

## GOING ONCE, GOING TWICE...SOLD!!!

GARY SKUSE, KA1NJL—RARA VICE PRESIDENT

The RARA auction has been an annual event for as long as I can remember so what can we do to change it up? We are moving it to **THURSDAY NOVEMBER 6<sup>th</sup>**. We are not really doing that to change things up but rather because of a scheduling conflict at the fire hall.

The annual RARA auction is something I look forward to each year for a number of reasons. The attendance is usually very good so I get to see friends I seldom get to see and I have opportunities to buy all sorts of stuff that I can actually touch and handle before bidding. It is also an opportunity to unload, or rather, pass on some of the ham radio treasures I no longer use to someone who will use them.

This year the auction is scheduled for **Thursday November 6<sup>th</sup>** and once again the long running tradition will continue with our hosts and auctioneers extraordinaire Dick Goslee, KG2I and Ed Gable, K2MP. These two hams not only entertain us but they educate us with their endless knowledge of all things radio, old and new. They have been graciously hosting the RARA auction for so long that there is a rumor that they met Hiram Percy Maxim at one of the first. While that rumor may not be true because I just made it up, I will venture to say that they know more about Maxim and his on air activities than I do. I am especially grateful for their help with this event and realize that it wouldn't be the same without them.

Please plan to join us on **Thursday November 6<sup>th</sup>** with *anything radio-related* that you would like to sell. Search your attic, basement, garage, beneath your bed, in your closet, the trunk of your car, your neighbor's garage or anywhere else you might be keeping something you no longer use that may become someone else's treasure. Be sure to clearly label all items with your name and sale price. We wouldn't want to give your money to someone else when your items sell. Not only will you be able to pass that potential treasure to a buyer who will get something he or she needs or wants but the club will benefit from 10% of the sale price. Of course, if you do not have anything to sell you should come and look over the treasures that will be for sale. You might find something you cannot live without.

This is a RARA **member only event** so bring your membership card with you or be prepared to renew your membership at the door if it has lapsed. The entertainment value of the Dick and Ed show alone is worth the price of an annual RARA membership. Of course each member is welcome to bring one guest to the auction; it is a great opportunity to introduce someone to the hobby and watch as their eyes glow with desire for the really cool radio-related items that sell each year. The auction will be held at the usual meeting venue, the Henrietta Fire Company #1 located at 3129 East Henrietta Road near Lehigh Station Road. It will start at 7:00pm on **Thursday November 6<sup>th</sup>** but the doors will be open at 6:30 so you can set up the items you have for sale and check out the things you may want to bring home with you. Since this is a member only function we ask that everyone enters the building from the door on the west side of the building. I'll look forward to seeing you there!

Thursday  
November 6, 2014



NOVEMBER 2014  
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# PREZ SEZ

FRANK SCHRAMM, WB2PYD—RARA PRESIDENT

**Thursday, Thursday, Thursday, Thursday, Thursday, Thursday, Thursday, Thursday!**  
Due to a Fire Department event conflict our November meeting is going to be a day early, on Thursday Nov 6<sup>th</sup>. This will be our Annual **Members Only** Auction. Membership cards will be scanned at the door to gain entry. If your membership is not current, renew online right now while you're thinking of it! ([Just click here](#)) If your membership has lapsed and you attempt to get past the guards at the door, you will be escorted out to the woodshed for 30 lashes with a rubber HT antenna –we're hams, why would we use a wet noodle? Did I mention it was going to be on Thursday? Just in case you didn't get it... the meeting is NOT on Friday this month.

## **New Membership cards**

The new membership cards are here. If you're a current, Full member and you've been waiting for a plastic membership card see the Membership Secretary to retrieve your card.

## **Hamfest 2015 Update**

Since the November meeting is the Auction, you'll have to wait until the December meeting for me to disclose the developing details of the 2015 Hamfest. Now that sentence alone is guaranteed to start our ubiquitous rumor mill abuzz with conjecture; so if you don't hear it from me, you can bank on whatever you hear as being... wrong! But for now, do know that we are making good progress for the 2015 Hamfest.

## **2014 Banquet**

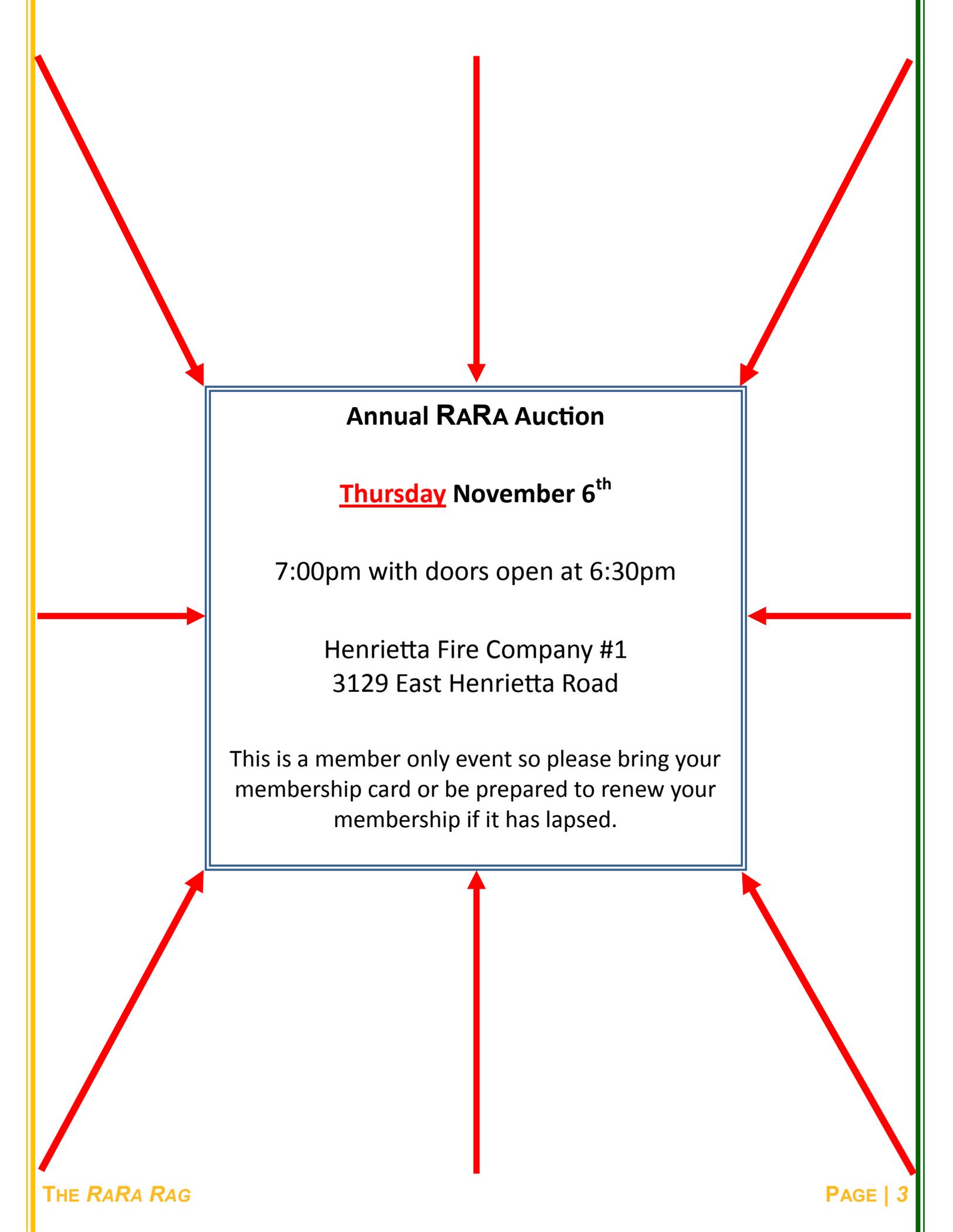
For those of you who missed it, the 4<sup>th</sup> annual RARA Banquet was well attended by nearly 10% of the membership and family. Besides a great buffet dinner, our guest speaker, Ed Gable, K2MP, discussed highlights of the past 100 years of Amateur Radio and how Amateurs have influenced military and commercial communications technology and standards. We also presented Joe Walker, KA8WJH, with our "Club Service Award" for many years of dedicated Public Service duty and as our Public Service Coordinator. Unfortunately Joe was unable to attend and receive his award in person. A special "Lifetime Achievement Award" was presented to both Ed Gable, K2MP, and Dick Goslee, KG2I, for decades of service to the club of too numerous variations to list here. Mark your calendar for our 2015 Banquet on Friday September 25<sup>th</sup>.

## **Question for you**

Whether you're a member of RARA, or just a reader of the RAG, I have a question for you: ***What more can RARA do to serve your individual needs?*** I want to know: [WB2PYD@Gmail.com](mailto:WB2PYD@Gmail.com)

## CALENDAR OF EVENTS

- NOVEMBER 6<sup>TH</sup>** - RARA Auction  
7:00 PM at Henrietta Fire Co. #1, 3129 East Henrietta Rd
- NOVEMBER 13<sup>TH</sup>** - RARA Board of Directors  
5:30 PM RIT Engineering Hall, Room 2110
- NOVEMBER 15<sup>TH</sup>** - RARA VE Testing  
10:00 AM RIT Gleason Hall, Room 3139



**Annual RARA Auction**

**Thursday November 6<sup>th</sup>**

7:00pm with doors open at 6:30pm

Henrietta Fire Company #1  
3129 East Henrietta Road

This is a member only event so please bring your membership card or be prepared to renew your membership if it has lapsed.

# Peak The Grid

Forest Shick, WA2MZG

## FEEDBACK and the RAG

Feedback is a very important concept in the design of electronic circuits. Negative feedback helps control gain, shape frequency response among other attributes. Positive feedback helps in the design of oscillators.

Feedback is an important tool for the smooth operation of businesses, organizations, communities, clubs, etc. Feedback is especially important when publishing and editing a newsletter or magazine. Which is my topic today.

The RARA RAG has been around for many years. Marisa and I have been editing it for less than a year now. We have brought our own styles and ideas to the RAG. What we are missing is feedback relating to content: positive or negative.

We have tried new ideas over the past few months: commentary articles such as Made In America, Build It articles, Cross Word and Word Search puzzles, articles that are not Ham Radio specific, even articles asking for questions to be answered.

RARA has 600+ members and the RAG has a distribution to over 7000 email addresses; you would think AND hope that someone would have an opinion: positive or negative feedback.

Receiving a well done or we like the new look or you are doing a great job is very rewarding and I think I can speak for Marisa and say we greatly appreciate this type of feedback.

What I am asking for is specific feedback.

Do you like the puzzles?

What type of articles would you like to read?

Are the articles too long or too short?

What do you think of the articles in the current issue?

I have heard comments such as "Why would I read the RAG"? I take this to mean that the RAG is not relevant to this person. The only way to improve the RAG, to make it relevant and encourage more writers is FEEDBACK!

Please, well expressed feedback, positive or negative, will be appreciated and considered.

## RARA's booth at the Rochester Mini Maker Faire

Jon Dickason, N2JAC



Saturday, November 22, 2014  
10AM-4PM

Rochester Riverside Convention Center

**MAKE** is a magazine about do-it-yourself tech projects. Makers are the people who do the building, tweaking, hacking, programming and creating. **Maker Faire** is the Greatest Show (and Tell) on Earth—a family-friendly showcase of invention, creativity and resourcefulness, and a celebration of the Maker movement. It is a place where people show what they are making, and share what they are learning.

Rochester Mini Maker Faire is an independent and licensed mini version of a full size maker faire, like the New York City flagship event with over 600 makers and 75,000 attendees. Some of the 60 exhibitors at the Rochester Convention Center will be: several robot booths, model railroads, programming, Rochester Makerspace, microcontrollers, astronomy, 3D printing, arts and crafts, performances and seminars, etc.

RARA will have a booth about ham radio, of course. We'll be showing kits and scratch built radios and antennas, mesh networking, APRS for high altitude ballooning, antenna design, hidden transmitter hunting, and more. We'll have morse code keys for kids to build, and we're looking for a couple more helpers to show off some DIY gear, help with the building project, and man the booth. Or if you have a DIY gadget you want us to show off for you, let me know. Please contact [N2JAC@qsl.net](mailto:N2JAC@qsl.net) for more info.

# VE Team Input

Ken Hall, W2KRH

RARA hosted the first monthly VE session of the 2014-15 test year on Saturday September 20<sup>th</sup>. We had 18 successful candidates who received 12 Technician, 4 General and 2 Extras. One of the successful Extra candidates passed all 3 exams at one sitting; our congratulations go out to Simon Shipkowsky AC2OQ. In addition we had 3 people who took and passed both the Technician and General exams.

|                  |        |   |                   |        |   |
|------------------|--------|---|-------------------|--------|---|
| William Kennedy  | KC2BEN | E | Evan Glen         | KD2HER | T |
| Simon Shipkowsky | AC2OQ  | E | Tucker Gordon     | KD2HES | T |
| Robert Clark     | KD2HEO | G | Benjamin Haag     | KD2HET | T |
| Robert Galory    | KD2GHF | G | James Lewis       | KD2HEU | T |
| Scott Mann       | KD2SJM | G | David Malecki     | KD2HEV | T |
| Ronald Robbins   | KD2HEZ | G | James McCusker    | KD2HEW | T |
| William Fousse   | KD2HEP | T | Colum McGaley     | KD2HEX | T |
| William Gatts    | KD2HFC | T | Luke VanDervort   | KD2HEY | T |
| Matther Glazer   | KD2HEQ | T | Zachary Santagata | KD2HFA | T |

The 'Last Man Standing' was Simon pictured finishing up his Extra exam. I would like to thank all the VE's who gave up their Saturday morning to help at the exam session.

This November RAG will be published before the October test results are available, they will be in the December RAG. The November session will be on November 15<sup>th</sup>, 10AM in the Gleason Bldg. room 9 -3139 on the RIT campus. Hope to see you there.



**Last Man Standing—AC2OQ**

# Get Started Making Your Own Printed Circuit Boards

Jamie Oliver, KF2B, KF2B@frontiernet.net

## Introduction:

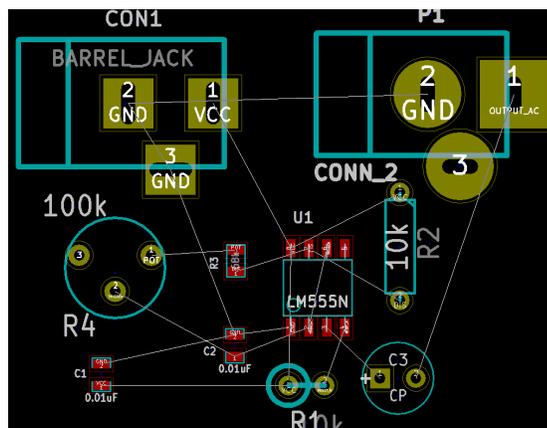
Did you ever have a project that you wanted to make but it was too complex to wire point to point, the parts are only available in surface mount, or didn't want to do a PCB with graphic arts technology? Thanks to a global team of wonderful programmers, there is now an open source fully integrated program for PCB generation that allows you to easily make a fully functional PC board. This includes the generation of schematics, schematic symbols, PCB layout, component footprints, and gerber files for production. To top it off, you can even view your project in 3D prior to sending to production. The software tool is called "KiCad" and can be found at [www.kicad-pcb.org](http://www.kicad-pcb.org). After you design your board, you can purchase 5 two sided PCBs for as little as \$10!

For those of you that do not have an electronics background, this is a warning that there is a lot to know about the creation of PC boards and isn't for the faint of heart. The learning curve for the details of PC board generation along with learning the software is significant but can be a fun part of your next project. This article is not a "how-to" article but intended to make you aware of the capability. If there is club interest, a class could be set up to show the tips and tricks of PC board creation. Please note that PCB layout is a career and learning this will take time. But, like many things, once you know how, it is easy.

## PCB Tools:

There are a few PCB tool sets out on the market. Most full featured professional packages start at \$4,000 such as Altium (built from Protel) and OrCad but there are free packages such as Eagle Software (<http://www.cadsoftusa.com/>). These packages have limitations such as one sheet schematics, board size (4" x 3") and only two layers. ExpressPCB (<http://www.expresspcb.com/>) lets you design your PCB but only on their tool set that is not compatible with other systems. KiCad's only limitation is 16 layers and you own all your files. Component libraries are growing daily. All libraries should be reviewed for accuracy. See <http://www.kicadlib.org/> for more schematic, footprint, and 3D models.

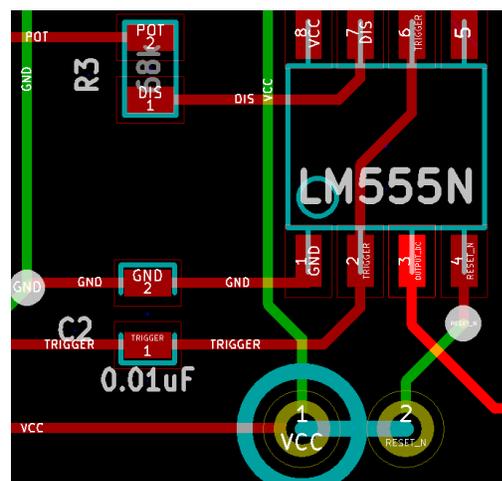
To whet your appetite for the tool set, take a look at some of the capabilities. The schematic editor is relatively simple. My biggest complaint with it is that it is only hierarchical and not a flat file system, but there are ways around that. Once your schematic is done, you can assign footprints to the schematic symbols. Many other software packages have the footprints associated to the symbol directly. Once you bring in the components, your layout will look like a rats-nest.



Rats Nest

Once the parts are placed, you can route the board which is the most fun. Note that there is an auto router for this as well. One very helpful feature is that if you label your nets in your schematic (very good process), you can see it in the tracks in the layout as you lay the tracks down. This is a great reminder for signal integrity, crosstalk, or analog layout concerns.

Once your layout is complete, you can review it in great detail in the 3D board viewer and zoom in on any section. This makes it easier to validate your design for problems. See the 3D view on the next page. You can rotate the board in any position and zoom to inspect vias, pads, holes, tracks, etc. For this design, I used surface mount and through hole components to illustrate the modeling capabilities and options you can have.



Route With Net Labels

## Documentation:

The documentation provided is very good and walks you through an entire design step by step. The first document to read is "Getting Started in KiCad." Next is the reference manual for Pcbnew. This 111 page manual details many awesome features.

## Fabrication of PCBs:

There are many businesses that will fabricate your PCBs from your gerber files for very small price. You must check with each fabricator as they may have restrictions of board size, track and spacing limitations, specific hole sizes, among

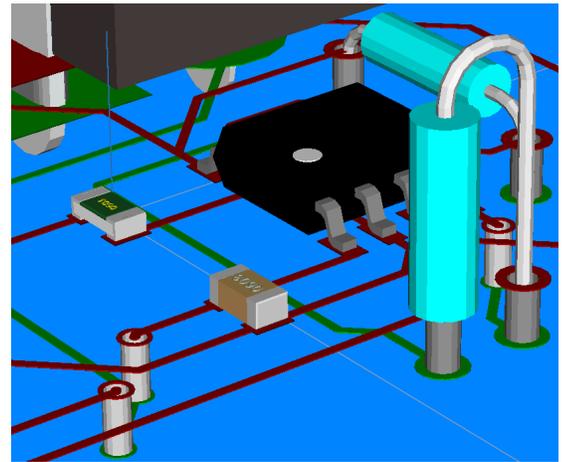
others. Identify your fabricator and know the limitations before you start your design. If there is enough interest, I can make a table of fabricators and their limitations.

**Extras:**

KiCad has a PCB calculator for microstrip, coplanar waveguide, stripline and other transmission lines. Pcbnew also has a special shape generation tool specifically for microwave applications. As it is an open source project, it is only getting better. There is a yahoo forum [kicad-users@yahooogroups.com](mailto:kicad-users@yahooogroups.com) where people can research problems and learn what others are doing.

**Conclusion:**

KiCad may not have all the features that the \$4000 professional packages have but it is certainly close enough for the hobbyist and small businesses. Many businesses use KiCad for their PCB design package.



3 D View

Please tell me what you think of this and let us know if and what you would like to see more of in future RAGs about this. If you do a PCB and would like to make it available to the club, write an article about it and have the project to send to others.

## Build It!

Forest Shick, WA2MZG

**Straight Key**

Last month we built a code practice oscillator (CPO). Without a key, you cannot do much with your CPO. This month we will build a straight key. This picture shows a J-37 key mounted to a black bakelite base to become the J-47. This is a WWII era key used by the military. You can find interesting information on line about the variety of straight keys.



Building the straight key is mostly a mechanical task. The key consists of a base made from a piece of oak and a heavy brass strip as the key lever. Miscellaneous hardware is required to assemble the pieces. Oak was selected for the base as it is relatively heavy. The base should be heavy to help stabilize the key while you are sending.

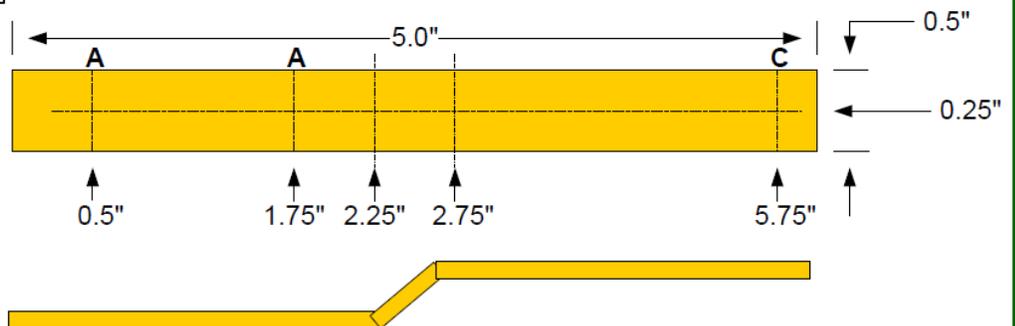
- | Straight Key Bill of Materials        |  |
|---------------------------------------|--|
| Oak block cut to 6" x 2.5" x 0.5"     |  |
| Brass strip cut to 5" x 0.5" x 0.064" |  |
| 3 4-40 x 3/4 screw                    |  |
| 3 4-40 nut                            |  |
| 1 4-40 x 1/4 screw                    |  |
| 2 #4 solder lug                       |  |
| 1 #4 flat washer                      |  |
| 1 #4 internal tooth lock washer       |  |
| 2 1" dia. wooden disk                 |  |

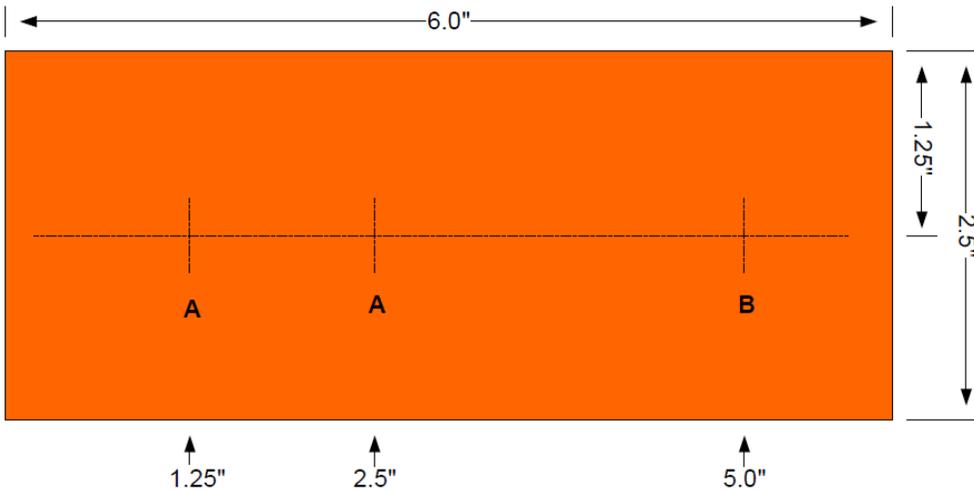
The wooden disks and the oak block are available from stores such as Lowes and the brass strip is available at hobby shops. The oak block comes in 24" length and the wooden disks are available in a 12 pack. You might like to build this with a few friends!

The brass strip is cut to size and 0.109" holes are drilled at locations marked "A" for mounting the brass strip to the oak block. The proper hole size for a 4-40 screw is 0.120" but we would like a snug fit. A 0.089" hole is drilled at location C and then tapped with 4-40 threads.

The lines at 2.25" and 2.75" are the locations to bend the brass strip to form the spring action of the key.

To bend the brass strip, clamp the brass strip in a vice, with the jaws of the vice at either of the bend lines. You will want to cover the surface with tape so you do not scratch the surface of the brass strip. Gently bend the strip to about 45°. Reverse the brass strip in the vice and bend. Be sure of your orientation so the bends come out as shown. The 2 long surfaces of the brass strip should be parallel. For a smooth finish on the brass strip, use your hands to do the bending, not pliers or a hammer.





The oak block is cut to size and 0.125" holes are drilled at "A" for mounting the brass strip.

A 0.078" hole is drilled at "B". This hole is undersized. This is the mounting hole for one contact of the key. The other contact is the brass strip. More detail on this in a minute.

On the back side of the oak block, counter sink the "A" holes to recess the screw head. This will allow the block to sit smoothly on your desk and not scratch the finish.

This picture shows the 2 mounting screws for the brass strip and one of the contacts. The contact consists of a screw, flat washer, solder lug and nut. The nut, solder lug and flat washer are threaded onto the screw. The screw is then threaded into the wood block.



A wire is soldered to the solder lug.

NOTE: the B hole is NOT tapped. This makes a tight fit to hold the screw securely.

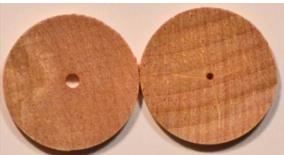
The height of the screw is adjusted after the brass strip is in place. In this picture, the screw height is 0.25" from the oak base to the top of the screw head. The bottom side of the brass strip is 0.33" above the base. The height of the screw is dependent on the bend in the brass strip and how much travel you find comfortable in the key when pressing and releasing to create dits and dahs.



The second solder lug / contact has the blue wire attached. The hardware to hold the lever is a screw, solder lug or lock washer and a nut.

NOTE: The Yellow wire is NOT soldered to the solder lug with the blue wire. The yellow wire passes through the hole in the solder lug as a strain relief. If you need more strain relief for the wires, loop them through the holes in

this solder lug, one more time.



Finally we need to add a knob to insulate your hand from the lever. Using 2 wooden disks, locate the center of each disk and then drill a 0.109 hole in one disk. Next make a pocket in each disk. A 4-40 screw will go through the hole. The pockets allow the screw head to be sandwiched between the 2 disks. Use wood glue to secure the screw in the disk and hold the 2 disks together.



Many simple CW transceiver kits such as the RockMite[[ only provide enough audio to drive headphones. In a future RAG, we will discuss a simple audio amplifier that could be used with the CPO or any small receivers to allow use with a speaker in place of headphones.



Please send pictures of your CPO and key for publishing in future RAGs. If there are any questions on this project contact Forest: [WA2MZG@ARRL.NET](mailto:WA2MZG@ARRL.NET)

# Xerox Amateur Radio Club Renamed, Reformed

History - The Xerox Amateur Radio Club has been renamed to the XRX Amateur Radio Club (still XARC). The club was formed in 1980 by a group of hams who worked at Xerox. The club had company support via the Xerox Recreation Association (XRA) through 2009, including a club station (W2XRX) on the Webster campus. Over the years, the club maintained 2 meter, 220, and 440 repeaters on top of the Xerox Tower, operated Field Day for over 25 years, put on dozens of hidden transmitter - fox hunts, won and retired the Rochester VHF Group's Rochester Cup, and conducted many amateur radio license classes and exams.

By the early 2000's company support waned, then was stopped completely when the building that housed the club station and XRA was sold. Many members left the company, and even more retired. The club kept functioning - focusing on keeping the repeaters running, operating Field Day, and putting on fox hunts.

New Interest - By mid-2014, there was interest in reactivating the club. A number of new hams were looking for ways to enjoy the hobby and find other hams in the area. A group of retired XARC members and non-XARC hams have been holding weekly lunch gatherings for a few years. The club unofficially dropped its membership rules to allow non-Xerox people to join the club, but without company support it was somewhat without direction, and the club bylaws were out of step.

Club Reformed - The remaining membership wrote and adopted a new club constitution and bylaws this past September. There was a lot of internal discussion on what the club name should be. Many felt there was no reason to change it, many felt a change was needed. In the end, a good compromise was had. Though there still is a large connection to Xerox with several members being employed there, or having worked there, it is not what will define the club in the future. Moving forward, the club wants to be known for the activities and events it participates in and will be organized and function as any other amateur radio club.

The new club expects to still be associated with RARA, continue putting on fox hunts and operate Field Day, and hopefully keeping its 2 meter repeater fully functional with enhanced capability (more news on that soon). The meeting schedule will likely be 6-8 times/years, and the informal lunch group is going strong on a weekly basis. The members have varied interests, but QRP and construction projects tend to be prevalent. There is also interest in the Summits On The Air (SOTA) initiative.

Seeking Members - The club is now open to all area hams or others who are interested in ham radio. We are still in the process of firming up our membership guidelines and the operational aspects of the club. Please check out our new website: <http://xarc.us> which has all the latest information. Contact us with questions, and join!

## Silent Key

**Bernard G. Schmidt**  
N2VDN  
September 27, 2014

## Silent Key

**Preston W. Durkee**  
AA2RC  
September 24, 2014

## Silent Key

**Robert L. Snyder**  
KA2BHL  
October 11, 2014

# 2014 Fall Fox Hunt

Ned Asam, W2NED

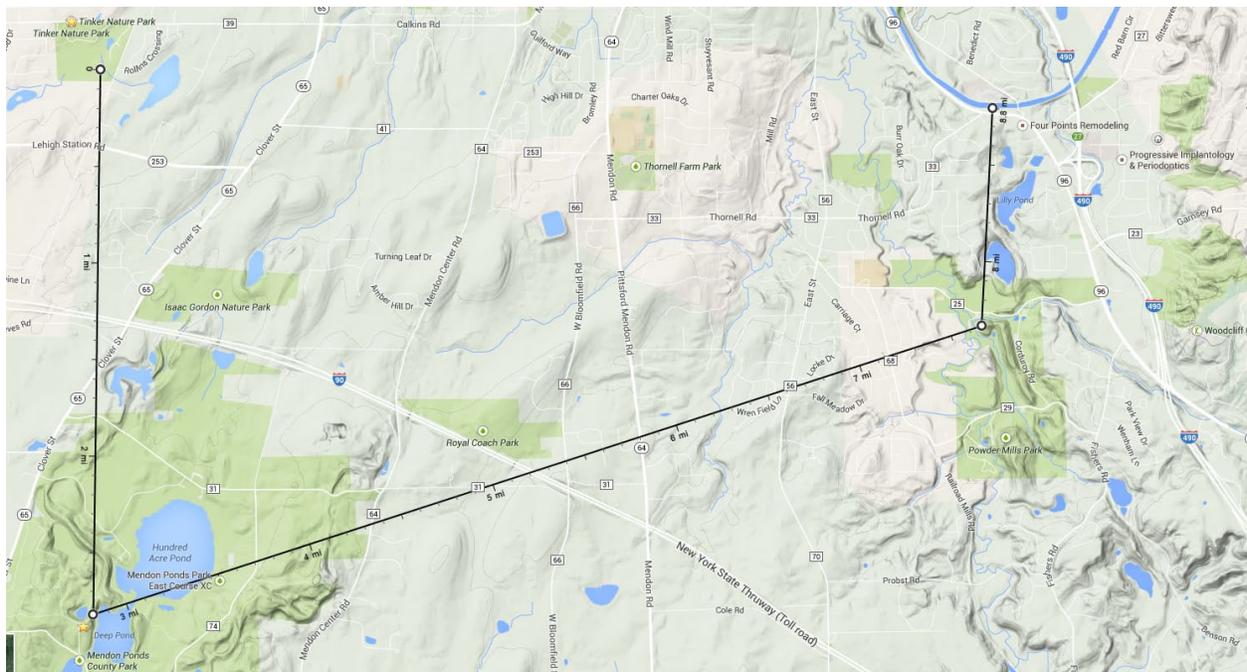


## 2014 Fall Fox Hunt

Multiple Foxes  
Multiple Frequencies



On Saturday, October 11, XARC sponsored its Fall Fox Hunt. Ned, W2NED, and Vince, W2VAB were hunt masters. We had planned the hunt to be a challenge for the most experienced hunters, but not too difficult for beginners. As usual, we all had a great time. Seven teams started and five teams found at least one fox. The top score was achieved by Jon, N2JAC and Laura, who found all four foxes for a score of 43. Second and third places were secured by Pete, W2SKY, and Bob, K2OID, who found three foxes for scores of 34 and 33 respectively. All hunters tell me that it was a very challenging hunt. Everyone was busy right up until the time we gathered for lunch at the Fruit and Salad Company in Bushnell's Basin.



The Hunt Map

We met at Tinker Farms Nature Park at 9:00 AM for registration and practice at the north end of the park. At 9:30 the hunt began, and three of the four foxes could be heard from the starting location. Each fox had a unique number, frequency, tone, duty cycle and data rate. Although not advertised in the beginning, the fox numbers, tone, and data rate all increased for foxes one through three. We had hoped that this would become evident as one progressed along the path indicated on the map from the start location in Tinker Park (upper left) to the final fox hidden along the Erie Canal. But, alas, things were not as simple as the map implies.

From the starting point, the strongest signal was, in fact, Fox Three which was located at the highest point in Powder Mill Park -- more that 5 miles away. Fox Three was a 6 watt transmitter with a vertical coax dipole wrapped around a sapling well above the ground. The choke coil was visible about 5 feet above the ground on the sapling in the middle of the picture. The transmitter was on the ground partially covered with leaves and the bag of score cards hung from a twig about a foot above the fox. This made for a very strong signal that appeared to be everywhere as it echoed through the ravines and along the streams of the park -- just the sort of situation that makes fox hunting so interesting.

The second strongest signal was from Fox Two. It was similarly hidden along a ridge overlooking the two largest ponds in Mendon Ponds Park. Fox Two was also a 6 watt transmitter creating a very strong signal that tended to confound the hunters as they approached the transmitter from various directions.

Fox One -- a 0.5 watt transmitter with a small, "stubby" antenna -- was placed on the ground under a hollowed out section of a tree. It was located within the Tinker Farm Nature Park less than a quarter mile south of the starting point. While Fox One had the weakest signal at the starting location, its signal increased quickly as one walked south in the parking lot. We



**Fox in Powder Mill Park**

had encouraged folks to store all the fox frequencies in their radios so that they could quickly monitor all the foxes and notice that Fox One was indeed close to the start location. This, however was not the case. No one found Fox One until after it was announced as a hint that it was very near the starting location.

Fox Four was hidden along the Erie Canal adjacent to a parking area about a quarter mile west of the Fruit and Salad Company in Bushnell's Basin. Fox Four could be easily heard from the location of Fox Three in Powder Mill Park. It also had a good signal from the parking lot of the Fruit and Salad Company. At noon it was announced that this was destination for lunch and that Fox four was within walking distance from there.

This, however, introduced a couple subtleties. If one started on foot from the Fruit and Salad Company parking lot, due to a bend in the canal, it was impossible to discern on which side of the Canal the fox was located. Further, there was this one lane bridge in Bushnell's Basin which produced deceptive reflections and invited the hunters to cross over to the towpath side of the canal in search of the fox. Once the hunter discerned that Fox Four was, indeed, on the Crescent Trail (South Side) of the canal, it was fairly easy to find. We reactivated Fox Four after lunch to provide additional practice for some of the hunters.

Everyone found the hunt challenging, and it did meet the general objective of allowing newcomers to find at least one fox, while being sufficiently challenging to keep our best hunters interested. This hunt emphasized the fact that having a good hunt strategy is more important than having the best and most expensive equipment. More on this in another article. I hope to see more hunters at the Spring Fox Hunt.

## Dip The Plate

If you have finally reached this page in the RAG, you have probably read most of the articles. You have also formed opinions on the articles. Below is a link to a short survey. Please use this as a method to FEEDBACK your thoughts on this issue of the RAG.

## November Survey

Don't forget that you can always send an email to [editor@rochesterham.org](mailto:editor@rochesterham.org) with your thoughts and ideas for the RAG.

### **New Feature**

We would like to present 1 or 2 of your projects each month in the RAG. If you have a project that you would like to share please send a picture, a short description and your name, call sign and email address to [editor@rochesterham.org](mailto:editor@rochesterham.org).

# RARA RAGS OF THE PAST

Ed Gable, K2MP – RARA Club Historian

## 20 YEARS AGO, NOVEMBER, 1994

The long standing tradition of the RARA Auction continued with the announcement of the annual event to be held November 4<sup>th</sup> at the Henrietta Fire Hall. Vice-President Chris Reich, WB2DYJ, wrote a compilation of upcoming RARA events that included a joint venture with RARA and the Kodak Elmgrove ARC, the annual RARA Winter-Fest and a presentation to RARA members by and about the ARRL Field Organization. It appears as though a marketing guru joined the very active RARA K2JD Engraving Team as their new slogan became "Better Living Through Personal Identification by Visual Means." Vic Gauvin, K1JUL, wrote an article announcing a joint venture between RARA, the RDXA and the K2JD Club Station to encourage members to try contesting. Four contests were selected throughout the Fall season in a low-key, no pressure activity where you could drop in, and with the aid of an experienced coach, get your feet wet in the art of contesting. "The Internet Comes to Rochester" was the headline by Neal Eckhardt, WB2EKP, who told how to access the Internet. Although not for the novice user as you needed to use UNIX to access the fifty-cent per hour service, it was the beginning. From the Want Ads you could buy a TS-530SP with a VFO-230 and AT-230 from Mike, KF2LF. Glenwood Sales on Hague Street remained a long term advertiser.

## 40 YEARS AGO, NOVEMBER, 1974

Vice-President Bill March, WA2CER, wrote to announce the popular RARA Ham-Auction with Tom Ball, WA2THS, auctioneer. President Joe Hood, K2YAH, announced the Fall/Winter General and Advanced theory classes. New this year was a schedule that assigned seven different instructors over the 13 week total period. Classes were at the Civil-Defense facility on Westfall and East Henrietta Road. Similarly, the RARA Novice class began on October 7<sup>th</sup> with Dave Hassett, K2SQI, teaching theory and Bob Lauzon, WB2NSD teaching the code. There were 38 Novice students and 35 General/Advanced students for a total 73 Fall students. Users of the popular local 2 meter FM net learned from this issue that the net has moved from Sunday at Noon to Sunday evening. C F P Enterprises, Lansing, NY, remained a long time commercial advertiser.

# The RARA RAG

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NO. 3

## The November 1st Meeting

### ANNUAL AUCTION

by Bill March, WA2CER  
There are several annual events that mark the amateur's calendar in the Rochester area, depending on individual interests. For the RaRa member, the most popular event, excepting the Hamfest, is the annual club auction. The auction will be held again this year on Friday, November 1st, 1974, at 8:00 p.m.

In order to keep the auction exciting, fair, and running smoothly, a few rules have been established. First, the auction is open to RaRa members and one guest per member. Membership cards will be checked at the door. Secondly, all equipment for auction must be marked by the seller with:

1. name and call
2. what it is or does
3. operational condition
4. the minimum starting bid (\$2.00 or more)
5. if Chinese bidding acceptable (accept less than the minimum when no bids are received).

Please, no basket cases or out and out junk. Thirdly, commercial exhibitors will once again be allowed to return to the auction, subject to these stipulations. They must be a RaRa member and will be expected to donate the usual 10% of sales to the club treasury. Also, if these commercial sales interfere with the auction itself, they may be asked to close shop.

Finally, in order for the club to receive its 10% donation, all auctioned items must be bought and sold at the club treasurer.

For those of you that have never attended the club auction, it is well attended and lots of fun (a real pack rat's delight). Those who have attended past auctions know how fortunate we have been to have a good auctioneer, Tom Ball, WA2THS, has accepted the job again this year. Last but not most important, YOU must bring the gear to be auctioned. So pack up the chariot on Friday, November 1st and head for the Farm and Home Center, 249 Highland Avenue. And we will be ready for early arrivals.

## FM Net Moves

A local two meter FM net which had been meeting each Sunday noon has moved to Sunday evening at 9 p.m. The net meets every Sunday. It meets alternately on WR2ABF, 146.79 and WR2AEI, 146.88 MHz.

## Notes from the President's Desk

by Joe Hood, K2YAH

This month's meeting is the annual auction and is one of the most heavily attended meetings of the season. For this reason the officers and board of directors have established some guidelines to assure that club members will have maximum opportunity to make the most of their auction. These guidelines are discussed by Bill March, WA2CER, RaRa Vice-President and Program Chairman in his article in this issue and they will be reviewed prior to opening the auction. The sole intent of these guidelines is to give the people who support the club ---the club members, the best auction possible.

We found a blackboard and all but a few of the text books for the general and advanced theory course have arrived so we plan to begin the classes at 7:30 p.m. on Monday, October 21, at the CD facilities at the corner of East Henrietta and Westfall Road. More detailed information on the exact class location is available from Ed Holdsworth, WA2EKR, or Bob Lauzon, WB2NSD. Incidentally, interest in the class is high as is evidenced by the 35 people signed up to attend.

Instructor assignments for the 13 week course are as follows:

| Session | Date   | Text Chapter(s) | Instructors |
|---------|--------|-----------------|-------------|
| 1       | Oct 21 | 1 and 2         | WA2RYT.     |
| 2       | Oct 28 | 3 and 4         | K2WW        |
| 3       | Nov 4  | 5 and 6         | W7JRL       |
| 4       | Nov 11 | 7 and 8         | WA2JFM      |
| 5       | Nov 18 | 9               | WA2JFM      |
| 6       | Nov 25 | 10              | WA2RYT      |
| 7       | Dec 2  | 11              | WB2EDT      |
| 8       | Dec 9  | 12              | WB2EDT      |
| 9       | Dec 16 | 13              | WB2EEU      |
| 10      | Dec 23 | 14              | K2LZG       |
| 11      | Dec 30 | 15 and 16       | W7JRL       |
| 12      | Jan 6  | 17 and 18       | K2YAH       |
| 13      | Jan 13 | 20              | K2YAH       |

Oh yes, the texts will be \$13.00 each so those of you who ordered them should be prepared to pay for your text at the first class session. If any of the instructors have conflicts please let Ed Holdsworth, WA2EKR, or me know as soon as possible and at least one week before your class session.

Some other exciting things are happening too. Fred Becker, W2GV, and Bob Crumrine, WB2DNN, are busy working on the Space Science, Oscar 7 project for area high and junior high school science departments. They

(Continued on page 2)

# NEWS FROM AREA CLUBS

## MONROE COUNTY ARES / RACES NEWS

The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month. Anyone interested, members and non-members, are welcome to attend.

So as to not interfere with the **Thanksgiving Holiday** this month, the next ARES Meeting will be held on: **Thursday, November 20, 2014, at 7:00 PM.** (Third Thursday)

Meetings are held at the **Greater Rochester Chapter of the American Red Cross HQ, 50 Prince Street, Rochester, NY 14607.** (Located behind the Rochester Auditorium Theatre, 885 Main St. E.)



**ARES NET:** Monroe County ARES/RACES meets on the air every Thursday of the month at 8:00 pm, on the 146.61 MHz (-) 110.9 Hz PL repeater. The only exception to that are nights when we hold our regular meeting, generally on the 4th Thursday of the month.

**WEB:** [www.monroecountyemcomm.org](http://www.monroecountyemcomm.org)

**NBEMS:** Want to learn about Narrow Band Emergency Messaging System (NBEMS)? It's the latest and easiest way to "Go Digital!" Bring your laptop computer and 2-M handheld transceiver. We will conduct an NBEMS clinic after every meeting through June 2015.

## ROCHESTER RADIO REPEATER ASSOCIATION, RRRRA

The Rochester Radio Repeater Association, RRRRA, invites you to attend its November meeting. The date is November 21 and the place is the Pittsford Town Hall basement starting at 7:30 pm. Refreshments will be served.

RRRA's annual tune up clinic will be the event scheduled for November. This event will be provided by RRRRA's Technical Chairman Bob Shewell, N2HJD and hopefully his assistant Brad Armstrong, W1YX can help. Together they will perform equipment testing and adjustments if necessary. If time permits they can also do some minor repairs. This means no basket cases or equipment requiring major repair. This tune up clinic is a free service for RRRRA members. All are welcome to watch the activities, socialize, and become a member to help support the club. If time permits we may be able to check non member equipment.

Hopefully everyone has had time to check out RRRRA's new web site. The RRRRA Board officially launched the [www.K2RRRA.org](http://www.K2RRRA.org) web site at its September meeting which featured the site's features. This year RRRRA's Board is going to make changes to benefit its membership. The new web site is the first of many. Included in the web site is the ability to join the RRRRA membership using PayPal or a credit card. RRRRA almost folded this year but was saved by a donation. RRRRA need members to maintain its expenses. These expenses include insurance, phone lines for 911, autopatch, and repeater control, plus every day maintenance of the club's repeaters. Without an influx of cash from membership and donations, RRRRA, the only non profit repeater club in Rochester will go away. RRRRA and its affiliates provide 17 of the local Rochester area repeaters. RRRRA's 146.88 is the only repeater in the Rochester area with an active online backup repeater. RRRRA also provides reliable Echolink and IRLP connectivity and has remote receivers to improve repeater coverage. Please help support RRRRA.

## SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. The November meeting is the 12th at 7:30PM. We have License Exam Testing every other month which begins at 6:30PM. We will have testing before the November meeting starting at 6:30PM.

## GENESEE VALLEY AMATEUR RADIO ASSN.

Our next meeting is Sunday October 26th at 6:30pm. Testing will start at 5:30pm. We test and meet at Room 205 of the Livingston County Government Center, in Geneseo.

We would like to thank Neil Gibson KO4DX for his presentation on his Crappie Pole antenna. If you have not seen this antenna, it is impressive how he made it out of a Crappie Fishing Pole.



We are looking for someone to put give a presentation on an antenna they have built for our October Meeting. If anyone would like to give a short presentation on their antenna and how to build it, please contact, Billy Boyd N3DSP at [n3dsp@lafireline.net](mailto:n3dsp@lafireline.net)

## DRUMLINS AMATEUR RADIO CLUB

Our meetings are held the third Wednesday of each month. The November meeting is Wednesday the 19th. Doors open at 7:00pm, meeting starts at 7:30pm at the Wayne County EOC, 7376 Route 31, Lyons. VE sessions held before the meeting on even months. Talk-in before meeting on 146.685-.

## ROCHESTER VHF GROUP

The Rochester VHF Group holds monthly meetings on the second Friday of the month between September and June. Meetings begin at 7:30 PM and are held at the Spencerport Wesleyan Church, 2653 Nichols St. (NY Route 31) in Spencerport. Visit our website [www.rvhfg.org](http://www.rvhfg.org) for details.

The Rochester VHF Group sponsors an informal On-Air Net every Monday at 2100 local time on 144.260 MHz USB and a 6 Meter Net every Thursday at 2100 local on 50.200 MHz USB.

More club information can be found by visiting [www.rvhfg.org](http://www.rvhfg.org) or just calling in any Monday or Thursday night. All are welcome to check in to these nets.

## ROCHESTER DX ASSOCIATION, RDXA

November Meeting: Tuesday, November 18, 2014

Time: 7:30pm

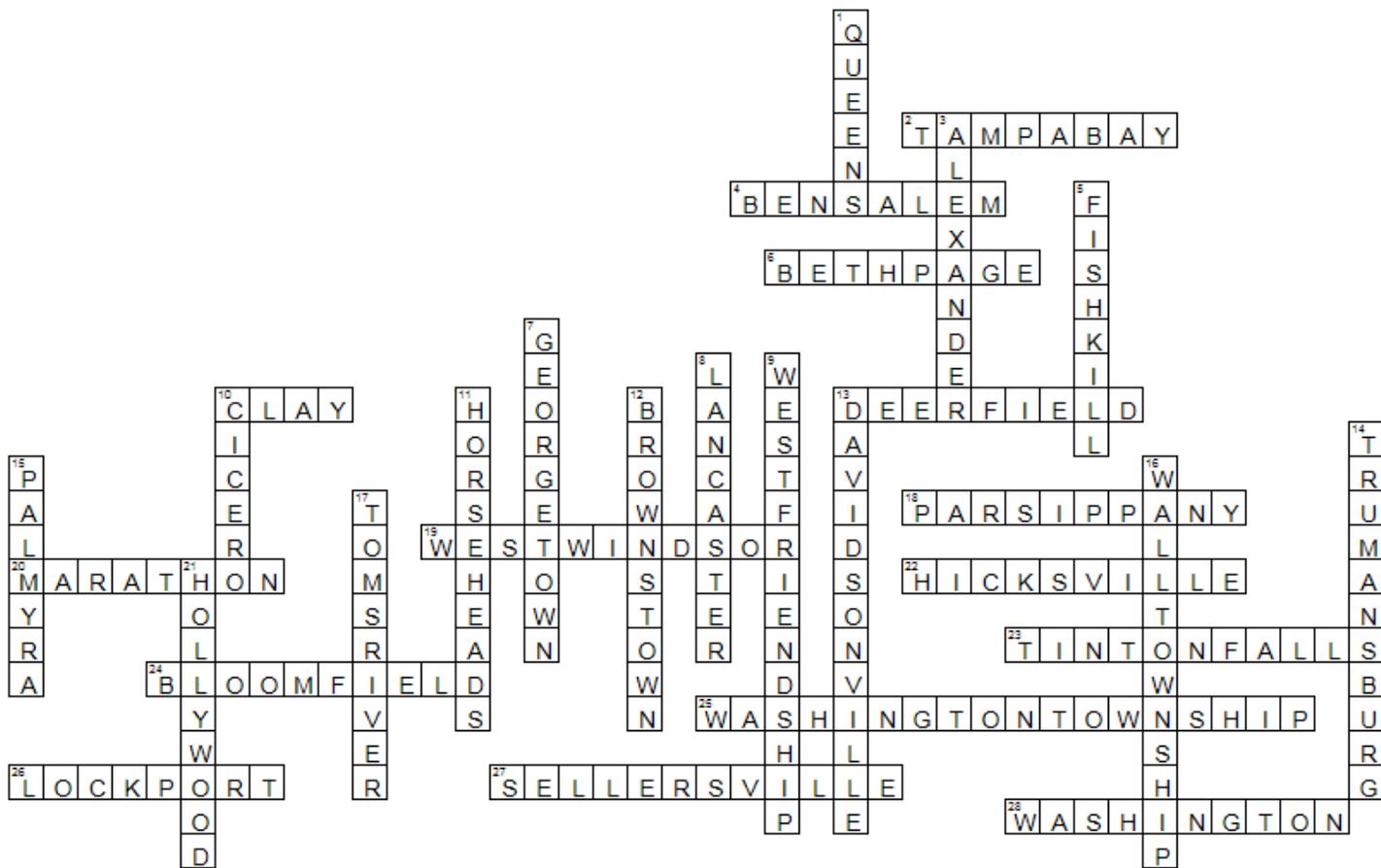
Location: Monroe County EOC Building, upstairs

1190 Scottsville Road, Rochester, NY 14624



# October Puzzle Solution

## Hamfest Cities and Towns



## November Word Search



ARMSTRONG

INJECTIONLOCKED

ROBINSON

CLAPP

MULTIVIBRATOR

ROTARYTRAVELINGWAVE

COLPITTS

NEONLAMP

ROYER

CRYSTAL

NUMERICALLYCONTROLLED TRITET

DELAYLINE

OPTOELECTRONIC

VACKAR

DIGITALLYCOUPLED

PHASESHIFT

VOLTAGECONTROLLED

ELECTRONCOUPLED

PIERCE

WEINBRIDGE

HARTLEY

RING

# THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

## THE RADIO AMATEUR IS:

- CONSIDERATE** Never knowingly operating in such a way as to lessen the pleasure of others.
- LOYAL** Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
- PROGRESSIVE** With knowledge abreast of science, a well built and efficient station and operation beyond reproach.
- FRIENDLY** With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
- BALANCED** Radio is an avocation, never interfering with duties owed to family, job, school or community.
- PATRIOTIC** With station and skill always ready for service to country and community.

## VISIT THE RARA WEBSITE!

Did you know that your club's website ([www.rochesterham.org](http://www.rochesterham.org)) offers these features and more?

- Photos of meetings & events (you might be in there!)
- Info on upcoming meetings/programs
- Rochester Hamfest information!
- Online membership & renewal
- Track and redeem your Reward Points
- Public service info & sign-up
- VE testing info
- Back issues of the *Rag* in PDF
- Officer contact
- List of past presidents
- Online membership directory
- Order RARA logo products
- Useful Internet links
- Ham Radio 101 – tons of tutorial info, plus net & repeater listings



# For Sale

## Complete Rohn 48' Fold-over Tower package including:

- Rohn FK2548 Fold-Over Tower w/ New 25G Flat Top Rotator Shelf (2013)
- New (2013) Dutton-Lainson B2100 brake winch & SS cable
- New (2013) Rohn TB-3 Thrust Bearing
- 2 sets of 4 Phillystran Guy Wires plus Dead Ends (New 2013)
- (4) Rohn Earth Anchors w/ Equalizing Plates
- (8) Rohn 10" Turnbuckles

I'm moving – need to have it removed by the end of October!  
On the ground and ready to load in your vehicle or on a trailer

\$950

## Additional associated equipment

- Balun Designs (#2112) 2:1 balun (For Full Wave Loop's) \$70
- Hy-Gain Ham IV Rotator, Controller & 100' of Belden #8448 \$325
- Heathkit SA-1480 Antenna Switch w/100' Belden #8448 \$165
- (2) Large Fiberglass Enclosures (inquire about pricing)
- (2) 8' Copper ground rods \$10 ea.

Contact Ron – WB2RCB – 585-322-2166 or [rketchum@earthlink.net](mailto:rketchum@earthlink.net)

All can be seen at my website: [www.wb2rcb.com/forsale.htm](http://www.wb2rcb.com/forsale.htm)

# RARA MARKETPLACE

Your commercial ad could be here! The RARA Rag can help spread the word on your business at very reasonable rates.

Contact us for details at [editor@rochesterham.org](mailto:editor@rochesterham.org).

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For more information: [Editor@RochesterHam.org](mailto:Editor@RochesterHam.org)

# RARA OFFICERS

## OFFICERS

|   |                |  |
|---|----------------|--|
| <b>President:</b> Frank Schramm, WB2PYD   | (585) 270-1045 | <a href="mailto:wb2pyd@gmail.com">wb2pyd@gmail.com</a>               |
| <b>Vice-President:</b> Gary Skuse, KA1NJL | (585) 223-1511 | <a href="mailto:ka1njl@arrl.net">ka1njl@arrl.net</a>                 |
| <b>Secretary:</b> Betsy Tascione, KD2DYU  | (585) 458-6546 | <a href="mailto:kd2dyu@rochester.rr.com">kd2dyu@rochester.rr.com</a> |
| <b>Treasurer:</b> Wendy Tascione, KD2DYW  | (585) 704-5385 | <a href="mailto:kd2dyw@rochester.rr.com">kd2dyw@rochester.rr.com</a> |

## BOARD OF DIRECTORS

|                          |                |  |
|--------------------------|----------------|--|
| Marisa Ashour, KC2VMM    | (646) 236-9009 | <a href="mailto:msa2984@rit.edu">msa2984@rit.edu</a>                     |
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| Ken Hall, W2KRH          | (585) 289-3801 | <a href="mailto:ken@w2krh.com">ken@w2krh.com</a>                         |
| Ross Mazzola, KC2LOC     | (585) 247-8323 | <a href="mailto:kc2loc@arrl.net">kc2loc@arrl.net</a>                     |
| William Mullaney, KC2VSJ | (585) 749-7363 | <a href="mailto:kc2vsj@arrl.net">kc2vsj@arrl.net</a>                     |
| Forest Shick, WA2MZG     | (585) 721-1653 | <a href="mailto:wa2mzg@arrl.net">wa2mzg@arrl.net</a>                     |
| Jim Stefano, W2COP       | (585) 270-1911 | <a href="mailto:w2cop@arrl.net">w2cop@arrl.net</a>                       |

## DEPARTMENT HEADS

|                                      |   |  |
|--------------------------------------|---|--|
| <b>Awards/ Raffle Administrators</b> | Jay Hamill, KC2TCM<br>Sabrina Hamill, WD2STK  |  |
| <b>Club Historian</b>                | Ed Gable, K2MP                                |  |
| <b>Club Station Trustee</b>          | Jim DiTucci, N2IXD                            | <a href="mailto:n2ixd@arrl.net">n2ixd@arrl.net</a>   |
| <b>Education Coordinator</b>         | Pam Kasperkoski, W2PHK                        | <a href="mailto:pamelakasper@frontiernet.net">pamelakasper@frontiernet.net</a>   |
| <b>Hamfest Producer</b>              |   |  |
| <b>License Testing Coordinator</b>   | Ken Hall, W2KRH                               | <a href="mailto:ken@w2krh.com">ken@w2krh.com</a>   |
| <b>Membership Secretary</b>          | Tim Barrett, K9VB                             | <a href="mailto:timbarrett@frontiernet.net">timbarrett@frontiernet.net</a>   |
| <b>Media Communications</b>          | Marisa Ashour, KC2VMM                         | <a href="mailto:msa2984@rit.edu">msa2984@rit.edu</a>   |
| <b>Public Service Coordinator</b>    | Jim Stefano, W2COP                            | <a href="mailto:w2cop@arrl.net">w2cop@arrl.net</a>   |
| <b>RARA RAG Editors</b>              | Marisa Ashour, KC2VMM<br>Forest Shick, WA2MZG | <a href="mailto:msa2984@rit.edu">msa2984@rit.edu</a><br><a href="mailto:editor@rochesterham.org">editor@rochesterham.org</a> |
| <b>Refreshments Coordinator</b>      | Tom Austin, KA2GXX                            |  |
| <b>Webmaster</b>                     | Frank Schramm, WB2PYD                         | <a href="mailto:wb2pyd@gmail.com">wb2pyd@gmail.com</a>   |

## DECEMBER RAG DEADLINE

NOVEMBER 15, 2014



**RARA meets at 7PM on the  
Thursday Nov. 6th  
first Friday of each month;  
come join us at:**

Henrietta Fire Co. #1  
3129 East Henrietta Road  
Henrietta, NY 14467

**[Get Directions](#)**

## ROCHESTER AREA RADIO CLUB CONTACTS

**Antique Wireless Association (AWA)**  
Lynn Bisha, W2BSN: [lbisha@rochester.rr.com](mailto:lbisha@rochester.rr.com)

**Drumlins Amateur Radio Club Ltd. (DARC)**  
Glen Bruemmer, KC2YGH: [kc2ygh@yahoo.com](mailto:kc2ygh@yahoo.com)

**Fisherman's Net Amateur Radio Club**  
Jim Sutton, N2OPS: [jim@otrym.org](mailto:jim@otrym.org)

**Genesee Valley Amateur Radio Assn.**  
Bill Boyd, N3DSP: [N3DSP@lafireline.net](mailto:N3DSP@lafireline.net)

**Monroe County ARES**  
Jim DiTucci, N2IXD: [n2ixd@arrl.net](mailto:n2ixd@arrl.net)

**Orleans County Amateur Radio Club (OCARC)**  
Terry Cook, K2EYS: [k2eys@ocarc.us](mailto:k2eys@ocarc.us)

**Rochester Amateur Radio Association (RARA)**  
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**Rochester DX Association (RDXA)**  
Chris Shalvoy, K2CS: [cshalvoy@att.net](mailto:cshalvoy@att.net)

**Rochester Radio Repeater Association (RRRA)**  
Bob Shewell, N2HJD: [bshewell@frontiernet.net](mailto:bshewell@frontiernet.net)

**Rochester VHF Group (RVHFG)**  
John Stevens, WB2BYP: [wb2byp@arrl.net](mailto:wb2byp@arrl.net)

**Squaw Island Amateur Radio Club (SIARC)**  
Steve Benton, WB2VMR: [sbenton2@rochester.rr.com](mailto:sbenton2@rochester.rr.com)

**XARC Amateur Radio Club**  
Ned Asam, W2NED: [w2ned@frontiernet.com](mailto:w2ned@frontiernet.com)

## THE RARA RAG

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