



The Scope

Central Michigan Amateur Radio Club

Lansing Civil Defense Repeater Association

March 2016
Volume 16
Issue 3

March CMARC Meeting

The Last BIG Field Day is the story of the 2006 W3AO Field Day operation. What's so special about it? Their operating class was 50A. That's not a typo - Fifty stations on the air... at the same time? Well, that doesn't sound right, so what's the story? This is the story.

The program was produced by Gary Pearce KN4AQ, who has gone on to create HamRadioNow.tv, a television show/YouTube show/podcast for and about Amateur Radio. Gary was a guest-host on Bob Heil's Ham Nation in 2011, and he liked it so much he started his own show in 2012. HamRadioNow has produced over 250 episodes, including some talk shows, some mini-documentaries, and a bunch of forums and seminars from Dayton, Orlando, and the TAPR Digital Communications Conference. All the programs are free to watch, with voluntary viewer contributions.

Gary has also written several columns and reviews in QST, CQ and CQ-VHF, and recently he edited and narrated K4UEE's K1N Navassa DXpedition DVD (which we should play at a club meeting soon!). It's available at www.NavassaDX.com.

**When: CMARC Monthly Meeting,
7:00 pm, Friday, March 11, 2016**

**Where: Salvation Army South Corp
701 W. Jolly Rd, Lansing MI 48910**

For more information, you can check out our website at www.centralmiarc.com or get a hold of Club contact Don McLain/KB8RAD at (517) 694-0812 or KB8RAD@arrl.net.



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Ziegenbein Nominations

It's time to begin thinking about who you would like to nominate for the 2015 Ziegenbein Award.

For those of you who are not familiar with the award - it is presented each May to the Full CMARC member who has contributed the most to Amateur Radio, in general and CMARC, in particular **for the previous calendar year.**

Nomination Guidelines

1. The recipient must be a **full, current** member of CMARC
2. Nominations to be made in writing, in your own words, **no** chain letters to be accepted, stating nominees contributions to CMARC and Amateur Radio.
3. All nominations are to be kept secret until the award is presented.
4. All nominations are to be mailed (regular postal mail **OR** email).
5. The same person can receive the award more than once.
6. The Committee shall consist of the last three recipients; the senior member shall be the chairman.
7. All nominations are to be closely checked and discussed by the Committee.
8. If the Committee feels the nominees are not deserving, the award does not have to be given.
9. Nominations are to be submitted before **March 15th** of each year, so the Committee can make the selection and have the plaque engraved.
10. The recipient will be announced at the annual Ladies' Night.

REMEMBER

Your nominations for the Ziegenbein Award are due March 15th. This year's Senior Chairman of the Ziegenbein Committee is John Hosford/KC8QZB.

Send your e-mail nominations with a subject line of **"Ziegenbein Nomination"**, to jon.jan44@hotmail.com.

If you prefer to use snail mail:

John Hosford
7057 Kieppes Court
Lansing, MI 48911

Write **"Ziegenbein Nomination"** on the envelope.



Top:
2012 Winner & Senior Committee Chair
John Hosford/KC8QZB

Middle:
2013 Winner-Jane Hosford/KC8QZB

Bottom:
2014 Winner - Dan Beuchert/WX8MOJ





Ladies Night/Ziegenbein Award Banquet

WHO: All CMARC's Members, their Families
and Friends are invited to attend!!

WHAT: CMARC's Annual Ladies Night & Ziegenbein Award Banquet

WHEN: Friday, May 13, 2016 – 5:30pm to about 8:30pm
Please be seated by 6pm Sharp!!

WHERE: Delhi Café, 4625 Willoughby Rd. in Holt

WHY: To Honor our Ladies, Present the Ziegenbein Award, and Enjoy Good
Food, Great Fellowship and Fantastic Entertainment by **JOHN KELLY AA8LF!!**

-----Cut Here-----

Reservations/Orders **MUST** be turned in by **Monday, May 2nd!!** **SEND ORDERS ONLY, DO NOT**
SEND MONEY!! You pay Delhi Café for your bill & your tip the night of the Banquet!!
To RSVP: Call Julie McLain/KB8ZXR at: (517) 694-0812, **Email** me at: KB8ZXR@aol.com,
or **Snail Mail** me at: 4444 Sycamore St., Apt. 1; Holt, MI 48842

Name & Callsign _____ Ph. # _____
Wife's Name & Callsign _____
Guest's Name & Callsign _____
Guest's Name & Callsign _____

TO ORDER: Please choose an Entrée for each person attending with you, by writing the
number of meals requested, on the line in front of the Entrée you've selected. (Example: If two
of you want Chicken Western put a number "2" on the line in front of that Entrée to show you
want to order "2 Chicken Western meals".)

OUR ENTRÉE CHOICES ARE: (All dinners INCLUDE coffee or tea. Tax and tip are NOT
included.)

- _____ 1.) Chicken Western served w/rice and salad - \$14.70
- _____ 2.) House Sizzler served w/baked potato and salad - \$15.00
- _____ 3.) Broiled Cod served w/baked potato and salad - \$14.70
- _____ 4.) Swiss Steak served w/mashed potato and salad - \$14.70
- _____ 5.) Veggie Stir Fry served over rice and salad - \$14.00
- _____ 6.) Off The Menu - special diets

CHILDREN'S MENU: (under 12) - (Tax and tip NOT included)

- _____ 1.) Grilled cheese with fries and drink - \$5.00
- _____ 2.) Chicken Fingers with fries and drink - \$5.00

March Birthdays

3/5 Roger Goodman / KB8YQZ
 3/23 Herbert Terbrack / KB8QEZ
 3/23 Alton Stoddard / KD8MB

March Anniversaries

3/4 John Doornhaag / KD8NNQ
 3/12 Paul Keefer / KB8YQZ
 3/17 Tom Cain / KB8ZL

Upcoming Meetings

ARPSC



The ARPSC meeting for the month of March is at 7:00pm on Monday, **March 21st**. We will be meeting at Lansing Fire Station 8 off Marshall Rd, South of Grand River. For information about the ARPSC please check out our website at www.lansingarpsc.com

VE Exam Session

Lansing, MI

Date: **3/12/16**
 Time: 11:00 AM (Walk-ins allowed)
 Sponsor: Ingham County VE Group
 Contact: Don McLain / KB8RAD
 (517) 694-0812
 Email: KB8RADon@aol.com
 Location: Lansing Fire Station #44
 Community Room
 1435 E Miller Rd
 Lansing MI 48911-5322

Happy 100th Birthday

February 25th
 Jean Devendorf, widow of Don Devendorf/W8EGI

Treasurer's Report 2016

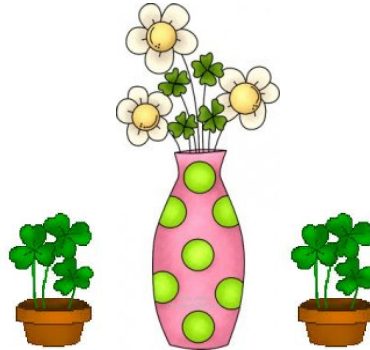
John Doornhaag / KD8NNQ - CMARC Treasurer

Bank Balances for February	
Beginning Balance	\$4,635.29
Total Income for February	\$145.00
Total Expenditures thru Feb 20	(\$70.00)
Total Business Checking	\$4,710.29
Petty Cash	\$41.00
Sub Total	\$4,751.29
Primary Share Accounts	
Humphrey's Fund	\$1,092.47
Building Fund (Club Station)	\$9.09
Field Day	\$472.67
Total Net Worth	\$6,325.52
Youth Fund Balance*	\$253.72
* Separate from CMARC Funds	



MARCH TEA TIME LADIES' DAYS

March 10th – Adrina Keresztes/KD8OQW's Birthday!!



MARCH LADIES TEA TIME LUNCHEON

Please be sure to join us for our next “Ladies Tea Time Luncheon” on Saturday, March 26th at 12:30pm! This time we will be going to Falsetta's Casa Nova located at 138 S. Waverly Road in Lansing. And remember, this invitation is for ALL Ladies, whether you have a Ham license or not!! So, come on out and join us...we always have a great time getting together with our friends! Please RSVP by Friday, March 25th so I can make reservations for us all to sit together. 73, Julie KB8ZXR (KB8ZXR@aol.com or 517.694.0812)



LADIES TEA TIME NET!

Please join me every Tuesday evening at 7 pm on the 145.39 (100 Hz PL) Lansing-area repeater for the “Ladies Tea Time Net”. The Net can also be accessed via the EchoLink *DODROPIN* Conference Server (Node ID# 355800). The main goal of this Net is to get our Lady Hams out on the air each week, having fun as they visit together. And for those Ladies without a Ham license...you can still check in “Third Party”, as long as your licensed husband or friend checks in first.

Remember, we always look forward to having our Gentlemen join us for a fun time, too, right AFTER the “Ladies Only” portion of the Net!! So, pour yourself a cup of hot tea, key up the mic and join me for the “Ladies Tea Time Net”. I'll be listening for you!!

~Julie McLain, KB8ZXR~
Ladies Tea Time Net Control
(517) 694-0812 or KB8ZXR@aol.com
www.centralmiarc.com

2016 NWS Grand Rapids Weather Spotter Training Schedule

Date	Time	Location	Sponsor
Saturday, March 5, 2016	10:00am - 12:00pm	Lakeview Middle School 300 South 28th Street Battle Creek, MI	Calhoun County and the City of Battle Creek
Saturday, March 5, 2016	2:00pm - 4:00pm	Jackson County Jail 1995 Chanter Road Jackson, MI	Jackson County
Saturday, March 12, 2016	10:00am - 12:00pm	Luella Collins Community Center 419 126th Street Shelbyville, MI 49344	Barry County and Allegan County
Saturday, March 12, 2016	2:00pm - 4:00pm	TBD	Van Buren County
Saturday, March 19, 2016	10:00am-12:00pm	Oceana County Medical Care Facility Upstairs Conference Room 701 East Main Street Hart, MI 49420	Oceana County and Mason County
Saturday, March 19, 2016	2:00pm - 4:00pm	Muskegon Community College Stevenson Center 221 South Quarterline Road Muskegon, MI 49442	Muskegon County
Wednesday, March 23, 2016	6:00pm - 8:00pm	Regional Center for Agri-Science and Career Advancement - Room 118 5479 West 72nd Street Fremont, MI	Newaygo County
Saturday, April 16, 2016	2:00pm - 4:00pm	Holt Christian Church 2424 Washington Rd Lansing, MI 48911	Ingham County
Saturday, April 23, 2016	10:00am - 12:00pm	Clare County Transportation Cabinet 1473 Transportation Drive Harrison, MI 48625	Clare County
Saturday, April 23, 2016	2:00pm - 4:00pm	TBD	Isabella County and Central Michigan University
Saturday, April 30, 2016	10:00am - 12:00pm	Alma College Swanson Academic Center 614 Superior Street Alma, MI	Gratiot County

<http://www.weather.gov/grr/spottertraining>

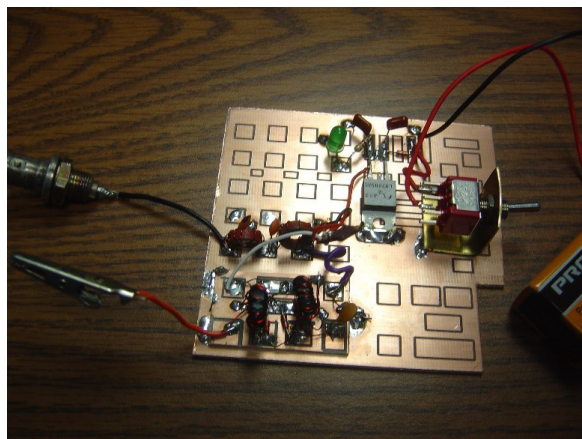
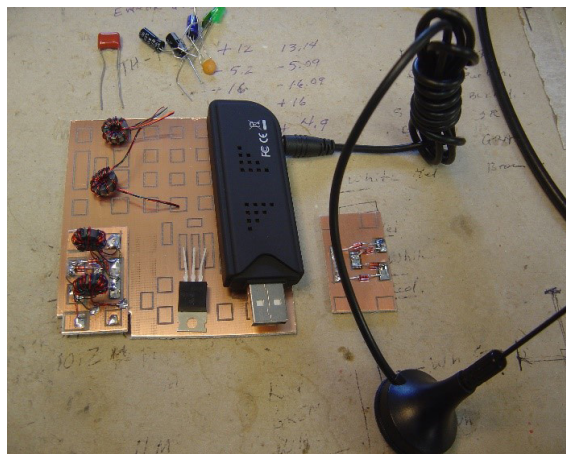


The MSU ARC Learns the Fine Art of Building an SDR Dongle Up-Converter Manhattan Style

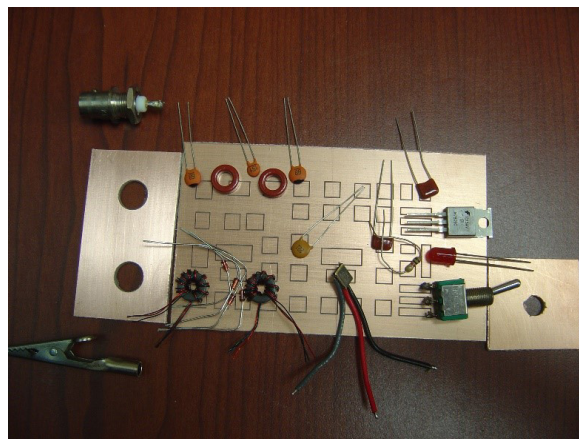
By Gregg Mulder / WB8LZG

From the moment I turned the page in the January 2016 QST to the simple SDR receiver based on a widely available DVD Dongle, and a simple up converter to bring in the HF spectrum, I was hooked. I ordered a Dongle on Amazon for \$10. Wow, simply an amazing little gadget! As soon as software was loaded, I was receiving the “39” repeater on the computer. What possibilities! Here is a simple project the can be made with all new parts for under \$20. Perfect for a “group build” for a club. But 1st I had to build one and get a prototype working to insure that it was a “Do-able” group project. I already had a bunch of the toroids, caps, resistors, diodes, and wire. The only things I had to buy were the 100Mcs oscillator chips. So I “bit the bullet” and ordered up an oscillator chip to test. I got the SMT chip version due to discontinuation of the larger “hole thru” part. No problem, I’ll just solder wires onto them. To keep it cheap, I decided to “roll my own” Double Balanced Mixer instead of buying the commercial one in the article. This Kit was the combination of the DBM from the old 2N2222 XCVR kit, of Nor-Cal fame, and the QST version, and Manhattan building techniques. Here is a pictorial of the prototype to finished project build.

This is a shot of the 1st attempt on the DBM. The small PCB is the diode bridge of the mixer. The PC board was cut from FR-4 material, but any PCB board should work just fine. None of the parts or layout are critical. Just follow the schematic. Start by winding the toroid coils, being careful when “baring” the copper wire for soldering. Mount the diodes for the DBM. Then the coils, being careful not to mix up the windings. Then the coils and caps of the low pass filter. Then put the power regulator in and test it for good voltage before soldering in the 100 Mcs crystal oscillator. Now just a few interconnections, and we’re ready for the “smoke test”. I used an alligator clip to attach the “dongle” antenna to the converter, so I did not have to damage the dongle unit in any way. The 1st unit ain’t pretty, but allowed me to work out the “bugs” to build a better 2nd kit.



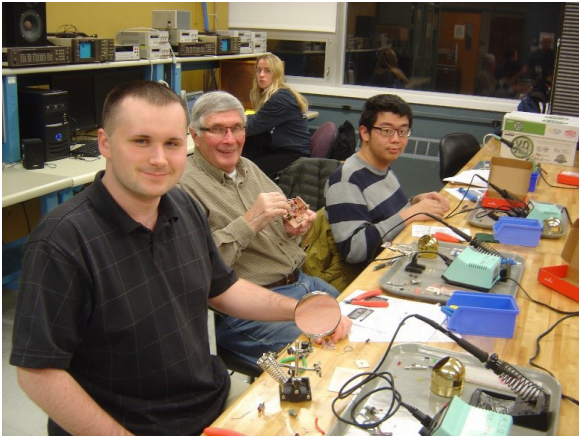
Here is the finished prototype.



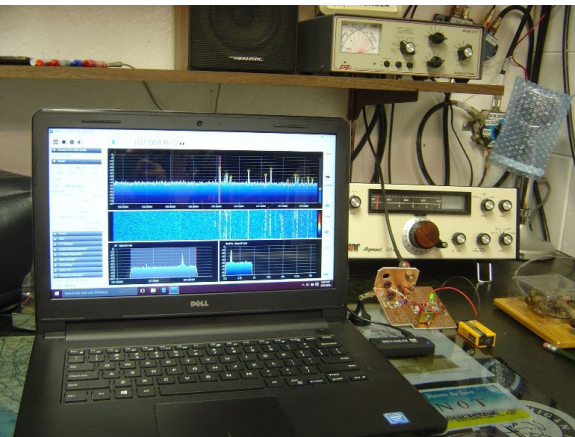
Here is the 1st “kitted” version.

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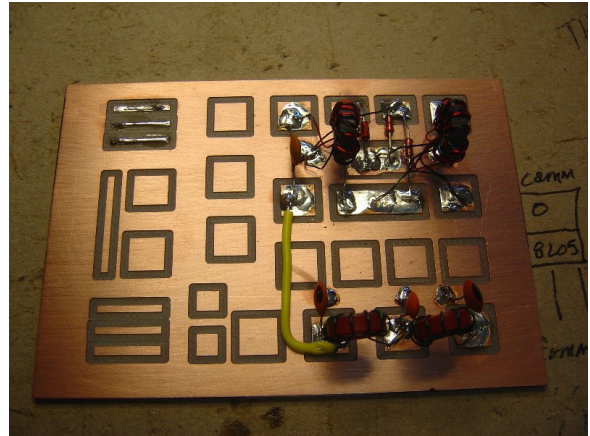
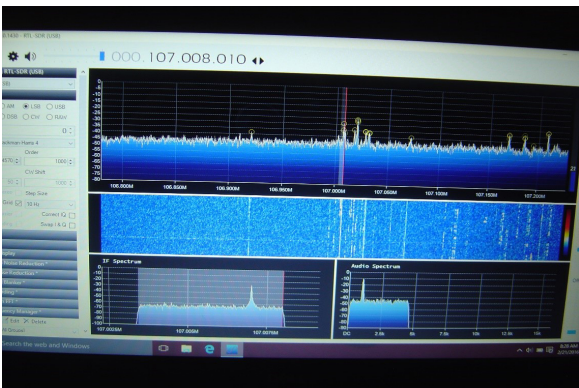
Building an SDR Dongle Up-Converter *Cont'd*



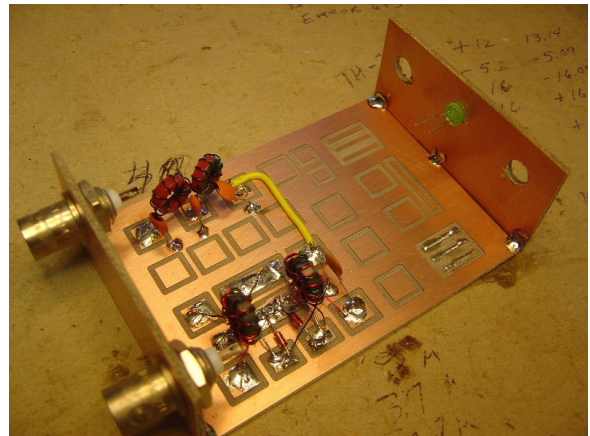
The “build night” at MSUARC in the maker space in the Elec. Eng. Bldg. Students and Alumni enjoyed “melting solder”. The only problem was we ran out of time before everyone completed their kits.



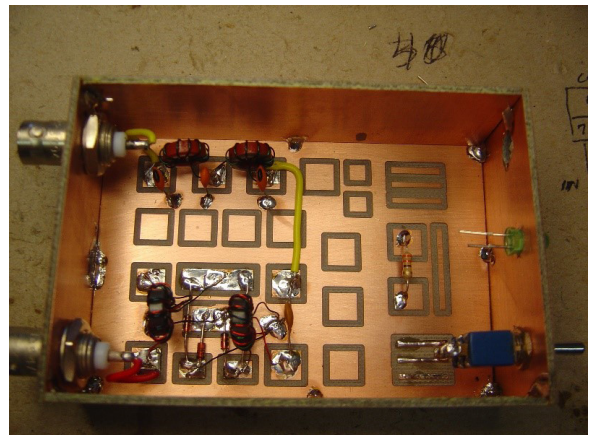
Here’s a pix of the prototype unit testing during the ARRL CW contest, 7.008 Mcs. The top slot highlights signal peaks, the middle is a “panadapter”, the bottom two, are the IF spectrum, and the AF spectrum. On the left side of the screen, the bandwidth and filters may be activated, adjusted, and varied to allow manipulation of the signal. Playing around with these filters results in some very interesting audio output.



The start of prototype #2 with “bigger pads”.



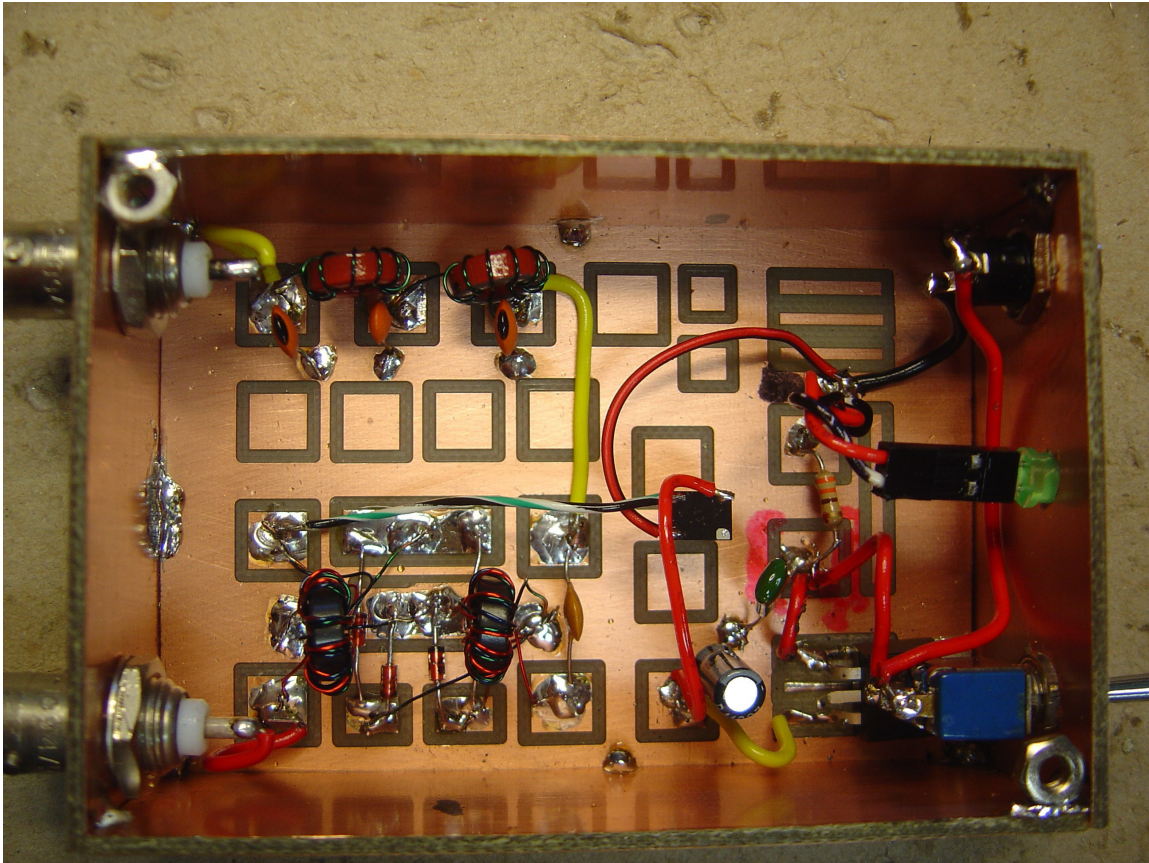
The addition of the “homebrew panels”.



Next, the sides, LED, and pwr switch.

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Building an SDR Dongle Up-Converter *Cont'd*



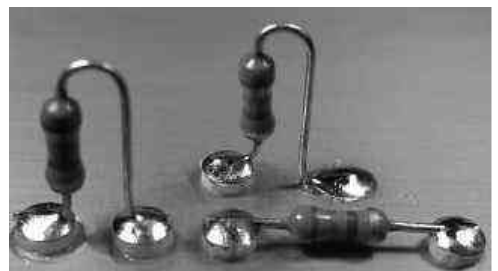
This is the converter with pwr jack wired in and the pwr regulator under the switch. Small nuts were soldered to the corners to secure the cover. The 100 Mhz surface mount oscillator chip is the black square in the center. Antenna input to LP filter is upper left, DBM and IF input, Lower left. Finished size is about 2.5" x 3.5", powered from a wall wart or 9v battery, and will give a good account of itself demonstrating the finer art of "Ham Radio". I have already been copying color SSTV pictures with this little gem, and the experimentation isn't over yet. Software Defined Radio is the future of our hobby. As Hams, perhaps it's time to "roll up your sleeves" and learn something new. I hope this will inspire others to build one also. • 73 Gregg WB8LZG

Manhattan Building Techniques

If homebrewing your own circuit at home using the Manhattan Building Technique sounds exciting, but is completely foreign to you, don't worry. Chuck Adams / K7QO wrote a very thorough, 29 page article, that walks you through everything you need to get started.

Download the article in PDF format by visiting the link below.

<http://www.qrpme.com/docs/K7QO%20Manhattan.pdf>



Picture used with permission from Chuck Adams / K7QO

Social Media and Ham Radio

By Dan Romanchik, KB6NU

When he's not blabbing or tweeting, KB6NU likes to work CW, build stuff, and teach ham radio classes. He's also a prolific blogger (www.kb6nu.com) and the author of the "No Nonsense" amateur radio license study guides (www.kb6nu.com/study-guides). If you have any comments, questions, compliments, or complaints, email him at cwgeek@kb6nu.com.

In the last ten years, there's been an explosion in social media. I've found some to be really great. Others, I haven't found to be to my liking. Here are my opinions on a few of the most popular social media websites:



* Twitter (twitter.com). I like Twitter. I have more than 3,000 followers on Twitter, and it's not only

helped me sell more books, I've found out about a lot of great projects, and I've met and corresponded with a lot of great hams there. It's a lot of fun. If you have a Twitter account, follow me there. I'm @kb6nu.

* Facebook (facebook.com). I have a Facebook account and I even have a page for my study guides. I don't like using Facebook, though, and avoid it when I can.

* Reddit (reddit.com/r/amateurradio). Reddit hosts a very active amateur radio forum. What I like about Reddit is that these guys, unlike say the forums on eHam.Net or QRZ.Com are really interested in doing stuff, not just complaining or arguing. A lot of the hams on Reddit, and it's associated IRC channel (talk about retro!), #redditnet, have used my study guides, and apparently, I'm quite popular there.

* Blab (blab.im). Blab is an interesting concept. It's kind of like an interactive podcast. You can record the blab sessions and then post them to YouTube or your own website. When I suggested having a regular Blab session to talk about ham radio topics to my blog readers, they weren't very enthusiastic about it. Even so, I think that I'm just going to do it. Sometimes you just gotta go with your gut, and my gut says this could be fun and eventually popular. Blab is integrated with Twitter, so if you follow me on Twitter, you'll find out when I'm blabbing.

The biggest problem with participating on these social networks, of course, is that it takes a lot of time, time

that could be used for building stuff or getting on the air. Even so, I would say that, overall, using them has certainly increased my enjoyment of amateur radio and has connected me to people that I probably would not have connected with otherwise.

What do you think? What social media accounts do you have? Which do you prefer? What have they done for you? •



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Smart Answers to Dumb Questions About Amateur Radio

By Don Keith, N4KC

Copyright by Don Keith N4KC, reprinted by permission. Don writes many articles on Amateur Radio, available at his web site, www.n4kc.com, or in his various books on our hobby. See www.donkeith.com for info on those or other books by N4KC.



You may as well accept the fact that eventually people will figure out that you are a licensed Amateur Radio operator. No matter how hard you try to hide it, they will sooner or later catch you. It may be the

HT you monitor in your cubicle at work, the Ham Radio license plate on your old beater, the ninety-foot skyhook in the backyard, or the “Know Code” tee shirt you wear everywhere you go...except maybe to church. Regardless how they come to the conclusion, they will break your cover and deduce that you are, in reality, a real, live Ham nut.

And when they do, they will ask you questions. They will likely do so for one of four reasons:

1 – They are just being polite and don’t really care at all what your answers might be.

2 – Now that they have found you out, they are convinced that your station is the reason the picture on their TV freezes when they try to watch “Dancing with the Stars.”

3 – They want to sell you something, like vitamin supplements, plastic-ware, makeup, or timeshares, and now they have an excuse to talk with you.

4 – They actually have an interest in the hobby and want to learn more about it.

One thing you can count on, though. Many of the questions will be—at least to you—very basic and, frankly, dumb. Never assume your new friend knows enough about

our hobby to even ask a cogent question. Don’t roll your eyes and let out a big sigh! Instead take the stance that the person is asking that dumb question because he or she actually wants to know the answer. Seize the opportunity to give a smart response and you may just be able to evangelize a bit about our great hobby.

To assist you in this effort, I am going to list below some of the really goofy questions folks have asked me through the years. Then I will give some of my own suggested answers. You can likely come up with your own better responses. But remember, don’t get too technical. Make your answers short and to the point so they can ask more if they are truly interested. Don’t lie or exaggerate. And try not to get wild-eyed and foam at the mouth in your eagerness to share with a potential new Ham your immense enthusiasm for the hobby.

So, here are the questions and possible answers:

Question #1: “How far can you talk on that thing?”

Ah, the “how far” question! Careful. Regardless your answer, this often leads to question #2 below so be prepared for that follow-up. Don’t worry, either, about whether the questioner is referring to the 2-meter HT on your belt or the five-element beam watching over the neighborhood from your backyard. The question is hypothetical.

You can be flip and say, “As far as I want to.” You certainly don’t want to break into a detailed explanation of ionospheric refraction or sporadic-E VHF propagation. I usually go for the “impress ‘em” answers, though.

“To the other side of the planet,” I proclaim. Hey, with Echolink or similar technology you can even use that HT



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Smart Answers to Dumb Questions *Cont'd*

to talk far beyond just the local repeater. Maybe even the other side of the planet. Technically it is true.

If their eyes don't go blank and they don't erupt into a gigantic yawn, I trudge on with, "I've talked with other Hams who were operating from an island in the middle of the Indian Ocean, almost exactly on the other side of the world from where you and I are standing right now."

Even if you haven't quite accomplished that feat yet, you can confidently make the same point by proclaiming, "Some Hams talk with other guys operating from the other side of the planet..."

If the person has not begun inspecting his car keys or picking lint from his sweater while he thinks of a way to courteously get away from me, I go even farther.

"Many Amateurs bounce their signals off the moon, off the Northern Lights, or off the tails of comets. We have Amateur Radio satellites orbiting over our heads right now and you can even talk with the astronauts in the International Space Station."

"Really?"

You got him! There is the first sign of a spark of interest. Hopefully you can set the hook and reel him in. But don't be surprised if he asks the next dumb question:

Question #2: "But what can you do with that radio of yours that I can't do with my smart phone?"

Or tablet or laptop or two tin cans and a string? Yep, it's the dreaded "smart phone texting Facebook Pinterest social media flavor of the day" question. "I don't need a license or a radio or a big antenna to talk to people. I got me an Avocado SPF-7 with GPS, a mega-pixel mini-movie-screen, 30 watts of hi-fi stereo audio and a built-in bottle opener and belt-hole puncher right here on my hip."

"Well, you certainly can talk on that bad boy. But Amateur Radio is far more than just talking to people. It's communicating with others of a like mind, using a

station that you put together yourself, using a wide array of technology, and doing so in such a way that you will often be surprised and fulfilled."

Blank look? Move on and talk about something else. Or tell him or her bye bye. Still seems to be paying attention, though? Move on to the next part of the answer.

"You can also buy fish at the market so why do so many people purchase a boat, fishing tackle and beer and head out onto the lake? Golf? Just walk over and drop the ball into the hole. No need to whack at it a bunch of times with a club. See, you do these things because there is a challenge and a fulfilling reward if you try and succeed."

Maybe it is at this point that you get the squinty-face look and the person responds with something like, "Okay, but it still seems like a lot of trouble just to be able to talk to somebody."

So you shake your head sagely, put your forefinger to your chin, and issue a dare.

"Maybe so, but I'd like for you to try something for me. Take that smart phone and dial an international area code and random number. First, let's see if you can even get an answer. If, by some miracle you do, and if that person just happens to speak your language, engage him or her in a half-hour conversation.

What is the likelihood that this random call will net you somebody that not only is willing to chat with you and knows your language but that he or she immediately has some very strong common ground with you? I mean besides also being an owner of a smart phone. These sorts of communications happen all day every day on the Amateur Radio bands. With a contact on the radio, you automatically have something very big and exciting in common. You are both Amateur Radio operators, members of the same fraternity. And whether or not either of you can explain the magic of that, you know it and you feel it."

If the questioner doesn't get that point, you are probably wasting your time.



Continued on Page 13

Smart Answers to Dumb Questions *Cont'd*

Question #3: “Is Ham sort of like...what?...that radio Burt Reynolds and Sally Field used in that trucker movie? CB? That was it, right?”

Citizens Band had its day and you may as well admit it. Millions who would never have picked up a microphone jumped aboard CB over the years. Many still do. Do not make the mistake of instantly condemning the “Chicken Band,” all who have ever yakked on it, or the whole notion of people being able to “work skip” without a license. You might be surprised how many of the folks you admire and talk with regularly on the Ham bands actually began with a “handle” and an II-meter radio.

“CB is one way many people first realize that they have an interest in a radio hobby,” you might answer. “But they want to learn and do far more than what that particular service offers. Some of our most avid Hams started out with a CB radio but moved beyond the low power, limited coverage, crowded frequencies, and lack of choices.”

Question #4: “You guys still use that Morse code, too, don’t you? And I heard you have to know how to send it to get a license to be a Ham.”

Depending on how you feel about CW, you may feel inclined to preach the gospel of “you ain’t a real Ham unless you know Morse!” But trust me, now is not the time to launch into that sermon. Temper your answer. You can convert the person to the paths of righteousness later on if you see that as your mission. The fact that this question even came up confirms that this particular person sees the code as a roadblock. First help him get past that for right now.

“Well, no! It is no longer required at all. Hasn’t been for years. You don’t need to know the code to do most of the fun things in our hobby either.” Pause for a breath. Let that sink in. Then do a low-key sales pitch. “I should tell you, though, that since the requirement went away, more and more Hams have started to learn and use Morse code, by choice and not because they have to. They see it as a fun thing to do. But that is totally up to you. Our hobby has lots of facets and options and learning and using Morse code is just one of them.”

Mentioning “facets and options” may well key dumb question number five.

Question #5: “Still seems like a lot of trouble just to talk to other Ham types. Is there other stuff a Ham license would let me do?”

Okay, that isn’t a dumb question at all. If I’m going to get interested in any kind of pastime I want to know what it involves.

“Absolutely!” you can chime in without fear of contradiction. “Not only is Amateur Radio just about the perfect hobby because you can do it regardless of age, gender, or physical or technical ability, but it offers such a wide area of possibilities.”

You can talk about your own interests here or find out what the questioner likes to do and hone your pitch. Don’t forget activities like contesting, kit building, DXing, tying radios and computers together for SDR, digital modes and more, working satellites, weather spotting, DIY/“maker,” public service, RVing, amateur television, hiking and activating mountains and islands, drones and other radio-controlled devices, experimenting with antennas, propagation, battery/solar power and other alternative energy sources...well, the list is lengthy. -- Practically endless, in my opinion.

While many Hams simply enjoy talking with other like-minded folks, there is plenty more to do with the hobby. And regardless of what other interests a person might have, there is a pretty good chance it marries well with Amateur Radio, enhancing your enjoyment of all of them.

Question #6: “It’s expensive, right? All that radio stuff and antennas?”

“Not necessarily. Like most hobbies, you can spend as much as you want to, but you can also get great satisfaction with a modest station.”

Invite the person to price a bass boat, trailer, motor, tackle box full of lures, a place to keep the boat, and all



Continued on Page 14

Smart Answers to Dumb Questions *Cont'd*

the other necessities to get involved seriously in fishing. Or check the cost of a decent set of golf clubs, club membership, greens and cart fees, lessons, and all the other things you need to become a golfer.

If pressed, you can honestly say that you can get on the air with a pretty good station for less than a thousand dollars. A thousand dollars! That is a lot of money!

Yeah, about four trips to WalMart for my family. Far less than that boat or golf club membership. And you have a station that will stand you in good stead the rest of your life. Plus, if you have someone who can help you find and evaluate used gear, you can get in even cheaper.

Question #7: “Oh, speaking of antennas, I doubt my homeowners’ association would ever allow me to put up a tower. How would I ever be able to get on the air?”

Wow! These questions are not only getting less and less dumb but also more and more difficult to answer. But answer you must. You now have your questioner asking about the right things.

“That is an issue for many Amateurs these days. There is even legislation pending in Congress right now that will make it easier for Hams to get HOAs to allow a reasonable antenna system. But there are plenty of ways to get on the air without having to put up an elaborate antenna or tall tower that will cause your neighbors throw rocks at you. There are many books and articles on the subject, too. Rest assured, Hams are pretty good at finding ways to pursue their hobby regardless the restrictions or impediments.”

Now, if you have done your job of answering the dumb questions without getting frighteningly animated or veering off subject, you may get the least-dumb question of all.

Question #8: “How do I get started? How can I learn what I need to know to pass the test?”

Bingo! You should be a salesman! Or politician! I hope you have a good reply ready for this strong “buying signal.”

But first, here is the wrong answer: “Don’t just learn the answers to the questions on the test. Learn all there is

to know about radio and electronics before you even think about taking the exam.” Wrong, wrong, wrong! A Ham license is a license to learn. Encourage those interested to go ahead and study for the test but assure them they do not need to qualify for a degree in electronic engineering before actually taking it. If their experience is typical, they will start learning while getting ready for the licensing test and they will not stop until the day they go SK.

Many people—including those with a technical background or a real interest in the technical side of our hobby—are still a bit leery of learning enough to pass the exam. They shouldn’t be. And neither should you give them any reason to doubt their ability to pass it. Encourage them to get the ticket. They’ll have the rest of their lives to learn all there is to know.

“Our Amateur Radio club meets every third Thursday at the library, starting at 7 PM. You’d be welcomed by a friendly bunch of folks and we have licensing classes starting next week. You can also visit the American Radio Relay League’s web site. That’s our hobby’s national organization and their site can answer about any question you can think of.”

If the questioner’s response is, “Hey, you have done a pretty good job answering my questions,” then take pride in knowing you may have recruited yourself a new Ham.

Remember, too, what one of my school teachers used to say. “Mr. Keith, you will never pass my class unless you stop reading that Ham Radio magazine while I am lecturing.” Whoops. He did say that, but he also said, “The only dumb question is the one that is never asked.” I suspect we all asked even dumber questions than those above before we started out in the hobby. I know I did.

Thank goodness several very helpful Hams took the time and showed the patience to answer them for me. The result is not only a hobby that has given me endless enjoyment and gratification over the years, prepared me for a 45-year career in media and communications, but also led to many people approaching me with some of those same questions.

In many cases, I was able to answer them and those folks went on to become part of the greatest hobby on earth. •



The DX Corner

By Col McGowan, MMoNDX

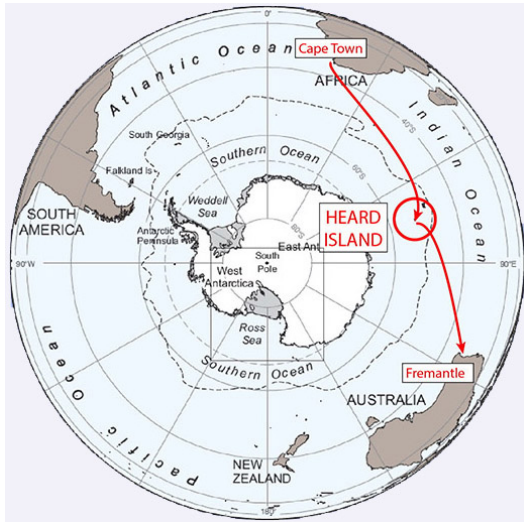
The images and articles about current and/or upcoming DX operations are published here with permission by Col McGowan/MM0NDX as made available on www.dx-world.net.

Images for the QSL cards are published with permission from Tom Roscoe/K8CX and the QSL Card Museum at www.hamgallery.com/qsl.



On March 1, 2016 the first of the Heard Island Expedition Team board flights for Cape Town, South Africa, the accumulation point for the expedition to Heard Island. The first three to depart, Bob Schmieder KK6EK, Ken Karr NG2H, and Adam Brown K2ARB, will arrive in Cape Town at 1:00 PM local time, to be met by members of the South Africa Support Team. They will be followed over the next four days by the other team members: Fred Belton KM4MXD, Arliss Thompson W7XU, Gavin Marshall VK2BAX, Hans-Peter Blattler HB9BXE, Alan Cheshire VK6CQ, Bill Mitchell AEØEE, Dave Lloyd K3EL, Jim Colletto N6TQ, Vadym Ivliev UT6UD, Dave Farnsworth WJ2O, and Carlos Nascimento NP4IW. The team should be on the air between March 20th and April 10th.

You can visit vk0ek.org for many more pictures, updates, as well as information on how to work them.



Here is the location of Heard Island



VK0IR 1997 Heard Island - Courtesy of K8CX



Braveheart tied up in Cape Town, South Africa
This is the same vessel that transported the VP8 team last month - Photo courtesy of Adam/K2ARB



Picture of the HDT Airbeam Tents. These tents inflate in 10-15 minutes allowing for a quick setup in cold and windy environments. They come with diesel heaters and full electrical and ventilation systems. They can be connected together for added strength. They also have rigid and insulated flooring.

DX Code Of Conduct Refresher



Every so often it becomes obvious when we need to sit down and review the DX Code of Conduct. For those of you who may not be aware of this, the DX Code is a set of “rules” that every DX’er should strive to follow. Following these “rules” creates a more efficient pile-up, cuts down on the intentional QRM, and makes sure that everyone gets a chance to work the station. Each rule is listed in blue with an explanation giving more detail.

If you are a newer Ham, don’t think that these “rules” will keep you from having a good time. Jump in feet first!! You just may be bitten by the DX bug.

#1 I will listen, and listen, and then listen again before calling.

This seems so obvious but it is the most vital thing to do. Careful listening rather than rushing to transmit will get the DX into your log. You must listen to find out whether the DX is working split and if so, where is he listening? Then you need to listen to the calling stations in order to determine what the DX station is doing. For example, he may be working gradually up or down the pile-up frequency range - and you need to find the best spot to call. And it may be time to ask yourself: “Do I really need to work this bit of DX, right now? Can I wait for the pile-up to subside?”

#2 I will only call if I can copy the DX station properly.

You also need to listen carefully to determine how well you can hear the DX station to be sure you will hear his reply to your call and to avoid causing interference by transmitting at the wrong time. It is extremely frustrating for a DX station to return a call to a station that is unable to hear him, thereby causing incessant QRM.

#3 I will not trust the Cluster and will be sure of the DX station’s callsign before calling.

Cluster spots often show the wrong call sign. Before you log a station, you should hear the station’s callsign on the air – don’t trust spotting networks. The DX operator should send his call sign at regular intervals. Unfortunately, not all operators do this!

#4 I will not interfere with the DX station or anyone calling and will never tune up on the DX frequency or in the QSX slot.

Sadly, this covers a multitude of operators, employing poor operating practices. We are frequently afflicted with “Policemen,” people who repeatedly jump in to tell callers that “the DX is listening up” – often adding a gratuitous insult. The rule is quite simple: never, ever transmit on the DX frequency for any purpose whatsoever.

I will pay attention to the operator’s instructions if he is operating “split” so as to stay in his preferred bandwidth.

#5 I will wait for the DX station to end a contact before calling.

If you transmit before a QSO is over, you are likely to interfere with the exchange of information, lengthening the QSO and slowing the process. It may seem clever to “nip in” as the previous contact is ending but many DX stations don’t like it, as such operating may break the pattern of the operator, which is what helps everyone to know when to transmit.

#6 I will always send my full call sign.

This is essential for CW and SSB, because incomplete calls lead to an extra transmission, slowing the operator’s progress with the pileup. If the operator is responding to partial call signs, it may appear that you should call with only several letters. Generally, this is not the case. **Always use your full call sign.**

#7 I will call and then listen for a reasonable interval. I will not call continuously.

Continuous calling is selfish and arrogant. With a computer or memory keyer, it is easy to send continuously. Unfortunately, it prevents you from listening and knowing what is taking place. In addition, it raises the QRM floor greatly, making life difficult for the DX station and everyone else.

#8 I will not transmit when the DX operator calls another callsign, not mine.

Perhaps this is intuitively obvious, but it is a common occurrence. If it is clear that the station is not calling you, **do not transmit.**

Continued on Page 17

DX Code Of Conduct Refresher *Cont'd*

#9 I will not transmit when the DX Operator queries a call sign, not like mine.

In life outside amateur radio it would simply be considered rude to answer when someone else is asked a question! How do you know if the station is calling you? Perhaps the DX operator has a partial version of your call. Is it me? "The timing is right!" Yes, the timing may seem right, but it may also be "right" for many other stations. If the DX is actually calling you and hears nothing, he will call you again. Then you can call. **Only one letter from your call sign is NOT enough, however.** Calling when not being addressed raises the floor level of QRM and slows progress dramatically.

#10 I will not transmit when the DX operator requests geographic areas other than mine.

You must recognise and accept that when an operator is calling for a specific geographic area (e.g. NA for North America, AS for Asia), you must not call until the operator's instructions change. Even if his choice appears incorrect, you must follow his instructions. The DX operator is in control. Here's an important point: If a DX operator is working, some area, perhaps North America, and he fails to say so between QSOs, do not begin calling immediately. Call only when it is clear that the operator's instructions have changed. To do otherwise is impolite and simply slows the process.

#11 When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.

If you repeat your call sign, the DX station may think that he has your call sign wrong. He might then listen very carefully – again – thus slowing the process. A DX operator will generally log what he has if you say nothing further.

#12 I will be thankful if and when I do make a contact.

There should certainly be a pride of accomplishment when you get a QSO with a guy in a far-away entity. But before you start basking in the glow of accomplishment, think about the help you received from your partners, perhaps Mr. Icom, Mr. Alpha, and Mr. Force 12. If your ego still feels a need to take ALL the credit, try again. But this time turn off your amplifier and connect your rig barefoot to a dipole. If you get through the pile up this time, then YOU, as the operator, can take more of the credit.

You should also acknowledge that you would not have had the contact without the skill of the operator at the other end who undoubtedly made sacrifices to be there for you. So be thankful for all this help you received.

#13 I will respect my fellow hams and conduct myself so as to earn their respect.

Respect is about behaving well toward others. DXing is very competitive. If you operate otherwise, you may acquire a bad reputation. DXing will be the most fun for everyone if we all behave with politeness, mutual respect and even a bit of humility!

If you don't believe me, here is proof it works based on reports from returning DXpedition operators.

PJ6A

I thought I'd give you a little follow-up on my reflections of the PJ6A operation.

I think you're making a difference! I worked about 80% Europeans and about 95% CW. I found the pile-ups to be well mannered and courteous. When I responded to a call sign, it was unusual for another station to call. If I got a partial call and sent, "SP6GD? 5NN," the frequency was quiet except for the SP6 responding. Of course a few would call once in a while, but these were insignificant and were likely just people out of sync. So, I can't complain at all about pile-up behavior during my watch; and as I say, it appears you are making a difference.

Thank you! 73, Ralph - K0IR

Special Board Meeting

February 20, 2016

❖ CALL TO ORDER:

- President Julie McLain/KB8ZXR brought the meeting to order at 5:08 pm, on Saturday, February 20, 2016. The following Board members were present: Treasurer John Doornhaag/KD8NNQ, Secretary Jane Hosford/KC8FSK, Director Chris Ranes/NS8Q, Director Russ Fitzgerald/N8FZ, and Under 22 Sam Fitzgerald/N8FPR. Vice President Tom Rocheleau/WA8WPI was excused.

❖ MEETING ADJOURNMENT:

- Motion to adjourn made by John/KD8NNQ, seconded by Chris/NS8Q, and approved.
- Meeting adjourned at 6:25 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

❖ FUTURE CLUB MEETING IDEAS:

- Building kits, CW, Technician, and General classes. Message handling with Bob Berger/K8RDN, digital modes, HF operation.
- The basics of internet linking, and how to use ARRL LOTW (Logbook of the World).
- Invite Neal Barncard/KD8YSH to talk about preparedness.
- Invite Matt Miller/KD8OOS and John Tyree/KD6KCX to put on a digital mode demonstration.

❖ NEEDS FOR THE CLUB ROOM AND TO MAKE THE OPERATING STATIONS MORE USABLE:

- John/KD8NNQ will look into getting a couple plastic containers with dividers to hold small parts.
- Go to MSU salvage and see what we can get from them.
- Need to get rid of the cubicles and get two desks. Need a four-drawer locking file cabinet, plus one or two two-drawer file cabinets that can do underneath the desks.
- Need upgraded desktop computers. Maybe Sam/N8FPR and Chris/NS8Q can work on building a couple computers.
- Need to have handles put on the side of the box Dan/KD8YDE and Mark/KD8YUY made for easier handling and transporting.
- Need an inventory of what is in the Club room.
- Need to find all of the Club's awards and certificates and get picture frames for them. Then we can start to hang them on the wall.
- Take all of the items that the club is not using to the Hamfest in July and put "free" on it for anyone that wants it.

CMARC Board Meeting

February 12, 2016

❖ CALL TO ORDER:

- President Julie McLain/KB8ZXR called the meeting to order at 6:10 pm with the following board members in attendance: Secretary Jane Hosford/KC8FSK, Treasurer John Doornhag/KD8NNQ, Director Russ Fitzgerald/NS8Q, Director Chris Ranes/NS8Q and Under 22 Director Sam Fitzgerald/N8FPR. Vice President Tom Rocheleau/WA8WPI had an excused absence.

❖ SILENT KEYS:

- Gloria Cote, wife of Don Cote/KD8BD passed away on January 11, 2016.
- Bill Mathews/K5TTS passed away February 10, 2016.
- Robert Marklewitz/K8NNZ passed away December 19, 2015.
- Steve Babcock passed away February 3, 2016. He was the "face" of the Lansing Fire Department for more than 15 years.

❖ CARDS & FLOWERS REPORT:

- Sympathy cards were sent to the families of Gloria Cote, Bill Mathews/K5TTS, Robert Marklewitz/K8NNZ, and Steve Babcock.
- A \$40.00 donation was made to the Alzheimers Association in memory of Gloria Cote, wife of Don Cote/KD8BD.

❖ POSSIBLE PROGRAMS AND/OR SPEAKERS:

- ARRL's Logbook of the World (LOTW)
- Michael/W8MKB said he could show how to build a portable antenna and how to set it up with a radio.
- June - Have an indoor mini field day with the different stations so newer members can get a feel of it before the actual day.

❖ SKYWARN TRAINING:

- Saturday, April 16th from 2-4pm at Holt Christian Church located at 2424 S. Washington Rd in Lansing. This is the same place where our Hamfest is held.

❖ NATIONAL PARKS ON THE AIR (NPOTA):

- Sponsored this year by the ARRL in celebration of the 100th anniversary of the

National Park Service. There are 483 units of the National Park Service (National Parks, National Battlefields, National Monuments, etc.) and hams are being encouraged to operate portable from them throughout 2016, complete information about NPOTA can be found at <https://npota.arrl.org/index.php>. Each park has been assigned a 4-digit descriptor (two letters and two numbers) by the league. To make it a lot easier to keep track of which parks you've contacted, Joe/W8JRK organized the listing of parks into a checklist and posted it on his domain. Please feel free to download it.

- A pdf version – <http://www.learnerassociates.net/npota.pdf>
- An MS-Word version – <http://www.learnerassociates.net/npota.docx>

❖ MISCELLANEOUS ITEMS

- Regarding our membership in "SATERN" Salvation Army Team Emergency Radio Network - we still need a unit leader for our CMARC SATERN group.
- Russ/N8FZ mentioned the DeWitt Band Invitational on October 8th and having Club members work at it.
- Things we need to finish up: 501C3, club directory, club room remodel, someone to be CMARC/SATERN leader, find someone to teach CW and general classes.
- Ziegenbein nominations are due March 15th.
- Club Photographer: Philip Woodard/KD8ZZK has resigned from his position as co-club photographer. Kenny Hazlett/N8BVV will be the full time Club photographer.
- Saturday, February 20, 2016 marks CMARC's 60th year with the ARRL.
- Dan/KD8YDE and Mark/KD8YUY are bringing in the storage box that they built.

❖ MEETING ADJOURNMENT:

- Motion to adjourn made by John/KD8NNQ, seconded by Sam/N8FPR, and approved.
- Meeting adjourned at 7:03 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

General CMARC Meeting

February 12, 2016

❖ CALL TO ORDER:

- President Julie/KB8ZXR brought the meeting to order at 7:10 pm.
- We do have nametags for everyone if you don't have your own, so please use, so we know who everyone is. Please sign in on the sign in sheets that are going around, there is one for members and one for visitors.
- The meeting began with the Pledge of Allegiance. The flag was held by Sam/N8FPR.
- A moment of silence for our silent keys.

❖ 2016 BOARD INTRODUCTIONS:

- Julie/KB8ZXR introduced the new 2016 Board:
 - President - Julie McLain / KB8ZXR
 - Vice President - Tom Rocheleau / WA8WPI
 - Treasurer - John Doornhaag / KD8NNQ
 - Secretary - Jane Hosford / KC8FSK
 - Director - Chris Ranes / NS8Q
 - Director - Russ Fitzgerald / N8FZ
 - Under 22 - Sam Fitzgerald / N8FPR
- If you need to contact any of the Board members, you can do that on the Club website: centralmiarc.com, left hand side of the page, near the bottom is leadership, and that brings up all the appointments for 2016.

❖ ATTENDANCE:

- There 38 people in attendance.
- Our visitors included: Geraldine Jenks, Linda Dunahoo, Vicky Weaver, and Jim Geyer/KD8CHU.

❖ NEW LICENSES, UPGRADES AND VANITY

CALLS: Ray Jenks/KD8ZDX got his General and John Winn/KE8CYC got his Technician.

❖ SILENT KEY REPORT:

- Gloria Cote, wife of Don Cote/KD8BD passed away on January 11, 2016.
- Bill Mathews/K5TTS passed away February 10, 2016.
- Robert Marklewitz/K8NNZ passed away December 19, 2015.
- Steve Babcock passed away February 3, 2016. He was the "face" of the Lansing Fire Department for more than 15 years.

❖ CARDS AND FLOWERS REPORT:

- Sympathy cards were sent to the families of Gloria Cote, Bill Mathews/K5TTS, Robert Marklewitz/K8NNZ, and Steve Babcock.
- A \$40.00 donation was made to the Alzheimers Association in memory of Gloria Cote, wife of Don Cote/KD8BD. Sympathy cards were sent to the family of Arlene Pedersen and a \$40.00 donation was made to the McLaren Volunteer Services in memory of Arlene Pedersen.

❖ NATIONAL PARKS ON THE AIR (NPOTA):

- See the CMARC Board Meeting minutes on page 15 for further details.

❖ PLEASE PAY YOUR DUES: NEW HAMS GET ONE YEAR FREE MEMBERSHIP

- CMARC dues to John/KD8NNQ and LCDRA dues to Julie/KB8ZXR.

❖ SKYWARN TRAINING:

- Saturday, April 16th from 2-4pm at Holt Christian Church located at 2424 S. Washington Rd in Lansing. This is the same place where our Hamfest is held.

❖ NEW BUSINESS:

- A motion to accept the January Secretary's report as printed in the February Scope was made by Ted/WA8MFQ, seconded by John/KD8NNQ, and approved.
- A motion to accept the January Treasurer's report as printed in the February Scope was made by Jerry/KD8GLN, seconded by Mark/KD8YUY, and approved.
- Bob/KB8DQQ sells candy bars for a dollar

❖ UNDER 22 REPORT: None

- ❖ **50/50:** John Dornhaag/KD8NNQ won \$15.00 and donated it to the Club. Thank you John.

- ❖ **MOTION FOR BREAK:** Michael/W8MKB, seconded by Kenny/N8BPV, and approved.

Continued on Page 21

General CMARC Meeting

February 12, 2016

❖ UPCOMING EVENTS:

- May 13th is Ladie's Night which is in lieu of our monthly meeting. It will be held at Delhi Cafe and at that time, the Ziegenbein Award will be presented. Nominations for the Ziegenbein Award must be in before March 15th.
- Field Day is June 25th and 26th.
- Hamfest is July 30th.

❖ PROGRAM:

- Our guest speaker for tonight is meteorologist Jim Geyer/KD8CHU. Jim is eminently qualified to speak on any weather topic. He not only holds an Associate of Arts degree from Concordia University, but also holds a Bachelor of Science in Atmospheric and Oceanic Science degree from the University of Michigan in Ann Arbor. He is a member of the American Meteorological Society, and a charter member of the National Weather Association. Jim also holds the American Meteorological Society's Seal of Approval for both television and radio weathercasts.

❖ MEETING ADJOURNMENT:

- Motion to adjourn made by John/KD6KCX, seconded by Ray/KD8ZDX, and approved.
- With all business concluded, the meeting was adjourned at 8:50 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

- Kenwood AT-230 antenna tuner, for use with TS-830, TS-530, etc. 200 Watts, 1.8 to 30 MHz, 20 & 200 watt scales -- **\$120**
- Kenwood VFO-230 digital synthesized VFO, for split frequency. 20 Hz steps. 5 memories. Designed to connect to TS-830s or TS-530 -- **\$135**
- Radioshack HTX-420 Handheld FM transceiver -- 3 to 4 watts -- 2M & 70cm -- with AC adapter. Includes electronic compass. (needs new battery). -- **\$65**
- Radioshack Pro-97 Scanner Receiver -- triple trunking -- 1000 channel. With AC adapter. (battery not included). Good condition-- **\$75**

CMARC Classifieds

Please contact Matt Beha/N8BPI by email mattbeha@hotmail.com or call 517-646-6925 and leave a message

- Yaesu FT-747GX transceiver, original MH-1 B8 mike, matching FP-757 HD Power Supply, power cord. Working condition; recently tested. Original owner, non-smoker. **\$395**
- Hustler HF Mobile antenna mast and resonators for 10, 15, 17, 20, 40 & 80 meters. Includes mount and spring. Excellent condition. **\$79**
- Nikon D3100 14.2 Megapixel SLR camera, 18-55mm Nikkor lens & 55-200mm Nikkor lens. Like new. 8GB SDHC card included. **\$199**

Remaining Items from the Estate of Louis Larche/KD8BWL

The following items of equipment from the station of Louis Larche / KD8BWL, SK, are still available. Listed is the suggested price for each. Please make an offer if you are interested. All the proceeds will go to Barb, Louie's XYL. Contact me at 517-896-3570 or kfaiver@sbcglobal.net. -- Ken / W8HNI

- RCA VWV-120A voltmeter -- AC power line monitor -- **\$12**
- Leader LPM-885 SWR/power meter -- 3 ranges: 20, 200, 1000 watts
- Pyramid CB-1000 speaker -- mobile speaker
- RL Drake 1525 EM microphone -- mike with touch tone ham keypad -- **\$5**
- Low-pass filter -- no specifications -- **\$3**
- Large study steel desk (5x3 with drawers on each side) -- **\$75 or make offer**



"PRACTICE AMATEUR RADIO EXAMS"
Sponsored by the "Ingham County VE Group"
VE Julie McLain KB8ZXR

Technician Class 2014 Pool

- 1.) Question T7C11 - What is a disadvantage of air core coaxial cable when compared to foam or solid dielectric types?
- A. It cannot be used at below freezing temperatures
 - B. It cannot be used for VHF or UHF antennas
 - C. It requires special techniques to prevent water absorption
 - D. It has more loss per foot
- 2.) Question T5D09 - What is the current flowing through a 24-ohm resistor connected across 240 volts?
- A. 10 amperes
 - B. 0.1 amperes
 - C. 216 amperes
 - D. 24,000 amperes
- 3.) Question T7D11 - Which of the following precautions should be taken when measuring circuit resistance with an ohmmeter?
- A. Ensure that the circuit is grounded
 - B. Ensure that the circuit is not powered
 - C. Ensure that the applied voltages are correct
 - D. Ensure that the circuit is operating at the correct frequency

General Class 2015 Pool

- 1.) Question G5A02 - What is reactance?
- A. A property of ideal resistors in AC circuits
 - B. Opposition to the flow of alternating current caused by capacitance or inductance
 - C. Opposition to the flow of direct current caused by resistance
 - D. A large spark produced at switch contacts when an inductor is de-energized

- 2.) Question G2B03 - If propagation changes during your contact and you notice increasing interference from other activity on the same frequency, what should you do?
- A. As a common courtesy, move your contact to another frequency
 - B. Increase power to overcome interference
 - C. Report the interference to your local Amateur Auxiliary Coordinator
 - D. Tell the interfering stations to change frequency

- 3.) Question G2E06 - What is the most common frequency shift for RTTY emissions in the amateur HF bands?
- A. 425 Hz
 - B. 170 Hz
 - C. 85 Hz
 - D. 850 Hz

Extra Class 2012 Pool

- 1.) Question E7H01 - What are three oscillator circuits used in Amateur Radio equipment?
- A. Taft, Hartley and Pierce
 - B. Pierce, Fenner and Beane
 - C. Colpitts, Hartley and Pierce
 - D. Taft, Pierce and negative feedback
- 2.) Question E5B02 - What is the term for the time it takes for a charged capacitor in an RC circuit to discharge to 36.8% of its initial voltage?
- A. One time constant
 - B. One discharge period
 - C. An exponential discharge rate of one
 - D. A discharge factor of one
- 3.) Question E4E03 - Which of the following signals might a receiver noise blanker be able to remove from desired signals?
- A. Signals which appear at one IF but not another
 - B. Signals which have a sharply peaked frequency distribution
 - C. Signals which are constant at all IF levels
 - D. Signals which appear across a wide bandwidth

Questions and Answers Copied from ARRL's "Practice Amateur Radio Exams"
found at: <http://www.qrz.com/hamtest/>

****ANSWERS**** Technician: 1-C; 2-A; 3-B General: 1-B; 2-A; 3-B Extra: 1-C; 2-A; 3-D

Greater Lansing Nets

The “**Central Michigan Slow Scan TV Net**” meets every Sunday evening from 7:00- 8:30pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Carl Canfield/K8YHH. EVERYONE is welcome to join in and have fun learning and using this interesting and useful mode of communication. Other digital modes will be explored from time to time. For more information, call Carl at: (517) 755 6627.

The “**Ladies Tea Time Net**” meets every Tuesday evening at 7pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Julie McLain/KB8ZXR, and can now also be found on the *DODROPIN* EchoLink Conference Server (ID# 355800)! Everyone is welcome to check in—even all you guys!! This Net has been around now for over SEVEN YEARS (since July 3, 2007), so let’s keep it going and growing!!

The “**Quarter Century Wireless Association Net**” also meets every Tuesday night but at 8pm and on the 146.70 repeater (PL 107.2 Hz), with Net Coordinator Don Tillitson/WB8NUS. Be sure to stop by after Julie’s Net and say “Hello!”

The “**Mid-Michigan Information & Trader’s Net**” meets every Wednesday evening at 7:00pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Julie McLain/KB8ZXR. This Net has been around now for over FIVE YEARS (since November 11, 2009) and is still growing!! Be sure to join Don for a time of FUN, FELLOWSHIP, and INFORMATION!! There will be helpful Ham-related information to share from both Net Control and our check-ins, time for questions and answers, and “Trader’s Net” style on-the-air swapping of Ham-related equipment throughout the Net. Sounds like a good time to me!!

ALL are welcome on these nets, so be sure to check in to show your support. And as with all Nets, 3rd party check-ins are welcome, but must have Control Operator present at check-in time.

CMARC Officers and Appointees

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Julie McLain, KB8ZXR
(517) 694-0812

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(517) 641-4533

Photographers
Kenneth Hazlett, N8BVV
(517) 348-5513

Salvation Army Liaison
Jerry Waite, KD8GLN
(517) 882-5406

Meetings
Held Monthly on the second Friday of the month at:
Salvation Army-Capital Area,
701 W. Jolly Rd, Lansing
at 7:00 PM. Board Meeting
begins at 6:00 pm.

CMARC Calls:
W8MAA & W8PLP

LCDRA Officers and Appointees

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(517) 449-1517

Vice President
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wd8bcs@arrl.net

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(517) 694-0812

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Meetings
Held Quarterly on the third Thursday of the month at:
Fire Station #48,
Marshall St, Lansing
at 7:00 PM.

LCDRA Call:
W8BCI

The Scope is a monthly joint publication of The Central Michigan Amateur Radio Club and the Lansing Civil Defense Repeater Association.

Please send all articles, classified ads, or other Information to the editor, Chris Ranes, NS8Q, at cmarscope@gmail.com.

The deadline for each issue is midnight on the 20th of the preceding month.

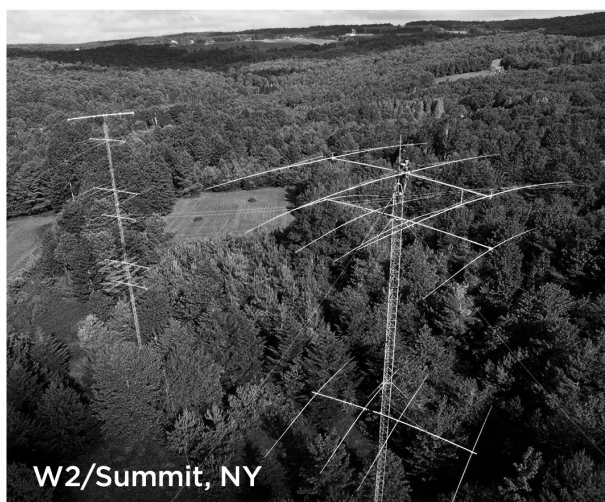
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56th Annual
Michigan Crossroads Hamfest & Radio Swap

Saturday, March 19, 2016
Wings Stadium Annex
3600 Vanrick Drive, Kalamazoo Township, MI 49001

Sponsored by the Southern Michigan Amateur Radio Society

Vendor set-up: Friday, March 18th, 6:00 PM - 9:00 PM Saturday, March 19th, 6:00 AM - 8:00 AM



General Admission: Saturday, March 19th, 8:00 AM - 12:00 PM
\$5.00 admission fee at the door
Vendor table or 8' space rental \$10.00
2000 Free PAVED parking spaces
Door prizes
Amateur Radio Examinations (10:00 AM)



Talk-in: 147.000 MHz (+600 kHz offset) KARC Repeater PL 94.8
(PLEASE NOTE, This is different from previous years)

For more information, visit our website <http://www.w8df.com/hamfest>, contact **Tom, WR8G**, at (269) 962-8007 or via email at wr8g@arrl.net.

Registration Form

Name _____

Company _____

Call sign _____ Email address _____

Phone (____) _____ - _____

Mailing address _____

City _____ State _____ Zip _____

Check boxes for: Electrical hookup ☐

Wall table(s) preferred ☐

_____ Tables (8ft) at \$10.00 each = _____
(Or 8' space)

_____ Tickets for hamfest @\$5.00 _____

_____ Electrical Hookup \$10.00 _____
(Does not include table)

To order, please send a copy of this form, check or Money Order payable to SMARS, and a SASE to:

SMARS
PO Box 934
Battle Creek, MI 49016

Total amount enclosed _____

NOTE: NO RESERVATION WITHOUT THIS FORM AND PAYMENT.

There is NO SMOKING in the building. Adult material and alcohol are prohibited.
Reservations by mail accepted until March 1, 2016, Please call after March 1st.



Show Your Support for Amateur Radio and Join CMARC & LCDRA Today!



JOIN TODAY!

Central Michigan Amateur Radio Club, Inc.

As a licensed Amateur, you can **sign up today** as a Full Member. As a Full Member of CMARC, you will receive voting rights and an annual subscription to 'The SCOPE'. This newsletter is filled with Club News, special interests and events.

Sign up today as an Associate Member and it includes an annual subscription to 'The SCOPE'. (no voting rights as an Associate Member)

New licensees are now eligible for a *one FREE year membership* at CMARC and **Under 18** licensees are *eligible for FREE membership*!

JOIN TODAY!

Lansing Civil Defense Repeater Association

As a licensed Amateur, you can **sign up today** for only \$15. As a member of LCDRA, you will receive an annual subscription to 'The SCOPE', as well as voting rights in the Association.

LCDRA oversees the operation and maintenance of all Lansing Area repeaters. Use of the repeaters does NOT require LCDRA or CMARC membership, but your support is welcome and appreciated.



LANSING CIVIL DEFENSE REPEATER ASSOCIATION

Name		Callsign
Address		City State
ZIP	Phone	Lic. Class
ARRL Member?	Birthday	Wedding Anniversary
Year 1st Licensed		Please supply email address for SCOPE mailing
<input type="checkbox"/> Full <input type="checkbox"/> Associate <input type="checkbox"/> New Licensee (1 yr. free) <input type="checkbox"/> Under 18 (free)		
Full Membership \$15 per calendar year (must be a licensed amateur to obtain Full Membership) Associate Membership \$5 per calendar year		
Mail Your Check or Money Order to: John Doornhaag 1165 S Ainger Rd Charlotte, MI 48813-9540 (Checks made payable to CMARC)		

Name		Callsign
Address		City State
ZIP	Phone	Lic. Class
ARRL Member?	Birthday	Wedding Anniversary
Year 1st Licensed		Please supply email address for SCOPE mailing
LCDRA Membership is \$15 per calendar year (add a Family member for only \$7.50 per person, per year). LCDRA maintains our local repeaters and your support is appreciated. (Membership not required to use repeaters)		
Mail Your Check or Money Order to: Julie McLain KB8ZXR 4444 Sycamore St. #1 Holt, MI 48842 (Checks made payable to LCDRA)		

Central Michigan Amateur Radio Club
P.O. BOX 27321
Lansing, MI 48909-7321



Central Michigan Amateur Radio Club

THE SCOPE



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