

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

President Vice President Secretary Treasurer W8KEA Station Trustee Midland County EC/RO Midland County AEC Newsletter Editor Newsletter Publisher ARRL Liaison Web Page Chairman Club Historian Quartermaster Public Information Officer Field Day Committee	Kevin Martin KD8QAM Mark Rodgers, KC8GRQ Linda Hodges KC8MUD John Wolters W8QN Larry Macklin N8CGP John Wolters W8QN Chris Rose KB8UIH Pat Mullet KC8RTW Keith Johnson KB8SOE John Tallman KB8PGW John McDonough WB8RCR Stan Rowe K6VWE Lee Hodges KC8ITI Pat Mullet KC8RTW Mark Rodgers, KC8GRQ/Ch	(989) 513-0100 (517) 672-1060 (989) 374-0032 (989) 832-9122 (989) 631-7748 (989) 832-9122 (989) 832-7179 (989) 832-7179 (989) 828-6657 (989) 859-0364 (989) 631-0178 (989) 837-7252 (989) 374-0032 (989) 828-6657 (517) 672-1060
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LIFE MEMBERS Larry K8SQB, Don W8WOJ, Lee KC8ITI, Dennis N8ERF

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 March 1, 2012, 6:00 PM Next CLUB Meeting — Thursday March 1, 2012, 7:30 PM Salvation Army Building, 330 Waldo Ave. Talk-in 147.000+

March 2012

Static Discharge

Kevin Martin, KD8QAM

The General class that Lee KC8ITIis conducting has been going quite well. There are roughly 8 students and we are asking a lot of questions.

With the weather being nice only on the days that I work, I haven't been out much to work on different projects. I have been getting on the air more. When the weather warms up, I am afraid I will have to cram a few projects into a weekend just to make sure that Field Day goes well.

I was quite pleased with the different projects that everyone shared at the last club meeting.

Don't forget that in April we will have the Spring Skywarn[®] training. Hope to see you all there.

-Kevin, KD8QAM



MARC Minutes

Linda Hodges, KC8MUD

The meeting was called to order by Kevin KD8QAM with 30 in attendance. A sign-in sheet was passed around and introductions were made.

The meeting minutes are published in the newsletter. If there are any cor-

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/examsearch.phtml?State=MI

AUTOPATCH

All Midland Club members have autopatch privileges. If you do not have the instructions, contact N8CGP for a copy. Please do not pass on your copy.

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) rections or additions please bring them to the attention of the secretary.

• Treasurer's report-John W8QN-Thank-you to all who have renewed their dues.

• EC/RO Report- Discussion included a minor packet test which took place last Saturday and a convention coming up in Traverse City. Skywarn[®] Training will take place during the April meeting at the LEC starting at 7:00 p.m.

• MS Walk-Chris KB8UIH- The date has been moved forward a week so this will take place on April 21st and not on April 28th as previously stated. It is a lowimpact exercise for those who would like to learn about helping at this type of event. Helpers are needed from 8:30 to noon. The starting point is the Central Middle School.

• Banners-Pat KC8RTW- All the new banners are in and were unfurled for the club's inspection. Thank-you Pat and Kev-in KD8QAM for donating your banners to the club.

• Field Day –Kevin KD8QAM- Thank you to Mark KC8GRQ, our Vice-president, for offering to chair the Field Day event held June 23rd-24th. Please contact Mark if you would like to help out and plan the Field Day activities.

• Dow Run-Dennis N8ERF- Lee KC8ITI and Dennis will be co-chairing this year's Dow Run communications effort. Please contact either one of them if you can help on May 19th.

• General Class-Lee KC8ITI- This class will start next week and will be held at the Salvation Army building on Monday and Wednesday night starting at 7:00 P.M.

• Auction-Lee KC8ITI- The Saginaw Club to hold an auction Friday night. Everybody welcome.

• Field Day Barrels- Lee KC8ITI- Lee pulled out and sorted contents of the Field Day barrels. A discussion was held about donated and stored equipment. An inventory sheet is being compiled and will be published in the newsletter at a later date.

My Two Cents

Now that I have FLDigi up and running—and have my microphone/interface switch finished—I've been getting my feet Lee will bring more sale items to upcoming meetings.

• Dow Run –John W8QN- Hams needed between 7:30 a.m. and 11:00 a.m. on May 19th. (Dayton Weekend) There is a marathon on Sunday but our group is not expected to participate in that.

• Library Subscription-John W8QN-John has renewed the subscription to AR-RL to the library. Thank-you John.

• Club Calls- Club Discussion about cost, renewal and need for several club vanity calls.

• Phone Bill- Club Discussion about need, cost and phone patch service.

• Michigan QSO Party-Pat KC8RTW-The Michigan QSO party will take place on April 21st from Noon to midnight.

• Central Middle School Club- Denny WD8BPT- The School Club Round-up takes place on February 13th to the 17th. Kindergarten- to College- age kids will participate. They use all bands. Denny has several very interested students participating in his club, one of which will have her license by the end of the year. Great Job on the Central Middle School Club.

• Swap- June 16th date for the Swap has been confirmed with the Salvation Army.

• Net Controls:

Feb 9th Kevin KD8QAM

Feb 16th John W8QN

Feb 23rd Jack NX8A

• Tonight's meeting activity was called project night. Several members brought completed projects from home and told about them. Thanks to the guys who shared their work with the club, it was a great learning experience and a fun time.

An Adjournment motion was made by John KD8JQX and seconded by Cindy KD8JQY. The meeting ended at 8:30 P.M.

> Respectfully submitted by Linda KC8MUD MARC Secretary

Pat Mullet, KC8RTW

wet in the digital modes and really enjoying it. I've made nearly a dozen PSK-31 contacts, and am fascinated by the mode. My Alinco DX-70 HF rig only has two power settings; 100 watts on high and 10 watts on low, and since high power is not recommended when going digital, I've been working 10 watts on 40 meters and making contacts on both ends of the country.

Last weekend, I ran across some confusing signals scrolling down my waterfall, and couldn't identify them by running through the available modes in FLDigi. A chance remark I picked up in another QSO on the band mentioned RTTY, so I went into the setup and checked the reverse tick, swapping the mark and space signals, and started seeing QSOs scrolling across the receive window. Since it was a contest weekend, I didn't jump into the fray, preferring to wait until the waters were calmer before sticking my toe in.

With the spate of spring-like weather we've been enjoying, I've been thinking about antennas. I'm hoping to relocate my HF vertical and my VHF/UHF vertical this spring, but that's going to involve burying a few runs of coax, installing a radial system and possibly replacing the TV masting that's supporting my VHF/UHF antenna so that I can get a few more feet of height. I'm also planning on getting a second VHF antenna up for APRS, but recent developments may make me put this project on hold for a bit.

I'd been planning on tapping my HF

rig's tuner port for 12 volts to provide illumination for my manual tuner's meter. After consulting the service manual to be certain I had the proper contacts, I plugged everything in and fired up the rig.... and everything stayed dark. No lights on the meter, no light from the rig. Other than checking the fuses, I haven't had a chance to investigate to see if I've just managed to knock a connection loose or if I've managed to smoke something internally, but I may have to start saving to either repair or replace my rig. (As I finish editing the Newsletter, I've had a change to take a look at the rig. Looks like something's opened up in the power circuitry, so it's hors de combat. Time to start collecting spare change.)

Lastly, I want to remind everyone that the ARRL has released the 2012 Field Day rules packet, and that the PR side of things is already starting to ramp up—I've already sent in the Proclamation request to the Governor and have prepared the requests for the City and County. The quicker we can settle on a site, the quicker I can start generating press releases and get started trying to get the media involved in promoting us. Time's a-wasting!

That's it for now, hope to hear you on the air soon!

73, Pat, KC8RTW

ARES®/RACES John Wolters, W8QN

At the February ARES®/RACES meeting we looked at examples of APRS equipment and worked on some settings. I hope everyone got a taste of the uses for APRS. If needed, we will have another session some time this summer. At the March meeting I plan to discuss accomplishments over the past 2 years and what we want to accomplish this year. Please put some thought into what we should be doing for 2013 prior to the meeting.

Dow Run

As we have talked about, the Dow run will occur on Saturday, May 19th this year. Lee Hodges and Dennis Klipa have agreed to do the coordination for this year's run. A signup sheet was passed around at the February meeting. If you missed your chance to declare your availability, look for a phone call. Right now we need at least 14 operators to pull off minimal coverage. There is also a marathon run that will occur on Sunday, May 20th. It will start at the Dow Diamond and end somewhere in Bay County. It is not being held by the Dow Run folks and we have not been contacted to help.

Weather Spotter Training

The National Weather Service will conduct the annual Skywarn[®] training class on Thursday, April 5th at 7:00 pm at the Law Enforcement Center, 2727 Rodd Street, in Midland. This class will take the place of the ARES[®]/RACES and monthly Midland Amateur Radio Club meetings for April. You do not have to be an amateur radio operator to attend; there is no cost and no need to pre-register. If you would like to know more about severe weather and how to report it, please plan to attend.

For more information contact John Wolters, W8QN, 989-832-9122.

Upcoming Events					
4/5	Skywarn [®] Training				
4/21	MS Walk				
5/18	Dow Run				
6/23-24	Field Day				
7/5-8	Lupton				

Michigan Hamfests

* 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 W Mi Trffc Net; MWF, 145.15 MHz, 0900 ET TMMTN; Mon-Sat, 147.30 MHz, 2130 ET MACS; Mon-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

MARC MERCHANDISE						
T-Shirt	S- XL	\$10				
Long-Sleeve Tee	2X - 3X S- XL 2X - 3X	\$12 \$12 \$15				
Crew Sweatshirt	27 - 37 S- XL	\$15 \$18				
Hoodie	2X - 3X S- XL	\$20 \$24				
Zipper Hoodie Winter Coat	2X - 3X S- 3X S- XL	\$26 \$30 \$42				
Spring Jacket	2X - 3X S- XL 2X - 3X	\$45 \$32 \$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.

Volunteers Needed to Provide MS Walk Comms

The Midland Amateur Radio Club is once again providing communications support for the MS Walk, and about 15 volunteer operators are needed for the event. The MS Walk is a low-impact event that allows amateur radio operators interested in Emergency Communications, a chance to get their feet wet operating under control of a directed net.

will be at the Midland Central Middle School, 305 East Reardon St., and will begin at 9:00 am. The opening ceremony is scheduled for 9:45 am with the official start of the commencing at 10:00am and running along a 3 mile route. Ham volun-

The MS Walk will be Saturday, April

21, 2012, and run from 8:30 am to around

twelve-thirty. Registration for the race

MARC General Class 2012

We have started our General License class for 2012 with 6 eager students in attendance. This is a revamped class following an upgrade of the general class question pool released last July 1st. I expect that the class should run for 7 weeks and finish up by the end of March. The class meets on Monday and Wednesday nights at 7 PM at the Salvation Army building. A VE testing session will be offered at the conclusion of the class but at this time a date and time haven't been set. Also, I'm teers are expected to be in place shortly after 8:30 am, with locations to be determined by Chris, KB8UIH, MARC's chairman for the event.

If you'd like to volunteer, please contact Chris Rose, KB8UIH. Chris' phone number is on the front page of the newsletter, and he can be emailed at kb8uih@charter.net.

in the process of scheduling an Extra License class that I expect to start sometime in mid to late April. If you're interested in seeing how we present our class material please stop by and pay us a visit.

Lee-KC8ITI

MARC Club Inventory

I'm in the process of updating the club equipment inventory list. So far, I've processed all of the equipment I have stored at my QTH along with the contents of the club Field Day barrels. I have sent out the results of this effort to a few people who might have some input as to the status of the equipment on the inventory list. Over the years, the club has loaned out equipment for use by our members that we have sort of lost track of. If you are in possession of any club equipment or have any information on the disposition of any club equipment please let me know so I can update our club records. Once the records are updated, I plan on publishing the inventory in the newsletter. As part of this process, I also plan on developing an updated policy on making club equipment available for use by our members. The club also has a large inventory of small parts that have been donated to the club over the past few years. I plan on making these parts available at the club meetings on a rotating basis, which can be obtained by a goodwill donation to the club. Thanks for your help on this.

Lee – KC8ITI

Annual Lupton Family Outing Scheduled

(Michigan Section News—February 2012) The Michigan Section's 14th

Annual Summer Family Outing will be held July 5-8. More information is available at www.sectionouting.info.

Amateur Radio Gets Secondary MF Allocation at WRC-12

(ARRLWeb—02/14/2012) It's official -- delegates attending the 2012 World Radiocommunication Conference (WRC-12) have approved a new 7-kilohertz-wide secondary allocation between 472-479 kHz for the Amateur Radio Service. Agenda Item 1.23 had both its first and second readings. Learn more at <ht-

tp://www.arrl.org/news/amateur-radio-gets-secondary-mf-allocation-at-wrc-12>



ARRL Field Day JUNE 23 & 24, 2013

2012 Field Day Packet Now Available



(ARRLWeb--02/02/2012) It's that time of year again -- time to start gearing up for ARRL Field Day, June 23-24, 2012! ARRL's flagship operating event -- always held the fourth full weekend in June -- brings together new and experienced hams for 24 hours of operating fun. Field Day packets are now available for download (www.arrl.org/fieldday) and include the complete rules, as well as other reference items such as forms, ARRL Section

abbreviation list, entry submission instructions, а Frequently Asked Questions section, guidelines for getting bonus points, instructions for GOTA stations and a kit to publicize your event with the local press. A brief one-page flier with basic "What is Field Day" information has also been included in this year's Field Day packet. Amateur Radio clubs and individuals are encouraged to reproduce this flyer as a handout for information tables.

RAC to Split Ontario into Four Sections

(ARRLWeb—02/14/2012) On February 6, Radio Amateurs of Canada (RAC) issued a statement on their website that the Ontario Section would be split into four new RAC Administrative Sections, effective September 1, 2012. The reason given for the restructure was "...to create a management model that better communicates with, and represents the interests of, the overall Ontario Amateur population." The Ontario Section will be dissolved and be replaced with four new RAC Sections: Ontario North, Ontario South, Ontario East and the Greater Toronto Area. The new section abbreviations will be announced when final.

This new change will affect ARRL contests and Field Day in the following ways:

• For ARRL contests that use AR-RL/RAC sections as multipliers -the ARRL November Sweepstakes and the ARRL 160 Meter Contest -- there will be an overall increase of three available multipliers.

• ARRL contests that use US states and Canadian provinces as multipliers -- the ARRL RTTY Roundup, the ARRL International DX Contest and the

ARRL 10 Meter Contest -- are unaffected by this change. ARRL VHF+ contests and the IARU HF Champion-ships are also unaffected by this change.

• The first contest to be affected by the RAC administrative change will be the 2012 ARRL November Sweepstakes, which will now require 83 multipliers to achieve a Clean Sweep.

• ARRL Field Day does not use multipliers, but Ontario stations will send new Section abbreviations as part of their exchanges.

Logbook of The World to Now Support CQ Awards

(ARRLWeb—01/24/2012) The AR-RL and CQ Communications, Inc have signed an agreement to begin providing support for CQ-sponsored operating awards by the ARRL's Logbook of the World (LoTW) electronic confirmation system. The agreement was announced jointly today by ARRL Chief Operating Officer Harold Kramer, WJ1B, and CQ Communications President Richard Ross, K2MGA.

CQ's awards will be the first non-ARRL awards supported by LoTW and will be phased in beginning with the CQ WPX award, with additional CQ awards to follow. The ARRL's LoTW system -- an interactive database recording contacts between radio amateurs -- was created in 2003 and has been adopted by 47,500 radio amateurs worldwide. It already has records of 400 million contacts and is growing weekly. The target date for beginning LoTW support for WPX is April 1, 2012. Amateurs will be able to use LoTW logs to generate lists of confirmed contacts to be submitted for WPX credit. Standard LoTW credit fees and CQ award fees will apply.

ARRL Chief Executive Officer David Sumner, K1ZZ, observed that this step gives radio amateurs throughout the world an inexpensive and convenient means of gaining credits toward CQ's popular operating awards: "LoTW has significantly increased interest and participation in the ARRL's DXCC, Worked All States and VUCC awards programs. We anticipate a similarly positive response to the addition of the CQ WPX award. Amateurs will be able to spend more time operating and less time chasing QSL cards."

CQ President Richard Ross, K2MGA, said he is very pleased to be able to move forward with LoTW support for CQ awards. "We have had excellent results with electronic confirmations for several years," he ex-

Explore the World with Amateur Radio!

plained. "I am glad that we are now able to begin expanding that convenience to those participants in our award programs who use Logbook of The World. We look forward to a smooth launch for WPX and to the expansion of LoTW support to include the rest of our award programs, as well."

New Rules for 5 MHz (60 Meters) To Go Into Effect March 5

(ARRLWeb—02/03/2012) On November 18, the FCC released a Report and Order (R&O), defining new rules for the 60 meter (5 MHz) band. These rules are in response to a Petition for Rulemaking (PRM) filed by the ARRL more than five years ago and a June 2010 Notice of Proposed Rulemaking (NPRM). In the February 3 edition of the Federal Register, the FCC announced that these new rules will go into effect on March 5, 2012.

In summarizing the new rules, the FCC explained that the new rules amend the current rules to facilitate more efficient and effective use by the

Amateur Radio Service of five channels in the 5330.5-5406.4 kHz band (the 60 meter band): "Specifically, and consistent with our proposals in the Notice of Proposed Rulemaking in this proceeding, the Commission replaces one of the channels with a less encumbered one, increases the maximum authorized power amateur stations may transmit in this band and authorizes amateur stations to transmit three additional emission designators. The Commission also adopts an additional operational rule that prohibits the use of automatically controlled digital stations and makes editorial revisions to the

relevant portions of the Table of Frequency Allocations and our service rules."

The Amateur Radio Service in the United States has a secondary allocation on 60 meters. Only those amateurs who hold General, Advanced or Amateur Extra class licenses may operate on this band. Amateur stations must not cause harmful interference to -- and must accept interference from -- stations authorized by any administration in the fixed service, as well as mobile (except aeronautical mobile) stations authorized by the administrations of other countries.

Technical Topics and Information

(The ARRL Contest Update—Feb 1, 2012) The late G4FGQ created a number of useful calculator utility programs such as this radial calculator <www.zer-obeat.net/G4FGQ/> that includes the conductivity of the soil. With it you can begin to answer the question, "How many ground mounted radials do I need and how long do they need to be?" All such calculators are a model and probably deviate from an exact simulation but you can get an idea of what might work. Another tack is to vary the radial length but keep the number of radials constant. (Thanks, Bob N6TV)

• Fork-lift pallets are cheap, sturdy, and widely available - how about making some furniture out of them? Like maybe an operating desk as shown in this Instructables article! http://www.instructables.com/id/Pallet-desk/>

• Chris N7ZWY has released a paper on his KISS Mixer that includes a PCB layout for the mixer and an LO driver circuit. The paper goes into quite a bit of detail including comparisons to other mixer designs. http://www.home.earth-link.net/~christrask/Paper022.html • In the quest for connector tightening tools, Greg W8WWV came up with this screwdriver-style tool for type F and BNC connectors via the Home Depot stores. If the URL proves too long for your browser, search for Ideal 35-046. <http://www.homedepot.com >

• Speaking of tools...when we go to multiops or Field Days or work parties, it's easy to lose track of your tools. To avoid tool trauma, here's a Boing Boing article with some ideas for marking your tools for easy identification. (Thanks, Zhu Zhu Xiao) <http://boingboing.net/2012/01/20/how-to-mark-yourtools-for-ea.html?utm_source=feedburner&utm_medium=feed&utm_campaign= Feed%3A+boingbo-

ing%2FiBag+%28Boing+Boing%29>

• Randy AB9GO reminds us to be extremely cautious when using a voltmeter to measure high voltages. Be SURE the meter is adequately. Older meters in particular are often unsafe such as the popular Simpson 260 that had a 5 kV range. Modern meters such as the Fluke 87 series are rated for 600V category IV and 1000V category III environments, can withstand high voltage transients and are constructed to protect the user against arc flash. Even with all the protection, remember that power supply capacitors store a lot of energy that can do significant damage.

• Here's a tip for solder tips from Instructables that reminds us inexpensive brass kitchen scrubbing pads can be used instead of expensive specialized solder tip cleaners; stick one in a container and dab away!

• Ian G3NRW has just spruced up his AIM4170 antenna analyzer resources web page including a recent RadCom article that shows how to set up custom scanning, perform time-domain reflectometry (TDR) measurements and operate it via a WiFi connection. <http://homepage.ntl-

world.com/wadei/aim4170.htm>

Magazine Roundup

• *elektor* magazine for February 2012 contains a construction project for the Pico-C 'small-C' capacitance meter. It's specially designed to measure capacitance below 10 pF such as values used in VHF and UHF circuits or encountered

It's Not Your Grandfather's Amateur Radio! in measuring leakage at HF. *Elektor* may be available on newsstands or in the library.

• *Nuts and Volts* columnist George Steber's article "The Radio Whisperer" in the January 2012 issue gives a good account of propagation beacon mode WS-PR and includes the design of a simple receiver.

• The March 2012 issue of *Sky* and *Telescope* features two solar telescopes for observing "an active Sun" and techniques for tracking and photographing the ISS.

• In the Winter 2012 edition of *QRP Quarterly*, Mike WA8MCQ reminds us that power attenuators are often asymmetrical, meaning that the power rating is different for the input versus the output. Gary K9AY also discusses finding the reason for unexpected behavior by antennas.

• Ed KE4ZNU's column on RFI Bypassing in *Circuit Cellar* for February 2012 is a close-up look at the behavior of bypass capacitors of various styles at various frequencies. Aimed at electronic design technicians and engineers, the article shows the effect of packaging very clearly and you might be surprised by the behavior of even SMT capacitors!

• If you need small waterproof cases for storage, making outdoor connections, go kits, foxes for hunting, and so forth, David K1TTT recommends bulk purchases of various surplus containers from Cheaper Than Dirt.

Swap 'n' Shop

For Sale: Yaesu FT897D. \$700. Wanted to Buy: Power tubes such as but not limited to 4CX series, 3CX400 and larger. 4-250 and larger, 3-500 and larger. Sockets for same and particularly for 4CX1500B and 4CX3000A7. Old Repeater amp that used a Push pull pair of tubes. I could use some 7/8" to 1.5" Heliax with connectors, but need a minimum of 200' for each run. Looking for HV power transformers in the range of 2400, 2600, 2800, and 3000 VAC, 2KVA and up as well as 800VAC to 1 KV AC for screen supplies. 6V@10A (4CX1500B), 9V @ 8.5-9A (FU728F), 9.0V @ 41.5A (4CX3000A7), and 10V@10A, filament transformers. High power tuning caps including vac variables.

Contact Roger, K8RI (K8RI@ro-gerhalstead.com)

Me	mberships Expiring in Febru	lary	
W8NON WB8FYR		WD8ODG WB8RCR	
М	emberships Expiring in Mar	iring in March	
K8RI	N8JBW	K8VB	
ľ	Memberships Expiring in Ap	ril	
	None		
Current Active Club Membership 53			
Birtho	lays Celebrated in February/	March	
KC8ITI 2/2 AA8EJ 2/3 W8JBD 2/4 K0ACP 2/7 KB8LQM 2/8 KD8EJK 2/14	W8NON 2/14 KB8MCI 2/15 WW9E 2/18 KB8VSU 3/9 NQ8T 3/15 KC8RTU 3/16	KC8RTW 3/17 K8VB 3/19 KC8FDM 3/26 WD80EU 3/27 W8QN 3/31	
Annive	rsaries Celebrated in Februar	ry/March	
KC8TQS and Julia 02/14 WW9E and KB9YSQ 2/15 K8RRB and ??? 3/4 nformation is from data received 2/15/2011		KC8ITI and KC8MUD 3/6 WD8BPT and Melody 3/13	
Any corrections or questions contact John, W8	QN		



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	e 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