



W8KEA



MARC

MIDLAND AMATEUR RADIO CLUB
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www.w8kea.org

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	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 November 1, 2012, 6:00 PM

Next CLUB Meeting — Thursday November 1, 2012, 7:30 PM

Salvation Army Building 330 Waldo Rd.

Talk-in 147.000+

November 2012

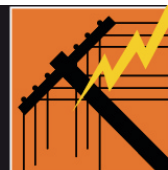
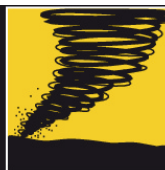
Static Discharge

Kevin Martin, KD8QAM

The cold air and the raking of the leaves are setting in and making way for the snow to fall. I have a few antenna projects that still need to be wrapped up. I am toying with the idea of putting a two-meter radio on the bike over the winter. It would be a nice addition, but with people wanting to cut you off all the time it may be a distraction.

The garage is turning into a typical ham shack with parts and pieces filling up the workbench. I have been fortunate this month that we haven't had to use any band-aids for anything. I seem to be getting very acquainted with Murphy's Law. I have been getting on the air more that all the non-radio projects are getting finished. The big antenna that I was trying to get up is sitting on the bench in a few pieces. Giving it a test run before winter was a high priority, too. The idea was to put a two-meter antenna on the outside of the house as well, but I am not sure on exactly what I would like to mess with; a vertical, yagi, or some other form? I know that I only want to put one up.

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



I hope that everyone can make it out to see the Santa Parade next month. Anyone wanting to participate is wel-

come to join us. There will be a float this year, so anyone who would like to ride the route can. See you all at next

month's meeting.

MARC Minutes

Dorie French, N8WTQ

The meeting was called to order at 7:35 by KD8QAM with introductions by the 32 members present.

- There was a moment of silence in memory of Larry Adams SK K8SQB. Doris sent a card to the family from the

MARC MEETINGS

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

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)

Club.

- Joe Rivard KD8TCH, the New Isabella County ARES® EC/RO was introduced.

- Dennis Klipa N8ERF showed a video on radio waves. Those who want to view the movie again can go to the AT&T Archives on the web.

- The minutes of the September meeting were published in the newsletter and there were no corrections.

- EC/RO report—the SET (Simulated Emergency Test) will be Saturday. Help is needed statewide for this event. MARC will be doing a 2-hour packet test on Oct 20 at the County Services building.

- John W8QN gave the treasurer's report.

- MARC Fall Picnic—a good time was had by all. Carol KD8HIC was there for a while. It was good to see her.

- The Dirty Dog Run will be Oct. 13, 2012 hosted by the SOS Animal Rescue will be at the city park at 7 a.m. This is to raise funds for the spay/neuter program.

- A motion was made by Pat KC8RTW and seconded by Bill AB8JF to send a check to the Salvation Army so we can participate in the Santa Parade

this year. Ryan KB8RCR has a wagon that we can decorate for the event.

- Ryan also reported that the 3.952 National Traffic System needs people to join. Contact either him or John WB8RCR for more information.

- The Winter SkyWarn® training has not been scheduled yet.

- Lee KC8ITI reported that no students showed up for the Tech class. He will be getting a General class together for the New Year. Dennis WD8BPT said the Central Middle School class started today. He also talked to the High School. The science department will sponsor it. Andy Fawcett is the liaison. They will meet on Oct 8 to put the program together.

Net Controls:

Oct 11 Lee KC8ITI

Oct 18 John W8QN

Oct 25 Larry N8CGP

- Keith KB8SOE gave a very nice presentation of Software Defined Radio

- A motion was made by Larry N8CGP and seconded by Steve WA8Y to adjourn the meeting at 9:20 p.m.

Respectfully submitted,

Dorie N8WTQ

Secretary

My Two Cents

Pat Mullet, KC8RTW

Okay, I'll admit it. Between baseball's post season and my attempts to slowly but surely clean up the yard trash generated by the black walnut trees this year, I've been a bit distracted this month. Still, a few ham radio related matters have crossed my horizon.

First, like the rest of the Club, I was saddened to hear of the passing of Larry Adams, K8SQB. In the years I've been a member, Larry's been one of the mainstays of the Midland ARC. Rest well, Larry.

It looks like the officials of Isabella County are working on re-vivifying the county's moribund Amateur Radio Emergency Services® organization. Emergency Manager Marc Griffis, KD8EJL is work-

ing to establish a registry of available hams in the county, and Joseph Rivard, KD8TCH is the new Isabella County EC/RO.

If you attended the October MARC meeting, you saw Keith, KB8SOE's excellent discussion of Software Defined Radio on the Cheap, utilizing the Realtek RTL2832U & Elonics E4000-Based USB DVB-T Receiver. This USB dongle is meant for receiving terrestrial digital TV in Europe, but when coupled with free downloadable SDR software it was soon found to be ideally suited as an all-mode receiver for 50 MHz and up. Moreover, at \$20-30 a crack, depending on where you order from, you can't beat the price.

While it's limited to 6 meters and up

straight out of the box, transverters are being built to allow its use on the HF bands and I've seen online videos of the receiver being used to image airport radar. Though I want to play around with the many frequencies and modes it can cover, I'd like to look into the DVB-T receiver's possible use as a panadapter or bandscope for use with my HF rig.

I do have a couple of projects lined up for the dark days of winter when I'm not operating. I ordered the ARRL's new book on Antenna Modeling, and want to

teach myself the why's and wherefore's of that technique. I'm also looking forward to figuring out more of the bells and whistles of the propagation software I'm currently using. I've already found that utilizing real-time mapping of the grey-line can help in making some DX contacts.

There's plenty out there to keep anyone's interest up when it comes to amateur radio. I hope I'll get a chance to hear you on the air, too.

73, Pat, KC8RTW

Michigan Section News

Fall, football, raking leaves and thoughts of upcoming holidays are upon us. The colors of the season have been brilliant here in Michigan this fall. I can't imagine any place where the change of seasons is more vibrant than here in Michigan.

PRB-1 Update

The latest information is that our Senate Bill is now known as SB 1244 number and was introduced into the Michigan Senate on Sep. 11, 2012. It has been assigned to the Committee for Local Government and Elections.

We still have some additional language that needs to be added to the bill while it is in committee and we hope to have that accomplished soon. We will be notifying the hams of Michigan soon of the need to write their Senators in support of the bill and will provide a letter for you to use. Please wait to do so until we notify you. You can find more information at our PRB-1 website at <http://www.miarrl-prb1.org/>.

2012 Simulated Emergency Test

Initial comments from the planners of this year's SET indicate that overall things went reasonably well considering that this was the first real test drive using ICS forms, causing some consternation among the troops. Our reality is that as we embrace NIMS, there are adjustments in our world that need to be made in order to efficiently interface with our served agencies. Paradigm shifts are seldom comfortable and this one is no exception. I have every confidence that we will be able to adjust and prosper.

ARRL Card Checker Program

We are fortunate to have 5 QSL card checkers in Michigan. These hams

provide these services to their fellow hams out of their desire to help promote ham radio awards and DX contacts. We have embarked on an effort to have a card checker available at as many hamfests as is reasonably possible throughout 2013. We need to remember that these individuals do this at their own expense. We are encouraging the promoters of various hamfests throughout the state to directly contact the card checkers to discuss the possibility of attending the larger hamfests in order to make card checking services available to the maximum number of hams in the section. Our goal is to have a card checker at 5 - 7 hamfests across Michigan in 2013. The organizers of the Milford swap (April 20, 2013) have arranged to have a card checker in attendance at their swap.

You can find information about the card checking program at

<http://www.arrl.org/dxcc-field-checking> and a list of Michigan card checkers at <http://www.arrl.org/dxcc-card-checker-search>.

Note: None of the Michigan card checkers are able to check 160M cards. For those of you who have 160M cards to be checked, there will be a qualified 160M card checker at the Ft. Wayne, IN hamfest which will be held on Nov. 17-18, 2012. Info on that hamfest is available here:

<http://www.arrl.org/hamfests/indiana-state-convention-fort-wayne-hamfest-computer-expo-1>

73 until next month,
Larry, WB8R
Section Manager
ARRL Michigan Section

Upcoming Events

11/17 Midland Santa Parade
12/7 MARC Christmas Party

Michigan Hamfests

10/21 Kalamazoo
12/2 Harrison Township
2/17 Livonia
4/20 Milford

* Denotes date based on 2011 event

Area Nets

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

Larry W. Adams, K8SQB (SK)

(Larry Adams, K8SQB, was not only a life member of the Midland Amateur Radio Club, but one of the founding members. The following was provided by his family-Ed)

Lawrence W. Adams, age 92 of Midland, died Monday morning September 24, 2012 at King's Daughter's Home. The son of the late Cecil L. and Alice M. Pierce was born in Frankfort, South Dakota on July 17, 1920. Larry was a graduate of Iowa State University. He was employed with The Dow Chemical Company as an Instrument Engineer until his retirement in 1980 after 39 years of service. He also held the position of Associate Process Consultant. Larry was a member of Chapel Lane Presbyterian Church, founding member of Midland

Amateur Radio Club, a member of Instrumental Society of America, life member of the NSPE and the Michigan Chapter. He also enjoyed collection stamps and coins, and train hobbies. On January 15, 1944, Larry married the former Elizabeth Ann Miller. She died on October 30, 1953. He then married the former Marylouise Kooyers on July 16, 1955.

Surviving is his wife of 57 years Marylouise Adams; children, Susan A. Perry of Du Quoin, Illinois, Thomas W. (Karen) Adams, Alton C. Adams, all of Midland, Richard J. Adams of Capitola, CA, Alice M. Adams of Midland, David W. (Daileen) Adams, Donald L. (Vickie) Adams of Bay City, Robert W. Adams of Saginaw; 4 grandchildren, Bradley Perry, Beth Perry, Timothy (Crystal)

Perry, Aaron (Alana) Adams. Two great-grandchildren Taylor N. Perry and Danille (Michael) Lamb, In addition to his parents Larry was preceded in death by son, George D. Adams; sisters, Joyce Mogck, June A. Jones and 2 infant brothers.

Per the wishes of Larry, cremation has taken place and a memorial service was held Saturday, October 13. Memorials may be offered to Chapel Lane Presbyterian Church, Men of Music, Humane Society of Midland, or the organization of one's choice. Arrangements are under the care of the Wilson MILLER Funeral Home. Personal messages of condolence may be offered to the family at www.wilson-miller.com

Central Middle School ARC

At the first meeting of the Central Middle School Amateur Radio Club, nine students attended with five of them being returnees from last year. We had two former students drop in to tell us that they couldn't make this meeting but they would be back. The new students were very enthusiastic about the club with lots of questions. Dennis Caney, WD8BPT and Dennis Klipa, N8ERF, are leading the club this year. After introductions were made, three different videos were shown to the students to introduce ham radio. The three videos were "The DIY Magic of Amateur Radio", "Amateur Radio Today" in which Walter Cronkite describes public service and emergency

communications and a video from the *Tonight Show with Jay Leno* showing how Morse code can beat texting in a speed contest. After the videos, we talked with the kids about what they wanted to get out of the club and answered many questions. With so many returning students, we are going to have to up our game in order to keep them challenged and entertained.

As this is the last year for Central Middle School, we are planning to create a new club at Midland High School. On Monday, October 8, 2012, Dennis and Dennis met with Jeff Yoder and Andy Fawcett to discuss the possibility of starting the club in the fall of 2013.

Andy, who is a physics teacher, was very receptive and enthusiastic about being the sponsor for the club. We began a discussion of our expectations for the club, as well as how and where we might set up a club station and antennas. We still have a lot of groundwork and preparation ahead of us, but we are optimistic about the future of the Midland High School Amateur Radio Club. Andy will start working on getting his Tech license in the near future.

Best Regards,
Dennis, N8ERF

SOS Animal Rescue "Dirty Dog Run"

Thanks to all of you who helped with this event on October 13th. Operators were Linda, KC8MUD; Pat, KD8IVZ - Net control; Denny, WD8BPT; Dennis, N8ERF; John, W8QN and Wendy, KD8IWB.

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 weather was anything but good with rain for most of the event but everyone came prepared for foul weather. It sure felt good to return to the van

where it was dry and warm

Special thanks go out to the Salvation Army for the use of the SATERN Communications Van for our base of operations.

Lee - KC8ITI

Weaver's Words

Joe Wehner, W8KNO Appointed Card Checker

Jim Weaver, K8JE

Joe Wehner, W8KNO of Hiram, OH has been appointed an ARRL Card

Checker. Joe previously had been certified to check cards for VUCC. He now

can check QSL cards for all ARRL awards with the exception of 160M. Joe has credits for 221 entities (countries) by phone in the DXCC chase.

As a Card Checker, Joe is available to travel at reasonable distances and at reasonable times to check cards at hamfests and other activates. He also is available at reasonable times to check cards at or near his home. One advantage of having cards checked by Card Checkers is that QSLs do not need to be shipped to ARRL HQ. In many instances, submitting QSOs for credit can essentially be done online.

Before taking QSLs to Joe or any Card Checker, please be sure to read the rules for submitting these. DXCC card rules can be found at www.arrl.org/dxcc. Rules for checking cards for VUCC can be found at www.arrl.org/vucc. Card Checkers in your general area can be found at www.arrl.org/awards-managers.

Why Consider a Card Checker for Your Hamfest/Swap

QSL Card Checkers are ARRL members who volunteer their time and service to checking QSL Cards for one or more League operating awards without the need to send QSLs to HQ. The awards include the DXCC and WAS families of awards, and VUCC. There are benefits to amateurs from having their QSLs checked in the field by a Card Checker. These include:

- There is no risk of having QSLs lost being shipped to and from HQ.
- No need to ship the cards means no postage or other shipping fees.
- The fee for processing QSL submissions may be less when using a Field Checker than when mailed to HQ.
- As the use of Card Checkers (and Logbook of the World) increases, delays in processing submissions due to volume of submissions should decrease.

There also are benefits to hamfests/swaps from arranging for and publicizing the presence of Card Checkers.

- Providing the service gives another

reason for amateurs to attend the hamfest/swap.

- The availability to have QSLs checked at a hamfest/swap makes it stand out in the minds of hams who chase QSLs.

What is the cost to a hamfest/swap to bring in a Card Checker?

- Including an announcement of the service in publicity of the hamfest/swap.
- A free admission.
- A table and a couple of chairs.

Card Checkers in your general area can be found at www.arrl.org/awards-managers. DXCC Card Checkers can check essentially all QSLs with the exception of those for 160 meters. Only Checkers who themselves hold a 160M DXCC are able to check 160M cards.

Jim Weaver, K8JE
Director, Great Lakes Division

Technical Topics and Information

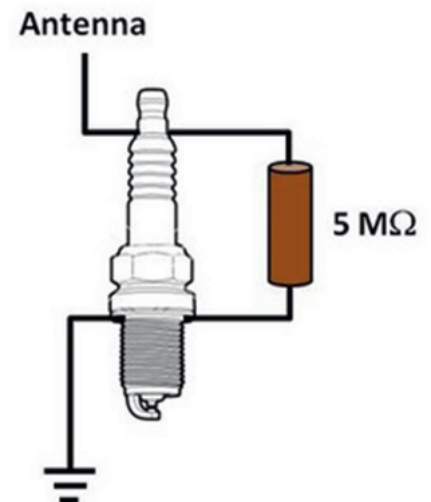
(ARRL Contest Update—Sept 26, 2012) As the fall contest season continues to ramp up to full intensity, there has been lots of discussion about table height for contesting. Most tabletops are placed 29-31 inches from the floor but always seem just a little "too" one way or the other. The solution may lie right under you - in an adjustable chair. A small footrest can go a long way towards improving operator comfort as well. Gary K9GS identified an alternate solution, "You can buy very heavy duty adjustable leveling feet that will give you several inches of adjustment. Again *Google* is your friend but you can probably start with *Rockler*, *Woodcraft*, or *Lee Valley* to find what you need." Jim K8MR has "...installed a slide-out keyboard shelf which rests the keyboard 24 inches above the floor. This works out to be almost literally in my lap." He also suggests, "Use a chair without arms, or at least a chair wide enough that you can drop your arms by your side without using the arm rests. It is much more relax-

ing...(and)...your wrists will not be bending sideways. Have enough extra cables on your radios that you can slide them to the very front edge of desk. With this, there is only an inch or two of forward motion required to move between the keyboard and the radio...(or)...radios can also be shoved back to a more conventional position, with your arms resting on the desktop. Change of position is always a good thing." He also notes that armless chairs help you stay awake!

• Many counties provide the *National Electrical Code* (NEC) as a downloadable PDF file such as this 2008 version, since it is written into their inspection code requirements. (Thanks, Steve W3AHL) <<http://www.garnernc.gov/Publications/Inspections/2008%20National%20Electrical%20Code.pdf>>

• A tale of telephone RFI on 10 meters from Eddy VE3CUI/VE3XZ recounts his amazement of discovering that "the coiled handset cord while I was seated was immune to RFI but as soon as

it was outstretched, it must have acted like a resonant (antenna) on 10 meters!" It just goes to show that anything can act as an antenna - either receiving or trans-



An ordinary spark plug and a high-value non-inductive resistor (carbon composition or metal oxide) provide some inexpensive protection for static charge building up on your antenna. (Thanks, K2AV)

Explore the World with Amateur Radio!

mitting!

- The graphic above shows a method of draining charge from an antenna while also providing some protection against high voltages from static electricity. The basic idea is presented on the *K2AV Folded Counterpoise* antenna website. The value of the 5 MΩ resistor is not critical and just needs to be high enough to minimize its effect on antenna impedance while surviving normal operation. Power ratings of 2 watts or better are generally recommended in this application. The spark plug can be mounted directly to a grounded plate, as well.

- Based on some reasonable assumptions about converting materials into cost-per-dB, Tom W8JI came up with a reasonable order of progression for low-band station builders:

1. A good TX omni antenna
2. Good basic RX antennas that fit your location
3. An amplifier
4. Better RX antennas or bigger amp, depending on your results at this stage
5. After the legal power limit is reached and if people still have problems

hearing you, only then comes transmitting antenna gain

- Dave K6LL reminds us of a method for testing coax loss even with an antenna connected. It takes advantage of an antenna's likelihood of presenting a high-impedance at some out-of-band frequency to act as a nearly open circuit. Dave presents a formula for converting the resulting SWR into line loss. The lower the SWR at the high-impedance frequency, the higher the loss. <<http://lists.contesting.com/archives/html/Tower-talk/1998-11/msg00371.html>>

- Along with VE3CUI's discovery on transmitting RFI, Dale K9VUJ also discovered that receiving RFI can be caused by anything. "I myself a few years ago had a random sporadic noise, crackling and very strong especially on the lower bands. One day I had the receiver volume turned up so I could hear it in another room and while I was walking though the kitchen I heard the "crackle crackle" while I walked. I went to the basement and started looking all around. What I found was the metal wire that is used to hang suspended ceiling tile was barely touching a metal electrical conduit above

the tile and any amount of vibration would cause static in the radio."

- The round "flip-top" containers for chewing gum lozenges make great small-parts holders for toolboxes and on the workbench. The labels peel right off so you can easily see what's inside and the small flip-up hatch makes it easy to get out one part at a time.

- What is the worst radio location in the world? Well, it's not actually on this world, according to the *Popular Science* article "Satellite Radio" in the October 2012 issue. The worst place turns out to be on the dark side of the Moon but the noise floor is really, really low!

Technical Web Site of the Week - 3D printing is a technology that is going to be increasingly common in ham radio as evidenced by this *Makezine* review of 15 different consumer-grade 3D printers. Consider that just a few years ago, these were high-end industrial products costing five figures and up. Now we have "consumer grade" and more than a dozen available plus online plans for building your own. <<http://blog.makezine.com/2012/09/09/makes-3d-print-shop-weekend-day-1/>>

More Technical Topics and Information

(ARRL Contest Update—Oct. 10, 2012) Here is a very interesting article by Dave AB7E about minimum discernable signal differences. He has also generated audio files with different levels, combinations of CW tones, and sending speeds that can be downloaded and played back for you to test your own listening ability. < <http://pvrc.org/Newsletters/oct12.pdf> >

- How high is that tower? Here are two methods. K1TO's looks down and N2NL/KH2's looks up:

Looking down on a sunny day:

Measure the shadow of the tower, D1. Stick a straight rod or tube with a height H2 into the ground. Find the length of its shadow, D2. Tower height, H1 = (H2/D2) * D1. The longer H2 is, the more accurate the method will be.

The Boy Scout method, looking up:

Back away from the tower with your arm held straight out until you can stick up your thumb and place its tip at the top and base at the bottom. Turn your thumb

sideways so that the base is still at the bottom and the tip is on the ground. From the spot on the ground just covered by the tip of your thumb, measure to the tower base to find the tower height.

- For complete directions about transient protection with good explanations, Jim W6RMK recommends Ronald Standler's book *Transient Protection of Electronic Circuits* from Dover Publishing. The book includes both theory and cookbook "what do you do in situation X" instructions. As Jim points out, doing the "right thing" is no more difficult than the "wrong thing" (and he has lots of examples of poor design from a transient damage standpoint). Dover Publishing has reprinted lots of old technical books that still contain much valuable information at a much lower cost than a brand-new text.

- The October 2012 issue of "Cheesebites", the Packrat VHF Society's newsletter, has a nice article on 6 meter propagation by Chris W3CMF. It fea-

tures several interesting maps of contacts from the popular *DX Maps* website run by ON4KST. The article illustrates some surprising September auroral propagation as well as Trans-Equatorial Propagation (TEP) that is quite rare here in North America.

- The Koolau Amateur Radio Club's Field Day team needed an antenna tuner design aimed at high-impedance, end-fed half-wave vertical dipoles. After some study, they came up with this L network design and a detailed set of building instructions including a detailed bill of materials and parts sources. < <http://www.karc.net/OperatingEvents/Field-Day/TunerBOM.html> >

- Brad AA1IP shows us where tube design lives on in QRP homebrewer Kazuhiro JA1OZL's inspired website collection of tube circuits. There is everything from audio amplifiers, to linear amplifiers, to complete radio receivers and transmitters. He also includes some solid-state designs along with the

"hollow state". By the way, Brad just managed to span the Atlantic with a QRPP radio modeled on the 10 mW Vanguard satellite beacon from 1958, using an original PNP transistor from that era! < <http://www.intio.or.jp/jf10zl/> > (Thanks, Brad AA1IP)

• Here's thought-provoking article with parallels to radiosport - "A Study of the Performance of Wireless Sensor Networks Operating with Smart Antennas" by Skiani, Mitillineos, and Thomopoulos in *IEEE Antennas and Propagation Magazine*, June 2012. If you replace "wireless sensor networks" with "radio

contest stations" and "smart antennas" with "directional antennas" the discussion reminds me very much of how we use directional antennas to minimize interference and maximize rate. The cognitive radio folks might want to listen to the ham bands during the current contest season!

• This *Electronic Design* article on A/D converters is a very good overview of available types, how they work, and for what applications they are the most suited. With so much of radio depending on these ICs, it's important to understand their basic operation. < [\[icdesign.com/article/analog-and-mixed-signal/relate-adc-topologies-performance-applications-74420\]\(http://icdesign.com/article/analog-and-mixed-signal/relate-adc-topologies-performance-applications-74420\) >](http://electron-</p>
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Technical Web Site of the Week - Nothing NASA measures is done "up close" as shown by this *EDN* collection that describes many of NASA's amazing sensors. There is certainly more to NASA spinoffs than "Tang" and the ball-point pen! Remote sensing is important for the ham and non-ham alike. < <http://www.edn.com/design/sensors/4397296/Slideshow--NASA-s-incredible-unsung-sensors?cid=EDNToday> >

Swap 'n' Shop

Free: Larry Adams K8SQB's tower and antenna is available to anyone who takes it down. Contact Alton Adams 631-4211

For Sale: HP 1200 DTN Printer-auto-duplex unit, one 250-sheet input tray, built-in 802.3 wired Fast Ethernet (RJ-45 connector), power cord, AC power adapter, software

CD, USB 2.0 full speed port, IEEE 1284-compliant bidirectional parallel port. Asking \$150 contact Lee - KC8ITI

MARC Vital Statistics

Memberships Expiring in October

K0ACP
KC8GRQ

N8FUZ
W8LSS

WD8AXR
WB8YAG

Memberships Expiring in November

NONE

Memberships Expiring in December

NONE

Current Active Club Membership 48

Birthdays Celebrated in October/November

W8WOJ 10/3
KD8JQX 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
K6VWE 11/13

KC8GQK 11/19
KD8FQF 11/21
KB8UIH 11/27
N8NVL 11/28

Anniversaries Celebrated in October/November

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 Tersa 0/20
KB8LQM and KC8IHB 10/23

NQ8T and Barbara 10/23
KB8QWO and N8DHF 11/17
KC8KOC and Jennifer 11/23

Information is from data received 8/13/2012

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