



W8KEA

MARC



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

President	Kevin Martin KD8QAM	(989) 513-0100
Vice President	Art Peters, KOACP	(989) 400-3745
Secretary	Dorie French N8WTQ	(989) 835-5562
Treasurer	John Wolters W8QN	(989) 832-9122
W8KEA Station Trustee	Larry Macklin N8CGP	(989) 631-7748
Midland County EC/RO	John Wolters W8QN	(989) 832-9122
Midland County AEC	Chris Rose KB8UIH	(989) 832-7179
Newsletter Editor	Pat Mullet KC8RTW	(989) 828-6657
Newsletter Publisher	Art Peters KOACP	(989) 400-3745
ARRL Liaison	John Tallman KB8PGW	(989) 859-0364
Web Page Chairman	John McDonough WB8RCR	(989) 631-0178
Club Historian	Stan Rowe K6VWE	(989) 837-7252
Quartermaster	Lee Hodges KC8ITI	(989) 374-0032
Public Information Officer	Pat Mullet KC8RTW	(989) 828-6657
Field Day Committee	Kevin Martin KD8QAM/ch	(989) 513-0100
	Pat Mullet KC8RTW	(989) 828-6657
Swap Committee	Mark Rodgers, KC8GRQ/Ch	(517) 672-1060
	Pat Mullet KC8RTW	(989) 828-6657

LIFE MEMBERS

Larry K8SQB (SK), Don W8WOJ, Lee KC8ITI, Dennis N8ERF, Larry N8CGP, Denny WD8BPT

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 Oct. 3, 2013, 6:00 PM
Law Enforcement Center, 2727 Rodd St.
Next CLUB Meeting — Thursday Oct. 3, 2013, 7:30 PM
Salvation Army Building 330 Waldo Rd.
Talk-in 147.000+

October 2013

Static Discharge

Kevin Martin, KD8QAM

I would like to thank those who have held a club office for both their efforts and time. I would like to congratulate the officers for another year of service.

Mark KC8GRQ, we will miss your leadership as Vice President. You had put together a lot of nice presentations for the club, and a lot of wonderful demonstrations. We look forward to you sharing your vast knowledge of amateur radio and wireless internet with the club.

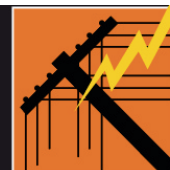
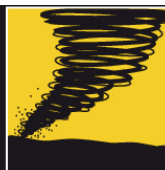
The Midland High School is making a lot of progress with setting up their tower and class rooms. There will be a meeting held at the school in the future so we can all tour the lab and class room.

The MARC picnic is on September 21st, at 11:00 am. Bring a dish to pass, and the grills will be available for anything that you would like to cook.

If you are available on October 5th, operators will be needed to help with the Dirty Dog Run out at Midland's City Forest at 7 am which should wrap up by noon.

Kevin KD8QAM

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



MARC Minutes

Dorie French, N8WTQ

The meeting was called to order at 7:35 p.m. with 30 members present. The minutes for the last meeting were posted in the newsletter.

- The Treasurer's report was made by John, W8QN. There was only one weather net this last month. W8QN said those who were out in the storm should use their own judgment as to keeping

MARC MEETINGS

Art Peters, KOACP, 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 Art at (989) 400-3745, or via e-mail: k0acp@arrl.net

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

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/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 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 Keith, KB8SOE, at kb8soe@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 Kevin (cherryredirocz@sbcglobal.net)

safe while spotting.

- The MHS ARC's first class is scheduled for September 25, 7-9 p.m. The tower was to ship on Monday, September 9. The base is in, computers purchased and students are being recruited. Everyone is enthusiastic about the program.

- The Dirty Dog Run will be October 5 at the City Forest. It will run from 7:30 to noon. A sign-up sheet went around. Anyone interested in helping should contact Lee, KC81TI.

- The MARC picnic will be September 21 at the Homer Park from 11-2. Bring a dish to pass, table service and the meat you want. Grills are there for cooking the meat. Bring children, grandchildren if you want, and any games you want to play.

- Elections were held. Keith, KD8QAM was elected president; Art, KOACP was elected vice president; John, W8QN was elected treasurer and Dorie, N8WTQ was elected secretary.

Net Controls:

Sept 12 John W8QN

Sept 19 John W8QN

Sept 26 Keith KD8QAM

- Ryan, KB8RCR, resigned and requested that any of his dues remaining should go towards a student's membership.

- A motion to adjourn was made by Larry, N8CGP and seconded by Gordon, WA8KJR.

Meeting was adjourned at 8:20 p.m.

Respectfully submitted,

Dorie French, N8WTQ

Secretary

My Two Cents

Pat Mullet, KC8RTW

Sometimes you just gotta go ahead and blow the rust off.

I've been diligently upgrading *FLDigi* and its associated programs whenever an update is posted—I'm a member of both the discussion groups that the developers frequent, and they're very good about posting whenever a new release is posted—but I'm afraid I haven't been play with the digital modes since the dead of winter. And I have to admit, while I'd become comfortable with the program, I'd come nowhere near the level of a power-user, more like a dilettante.

Flash forward to last month, when John, W8QN scheduled a practice session for the ARES®/RACES group to allow them to get their feet wet with the digital modes and allow us to add another "arrow" to our Emcomm "quiver."

We adjourned from the Thursday night Midland County Public Service Net and QSYed to the agreed upon HF frequency, and I immediately began to flounder. I'd forgotten all the macros I'd set up for quick "callsign/RST" type contacts, forgotten how to edit the buffer on the fly, forgotten how to preset commands in the buffer to toggle the radio into receive mode.

Rust? Heh. I felt like the Tin Man in "The Wizard of Oz." Where the heck

was that oil can? I struggled through the session, but man, did I feel sheepish.

Move ahead a couple weeks to last Thursday's Net. Once again, after the VHF ended, those of us equipped to operate in digital mode QSYed to 80 meters. Having at thumbed through the documentation, I was more comfortable at the keyboard, and it showed. The session was much smoother, the round table a bit more organized, though I admit that I doubled with Del, WB8FYR a time or two. And I was even able to play with a few of the bells and whistles of *FLDigi*.

That's pretty much the idea behind these sessions, get everyone comfortable with the program so we can begin to instill some net protocols and integrate the add-on programs that will allow transmission of both formatted messages and tabulated data which will undoubtedly be required should be called on during a disaster.

And, of course, it's fun.

But, it also points up the fact that you can't just show up for a deployment thinking you're ready for anything just because you own a hand-held. You need to be familiar with the tools, you have to train.

You gotta blow the rust off.

73, Pat KC8RTW

ARES®/RACES John Wolters, W8QN

We have been working with *FLDigi* and practicing on Thursday nights after the 9 pm Midland VHF net, working on hf 3.583 or there about. Coordination has been thru the repeater if needed. We will continue with this and additional practice using *FLDigi* thru the repeater. Join us if you want to start working with *FLDigi* and need help or feedback or just want to practice.

The annual Simulated Emergency Test (SET) will occur on Saturday October 5th. At this time I do not have any details on what District 3 will be doing but should know by the October 3rd meeting. I suspect we will be doing something with packet and *FLDigi* but that is only speculation on my part. Lee, KC8ITI, has another activity that the club has been asked to help with that

day so there will be some separation of forces. We will work thru that as required. See you at the meeting with more details.

There was some discussion on the use of mobile rovers during a Skywarn® activation. The gist of the discussion was that if you decide to help with mobile watching during severe weather please make your personal safety first priority. If you feel you are getting into a situation you are not comfortable with, get yourself out. Do not worry about us and the Skywarn® Net. When you get into a safe environment take time to let the Net know what you have seen. Your safety is first priority.

Hope to see you at the Oct. 3rd meeting.

John Wolters, W8QN

MARC Minutes Exec Meeting Aug. 28th

In attendance: Dennis Caney WD8BPT, Kevin Martin KD8QAM (President), Mark Rodgers KC8GRO (Vice President), Dennis Klipa N8ERF, John Wolters W8QN Treasurer), Lee Hodges KC8ITI and Linda Hodges KC8MUD (Acting Secretary).

The meeting came to order at 7:30 P.M.

- Logos-Kevin, KD8QAM passed around his exterior window decals with the club logo for a donation to the club.

- Nominations committee- Dennis Klipa, N8ERF- A discussion followed about this year's elections.

- Treasurer's Report-John, W8QN- John reports the club is in good shape. ARES®/RACES may ask for a donation sometime soon.

- Tech Class- Lee, KC8ITI- A new Tech Class may be starting soon.

- Trailer – Lee, KC8ITI- Pat, KD8IVZ found a trailer that the club might purchase. Questions were raised and a discussion followed. The trailer committee will pursue options.

- Picnic-Linda, KC8MUD- The fall picnic will be at Homer Township Park on September 21st. We'll gather at 11:00 am. The grills will be hot and the company wonderful. Please bring a dish to pass and join us for this end of the season celebration.

- Repeater- Mark, KD8GRQ and John, W8QN- Discussion included repeater maintenance and upgrades, telephone connection, building replacement, possible repeater replacement and the time frame to get projects finished.

- School Project- Dennis Klipa, N8ERF - The School project is giving our club credibility. A discussion followed about the school club and new tower. A follow-up discussion about rules of maintaining the school club finished the meeting.

- The meeting ended at 8:30 P.M.

Respectfully submitted,

Linda, KC8MUD, acting secretary

MARC Election of Officers

At the September 5th meeting, the membership of the Midland Amateur Radio Club held elections for club officers as provided in the club's bylaws. President Kevin Martin, KD8QAM, Treasurer John Wolters, W8QN and Secretary Dorie French, N8TWQ all ran

unopposed and were re-elected by unanimous acclamation. Setting Vice-president Mark Rodgers, KC8GRQ was defeated in his quest for a third term by challenger Art Peters, K0ACP who will assume office at the next meeting.

Upcoming Events

9/21	MARC Picnic
10/5	Dirty Dog Run
10/5	SET
10/20	JOTA

Michigan Hamfests

9/15	Adrian
9/21	Utica
10/5	Petoskey
10/6	Madison Heights
10/19	Muskegon
10/20	Kalamazoo
12/8	Harrison Township
2/16	Livonia

* Denotes date based on 2013 event

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.

VP's Database

Art Peters, K0ACP

First I would like to thank Mark, KC8GRQ, for his service as our outgoing Vice President, as well as to thank those of you who entrusted me the responsibility of being your VP. As I have said in the past, I am relatively new to Midland, so please indulge me if I stumble every now and then. To do the job that you all deserve, I'll need a lot of help and will be asking for some from all of you.

I would like to add a touch of rigor to our monthly program by adding a schedule, so that folks can know and plan for what is being presented at every meeting. Also, I'd like to mix up our

programs with a mix of presentations, demonstrations, and perhaps videos. Here is the calendar for the coming year:

October's topic is *APE: not just monkeying around*, presented by Art, K0ACP. For November, Kevin, KD8QAM discusses ladder-line antennas. Dennis, N8ERF will showcase the facilities at the Midland HS ARC for the December meeting. Next February, John, W8QN shows off his latest "toy", the Flex Radio Software Defined Radio transceiver. The rest of the year's slots are currently open.

Folks, here is where I need your

help. I am looking for some folks to prepare and give a 20 – 30 minute talk on a topic of your choice. Alternatively, I am looking for ideas for programs that could be presented to the club. Right now, my plan will be to circulate a sign-up sheet for you all to help fill in the blanks. Some of the topics, that I have thought of are: antennas – design, modeling, construction, and installation, stealth antennas, use of antenna analyzers, how to contest in a multi-multi environment, what makes a good grab'n'go kit, NTS, etc....

Till next month, 73 de K0ACP

MARC Fall 2013 Picnic

Remember September 21st is the date for the MARC Fall Picnic. Bring a dish to pass, your own table service, drinks and anything you would like to

grill. Charcoal grills will be fired up for your use. The location is the Homer Township Park on South Homer Rd. Plan on meeting around 11 AM for an

afternoon of fellowship.

Dorie, N8WTQ

Linda, KC8ITI

2013 Jamboree on the Air

In conjunction with the Boy Scout Fall Camporee which is being held at the Midland County Fairgrounds, the Midland Amateur Radio Club has been asked to set up amateur radio stations for Jamboree on the Air (JOTA). The Camporee is scheduled to run from Friday, October 18th through Sunday October 20th. Jamboree on the Air runs from Saturday October 19th through

Sunday October 20th. So far we have been asked to run our JOTA stations just on Saturday October 20th. The goal of JOTA is to allow scouts to talk to other scouts over amateur radio. Right now I'm planning on having 3 to 4 stations set up for the scouts to use. If we want to we can get our equipment set up on Friday the 18th. Camping spots will be available. All staff volunteers are required to pay a

\$15 registration fee which includes lunch on Saturday. I'm talking to the coordinator of this event so we are still in the planning stage as far as the logistics of this event. If you would like to help with this event please let me know by calling (989) 374-0032 or by sending me an email at kc8iti@arrrl.net.

Lee - KC8ITI

SOS Animal Rescue Dirty Dog Run

The SOS Animal Rescue people have asked for our help again this year with their event at City Forest. The date

is Saturday, October 5th. We should be on site by 7 AM and the event finishes by noon. If you can help with this low

impact event contact Lee, KC8ITI at (989) 374-0032 or email kc8iti@arrrl.net.

Midland High School Amateur Radio Club News

The advisory board continues to work diligently through the summer in preparation of the startup of the high school amateur radio club. The fund raising campaign is complete with a total of \$45,062 raised! We want to thank the following contributors; Midland Amateur

Radio Club, the Midland County Youth Action Council as administered by the Midland Area Community Foundation, The Dow Corning Foundation, also administered by the Midland Area Community Foundation, the Midland Kiwanis Foundation, the Kiwassee Kiwanis

Foundation, USW Local 12934, the Midland Rotary Foundation, the Gerstacker Foundation, the ARRL Foundation, the ARRL ETP Grant program and, of course, many individual donors.

This is a very complex project with many facets and many unknowns in un-

It's Not Your Grandfather's Amateur Radio!

charted waters (at least for us). It would be great if everything went according to plan but there is always going to be challenges. Fundraising was indeed a challenge but we have overcome that hurdle. The challenge we have been attacking for several months now has been getting the tower installed. We finally have a contractor, Gerace Construction, and have accepted a bid. We have had to change the location of the tower as the cost of the installation at the first site was prohibitive. The current challenge is getting a permit to install the tower. Based on input we had gotten from the city, we thought we had the permit issue well in hand. But we recently found out that that was not the case. We will have to make a presentation to the zoning board of appeals to get a variance from the 20 ft tower height limit. We are hoping that we will be successful. John, W8QN is working to put together the paperwork for this meeting. The paperwork was due August 23 and the appeal board meeting is September 22nd. Keep your fingers crossed. The tower has been ordered and the base should have

arrived on August 15th. The SteppIR DB-18 was purchased and delivered on August 13th. We have also done an analysis of the cabling that we will need for the various antennas and rotors. And finally, we have ordered some computers to be used at the operating stations.

We have received 5 oscilloscopes, 5 variable power supplies and 5 signal generators for use in the lab from the Electrical Engineering and Computer Sciences department at the University of Michigan thanks to Prof. Alexander Ganago. It was originally to have been a donation, but the U of M department of investment recovery had the final say and we had to pay \$450. It was a bargain. The scopes are awesome. On top of that Agilent Technologies donated two more of the same model scope for a total of seven 100 MHz dual channel scopes.

Thanks go to Prof. Ganago for the lead on that one too. The ARRL ETP grant was approved and should provide us with about \$2000 worth of equipment for a UHF/VHF station.

We started the student recruitment program before the end of the school

year last May. We are starting up again at the end of August. We are still working on exactly what we are going to in the club. That has partially been up in the air due to the uncertainty about the tower. Now that we know the tower won't be in place when we start up the club near the end of September, we know what we need to focus on.

Dennis, N8ERF has built the three desks that will be used for the three operating stations. He has also built and installed the cabinets that go behind the desks and will act as the cable chases for all of the wires. The shelving that will set on the desks and hold the equipment is under construction even as this article is being written. The cost of the desks, shelves and cabinets is just a trifle over \$1000. Thanks to John, W8QN; Zack, KD8ULE; Lee, KC8ITI and Lee's grandchildren for the assistance with the installation.

There is still a lot of work to be done but we are all very excited about getting the show on the air.

Best Regards,
Dennis, N8ERF

NASA Invites Ham Radio Community to Say "HI" to Juno Spacecraft

(ARRL Letter, Sept 12, 2013)—NASA's Juno spacecraft will fly past Earth on October 9 to receive a gravity assist, putting it on course for Jupiter. To celebrate, the Juno mission is inviting Amateur Radio operators around the world to say "HI" to Juno in a coordinated Morse code message. If enough operators participate, Juno's "Waves" radio and plasma wave experiment should be able to detect the message. The *Say "HI" to Juno* web page will be updated with additional information as the event approaches. All transmissions will take place on 10 meters, with the precise (suggested) frequency determined by the last letter of your call sign (see the web page below).

Sponsors say Juno will have a better chance of detecting signals from many operators if the transmissions are spread out across the spectrum. The Juno Waves instrument is a broadband receiver, and the detector being used for this event has

a passband that's 1 MHz wide.

While the Waves instrument is sensitive to radio signals in all amateur bands below 40 MHz, sponsors chose 10 meters, because experience with the University of Iowa instruments on the Galileo and Cassini Earth flybys showed significant ionospheric shielding at lower frequencies. Sponsors actually are hoping for poor band conditions on October 9, so an appreciable fraction of the radiated energy can escape the ionosphere into space.

Indicators on the *Say "HI" to Juno* web page will instruct participants when to transmit and when to stop transmitting. Each will have a timer to indicate how long until you switch from one mode to the other mode. Stations should transmit a legal station identification as the FCC or non-US regulators require. Participants should consider their stations to be operating as attended beacon stations and should avoid transmitting on top of ongoing communications.

Stations with directional antennas should check the web site for information on what headings to use during the event. Visit the *Say "HI" to Juno* web page for full details and to obtain the latest information. The activity begins October 9 at about 18:01 UTC and continue until about 20:41 UTC. Operators taking part should make sure their computer clocks are synchronized to network time prior to the event. The web page will indicate when you start or stop transmitting (key down/key up).

Participants can receive a QSL card for contacting Juno. E-mail your call sign and mailing address to: juno_outreach@jpl.nasa.gov. Additional information is available at NASA's Juno website and the Mission Juno website. -- NASA Jet Propulsion Laboratory; thanks to John Andrews, ACØXY

Read more at the "Say "HI" to Juno" web page: <http://www.jpl.nasa.gov/hijuno/>

Explore the World with Amateur Radio!

Hurricane Watch Net to Activate for Hurricane Ingrid

(ARRLWeb, 09/14/2013)—[Updated Sep 14, 23:15] Hurricane Watch Net (HWN) manager Bobby Graves, KB5HAV, has announced that the net plans to activate Sunday, September 15, at 1500 UTC on 14.325 MHz in response to the approach of Hurricane Ingrid, only the second hurricane of the 2013 season.

A hurricane warning has been issued from Cabo Rojo to La Pesca, Mexico. A tropical storm warning has been issued from north of La Pesca to Bahia Algodones,

and from south of Cabo Rojo to Tuxpan, Mexico. A tropical storm warning from Coatzacoalcas to south of Tuxpan has been discontinued. Interests elsewhere along the Gulf Coast of Eastern Mexico should continue to monitor the storm's progress.

Now a category 1 hurricane, Ingrid is expected to produce 10 to 15 inches of rain over a large part of Eastern Mexico, with isolated amounts of 25 inches possible, especially in mountainous terrain. Life-threatening flash flooding and mud slides

are possible along with storm surge along the immediate coast near and to the north of where the center of Ingrid makes landfall. The surge will be accompanied by large and destructive waves.

The HWN will be looking for condition reports from stations in the affected areas and appreciates the consideration of other radio amateurs in keeping the net frequency clear and for listening for possible relays. For more information, visit the HWN webpage (HWN.org).

Technical Topics and Information

(ARRL Contest Update, August 28, 2013)—Guy K2AV found a particularly interesting view of propagation provided by the Reverse Beacon Network (RBN) watching a particular signal over an entire contest. The results document the propagation modes changing, particularly if conditions are quiet. He presents an example recorded during the 2011 ARRL DX CW contest on 40 meters when multi-multi stations were all calling CQ consistently. Start by logging on to the RBN's analysis page. "Enter 02/19/2011 as the date. Click on the Europe bar. When the station selection expands, click on S5ØARX. Enter NY4A, W3LPL, and K3LR under stations. Look at the 40 meter spots. On the right side of the graph for the...day, Saturday evening was for propagation one of those wide open very "smooth" propagation evenings analogous to reflections off a lake on a windless day. In particular, starting around 19Z or so, see how NY4A's strength goes through three jumps up to a plateau. You can see that LPL and LR climb them as well. These plateaus follow the propagation changing modes (numbers of hops and angle) as the band opens into the evening. Note that the NY4A 5-element long quad (at 84 feet center height, over 179 feet of catenary) engages all three modes cleanly and fully as they open, without any fading. If the path to EU from NY4A is cleanly open, the path must be open from LPL and LR distances. By common expectation LPL and LR should have a propagation advantage over NY4A. LPL and LR both have excellent stacked 3 or

4 element 40m Yagis. But note how as the fourth mode is engaged, both LR and LPL fall off because they are not cleanly engaging the mode, most likely because the increasing elevation angle is (moving) into a notch in the Yagi vertical pattern. Also note that NY4A carries the best signal for most of the 24 hours. This is an evaluation of the NY4A 40 EU quad vs. known excellent installations that is hard to argue with."

- If you have a crank-up tower and are seeing some broken strands on the lifting cable, there are standards for when a wire rope should be replaced by OSHA and inspection tips from Safety Solutions. (Thanks, Grant KZ1W) <http://www.grainnet.com/articles/Inspecting_Wire_Ropes-10905.html>

- Don WD8DSB recommends using Kynar-insulated wirewrap wire to wind binocular core receiving antenna transformers. The Kynar insulation resists being scratched by the core's sharp edges and it can be easily removed for soldering. Radioshack stocks the wire in 50-foot spools of different colors.

- Speaking of wire wrapping, Mike N2MS reminds us that the technique was very popular in the 60's and the 70's before the advent of multilayer printed circuit boards. The Apollo Guidance Computer's backplane was connected via wire wrap. Wirewrap is still quite practical for the homebuilder. <<http://w2dtc.com/2011-0522-infoage/2011-0522-0061.jpg>>

- The RF & Microwave Toolbox app from the *Elektor* magazine developers is now up to 55 different functions. It runs

on devices using the Android OS and just costs a few euros. <<http://www.elektor.com/news/rf-microwave-toolbox-app-updated.2538725.lynx?referer=rss>>

- Here are some useful formulas for resistive signal splitters from *EDN*. These come in handy for dividing receive antenna signals between several radios without any matching transformers. The small amount of loss is usually not a problem on the lower HF bands. <<http://www.elektor.com/news/rf-microwave-toolbox-app-updated.2538725.lynx?referer=rss>>

- From the coherer to the cat's whisker to the semiconductor diode and now to a light-wave RF detector? Maybe you'll have to adjust the laser to shine on the most sensitive spot! (Thanks, Brian Fernandez)

- Gary W9XT presents his portable NVIS antenna design in this online presentation. A few more of his good talks are available as well. <<http://www.elektor.com/news/rf-microwave-toolbox-app-updated.2538725.lynx?referer=rss>>

- Vacuum tube fans will find the PSU Designer software useful, indeed. It is intended to help design simple, unregulated linear supplies using vacuum tube rectifiers. The software does not appear to be certified to run on Windows Vista or Windows 7, however. (Thanks, Paul W9AC) <<http://www.duncanamps.com/psud2/>>

- Did you ever wonder about "why 50 ohms?" Gary K9AY tackles the subject in this *High Frequency Electronics* editorial. (Thanks, Brad NK8J) <<http://www.duncanamps.com/psud2/>>

More Technical Topics and Information

(ARRL Contest Update, Sept 11, 2013)—If you are trying to track down some pesky intermodulation distortion (IMD) products, the online intermod calculator at RadioMobile is a very helpful tool. IMD is by no means just a VHF+ problem as multi-transmitter HF contest operators well know! http://radio-mobile.pelmew.nl/?RF_Aids:On-Line_calculators:Intermodulation

- Maxwell's equations—which form the foundation of our understanding of electromagnetic phenomena—are often shown as four separate equations using the notation of vector calculus. But few know that those equations were actually created by Oliver Heaviside who reworked Maxwell's original twenty equations into the four we use today. For those interested in how this transformation was made, see if you can find a copy of the article "The Evolution of Maxwell's equations from 1862 to the Present Day" by John Arthur in

the June 2013 issue of *IEEE Antennas and Propagation Magazine*. Some math is involved! You may be surprised at some of the names of those who were involved in the work.

- From the "Why Didn't I Think of This? Department, here is a workbench accessory we all need - the workbench Electrical Tape Dispenser! <http://www.instructables.com/id/Electrical-Tape-Dispenser/>

- Ricardo PU2CLR is developing an Arduino-controlled antenna tuner. You can watch his progress in this YouTube video. The latest addition is a homebrew butterfly-style capacitor. English subtitles are provided for better understanding by English speakers. <http://www.youtube.com/watch?v=Rwl3G2ET7Jw>

- Where IS that footswitch? They seem to have quite a knack of slowly migrating to the most inconvenient possible location during the contest. Hans KØHB

says his seamstress wife, Colleen KØCKB pointed him in the direction of Pedal Sta II to keep that switch where it belongs. Solving the same problem, Tad K3TD recommends the widely available Linemaster Clipper 642-S. He says "It is heavy and heavy-duty and will not move around."

- How much basic science do you know? It is reported that only 7% of the adult population in the U.S. gets all 13 questions correct on this current science quiz. <http://www.pewresearch.org/quiz/science-knowledge/>

- In discussing how to keep hardware from seizing and corroding, there is no end of suggestions. Jon W4ABC, residing between the Gulf of Mexico and Tampa Bay, recommends "Never-Seez Regular Grade." It comes with a brush-on applicator that is a little easier to use for coatings than a squeeze tube. <http://www.bostik-us.com/sites/default/files/NSRegular.pdf>

MARC Vital Statistics

Memberships Expiring in September

KD8TCH

Memberships Expiring in October

N8FUZ
W8LSS

WD8AXR
W8QN

WB8YAG

Memberships Expiring in November

KB8TBI
WA8LQD

KD8ULA
Bruce Temple

Current Active Club Membership 52

Birthdays Celebrated in September/October

KC8ZMQ 9/6
N8STF 9/9
N8FUZ 9/17
KB8PGV 9/17
KB8SOE 9/19
KB8WEE 9/24
KC8GRQ 9/27

KC8YTK 9/29
W8WOJ 10/3
W8ZSX 10/5
N8LTR 10/10
N8WTQ 10/10
WD4PIJ 10/13
KA0KPP 10/16

KC8TQU 10/19
WB8IDY 10/23
KB8PGW 10/25
N8OVT 10/27
KC0CJC 10/31

Anniversaries Celebrated in September/October

N8LBF and KB8QYC 9/6
W8JBD and ??? 09/10
KC0CJC and Sally 9/12
K8RI and N8JBW 9/26
KG8YG and Rachel 10/01

KD8CUX and ??? 10/04
KB8MCI and Cyndi 10/06
WB8RCR and Eileen 10/12
WB8IDY and Audrey 10/19
KB8SOE and Darcie 10/19

KC8GQK and Tera 10/20
KB8LQM and KC8IHB 10/23
NQ8T and Barbara 10/23

Information is from data received 8/14/2013

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