



W8KEA



MARC

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

President	John Wolters W8QN	(989) 832-9122
Vice President	Mark Murray W8MGM	(989) 513-7174
Secretary	Linda Hodges KC8MUD	(989) 835-7746
Treasurer	Larry Macklin N8CGP	(989) 631-7748
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	Pat Mullet KC8RTW	(989) 828-6657
Swap Committee	Pat Russell W8PMR	(989) 832-2924
	Chuck Cribley WA8LQD	(989) 488-9409
	Keith Johnson KB8SOE	(989) 488-4337
	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 October 6, 2016, 6:00 PM  
Law Enforcement Center, 2727 Rodd St.

Next CLUB Meeting — Thursday October 6, 2016, 7:30 PM  
Salvation Army Bldg., 330 Waldo Ave.  
Talk-in 147.000+

October

Static Discharge

John Wolters, W8QN

Well, with the completion of the September meeting a new slate of officers has swept into office after a fierce competition. Well, not so fierce and not a very big slate. Basically Keith Johnson, KB8SOE stepped down as Vice President and Mark Murray, W8MGM stepped into his place. Mark will be looking to put together a slate of programs for the new year. If you have suggestions or would like to put on a presentation, please let him know. Thanks to Keith for his service, Larry Macklin, N8CGP and Linda Hodges, KC8MUD for their continued service and welcome Mark.

73, John, W8QN



The meeting called to order by John, W8QN at 7:40 pm. with 30 members and guests present. A sign-in sheet was passed around and introductions were made.

Please bring any additions or corrections to the attention of the Club Secretary Linda, KC8MUD.

- Presentation—Keith KB8SOE — Keith did a great

## MARC MEETINGS

Mark Murray, W8MGM, 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 Marc at (989) 513-7174, or via e-mail: [mark.g.murray@icloud.com](mailto:mark.g.murray@icloud.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@arrl.net](mailto:kc8rtw@arrl.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@arrl.net](mailto:k8gus@arrl.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.arrl.org/arrlvec/exam-search.phtml?State=MI>

## SUBMISSIONS FOR NEWSLETTER

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

I need your items by the 15<sup>th</sup> 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@arrl.net](mailto:w8qn@arrl.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@arrl.net](mailto:kc8rtw@arrl.net)) or John ([w8qn@arrl.net](mailto:w8qn@arrl.net))

presentation about information security on your home computer systems. Topics included how not to get your information stolen and all about ransom-ware. This was followed by a second presentation about microcomputers.

- Dorie— John, W8QN— John presented Dorie, N8WTQ a chef's hat for her hard work and dedication to helping with preparing and serving food for all our club events for many years. Thank-you Dorie for all your hard work.

- Treasurer's report—Larry, N8CGP—Thank-you to all those people who have renewed their membership. A check for \$300.00 was sent to the Salvation Army building as a donation for the use of the building for our swap.

- Dirty Dog Run—Lee, KC8ITI— Thank-you to those that helped support the Dirty Dog Run at City Forest. Even though we got some rain it was a great success.

- Technician Class—Lee, KC8ITI— A new Technician Class will be starting on Sept. 12<sup>th</sup>. It will be on Monday and Thursday nights at the High School. See Lee for more details.

- First Contact— Dennis, N8ERF—First contact certificates were presented to Odin, KE8EPC and Mark, W8MGM. Congratulations to our newest hams. A certificate of appreciation was also awarded to Dennis, WD8BPT for 12 years of dedicated service as an adviser and mentor to the middle and high school clubs. Thank-you Denny for all your time and hard work.

- Silent Key—Linda, KC8MUD— We sadly report the passing of Jim Hall, KC8TQS. Jim ran the Carousel Catering Service that catered our Christmas party for many years. Our

thoughts go out to Jim's family.

- Porter Township—Dennis, WD8BPT— The Porter Township Preparedness Fair is on Sept. 10<sup>th</sup>.

- Christmas Party— Doris, N8WTQ— We need to think about dinner for our Christmas party. Tom French has offered to cater the event, Pot Luck or booking a restaurant are other options.

- Chuck, WA8LQD— Told about a book called "Thunderstruck" by Eric Larsen, which is described as a mixture of murder and 'wireless'. Also Chuck says thank-you for all the support he received from club members during his recent hospital stay.

- Lou, N8LOU— Made an announcement about the State Parks on the Air in 2017. Field Day will be the kick off for that event.

## Net Controls:

Sept. 8<sup>th</sup> Lee, KC8ITI  
 Sept. 15<sup>th</sup> Chris, KB8UIH  
 Sept. 22<sup>nd</sup> John, W8QN  
 Sept. 29<sup>th</sup> Keith, KB8SOE

## Elections—

President John, W8QN  
 Vice-Pres. Mark, W8MGM  
 Treasurer Larry, N8CGP  
 Secretary Linda, KC8MUD

Advisory Board—Dennis, N8ERF— The members of the High School Advisory Board are as follows: Dennis, N8ERF; Art Peters, K0ACP; Andrew Fawcett, KD8ULJ; Lee Hodges, KC8ITI; Will Halphen, K8VFO.

- Next month's presentation will be on WSPR, "Weak Signal Propagation Reporter" software.

- Resignation— John, W8QN has turned in his resignation as EC/RO for Midland county. Anybody interested in having that title please contact John for more in-

# Amateur Radio is a Contact Sport!

formation.

A motion to adjourn was made by Larry, N8CGP and seconded by Dorie, N8WTQ. The meeting was adjourned at 9:15 p.m.

Respectfully submitted,  
by Linda, KC8MUD  
MARC Secretary

### My Two Cents

Pat Mullet, KC8RTW

I haven't been on the air too much this past month (I'm beginning to sense a trend, here.) VHF conditions have been spotty for the weekly Thursday night net—one week the repeater is booming in, the next week, I can't even bring it up. My one attempt at any HF work was a half-hearted effort to play in the Hawai'i QSO Party. When I got started on Saturday night, there were a few stations from the Islands making it into the Midwest on 20 meters, but I couldn't break through the pileups, and then the bands shifted to 40 meters, and I couldn't hear anything. Tried to pick it up again early evening on Sunday, but sadly, it seemed most of the Hawai'i ops had put in their maximum allowed hours and silence reigned. Oh, well, maybe next time.

Most of my time has been

spent working on accessories for my FT-817 portable station. The Phil Salas, AD5X Power Conditioner kit by Brian Riley, N1BQ, is awaiting construction, and I'm in the middle of assembling the Skip Teller, KH6TY DigiVOX interface. This will allow me to use my Winbook TW700 tablet with *FLDigi*, *Outpost* or even APRS on the little Yaesu transceiver—five watts out is enough for good performance on most of the digital modes. I'm looking forward to being able to sit at a park bench and enjoy some portable QSOs.

Well, projects await, and there are a couple of upcoming on-air events I want to make time for, and more QSL requests to make, so I guess I'd better get busy. Hope to hear you on the air.

73, Pat, KC8RTW

### ARES®/RACES

John Wolters, W8QN

If you were at the September Club meeting you heard that I have resigned as ARES® EC for Midland County effective immediately. At the October ARES®/RACES meeting there will be a discussion on how to find my replacement and what happens if

one is not found. I ask that all RACES members and any interested ARES® members please attend this meeting.

John Wolters – W8QN

### Future Club Meetings

The following is a list of the future presentations that will be made at club meetings.

We reserve the right to change, substitute, or change the date as the case requires.

October—WSPR

Demonstration, Will Halphen, Salvation Army Building, 7:30 pm

Mark Murray, W8MGM will be working on the upcoming year's programs. Look for a posting in the November Newsletter.

### Upcoming Events

#### Michigan Hamfests

10/8	Alpena
10/15	Muskegon
10/16	Kalamazoo
10/30	Madison Heights
12/4	Madison Heights
2/19	Livonia
3/11	Lowell

#### Area Nets

SVARA; Mn, 147.24 MHz, 2100 ET  
 Gladwin; Tu, 147.18 MHz, 2000 ET  
 BARTS; Tu, 145.31 MHz, 2100 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.

# got rf?

## SOS Animal Rescue "Dirty Dog Run" 2016

Thanks to all of you who helped with this event on August 27<sup>th</sup>. Operators were: Linda, KC8MUD; Denny, WD8BPT; Dennis, N8ERF; John, W8QN; Dorie, N8WTQ; Stan, K6VWE and Odin, KE8EPC.

This was a 10K run and a 5K run/walk through the Midland

City Forest with participants competing with the companionship of their canine friends. The Animal Rescue group partnered with another group this year so the event was in August instead of October. The weather was good this year with it being cool for August for the runners. The rain held off until

the event was over but we had to pack up our equipment in a down pour. The organizers of event appreciate our efforts and the professional way we support their event. Again thanks to all that helped.

Lee - KC8ITI

## Midland D-Star Repeater Conversion Update

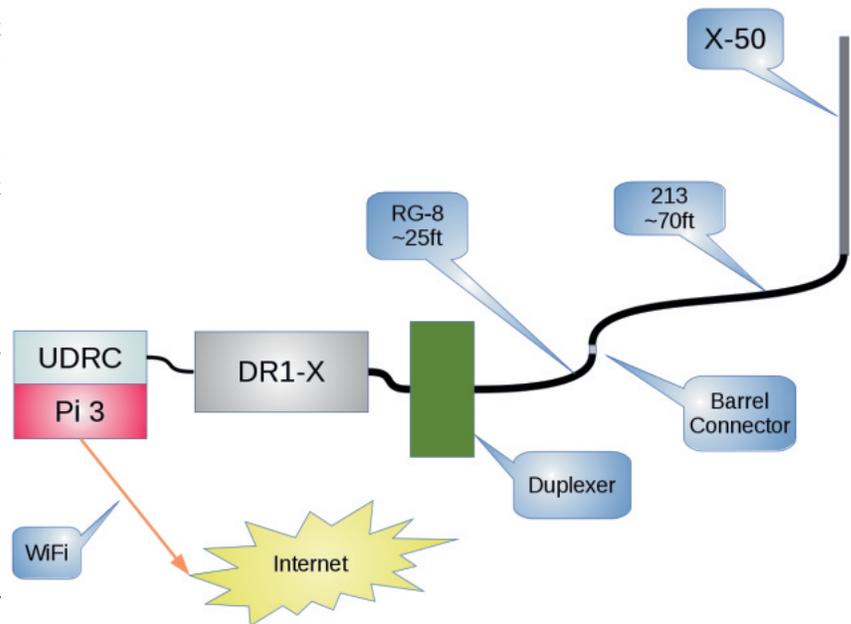
Most of you are probably aware that changes are coming to the 444.350 (WB8WNF) repeater. We are adding D-STAR capability to the repeater. And yes, I said adding. The repeater will still be capable of analog and System Fusion, but if you hit it with D-STAR it will respond D-STAR. It has a new call, KC8ARJ, so it doesn't collide with WB8WNF on the D-STAR network. Every call on the D-STAR network must be unique because you can direct your radio to a callsign. If there were two stations with the same call the network wouldn't know what to do.

The main feature of D-STAR is that **you** can link the repeater. Unlike DMR, where linking is controlled by the repeater owner, from your radio you can link the repeater to any other repeater on the D-STAR network or to any of hundreds of reflectors. With older radios you need to program a channel to make the repeater link. Newer radios have a button on the screen to poke. You cannot make the repeater link with an analog radio, nor can you communicate across the link.

You can also ask the repeater to tell you what it is linked to, and even to echo back your transmission so you can hear how well you are getting in.

The repeater is still the DR1-X with the addition of a board from NW Digital called an UDRC. This board allows the addition of D-STAR and in the future, possibly DMR. No changes were made to the actual repeater; in fact, we never removed the cover.

As I write this, the repeater is currently at WB8RCR with a fairly lame antenna and a cobbled together mess of feedline (see image). From this location it covers most of the city to a decent mobile, but not much beyond. We hope to move it back to the original site within the next few weeks.



We have some last minute details to clean up before we schedule the move back to the original site. Most of the remaining work is kind of detailed; working out the Internet details, sorting out logging, backup and remote control, etc. After the move to the site we will experiment with an external amplifier, potentially increasing the footprint. You can follow the progress at <http://kc8arj.blogspot.com>. But the repeater is currently fully operational and you can talk around the world.

After an hour of inactivity, the repeater automatically links to reflector REF024C. This is an open reflector most commonly used around Michigan. The Owosso, Livingston, Battle Creek and Charlevoix repeaters are usually linked to this reflector. REF024A is the Michigan ARES reflector; used for drills and exercises and for the Monday night ARES<sup>®</sup> net.

So if you have a D-STAR radio, try it out. And don't be shy about poking around to other reflectors

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It's Not Your Grandfather's  
Amateur Radio!

4

and repeaters. The blog contains information about other interesting reflectors, as well as a link to a full list of the REF reflectors and in-

structions on how to set up your radio to make the repeater link.

So use it and enjoy! Make friends in Scotland or Singapore.

Have fun!

73 de WB8RCR

## Michigan Section News September 2016

Greetings to the Hams of Michigan:

We are past Labor Day now and the weather has begun to cool a bit. In my estimation, the days of fall are the best that Michigan has to offer. Hamfests are a great activity in the fall (or all year-round). See the list below of swaps scheduled in Michigan. Hamfests from across the country are available on the ARRL website. ([www.arrl.org](http://www.arrl.org))

### Amateur Radio Parity Act

In the evening of September 12, the U.S. House of Representatives passed the Amateur Radio Parity Act, otherwise known as HR 1301. The next step in this long process is for the U.S. Senate to consider the bill. The ARRL has made it very easy for members to send letters to our Senators via email. You can follow the link in the letter from Rick or go to the Rally Congress page at: <https://arrl.rallycongress.net/ctas/urge-senate-to-support-amateur-radio-parity-act>.

It is crucial that we all send

letters to Senators Peters and Stabenow to request their support when HR 1301 comes before the Senate.

If you would be so kind, please send me a quick note advising me that you have sent your letters. You can email me at [wb8r@arrl.org](mailto:wb8r@arrl.org). Thanks in advance!

### Michigan Fireman's Memorial

Special Event Station – The Northern Michigan Amateur Radio Service Team will operate “NM8RT” for the Michigan Fireman's Memorial, Roscommon, MI Sept 14 thru 27, 2016.

Each September, Fire Chiefs, Fire Fighters, EMS and thousands of friends and family from all over the United States and Foreign countries gather to honor the memory of the valiant Fire Fighters who gave the supreme sacrifice while protecting their communities.

NMARST is looking forward to promoting Amateur Radio from within the ranks of the Fire Service and saluting their efforts.

Watch for spots and mid-band General Class Bands. NM8RT at QRZ.com for QSL info. Will QSL to SWL's.

### New Officers Chosen for Midland ARC

(Midland, MI—September 15, 2016) Last Thursday night, at their September 1<sup>st</sup> meeting, the membership of the Midland Amateur Radio Club held elections for club officers as provided in the club's bylaws. President John Wolters, Treasurer Larry Macklin and Secretary Linda Hodges were re-elected. Mark Murray was selected to replace outgoing Vice President Keith Johnson. Mark will assume office at the next meeting.

Congratulations and thank you for stepping forward as leaders in your club. Clubs truly are the lifeblood of amateur radio.

73 until next month,

Larry Camp, WB8R  
ARRL Michigan Section  
Section Manager  
[wb8r@arrl.org](mailto:wb8r@arrl.org)

## Long-term Power Outages

FEMA has been very concerned about the potential for long term power outages. We have had a number of workshops and exercises around this over the past month, with more planned for the coming year.

Besides the normal stuff, keep plenty of food and water on hand,

keep a good supply of medications, keep your gas tank full, another important item came up.

As soon as the lights go out, TURN OFF YOUR CELL PHONE. In the first few hours the circuits will be overloaded so it won't be of any use, but if the cell tower goes down, your phone will go into

search mode and suck your battery dry in a hurry. Worse, you don't know when you will have a chance to recharge it.

During the outage, limit yourself to text messages. Those can get through even if the network is compromised, and take very little power. Turn on your phone every so often

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to check for messages, then turn it off.

There was another interesting bit. The major carriers have plans to get generators to their cell towers, but except along the Interstates, they have no control over the backhaul.

Worse, most rely on cable, which has hundreds of serially connected failure points and no provision for generators. That means you might be able to connect to the cell tower, but you won't be able to talk to anyone. They own the lines along the

Interstate, so in an emergency, your odds of getting through are much better along the Interstate.

Stay prepared!

73 de WB8RCR

## Technical Topics and Information

(ARRL Contest Update—August 24, 2016) Jim, KA2RVO, via the Elecraft mailing list, suggested the free online book [Signal Processing For Communications](#). I skimmed the introductory chapters, and it is interesting enough to add to my reading list, in my case as a potential good review of the mathematical underpinnings for DSP, and how they relate to practical real-world characteristics of communications channels. The book builds on the theory introduced in early chapters to ultimately discuss the design of a modem that provides 2400 baud communications over a telephone-grade channel.

◆ Back in February, [AMSAT announced it is seeking volunteers](#) to assist with the technical details and development of [Phase 4 "Five and Dime"](#) ground terminals. The satellite will be using the 5 and 10 GHz bands, with an underlying

digital transmission transport layer. The technical details are to be "open source," and the project's source files are kept on *Github*. It's interesting to read the [weekly progress reports](#) in that portion of the repository, and some of the source code for various DSP receivers that will eventually be posted may find crossover application for controlling skimmer hardware.

◆ Orbital Angular Momentum (OAM) is a characteristic of electromagnetic waves that is starting to garner interest as a means to increase the number of signals using a single frequency. Individual signals with different OAM values can be distinguished and apparently do not interfere with one another, [according to an article in IEEE Spectrum](#). (Ward, N0AX)

◆ If you'd like maximum life from your lithium ion batteries, charge them slowly, and try not to

continually charge them, according to [this article in the New York Times](#).

◆ VE7BQH maintains UHF/VHF antenna comparison spreadsheets. Recently they've been updated, and [uploaded to W7GJ's website](#). They are also available with an HTML view via [dxmaps.com](#). The tables include information on expected gain figures when stacking them in different common configurations.

◆ Steve, K6OIK, as part of a presentation to the [Foothills Amateur Radio Society](#), has prepared a paper entitled "[Amateur Radio Resources that Save Space](#)". His secret is to store radio-related books, articles, papers, and so on electronically, or take advantage of resources available online. He also updated a list of [radio-useful software](#) on the club's website.

## More Technical Topics and Information

(ARRL Contest Update—Sept 7, 2016) [DARPA is sponsoring a smart radio contest](#). Billed as "The world's first collaborative machine-intelligence competition to overcome spectrum scarcity," the competition involves using a standardized SDR platform to demonstrate how intelligence can be built into radios to establish and maintain communications in the presence of congestion and interference. One of the interesting aspects of the competition format is that the qualifying or hurdle round entries are made using cloud computing images and data

sets of sampled I/Q information, so nearly anyone with SDR expertise can enter.

◆ Talk about a flea market find: A surplus auction buy some decades ago may inadvertently have preserved the software for the first Apollo Guidance Computer software. [According to a link](#) sent by Chris, ZS6EZ, the hardware from mission AS-202 was sold in a surplus scrap auction in 1976. Recently, an enthusiast in South Africa started to extract the bits from the core memory, after realizing the potential significance of the hardware.

NASA apparently did not archive the AGC software, so this may be the only copy that exists.

◆ Post-contest, when archiving all of the various files for a particular event, it's likely that you're using software like WinZip to keep all of a particular contests' files together. Bob, N6TV, provides this tip for using WinZip 20.5:

*I couldn't resist the offer to upgrade to the latest version of WinZip 20.5 for only \$10. I also installed the WinZip Command Line Support Add-On which command line aficionados find much*

faster and easier than waiting for WinZip GUI to load. The GUI worked fine, but every time I tried the new WZUNZIP from a command prompt to unzip a file downloaded from the Internet, it failed with, "Warning: (filename) was blocked by Windows. Extracted file was blocked due to security zone."

Internet searches revealed many unacceptable and incorrect solutions. I finally discovered the new -yz command line option, which turns the Security Zone identifier check OFF. WZUNZIP now extracts files just like the old

wzunzip. Just add the "-yz" option, like this:

wzunzip -yz filename.zip

Or put a one-line batch file in your PATH named unzip.cmd that adds the -yz option for you:

@ "C:\Program Files\WinZip-wzunzip.exe" -yz %\*

◆ If you need to adjust a transformer's output voltage up or down a bit, there may be a different primary tap that you can select. If there's not, you could use an additional buck or boost transformer to do the job. Schneider Electric provides an [online calculator](#) can help in selecting a trans-

former with an appropriate rating, and provides a schematic of how to use it. [Hammond Power Solutions also provides a selection guide in document form \(PDF\)](#).

◆ The [customized RTL-SDR dongle version 3](#) has a "Direct Sampling HF Mode" that allows coverage from 500 kHz to 28.8 MHz without an external mixer. This should be of great interest to those that would like to use this device for CW or RTTY Skimmer applications, or for general use at HF.

## MARC Vital Statistics

Memberships Expiring in September

NONE

Memberships Expiring in October

KD8ULT

Memberships Expiring in November

KA9WCS

KC8IHB

KD8QXK

N8DHF

Members in Good Standing

AC8QF	KA9WCS	KC8RTW	KD8QXK	N8CGP	N8WTQ	WA8KJR	WN8QGV
AC8RT	KB8PGW	KC8TQS	KD8ULA	N8DHF	NX8A	WA8Y	
AG8B	KB8SOE	KD0JHX	KD8ULT	N8ERF	W8LSS	WB8FYR	
K0ACP	KB8TBI	KD8HIH	KE8CTH	N8JBW	W8PMR	WB8RCR	
K6VWE	KC8CTG	KD8IWB	KE8CTI	N8KRL	W8QN	WB8WNF	
K8RI	KC8IHB	KD8MMH	KE8DON	N8LBF	W8WOJ	WD8AXR	
K8VB	KC8ITI	KD8MRB	KE8DOP	N8LOU	W8ZSX	WD8BPT	
K8VFO	KC8MUD	KD8QAM	KE8EOW	N8NGT	W8ZSX	WD8ODG	

Current Active Club Membership 57

Birthdays Celebrated in September/October

KC8ZMQ 9/6	KB8WEE 9/24	KC8TQU 10/19
N8STF 9/9	W8WOJ 10/3	WB8IDY 10/23
N8FUZ 9/17	W8ZSX 10/5	KB8PGW 10/25
KB8PGV 9/17	N8LTR 10/10	N8OVT 10/27
KB8SOE 9/19	N8WTQ 10/10	KC0CJC 10/31
KC8CTG 9/22	WD4PIJ 10/13	
KC8GRQ 9/27	KA0KPP 10/16	

Anniversaries Celebrated in September/October

N8LBF and KB8QYC 9/6	KG8YG and Rachel 10/01	KB8SOE and Darcie 10/19
W8JBD and ??? 09/10	KD8CUX and ??? 10/04	KC8GQK and Tersa 10/20
KC0CJC and Sally 9/12	KB8MCI and Cyndi 10/06	KB8LQM and KC8IHB 10/23
AG8B and Janell 9/22	WB8RCR and Eileen 10/12	NQ8T and Barbara 10/23
K8RI and N8JBW 9/26	WB8IDY and Audrey 10/19	

Information is from data received 8/13/2016

Any corrections or questions contact Larry, N8CGP

# 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