



W8KEA

MARC



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

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	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, July 6, 2017, 6:00 PM
Law Enforcement Center, 2727 Rodd St.
Midland ARC Meeting — Thursday, July 6, 2017, 7:30 PM
Salvation Army Bldg, 330 Waldo Ave.
Talk-in 147.000+

July 2017

Static Discharge

John Wolters, W8QN

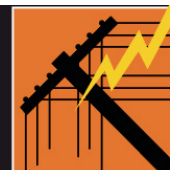
Well, we have passed the midpoint of the year, happy July 4th. When I write this, Field Day weekend is approaching. It will be over by the time you are reading this, so I hope that you had time to participate. Midland joined Saginaw this year at the Elmer Lange Park in Kochville for Field Day. Lots of room for parking, camping and antennas. Hope for a report at the July meeting on how things went. The Swap has been moved to August 12th due to scheduling conflicts. It will still be held at the Salvation Army Building. Please help get out the word to others about the move if you can.

And finally, the installation of my amateur gear in the new car has slowly come to fruition. Power run from the battery, thru the firewall, to the radios, power pole connectors installed, antennas installed, coax run, chokes installed for HF, SWR checked (antennas tuned) and so on and so on. While it took over four weeks to get things agreed to by the XYL, gathered, built and installed, I am fairly happy with the outcome. We will see how it operates on the next vacation trip.

Thanks for taking time to read the newsletter and hope to see you at the July meeting.

John Wolters, W8QN

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



MARC Minutes

Linda Hodges, KC8MUD

John W8QN brought the meeting to order at 7:30 pm with 32 members and guests present. Introductions were made and a sign-in sheet was passed around.

Any additions or corrections to the minutes should be brought to the attention of the secretary Linda, KC8MUD.

• Presentation — Dennis, WD8BPT — Thank-you Dennis for the power point presentation all about your home-

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.

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.

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@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 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.

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) or John (w8qn@arrrl.net)

built communications trailer.

• Treasurer's report—Larry, N8CGP—The report included both April and May. Thank-you to all who have renewed their membership.

• Dow Run—John, W8QN—A big thank-you to all the operators who came out to the event to help, especially to the several members of the Saginaw club. Your help and support is greatly appreciated. Event officials commented on the professionalism and efficiency our club brings to the table. Good Job everybody.

• Swap—Keith, KB8SOE — The sale is set for Sat. August 12th. The discussion included admission prices, table rent and the VE Exams. Please pass the word about this important date.

• Field Day—Mike, KD8HMM—Plans are being made for the Midland Club to join the Saginaw Club for Field Day at Kochville and Mackinaw Rd. We can begin setting up on Friday. There is a pot luck dinner at 6:00 pm on Saturday. Campers are welcome. Also, Mike says thank-you for the MARC support for their MS Walk.

• High School Club—Dennis, N8ERF— Please join Dennis for an Antenna Party at the Midland High School on Saturday, June 17th at 9:00 am for some SteppIR motor repair. Dennis also gave a balloon launch report. The balloon was launched from Edenville with 14 students and parents present. All systems worked perfectly. Lots of positive feedback is coming back from the kids, parents and teachers. Plans are being made to launch a balloon from the half-time at a football game in the fall.

• Don, W8WOJ—Dennis, N8ERF—Don is doing well but has moved into a new home. He can still have his antenna and radio equipment.

• Silent Key—Linda, KC8MUD—

Glenn Boggs, AA8EJ has passed away.

• John, W8QN—Do we want a meeting on July 6th? It was decided that yes, we want a meeting.

• Repeater Problem—John, W8QN—There was a short repeater discussion about some problems it was having. If you hear any problems with the repeater please let John know.

Net Control:

June 8 th	Art, K0ACP
June 15 th	Dennis, N8ERF
June 22 nd	Lee, KC8ITI
June 29 th	John, W8QN

• Lupton —John WB8RCR—Keep July 7th, 8th and 9th open for the Lupton Section Outing weekend. Traditional camping paired with radio seminars and information meetings is a great opportunity for the entire family. Go to www.sectionouting.info for more information.

• Museum Ship Weekend —Lou N8LOU—Lou told about a radio event on the USS Edson Museum Ship coming up this weekend. The USS Edson is docked in Bay City and is always a fun, entertaining and educational destination.

• Hamvention Update —Pat W8PMR—Great review, Lots of room, lots of stuff, well attended, Very positive experience. A few driving delays but parking was good and there was a shuttle service.

A motion to adjourn was made by Larry N8CGP and seconded by Keith KB8SOE.

The meeting ended at 9:30 pm.

Respectfully submitted by
Linda KC8MUD

My Two Cents

To paraphrase Dr. Seuss, "oh, the things that you'll learn..."

At last year's Hamfest, I spotted a used Yaesu FT-817, the very popular DC to daylight all-mode QRP radio. From a number of years, I'd been thinking about how the '817 would be a handy tool to have in an EmComm go-kit—an HT, portable packet station, local APRS digi

Pat Mullet, KC8RTW

and a digital-mode rig, all in one box. Granted, it's low power, but for local use, it should haul the mail, and hey, there are always the 50 watt power amplifiers on the market.

Then I got thinking about satellite ops—I knew many hams have worked the FM birds using 2m/440MHz handheld antennas and dual-band HTs and

that the ground station's needed to operate with reduced output power. Great, now I have another use for the little rig. I'm so glad I picked it up!

Googleing satellite ops, I learned that ideally, one used full-duplex mode for satellite QSOs, that is, listening to both sides of the contact, which is why many used a pair of HTs or radios, one per band, for serious satellite work. And then there was that pesky thing called "Doppler shift," the apparent change in transmission and receive frequencies due to the fact that the birds are moving so fast.

To get around Doppler, you can program a range of frequencies into your HT and change memory channels during the pass, or, if your radios are capable of PC control, you can let software such as Orbitron crunch the numbers and tune the radios.

Now, I was fine with letting the computer talk to the radio(s) but since I was doing this on a shoe-string budget, I didn't really want to buy another radio for receive only, though I could use my HT for the task, but then I'd be back to manually changing the frequencies, and I didn't have enough hands to hold an antenna, change frequencies and hold a mike!

More time spent with Google revealed that a number of hams were using the inexpensive little RTL-SDR dongles as satellite receivers and allowing software to tune both the dongle and the radio. I'd picked up one of the cheap dongles from eBay after Mark Rodgers, KC8GRQ, gave a demonstration wherein he used the SDR dongle to decode the digital audio from a scanner radio.

So, now I have the hardware and a

list of software that can do the job—all I'm missing is a hard 'n' fast method to tie it all together...so, back to Google.

And then serendipity raises her head.

I've always liked the idea of a panadapter, bandscope, or spectrum scope, whatever you wanted to call it. To be able to see a graphic display of other hams operating on the band would be fantastic. Oh, I know that this is an old technology, and that in the days before microprocessor controlled radios, so called CRT display "station monitors" were readily available, but by the time I was licensed, they were being reintroduced in a crude fashion. My Alinco HT has a crude, ten-segment display of active adjacent channels. The Icom IC-7000 has much improved display, but when it's engaged, it timeshares with the receiver, giving the audio a chopped, broken effect. SDR Panadapters came out a while after the 7000 debuted, but the general consensus was that to use one, you needed to go into your rig and tap the first IF stage for a feed for the SDR to decode.

Still looking for the method of interfacing my software for a satellite station, I chanced across a discussion on an online reflector about using HDSDR, my SDR software of choice as a panadapter. Now back to the internet to find the best way to tap a signal first IF amplifier on my radio. If this proves out, I think I'll have to get a couple more of those RTL-SDR dongles and look at adding another monitor to my shack computer!

Oh well, back to Google....

Hope to hear you on the air.

73, Pat, KC8RTW

ARES®/RACES

Michigan held a statewide exercise on a long term power loss this past week. The State EOC was activated and on Friday June 16th, the amateur radio operators were able to participate in the activity. Many of you saw the daily updates I was able to send as the scenario progressed. This was a real learning opportunity for me, without a doubt. I really want to thank the people who volunteered for 4 hours on Friday to help man a net and monitor traffic signals. Sometimes there can be nothing less fun than monitoring a frequency and not much is happening. So for those people who helped, you shared the most valuable asset of all, your time in service to your community. Thank you to

Al Bailey, KA9WCS

N8ERF, KC8ITI and W8QN; this was really a great selfless act. You guys are the best.

Our next meeting is July 6th, and we will continue to work on the sensitivity mapping we started at the last meeting. Thanks to Marty and Crew for making that work—I had a family obligation out of town. Please bring your hand held radios again as we go out to see how far we can reach the 911 center on simplex radio. If you have not come before you are welcome to join in this fun and useful activity.

Al, KA9WCS

Upcoming Events

6/24-25	Field Day
7/7-8	Lupton

Michigan Hamfests

7/22	Shelby Township
7/22	Harrison
7/29	Lansing
8/5	Escanaba
8/12	Midland
8/13	Port Huron
8/19	Alpena
9/9	Wyoming
9/17	Adrian
9/23	Shelby Township
10/7	Brooklyn
10/21	Muskegon
10/22	Kalamazoo
10/29	Madison Heights
12/3	Madison Heights

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.

Dow Run Final

After a long wait for the final race, Girls on the Run, the 2017 Dow Run came to an end. I think it was a great success and want to thank all of you that took time out of your day to help.

In no particular order, they are: Dave Wallick, N8LBF; John McDonough, WB8RCR; Dennis Caney, WD8BPT; Dorrie French, N8WTQ; Joe Tuscher, N8OSL; Emmett Bengry,

NE8B; Mike Dougherty, KD8MMH; Jim Wise, KC8HTH; Mike Elias, K8AVJ; Kevin Cuthbertson, KD8QXL; Debbie Cuthbertson, KE8EOX; Chuck Cribley, WA8LQD; Keith Johnson, KB8SOE; Chris Rose, KB8UIH; Marty Crook, KE8FIZ; Dennis Klipa, N8ERF; Linda Hodges, KC8MUD; Del Lafavor, WB8FYR; Paul Tolly, KE8GEM; John Tallman, KB8PGW and Michael Linton,

N8XPS. I know there were a few sons and daughters but I did not get their names, sorry. Also if I missed someone I am terribly sorry. Make me aware of who you are and I will correct the mistake.

John Wolters, W8QN

2017 Midland Hamfest Date Changed to August 12th

Due to a scheduling conflict with our venue the date for the Midland Amateur Radio Club Hamfest and Swap has

been changed. The swap will take place this year on August 12th, 2017 at the Salvation Army Building, 330 Waldo Ave.

See the club website, w8kea.org for information as it develops, or contact Keith Johnson, KB8SOE at kb8soe@arrrl.net.

Michigan Section Family Outing at Lupton, July 7-8

Once again the Michigan Section will hold its annual outing on July 7-8 at Lupton, and once again we have a fun and interesting program planned, especially for those involved in emergency communications.

A highlight of Saturday will be our own Lee Hodges, KC8ITI, who will be leading a group build of a roll-up J-pole

antenna. This is something everyone should keep in their trunk. Throw it up in a tree and extend the range of your HT.

Some other speakers will be Tim Crane of Genesee County, also Alex Abdun-Nabi, the State Police Training and Exercise Officer, and of course there will be an ARRL forum where you get to grill

Michigan Section Manager Larry Camp, WB8R as well as Great Lakes Division Director Dale Williams, WA8EFK.

Full details at <http://www.section-outing.info>

Oh, and pizza, can't forget pizza.

73 de WB8RCR

Michigan Section News June 2107

Field Day 2017

The 2017 Field Day is almost upon us (boy, the time goes fast...) and all thoughts point to the last full weekend of June. On June 24 and 25 we will all be heading to our local FD locations to become radio-active! This is a great opportunity for amateur radio to be in the public spotlight and to have some serious fun. Be sure to take advantage of all opportunities to get publicity for your event. What possibilities, you ask? Go to the ARRL website and search for Field day – there you will find all the tips on how to make your FD successful!

Don't forget to invite your Emer-

gency Manager and other public officials to visit. Your State Representative or Senator would appreciate an invitation and who knows, you may be able to get him or her on the air!

Amateur radio in Michigan has a pretty high profile with our elected officials these days, so this may be a good opportunity for an invitation and a first-hand look at what amateur radio is all about.

Governor Proclaims June 19 - 25 Amateur Radio Week

Governor Snyder recently declared June 19-25 to be Amateur Radio Week in

the State of Michigan. You can find the proclamation on the Michigan ARRL website (left most column on front page -Recent Posts) located at www.mi-arrrl.org.

This proclamation will make a great addition to your information table at your field day site. Feel free to send the proclamation and news release to your local media outlets as well. Many thanks to Section PIO KC8RTW for making this happen!

73 until next month,

Larry Camp, WB8R
ARRL Michigan Section Manager

Contesting Calendar

While I have still desired to provide a monthly article, you probably noticed that I have fallen into a bi-monthly column.

Last article was focused on grounding, and it would be remiss if I did not point folks to the new book by Ward Silver, N0AX; *Grounding and Bonding for*

Art Peters, KOACP

the Radio Amateur. Ward has a great way of explaining the seemingly incomprehensible; this book is a great example of his talent. I highly recommend checking

Midland Amateur Radio Club

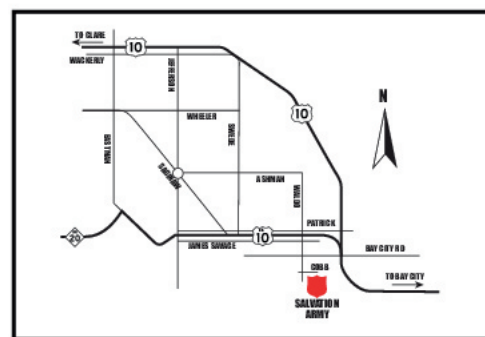
Midland Hamfest '17



August 12, 2017
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
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Parts, Coax & Connectors
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

Keith Johnson, KB8SOE at (989) 488-4337 email: KB8SOE@arrl.net

this out if you have desire to follow this thread.

This month, I am going to start a multipart series on antennas. The focus on this will be to select, design, fabricate, build and install a money-band wire antenna with some directivity and gain. I am going to focus on a 40-meter Half Square. The journey to selecting this antenna was steered by my desire to install a simple single band wire antenna that would provide some directivity and gain, while not being overly complicated to fabricate or tune. I chose 40m for the target band as that is a real money band for us now, especially where we are in the sunspot cycle. 40m gives good near-in performance, yet opens up and goes long at night. The half square is also a

good introductory antenna as it does all this without radials or complicated supports.

To verify my thoughts, I did some reading (Google and ARRL antenna book(s) are our friend) which lead me to conclude this was a good candidate. Next I did some quick modeling using *EZNEC* and was encouraged with about 3.5 dBI gain with some reasonable nulls along the axis of the wires. I am also a big believer in using common mode chokes, CMC, to reduce RFI, and noise that can be introduced without an adequately choked antenna system. So this forced me to consider how to integrate a CMC into the frame of the antenna.

For those not familiar with a half square antenna it has a couple of differ-

ent forms, the one that I chose consists of two $\frac{1}{4}$ wave vertical radiators that are top-fed and connected with a $\frac{1}{2}$ wave phasing line. The feed point for this antenna is at the top of one of the $\frac{1}{4}$ wave radiators. My plan is to hang this antenna from two trees and have the feed-line run away from the antenna in the same plane as the phasing line. Well at least for now, that is the plan.

Next time, I'll discuss my antenna support and the integration, fabrication, and measuring of the CMC.

Till then, 73 es God Bless,
Art / K0ACP

Operating Tip

(ARRL Contest Update—June 14, 2017) **Check and Change Batteries BEFORE the Contest**

This tip comes courtesy of Doug, W7ZZ: 'In the middle of the 7th Area QSO Party, while my computer was activating the transmitter and repeatedly calling CQ via the .WAV file, the wireless keyboard's batteries died. I realized

this as I tried to stop the transmitter from being repeatedly keyed, calling endless CQs. Typing didn't stop the CQ, as it should have. The ESCAPE key didn't stop it either. After initial panic, I realized the batteries must have died and that I had no way to communicate with computer other than to power it down. I ran around the house and, fortunately, found

a couple AAA batteries, all while I'm calling CQ. I inserted the batteries, hit the "connect" button on the bottom of the keyboard and breathed a sigh of relief as the CQs stopped. Never will I start a contest again without fresh batteries in the keyboard and mouse!'

Technical Topics and Information

(ARRL Contest Update—May 31, 2017) Ash, KF5EYY, has shared his [design of an Arduino-based SO2R controller and 6x2 Antenna Switch](#) compatible with the Open Two Radio Switching Protocol (OTRSP). By supporting the OTRSP protocol, it's compatible with logging programs that use support OTRSP for SO2R radio control, such as [Win-Test](#), [DXLog](#), and [NIMM Logger+](#).

♦ Some Internet-connected televisions supporting the [DVB-T standard](#) (used outside the US) may be vulnerable to hacking by a malicious payload arriving via the DVB-T receiver. In a [proof of concept](#), a malicious over-the-air signal was able to overwhelm the normal re-

ceived signal, and the television was instructed to retrieve a firmware update from a malicious website. The specifically crafted firmware had access to the all of TV's resources.

♦ [Carbon nanotubes were used to fabricate a Tellurium wire](#) one atom in thickness. By constraining the Tellurium to one atom of thickness, it exhibited characteristics of a metal, versus its normal semiconductor properties. Called Extreme Nanowires (ENs), these may find application as semiconductor devices continue to shrink in size. (Dennis, N6KI)

♦ [RF-KIT](#), a firm based in Germany, was exhibiting a legal-limit HF Amplifi-

er Kit at the Hamvention. The unit on display was using two LDMOS power devices and sported a 7" color touchscreen for amplifier control and status. The kit includes everything necessary to build the amplifier except the Raspberry Pi 3 CPU, and three fans. The company's literature states that it can be built in less than a day.

♦ [HobbyPCB](#), makers of the HARDROCK-50 HF Amplifier, were showing an [RF Wattmeter Shield for the Arduino](#) at Xenia. The shield itself is capable of measuring 0.1mW - 2W, and could be a useful component in automated monitoring of your station.

More Technical Topics and Information

(ARRL Contest Update—June 14, 2017) In the soapbox comments from the

most recent [June ARRL VHF Contest](#) many stations were reporting the use of

the MSK144 digital mode for making QSOs where a SSB or CW path did not

appear to exist. MSK144 can be sent and received using the [WSJT-X](#) program by Joe Taylor, K1JT. MSK144 uses exchange sequences as fast as five seconds to take advantage of propagation that might occur due to meteor scatter.

♦ Attention [EZNEC](#) users! If you export data from EZNEC into other programs using files ending in the ".slp" extension, you'll want to update to at least the 6.0.13 version. The newer version corrects an issue in the file's header

field. EZNEC is a popular Microsoft Windows based application for antenna modeling. (Ward, N0AX)

♦ The FCC and OSHA have partnered to publish a document entitled "[Communication Tower Best Practices.](#)" This document is not a how-to, nor prescriptive on practical tower construction or maintenance -- it's more of a description of the practices and procedures the various entities involved in commercial towers should use for management, co-

ordination, and documentation of work practices.

♦ Future autonomous vehicles may require a lot of connectivity. One manufacturer of vehicle antennas [estimates that up to 18 different antennas](#) could be required in some circumstances. AM, FM, multiple Wi-Fi and LTE, and GPS are all part of contribute to the requirements.

MARC Vital Statistics

Memberships Expiring in June

KB8UIH
N8KRL

NX8A
W8LSS

WA8KJR
WA8Y

WB8FYR
WD8AXR

WD8ODG

Memberships Expiring in July

KE8EOW

W8ZSX

WD8BDM

Memberships Expiring in August

N8NGT

Members in Good Standing

AC8QF
K6VWE
K8AVJ
K8RI
K8VB
K8VFO
KA8EZT
KA8ORL

KA9WCS
KB8AWE
KB8PGW
KB8SOE
KB8UIH
KB8VSS
KC8IHB
KC8ITI

KC8MUD
KC8RTW
KD8HID
KD8IWB
KD8MMH
KD8MRB
KD8QAM
KD8QXK

KD8QXL
KE8EOW
KE8EOX
KE8FIX
KE8FIY
KE8FIZ
KE8FJA
KE8FJB

KE8FJD
KE8GEM
N8CGP
N8ERF
N8JBW
N8KRL
N8LBF
N8NGT

NX8A
W8LSS
W8PMR
W8QN
W8WOJ
W8ZSX
W8ZSX
WA8KJR

WA8LQD
WA8Y
WB8FYR
WB8RCR
WD8AXR
WD8BPT
WD8ODG

Current Active Club Membership 55

Birthdays Celebrated in June/July

W8LSS 6/2
N8LOU 6/8
K8RI 6/16
KB8VSS 6/21
KB8IPU 6/23
KD8IWG 6/23
K8HP 6/24

N8POX 6/25
KC8URV 6/28
WD8ODG 6/30
KD8MMH 6/30
KA8ORL 7/1
KB8RCR 7/2
KG8YG 7/6

K8RRB 7/8
N8NGT 7/14
AG8B 7/18
KD8DWX 7/21
WB8RCR 7/21
N8LMS 7/27
W8OKN 7/30

Anniversaries Celebrated in June/July

N8CGP and N8KRL 6/5
N8KFE and Cheryl 06/12
KB8VSU and Barbara 06/13
N8STF and Mary 6/16
WA8LQD and Kathy 6/16
N8POX and Kris 06/17
W8LSS and WD8AXR 6/19

N8UPP and KC8AVI 06/21
WB8WNF and ??? 6/22
NX8A and Kristina 6/24
K8VFO and Mayumi 6/27
KB8PGV and Connie 6/27
K8CCE and Clarice 06/28
AA8EJ and Beverly 6/28

KD8HID and ??? 6/28
KE8CTI and Molly 7/8
KC8RTU and Brenda 07/20
KD8MQX and Emily 7/20

Information is from data received 3/20/2017

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: 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