



SOFTWARE DEFINED RADIO

ANAND CHOUDRI, KC2KPG - RARA VICE PRESIDENT

Ryan Tucker, W2XH, will be our speaker for the December meeting. Ryan will talk to us about Software Defined Radio (SDR). His topic title is "**Software-Defined Radio: I Bet Your Kenwood Can't Do This.**" I have no clue what he means by that, so I plan on being at the meeting to find out. I hope you will be there too.

He will tell us what SDR is all about – where is SDR used and how does it work. Once he has convinced us that SDR is important, he will guide us in determining what we need to get started. For example, what are the choices in software that are available to us. He will have a showcase of available hardware from \$20 to \$2000 (I presume this will be a virtual showcase).

He will end his talk with a demonstration of SDR (TX and RX). So you won't want to leave before his demonstration or at least until you make sure nobody is sniffing the remote unlock button on your keychain. I hope he'll explain what he means by that.

Please come to your club meeting on Friday, December 4, 2015 at the BSA building located at 2320 Brighton-Henrietta Town Line Road, Brighton, NY 14623.

DECEMBER 2015
VOLUME 68, ISSUE 4

INSIDE THIS ISSUE

DECEMBER PROGRAM	1
PREZ SEZ	2
CALENDAR OF EVENTS	2
INTERLOCK ROCHESTER	5
ANOTHER TEN TEC SAVED	6
HAZY DAYS OF RADIO	7
MINI MAKER FAIRE	8
PUMPKIN PATROL WRAPUP	9
RAGS OF THE PAST	10
VE TEAM INPUT	11
RARA CALENDAR	12
NEWS AREA FROM CLUBS	13
FOR SALE	15
AMATEUR'S CODE	16
WEBSITE INFORMATION	16
RARA MARKETPLACE	17
RARA OFFICERS	18
AREA CLUB CONTACTS	19

PREZ SEZ

WILL MULLANEY, KC2VSJ—RARA PRESIDENT

Welcome again to another, lengthy edition of Prez Sez for December of 2015. This past month, RARA hosted its annual Member's Only Auction. The auction lasted several hours at the BSA headquarters in Brighton and was filled with all sorts of interesting things. Members packed the house to look at radios, antennas, keys, and many other related goods. There was also equipment that wasn't directly related to Ham Radio, such as weather stations, mounting poles, and even a brand new 30 amp generator. Don (AC2EV) had 28 BaoFeng radios available to the group, but the highlight of the evening was certainly the 20 unmarked fiberglass antennas that Ed Gable determined could be cut in half and used as driveway markers.

While we are still putting together final numbers, our initial estimates are that the club earned over \$1,000 from the auction in fees and donations, plus the fees for members who processed their renewal at the door. Speaking of members, there's just over 500 paid members right now, but around 125 more who have not renewed yet. If you're one of them, please consider doing so as soon as possible. You can do it online at our website using a credit card (you do NOT need to have a PayPal account), you can mail in a check, or you can renew with check or credit card in person at any meeting.

At next month's meeting, we will be starting a break-out session for new(er) hams that may be in attendance. When the general presentation starts, we will have a smaller session in one of the adjoining conference rooms to host a Q and A style session with any new hams who may be looking for help overcoming issues getting into the hobby, and who find the regular session to be too technically advanced for their current level. If you are just getting started or re-started in the hobby, come on down and talk to us. This month, Frank Schramm and I will be available to answer questions, and the Elmers will rotate out from month to month. If you're interested in helping, let us know!

With regards to getting newer hams into the hobby, we're starting a new column in the RARA RAG. We'll now have a column entitled "Ask Elmer" where hams can ask questions of our friend Elmer, who can give some advice (technical or other) in a future issue of the RAG. Check it out, starting next month, and send us some questions you always wanted the answer for.

Join us online on Facebook or Twitter. If you've got an account, search for our page and give us a like. We will try to post info from the club along with amateur topics from other sources. You guys and gals can also participate in the discussion, and you'll likely find a way to get some membership points in doing so. I'll give you a hint to get started, clean up your shack and start taking some pictures; I smell a contest in the works.

Hamfest

We're moving on to the time when we need to start doing some serious consideration and work on the hamfest. In a meeting roughly one year ago, the general membership stated to the Board of Directors that a hamfest was an important event for the club and should continue, as it served not only as a vehicle of revenue for the club and a flea-market type opportunity for members, but also as a social event. Last year we commissioned Barnard Fire Department to produce the fest for RARA, after a year without any event.

I have been provided with information from other BoD members that I have summarized regarding our last few fests: Back in 2008, the then current BoD sought to end the string of festivals that were hosted at the Dome Arena due to extreme expense, questionable handling of finances, and diminishing returns. Other venues were sought out, with Barnard Fire Grounds being chosen as the one for that year. The first year, the fair grounds were given to RARA, who produced the event internally, for free. RARA made \$6,200 on gross receipts of \$11,835. For the subsequent two years, Barnard

CALENDAR OF EVENTS

DECEMBER 4TH - RARA General Meeting

7:00 PM at BSA Headquarters, 2320 Brighton Henrietta Town Line Rd

DECEMBER 10TH - RARA Board of Directors

5:30 PM RIT Engineering Hall, Room 2110

DECEMBER 19TH - RARA VE Testing

charged RARA a fee of \$750, resulting in earnings of \$4,313 and \$5,520 for each respective year. Following the event, the FD called representatives of RARA to a meeting where they stated that the venue fee would increase from \$750 to \$3,000, consuming roughly ¾'s of RARA's proceeds for no additional space or work being provided by the fire department. It was determined that this was an unacceptable increase in fees based on the venue, especially considering that RIT was willing to rent the fieldhouse, a far more comprehensive venue, for only \$4,000. The fieldhouse was selected, and RARA made over \$6,000 with nearly 2,200 attendees.

Unfortunately, the amount of outright complaining by a small but very vocal contingence of attendees left many of those responsible for organizing the event unwilling to put the event on again, despite the major financial success. Subsequent years had a small flea-market in S-lot at RIT and a canceled event in 2014.

As stated prior, last year RARA's board met with the membership, and upon hearing the request to continue the event, but without sufficient manpower to actually put the event together, we sought out other alternatives to host the event. We revisited Barnard FD because their Chairman assured us that we could find more favorable terms than years past. We jointly entered into successful negotiations requesting that Barnard produce the event for RARA, organizing things like ticket sales, parking, food, and trash removal. In exchange for the efforts, Barnard agreed to remit 30% of the net proceeds to RARA. The event resulted in a total profit of \$5,660 on \$11,803 in gross receipts, with RARA taking \$1,698 for its 30% share. By most measures, the event was successful and the members of the fire department performed as they were tasked. RARA's board was seriously looking to continue the engagement as this allowed our club to continue the event, satisfying our requirements for both a fundraiser and a social event in light of a membership unable or unwilling to produce the event itself.

Unfortunately, when our board sat down with Barnard's President and Chairman over the summer, things quickly took a turn in an unfavorable direction. We were informed by the Chairman that some members of the fire department were questioning the deal after the fact, and would not likely find it favorable to continue at the currently agreed rate since RARA had "done nothing" at the event. We noted that we would not be happy with a change in terms and would be forced to review our options. We were then told by the chairman that Barnard would be having a festival in June, with or without RARA. This tactic does not sit well with me, nor did it sit well with the other members of our board.

Imagine if RARA was hosting a fundraising banquet and reached out to an event planner or party house to have them produce a fundraiser. Both organizations jointly struck a deal, and then had a successful event. Now imagine that after the fact, the event planner complained that the terms were unfavorable, not due to underestimating the amount of work required to produce the event, but instead upon the basis that the event planner had to do all the work! This alone would be silly at best, as that was exactly the job they were hired for and agreed to do. If they didn't like the idea of event planning they shouldn't be accepting work doing so. Then imagine that the event planner also made statements to host a banquet themselves the following year, presumably keeping 100% of the proceeds if we did not agree to a lesser cut!

That situation would not sit well with me, nor with most people. Sadly, when I think back to our meeting, this is how I feel RARA is being treated based on the meeting I attended. Barnard was hired to do a job on behalf of RARA and did it to our satisfaction. In exchange for producing the event for us, they took 70% of the profits to use for their own organization as they please, a fair value for the time and effort their members put in. To complain to our board that the percentages were unfavorable because they had to produce the event and we did not is simply silly. RARA hired them to produce the event! Both organizations had risk (Barnard with immediate risk of financial loss and RARA with potential of its name and image being tarnished by a mismanaged event), but neither situation materialized and both organizations profited. To then turn around and make statements that most if not all of the board perceived as a threat to take 100% of the profits of future events if we didn't agree to a lesser cut is, in my mind, downright unacceptable.

I'm saddened by this situation, as I think the members of the fire department executed their part of the agreement to our satisfaction. Perhaps this attempt at what we see as profiteering is a misguided business strategy advanced by only a few members of their group and unknown to the rest. Unfortunately, this is not a business strategy that our group can be a part of, so we must thank Barnard for last year's work and wish them well as we regretfully part ways.

This brings us to a crossroads. Clearly having this event farmed out to another non-profit group is not going to work in our favor. This means we either end the event, hire a reputable business in the event planning arena, or continue to produce the event in house. The downside of the first option is obvious; the fest ends and both the fundraising and social aspects go away, or a group completely unrelated to the club or even the hobby runs the fest and potentially pockets all of the proceeds. This probably wouldn't go well with most people.

The second option would require ending free admission for members and likely result in a significant increase in ticket prices for both members and non-members which would be highly undesirable to most people, and probably result in vastly reduced attendance. Attempting to cover the costs out of the clubs own funding would be fiscally irresponsible and would not be sustainable for any length of time.

The final option is for the club to produce the event itself. What does this mean? For this to work, a group of individuals need to agree to form a committee to organize the event, participating in the planning functions. This is actually outlined in our own bylaws as one of the only official and permanent committees of the club. While this committee will answer to the board and can be staffed in part by members of the existing board, coordinators, or VE's, it's not the direct function of any of these groups. Additionally, on the day of the event, club members will have to fill the functions of the event not covered by contracted staff. Typically, this means setting up and tearing down equipment, aiding in parking, staffing information booths, hosting exams, management/cleanup of garbage at the site, etc....

At our next meeting, we'll set aside time to discuss this and other events for the club. If members of the club want this event, members of the club must agree to organize and staff it. I applaud those people who volunteer for the club in all different ways, including but certainly not limited to our board, our coordinators, our VEs, instructors, all the members who help with public service events, and those who help further our hobby and name at things like JOTA or Maker Faire, all of whom serve without compensation. I do not doubt that we have members willing and able to organize this event as well. However, to continue it, we need commitment from those members to do so. If the event is important to you, participation in it has to be important to you too.

Please come to the next meeting with your questions, comments, concerns, flames, etc, and your spirit of volunteerism. We'll have a sheet available for you to sign up to participate!

INTERLOCK ROCHESTER

Ryan Tucker, W2XH

Interlock Rochester is a 501(c)3 non-profit Hackerspace whose goal is to provide a physical space and community to its members and the public at large. We provide workshops, classes, and a community of hackers with a wide range of interests: 3D Printing, information security, electronics, micro-controllers, laser cutting, radios, programming, networking, and much more that falls on the geek spectrum.

We have a regular schedule of meetups on a variety of topics throughout the month, all of which are free and open to the public:

- First Tuesday of the month: Monthly Business Meeting and Member Presentations, 7pm.
- First Friday of the month: Rochester 2600 Meeting, 7pm. Information Security presentations and discussions.
- Second Friday of the month: Software Defined Radio (SDR) Meetup, 7pm. Hang out with SDR experimenters and enthusiasts.
- Third Friday of the month: The Open Organization Of Lockpickers (TOOOL), 7pm. Learn about locks and how to defeat them, and become better at choosing locks to protect your stuff.
- Third Saturday of the month: Linux Workshop, noon to 4pm. Bring your Linux problems and join us for an afternoon of problem solving and experimentation.

We also participate in local technology events like Security B-Sides Rochester and the Rochester Mini Maker Faire, global events like Arduino Day, and -- increasingly -- on the air with Field Day and other ham radio events as K2HAX.

You can find us most every Tuesday night at 7pm in the Hungerford Building (1115 East Main Street, Rochester NY), just north of Village Gate. Come to Door #7 (next to Comics Etc) and buzz Suite 200. Find out more on our website at interlockroc.org and contact info@interlockroc.org with any questions, or find us in #interlock on Freenode IRC.



Hams serving Hams -
We speak your language - QSL?

- * **FREE** home relocation and property search services
- * **FREE** valuation and financing consultations

Personally serving all of Central and Western New York with affiliates world-wide!
Search for your next home with antenna placement in mind - not as an afterthought!

- Estate Liquidation
- Downsizing
- Movin' up
- or just a change of scenery...

Whatever your real estate needs are, call:
Frank (WB2PYD) or Lisa (K2BGR)

Lisa Schramm
Licensed Real Estate Salesperson
LSchramm@KW.com
585.756.3185

Frank Schramm
Realtor - Licensed Real Estate Salesperson - Certified Financing Specialist
FSchramm@KW.com
585.362.8564

kw GREATER
ROCHESTER
KELLERWILLIAMS. REALTY

Keller Williams Realty Greater Rochester
2000 Winton Rd South Building 1-201
Rochester, NY 14618

Find your new home on FSchramm.com



ANOTHER TEN TEC SAVED

Bill Hopkins, AA2YV

I got my first ticket in 1960 back in Seattle. For my General, I had to go down to the big Federal Building and up to the *n*th floor to take the exam. Everyone else in the room - with its individual school desks - were all "men," much older than I was. I sat there and worked through the formulas, wrote down the answers, and then I drew out the Colpitts, the Hartley schematics and something else. I vaguely remember the code test: 13 wpm, wow, what speed! Weeks later my license came. Now that was exhilaration! But I couldn't afford any of those great transmitters and receivers. Mine were an NC-125 and a DX-20. "Be happy with what you've got, my boy." Tuner? What's a tuner?

Throughout college I saw in QST all those new rigs: the Collins; Hallicrafters; and the Swans. A rich kid in the dorm had a Swan in his new car. After college life got cranking up and I forgot ham radio for twenty-five years. The license lapsed.

So when I got back into the hobby in 1995, I took to it again like a loon to water. Of course, I looked around for something I could recognize, something I couldn't own way back when. I settled on an old Drake TR-4. Still have it.

I've played around with boat anchor receivers and some transmitters. Have experienced the Kenwood hybrid transceivers. But gradually I came to understand that the "old" radio brand to have and tinker with was Ten Tec. Mine have been the Triton IV (Batavia Hamfest at the race track); Corsair and Omni C (both Ebay).

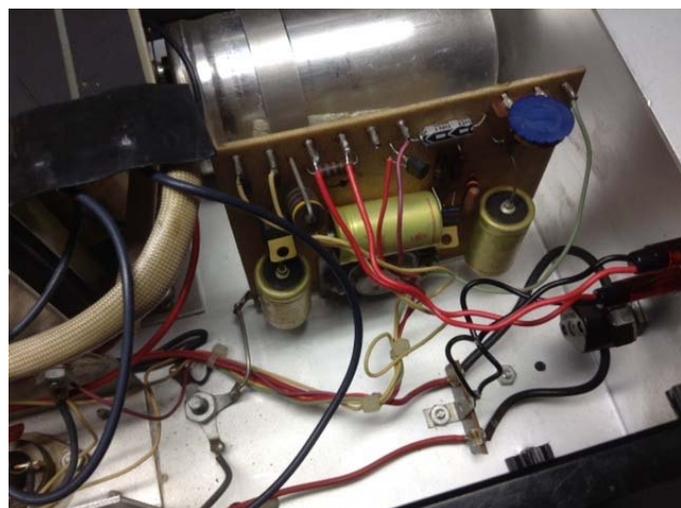
Each one required work. I sent the first one with PS back to Sevierville TN for a tune-up. That was a good decision, but it cost me as much as I paid that guy down by the home stretch. After I got the Corsair from Oregon and became convinced of its great receiver quality, I decided to go backwards in time and get an Omni, the C. There are the A, B, C, and D and variations of each. (Rigs after that were the Paragon and the V and VI, etc.) I replaced the PTO in my C with a digital VFO and am really happy with it. I really like the easy-to-work-on modular boards and the Ten Tec documentation.



So what turns up at the RARA Hamfest this past June? TWO Omnis, a C and a D. (Here? In Western New York?) The D had a companion PS (very important to have for old Ten Tec's!), but the SSB and CW filters weren't there. So, over to the guy with the C. He said it worked, and it did have the filters. Price? I remember \$130 or so.

At home I hooked it up to a TT power supply and got good reception. Then the dummy load. Transmitter: dead. What the! So I methodically went through the circuit and found no bias voltage into the final. Took the final cage all apart. (You really don't want to begin messing with those final amp transistors, if you can at all help it.) So I began making resistance checks. Ha!!! The little rotary variable resistor - controllable through a hole in the cage - was open. Probably dust. Go

figure. By moving it back and forth, I both solved the problem and made another one. Now I needed to reset the bias. "Get out the manual." I put it all back together, hooked up ammeters here and there and re-set both the driver grid and final amp grid levels. The Omni C was back in business - on all bands.



I won't tell you about the matching power supply I picked up on Ebay for \$30. *Caveat emptor*. Seller didn't tell me it had been dropped on its "backside." Bent the frame. I bent it back. Then I replaced all electrolytics (not the 19K mfd. biggie) and found a heap of bad solder joints. Now it works like a charm. (I went on Google Earth to see what sort of house that guy lives in. Not shabby. It takes all kinds.)

Isn't this a great hobby?

HAZY DAYS OF RADIO

FOREST SHICK, WA2MZG

Those crazy, lazy, hazy days of radio! We probably all have them, some of us more than others. HAHA. They are not due to weather but to time – the distance in time back to when we personally, first discovered radio. As you look back through the fog of time, you will see the little sparks of excitement as you remember your first steps in radio and electronics.

My first memory of radio was a white AM radio that sat on a shelf (where I couldn't reach it) in my grandma Shick's kitchen. It looked similar to the picture at the right. I don't remember it being turned on much. We lived in a very small town in western Pennsylvania with hills on all sides – I bet the reception was not great! Although our next door neighbor had a TV and we would get invited over to watch it once in a while.



Next came a record player/AM/FM radio console that my parents had. It might have been a Philco or a Zenith but I really do not remember. After the record player stopped working, (Do you remember 78RPM records?) I removed the radio from the cabinet and kept it in my room until I went to college. It was neat to see the glow of the tubes on the ceiling at night. Using that radio, I discovered I could learn to play songs on the guitar by listening to the radio.

My other grandma had a record player/AM/FM/TV console. It was huge! When they wanted to get rid of it my dad would not let me have it – too big for my bedroom. Besides, I already had a radio! On the other hand, he would bring home old TV sets so I could scavenge the components.



My best friend had an all band radio in his bedroom that was from his grandmother. We would sit on the floor and listen to anything we could tune in. We didn't know anything about antennas so whatever the radio had for an antenna was all that we used.



One Christmas my parents gave me a small, fit in a shirt pocket, Motorola portable AM/FM radio. It required a really strange and expensive battery – not a 9V or AA – but a single cylindrical battery. Unfortunately, it stopped working because I wanted to know what all those “screws” (tuning slugs in the inductors) were for. Of course I turned every one – many times and many turns!

As an older teenager, I started to collect antique radios. I had a few Atwater Kents and various other brands. Some even worked. I had found them in barn sales traveling between Rochester and my grandma's house in Pennsylvania. They were exciting to find and look inside and guess how they worked but not too exciting to own. I eventually found someone who wanted my small collection.



Although, those were memorable radios there are 3 outstanding ones. First there was a crystal radio I acquired by selling flower and vegetable seeds. I think it was the Burpee Seed Company. You earned points by selling seeds. One year I earned enough to acquire 3 projects: an electric motor, a crystal radio and some other project I do not remember right now. They were kits and came in cylindrical cardboard tubes a bit smaller than an oatmeal container.

The motor was mostly plastic parts that snapped together. You had to hand wind the coils on the rotor. You connected the battery and the motor would spin. You did have to spin the rotor to get the motor started but then it would continue turning.

I think the radio was built on a little plastic form. I can't remember the details right now but I remember having the radio. I remember trying to find the sweet spot on the crystal to place the cat's whisker so sound would magically come from the headphones.

The second was another crystal radio kit. This one looked more like a “real” radio because all the components were inside a plastic housing. It had a tuning slider on the front panel that moved a wiper across the tuning coil. It is hard to see in the picture but this radio required an



external antenna. It was fun tuning around and listening to all the beeps, boops and occasional voices.



The third was my first real radio, a Heathkit GR-91, which sits on the shelf in my shack today. It was great fun to build and tune up. Dad even put a wire antenna from my bedroom window to the basketball pole in the backyard. I was never good at basketball so the antenna was never broken by being hit with the basketball.

As I am writing this I wonder what my grandson and granddaughter will remember as their hazy days of radio. I have a broken Ten Tec 1254 that I will try to get working for them to play with. But what will they look back

on?

What will my own children look back on? There already was color TV, boom boxes, iPods, internet, Sirius, CDs, MP3s and on and on. Is any of this memorable? What's a 78RPM record? A crystal radio? Black and White TV? A rotary phone? A phone with no dial (This is 1234M, I would like J please. Just to call a neighbor!).

What are your Hazy Days of Radio like? Please send in a story.

ROCHESTER MINI MAKER FAIRE 2015

JON DICKASON, N2JAC



XARC and Pittsford Mendon High School were at the Rochester Mini Maker Faire Saturday to represent Rochester amateur radio. Joe AG2Y and his son Mark, and Bob K2OID, helped visitors listen to CW stations while technology teacher Scott Banister and his high altitude balloon (HAB) students displayed some HAB tech and helped kids build almost 60 Morse code keys. Attendance at the convention center was estimated to be about 3000, twice as many as last year.



Just like last year, the elementary and middle school age kids really enjoy discovering Morse code and building and decorating their DIY code keys. Adult visitors got to see that CW and ham radio is still alive. Some of the other 100 makers at the faire showed robots, arts and crafts, lock picking, model railroads, bicycles and motorcycles, and a learn-to-solder blinky LED project.



PUMPKIN PATROL WRAPUP

Brad Allen, KB2CHY

Everything went well for Pumpkin Patrol. There were no incidents. I wish to thank all those involved; I hope you all had a great time. The Goodie Patrol is funded by the quiet money put forward; I do appreciate it as everyone had plenty of cupcakes, cider, hot chocolate, cookies and some candy and coffee. The Goodie Patrol is always funded by quiet donations and me. Everything that is perishable or would need reheating or refrigerated etc. is not reused. Each night fresh liquid is purchased. This is so there is no chance of any contamination that could take place.

So this year has passed. Come September next year shortly before or after Labor Day, we do it all again.

RARA RAGS OF THE PAST

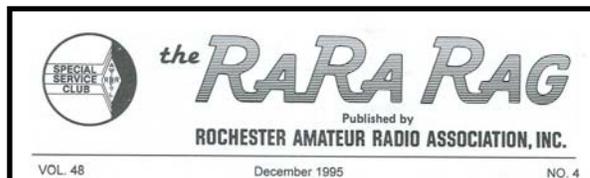
Ed Gable, K2MP – RARA Club Historian

20 YEARS AGO, DECEMBER, 1995

The December program took us to the topic of picture taking in the 21st century. Sounds a bit off topic for a RARA Meeting unless you further learned that the venue was the annual joint meeting with the Kodak Amateur Radio Clubs, this time with the Elm Grove plant folks. The gathering was hosted by Keith Freeberg N2BEL (sk), and members of Kodak's Marketing Technical Services Group. Licensing Class Director Art DeBruyker W2YGW (sk), announced the retirement of long term Technician/General class theory instructor, Dick Goslee K2VCZ. Art reported he is seeking a replacement. President Chris Reich WB2DYJ, reported on the just completed RACES/Ginna pre-drill exercise. All went well, according to Chris, who especially cited the new RACES UHF ATV repeater system as performing well and offering untold opportunities for RACES help in the community. Reported by Atlantic Division Director Hugh Turnball W3ABC, and citing that the ARRL's Western New York Section has become too large to be administered by one Manager, the ARRL announced the formation of the new Northern New York (NNY) section effective January 1st. With regret it was reported that Charles Eastman WB2NLU, was reported as a Silent Key. There were no Want Ads in this issue but Glenwood Sales, of Hague Street, remained a long time advertiser.

40 YEARS AGO, DECEMBER, 1975

The December meeting featured Terry Rogers WA2BFP, an Electrical Engineer with Harris/RF, speaking on instrumentation for the average ham, with emphasis on oscilloscopes. Writing for the licensing classes, Mr. Ditson Dawes, call sign unknown but obviously a CW operator, reported that this Spring's class, along with the normal Novice teachings, will be on General Class theory. Shown was a picture of the RARA Van, a colorful 1962, Corvair Van, in RARA colors of green and white, and fully radio equipped. The accompanying articles told of its use during the Triumph Touring Club's Road Rally. This period was the peak of the emergence of FM and FM repeaters into the world of Ham radio and nothing was more intriguing than the possibility of making auto-patch phone calls. To that end, Ron Jakubowski W2HXP, printed an article on how to connect a standard touch-tone telephone key pad to an amateur FM transceiver. (Editor's note: Ron Jakubowski, now K2RJ, was very active in local FM and RARA activities and was an engineer with Harris/RF. Rochester lost a good ham radio advocate when Ron left to pursue his communications career elsewhere. To those who knew him, know that he is alive and well, retired in Florida, and remains radio active as the Treasurer of the very prestigious *Radio Club of America*, the first and oldest such international organization on the planet – Ed) From the Want Ads you could buy a NC-5 transceiver from Bill White K2KAD. The Tire World of Greece, Ray Roberts WA2SSU, Manager, remained a long time advertiser.



DECEMBER PROGRAM TO BE HELD AT KODAK ELMGROVE

Picture taking in the 21st Century will be the topic for Friday, December first. It is time once again to meet out at the expansive Kodak Elm Grove Plant located at the south end of Elm Grove Road in the nearby suburb of Gates. Keith Freeberg, N2BEL, will be our featured presenter with a support staff from the Marketing Technical Services group.

Just imagine... it is the year 2000 and so many things have changed, the technology has become ordinary and FRIENDLY! You're out at a very special event, perhaps a graduation, a marriage, the setting of the base of your new "Hover Rite" tethered floating tower, and you think how great it would be to commemorate this event with a picture.

Wouldn't it be great to snap a picture and share it instantly with your new friends in Australia? You pause for a moment, remembering when it took weeks to get your pictures back only to find that you had stuck your finger in front of the lens. You smile to yourself as you pick up your Kodak point and click after another special palm-top image.

Perhaps people will ground Mable's look redder than what you fixer up now, it is "electron more picture. If all the probably think again for the T lucky ind their ve

RaRa MEETING

December 1, 1995

8:00 P.M.

Kodak Elm Grove

901 Elm Grove Road

Picture Taking in the 21st Century

Is there any subject/program you would like to have brought up at a future meeting? We have experts on most subjects just waiting to enthral you with topics not yet determined. Do not be bashful, give them a chance by letting your wants be known.

Regards the classes, Richard Goslee K2VCZ has decided to take a sabbatical from teaching the Novice theory after the present class. We thank Dick for his dedication for the last five or so years he has poured the information on prospective Novices in such a manner they may soaked it up, rather than let it drain off. A number of them have his expertise in teaching to thank for their having



December 5th Meeting - - - "Instrumentation for the Ham"

by Jim Collinsworth, WB2EDT

Terry Rogers, WA2BFP/WA4BYV has planned a stimulating, informative presentation and demonstration for our December 5 meeting at the Farm and Home Center on Highland Avenue. Terry's instrumentation program will feature practical applications of oscilloscopes and Cathode Ray Tubes in general in many ham shack applications--both HF and higher frequency work. You can expect to see some easy but worthwhile tips, techniques and measurement applications that the average amateur operator fails to take advantage of.

Most of the areas Terry will cover can be readily employed by most hams--but in addition he will have on hand some more sophisticated instrumentation to show what is available in commercial state-of-the-art equipment.

Terry comes well qualified as a speaker-entertainer, as well as an electronics expert. He is employed by Harris RF Division as an engineer in UHF/VHF communications equipment.

A Yankee originally from Auburn, he spent several years in Raleigh, North Carolina rebel country employed by Aerotron in VHF equipment. Terry graduated from Albany State with a degree in Physics and a strong preliminary background in engineering.

Terry also spent several years as a disc jockey--which may account for some of the entertaining, but unintelligible quips he frequently makes over local 2-meter repeaters.

Be sure to attend this meeting--it promises to provide interesting and informative material for hams at all levels from newcomer novices to old time extras!

Valentine Dinner-Dance

Watch next month's RaRa Rag for details about the annual Valentine Dinner-Dance. This is an event no one will want to miss.

For the newcomers to RaRa, the Dinner-Dance is our way of expressing thanks to our spouses for putting up with us throughout the year. It is the one night of the year when we attend a radio club function where radio is not the topic of discussion.

GENERAL LICENSING CLASS ANNOUNCED

by Ditson Dawes

Starting in February, 1976 we will hold another licensing class for a General Class ticket by May. The class will be timed to be completed just before the Rochester Hamfest where the FCC has again agreed to administer examinations for Technician, General, Advanced and Extra Class tickets.

The announced course will be held at CD Headquarters on Monday evenings from 7:30 until 9:30 p.m. It will consist of code from the class starting level (to be determined) up to 15 WPM. The theory course will be the same as last year. Seminar type discussions geared to start the students thinking and to help them gain enough knowledge to pass their test. The course is NOT intended to make an Electronic Engineer out of anybody - its sole purpose is to get you the desired license. Preregistration is essential so we can plan for the proper size class. If you're interested send a postcard indicating your interest to Bob Lawson, WB2NSD, Drawer G, Pittsford, N.Y. 14534 and be sure to include your address and telephone number.

Students must be members of RaRa. If already licensed regular membership is \$5.00. If the student has no license an Associate Membership is \$8.00. If you are not a member see the Membership Chairman, Bud Young, WA2UGS, at any RaRa meeting.

WNY HAMFEST

The 1976 Western New York Hamfest is scheduled for Saturday, May 22, at the Monroe County Fairgrounds.

Those who gather on Friday, May 21st, are directed this year to a new headquarters location, the Rochester Marriott Inn, on route 15, West Henrietta Road, directly across from Thruway exit 46.

The Hamfest ad running in all the amateur journals tells of the Marriott as new headquarters. Many have asked what about the Fairgrounds. The answer is stated above. Please tell your friends how it works.

For anyone who wishes to organize a hospitality room or suite for a special interest group, please make your wishes known as soon as possible to Hamfest general chairman, Harold Smith, WA2KND.

VE TEAM INPUT

Ken Hall, W2KRH

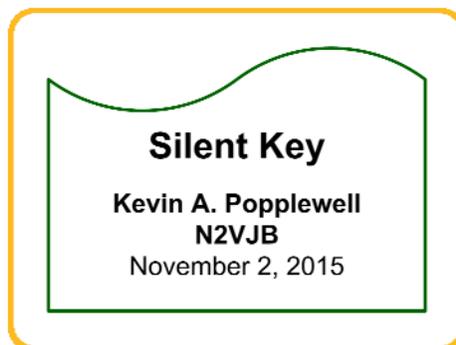
We had 14 successful candidates with 2 Extra, 4 General and 8 Technician. One of the Extra licensees, John Hall AC2RL ,passed all 3 exams at this session; he is only the fourth person since I have been the team leader. Congratulations to all successful candidates and welcome to the world of Ham Radio to all enjoy your new license or upgrade.

The December session will be on the 19th, the Saturday prior to Christmas.

If you have any questions please contact Ken Hall ken@w2krh.com.

John Hall	AC2RL	E	Michael Casadevall	KD2JRT	T
Jairus Harvey	KD2HJA	E	Timothy Keeler	KD2JRU	T
Catherine Brown	KC2UAD	G	Robert Kuzmicki	KD2JRV	T
Michael Kolstee	KD2IZQ	G	Sean Liddle	KD2JRW	T
Renato Pietrantoni	KD2JLF	G	Benjamin Shaner	KC3FVQ	T
Gary Terrana	W2GMT	G	Christina Steenhoff	KD2JRX	T
Linda Parkerson	KD2ISE	G	Andrey Vasilik	KD2JRY	T
Paul Austin	KD2JRR	T			

New licensees names are in BOLD



RARA CALENDAR

Tim Barrett, K9VB

~ December 2015 ~						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 QRP Fox Hunt	2	3 QRP Fox Hunt NRAU 10M Activity Contest NCCC Sprint	4 RARA Monthly Meeting 7:00pm, BSA HQ, 2320 Brighton Henrietta TL Rd	5 ARRL 160M Contest AWA Bruce Kelley 1929 QSO Party
6 ARRL 160M Contest AWA Bruce Kelley 1929 QSO Party	7	8 QRP Fox Hunt	9 SIARC 7.30pm	10 RARA BoD Mtg 5.30pm QRP Fox Hunt NCCC Sprint	11	12 AWA Bruce Kelley 1929 QSO Party ARRL 10M Contest SKCC Sprintathon International Naval Conteat
13 AWA Bruce Kelley 1929 QSO Party ARRL 10M Contest SKCC Sprintathon International Naval Conteat QRP ARCI Homebrew Sprint	14	15 RDXA Holiday Banquet QRP Fox Hunt	16	17 QRP Fox Hunt NCCC Sprint Russian 160M Contest AGB Belarus Contest	18	19 RAC Winter Contest
20 ARRL Rookie Roundup CW Run for the Bacon Contest	21	22	23	24 NCCC Sprint	25	26 World Wide Iron Ham Contest RMSC Holiday Science & Technology Days
27 World Wide Iron Ham Contest RMSC Holiday Science & Technology Days	28 RMSC Holiday Science & Technology Days	29 RMSC Holiday Science & Technology Days	30 RMSC Holiday Science & Technology Days	31		

Print this calendar and leave it by your radio.

NEWS FROM AREA CLUBS

MONROE COUNTY ARES / RACES NEWS

NOTE: No meeting in December

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. There will be no meeting in December. Enjoy the Holidays. See you in January.

The next ARES Meeting will be held on: **Thursday, January 28, 2016, at 7:00 PM.**

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.monroecountiemcomm.org

Severe Weather Alerts: Summer often brings severe weather in the form of heavy rain, wind, hail, lightning and thunderstorms. If you experience any of these forms of severe weather, and especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads)

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 2016.

ROCHESTER RADIO REPEATER ASSOCIATION, RRRRA

The Rochester Radio Repeater Association, RRRRA, invites you to attend its December meeting. The date is December 18th and the place is the Pittsford Town Hall basement starting at 7:30 pm. Refreshments will be served. Last month's meeting featured the Radio tune up Clinique with Pres. Bob Shewell - N2HJD , and Vp. Bob O'Dell - N2BZX . This December's meeting could be a dinner date in lieu of a regular meeting. Please contact me at http://www.k2rra.org/index.php?option=com_alfcontact&view=alfcontact&Itemid=139 and let me know your preferences or suggestions for the dinner time and place.

Bob O'Dell N2BZX

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 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 or just calling in any Monday or Thursday night. All are welcome to check in to these nets.

ROCHESTER DX ASSOCIATION, RDXA

Annual Holiday Dinner
December 15, 2015
Rick's Prime Rib House
Cocktails at 6PM and dinner at 7PM
Dinner Selections \$25.00
All are welcome



Reservations and dinner selection by December 4th: RDXABANQUET@RDXA.COM

XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club meeting is 6PM on December 10, 2015 at the Webster Recreation Center where Bob Karz, K2OID, will be giving a talk about CW. Also, if you have a System Fusion radio, we have been having informal nets on Thursdays at 8:30 PM on the W2XRX 145.29 Repeater. For all the latest news and info visit <http://xarc.us>

SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:00PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM with the regular meeting beginning at 7:30PM. The December meeting will be our annual Christmas Party. We will be meeting at The AWA building in Bloomfield on Wednesday the 9th at 7:00PM. Please bring an appetizer or desert.

73's Steve Benton, WB2VMR

AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER

Hello and welcome to ARAST sponsors of the Elmira Hamfest.

Mark your calendars for the Elmira Hamfest coming up the last Saturday in September, 2016. The hamfest committee is working hard to get things going. It will really ramp up after the new year.

One of the events that we handle (in conjunction with the KLARA club) here in the southern tier is the Wineglass Marathon. This is a 26 mile run from Bath to Corning. It takes a tremendous amount of volunteer work to put this all together. We (the Chemung County Amateur Radio Emergency Services and KLARA) could use some help. If you are interested in working this event, it is the first Sunday of October. The way we try to do this is, should you wish to help out, we assign you to a post on the upper end of the course and you would be done around Noon. More information on this event can be obtained from the Emergency Coordinator using the email of emergencycoordinator@arast.org. Every person makes a difference.

A shout out for a hamfest in our area (not affiliated with ARAST) on the last Saturday in February is at the Big Flats Legion. More on that can be found at www.ka2lim.com/7.html. As I said it's just a shout out for their hamfest.

COMMUNITY AMATEUR RADIO CLUB, CARC

The focus of The Community Amateur Radio Club is emergency communications and supporting our community. Our next meeting is the first Saturday of the month (December 5) at the Hoag Library (134 S. Main St.) in Albion, NY beginning at 7pm. We will be learning to handle formal traffic at this meeting. Come join us for a meeting or catch us on our weekly nets - Sunday night service net at 8pm on 147.585 simplex or Thursday evening social net at 8:30pm on 147.285+ (W2SO repeater) - where we talk about anything from ham radio to ham sandwiches. We look forward to hearing you! For more info: k2srv.org

DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP is happy to report that the DStar hotspot located high above the RIT campus is back on the air and is demonstrating excellent coverage throughout the area. The hotspot is a simplex device based on a [Raspberry Pi](#), a [DVRPTR](#) and a GE Phoenix radio. The callsign is W2RIT and the simplex frequency is 446.125. We invite you to try operating through the hotspot using the normal DStar addressing conventions using the B user and G gateway ports. Of course a DStar radio is required but if you have one please give the hotspot a try. Very recently two of our members started experimenting with DMR using inexpensive Chinese [handhelds](#). Hopefully we'll have more to report about those efforts very soon. You can learn more about DCAP and our digital explorations here www.dcap-kb2vzs.net.

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Here's some of our events for the month of December:

Tuesday, December 1, 7pm: Monthly Business Meeting & Member Presentations, open to the public.

Friday, December 4, 7pm: Rochester 2600 - <http://www.rochester2600.com/>

Saturday, December 5, 4pm to 7pm: Annual Meeting. Officer and Board of Director elections, reports, bad jokes, and potluck.

Friday, December 11, 7pm: Software-Defined Radio (SDR) Meetup

Friday December 18, 7pm: TOOOL Rochester Meeting - <http://toolroc.org/>

Our monthly Linux Workshop is taking a December hiatus but will be back in January.

You can find us most every Tuesday night at 7pm in the Hungerford Building (1115 East Main Street, Rochester NY), just north of Village Gate. Come to Door #7 (next to Comics Etc) and buzz Suite 200. Find out more on our website at interlockroc.org and contact info@interlockroc.org with any questions, or find us in #interlock on Freenode IRC.

For Sale



HHL3000 Reflow Oven with Manual

Solder Area: 8.2 x 7.4 in
Infrared heating element
With spare temperature sensor



SMT Stencil Printer

Contact: Forest Shick, WA2MZG

fshick@rochester.rr.com

585-721-1653

Reflow Oven and Stencil Printer

\$450.00



Kenwood TS-480, 100 Watt

500 Hz CW filter
Voice board
Excellent condition
\$750

Contact: Charlie Kuhfuss
WB2HJV@rochester.rr.com

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) 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



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.

Michele A. Jamison, MD
Office Hours
by Appointment



www.JamisonEye.com
90 Erie Canal Drive | Rochester, NY 14626 | P: (585) 225-5883

ELECTRICAL WORK • TELEPHONE JACKS • CABLE TV
BURGLAR ALARM SYSTEMS • PADDLE FANS



MARTIN IPPOLITO
Master Electrician

Call **585-266-6337**

P.O. Box 17438
Rochester, NY 14617
N2HEG

PROMOTE YOUR BUSINESS WITH RAG ADVERTISING

Ad size and cost:

Business Card	- 2 x 3.5	\$140
Quarter Page	- 4.2 x 3.5	\$300
	- 2 x 7.3	\$300
Half Page	- 4.2 x 7.3	\$600
	- 8.6 x 3.5	\$600

The above prices are **per year** - not per month as is typical in other publications.

Your advertisement will be seen by amateurs in Rochester, Monroe County, New York State, the United States and even the rest of the world. RAG circulation is approx. 8,000.

• Retirement Review • Life Insurance • 401K Rollover •
• College Funding • Health/Auto Insurance • IRA •

I'm here to help you plan for your future.

Andy Williams • Your Local New York Life Agent
585-242-9227 • [Click Here for More Information](#)

Life Insurance. Retirement. Long-Term Care. **KEEP GOOD GOING** **NEW YORK LIFE**



Get your message through!
Advertise in the RaRa RAG -
Read by over 8,000 radio enthusiasts each month.
For more information: Editor@RochesterHam.org

RARA OFFICERS

OFFICERS

President: William Mullaney, KC2VSJ	(585) 749-7363	will.mullaney@gmail.com
Vice-President: Anand Choudri, KC2KPG	(585) 377-0759	achoudri@rochester.rr.com
Treasurer: Betsy Tascione, KD2DYU	(585) 458-6546	kd2dyu@rochester.rr.com
Secretary: Ken Hall, W2KRH	(585) 289-3801	ken@w2krh.com

BOARD OF DIRECTORS

Brad Allen, KB2CHY	(585) 247-3724	ballen@frontiernet.net
Tim Barrett, K9VB	(585) 582-1006	tim.k9vb@gmail.com
Don Kiser, AC2EV	(585) 613-1035	ac2ev@frontier.com
Frank Schramm, WB2PYD	(585) 270-1045	wb2pyd@gmail.com
Forest Shick, WA2MZG	(585) 721-1653	wa2mzg@arrl.net
Natalie Tascione, KD2DYV	(585) 698-5102	kd2dyv@rochester.rr.com
Ryan Tucker, W2XH	(585) 857-2181	w2xh@ryantucker.us

DEPARTMENT HEADS

Raffle Administrators	Jay Hamill, KC2TCM Sabrina Hamill, WD2STK	
Club Historian	Ed Gable, K2MP	
Club Station Trustee	Jim DiTucci, N2IXD	n2ixd@arrl.net
Education Coordinator	Pam Kasperkoski, W2PHK	pamelakasper@frontiernet.net
Hamfest Producer		
License Testing Coordinator	Ken Hall, W2KRH	ken@w2krh.com
Membership Secretary	Tim Barrett, K9VB	tim.k9vb@gmail.com
Media Communications	Jim Stefano, W2COP	w2cop@arrl.net
Public Service Coordinator	Jim Stefano, W2COP	w2cop@arrl.net
RARA RAG Editor	Forest Shick, WA2MZG	editor@rochesterham.org
Refreshments Coordinator	Dawn Lepard, KC2VJU	dawn@leopard.ca
Webmaster	Frank Schramm, WB2PYD	wb2pyd@gmail.com

JANUARY RAG DEADLINE

DECEMBER 15, 2015



**RARA meets at 7PM on the
first Friday of each month;
come join us at:**

Seneca Waterways Council, BSA Headquarters
2320 Brighton Henrietta Town Line Rd
Rochester, New York 14623

[Get Directions](#)

[Rochester Area Repeater Listing](#)

ROCHESTER AREA RADIO CLUB CONTACTS

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

Community Amateur Radio Club (CARC)
Joe Gangi, AC2NB: ac2nb.carc@gmail.com

Digital Communications Association of Perinton (DCAP)
Gary Skuse, KA1NJL: ka1njl@arrl.net

Drumlins Amateur Radio Club Ltd. (DARC)
Glen Bruemmer, KC2YGH: glenbruemmer@gmail.com

Fisherman's Net Amateur Radio Club
Jim Sutton, N2OPS: jim@otrym.org

Genesee Valley Amateur Radio Assn.
Bill Boyd, N3DSP: N3DSP@lafireline.net

Monroe County ARES
Jim DiTucci, N2IXD: n2ixd@arrl.net

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

Rochester Amateur Radio Association (RARA)
Will Mullaney, KC2VSJ: will.mullaney@gmail.com

Rochester DX Association (RDXA)
Chris Shalvoy, K2CS: cshalvoy@att.net

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

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

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

XRX Amateur Radio Club
Brian Donovan, K2AS: k2as@outlook.com

THE RARA RAG

Published by

Rochester Amateur Radio Association, Inc.
P.O. Box 93333, Rochester, NY, 14692-8333
Hotline – (585) 210- 8910
Website – <http://www.rochesterham.org>