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

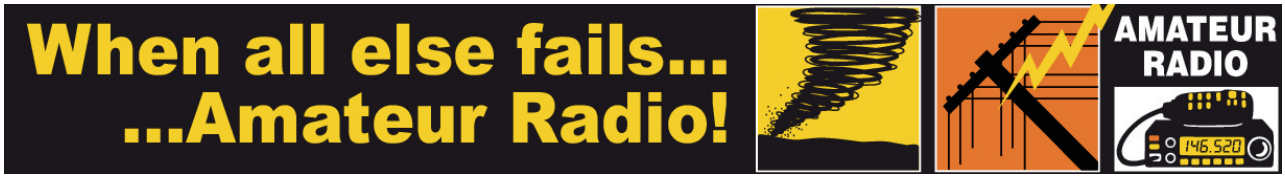
November 2013

Static Discharge

Kevin Martin, KD8QAM

I sure am enjoying this fall weather we are having. I am getting a lot of my summer projects completed and starting a few winter projects. Over the snow season I would like to continue with making a few new antennas, like a loop. I hope everyone has a safe Halloween.

Kevin, KD8QAM



MARC Minutes

Dorie French, N8WTQ

The meeting was called to order at 7:40 p.m. by Keith, KD8QAM with 26 members and guests present.

• The treasurer's report was given by John, W8QN.

• EC/RO John, W8QN reports the ARRL/FEC is working to get rid of the baud limitations and make it band limitations.

• The SET (Simulated Emergency Test) is Saturday and it is digital at 3580 MHz from 8:30-9:00 a.m. MARC is not involved with that SET. Ours will be Oct 23 from 9:00 a.m. to 1:00 p.m.

• Midland High School ARC—the tower base is in. The tower anti-climbing panels were damaged during shipment. Dennis, N8ERF will build new ones. He made a claim with the company and the end result was that we got a motor to crank up the tower in exchange for the damage and delay in delivery of the tower. We are getting a good deal on the cable. Essexville Electric contributed much for the MHS ARC including 70-80 feet of cable tray. The December MARC meeting will be at the Midland High School little theatre so members can have a tour of the facility and tower.

• The Dirty Dog Run will be Oct 5 with operators to report at 8:00 a.m. at the Midland City Forest parking lot. The race starts at 9:00 a.m. Lee, KC8ITI will have a list of where the operators will be stationed. The Salvation Army SATERN van will be headquarters.

• The Tech class starts Oct 8 from 7-9 p.m. at the LEC conference room. It will be a 6 week class. The testing sessions will be Oct 26 and Nov 23.

• The Boy Scout Jamboree on the Air will be Oct 19 at the Midland County Fairgrounds. There will be four stations. A signup sheet went around.

• Oct 9 the Juno space craft will slingshot around earth. ARRL is asking all hams to transmit on 10 meters in CW with their call sign from 2:00-3:30 p.m. that day.

• A member suggested a project to get returning vets involved with amateur radio. Keith, KD8QAM will check with the VA for interest.

• Dorie, N8WTQ announced the Halloween party for Oct 19 at 7:00 p.m. at her house, and the Christmas party Dec 6 at the Lee Township Hall, with gathering beginning at 5:30 p.m. and meal at 6:00 p.m. Don't forget the white elephant gifts. Del, WB8FYR will provide entertainment again this year.

• Net Control:

Oct 10 W8QN, John
Oct 17 WB8FYR, Del
Oct 24 KB8UlH, Chris
Oct 31 W8QN, John

• Art, KOACP gave a presentation on the PSK-31 QSO party.

A motion to adjourn was made by Art, KOACP and seconded by Cindy, KD8JQY. The meeting adjourned at 8:45 p.m.

Respectfully submitted,
Dorie, N8WTQ, Secretary

MARC MEETINGS

Art Peters, K0ACP, 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)

My Two Cents

Pat Mullet, KC8RTW

Things have been a little light when it comes to amateur radio activities for me this last month, other than participating in the weekly Midland and Canadian Lakes nets. I played around in the Texas QSO Party during the last weekend in September, mostly in an attempt to work the state on 10 and 80 meters, with an eye towards building my count for 5-Band Worked All States. Ten meters was silent, and while 80 had a high noise floor, I did run across a number of hams rag-chewing, but no one seemed to be playing in the contest.

I wasn't able to get in on the 10-10 Sprint Oct. 10th, which might have landed me more states

Amateur Radio is a Contact Sport!

on the 10 meter band, but considering the way my system seems to be behaving, I'm not certain it was that much of a loss.

Last weekend both the Arizona and Pennsylvania QSO parties were scheduled. I held off until nighttime before trying my hand in these events, as I was looking for contacts on 80 from both states, but again, a high noise floor and a seeming lack of participating stations did me in. I'm beginning to think either my G5RV antenna just isn't suited to those bands, or possibly, my Icom IC-817 is better for rag chewing than contesting. Maybe next time I'll break out my Alinco DX-70 and give that a shot, just to see what happens.

By the way, if you think you'd be interested in getting your feet wet in contesting during one of the State QSO parties, you can find dates, times and exchanges for upcoming events in the pages of *QST*, or online at Bruce Horn, WA7BNM's *Contest Calendar* at http://hornucopia.com/contestcal/.

That's about it for this week. Hope to catch you on the air!

73, Pat, KC8RTW

ARES® / RACES — John Wolters, W8QN

Several of us have been practicing with *FLDigi* on Thursday nights after the weekly VHF Midland County Public Service Net. It has been going well and we have seen some of the challenges of high noise levels. We had planned to move onto testing over VHF and probably will but with the new Tech class that Lee is leading and other distractions, we will put it off for now. I had hoped that others would join us to verify that we have a population of hams that have a working knowledge of *FLDigi* but I guess Thursdays was not a good night. I asked at the last ARES®/RACES meeting if there was a better day to practice and was met with silence, partly because no one had an answer and partly because there were only a few people present. I guess I will send out an e-mail to all ARES®/RACES members in an attempt to determine a day/night the most of us could get together at least once.

If there is a major incident in Midland County requiring activation of the Amateur population, the use of *FLDigi* and Packet Radio will be key tools in our communications toolkit.

Talking about the weekly VHF Midland County Public Service Net, we are running short of net control operators. If I do the math, there are 52 Thursdays in the year. If we eliminate 12 due to club meetings, 2 or 3 more due to holidays, and 12 more because I usually take 1 session each month, that leaves about 25 nets to cover. If each person in the ARES®/RACES organization takes 1 or 2 net sessions a year we would have them covered. Think about it. It's not much of a commitment and your help would be greatly appreciated. You're nervous about directing the net? Don't worry, everyone has had a first time and we all have to learn. It is better to work on your nervousness in a non-stressful environment. Some day we may need you to step in when the conditions are a little more hectic. Please think about it and volunteer for a net session.

I hope to see you at the November ARES®/RACES meeting.

SOS Animal Rescue "Dirty Dog Run" 2013

Thanks to all of you who helped with this event on October 5th. Operators were: Denny, WD8BPT– Net control; John, W8QN; Linda, KC8MUD; Pat, KD8IVZ; Wendy, KD8IWB; Dorie, N8WTQ and Del, WB8FYR.

This was a 10K run and a 5K

Upcoming Events

Oct 23	Midland SET
Oct 19	JOTA
Oct 19	MARC Halloween Party
Oct 21-25	School Club Roundup
Nov 2-4	ARRL Nov Sweeps (CW)
Nov 16-18	ARRL Nov Sweeps (SSB)
Dec 5	MARC meeting @ MHS
Dec 6	MARC Christmas Party
Dec 14-15	ARRL 10 Mtr
Dec 31-Jan 1	Silent Key Night

Michigan Hamfests

10/19	Muskegon
10/20	Kalamazoo
12/8	Harrison Township
2/16	Livonia

* Denotes date based on 2012 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.

run/walk through Midland City Forest with participants competing with the companionship of their canine friends. The weather was anything but great and rain gear was the order of the day but it did stop raining by mid-morning. This has become an annual event and the sponsors really appreciate our efforts. Special thanks to the Salvation Army for the use of the SATERN communications van as our base of operations. Thanks to all of you for helping out on a less than perfect day.

Lee - KC8ITI

Midland High School ARC News—October 2013

(Due to a communications error the wrong article was printed in last month's MHSARC column. To correct that, the proper version appears here—Ed)

A whole lot has happened since the September Newsletter article was published. And about the time this one gets published we will be holding the inaugural meeting of the Midland High School Amateur Radio Club on September 25th at 7:30 PM. We are both excited and anxious to get the first meeting under our belts! The permanent tower and antennas won't be ready for the first meeting so John, W8QN and Lee, KC8ITI have installed a G5RV and we will have a VHF antenna for 2 meter contacts. We made the first contact with that antenna on 15 meters VA6GSM in Magrath, Alberta, Canada!

So far everything is good news. The tower base was installed on August 28th by Gerace Construction and all went well. They even managed to put it in with the correct orientation so that the tower will tilt over *away* from the building. Ask Denny, WD8BPT about that one. Thanks to John, who is managing the outside capital installation projects. The tower itself has finally shipped on September 13th from the Heights Tower facility in Pensacola, Florida, only 6 weeks past the original ship date. With luck the tower will have been installed by the time you read this.

John, along with Bill Sponseller, owner of Essexville Electric, has determined the best route for the cables to go from the classroom to the tower. It is a long way to the tower and it has not been easy figuring out the best path. John continues to work on getting that part of the project installed. Our thanks to Bill for his generous support and assistance!

The operating desks are completed and installed. The only things left to do are for Denny, to get the electrical hooked up and for myself to build the cable chase to enclose the cables from the ceiling down into the operating station cabinet. The three computers that we will use at the operating stations have arrived and Lee has done a yeoman's job of getting them ready to go. I have really come to appreciate Lee's computer skills! We have started moving equipment into the classroom and this has freed up some room in Lee's basement and my workshop.

Student recruiting has been done at all of the high schools in Midland County, either by direct visits by members of the Advisory Board or through contacts at the schools. We have no idea how many students will show up at the first meeting. My fear has been that we won't have enough students but based on the feedback we have gotten so far, I think that won't be a problem. The next concern is that we will have too many! I hope that is the case. Andy, KD8ULJ, Lee and Dennis have been working on the curriculum for the club meetings. This will be an ongoing exercise as the year progresses.

Zach, KD8ULE, the President of the MHS ARC, has put together a draft of a set of by-laws for the club. The by-laws are required for us to apply for a club call sign.

Make sure to mark your calendar as the December meeting of MARC will be held at Midland High School so that everyone can see what we have been up to. I hope to see you there.

At the September MARC meeting the MHS ARC Advisory Board (W8QN, KD8ULJ, WD8BPT, KC8ITI and N8ERF) were re-elected to their positions and I will continue to chair the committee. It has been awesome to work with such a talented and dedicated group of hams and I want to thank all of them for their hard work.

Best Regards,
Dennis Klipa, N8ERF

Midland High School ARC News—November 2013

The first three meetings of the Midland High School Amateur Radio Club are in the books and by all accounts it was a successful launch. We have had 17 to 20 students at each of the meetings with high enthusiasm and interest. I have to tell you that I was very anxious before the first meeting.

Eighteen months of planning and hard work by the Advisory Board and others went into this adventure and the first night was going to tell us how it was going to go. At 6:55 pm, five minutes before the club was to start, there were only three students in the room. I was not feeling really good about that. John, W8QN told me not to worry, the kids are always late. By 7:04 pm, there were 18 students in the room and we kicked off the inaugural meeting. At the end of the first meeting they applauded and thanked us for creating the club. I had an overwhelming feeling of gratification and satisfaction. We did it! The meetings have gone well, with good student retention. Some students have missed a meeting and we have added new students with time. I am optimistic about the future. Now the fun work begins; working with the students and revealing the world of amateur radio.

Things are going well on the project side. The operating stations are fully installed. The tower has arrived and is installed. Heights Tower, after learning what we were doing with the tower, decided to donate a $1,100 motor to raise and lower the tower, so we won't have to do it by hand. After cranking up the tower by hand the first time, we are all extremely happy to have that motor. John, W8QN is working closely with Essexville Electric to install the cabling, conduit, cable trays, and grounding system. Essexville Electric has been very generous in donations of labor and materials. Dennis Caney, WD8BPT has approached Standard Electric to help us source the cables. Dennis, N8ERF, with the help of David, N8LBF has been assembling the SteppIR antenna in his work shop. The plan is to install the antenna on October 17th, so it should be up by the time you read this.

So far the kids have learned how to solder, how to use a multimeter to measure voltage, current and resistance and are learning how to make contacts on the air. Four of the students have earned their First Contact Awards. Students have also started assembling simple circuits using the Snap Circuit Kits.

On October 23rd, 2013, the Midland County Youth Action Council will visit the school and see what we are doing with their donation to the project. We are going to make sure we have lots of blinking lights and meters for them to see, not to mention the antennas on the tower. The students are also going to start building the crystal radio sets designed by Bill Albe, N8FUZ. These are the same kits that we have been building at Central Middle School for years. Thanks Bill!

Please note that the December 5th MARC meeting will be held at Midland High School and you will get a chance to see the classroom and tower for yourself, although it will be dark for the club meeting at that time of year.

We are looking for donations for the club. We are interested in equipment, books, handbooks, money and we would like to get the last 20 years or so of *QST*.

Thanks for your continued support.

73,
Dennis Klipa, N8ERF
MHSARC Advisory Bd Ch.

VP db... Art Peters, K0ACP

Fall is among us and we are rushing headlong into another contest season. It is hard to believe that the November Sweepstakes is just around the corner. With any luck, I'll have my outside antenna situation resolved and make an attempt in this year's sweeps!

We finished our first meeting of my term and had a presentation on an APE, I think it went well and even more important, I now have seven of the remaining 11 meeting programs accounted for, thanks to Lee, KC8ITI and Larry N8CGP for volunteering to fill a couple of slots. There are still four more slots to go so anyone who has a passion or hankerin' please let me know! Here is the list of the meeting programs for the balance of the year: November, Ladder Line Antennas, Kevin, KD8QAM; December, Midland High School ARC, Dennis, N8ERF; January, Modeling Ladder Line Antennas, Lee, KC8ITI; February, FLEX Radio Review, John, W8QN; March ,IP Over Ham Radio, Larry, N8CGP; April, Open; May, Field Day Planning; June, Field Day Planning; July, Open; August, Open; September, Open.

Till next month, 73 de K0ACP/8

ARRL Exec. Comm. to Consider Numerous Regulatory Issues

(ARRLWeb, 10/02/2013)—The ARRL Executive Committee (EC) will face an agenda heavy on FCC and regulatory issues when it meets Saturday, October 5 in the Denver, Colorado, area.

Among action items, the EC is expected to consider the filing of a Petition for Rule Making, now in draft, seeking to delete restrictions on symbol rates for data communication and to establish a 2.8 kHz

maximum authorized bandwidth for HF digital data emissions. At its July meeting, the ARRL Board of Directors directed ARRL General Counsel Chris Imlay, W3KD, to prepare a Petition for Rule Making with the FCC seeking to modify §97.307(f) to delete all references to "symbol rate." The Petition would ask the FCC "to apply to all amateur data emissions below 29.7 MHz the existing bandwidth limit, per §97.303(h), of 2.8 kHz."

The Board determined that the current symbol rate restrictions in §97.307(f) "no longer reflect the state of the art of digital telecommunications technology," and that the proposed rule change would "encourage both flexibility and efficiency in the employment of digital emissions by amateur stations." ARRL CEO David Sumner, K1ZZ, explained the Board's action on symbol rate regulation in his September 2013 QST "It Seems to Us" editorial.

The EC also will consider authorizing comments on an FCC Public Notice on recommendations approved by the WRC-15 Advisory Committee. The Committee will consider approving the filing of comments with the FCC that express concerns about expanding proposed radiolocation use of the 77.5 to 78 GHz band beyond on-vehicle applications to, for example, fixed roadside applications. The comment deadline is October 11, although the FCC shutdown may change that date.

Technical Topics and Information

(ARRL Contest Update, Sept 25, 2013)—***DesignSpark PCB*** is a free printed-circuit board layout software package that now has a mechanical drawing sibling, *DesignSpark Mechanica*l. Learn more about the growing popularity of these two toolsets and the *ModelSource* online library of electrical and mechanical models in this online *EDN* article. <http://www.edn.com/electronics-products/electronic-product-reviews/other/4421141/2/Allied-Who--RS-Who--DesignSpark-What->

• Scott N7SS notes that, "The new EZ style [RJ-45 network] connectors allow you to strip the network cable long and unevenly and push the wire all the way through the connector. If you use the cool crimper with the proper cutter, it will crimp and flush cut the wires at the same time. If not, you just crimp and flush-cut with a utility knife."

• Here's a very interesting Q-meter design from *EDN* that is purely analog - except for the digital voltmeter readout! <http://www.edn.com/design/analog/4420157/Novel-Q-meter> Elsewhere on the *EDN* site is a web page that answers the question, "How many different values of resistance can I create using only 1 kohm resistors?" <http://www.edn.com/design/components-and-packaging/4421194/Resistor-combinations--How-many-values-using-1kohm-resistors-->

• Mike WØBTU reminds us that there is a good alternative to using a matching coil across a ground-plane vertical's feed point. For his 160 meter inverted-L (155' long with a pair of ¼-wavelength long elevated radials 10 feet off the ground), he matches the feed point impedance with a variable capacitor in series with the coax center conductor to the feed point and a second variable across the feed point from the antenna to the radials and coax shield. This is called an omega match, a type of L-network. <http://www.w8ji.com/omega_and_gama_matching.htm>

• This interesting article on the *Sky & Telescope* website suggests issues with current models that predict sunspot cycles. <http://www.skyandtelescope.com/community/skyblog/newsblog/Glimpse-of-Suns-Interior-Befuddles-Theorists-223291961.html> And we all know this cycle has been strange from the git-go. From the article, "David Hathaway (Marshall Space Flight Center), who has done extensive research on the meridional flow and its role in predicting the solar cycle, says the results are "catastrophic" for current theory. "It indicates the need for revolutionary changes in our dynamo models for the sunspot cycle." At any rate, our Sun's current "slacker star" status certainly has confused the scientists. (Thanks, Tom N5EG and Doug KR2Q) <http://www.nytimes.com/2013/09/24/science/space/the-sun-that-did-not-roar.html?partner=rss&emc=rss&_r=1&>

• *Instructables* offers a practical way to mount LCD monitors over your operating desk without using a pivoting flex arm. I particularly liked the description of "wandering around a home improvement store" during the design phase of the project - been there, done that! <http://www.instructables.com/id/Inexpensive-PVC-ABS-Monitor-Arm/>

• Veteran broadcast band DXer, Mark WA1ION, offers the following "magic bullets" for good reception when hunting BC DX and that also apply to receiving on the low bands:

(a) Select a site with salt water and a clear horizon view towards what you want to hear. Poor ground (rocks, sand, hills/mountains, tall buildings/vegetation) towards side and rear interference directions can help too.

(b) Stay away from power lines.

(c) Do most listening to the east at sunset before interference from the west builds up.

(d) Look at the weather maps to make sure any lightning is a long way off.

He has been using a Perseus SDR receiver on his seaside listening sessions and reports that the ability to store spectrum for later playback is an obvious killer-app. His latest car roof receiving antenna might inspire Top Band mobilers and portable operators. Mark notes that on 160, "I would advise a larger size antenna than the 2m by 2m square one I use on the car. You're dealing with smaller signals: sub-100 watt up to 1.5 kW stations instead of multi-kilowatt up to megawatt-plus ones you'd find on the AM broadcast band. Even if you have little interest in broadcast-band DX as a standalone hobby, checking that frequency range does offer propagational clues that can help coordinating 160 meter operation, antenna design, location evaluation, and so on.

• Version 2 of AC6LA's *EZNEC* automation program *AutoEZ* is now available, including an optimizer, new dialog windows for building common antenna configurations, and it's faster. Note that the program requires Excel with up-to-date service packs installed - no substitutes or older versions will work.

More Technical Topics and Information

(ARRL Contest Update, Oct 9, 2013)— How do they do that audio pitch-shifting thing? The theoretically-inclined among us might enjoy learning about the Constant-Q Transform, often employed in such signal processing antics. <http://www.edn.com/electronics-blogs/sound-bites/4421452/Audio-pitch-shifting---the-constant-Q-transform>

• For resistors that must handle transient overloads, such as Beverage terminations, be sure to use a bulk composition type resistor, either metal-oxide or carbon, that can handle surges without changing value. Carbon film or metal film components increase in value after short duration, high-energy surges, because the surge blows part of the film layer away. Ohmite's OX/OY series of "Ceramic Composition" resistors are a good choice and available from many distributors. <http://www.ohmite.com/cat/res_ox_oy.pdf> (Thanks, Mike W4EF)

• Here's a brief tutorial based on the Smith chart that shows what happens to an impedance as it is transformed via a length of transmission line. If you know the length of the feed line (in wavelengths including the velocity factor) you can transform impedances around the Smith chart and determine what the impedance of one end looks like from the other end. <http://www.antenna-theory.com/tutorial/smith/smithchart4.php> (Thanks, Earl N8SS)

• When using coax to make a capacitor, do you connect both leads at one end or the shield at one end and the center conductor on the other? "Neither. Instead fold the coax and connect to both ends in parallel. In other words, connect the center conductors in parallel and the shields in parallel. This will greatly reduce the loss due to the resistance of the conductors." (Thanks, Rick N6RK)

• Need a control panel that says, "Set everything to 11!"? Brian N9ADG sent this great set of online instructions for etching your own brass panels for homebrew projects. <http://electro-music.com/forum/topic-26116.html>

Technical Web Site of the Week - Being in the process of installing some new towers and antennas, I'm using information on grounding from a variety of sources. Tom W8JI has provided a good web page on lightning protection with a number of helpful photos that may help you design your own station. <http://www.w8ji.com/station_ground.htm>

MARC Vital Statistics

Memberships Expiring in October

N8FUZ
W8LSS
WD8AXR
W8QN
WB8YAG

Memberships Expiring in November

KB8TBI
WA8LQD
KD8ULA
Bruce Temple

Memberships Expiring in December

K0ACP
W8AWS

Current Active Club Membership 52

Birthdays Celebrated in October/November

W8WOJ 10/3
W8ZSX 10/5
N8WTQ 10/10
KB8PGW 10/25
KC0CJC 10/31
K6VWE 11/13
KB8UIH 11/27

Anniversaries Celebrated in October/November

WB8RCR and Eileen 10/12
KB8SOE and Darcie 10/19
KB8LQM and KC8IHB 10/23

Information is from data received 10/10/2013
Any corrections or questions contact John, W8QN

Pat Mullet
Newsletter Editor
171 E. Orchard Ave.
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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