



# THE RARA RAG

Newsletter of The Rochester Amateur Radio Association, Inc.  
Founded in 1931

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## INSIDE THIS ISSUE

MONTHLY PROGRAM	1
BOARDZ BUZZ	2
CALENDAR OF EVENTS	2
EDUCATION	3
PUBLIC SERVICE REPORT	4
RXCWG	4
INTERESTING CW LINKS	4
VOLUNTEER SPOTLIGHT	5
THE TINSYSA	6
GIL	8
ROOKIE MISTAKES	8
XRX FOX HUNT	10
PROFESSOR'S PIC(K)s	11
NEW ON THE WEB SITE	12
RESULTS: PP QSO PARTY	12
SPIRAL VHF DIPOLE	13
RAGS OF THE PAST	14
VE TEAM	16
ELMERS	16
RARA CALENDAR	17
NEWS FROM AREA CLUBS	18
AMATEUR'S CODE	20
ITEMS TO GIVE AWAY	21
RARA OFFICERS	22
AREA CLUB CONTACTS	23

## THE INVENTION AND EARLY DEVELOPMENT OF THE TELEPHONE

### ONLINE MEETING AND PRESENTATION

BRIAN O'CONNOR, KA2CGB, RARA VICE PRESIDENT

Please join us for our monthly membership meeting on Wednesday, 2 December at 7:00PM ET. We will review area Ham news and have an informative presentation.

This month's presentation is *The Invention and Early Development of the Telephone*, by RARA's President, Tim Barrett, K9VB.

*The early history of the telephone from invention in the 1870s through to the development of the first telephone exchanges and expansion in the early 20th century is the subject of our December presentation. Many of the same issues that made the development of radio and the morse telegraph so interesting are here too: initial skepticism or even disbelief that it was possible, inevitable arguments over who was the actual inventor, fights over patents, chaos from multiple companies all trying to do the same thing in different ways and eventually success which brought its own challenges.*



To register for the meeting, visit [https://rochesterham.org/club\\_meetings.htm](https://rochesterham.org/club_meetings.htm).

Please arrive a little early to ensure you are completely set up. See you then!



Cross Section of an Early Phone



K2JD

N2EH

W2EOC

# BOARDZ BUZZ

KARL HEINZ KREMER, K5KHK, SECRETARY

Has it been a year already since I wrote the last Board Buzz?

About ten weeks ago, I started to teach the Technician License class for the club. This was a first for me and teaching it virtually was a first for RARA. Talk about being guinea pigs ☺

Teaching this class gave me a new appreciation for how much somebody who does not have a technical background has to learn to pass the test. The class starts full throttle: The very first two weeks are filled with the basics of radio signals and electricity, followed by electrical components. If people don't drop out after these first two sessions, there is a good chance, they will stick with the class to the end.

Getting your first license is hard (even though, we had to work much harder when we got our first license, and we also had to walk ten miles to school every day, barefoot, uphill both ways and in the snow...), and it's easy to forget that fact with the years or decades of experience most of us have. So, when you hear a new ham on the air, be nice. They worked hard on getting their license, and very likely will appreciate a pat on the back.

The exciting news from the class is that two of my students passed the test after just six weeks. Congrats Susan (W2SBA) and Dan (KD2UWG)!

When I first volunteered to teach the class, the first thing I did was to take a few sample tests, just to see how much I had to study to get ready for the class. That went better than I thought, nobody knocked on my door, demanding that I surrender my license ☺ But it still showed some areas that I needed to brush up on: It was the licensing and operating regulations that I had to read up on.

The pandemic created some other obstacles besides having to teach the class virtually. No shack tour, no operating demonstrations during class, and no passing around of interesting gadgets during class. All these things are usually meant to help all that new stuff one must learn to stick around in one's brain for a little bit longer. So again, kudos to everybody who stuck around 'til the very end.

I also learned a few new things in the process. Now I know how to sign up for an FRN online at the FCC web site. I learned more about vanity call signs than I ever needed before, and I also learned that it really takes 18 days to get a vanity call sign. Yes, your new license will show up in the FCC database after just a couple of days, but a vanity call sign takes it's time before it gets published.

I will teach the Tech class again, starting in January. So, if you know anybody who is interested in getting a license, have them sign up with Tim Brown. They won't be guinea pigs anymore ☺

## CALENDAR OF EVENTS

**WEDNESDAY DECEMBER 2, 2020** - RARA General Meeting  
7:00 PM - ON LINE

<https://attendee.gotowebinar.com/register/830629768745514509>

**TBD DECEMBER, 2020** - RARA Board of Directors Meeting  
6:30PM ON LINE

Email request for link to [secretary@rochesterham.org](mailto:secretary@rochesterham.org)

**SATURDAY DECEMBER 19, 2020** - VE Testing



## EDUCATION

TIM BROWN, WB2PAY, EDUCATION COORDINATOR

### RARA LICENSE COURSES

**Technician License Classes** will be held online beginning Tuesday January 12th at 6pm - 8pm for 10 sessions  
Instructor -- **Karl Heinz Kremer, K5KHK**

**General License Classes** will be held online beginning Thursday January 14th at 6pm - 8pm for 10 sessions  
Instructor -- **Freddie Sulyma, WB2GFZ**

Class size limited to 12  
Pre-register by emailing  
[education@rochesterham.org](mailto:education@rochesterham.org)

Licensing courses are FREE to **current** members and students.  
The cost for non-members is \$15.00.

**Not a current RARA member? Register at:**  
<https://www.rochesterham.org/membership.htm>

ARRL Licensing manuals may be purchased for the discounted rate of \$25.00.

Order License Manuals by emailing:  
[education@rochesterham.org](mailto:education@rochesterham.org)

## ELMERS

RARA's Elmers have a wealth of Ham Radio knowledge and expertise.

If you have a technical or operational question, let the RARA Elmers help you.  
Send your inquiries to [education@rochesterham.org](mailto:education@rochesterham.org)

### MORSE CODE TRAINING

The RARA XEROX CW Group assists Hams wanting to learn Morse Code or to develop their CW skills.

### ONLINE PRESENTATIONS

On Thursday November 12th,  
**Bob Karz, K2OID**, presented a **Beginners Guide to CW**  
The slide presentation is available at  
<https://www.rochesterham.org/rxcwg/2020-11-12%20A%20Beginner's%20Guide%20to%20CW.pdf>

**Howard Bernstein, WB2UZE**, and **Jim Crites, W6JIM**, were guest speakers from the Long Island CW Club.  
[https://www.youtube.com/watch?v=J3r8LDck-el&feature=emb\\_title](https://www.youtube.com/watch?v=J3r8LDck-el&feature=emb_title)

Details on the LICW Club are available at <https://longislandcwclub.org/>

Morse Code Training Resources  
<https://www.rochesterham.org/rxcwg.htm>

### RARA ACADEMY WORKSHOPS

**January 9th --10:00am to 12:00pm**  
**GUI Development**

- Using a color touchscreen display.
- Basic layout of the display and touchscreen
- Drawing text, buttons, symbols, etc.
- Responding to touch activity on the display.
- Discussion will be based on the Teensy 3.2 and
- Color Touchscreen from [PJRC.com](http://PJRC.com)  
- Presenter will be **Forest Shick, WA2MZG**

Register by emailing  
[education@rochesterham.org](mailto:education@rochesterham.org)

Academy information is available at  
[https://www.rochesterham.org/rara\\_academy.htm](https://www.rochesterham.org/rara_academy.htm)

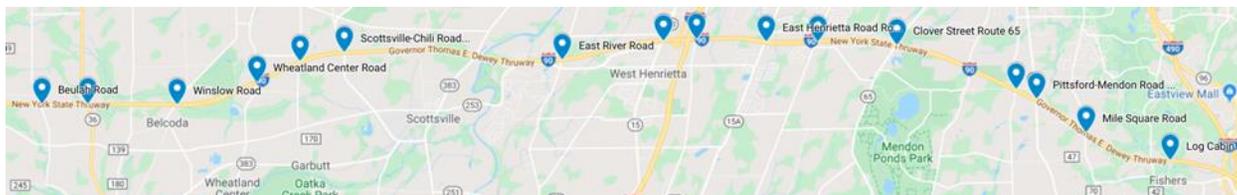
# PUBLIC SERVICE REPORT

MIKE MOORE, KC2NM, PUBLIC SERVICE COORDINATOR

The Pumpkin Patrol was held on the 16 Monroe County Thruway bridges on Friday, Oct. 30 and Saturday, Oct 31. There were no vandalism incidents reported either night. At the request of ARES, we again used the ARES repeaters 146.61 and 444.45 for Pumpkin Patrol. This repeater system has a number of remote receivers and provides good coverage of Monroe County. Ed, K1EM, did a great job organizing the event! He has sent each of the participants a "Thank You" note, reported the service hours to Tim, K9VB, and has requested the recognition certificates from Trooper Stumpf of the NYS Troopers. In addition to providing us an opportunity to hone our operating skills in a real-world service situation, a side benefit of this event is the manpower savings for law enforcement because we provide the bridge monitoring role. Here is a map of the deployment for this year's Pumpkin Patrol. Participants were:

AB2OY, K1EM, K1PY, K2DPC, K2UW, K4GWA, KA2WNS, KC2KPL, KC2MZP, KC2NLD, KC2NM, KC2YSO, KD2AZE, KD2EHW, KD2IOB, KD2PQP, KD2RAF, N2BNE, N2IZX, N2PHB, N2YPM, NS2B, W2JAT, W2RMB, WA2CHV, WA2MYF, WB2JOR, WB2KAO, WB2QCJ, WM2W

Most of the hams provided bridge duty but special thanks go to Tim, WB2KAO and Lynn, N2IZX who served as net control operators. Goodie Patrol duties were provided by Chuck, KC2KPL, Diane, and Lee, WB2JOR  
To add some additional fun for Pumpkin Patrol participants, our friends in the



Rochester VHF Group organized a QSO party to be held during a portion of the service event. This was not a contest but there were separate operating recommendations for Home Stations and Pumpkin Patrollers. The idea was for stations to contact each other on simplex between call ups on the Pumpkin Patrol net. Thank you Ev, W2EV and the Rochester VHF Group for adding to our fun. There was some additional coordination communication with our Thruway neighbors to our east and west. Dave, KD2RAF and Jeff KD2PQP made contacts with the Drumlins and SIARC operations to our east as well as the Gene-see and Erie county operations to our west. I think that we should build on this idea and add the capability to coordinate with these groups next year. It would give us a way to give and get a "heads up" about any issues moving our way.

We continue to work with the Rochester Museum and Science Center to determine if the Holiday Science and Technology program will be held this year. They

would like to put on an activity during the holiday school break but have not released a plan as of this writing. Our tentative schedule is shown below.

Holiday Science & Technology Days	Rochester Museum & Science Center (In Planning Stage)	Wednesday - Saturday	December 26-28
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## RXCWG

As many past Morse Code learners are progressing into intermediate levels and beyond, we are starting an additional weekly Zoom session that focuses on beginners and learners who still need help with learning the Morse Code character set.

This new session will use the methods similar to Tim Brown's sessions on Wednesday evenings but with slight modifications.

- Farnsworth character speeds at 15-18 wpm
- Koch character sequence
- Receiving AND sending Morse Code characters
- Personalize to each student level
- Assumes learners will practice daily between these sessions
- Learn at your own rate

The sessions will start on Thanksgiving evening, **Thursday, November 26 at 7:00 PM using 40 minute Zoom sessions.** Peter Fournia, W2SKY will host the sessions with occasional guest mentors appearing with special tips. Sessions will be progressive with frequent reviews of the Character Set, Words, Prosigns, Abbreviations and elementary QSOs.

Check out the sessions on **Thursday evenings.** Come and go as you please. Request a link to the recurring session by email to [pfournia@gmail.com](mailto:pfournia@gmail.com)

Don't worry if you missed the Thanksgiving session. You can start any time.

73,  
Peter, W2SKY  
(585) 377-0535

## INTERESTING CW LINKS

<https://qrper.com/2020/11/assembling-the-mfj-561k-miniature-travel-iambic-paddle-kit/>

<https://on7dq.blogspot.com/2020/07/the-ost-morse-box.html>

# RARA VOLUNTEER SPOTLIGHT

## ED WILKONSKI K1EM

SUSAN AIELLO, W2SBA

Ed has volunteered for RARA, RRRA, other radio clubs around the country, as well as on a variety of other non-ham related volunteer activities for many years. I invited Ed to talk with me for this feature out of my curiosity about the Pumpkin Patrol. Here are excerpts and highlights of our conversation for the first RARA Volunteer Spotlight!

### What is your first memory of Ham Radio?

Back in the 1970's, living in NYC, Ed lived near a block that was known as *Radio Row*; shop after shop, mostly stocked with radio equipment. His dream back then was to build a mobile station in the back seat of his Ford station wagon! The FCC was in walking distance and he strolled over to take the Novice exam, which included Morse code back in the day.

Radio Row sounded like a giant Hamfest to me and a quick google search following my conversation with Ed netted this Wikipedia info:

*New York City's Radio Row, which existed from 1921 to 1966, was a [warehouse district](https://en.wikipedia.org/wiki/Radio_Row) on the [Lower West Side](https://en.wikipedia.org/wiki/Lower_West_Side) of [Manhattan](https://en.wikipedia.org/wiki/Manhattan), [New York City](https://en.wikipedia.org/wiki/New_York_City). Major firms that started there include [Arrow Electronics](https://en.wikipedia.org/wiki/Arrow_Electronics), [Avnet](https://en.wikipedia.org/wiki/Avnet) (founded by [Charles Avnet](https://en.wikipedia.org/wiki/Charles_Avnet) in 1921), and [Schweber Electronics](https://en.wikipedia.org/wiki/Schweber_Electronics). [https://en.wikipedia.org/wiki/Radio\\_Row](https://en.wikipedia.org/wiki/Radio_Row)*

### How did you first get involved with RARA?

After involvement with ham radio for several years in various locales around the country, Ed landed in the Rochester area. In seeking out other hams, he found his way to RRRA as well as RARA and has been active in both organizations for many years.

### Tell me about the Pumpkin Patrol!

Ed volunteered monitoring a Route 90 bridge for about 4-5 years under the leadership of Brad Allen, KB2CHY. As Brad was stepping down and looking for someone to take on the job, Ed stepped up to coordinate the program starting in 2019.

Under Ed's coordination, a group of about 30 volunteers monitor 16 bridges across Monroe County on both October 30th and 31st. Some volunteers have been on the team for over 20 years and each year brings new volunteers into the fold. Volunteers have a variety of roles, from Net Control, Goodie Patrol, roving between bridges and monitoring bridges. Goodie Patrol delivers treats (no tricks!) to help these dedicated volunteers get through their shifts!

### Interesting stories from the Pumpkin Patrol

Given the time of year and work under darkness, there have been many an encounter with wildlife; Ed even had a coyote pass in front of his car one night. But the story that came with a chuckle was the time when one volunteer radi-



oed Net Control that he ran his car battery dry; anyone out there able to come with jumper cables?!?

New this year, in coordination with W2EV and the VHF home-based group, was the first PPQP- Pumpkin Patrol QSO Party! Watch the RARA Rag for a full report of this successful inaugural event!

### Do your friends and family share or support your interest in ham radio and volunteering?

Ed's wife is also an active volunteer pursuing her own interests, and those interests intersect, such as their time over the years volunteering with Habitat for Humanity. Some folks in Ed's family have suggested that he might learn to say 'no' to volunteer requests, but that is not in his nature! His family has been following his pursuits since his early ham days when he would use his mobile rig (pre-cell phone days) to report highway mishaps that he happened upon.

### What might (someone) be surprised to know about you?

I was surprised to learn that Ed's first ham shack was in his daughter's closet in their home on Long Island! Does that cozy set-up sound familiar to any other RARA Hams?!?

### What would you tell someone who is thinking about volunteering?

I was not surprised when Ed told me that he gets more out of volunteering than he puts into it. He has always enjoyed public service and it is clearly a significant element to his life and vitality. In Ed's experience, volunteering boils down to these three things: Learning new skills, sharpening old skills and sharing skills!

*My thanks to Ed for his generosity of time for this feature, but more importantly for his time giving back to the ham community as well as RRRA, Habitat and I'm sure others that we didn't even have a chance to discuss!*

# THE TINYSA THE NANOVNA'S FIRST COUSIN

KARL HEINZ KREMER, K5KHK

Remember the NanoVNA? I wrote about it a while ago - you can find the article "NanoVNA - Toy or Tool" in the December, 2019 issue of the Rag. It was the first very affordable Vector Network Analyzer that I had seen. Test instruments for about \$50 for things that used to cost a boatload of money seem to be the latest trend: We now have the TinySA, a spectrum analyzer that again is trying for the \$50 price point.

The project started out as a DIY spectrum analyzer, based on a couple of cheap transceiver modules plus a mixer and some filters. Throw in an Arduino microcontroller and a display and you have a spectrum analyzer. The construction is documented in the [HBTE \("Amateur Radio Homebrew Test Equipment"\) group](#).

Erik Kaashoek, the designer, made the document available in the group's "Files" section:

<https://groups.io/g/HBTE/files/Tiny%20Spectrum%20Analyzer/Build%20instructions%20for%20the%20Tiny%20Spectrum%20Analyzer.pdf>

Editor's Note: Visit <https://groups.io/g/HBTE/> for login information.

Eventually, he started to work with one of the guys who created one flavor of the NanoVNA who goes by the username Hugen. He brought the manufacturing experience and the distribution channel to the table. And the result of that collaboration is the commercial version of the TinySA.

It comes in the same form factor as the NanoVNA, uses the same processor and the same display, but the "guts" are of course different. When you look at it, it has two inputs (which can also be used as outputs, when the device is used as a signal generator): The low input is used for 100kHz to 350MHz and the high input is used for 240 to 960MHz.

The project web page at <http://TinySA.org> has plenty of information about the use of the device. After turning it on for the first time, it's a good idea to run a self-test, followed by a level calibration. Both steps require that the high and low inputs/outputs get connected with one of the included SMA coax patch cables. Once this is done, the spectrum analyzer can be used. The web page does offer a number of measurement examples:

<https://tinysa.org/wiki/pmwiki.php?n=Main.Examples>

The TinySA behaves very much like that "real" spectrum analyzer when you connect it to a source that delivers too much power: You will kill the device. It is however a lot less painful to do that with a \$50 device vs. a \$10,000 device. What I am trying to say is, don't connect your transmitter directly to the SA, use an appropriate attenuator.

Before we go into a bit more detail of what using the TinySA is like, here are a few more resources to learn about the device and how to use it:

- The project's web site has getting started tutorials and more:
- <http://tinysa.org>
- YouTube user "IMSAI Guy" has a playlist about videos regarding the TinySA: <https://www.youtube.com/playlist?list=PLXDK0MeyK4ZgnYyh1INCSvIhteEs4Tkt> - he even compares it with an HP spectrum analyzer, finds a few potential problems, but then learns that these were due to using the wrong settings. After that he is very happy with the performance of the TinySA.
- The TinySA designer Erik also has a number of YouTube videos:
- <https://www.youtube.com/playlist?list=PL5ZELMM2xseNkwVBtyAG00uZevwWUdVlg>
- Even though the TinySA grew out of the HBTE group, it now has it's own mailing list: <https://groups.io/g/tinysa>

When you receive your TinySA, it comes with two RG174 patch cables with SMA connectors, a small telescopic antenna that can be used to pick up RFI, and a guitar pick stylus. It connects to a charger via a USB-C cable, which is also used to connect to a computer. The computer is used for software updates (which have been very frequent since the device was first released), but also to have a larger display and to take screenshots. Erik released Windows software for the TinySA that allows you to use the computer as user interface and not have to use a magnifying glass to read the small screen. There is a reason it has "tiny" in its name :)

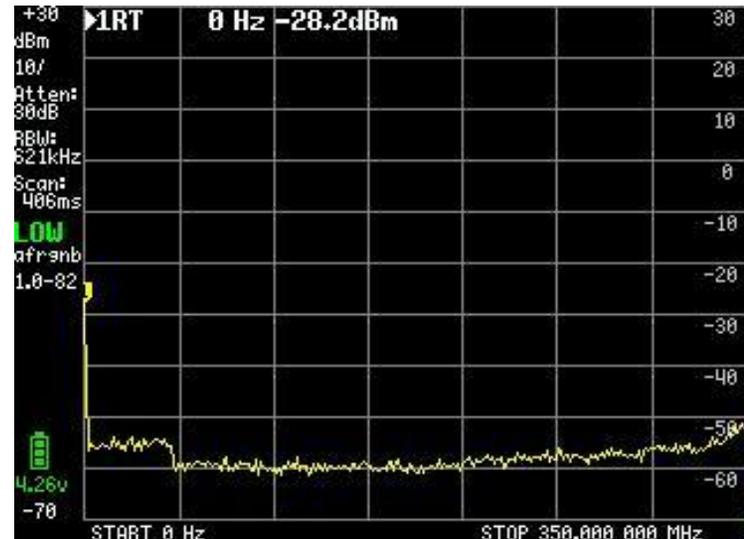


Figure 1: Uncalibrated output shows a "step"

As mentioned above, you need to first run a level calibration on the device, unless you do that, you will have steps in the output (all the screenshots were captured using the TinySA companion Windows application):

You can watch me do the self-test and the level calibration in this video.



I would love to test the output of a transceiver, but don't yet have the appropriate attenuators that can "take the heat", so I played around with picking up commercial radio stations. How that works (and how to configure frequency range) is in this second video.



The NanoVNA makes a great signal source for experiments, its signal level is however still too high for the TinySA to not overdrive its mixer, so I added two 12B attenuators. These can only take 2W, so are not "strong" enough for measuring transmitters. Figure 2 shows what my setup looks like.

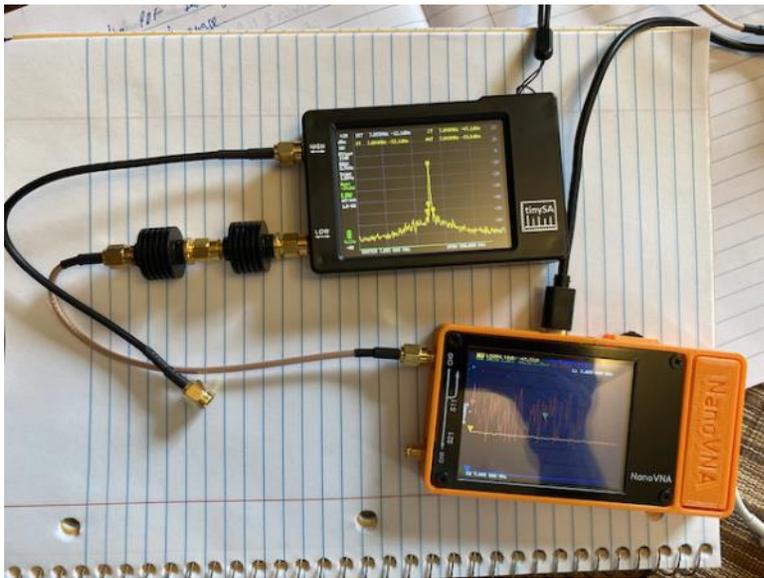


Figure 2: NanoVNA connected to TinySA

The CW signal from the NanoVNA looks like a nice signal, doesn't it? So how about expanding the frequency span that we look at. The TinySA has a mode to measure harmonics, once that is enabled, we get the output in Figure 3. It does not look that nice anymore...



Figure 3: Harmonic Measurement

There is a strong 3rd harmonic, and at the right edge of the screen, there is evidence of a strong 5th harmonic as well, so let's expand the frequency span a bit

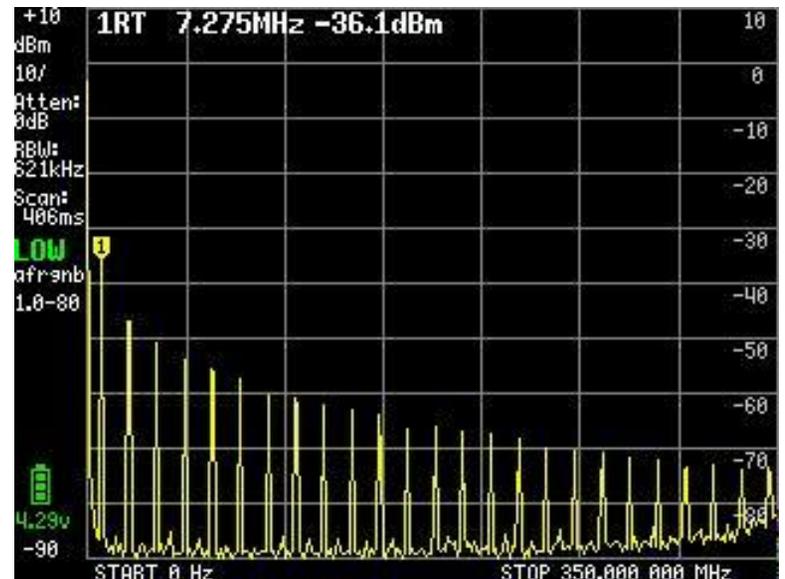


Figure 4: All harmonics

more. We now get the output in Figure 4.

Interesting... Based on Figure 3, the odd harmonics are strong, and we now see that they go on forever. That means that the NanoVNA is putting out a square wave.

And finally, here is a screenshot of the Windows application:

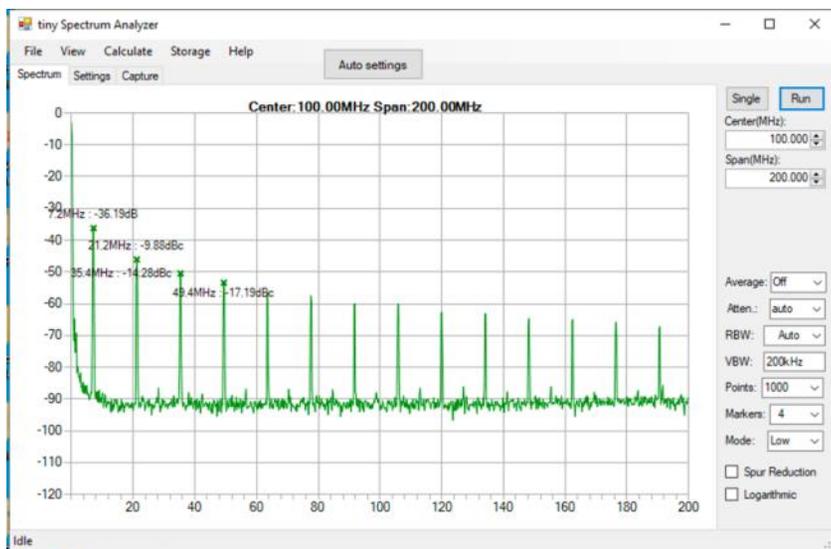


Figure 5: Windows software

The TinySA also makes a good signal generator: It can produce CW, AM and FM modulated signals on either the low or the high output.

This little (or tiny) spectrum analyzer is working quite well. Don't get me wrong, there is a good reason why you pay a lot more for a "full grown" spectrum analyzer. Erik has a page that lists the shortcomings of his design:

<https://tinysa.org/wiki/pmwiki.php?n=Main.Limitations>

The TinySA is a great addition to my toolbox. If you want one, Hugen's official store is on AliExpress or Alibaba, so you have to deal with ordering from China. The US based [RandL.com](https://www.randl.com) usually has the TinySA in stock, if they sell out, just watch their web site and jump on the next opportunity that comes up.

Can you use the TinySA to find out how dirty the signal from a Baofeng HT is? Stay tuned...



Courtesy December 1965 QST

## MY TOP 10 HAM RADIO ROOKIE MISTAKES (SO FAR)

DON VALLONE, KD2RE

We all make mistakes, sometimes more often than we care to admit! Some of you have been hams for so long that you probably can't remember (or don't care to remember) what it was like to be a newbie. I've only been licensed for a couple of years now, so my mistakes as an inexperienced ham are still all too painfully clear. I made so many mistakes during my first year as a licensed ham that I thought it might be fun to pass them along to our community for grins and giggles. And who knows - maybe there are still some rookies out there that might benefit from my embarrassment! So, here goes... This month's installment of my TOP 10 Ham Radio Rookie Mistakes! Can you relate to any of these?

### #7. Used Equipment

One of the best things about being a ham is attending the many hamfests every year (OK, let's assume we're talking about a "normal" year and not 2020). Seeing old friends, making new contacts, and having the opportunity to buy radio supplies and equipment at bargain prices can be almost intoxicating! But always beware of bargains that are being sold for a "friend" or a relative who couldn't

make it to the hamfest. This is the easiest way for someone to legitimately sell broken or non-functional equipment under the guise of ignorance. "This was my grandfather's equipment and I don't know much about it." So started off the conversation between myself and a flea market vendor at my first hamfest. I was looking for a power supply for my first HF rig. I needed a 30-Amp supply to be safe. The supply for sale was an older Yaesu with no specs on it, but it looked like it was decent quality. The seller said he believed it was a 30-Amp supply (recall that I had told him I was looking for a 30-Amp supply and had "rookie" written all over my face) and it worked fine as far as he knew (of course he couldn't test it because he "didn't know much about ham radio equipment"). And he couldn't guarantee it because it "wasn't his". He wanted \$40. I offered \$20 and should have been suspicious when he jumped at the offer like he had won a lottery. It turned out the supply did not work - but only because it was missing a fuse (a very rare type that was hard to find). But worse than that, my Elmer opened it up and declared that it didn't look like it was even as much as 3-Amps let alone 30! I ultimately found a brand new nicely priced "budget" power supply (Jetstream JTPS32MAB) for \$79 online. It's a switching supply (fine if you don't mind a tiny bit of background noise when it's running), 32-Amps, and has a nice Volt/Amp meter, a frequency shifter, and redundant power poles. I've been very happy with it and it didn't break the bank! It currently powers both my base station radios simultaneously.



#### #6. Antenna Masts

I have a long wire end-fed antenna over the house as my main HF antenna. It works fine (discounting the fact that polarization of the signal can't be changed and will limit some stations I can communicate with - but one thing at a time). I get fairly decent operation providing it is elevated far enough above the roof to avoid interference and wind damage from abrasion. To accomplish this, I use a tall mast mounted to each end of my roof with the wire suspended from insulators between them. Since my first attempt is always to use the cheapest and easiest solution (you're getting to know me know now, aren't you?), I imagined that PVC piping would make a great mast since it didn't need to support much weight in its sole purpose of elevating a single wire. I quickly designed two masts - each using three 5 foot PVC sections connected securely together by reinforced connectors with glue and screws and some eye hooks at the top to attach the insulator ends. It looked great and worked great. That is until a 10 mph breeze knocked the whole thing down as easily as a Category 3 hurricane. I discovered that PVC is way too flexible (especially the longer it is) and will bend in the slightest breeze until it pulls the wire away from the other mast, breaks the other mast entirely out of the reinforced connector, or breaks away entirely from the mount. In my case, all of the aforementioned maladies were observed within the first week of use. I learned to use only metal pipes for antenna masts. Aluminum is strong enough and lightweight enough for most simple applications like this. The irony is that I was able to find used aluminum conduit at a second-hand hardware shop for much less than I paid for the PVC at the big box hardware store! But even so, aluminum and even steel conduit is not

that much more expensive than the PVC - especially considering that you WILL BE replacing the PVC soon after installation!! Oh, and DON'T connect the insulator to the mast with BIODEGRADABLE cotton string! Apparently, we have acid rain that will dissolve it in a matter of weeks.



**BEFORE**  
10mph breeze



**AFTER**  
10mph breeze

## #5. Guy Wire

After I installed my roof antenna (multiple times), and finally had a solid and sustainable mast solution, I still had more high-altitude exercise and another important lesson to learn up on the roof. However, that lesson was a sneaky one that would not reveal itself until after the rainy season had ended. The summer sun now revealed to me that the once glimmering braided steel wire that protected my antenna from the gusty wind all winter long had now faded to a crusty, rusty brown mess that was literally crumbling into powder. One of the lines was already completely broken away from the ground and the other started giving way just by touching it. The tiny bit of strength remaining in the cable came only from the particles of rust that had not yet separated from one another but were suddenly transferred onto my fingers with my touch, and now the second guy line was crumbling into pieces with the first. I needed a guy line that would be as strong as steel but protected from the elements. Some poor ham many, many decades ago must have had the same problem and invented vinyl-coated steel wire for just such an application. Too bad I didn't spend a few extra dollars on this first! I planned my design, bought the necessary new hardware, and enjoyed one more trip onto the roof to fight the wind and the bees. Do yourself a favor and DO NOT EVER use bare steel wire for outdoor applications no matter how attractive the price is or how much you don't mind replacing it. It won't last six months in a moist climate!



TO BE CONTINUED...

Next Month: Coax, Digital Modes and Grounding Nightmares!

# THE XRX RADIO CLUB FOX HUNT SATURDAY, NOVEMBER 7

BOB KARZ, K2OID

The XRX Radio Club held our annual fall Fox Hunt Saturday, November 7th at Mendon Ponds Park with sunny warm weather (very unusual for November). Hunt masters Bob Karz (K2OID) and Ned Asam, (W2NED) planned a walking fox hunt to maintain social distancing and thus keep the hunt COVID-19 safe. The hunt began in Mendon Ponds park at the Canfield Rd. parking lot. There were three fox transmitters built by W2NED and Vince Burolla, W2VAB



Locations of the Three Fox Transmitters at Mendon Ponds Park

Brian Donovan, K2AS was the first to finish, finding all three foxes in about 1 hour 20 minutes. Second to finish was the Axmen team with Brian Duff WM2W, Brandon Knight K2BMK, and Yuan Miao AA2YA. This was their first fox hunt. They had some difficulty with their first fox, but after a few pointers, they found the last two foxes very quickly and finished in about 2 hours. We are all looking forward to the next hunt. Fox hunting is challenging and fun. We hope you can join us at the next one.



Fox hunt winner Brian Donovan (K2AS) tracking his first fox



Yuan Miao (AA2YA), Brandon Knight (K2BMK) and Brian Duff (WM2W) at their first fox hunt

## PROFESSOR'S PIC(K)S

JEFF SONSTEIN, KD2RRB

When Your 10-Year-Old(-Self) Is Bored

<https://www.thenmusa.org/wp-content/uploads/2020/10/2-Tiny-Tanks-Worksheet.pdf>

From the desk of LADY ADA

<https://www.youtube.com/watch?v=9XlwXvT19Rk>

Radio Spectrum Analysis in Virtual Reality

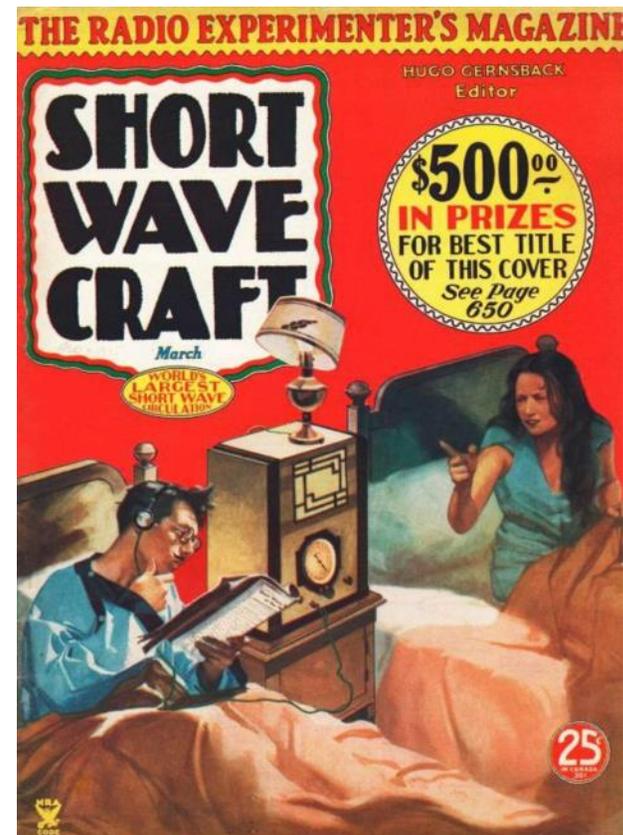
<https://www.rtl-sdr.com/radio-spectrum-analysis-in-virtual-reality-with-an-rtl-sdr-and-google-cardboard/>

A Visual Demonstration of the Power of Sound to Create Order out of Chaos

<https://twitter.com/schmittpaula/status/1326723264471818243>

Setting Up and Running a Freeware Version of Machinechat's "JEDI ONE" IoT Server Software

<https://www.youtube.com/watch?v=DNJABmMtqxU>



# NEW ON THE RARA WEBSITE

SCOTT THEIS, W2LW, WEBMASTER

We have a couple of new videos on the subject of getting started with CW from a recent presentation on November 12<sup>th</sup> setup by RXCWG and guests from the Long Island CW Club. More information on CW is available at:

<https://www.rochesterham.org/rxcwg.htm>

## Long Island CW Club

<https://www.youtube.com/watch?v=J3r8LDck-eI>

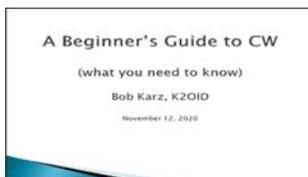
A short and informative presentation getting on the air for the first time by Howard Bernstein, WB2UZE and Jim Crites, W6JIM about overcoming the fear of the first QSO. The video starts a minute or so into the presentation. Running time is approximately 9 min.



## A Beginner's Guide to CW

<https://www.youtube.com/watch?v=JXMdCXZwlqA>

Bob Karz, K2OID, gives an excellent two-part exposé on getting started with CW and breaking down the components of a QSO. He provides a real-world view based on decades of experience and teaching new hams the art of CW. Running time approximately 30 min.



## Membership Database

I am happy to announce the problem with tallying membership points has been corrected. The problem was with a poorly structured SQL query (for all you computer geeks out there). Apparently, this problem had been festering for quite some time and became more apparent in recent months. If you are having an issue with your points tally, please email [membership@rochesterham.org](mailto:membership@rochesterham.org).

This brings me to a point of clarification of which every member should be aware. To access your membership information on the club site, you need your *name* and an *access code*. Note, this is NOT a password and the system does not treat that code with the same level of care and respect as a password. You may have noticed when you key your code in, it is not marked with \*\*\*\*\* or ••••• characters, another indication of it not being a password. Therefore, if you are using a common password for several internet sites (please don't) and it is the same as your *access code*, change both! This does not mean RARA's site has been compromised, it is simply good practice.

# RESULTS: 2020 PUMPKIN PATROL QSO PARTY

Ev TUPIS, W2EV

The PPQP was a unique event designed to support the volunteers who watched bridges on Halloween eve and night. The plan was to ask home stations to make contact with as many bridge-deployed stations as possible during the 9 o'clock hour on simplex frequencies. It was a qualified success that is certainly worthy of repeating next year, if possible!

It may startle many readers to see just how far you can communicate on VHF (146 MHz) and UHF (446 MHz) FM, even when one end of the contact is at a fairly low altitude (at the foot of a bridge).

Here are comments from some of the participants...

Ed, K1EM with 5 W into a magnetic mount antenna: Thank you for the idea and for all who played a part in making this whole event a success. I worked N2NAX and KA2ENE.

Steve, KA1CNF using a Yaesu FTM 300D, 50 Watts to a Diamond x50A at 30 ft: On Saturday I operated from home and could hear bridges 4, 8, 9 and 9a in Monroe county on the input to the net control repeater. I also heard KA2ENE, N2AX and KC2PCD, home stations on the simplex frequencies. I could hear all 9 bridges that Drumlins and SIARC were covering in Ontario county. Also cool to see how far your signal went and what you could hear.

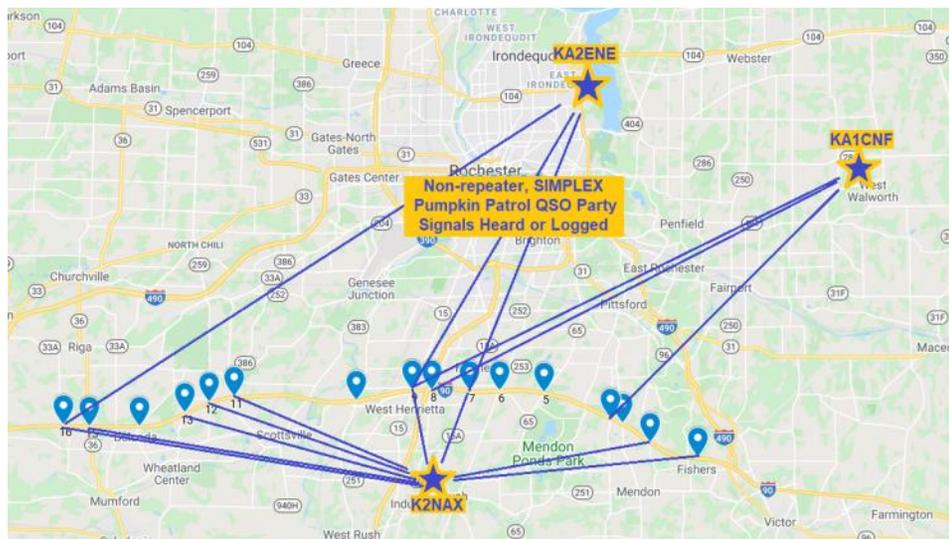
Jack, WA2CHV using a Kenwood TM-V71A at medium (10 Watts) power to a 19 inch mag-mount whip on the roof of my hatchback: I did talk to Harry, KA2ENE and Jim, K2NAX on 146.52 simplex from my station at Bridge #7 on the evening of the 31st.

Harry, KA2ENE: All contacts made with an Icom IC-9700 and Ringo Ranger antennas. 100 Watts on 146.52 with the bottom of the antenna at about 10 feet. 75 Watts on 446.00 with the bottom of the antenna at about 20 feet. Friday night 10/30/20, I worked KD2RAF Monroe Bridge 16 on 2 meters and K4GWA on Monroe Bridge 9 on 146.52 and 446.0 MHz on Monroe Bridge 9. Saturday night 10/31/20, I worked K4GWA on Monroe Bridge 9, KD2PQP on Monroe Bridge 16, and WA2CHV on Monroe Bridge 7 - all on 146.52 MHz.

Roger, W2RMB: I was stationed at Bridge 15 which is on Rte 36 between Churchville and Mumford. I was surprised that I made a simplex contact with K2SET at about 2115 on Friday night and K2NAX at about the same time on Saturday night. I think K2SET said he was in Livonia. The contacts were on 146.52. I could also talk with other Pumpkin Patrollers on the west side but could not hear anyone east of about bridge

8. Thanks for the fun. These were my first ever simplex VHF contacts. I was using my Yaesu 400 mobile rig.

Jim, K2NAX with a 50 W radio on a Cushcraft 270 vertical at 30': Bridge 1: NS2B, Bridge 2: W2JAT, Bridge 7: WA2CHV, Bridge 9: K4GWA, Bridge 11: WM2W, Bridge 12: KA2WNS, Bridge 13: K1EM, Bridge 15: W2RMB, Bridge 16: KD2RAF and KD2PQP.



The Rochester VHF Group would like to thank the Pumpkin Patrollers and Home stations that participated. We are thankful for both your volunteerism and for allowing us to coordinate this little "special treat" as you kept the "tricks" at-bay.

There is more fun on the way! The January VHF Contest is just around the corner. It will give us all another interesting opportunity to experience the excitement that comes with making contact with others on FM simplex.

## ROCHESTER VHF GROUP SATURDAY SESSION LEARNING LAB: SPIRAL VHF DIPOLE

Who: October 2020 QST Author John Portune (W6NBC)  
 What: Spirally Loaded Copper Tape and PVC Dipole Lab (build, or just watch!)  
 Where: Zoom  
 When: Saturday, December 19 at 11:00 AM  
 How: Watch the RARA email list for registration instruction

How many "HT Only", Emergency Communication, and "wish I had a better antenna" stations are out there? Plenty! Here's your opportunity to take a close look at a 2 meter FM antenna that is 40% of the size of a half-wave vertical but exhibits only 1dB less signal! Compare that to an HT "rubber duck" that shows a 6-10 dB REDUCTION in signal vs. a full size dipole.

Wouldn't it be nice to have something like that in your "go kit" or even easily mounted at your home? Or in your trunk for easy hookup to an HT when operating portable? Interested? Good!

Maybe you would like to "build along" with John? That can be done too! He has provided a list of items to gather beforehand. Maybe a few friends can team up to make a kit? Please attend if even just to observe and learn.



This is another great program brought to you by the Rochester VHF Group; a close affiliate and partner of RARA!

### Bill of Materials

Quan.	Item
3 ft. +	1¼ in. PVC SCH 40 pipe
1	1¼ in. PVC SCH 40 pipe end cap
8 ft.	1 in. x 1.5 mil copper tape, self-adhesive
2	Ring terminals, #8 lug.
1	Mini-8/RG-58 coax with connector one end
2	#8 x ¾ in. Stainless sheet metal screws and washers
	Small heat shrink tubing for coax ends
4 in	2 in. Heat shrink tubing or plastic electrical tape

### Tools

Quan.	Item
1	Drill motor with set of small bits and ¾ in. step drill
1	Antenna analyzer, VNA or transceiver with SWR bridge
1	Heat gun to shrink tubing
1	Screwdriver
1	Saw to cut tubing, if needed
	Extension cord(s) for power tools

# RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN

## 20 Years Ago, December 2000

Vice-President and Program Chairman Peter Fournia, W2SKY, wrote a longer than normal introduction to the next RARA meeting as both the location and content required additional discussion. First the location which was yet another joint gathering between RARA and one of the Kodak Amateur Radio Clubs, this time the KPARC and the Kodak Theater on the Ridge was the venue. Next, the program title (a long one) "Teaching Radio to 6<sup>th</sup> Graders, The Rochester Radio Coaches Program." This meeting shared information on RARA's Radio Coaches Program with all those attending and focused on members teaching electronics and communications to children in selected city schools. The coaches program had a ten-week instructional plan that was taught in the school classrooms. The Radio Coaches were proud of their accomplishments and looked forward to sharing their experiences and contributions with the community. In these pages we found Mark Hoffman, K2AXX, writing for the Rochester VHF Group, where he reported on the recently completed 2<sup>nd</sup> hosting of the Group's VHF Academy. Coordinated by Ev Tupis, W2EV, this weekend event brought local and far flung experts speaking on Moonbounce, Satellites, weak signal DXing, the use of transverters and other topics of VHF and beyond. Steve Kostro, N2CEI, founder of Down East Microwave was the keynote speaker. Tim Magee, WB2KAO, reported on the high rate of success of his crew and RARA's Licensing Classes. A guest this month was Alex, NV2Z, who briefed the students on what to expect as they finished their training sessions and headed for the next phase, the RARA Testing VEC Group. In his "China Clippings" column Ron Roach, W2FUI, continued his writings on Chinese Amateur Radio activity and news. A frequent visitor to BY land, Ron has befriended several of the few licensed amateurs in China and gets his information first hand. In his DX/Contesting report Ed Gable, K2MP, wrote to acknowledge and congratulate the RDXA for their 4<sup>th</sup> place finish, world-wide, in their 3A Field Day operation last June. Big DX news then was the KH5 group putting Kingman Reef and Palmyra on-the-air. We then heard again from Peter Fournia, W2SKY, as he wrote to announce the collaborative effort with RARA and the Rochester Museum and Science Center (RMSC) to provide a science fair activity scheduled for the week between Christmas and the New Year. The Radio Coaches were scheduled to be there and the RDXA set up a full HF station for on-air demos. Peter requested volunteers from local clubs to help out. Richard Goslee, K2VCZ, long term RARA Treasurer, wrote to thank those who, when renewing their memberships, also added a few tax deductible dollars to help RARA projects including Radio Coaches and the Buchan/Resch Scholarship Fund. There were no Silent Keys reported in this issue. From the Want Ads you could buy a 500 watt, 432 Mhz amplifier of the K2RIW design, from K2MP, with power supply, for \$275.00. Walker Tower, KA2RBW, offering tower and antenna work, was a commercial advertiser.



## the RARA RAG

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### December 1<sup>st</sup> Meeting Teaching Radio to 6<sup>th</sup> Graders (The Rochester Radio Coach Program)

By Peter Fournia, W2SKY

This month's topic is about teaching radio to 5<sup>th</sup> and 6<sup>th</sup> graders. The Rochester Radio Coaches will share their experiences gained from teaching students in the Rochester City Schools. This is a joint meeting with the Kodak Amateur Radio Club. We will meet at Kodak's Theater on the Ridge and start at 8:00 PM. Exhibits will be displayed prior to the meeting.

The coaches have a ten-week program that is taught in the classroom. To date, 4 of these have been delivered to 80 students. This has involved 2 different schools and 4 classrooms. Twelve different coaches have delivered segments in the classroom with 8 other hams involved with the field trips. Many additional hams and non-hams have supported the program through donations and special skills.

The Radio Coaches are proud of their achievement and have many stories to tell. About 8 coaches will participate in this presentation. It will give the audience a good feel for what they do and how they do it. Many of the electricity demonstrations that they use in the classroom will be described.

The Rochester Radio Coach Program has roots in Presidents' Bush and Clinton's 1998 "America's Promise, the Alliance for Youth". The ARRL designed and launched its Radio Coach program shortly after. The goals and methods that they use were derived from these programs. RARA sponsors this Radio Coach program drawing on volunteers in the ham radio community. The first class was pioneered in the spring of 1999.

This presentation will focus on what they do in the classroom and how they do it.

The meeting starts at 8:00 PM at Kodak's Theater on the Ridge, 200 Ridge Rd. West, located just one  
*continued on page 2*

### Thank You For Your Donation

Richard Goslee, K2VCZ

We would like to take this opportunity to thank the following people for their recent donations to RARA while they were paying their dues for 2000. Donations were received from:

Dorothy Dubert, Richard Schott, Eric Melenbacker, Roland St. Louis, Paul Reger, Frank Lisuzzo, Jack Tripp, Norm Turner, Rick Wells, Robert Knox, David Williams, Michael Vesco, William O'Donnell, Jonathan Arney, David Stanwix, Barry Blake, Nate Minosh, Charles Escriva, Jeanne Crone, Anthony Di Lettero, Donald Paters and Barry Quinn.

If anyone else would like to make a "TAX DEDUCTABLE" donation to RARA just check the appropriate box on your membership renewal and indicate the amount you are sending. If you have already paid your 2000 dues and would now like to make a donation you can send it to P.O. Box 93333, Rochester, NY 14692-8333.

Your donation may be made to RARA itself or you may specify that it be made to one of our two special projects. These are the "RADIO COACHES PROGRAM" or the "BUCHAN/RESCH SCHOLARSHIP FUND". The Radio Coaches program is an ongoing program where RARA members are teaching electronics and communications to children in selected city schools. The Buchan/Resch Scholarship Fund will be presenting scholarships to students going on to college. For additional information please contact the RARA Hotline at 442-0587.

Again many thanks for your help; we appreciate your support.

### RARA Meeting

December 1, 2000  
8:00 PM

Kodak's Theater On The Ridge  
200 Ridge Road West  
Teaching Radio To 6<sup>th</sup> Graders  
Presented by The Radio Coaches

Vice President and Program Chairman Don Drennan, W2EBF (sk), announced the December meeting to a joint meeting with the Kodak Park Amateur Radio Club on Ridge Road West. Don told readers that the program for the evening would be a pair of presenters consisting of Dick Dodd, WA2SDK and Jim Schueckler, WB2YZL, speaking on microprocessors in the hamshack. Their planned demonstrations included CW sending and receiving, station logging and slow scan television. A very nice article appeared, author still unknown some 40 years later, announcing the formation of a new radio company in Rochester called Sideband Technology, Inc. SBI's product was introduced to solve an increasing problem of overcrowding and lack of frequencies available for commercial and military communications. Their innovation was called Amplitude Compandored Sideband (ACSB) and took much less bandwidth than a normal voice channel and could coexist with current AM or FM users. RARA President Otto Bluntzer, WB2RJB (sk) wrote asking for nominations for the 1981 Amateur of the Year award. The selection committee consisted of Bud Young, WA2UGE (sk), Chuck Brelsford K2WW (sk) and George Walker N2BIR (sk). John Yells, N2JY, Contest Chairman for the Rochester VHF Group, wrote urging everyone with VHF/UHF capability to get on the January ARRL VHF Contest. After four years of capturing 2<sup>nd</sup> place to the PackRats club and each year getting closer and closer in score, John says our higher number of logs submitted, with just a few more points in each log, will put the Group'ers over the top. This must have been some form of unofficial "joint meeting month" as Frank Cannon N2AFP, wrote to tell the Rochester Radio Repeater Association (RRRA) and the Rochester VHF Group would hold a joint meeting with two programs; the repeater gang presenting "The Care and Feeding of Batteries" while the Group'ers rallied around the annual "Beat the Packrats" theme. And not to be outdone, Rick Berg WA2RLQ (sk), told of the RDXA

plan, at their December 16<sup>th</sup> after dinner meeting at the Colonial Hotel, to be the introduction and voting on their new club constitution. Also scheduled was the

announcement by Jeff Ach W2HPF, of the club score from the just completed CQWW Phone contest. Jeff promised contesters nation-wide were in for a surprise. Stay tuned! You still had time to put in an order for any of three types of RARA Jackets by contacting Gil Chapin WB2UTI (sk). These were great, long lasting jackets (I still have mine – Ed) and were seen everywhere. Finding a fellow RARA member at Dayton was easy, just look for the green and yellow. Co-authored by Warren Ulrick N2AUV and Steve Shideler WA2JPF, was a long article telling the story of local activity on ten meters during sun spot minimums. The outcome was the formation of the Flour City Net, meeting on 28.725 Mhz. At their peak the local net had 650 members in all states except North Dakota. With regret it was announced that a real Rochester old timer, Elmer Grabb W2DOD, was a Silent Key. Elmer was known throughout the local broadcasting community having worked at WHAM, WHAM-TV, WROC-TV, WHEC-TV, WORK-TV and WXXI. He was RARA President in 1940 and was a Charter member and co-founder of the RDXA. He was a DX'er with 358 confirmed when there were far less than that on the DXCC list! His DXCC status put him at 70<sup>th</sup> place world-wide. From the Want Ads you could buy 68' of coax from Irv Goodman, AF2K. There was an interesting commercial advertisement from the Heathkit Electronic Center on Jefferson Road that boldly said "We Sell More Than Heathkits" and went on to list Cushcraft, Hustler, MFJ Alliance, W2AU Traps and more.

# The RARA RAG

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## ANOTHER RADIO COMPANY FORMED IN ROCHESTER

In the past several years, several radio companies have been formed in Rochester which have grown and prospered. Perhaps best known are, RF Communications, now a division of Harris Corporation, and Scientific Radio Systems.

Another radio company has now been formed in our city. The new company, Sideband Technology, Inc., located at 3000 South Winton is owned by a group of people who have excellent backgrounds in the radio field and who are mostly amateur radio operators. They are: Niles Barlow, *President*, K2HJQ; Paul Jacobs, *Vice-President/Engineering*, W2IOG; Steven Beeferman, *Vice-President/Business Development*, K2VWI; and Harold Davis, *Vice-President/Marketing*, (no call–yet).

STI has a solution to the a major radio problem. Today both UHF and VHF frequencies are jammed with users. Almost every available channel is overloaded. Private and public land mobile frequency applications – including two-way mobile telephone and one-way paging systems – have more than doubled in the last decade, and are expected to double again by 1990, and again by the year 2000.

And how is this growing demand to be answered?

The brightest solution on the horizon is ACSB – Amplitude Compandored Sideband – a state-of-the-art, human engineered advance in single sideband technology that functions exactly like FM – but takes only one-fifth of the spectrum space! Potentially, ACSB can make five times as many channels available for land mobile radio. More important, ACSB can coexist and be incorporated within existing AM and FM systems – today! Hundreds more clear channels can be made available – without interfering with present AM or FM users.

SIDEBAND TECHNOLOGY, INC. (STI) was founded to develop and manufacture ACSB

(Continued on page 2)

## COMBINED RaRa/KPARC MEETING DECEMBER 5th at KODAK PARK RECREATION CENTER

D. H. Drennan, Vice-President RaRa

The December 5th RaRa meeting will be held at Kodak Park Recreation Center, Building 28, on Ridge Road West. We will be guests of the Kodak Park Amateur Radio Club and the Kodak Park Computer Club.

The podium will be shared by Richard (Dick) E. Dodd, WA2SDK, and Jim Schueckler, WB2YZL. Dick will tell us how microprocessors can be applied in the ham shack. A demonstration of receiving and sending C.W., logging and other uses is planned. Jim's talk and demonstration will be on "Microprocessors for Slow Scan Television (SSTV)". "Live" homebrew equipment will demonstrate the flexibility, capability, and speed of a microprocessor controlled SSTV system. Noise filtering, image enhancement, and many special effects will be shown.

Park in the Kodak parking lot #11 directly across Ridge Road West in front of Building 28. If by chance it is full, drive east about 200 feet to the next light, then right into Primrose Street and almost immediately left into the Kodak Park parking lot #17. Enter the main entrance or Building 28 into the lobby, take elevator or stairs to the 1st basement and Camera Club theater.

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## VALENTINES DAY DINNER-DANCE

Tickets are available from "Lee" VanGrol, WA2YEK, who can be reached during reasonable hours at 889-2536. The cocktail hour begins at 6:30 p.m., with dinner promptly served at 7:30 p.m. Tickets for the evening event are \$10.00 for Chicken and \$12.00 for Steak per person excluding cocktails at the cash bar. See the article in the November *Rag* for other details. Just remember how much soft soap you needed after last years contest effort. RaRa presents the ideal opportunity for you, and on exactly February 14th. See you at the Party House?

# VE TEAM

## Testing on Saturday December 19th

At a **NEW LOCATION**  
 Damascus Shriners  
 979 Bay Rd, Webster, NY 14580  
 With COVID Restrictions  
 Please Read Carefully!

A **COVID Questionnaire**  
 Must be Filled Out Either On-site or  
 Prior to Attending

Online Preregistration is required  
 The session size is limited to 20

Click to register:

<https://ham.study/sessions/5fbbfa8d10802c56a17b5141/1>

Applicants must supply their own PPE  
 (Mask is a minimum), pen, pencil, calculator and  
 be COVID negative and symptom free

Testing begins at 10:00AM.  
 Testing is free!

### CW ELMERS

Name	Call	Area	Email
Ned Asam	W2NED	Pittsford	<a href="mailto:w2ned@frontiernet.net">w2ned@frontiernet.net</a>
Tim Brown	WB2PAY	Ogden	<a href="mailto:tjbrown@rochester.rr.com">tjbrown@rochester.rr.com</a>
Pete Fournia	W2SKY	Penfield	<a href="mailto:pfournia@gmail.com">pfournia@gmail.com</a>
Bill Hopkins	AA2YV	Brighton	<a href="mailto:whopkin4@naz.edu">whopkin4@naz.edu</a>
Bob Karz	K2OID	Webster	<a href="mailto:rkarz@rochester.rr.com">rkarz@rochester.rr.com</a>
Joe Rowe	AG2Y	Webster	<a href="mailto:ag2y@rochester.rr.com">ag2y@rochester.rr.com</a>
Harry Williams	KF2TV	Webster	<a href="mailto:harryw7872@gmail.com">harryw7872@gmail.com</a>

### LICENSE TEST RESULTS

<b>Josh Judge</b>	KD2VBW	T	<b>Edward Kelty</b>	KD2VBX	T
John Allen	KD2TML	E	<b>Brennen Talley</b>	KD2VBY	T
Susan Aiello	W2SBA	G	<b>Ryan Armstrong</b>	KD2VBZ	T
<b>Roberto Chavez Torres</b>	KD2VCA	T	<b>Matthew Hutchins</b>	KD2VCB	T
<b>Jeffery loele</b>	KD2VCC	T	<b>Scott Minney</b>	KD2VCE	T
<b>John Mullen</b>	KD2VCF	T	<b>Roger O'Toole</b>	KD2VCG	T
<b>Michael Kennerknecht</b>	KD2VCD	T			

New licensees names are in **BOLD**

Next Testing Session  
 Saturday December 19, 2020

### RADIO ELMERS

Name	Call	Area	Email
Tim Brown	WB2PAY	Ogden	<a href="mailto:tjbrown@rochester.rr.com">tjbrown@rochester.rr.com</a>
Dave Carlson	N2OA	Batavia	<a href="mailto:kdcarloso@gmail.com">kdcarloso@gmail.com</a>
Lawrence Hill	N2AJX	Henrietta	<a href="mailto:lawrence.hill@rit.edu">lawrence.hill@rit.edu</a>
Bill Kasperkoski	WB2SXY	Pittsford	<a href="mailto:wb2sxy@gmail.com">wb2sxy@gmail.com</a>
Don Kiser	AC2EV	N Greece	<a href="mailto:dkiser100@gmail.com">dkiser100@gmail.com</a>
Karl Heinz Kremer	K5KHK	Chili	<a href="mailto:k5khk@khk.net">k5khk@khk.net</a>
Tim Magee	WB2KAO	Greece	585-704-5747
Peter Schuch	WB2UAQ	Perinton	<a href="mailto:pschuch@rochester.rr.com">pschuch@rochester.rr.com</a>
Forest Shick	WA2MZG	Webster	<a href="mailto:fshick3@gmail.com">fshick3@gmail.com</a>
Dave Timmons	W2DST	N Greece	<a href="mailto:dstimmons@gmail.com">dstimmons@gmail.com</a>
Dan Waterstraat	W2DEW	Henrietta	<a href="mailto:higreen@rochester.rr.com">higreen@rochester.rr.com</a>

# RARA CALENDAR

TIM BARRETT, K9VB, MEMBERSHIP SECRETARY

December 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		<b>1</b> Phone Fray QRP Foxhunt RTTYOPS Weeksprint	<b>2</b> RaRa Monthly Mtg ONLINE 7pm ROC City Net 3.810 MHz, 7 pm CWOps Mini-CWT Test QRP ARCI Top Band Sprint VHF/UHF FT8 Activity Contest	<b>3</b> RaRa BoD 6:30pm ONLINE ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NRAU 10M Activity Contest SKCC Sprint Europe NCCC RTTY Sprint NCCC Sprint QRP Foxhunt	<b>4</b>	<b>5</b> ARRL 160M Contest UFT Contest Wake-up1 QRP Sprint Ukraine DX Contest PRO CW Contest RTTYOps Weekend Sprint FT Roundup
<b>6</b> ARRL 160M Contest UFT Contest Ukraine DX Contest PRO CW Contest FT Roundup K1USN Slow Speed Test	<b>7</b> AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SSB WW SSB Activity Contest ARS Spartan Sprint	<b>8</b> Phone Fray QRP Foxhunt RTTYOPS Weeksprint NAQCC CW Sprint	<b>9</b> ROC City Net 3.810 MHz, 7 pm CWOps Mini-CWT Test VHF/UHF FT8 Activity Contest	<b>10</b> ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB RTTYOPS Weeksprint NCCC RTTY Sprint NCCC Sprint QRP Foxhunt	<b>11</b>	<b>12</b> PODXS 070 Low Band Sprint ARRL 10M Contest TRC Digi Contest SKCC Weekend Sprintathon RTTYOps Weekend Sprint International Naval Contest
<b>13</b> PODXS 070 Low Band Sprint ARRL 10M Contest TRC Digi Contest SKCC Weekend Sprintathon International Naval Contest QRP ARCI Homebrew Sprint K1USN Slow Speed Test	<b>14</b> AWA Net 145.110 MHz, 7pm VHF Grp Net 144.260 SSB WW SSB Activity Contest	<b>15</b> Phone Fray QRP Foxhunt RTTYOPS Weeksprint NAQCC CW Sprint	<b>16</b> ROC City Net 3.810 MHz, 7 pm CWOps Mini-CWT Test	<b>17</b> ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NCC RTTY Sprint NCCC Sprint QRP Foxhunt	<b>18</b> AGB Party Contest Russian 160M Contest OK DX RTTY Contest RAC Winter Contest Feld Hell Sprint	<b>19</b> Croatian CW Contest OK DX RTTY Contest RAC Winter Contest Feld Hell Sprint
<b>20</b> Croatian CW Contest ARRL Rookie Roundup Run for the Bacon QRP Contest K1USN Slow Speed Test	<b>21</b> AWA Net 145.110 MHz, 7pm VHF Grp Net 144.260 SSB WW SSB Activity Contest	<b>22</b> RTTYOPS Weeksprint Phone Fray SKCC Sprint	<b>23</b> ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test	<b>24</b> ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB RTTYOPS Weeksprint NCCC RTTY Sprint	<b>25</b> Gedebage CW Contest	<b>26</b> DARC Christmas Contest Stew Perry Top Band Challenge RTTYOps Weekend Sprint RAEM Contest
<b>27</b> Stew Perry Top Band Challenge K1USN Slow Speed Test	<b>28</b> AWA Net 145.110 MHz, 7pm VHF Grp Net 144.260 SSB WW SSB Activity Contest QCX Challenge	<b>29</b> RTTYOPS Weeksprint Phone Fray SKCC Sprint	<b>30</b> ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test	<b>31</b> ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB Bogor Old and New Contest RTTYOPS Weeksprint		

# NEWS FROM AREA CLUBS

## MONROE COUNTY ARES / RACES NEWS

Monroe County Amateur Radio Emergency Service (ARES)® is an amateur radio public service organization based in Monroe County, New York, and is open to all licensed amateur radio operators. Monroe County Radio Amateur Civil Emergency Service (RACES) is a program of the Monroe County Office of Emergency Management. We participate in training and emergency exercises so that we can serve other agencies during times of communication failure.



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

On even numbered months the meetings are held at the Monroe County EOC, 1190 Scottsville Rd. (Media Room, 2nd floor, north end). On odd numbered months we meet at the Red Cross, 825 John St.. W Henrietta. at 6:00 PM. Please check our website for any schedule changes.

If the doors are locked, call WB2EOC on the 146.61 MHz (-) 110.9 Hz PL repeater.

Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 PM, on the N2MPE 146.61 MHz (-) 110.9 Hz PL and 444.45 (+) 110.9 Hz PL repeaters. Our club callsign is WB2EOC.

There is no net on nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: [www.monroecountymcomm.org](http://www.monroecountymcomm.org)

Facebook : Monroe County Amateur Radio Emergency Service, Inc.

Twitter @MCARESNY

**Severe Weather Alerts:** Winter may bring severe weather in the form of heavy snow storms, strong winds, and flooding. If you experience severe weather, 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. Have each check-in station give you a situational awareness report and emergency power report. 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). We encourage all amateur radio operators to take a free Skywarn TM class offered by the National Weather Service. The schedule of classes can be found at <https://www.weather.gov/buf/skywarn>

Monroe County ARES  
Ralph Dutcher, Net Control - [KD2BDZ@arrl.net](mailto:KD2BDZ@arrl.net)

## ROCHESTER DX ASSOCIATION, RDXA

There is no Zoom meeting for December.

The next RDXA Zoom meeting will be held on Tuesday 19 January, 2021



For additional information on upcoming meetings and events, please, Check [rdxa.com](http://rdxa.com) for details

## ROCHESTER RADIO REPEATER ASSOCIATION

The Rochester Radio Repeater Association, RRRRA will not be having it's regular meeting on December 18th due to the Pittsford Town Hall's meeting room being closed.

Stay tuned to our web site, [www.k2rra.org](http://www.k2rra.org) for current information on whether our meeting place will be available.

The elected RRRRA officers for 2019 - 2020 are, Bob Shewell, N2HJD, President, Bob ODell, N2BZX, Vice President, Ed Wilkonski, KC2WM Secretary, and Bob Smith, NS2B-Treasurer / Membership Chairman. RRRRA also accepts donations to the club. If you are not currently a member and want to support RRRRA, you can join at our monthly meeting or on our web site [www.k2rra.org](http://www.k2rra.org)

## XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club meets the 2nd Thursday of each month. The meetings are 6PM at the Webster Recreation Center. Look for details on our website <http://xarc.us>

## ROCHESTER VHF GROUP

You are invited to join us on-line & on-the-air! We're here to help you to use the license that you worked so hard to get.



Check out what we do by visiting our website at <http://RVHFG.org> to start.

Join our e-mail group by sending a message to [RVHFG+subscribe@groups.io](mailto:RVHFG+subscribe@groups.io).

Join our weekly on-the-air nets on SSB:  
2 meter band - Monday 9 PM 144.260 USB  
6 meter band - Thursday 9 PM 50.200 USB

No VHF SSB radio (yet) to join the nets?  
Log-in to Echolink ka2ene-L #23426

We can help to answer the question, "What radio should I buy?" Here's a list of HF+++ radios, those with the HF bands and at least three VHF bands, giving you access to all sorts of VHF fun. Research each one to see which serves you best. Ask questions on our email list. We're here to help!

Yaesu FT-100D	Yaesu FT-817	Yaesu FT-818
Yaesu FT-847	Yaesu FT-857	Yaesu FT-897
Icom IC-706MKIIG	Icom IC-7000	Icom IC-7100
Icom IC-9100	Kenwood TS-2000	

Some are older models and some are newer models, but all provide access to the 6 meter, 2 meter, and 70 centimeter bands using both traditional FM and the exciting narrow-band SSB mode that supports unexpectedly long-distance (100's of km's routinely and 1,000's of km occasionally) VHF communication. These are good all-around radios no matter what club you end up affiliating with later. We hope its us.

## AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER, ARAST

ARAST meets the third Thursday of every month at the Town and Country Fire Department on Gardner Rd in Horseheads New York. Chemung County ARES (CCARES) meets the first Tuesday of the month except February on Harris Hill, next to the National Soaring Museum. See <http://www.ccares.info> for details. CCARES serves the entire area in Chemung, Schuyler and Steuben counties and all are welcome.

Our new website is up and running, although future enhancements are still planned. Check it out at <http://www.arast.info>.

Both CCARES and ARAST monthly meetings will be held online until further notice. Check out the Upcoming Events on [arast.info](http://www.arast.info) for particulars.

Our 2020 Hamfest, which was scheduled to be held this year on September 26, 2020 at the Chemung County Fairgrounds in Horseheads, New York, has been cancelled because we are unable to meet the strict requirements of the state and county and still make it a viable event.

Anyone who currently holds a ticket may obtain a reimbursement by mailing a stamped self-addressed envelope to ARAST, P.O. Box 614, Horseheads, NY 14845-0614. (Make a photocopy for your records.) Alternatively, you can use this year's ticket at next year's hamfest, scheduled for September 25, 2021, or consider it as a donation.

We regret that the 2020 Guthrie Wineglass Marathon in the Corning area could not take place as a "live" event. Hopefully, in 2021, things will be back to normal, and we will again be looking for extra communicators to join us.

Don't forget to check out our repeaters when you visit the area. N3AQ 147.36(+) and the W2ZJ 146.70(-) are the principal 2-meter repeaters. The latter can also be accessed via Echolink node 574415 with the call sign KD2QND-R. A full list of repeaters that can be heard in the Twin Tiers area surrounding Chemung County can be found at [http://www.arast.info/arast\\_website/public/repeaters.php](http://www.arast.info/arast_website/public/repeaters.php).

## COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7PM. Each meeting has a brief training/refresher period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9PM (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30PM on 147.285+. We'd love to hear you check-in!

## DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communication modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have members using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and publicly accessible DSTAR hotspots, Yaesu System Fusion systems on non-club repeaters and DMR systems through repeaters and personal hotspots. DCAP members meet for breakfast at 7AM nearly every Saturday morning at Rikki's Family Restaurant in the village of Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715MHz with a PL tone of 110.9Hz.

## DRUMLINS AMATEUR RADIO CLUB

The Drumlins Amateur Radio Club meets every third Wednesday of the month at 7:30 PM at the Wayne County EMO/Sheriff's Office 7376 State Hwy 31 #1000, Lyons, NY 14489. Doors open at 7 pm, meeting starts at 7:30 pm. Announcements will be made on the 146.685 repeater. The Drumlins ARC website address is <http://drumlinsarc.us/>

## KEUKA LAKE AMATEUR RADIO ASSOCIATION, KLARA

The purpose of our association is to:

- promote interest in Amateur Radio communication and advancement of the radio art.
- conduct programs, training, and exercises that enhance the skills of the members, and educate the community.
- develop ties with other services and establish relationships with community organizations.
- provide emergency communication services.
- promote enjoyable Amateur Radio related events.

The association was incorporated in 1991 and has been a vibrant part of the community ever since. We have a very active VE testing program. We also participate in numerous public events (the Wineglass Marathon and the Wine Country Classic Boat Regatta are two of the largest).

The Keuka Lake Amateur Radio Club isn't having in-person meetings we are staying in touch on the radio. Just as a reminder we have our 2 meter net every Sunday evening at 8pm on the KLARA Repeater System 145.190 or 147.330 or 147.045 all are PL110.9 and Echolink. You do not need to be a member to join us. We also have a 75 meter net Monday - Friday at 8:30am is check in and 8:45 net starts. 3.896 is the frequency. It's a round table style net. We also use NetLogger so look for us. Sunday mornings at 9am we have the same 75m net with frequency 3.890-3.896. The net is growing so please join in.

## ORLEANS COUNTY AMATEUR RADIO CLUB

The Orleans County ARC meets every 2<sup>nd</sup> Monday of the month at the Orleans County Emergency Operations Center, 14064 West County House Road, Albion, NY 14411. Doors open at 6:00PM, meeting starts at 7:30PM. Anyone with an interest in amateur radio is welcome. Program topics vary from month to month.

The club has an open two meter net every Tuesday night at 9:00PM local time on the club repeater, WA2DQL/R (145.27 -600KHz offset, 141.3 tone). Everyone is welcome to check in.

See the club website <http://ocarc.us> or contact club Secretary Ron Craig, N5BNO for more information.

## 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. We have License Exam Testing every other month which begins at 6:30PM. There will not be testing in December. The meeting for Wednesday, December 9th will be inside. There will be social distancing and Masks MUST BE WORN!!!. (Due to Covid 19 upswing the meeting may be canceled, check the SIARC website for updates)

## THE AMATEUR'S CODE

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

### THE RADIO AMATEUR IS:

- |                    |  |
|--------------------|--|
| <b>CONSIDERATE</b> | Never knowingly operating in such a way as to lessen the pleasure of others.   |
| <b>LOYAL</b>       | 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.            |
| <b>PROGRESSIVE</b> | With knowledge abreast of science, a well built and efficient station and operation beyond reproach.   |
| <b>FRIENDLY</b>    | 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. |
| <b>BALANCED</b>    | Radio is an avocation, never interfering with duties owed to family, job, school or community.   |
| <b>PATRIOTIC</b>   | With station and skill always ready for service to country and community.  |

SIARC is also holding a Health and Welfare NET Monday through Friday each week at 2000 hours on the SIARC 146.820 repeater (located in Canandaigua, NY), Tone 110.9. This net is to pass along general information and keep hams in touch. All hams are invited to participate

## INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Visit our website at <http://www.interlockroc.org/>, contact us at [info@interlockroc.org](mailto:info@interlockroc.org), or find us in #interlock on Freenode IRC.

## ROCHESTER MAKERSPACE

For more information visit <https://www.makerspacerochester.org/hamradio>

## GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email [n3dsp@lafireline.net](mailto:n3dsp@lafireline.net) for details.

## ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

For more information visit <http://www.rochesterastronomy.org/>

## ITEMS TO GIVE AWAY

Contact: Don Kiser, AC2EV, 585-613-1035

Diamond K400 3/8 Mobile Antenna Mount



LDG 4:1 Balun



BuxComm sound card interface  
DIN is wired for ICOM radio



20/40M Parallel Dipole with Balun



# RARA OFFICERS, DIRECTORS AND COORDINATORS

## OFFICERS

<b>President:</b> Tim Barrett, K9VB	(646) 496-5015	<a href="mailto:president@rochesterham.org">president@rochesterham.org</a>	<b>Treasurer:</b> Mike Moore, KC2NM	(585) 721-0011	<a href="mailto:treasurer@rochesterham.org">treasurer@rochesterham.org</a>
<b>Vice-President:</b> Brian O'Connor, KA2CGB	(585) 721-2346	<a href="mailto:vicepresident@rochesterham.org">vicepresident@rochesterham.org</a>	<b>Secretary:</b> Karl Heinz Kremer, K5KHK	(585) 210-0840	<a href="mailto:secretary@rochesterham.org">secretary@rochesterham.org</a>

## DIRECTORS

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## ACTIVITY COORDINATORS

<b>Club Historian</b>	Ed Gable, K2MP	<a href="mailto:egable@rochester.rr.com">egable@rochester.rr.com</a>	<b>Public Service</b>	Mike Moore, KC2NM	<a href="mailto:publicservice@rochesterham.org">publicservice@rochesterham.org</a>
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			<b>Webmaster</b>	Scott Theis, W2LW	<a href="mailto:webmaster@rochesterham.org">webmaster@rochesterham.org</a>

## ROCHESTER AREA RADIO CLUB CONTACTS

### Antique Wireless Association (AWA)

Lynn Bisha, W2BSN: [lbisha@rochester.rr.com](mailto:lbisha@rochester.rr.com)

### Amateur Radio Association of the Southern Tier (ARAST)

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### Astronomy Section Rochester Academy of Science

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### Community Amateur Radio Club (CARC)

Joe Gangi, AC2NB: [ac2nb.carc@gmail.com](mailto:ac2nb.carc@gmail.com)

### Digital Communications Association of Perinton (DCAP)

Gary Skuse, KA1NJL: [ka1njl@arri.net](mailto:ka1njl@arri.net)

### Drumlins Amateur Radio Club Ltd. (DARC)

[drumlinsarc@gmail.com](mailto:drumlinsarc@gmail.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)

### Keuka Lake Amateur Radio Association (KLARA)

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### Monroe County ARES / RACES

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### Orleans County Amateur Radio Club (OCARC)

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### Rochester Amateur Radio Association (RARA)

Tim Guyot, KB1POP: [timguyot@gmail.com](mailto:timguyot@gmail.com)

### Rochester Institute of Technology ARC

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### ROC City Net

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### Rochester DX Association (RDXA)

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### Rochester Makerspace

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### Rochester Radio Repeater Association (RRRA)

Bob Shewell, N2HJD: [bshewell@frontiernet.net](mailto:bshewell@frontiernet.net)

### Rochester VHF Group (RVHFG)

Ev Tupis, W2EV: [w2ev@yahoo.com](mailto:w2ev@yahoo.com)

### Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR: [sbenton2@rochester.rr.com](mailto:sbenton2@rochester.rr.com)

### XRX Amateur Radio Club

Brian Donovan, K2AS: [k2as@outlook.com](mailto:k2as@outlook.com)

## JANUARY RAG DEADLINE DECEMBER 15, 2020

RARA MEETS AT 7PM ON THE FIRST  
**WEDNESDAY** OF EACH MONTH.  
JOIN US ON-LINE AT:

<https://attendee.gotowebinar.com/register/830629768745514509>

CONTACT [WEBMASTER@ROCHESTERHAM.ORG](mailto:WEBMASTER@ROCHESTERHAM.ORG) FOR SUPPORT

## Rochester Area Repeater Listing

### THE RARA RAG

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