

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

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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 — Cancelled Law Enforcement Center, 2727 Rodd St. SkyWarn® Training — Thursday March 2, 2017, 7:00 PM Midland High School Little Theater, Room 156, 1301 Eastlawn Dr. Talk-in 147.000+

> > March

Static Discharge

John Wolters, W8QN

Well sometimes when a juggler has too many balls in the air he drops one and that's my situation now. Several family matters, sickness, a car replacement and a newsletter article. So one got dropped — sorry Pat.

First, I'd better cover the March meeting, which is our annual Skywarn[®] training. Because of a larger attendance last year and no way to predict attendance, it was decided to try to find a larger place to hold it this year. I was successful in securing the Little Theater at Midland High so that is where it will be this year. So on Thursday, March 2nd at 7 pm head to Midland High. The Little Theater is downstairs on the first floor after you enter the building. Once downstairs, turn to your right at the first hall and its right there. There is an elevator for anyone that might need it.

I want to thank John (WB8RCR) for his presentation on the new digital repeater that is now on the air in Midland County. It seems to cover the county and over into the north side of Saginaw fairly well. Have not been able to test it to



the north.

At the February meeting, we very briefly discussed the possibility of chartering a bus for the planned Ham Convention at the Michigan International Speedway on October 7th and 8th. Cost would range around \$40 a person but that depends on selling all the seats on the bus. Please let me

MARC Minutes

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.murrav@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

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

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

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/VEĆ" are required.

The address listed below gives testing sessions scheduled for http://www.arrl.org/arrlvec/examearch.phtml?State=MI

SUBMISSIONS FOR NEWSLETTER Contact Pat Mullet, KC8RTW at kc8rtw@arrl.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

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

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) or John (w8qn@arrl.net)

know if you are interested and I will pursue it more.

I don't know what Mark has in store for the April meeting but I do know the school electronics clubs are talking about a balloon launch in May so look for an RDF (radio direction finding/fox hunt) session soon.

My daughter is having a child

around the end of February so I suspect the wife will want the car headed her way quickly after. I may see you at the March meeting and I may not. Hope you and yours are enjoying the warm WX.

John, W8QN

Linda Hodges, KC8MUD

The meeting was called to order by John W8QN at 7:40 pm with 23 members and guests in attendance. A sign-in sheet was passed around and introductions were made. Please get any corrections or additions to the minutes to the secretary Linda KC8MUD.

 Presentation- John WB8RCR -John explained the ins and outs of a new Digital Repeater called D-STAR (Digital Smart Technology Radio) How to use it, it's to link to the repeater towers and reflector towers and how to make long distant contacts.

• Grants-John W8QN- Short summary on a grant from the Kiwanis Club for the Midland High School Club and Middle School Club. Thank-you Kiwanis Club.

• Treasurer's Report- Larry N8CGP- Thank-you to all those who have renewed their membership.

• Class-Lee KC8ITI- Lee has 11 signed up for his General Class. The class will start on Monday.

• List- Lee KC8ITI- Drop Lee an E-Mail if you would like to see his inventoried list of sale items. He has over 700 pieces and parts and a variety of equipment and electronics that may be just what you are looking for.

• Balloon Launch- Lee KC8ITI-Lee told about the spring balloon launch and how the students are working on unique sensors to pick up a variety of data. The launch will occur in April or May.

Walk-Chris KB8UIH-• MS Chris says put April 29th on your calendar to help with the annual Midland MS Walk. Chris will give us more information about the start time soon. Any and all help is greatly appreciated. Mike KD8HMM says please remember the Frankenmuth MS Walk is on May 13th. Hams are needed to help on that day too.

• Training- John W8QN- John reminded the club members about an upcoming Fox Hunt Training. Those operators who would like to help track the high school balloon after it has been launched would benefit from this training session.

• Welcome- John W8QN- John welcomed Al KA9WCS as the new EC/RO for the Midland Area. Congratulations Al on your new position.

• Dow Run-John W8QN- Mark May 20th on your calendar for the annual Midland Dow Run. Any and all help is needed for this low impact, fun event. Let John know if you are able to come out for the morning.

• Convention -John W8QN- The Great Lakes Ham Convention is on September 7th and 8th at the Michigan International Speedway. John would like to know if any Hams would like to charter a bus to the convention. Please let him know if you would be interested.

• Laws-John WB8RCR- John reported on HR555-The Amateur Radio Parity Act- that has gone through the U.S. House. Now we'll see what the Senate does about it.

> **NET Control:** Feb. 9th Chris KB8UIH Feb. 21st Al KA9WCS Feb. 23rd John W8QN

Amateur Radio is a Contact Sport!

• USS Edson-Lou N8LOU- Lou reported on restorations going on which included new mattresses, lighting and concessions building. On December 7th they ran a special event station and made over 700 contacts to 48 states and other countries for Pearl Harbor Day. They had a wonderful day.

• Special Event Station -John WB8RCR- Help is needed on April 22nd and 23rd for a Special Event Station in Dimondale commemorating the Michigan State Police 100th Anniversary.

• Net-John WB8RCR- Don't forget the weekly FEMA Net every Wednesday at 12:30 pm. Check-in if you can on 60 meters.

• Repeater Reports- The Edenville remote receiver is working. The West Midland remote receiver tower may be taken down. • Auction -Mike KD8HMM-Saginaw Club Auction is on Friday at the Red Cross Building.

• Christmas Party- Dorie N8WTQ-Thank-you to everybody who came to the Christmas party. We had a very nice time. Do we want the same restaurant again next year?

• Skywarn[®] Training-John W8QN-Skywarn[®] Training will be in the Little Theater at the Midland High School on the first Thursday in March at 7:00 pm. Everybody is welcome to come.

A motion to adjourn made by Larry N8CGP.

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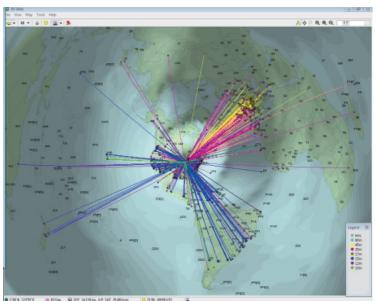
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Seconded by John W8QN. The meeting ended at 9:05 pm.

Respectfully Submitted, Linda KC8MUD MARC Secretary

My Two Cents Pat Mullet, KC8RTW



Screenshot of DX Atlas displaying Hamcap & ViewProp software-KC8RTW

We're headed into the bottom of the solar cycle, when those of us on HF have to work harder for each DX contact, and the numbers on the everpresent solar weather apps that populate ham radio websites make us cringe. I've worked a couple of QSO parties lately, and haven't even tried to work anything other than 40 meters during the day and 80 meters at night.

The other day I needed to use my shack computer—I have a copy of *Open Office* on the desktop, and it *Prop* software—*KC8RTW* station, it runs 24/7, so all I had to do to get started was bring up the monitors. I was rather surprised when I glanced at my propagation software and saw all the DX spots that had been mapped! Not listed in columns like you'll see on the DX Spotting web pages, but drawn out on an azimuthal map of the world.

I guess I'd better explain the software involved. The key to it all is <u>DX</u> <u>Atlas</u>, by Alex Shovkoplyas, VE3NEA, which as the name implies, Upcoming Events

4/15	Michigan QSO Party
4/29	MS Walk
5/20	Dow Run
6/24-25	Field Day

Michigan Hamfests

3/11	Lowell
3/18	Kalamazoo Township
4/22	Chassell
5/6	Cadillac
6/17	Midland*
6/18	Monroe
8/5	Escanaba
9/9	Wyoming
9/17	Adrian
10/7	Brooklyn
10/21	Muskegon
10/22	Kalamazoo
10/29	Madison Heights

Area Nets SVARA; Mn, 147.24 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 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

MARC MERCHANDI SE			
T-Shirt	S- XL	\$10	
Long-Sleeve Tee	2X - 3X S- XL 2X - 3X	\$12 \$12 \$15	
Crew Sweatshirt	S- XL 2X - 3X	\$18 \$20	
Hoodie	S- XL	\$24	
Zipper Hoodie Winter Coat	2X - 3X S- 3X S- XL 2X - 3X	\$26 \$30 \$42 \$45	
Spring Jacket	2X - 3X S- XL 2X - 3X	\$40 \$32 \$35	
Hat	ZN - JN	\$33 \$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.

generates maps for the ham radio operator—your choice of a Mercator map, a globe, or the aforementioned azimuthal map, designed to show antenna pointing directions. *DX Atlas* allows you to input your lat/long and will generate a pin on the map and center the map on your QTH; you can then use the program to show prefixes, CQ and ITU zones. If you have the freeware *DX Lab Suite*, you can use the logging app to generate a "pin list" you can load into *DX Atlas* and map out your logbook. Not bad for \$29.95. But wait, there's more!

Alex has also written <u>HAMCAP</u>, a graphical front end for <u>VOACAP</u> propagation software. Once you download the current solar weather

report into *HAMCAP*, it uses the *VOACAP* software to predict the propagation and MUF—Maximum Usable Frequency—for the band you're interested in, and once you type in the coordinates of your QTH and the DX station, it will plot both the path and propagation zones.

Alex's <u>IONOPROBE</u> automates the downloading of the solar weather data, putting an icon on your taskbar that alerts you to geomagnetic storms—click on the icon, and you get the full text of the space weather as well as a dashboard showing the propagation numbers.

HAMCAP ties *IONOPROBE* and *DX Atlas* together, automating the entire process and highlighting the

area with the best propagation into your QTH.

Rick Kiessig, ZL2HAM, author of <u>ViewProp</u>, another freeware program, has gone the extra mile, tapping the DX spots from up to three websites, the using the DX Atlas API to graph the paths from reporting stations within a given radius of your QTH to the DX stations, color-coded by band.

It all adds up to a wealth of information available at your fingertips in a simple, easy to digest manner.

Now, it's just a matter of getting on the air and using that information.

73, Pat, KC8RTW

ARES[®]/RACES

The men and women who were on the Thursday night net (Feb 16th) showed some real professionalism, I have to extol. Not just by checking in, or taking time Thursday night to get on the net. Nope, that happens most every Thursday night on the net. This was something not said, not done, and very much appreciated by a first time net control. They checked in with the deliberate manner of professionals, realizing they had someone who was not highly familiar with their call signs. Without having to ask, the operators called in and carefully enunciated their call signs. It really made a difference.

Why? Because it allowed me, a

first time net control, the opportunity to hear and record those checking in. Wow. That was really cool, and made the experience worthwhile. So I can say with absolute confidence, you too can be net control. Consider giving it a try, the people who check in will work with you to make it a great experience. We are open to having more people expand their role, so give it a try. We will help you, that is what our club professionals do. They are awesome.

This month we will not have a regular club meeting nor will ARES[®] / RACES meet at the Law Enforcement Center. Instead, we will be meeting for the SkyWarn[®] Training

Al Bailey, KA9WCS

program. This training is at the Midland High School Little Theater at 7:00 pm. This program is free, and open to the public. So take the time to ask someone to come who is not a ham. We have room for all.

Next month, April 6th we are looking to do some practice with our hand-held radios. Plan on coming to the Law Enforcement Center at 6:00 pm. Bring your hand-held or mobile radio and the manual. We have some very experienced operators who will help you to practice doing some of the on-the-fly changes needed under field conditions. Then we will go outside and practice these skills.

SkyWarn[®] Training March 2nd

The National Weather Service will be conducting Storm Spotter training at 7 p.m. Thursday, March 2, at the Midland High School Little Theater, First Floor, Room 156, 1301 Eastlawn Drive, Midland.

There will be no charge for the class, which will run about two

hours, and is jointly sponsored by the Midland County Office of Emergency Management and the Midland Amateur Radio Club. Though these classes are meant to train Skywarn[®] volunteers for Midland County and the surrounding area, the class is open to anyone and those who do attend are not committed to become Skywarn[®] volunteers. Those not wishing to volunteer may still wish to take the class to learn how to protect themselves and their families. Registration is not required.

For more information, contact John Wolters at (989) 832-9122.

2017 MS Walk Volunteers Needed

Volunteers are needed for the annual MS Walk scheduled for April 29th. This year's Walk will start and end at Midland HS. The event runs from 9:00 am to noon and will feature both 1 and 3 mile walks this year. If you'd like to assist in this low impact public service event, contact KB8UIH to volunteer. More information will be posted as it becomes available.

Chris Rose, KB8UIH <u>kb8uih88@charter.net</u> 989-832-7179

VE Session March 25th

The Midland Amateur Radio Club will be conducting an Amateur Radio License Testing Session on Saturday, March 25th, 2017 at the Salvation Army Building, 330 Waldo Ave., Midland, Michigan. Registration will begin at 8:30 am, with testing shortly thereafter. Walk-ins are welcome. Candidates are reminded to bring two pieces of identification, pencils, and photocopies of any current licenses. Calculators are allowed. The test fee is \$15.00. Checks should be made out to ARRL/VEC.

Testing for all classes of license — Technician, General and Extra — will be offered.

Contact Dennis Klipa, N8ERF, or Lee Hodges, KC8ITI for more information. You may email Dennis at <u>n8erf@arrl.net</u>. Lee may be reached at (989) 486-3771 or via email at <u>kc8iti@arrl.net</u>

Amateur Radio Parity Act Speeds to U.S. House Passage, Heads to U.S. Senate

(ARRLWeb-01/24/2017)

Just 10 days after being introduced, the 2017 Amateur Radio Parity Act legislation, H.R. 555, passed the U.S. House of Representatives this week on unanimous consent under a suspension of House rules. The bill's language is identical to that of the 2015 measure, H.R. 1301, which won House approval late last summer after attracting 126 co-sponsors, but failed to clear the U.S. Senate last fall as the 114th Congress wound The new bill, again down. sponsored by Rep. Adam Kinzinger (R-IL), was introduced on January 13 with initial co-sponsorship by Rep. Joe Courtney (D-CT) and Rep. Greg Walden, W7EQI (R-OR), who chairs the influential House Committee on

Energy and Commerce.

"The grassroots effort of Amateur Radio operators across this nation in support of the Amateur Radio Parity Act has been remarkable, nothing like we have ever seen before," ARRL President Rick Roderick, K5UR, said. "To all hams, keep going! Now is the time to charge forward with that same momentum to the Senate. We can to do it!" The bill arrives in the U.S. Senate with ample time in which to garner its approval through an education campaign.

"We're very encouraged by the speed with which this bill made it through the House. It's amazing that this happened," said ARRL Hudson Division Director Mike Lisenco, N2YBB, who has been at the forefront of the legislative initiative. "With the help of ARRL members, we believe we can get this done," Lisenco continued. "We came within a hair's breadth last time, with 110,000 emails to members of both houses of Congress, as well as letters and telephone calls. Member participation in this final push is critical."

H.R. 555 calls on the FCC to establish rules prohibiting the application of deed restrictions that preclude Amateur Radio communications on their face or as applied. Deed restrictions would have to impose the minimum practicable restriction on Amateur Radio communications to accomplish the lawful purposes of homeowners association seeking to enforce the restriction.



Field Day 2017 Packet is Now Available

(ARRLWeb—02/16/2017) The <u>Field Day 2017 packet</u> now is available from the ARRL website. Field Day 2017 is June 24-25 always the fourth full weekend in June. There have been no significant rule changes from 2016.

The Field Day packet contains

everything you or your club will need to succeed in June, including explanations, FAQs, articles from experts, and even a log page template, if you log on paper for FD. For more information on Field Day, <u>contact</u> the ARRL Contest Branch.

Explore the World with Amateur Radio!

Great Lakes Division News

(ARRLWeb—1/31/2017) Greetings everyone, welcome to "Dale's Tales" for February 2017.

January included the Annual Meeting of the ARRL Board of Directors. This is the first of two meetings your Board holds each year. The Board operates with three main committees, the Executive Committee, of which I am a member, the Administration and Finance Committee and the Programs and Services Committee. Each has some very specifically defined duties and each makes its annual report during the Board meeting. These reports often contain motions to amend policies, make new guidelines and improve how we do things.

Once in a while I get to include in "Dale's Tales", some really neat tidbit of new information. This is one: I am pleased to report that our ARRL Programs and Services Committee accepted the recommendations of the Checker Rules Revisions Working Group to update revise the DXCC Card Checker Rules. I was fortunate to serve on that group during 2016 and we did offer some significant revisions to the guidelines and how they affect card checking in the field. The existing rules contained some strangely conflicting statements.

So, among the changes to be implemented this year, we will be able to appoint more card checkers, replace those who are inactive and allow HQ to appoint special temporary checkers for special events like large conventions. There were a number of other updates that removed the conflicts and aligned the guidelines for international card checkers more closely with those in the U.S. You can expect the revisions to be posted soon. An informational e-mail will be going out to all Great Lakes Division Card Checkers today. We will look especially at the geographic arrangement of checkers with the plan to place new card checkers in those regions that are remote distances from those currently in place.

In other Board action, we continue to offer our support for the House Bill 555, The Amateur Radio Parity Act. That Bill was introduced in January and passed the House of Representatives in just ten days. At the time of this writing, it is moving on to the Senate. Obviously, everyone has seen the rapid movement through the House and we can only hope that Senate action will take place soon. Watch the ARRL web pages and bulletins for updates on HR-555.

73, Let's be radio-active! Dale Williams WA8EFK Director ARRL Great Lakes Division wa8efk@arrl.org

Technical Topics and Information

(The ARRL Contest Update — Jan. 25, 2017) The <u>fourth edi-</u> tion of the <u>Agilent Impedance</u> <u>Measurement Handbook is avail-</u> <u>able</u>, and it provides guidance on how to make accurate measurements under various conditions. As automated measurements become more the norm, the handbook also points out how to recognize and avoid inaccurate measurement results.

◆ The *Boy's Life* website recently featured a how-to article on <u>building a crystal radio</u>. The design uses a wound coil and germanium diode driving a telephone handset. The telephone handset may be the most difficult component to find.

♦ Ward, N0AX, rediscovered this lament while reading "The History of the ARRL": "In March, 1916...Almost the entire interest of amateur radio of this period seems to have been in the development and improvement of operating practices and technique. Technical interest had fallen largely by the wayside, insofar as the typical amateur was concerned. There were routine arguments about the relative efficacy of high and low spark tones, and some discussion about the proper circuits and operating voltages to be used with audions, but the pervading spirit was one of complete

complacency with regard to the technical status of the art." Not much has changed since then, eh, OM?

• When good coax goes bad, it's often due to water ingress. DX Engineering has published a technical tip showing how to use a combination of rubber splicing tape and vinyl tape to make weatherproof coax connectors.

◆ The Flexradio folks have shared <u>an application note regarding grounding in the shack</u>. Single point grounding and the differences between RF and electrical grounding are among some of the topics discussed.

More Technical Topics and Information

(The ARRL Contest Update — Feb. 8, 2017) Managing your local RF environment is essential to be able to continue to hear weak signals. Tracking down and eliminating local neighborhood RFI sources is one aspect of this. On his website, Larry, W0QE, <u>de-</u> scribes a method of using a spectrum display for tracking and identifying RFI sources. Larry developed a broadband high impedance amplifier to be used in conjunction with small whip antennas appropriate for mounting on vehicles. Tom, W0IVJ, used freely available software to make this video of using Larry's hardware for RFI 'war driving' to identify RFI sources, in this case VDSL2 modems. Larry's RF amplifier design is one that is applicable for nearly any SDR using small vertical monopoles while the screen video recording techniques could also be used, for example, in contest logging training. (Tom, W0IVJ, via RFI Reflector)

◆ Identifying man-made signals you might hear or see on your waterfall display might be made easier with the <u>Signal Identification Guide Wiki</u>. Signals of all types, including Over The Horizon (OTH) RADARs, digital data transmissions, and encrypted communication formats, are listed. Descriptions include sample audio as well as waterfall displays. (Dennis, N6KI)

◆ In your contest station-building activities, you might find this "... curated list of awesome resources for electronic engineers and hobbyists" (their description) of use. It's hosted using Github, so contributors can suggest changes through pull requests.

◆ Microwaves & RF's recent article on coaxial cable provides a good overview of cable types and dielectric construction, mostly geared toward higher frequencies and commercial uses. Only 12 more years until the coax centennial! (Tim, K3HX)

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AC8QF AC8RT AG8B K0ACP K6VWE K8RI K8VB K8VFO KA8ORL KA9WCS Current Act	KB8SOE KB8TBI KB8UIH KC8ITI KC8MUD KC8RTW KC8TQS KD0JHX KD8HID KD8HIH	KD8IWB KD8MRB KD8QAM KD8QXK KD8QXL KE8CTI KE8DON KE8DOP KE8EOW	Good Standing KE8EOX KE8FIX KE8FIY KE8FIZ KE8FJA KE8FJB KE8FJD N8CGP N8ERF N8JBW	N8KRL N8LBF N8NGT N8WTQ NX8A W8LSS W8PMR W8QN W8WOJ W8ZSX	WA8KJR WA8LQD WA8Y WB8FYR WB8RCR WD8AXR WD8BDM WD8BPT WD8ODG WN8QGV	
	Bir	thdays Celebrated	l in February/M	arch		
KC8ITI 2/2 AA8EJ 2/3 W8JBD 2/4 KE8EOW 2/4 K0ACP 2/7	KD8 W81 KB8	8LQM 2/8 8EJK 2/14 NON 2/14 8MCI 2/15 8TCH 3/4	AC8RT KB8VSU NQ8T 3 KC8RTU KC8RTW	J 3/9 B/15 J J 3/16 V	KD8QXL 3/18 K8VB 3/20 KC8FDM 3/26 WD8OEU 3/27 W8QN 3/31	
Anniversaries Celebrated in February/March						
KC8TQS and Julia 02/14KC8ITI and KC8MUD 3/6WN8QGV and Belinda 3/4WD8BPT and Melody 3/13K8RRB and ??? 3/4WD8BPT and Melody 3/13						
Information is from data received 1/2/2017 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: Pape	er copy via USPS or via e-mail	

Are you an ARRL Member? Y/N Do y

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