ARRL FIELD DAY**

# **HAM RADIO**

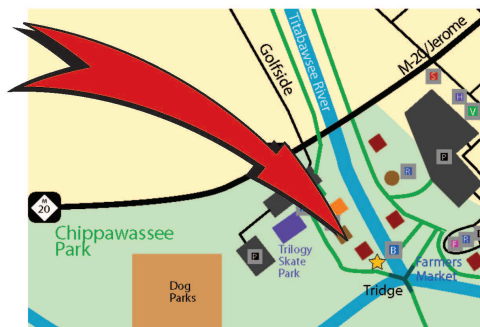
**The most popular on-the-air operating event in  
Amateur Radio. Gear up and get in on the action!**

**Participate in your local  
ARRL Field Day June 27-28, 2015  
All are Invited!**

The Midland Amateur Radio Club  
will be operating Field Day at  
Chipawassee Park from  
2:00 pm Saturday, June 27 until  
11:00 am Sunday, June 28.

**Come see  
Amateur Radio in Action!**

**Join the Fun!  
We'll even help you Get On the Air!**



**[www.arrl.org/FieldDay](http://www.arrl.org/FieldDay)**



♦ On the subject of making your CQ and exchange audio messages as clean and effective as possible, you might want to check out an audio editing program, such as *Audacity*. Jim K9YC posted a [video](#) how-to for using *Audacity* in this way so there's no reason to let badly recorded audio cut your intelligibility and, consequently, your QSO rate! (The video is a 300 Mbyte download, so it might not be a good choice for a dial-up connection...)

♦ After you do record crisp messages, Bill K4XS points out that you should listen to your transmitted audio with a second receiver - not the RF monitor in the transmitting radio. You can transmit into a dummy load at low power and listen to what you sound like on the air. Adjust your audio channel controls until your

signal sounds clear and does not splatter.

♦ If your MFJ-259B antenna analyzer took a hit or required repair, Tom W8JI posted this set of [instructions](#) on calibrating these popular units.

♦ Using microwave oven high voltage (HV) diodes is an inexpensive way to make a high-voltage rectifier for a homebrew amplifier but how do you test them? Using the diode test function of a multimeter won't work because the HV diodes are usually made from a string of 1kV diodes. Every regular silicon diode creates a 0.6V of forward voltage drop, totaling 3 V or more from typical units. This causes the multimeter to read "open." Use a forward power source of 10 V or more, limited with a 1 kohm resistor, to test these rectifier strings.

(Thanks, Val LZ1VB)

♦ Rohde & Schwarz has released another detailed, informative application note, ["Intermodulation Distortion Measurements on Modern Spectrum Analyzers"](#). While most of us don't make such measurements on a regular basis, the introductory sections on the theory of intermodulation and spectrum analyzer architecture are excellent resources for the interested reader.

**Technical Web Site of the Week** - The free Smith Chart software [SimSmith](#) is now up to version 11.3. The new software has improved its on-screen markers and plotting functions, sweep functions, and new error and text-editing windows. If you haven't tried this software, check it out!

## MARC Vital Statistics

### Memberships Expiring in April

K6VWE  
KB8PGW

KD8WZG  
N8WTQ

### Memberships Expiring in May

KB8SOE  
KC8MUD

N8LBF  
WA8LQD

### Memberships Expiring in June

KD8HID  
KD8MMH  
KD8QXL  
KD8ULA

N8KRL  
WA8KJR  
WA8Y  
WB8FYR

WD8ODG  
KA8HQW  
WD8SDX

Current Active Club Membership 37

### Birthdays Celebrated in April/May

KB8TBI 4/14  
KC8IHB 4/19  
KD8OLC 4/20  
WA8LQD 4/27  
KA8EZT 4/28

N8JBW 4/30  
KD8QAM 5/5  
KC8MUD 5/19  
WD8AXR 5/25  
WD8SDX 5/27

### Anniversaries Celebrated in April/May

KD8OLC and Lori 5/14  
KB8QWQ and Kate 5/16

Information is from data received 1/15/2015

Any corrections or questions contact John, W8QN

# Amateur Radio. . . We Do That!



Pat Mullet  
Newsletter Editor  
171 E. Orchard Ave.  
Shepherd, MI 48883

If you desire to join the Midland Amateur Radio Club, the dues are \$20 per year for an individual membership. A family membership is available for an additional \$5 per year which covers all of the individual's family members. Family members must reside at the same address as the primary member to be eligible for the family member rate. The membership dues help to cover the operating expenses of the Club, and its radio systems. Membership includes Autopatch privileges on the W8KEA repeater (147.000+), voting privileges at MARC meetings, and a monthly newsletter. Please supply the following information:

Name: \_\_\_\_\_ Callsign: \_\_\_\_\_ License Class \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Home Phone (\_\_\_\_) \_\_\_\_\_ Work Phone (\_\_\_\_) \_\_\_\_\_  
E-mail address \_\_\_\_\_  
Spouse: \_\_\_\_\_ Callsign: \_\_\_\_\_ License Class \_\_\_\_\_  
Birthday: (mm/dd) \_\_\_\_\_ Anniversary: (mm/dd) \_\_\_\_\_  
Desired newsletter format: Paper copy via USPS \_\_\_\_\_ or via e-mail \_\_\_\_\_

Are you an ARRL Member? Y/N      Do you want an ARES Application? Y/N

We request this information so we can communicate with you regarding MARC business, and periodically send you newsletters and congratulatory birthday & anniversary greetings. We do not sell this information nor will we knowingly publicize private information without your permission. Information that is publicly available may be distributed to Club members for various purposes, including membership lists, without prior notification.

You may give this completed form to the MARC treasurer, or you may mail it to:

MARC, PO Box 1049, Midland, MI 48641-1049