



THE RARA RAG

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

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WHAT MAKES A SUCCESSFUL AMATEUR RADIO OPERATOR ONLINE MEETING AND PRESENTATION

BRIAN O'CONNOR, KA2CGB, RARA VICE PRESIDENT

Please join us for our monthly membership meeting on Wednesday, 3 February at 7:00PM ET.

Amateur Radio is a broad hobby, ranging from theory to design, experiments to construction, power supplies to antennas, and casual QSOs to contesting. Moreover, it's learning. Elmers are our guides, our mentors, and our teachers.

This month's presentation is What Makes A Successful Amateur Radio Operator, by Eric Guth, 4Z1UG.

Since 2014, Eric has been interviewing Amateur Radio operators for his weekly podcast. "QSO Today is about the international hobby of amateur radio also known as ham radio. Every week, I interview a 'ham' to hear their amateur radio story and what they are doing now." Eric continues to collect the direct experience of amateur radio Elmers in what may well be the largest oral history project in Amateur Radio.

With more than 335 podcasts thus far, Eric's experience as an interviewer permits his guests to tell their story with minimal intervention. The focus is on the guest, their interests, and what has made them successful people as well as amateurs.

Eric was first licensed in 1973. He has formal training in electronics, worked as a marine radio technician, owned a two-way radio repair shop as well as electronics design and manufacturing companies.

After a stint as an operations director for a mid-sized cable television company, Eric and XYL, Karen, moved to Israel, in 2000, to start the next chapter of their lives. Karen teaches English as a second language, and Eric is an IT consultant. They have two sons and 6 grandchildren in Israel.

Last year, in response to the pandemic's disruptions to hamfests worldwide, Eric organized the first QSO Today Virtual Ham Expo. Over the weekend of 8-9 August, the Virtual Ham Expo had over 16 000 online visitors. The next Virtual Ham Expo will be held 13-14 March, and is promised to be better and bigger. (For details visit <https://www.qsotodayhamexpo.com>.)

With over 300 ham radio elmers or mentors, Eric will share what he has learned from them – to not only be successful, but to enjoy amateur radio – no matter what your level or station size.

To register for the meeting, visit https://rochesterham.org/club_meetings.htm. Please arrive a little early to ensure you are completely set up. See you then.



BOARDZ BUZZ

TIM BARRETT, K9VB, RARA PRESIDENT

As I write this, the sun is showing no sunspots after an encouraging display earlier in the month. That means little solar wind and less ionosphere to reflect our signals, so propagation is not what it was a few weeks ago. But this is early in Cycle 25 and these random short-term changes are normal, we can look forward to increased solar activity and excellent radio propagation in the months to come. If you are interested in monitoring the new cycle as it progresses, one way is to set up some routine checks that you perform regularly at fixed times. For example, Tim Brown, WB2PAY recently mentioned he uses the 5, 10, 15, and 20 MHz WWV signals as beacons to determine the maximum useable frequency (MUF). I have been listening to the beacons on 14.100 MHz to see which paths are open on 20 meters and noting down what I hear.

Covid is still upon us unfortunately, hopefully the roll-out of vaccines will speed up and we can start to get back to normal. But right now, we all need to take care and stay safe. I know that some of our members are suffering under covid right now and our thoughts and prayers go out to them.

Sadly, covid has led to Dayton 2021 being cancelled because there are so many facets in organizing what is an international as well as national event. But our Hamfest is still on for June this year, we will be taking all the precautions we can to make that a safe and successful event. I'm looking forward to being able to see some of you in person!

Despite all the challenges, the club is continually active. Our membership stands at a healthy 481 as I write this with many new members. We have Tech and General classes under way and testing has resumed. The RARA academy had a presentation in January given by Forest Shick, WA2MZG, by the time you read this the slides should be on [the academy page of our website](#) if you missed it. I'd like to thank all our presenters and event organizers for the excellent work they are doing.

The board has also been busy. We recently replaced the RARA email group on Yahoo (which was closing) with a new group on groups.io. That already has 87 members and is growing. A great place to ask any question so if there is anything radio related that puzzles you give it a try! You can join from the front page of [the RARA website](#).

We have also been taking a look at the club bylaws. These matter as we are a registered non-profit, so we need to make sure our rules are documented and followed. The official version had been a typed document from 1969 that had been scanned into a computer system as a pdf. We think it is time that was reviewed, it was written before the computer age and much has changed! As a first step we have converted the scanned version into a fully searchable Microsoft Word document and both that and the original are on our website as a pdf [here](#). Take a look, I think you will find the new version a great improvement in readability although the content is exactly the same as before. Our next step is to take the amendments at the end of the document and incorporate them into

the main body of the text and we are working on that. The final step will be to review the bylaws and make changes to bring them into the 21st century. We will be adding references to communication by email and holding meetings online for instance. If you have suggestions, you can email them to me at president@rochesterham.org for consideration. Of course, all members will have an opportunity to approve the final revised version in a vote at one of our general meetings before adoption.

Finally, take a look at the calendar in our Rag, there are a lot of ham radio events. If none of them are of interest to you, then just get out there and call CQ!

CALENDAR OF EVENTS

WEDNESDAY FEBRUARY 3, 2021 - RARA General Meeting
7:00 PM - ON LINE

<https://attendee.gotowebinar.com/register/4030428509327091726>

THURSDAY FEBRUARY 4, 2021 - RARA Board of Directors Meeting
6:30PM ON LINE
Email request for link to secretary@rochesterham.org

SATURDAY FEBRUARY 20, 2021 - VE Testing



EDUCATION

TIM BROWN, WB2PAY, EDUCATION COORDINATOR

RARA LICENSE COURSES

License classes for Technician and General are ongoing.

MORSE CODE TRAINING

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

BEGINNERS MORSE CODE ZOOM CLASSES

Peter Fournia, W2SKY, hosts Morse Code classes on Thursday evenings 7pm. No experience required.

Join the group at any session.

Register at: pfournia@gmail.com

MORSE PRACTICE FOR ALL LEVELS ON ZOOM

Tim Brown, WB2PAY, hosts code practice for all levels on Wednesday evenings 7pm.

Register at: education@rochesterham.org

MORSE PRACTICE ON AIR

Monday and Wednesday 11am 28.450 MHz

Tuesday 4pm 50.250 MHz

Tuesday 8pm 50.250 MHz

Thursday 11am 7.053 MHz

Friday 11am 3.553 MHz

ELMERS

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

Recent inquiries:

- City Lot Antenna Options
- HOA Stealth Antennas
- Disabled Vet needed help putting up an antenna
- Fusion Radio information needed
- Repeater Operations and Controls
- Anytone and Boafeng radio programming
- Capacitors needed for a project
- Reaching out to a Ham in a nursing home
- Decoding CW message left on a phone
- Help with IC-208H mobile installation

If you have a technical or operational question, let the RARA Elmers help you.

Send inquiries to education@rochesterham.org

RARA ACADEMY WORKSHOPS

March 13th 10am - QRP OPERATIONS - An Exciting Challenge

Our presenters will discuss:

- What attracts them to QRP operations
- QRP Rigs -- Assembled Rigs or Kit Built
- Power: watts vs. milliwatts?
- Power sources: Types of Batteries, Solar panels etc.
- Antennas for Portable Operations
- Memorable QRP experiences

Presenters: Karl Heinz Kremer, K5KHK, Ned Asam, W2NED, Bob Karz, K2OID, Scott Theis, W2LW

April 10th - EME MOON BOUNCE & SATELLITE COMMUNICATIONS

Presenter: Larry Keene, KD2LGX

PUBLIC SERVICE REPORT

MIKE MOORE, KC2NM, PUBLIC SERVICE COORDINATOR

Unfortunately, several setbacks in the recovery from the COVID-19 pandemic have made planning events difficult for the agencies and organizations that we serve. It has been confirmed that our largest event, The American Diabetes Association Tour de Cure will be held as a virtual event this year. Longer term, the ADA is looking at how to restore the Tour de Cure as a regional rather than a local event in Upstate New York. We look forward to working with them to learn how we can be of help on the road course as Command Post, SAG, and Sweep drivers.

We are in contact with the MS Society and Fairport Crew Crew to receive plans for the ROC the Ride and Fairport Lift Bridge Regatta events. These events are typically held in the Fall so there is time to continue with these events when the information is available. ROC the Ride is a bicycle ride fundraising event conducted in Genesee Valley Park and points south, The Fairport Lift Bridge Regatta is a rowing event that is held by the Fairport Crew Club. For both of these events, RARA will provide course safety and participant tracking communications.

Jamboree-on-the-Air, or JOTA, is the largest Scouting event in the world. It is held annually the third full weekend in October. JOTA uses amateur radio to link Scouts and hams around the world, around the nation, and in our own community. RARA, with our partners Drumlines ARC and SIARC have historically operated JOTA as part of the Challenge Trophy Campout which is an encampment of approximately 2000 scouts.

2021 will be the 45th year for The Pumpkin Patrol. RARA will participate in partnership with the NY State Police and HAM groups to the east and west along the NYS Thruway. We will be stationed at each of the 16 Monroe County bridges of the Thruway. Twice an hour roll call net will operate to keep an eye on the bridges to make sure motorists will not become the victims of any dangerous pranks.

As Rochester's hub of lifelong science learning, RMSC is the place that we can experience the thrill of invention and innovation. During the week between Christmas and New years, volunteers from RARA and other area organizations present the Holiday Science & Technology Days. We will have a booth with demonstrations of electricity, magnetism, and technology related to radio. Our partners at RDXA and XARC operate a demonstration Amateur Radio Station.

For up to date information about all of our Public Service events take a look at our RARA website https://www.rochesterham.org/public_service .

Please mark your calendars for our upcoming RARA Public Service Events

Bike MS: ROC the Ride	Genesee Valley Park - Rochester, NY	TBD	TBD
Fairport Lift Bridge Regatta	Erie Canal – Fairport, NY	TBD	TBD
JOTA (Verify CTC Date)	Camp Babcock Hovey	Saturday	Oct. 16, 2021
Pumpkin Patrol	Overpasses of the New York State Thruway	Saturday & Sunday	Oct. 30-31, 2021
Holiday Science & Technology Days	Rochester Museum & Science Center	Monday - Wednesday	Dec. 27-29, 2021

2021 Rochester Hamfest February Update

As most of you are aware, the 2021 Dayton Hamvention has been canceled. This was scheduled for May 20-22. See <https://hamvention.org>. Additionally, the ARRL is compiling a [list of canceled events](#). We have not, as of this writing made a decision to cancel our Rochester Hamfest that we are planning to hold on June 5, 2021.

RARA will continue to monitor the COVID situation as the date draws closer. We very much want to have the event, but the health safety of attendees and volunteers is our priority. Assuming that we will be able to proceed, we will be implementing preventative measures to reduce the spread of COVID-19 in accordance with Federal, State, and Local guidelines.

We are placing a short-term hold on committing club funds for this year's Rochester Hamfest until it becomes clear that we can successfully hold the hamfest. In all candor, an additional fact that should be disclosed is that as of this writing, the Hilton Exempts organization is not now accepting reservations for our use of the Hamfest site.

More information concerning the status of the 2021 Rochester Hamfest will be forthcoming and shared at <http://rochesterham.org> and in future issues of the RARA Rag.

2021 Rochester Hamfest Team

PROFESSOR'S PIC(K)S

JEFF SONSTEIN, KD2RRB

[Conspiracy Theorists](#)

[Solar Cycle Predictions](#)

[Limitless Power From Graphene](#)

[Beginner Friendly Electronics Tutorials](#)

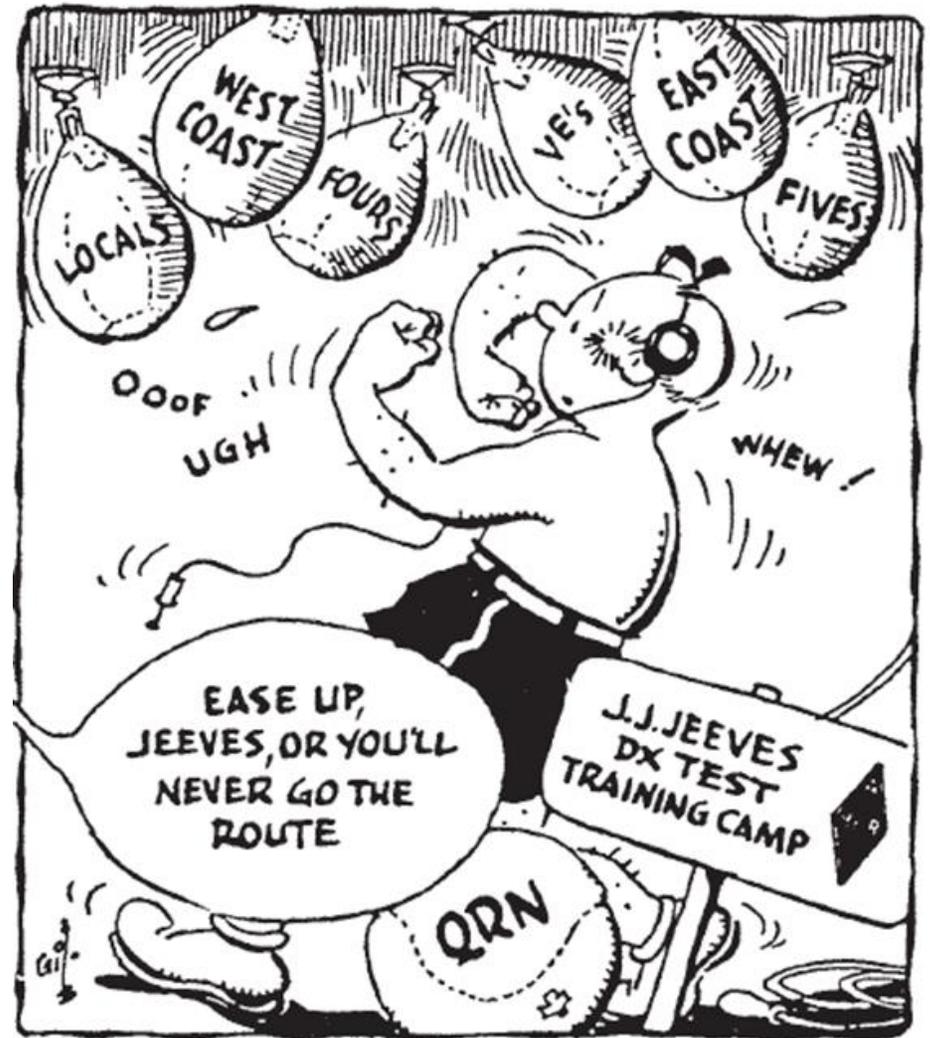
[Cableways Selection](#)

[A Practical 4-Bit Educational Computer](#)

[Was That a Dropped Call From ET?](#)

[Specific Neutral Earthing System](#)

[VT102 and PDP11](#)



Courtesy February 1958 QST

RARA VOLUNTEER SPOTLIGHT

PHIL VISALI, K2ELV

SUSAN AIELLO, W2SBA

I met Phil while volunteering at Net Control for the Tour d'Cure in 2018 and joined him again in 2019 at the Tour and also at Bike MS. Not a ham at the time, my job was answering calls from riders who needed help. I was fascinated by the whole process of managing this huge and important operation. It wasn't until I started studying for my general that I began to put some of the pieces together about what was actually going on at Net Control 😊 I found the whole process, and Phil himself, very interesting and I hope you do as well! Thank you, Phil for talking with me, teaching me a few things, and for your service to the club and community.

What's your first memory of Ham Radio?

I think Phil was born a techie. As a child child he worked on CB radio and train-sets, messed around with voltmeters and batteries...and his electronics journey took off. He now works as a network engineer. About 6-7 years ago, Phil was planning on using Walkie-talkies to help out at a large event when a friend suggested, why not just get your ham radio license? No code required! Phil immediately bought a Baofeng radio, (which was delivered before he even took the test), studied for three days, took and passed his Technician and General exams. Phil's first radio contact came about while listening to Tim Magee's repeater in Greece. He was thrilled to make his first ever contact with Tim, WB2KAO: a 'welcome' to ham radio. 'Hanging out' on the repeater, led Phil to Jim Stefano, W2COP, and Mike Rink, W2HYP, and the rest is history! Hanging out, actually at the repeater in Bristol, climbing towers, absorbing and sharing knowledge has expanded Phil's connection to radio. He even has a repeater in his yard 😊

How did you get involved in RARA Public Service as a Net Control volunteer?

A few years ago, Jim Stefano invited Phil to check out Tour d' Cure, and to help set up net control. That first year, Phil drove the course in a SAG, calling in to Net Control. The following year, and ever since, has found him volunteering as Net Control at both Tour d' Cure as well as Bike MS. This is where I first met Phil, while my husband was traveling the course with a SAG, I was taking calls from riders at Net Control. It was pretty exciting if I do say so myself. The team, led by Phil, was a well-oiled machine; responding to calls and keeping everyone safe for this enormous event.

One day a while back, Phil was out and about, wearing a t-shirt from a net control volunteer activity, when he was approached by a stranger who thanked him for volunteering to help the cause!

Do you have an interesting anecdote or story about Ham radio?

When he has a chance, Phil listens to what's happening on the net. Listening to the 14.300 Maritime Net one day, he heard ham radio emergency response at its best: a ham was stranded on his boat, 3-4 hours from land, calling out for

help because he was experiencing chest pains. A network of hams responded, patched in a doctor to help diagnose and calm the sailor, and a helicopter was dispatched to help!

Another time, Phil communicated with a commercial pilot flying a jet over Texas and Mexico! You never know where you will run into a ham 😊

Phil really appreciates the 'old guard' of hams: users vs. builders. They really know their stuff, before things became so easy 😊 Phil 3-D prints a lot of his ham equipment, including guides for his repeater stack...lots of interesting and cool stuff to print out there!

What do your friends and family think about your Ham hobby and volunteer activities?

Phil's family is supportive of his hobbies, gifting him with radio-related accessories. Phil is so enthusiastic about the hobby his friends and family call him 'The Pusher'. He always wants everyone to be as excited as he is. This has actually worked very well as he has 'pushed' about a dozen friends to become hams! He even buys them a radio so they can get on the air.

What might someone be surprised to know about you?

Radio with a purpose! Phil uses his skills to actually help people, not just to 'play' radio. His volunteer work meshes perfectly with his skill set.

What would you tell someone who is thinking about volunteering?

Do it! Not only do you feel good and make an important contribution to the cause, you meet awesome people! Every volunteer you meet comes with a different skill and passion.

Silent Key

Robert O'Dell Sr
WU2H

December 31, 2020

TINYSA – HOW BAD IS YOUR BAOFENG!?

KARL HEINZ KREMER – K5KHK

Introduction

A couple of months ago, I introduced you to the TinySA. A spectrum analyzer can be used to look at the output of a transmitter to see if it is within the limits that the FCC imposes on us amateur radio operators.

The following is not a quantitative test to see if a radio is within these limits, but should still shed some light on how good or bad a radio is. The reason for this is that the TinySA uses two different frequency ranges:

- Low input: 100kHz to 350MHz
- High input: 240MHz to 960MHz

Only the low input benefits from the level calibration that the TinySA performs when you connect the two inputs and perform the calibration, the high input is uncalibrated, and that's the reason I am not looking at exact values. I realized after I took the measurements that I could calibrate the high input level via a frequency generator between 240MHz and 350MHz and first measure on the low input, determine the level of the signal, and then connect it to the high input and adjust the level to what was measured with the low input. My nanoVNA could be used as the signal generator. But that's for a future article.

Test Subjects

I have access to the following VHF/UHF radios:

- Alinco DJ580 – this is a 2m/70cm radio from the early '90s
- Anytone D878UV – this is a DMR radio that also handles standard FM on 2m/70cm
- Yaesu FT4X – again 2m/70cm
- Baofeng F9v2 – 2m/70cm
- Baofeng UV6R – 2m/70cm
- Baofeng UV5R3 – 2m/1.25m/70cm
- Baofeng UV82 – 2m/1.25m

Test Setup

You cannot connect the output of a transmitter directly to the input of a spectrum analyzer. Let me just make sure that you understand this:

NEVER CONNECT THE OUTPUT OF A TRANSMITTER DIRECTLY TO THE INPUT OF A SPECTRUM ANALYZER!

If you do, you run the risk of destroying the device.

The TinySA has a maximum input power level of +10dBm, but in order to keep internally produced spurs low, you may want to stay well below these levels. All the radios I am about to test are putting out about 5W (the F9v2 can go up to 8W), which is 37dBm, so in order to get below 0dBm, we need to use at least a

37dB attenuator between the radio and the input of the spectrum analyzer.

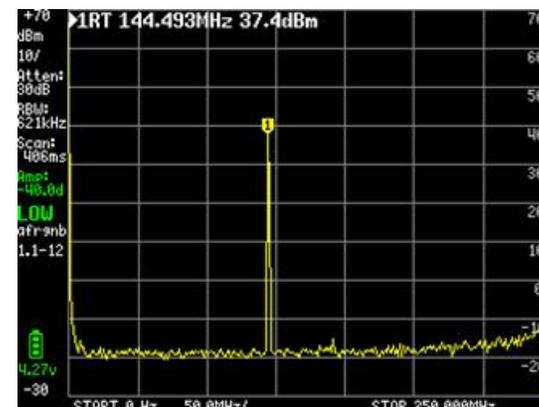
The following image shows the Yaesu FT-4X connected via a 40dB attenuator to the low input of the TinySA.



Results

Alinco DJ580

Here is the spectrum of the radio in 2m mode. The TinySA has a mode that allows you to measure harmonics. In this picture, there are no harmonics to measure, the output of the radio is very clean.

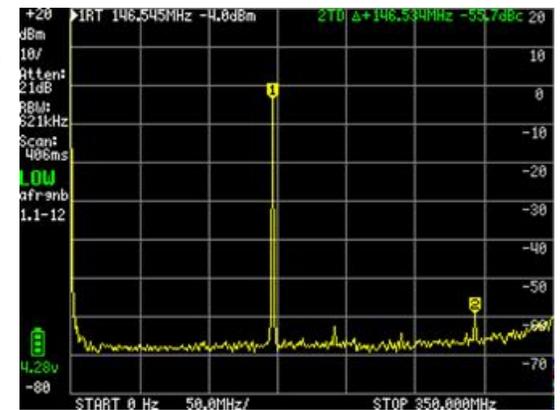


And here is the 70cm output. This time, we see a small amount of the 2nd harmonic. I will comment on the spurs below the operating frequency further down.



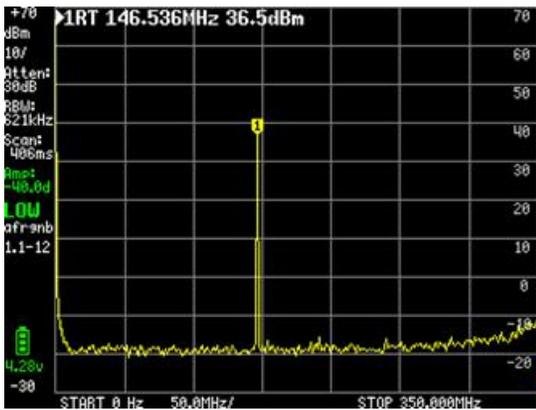
Yaesu FT4X

With the Yaesu, we finally get a small spur on the 2m band:

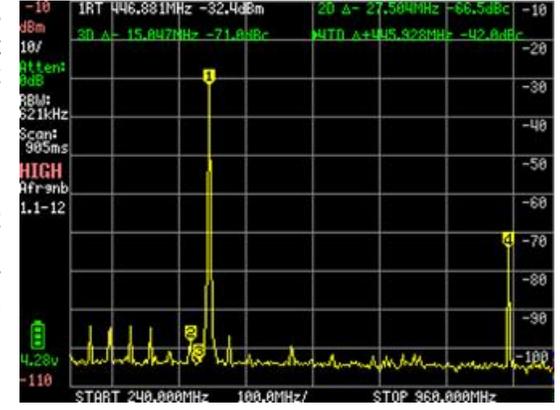


Anytone D878UV

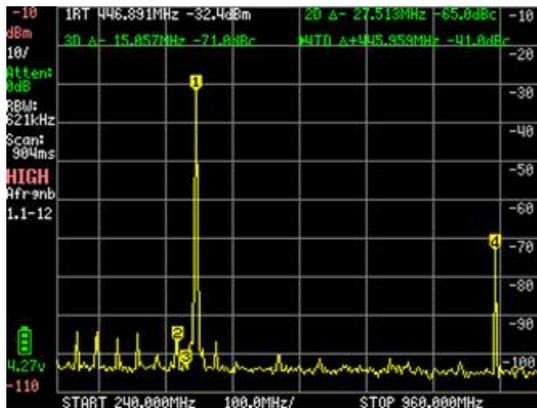
The 2m spectrum looks just as clean as the one from the Alinco:



The 70cm band again looks similar to what we've seen before, it now becomes pretty obvious that these spurs must be something that the TinySA is creating internally. The spectrum analyzer has an internal attenuator, but that is only used on the low input, so it makes sense that we would have to reduce the input even further to see a clean spectrum when using the high input.

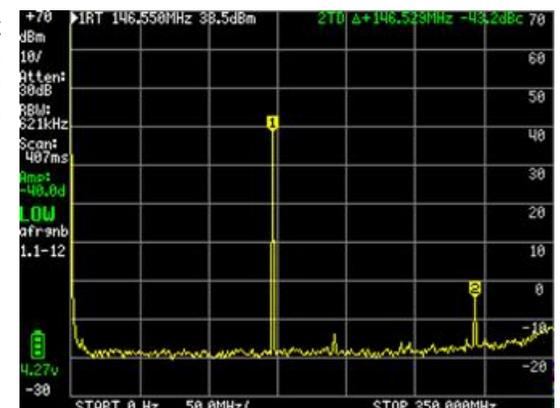


The 70cm spectrum looks similar to what we've seen with the Alinco. I suspect that the "stuff" below the transmitting frequency is internally generated in the TinySA. To verify that, I would have to change the amount of attenuation, to see if these spurs change by the amount of change in attenuation.

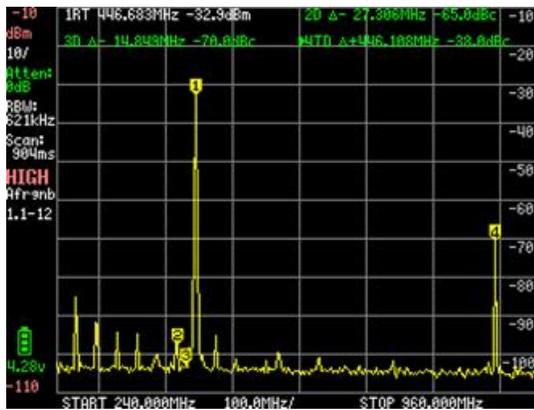


Baofeng F9v2

Now let's take a look at the first Baofeng in my collection. This is the 2m spectrum, and we see a spur that is definitely higher than what we've seen before:

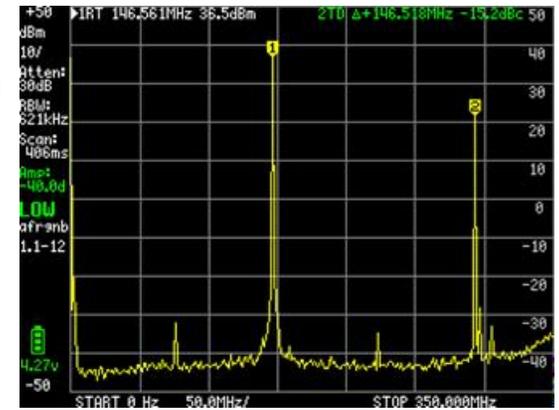


The 70cm spectrum also shows a higher 2nd harmonic than the previous radios:



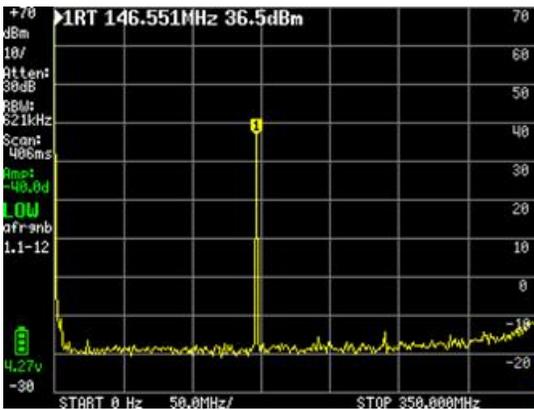
Baofeng UV5R3

Let's take a look at a 3 band HT. First up is 2m, and the spectrum is bad:

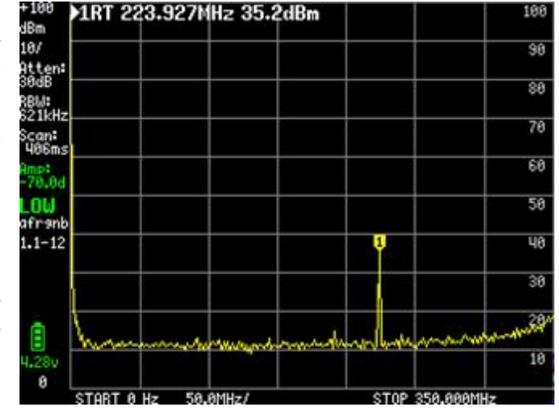


Baofeng UV6R

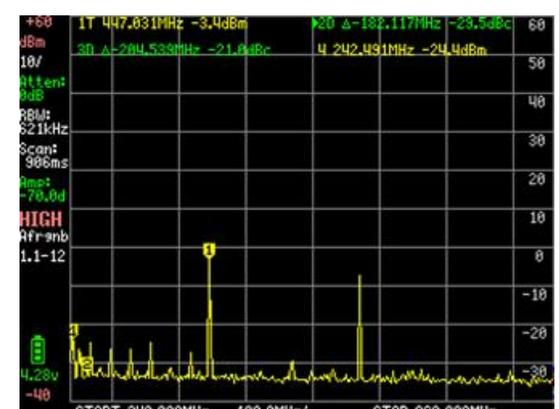
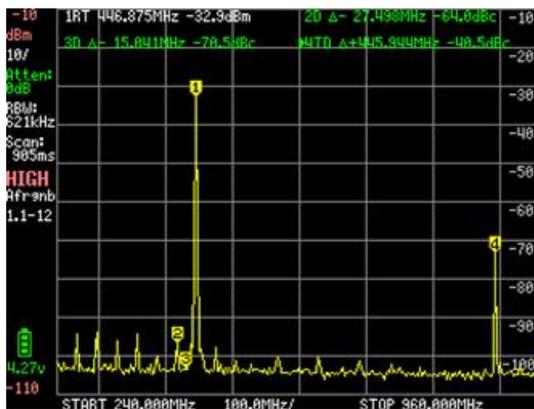
The 2nd Baofeng in the mix shows a very clean spectrum on 2m:



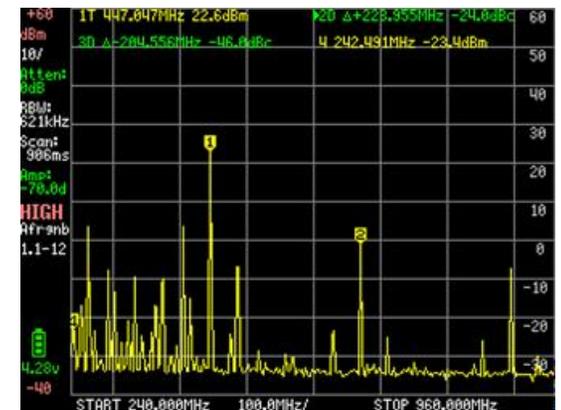
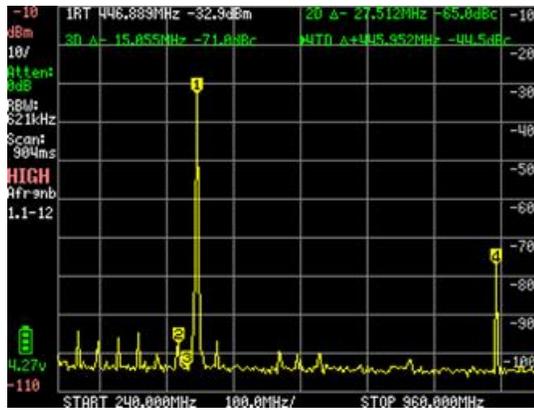
1.25m creates a new challenge: The fundamental frequency needs to be measured in low input mode, but the harmonics are then displayed in high input mode, so we will see two spectrums. Because the high input is not calibrated, we cannot determine the actual difference between fundamental and harmonics. The harmonics are definitely down, but we don't know exactly by how much. It's better than the 2m spectrum.



And the 70cm spectrum is better than with the F9v2, but not as good as with the name brand radios:

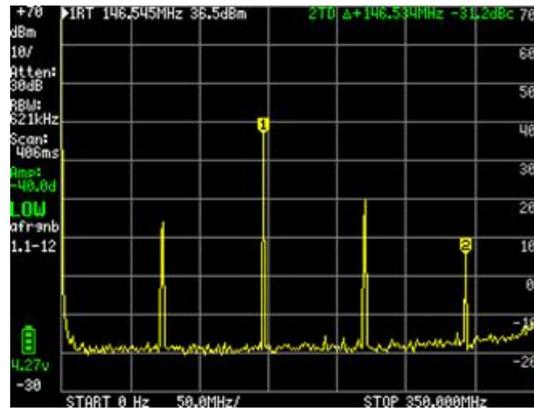


The 70cm spectrum does not look too bad – comparable to the name brand radios.



Baofeng UV82

Here is something new on the 2m spectrum: Don't know why this is happening, but there is definitely some stuff coming out of this radio that should not be there.

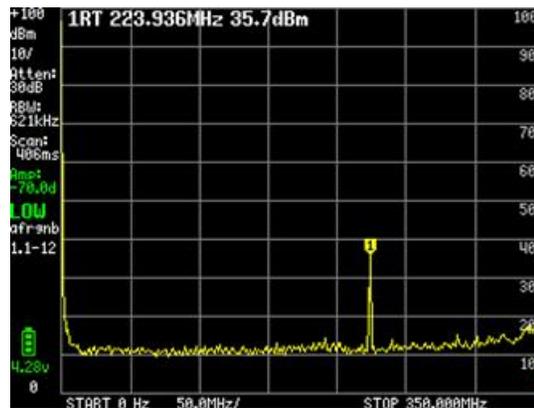


The Verdict

All the non-Baofeng radios did pretty well, and as far as Baofengs go, there is at least one in the mix that is pretty good (the UV6R), and two that have serious problems (the UV5R3 and the UV82).

With the Tiny SA and a few attenuators, you can now actually measure your own equipment and see if you want to put that cheap Chinese radio on the air.

And on the 1.25m spectrum (again, split up across two measurements) we also see more "crud" than what we've seen before:



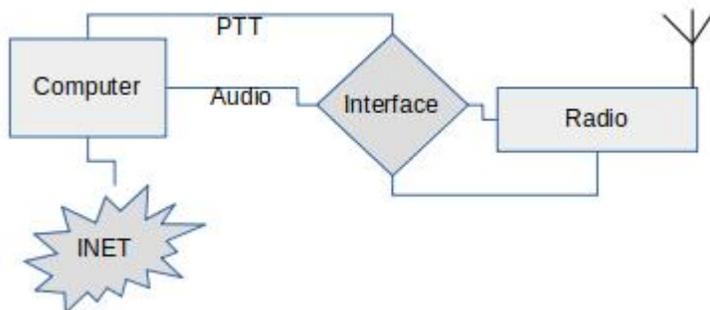
WEATHER APRS REDO

DON KISER, AC2EV

Gentlemen, we can rebuild it. We have the technology. We have the capability to make it better, faster, smaller...

I recently received an email from NOAA that my weather station was offline and had been offline for nearly a week. Odd, I just checked (CumulusMX was failing after about a 7 day run time) but when I went down to the basement I found the laptop that runs it all blinking a bright orange light. It was dead, the battery to be exact. So, instead of rebuilding it, again I decided to try something different. I wanted to get rid of as much extraneous hardware as possible. The weather station console is in the kitchen so less wires is better. My weather station and APRS digipeater 'lived' in the same laptop.

The general setup of these systems doesn't change much. Here's a basic diagram of what I had.



Hardware:

- Dell D830 laptop** – running Windows 7
- BuxComm Interface** – Level/impedance matching and PTT via serial port
- ICOM IC-228A** – 2 meter mobile radio
- Davis Vantage Pro 2** – Weather station
- Port Server TS** - Serial to Ethernet – WX console upstairs (in kitchen) to laptop in basement hamshack

Software:

- UZ7HO Sound Modem** – Sound Card modem that does AX.25
- APRSIS32** – APRS (iGate, Digipeater)
- CumulusMX**– Weather (CWOP, APRS, WU, Weather Camera)
- IP Timelapse** - Pulls image from camera, adds overlay text, uploads to WU



The Laptop and BuxComm interface



Even more wires for the WX station

Everything else was over network so there were also various drivers (serial to Ethernet) involved. For many years it worked great, until it didn't. I was also getting sick of all the wires, so something had to be done.

Step 1. The weather logging system

This was the easiest and most costly (\$378), but convenience comes at a price. I went with a Meteobridge Nano SD. This is a plug and play solution for the Davis Vantage Pro 2. There are several variants of the Meteobridge, including a DIY version so one might work for you.

OK, the first Meteobridge Nano SD I bought failed within 40 days so I had to

send it back and get another, so this article was delayed. I think having it try to do everything (weather, camera, dashboard) caused a corruption issue. I'm forgoing the built Dashboard for now, I've also changed my weather image from 4K to 640x480.

The Meteobridge Nano SD is a small "router" that runs OpenWRT and the Meteobridge software which does all the weather handling. It's basically a small Linux computer at 1.5" x 1". It plugs right into the existing connection on the console and provides serial communications and power. You then configure it via a built-in web page to send data to a multitude of online services.



In console C battery for size

It also host its own internal weather web page using Weather32 templates and nice graphics as well as supporting dozens of online weather aggregators.

As seen in the screen shot it can pull images from your IP based web camera and send the images to Meteobridge for post processing (weather data overlays).

Here's the Authors image:

<https://admin.meteobridge.com/cam/9833eacf8aba4d0ab4f2ab8c1355f103/camplus.jpg>

Overall I'm impressed with its capabilities but it's not for the Luddite. There is a forum and WIKI for the configuration but if you run into trouble you will be spending a lot of time researching the forums like I have. The author of Meteobridge is on there frequently. Software updates come out about once a month or sooner. By default, rebooting the unit will pull the latest software. Since this a small computer it will generate heat so you will need to configure your console to account for the 6-10 °F internal temperature rise.

Lastly, plan on buying a new power supply for your Vantage Pro2 console. The Davis 300mA supply is a bit anemic, I opted for a full 5V@1000mA instead.

But I don't have a Davis unit or want to plug in a tiny computer

If you have a Davis system but don't want to use this little system on chip or you have a different system (See <http://files.meteobridge.com/files/meteobridgepro%20-%20datasheet.pdf> for supported manufacturers) you can opt for the Pro version. They intercept the wireless communications and do the rest.



But hey, no more wires!

Step 2. Replace the APRS

This is not too expensive depending on the route you go. I went to <http://vilros.com> and got a Raspberry Pi 4. I tried a Raspberry Pi 3B I had laying around but the new Raspian OS sorry, Raspberry PI OS had issues with the 3B when it went to update to the latest version. It refused to boot.

At this point the author would like to say that Curtis (N1AAE) has already done the “hard work” and written up a meticulous step by step instructions on how to set up APRS on a Raspberry PI. Please go and follow N1AAE’s instructions.

<https://n1aae.com/raspberry-pi-aprs-direwolf-linux-igate-digipeater/>

If you get into trouble with Direwolf there is a very well-written manual that explains everything. It can be found here <https://github.com/wb2osz/direwolf/blob/master/doc/User-Guide.pdf>

Step 3. Lessons Learned

I originally started out with a cheap USB sound-card but found the GPIO of the Raspberry PI to be rather anemic as it wasn’t able to trigger the PTT circuit on my Icom radio. While I could build a transistor circuit and up the PTT voltage if desired, I decided less hardware is better. Since previous volunteering with RARA has left me with a sizable allotment of points, I decided to buy a Signalink USB sound card unit.

First, and I can’t say this enough, if you have the ability to volunteer, do it, it’s an easy way to advance Amateur radio in the community and get new equipment. If you don’t need new equipment then consider donating your points to a new ham so that they can get started.

This is my 2nd Signalink USB unit. Out of the box it’s a decent unit. For the Raspberry PI it works great. For FT8 I followed some of the online modifications to clean up the signal and separate the power. This involves some SMT soldering and cutting of traces, not for light of heart.

The big thing to learn/experiment with is the audio levels. Take a look at where my settings are right now.



Current setup

Squelch – wide open

Radio Volume – ¼ volume

Signalink TX – about ¾ volume (work in progress)

Signalink RX – almost ½ volume

Signalink Delay – minimum

This is where Direwolf’s helpful output comes in.

Also important is to always check and verify your connections and equipment. As I was testing I noticed that the system was not hearing as well as I thought it should. I got out the antenna analyzer and found the SWR to be 10:1 across the band. Luckily, I have two antennas in my attic and I switched to the vertical dipole which was 1:1. Now to go figure out why the other antenna isn’t working.

Here is the output of Direwolf as seen via PuTTY (SSH) and screen -R d direwolf.

```

AC2EV-9 audio level = 43(21/9) [NONE] ____|IIII
[0,6] AC2EV-9>APOT21,WIDE1-1,WIDE2-2;!4315,01N/07743,65Mw330/000/A=000348164F dkiser100@gmail.com
"100" in comment looks like it might be a CTCSS tone in non-standard format.
For most systems to recognize it, use exactly this form "T100" at near beginning of comment, after any frequency.
Position, VAN, Open Track
N 43 15,0100, W 077 43,6500, 0 MPH, course 330, alt 348 ft, PL 100,0
164F dkiser100@gmail.com
[OH] AC2EV-9>APOT21,AC2EV-1*,WIDE2-2;!4315,01N/07743,65Mw330/000/A=000348164F dkiser100@gmail.com
^[[A
AC2EV-9 audio level = 57(28/12) [NONE] ____|IIII
[0,6] AC2EV-9>APOT21,WIDE1-1,WIDE2-2;!4315,01N/07743,65Mw153/000/A=000334164F dkiser100@gmail.com
"100" in comment looks like it might be a CTCSS tone in non-standard format.
For most systems to recognize it, use exactly this form "T100" at near beginning of comment, after any frequency.
Position, VAN, Open Track
N 43 15,0100, W 077 43,6500, 0 MPH, course 153, alt 334 ft, PL 100,0
164F dkiser100@gmail.com
[OH] AC2EV-9>APOT21,AC2EV-1*,WIDE2-2;!4315,01N/07743,65Mw153/000/A=000334164F dkiser100@gmail.com
^[[A
AC2EV-9 audio level = 80(39/16) [NONE] ____:IIIII
[0,5] AC2EV-9>APOT21,WIDE1-1,WIDE2-2;!4315,01N/07743,65Mw142/000/A=000348165F dkiser100@gmail.com
"100" in comment looks like it might be a CTCSS tone in non-standard format.
For most systems to recognize it, use exactly this form "T100" at near beginning of comment, after any frequency.
Position, VAN, Open Track
N 43 15,0100, W 077 43,6500, 0 MPH, course 142, alt 348 ft, PL 100,0
165F dkiser100@gmail.com
[OH] AC2EV-9>APOT21,AC2EV-1*,WIDE2-2;!4315,01N/07743,65Mw142/000/A=000348165F dkiser100@gmail.com
^[[A
AC2EV-9 audio level = 117(57/24) [NONE] ____|IIII
Audio input level is too high. Reduce so most stations are around 50.
[0,6] AC2EV-9>APOT21,WIDE1-1,WIDE2-2;!4315,01N/07743,65Mw066/000/A=000345167F dkiser100@gmail.com
"100" in comment looks like it might be a CTCSS tone in non-standard format.
For most systems to recognize it, use exactly this form "T100" at near beginning of comment, after any frequency.
Position, VAN, Open Track
N 43 15,0100, W 077 43,6500, 0 MPH, course 66, alt 345 ft, PL 100,0
167F dkiser100@gmail.com
[OH] AC2EV-9>APOT21,AC2EV-1*,WIDE2-2;!4315,01N/07743,65Mw066/000/A=000345167F dkiser100@gmail.com
^[[A
AC2EV-9 audio level = 87(42/17) [NONE] ____|IIII
[0,6] AC2EV-9>APOT21,WIDE1-1,WIDE2-2;!4315,01N/07743,65Mw209/000/A=000343166F dkiser100@gmail.com
"100" in comment looks like it might be a CTCSS tone in non-standard format.
For most systems to recognize it, use exactly this form "T100" at near beginning of comment, after any frequency.
Position, VAN, Open Track
N 43 15,0100, W 077 43,6500, 0 MPH, course 209, alt 343 ft, PL 100,0
166F dkiser100@gmail.com
[OH] AC2EV-9>APOT21,AC2EV-1*,WIDE2-2;!4315,01N/07743,65Mw209/000/A=000343166F dkiser100@gmail.com
[OL] AC2EV-1>APDW16,WIDE1-1,WIDE2-1;!4315,02NS07743,66W#PHG7140North Greece NY
[ig] AC2EV-1>APDW16;!4315,02NT07743,66W&
[OL] AC2EV-1>APDW16,WIDE1-1,WIDE2-1;!4315,02NS07743,66W#PHG7140North Greece NY

```

for reasons unknown don't use 'Callsign'-0 such as AC2EV-0, I tried this and while the iGate server connected Direwolf would not forward packets and my station would not show on the APRS servers (APRS.FI)

There's a lot to look at here so let me describe what was going on. I had an APRS setup running out on the porch (Garmin Nuvi/ArgentDate Radio). What you're looking for is the AC2EV-9 audio level = ## - I was adjusting the RX volume on the Signalink and my radio till I got to a "happy medium".

Direwolf will tell you when the audio is too high by saying:

'Audio input level is too high. Reduce so most stations are around 50'

Depending on your radio and APRS traffic around you it could take a bit of tweaking to get it right. Right now I'm at **audio level = 87**, it's passable but could be better.

When multiple modems are configured per channel, a simple spectrum display reveals which decoders picked up the signal properly.

| means a frame was received with no error.

: means a frame was received with a single bit error. (FIX_BITS 1 or higher configured.)

. means a frame was received with multiple errors. (FIX_BITS 2 or higher configured.)

_ means nothing was received on this decoder.

Here are some samples and what they mean:

____|____ Only the center decoder (e.g. 1600/1800 Hz) was successful.

___|||____ 3 different lower frequency modems received it properly. Assuming USB operation, the transmitting station is probably a little low in frequency.

____|||: 3 different higher frequency modems received it with no error. The highest one received it with a single bit error.

The 'screen' app was a new one to me. It allows you to run a virtual console and Direwolf runs in that so all output is piped to the 'screens' virtual console and you're still able to use the main console connection if you have it connected with a monitor and keyboard.

Don't worry if it doesn't get connected to one or more iGate servers during initialization. iGate servers are in a round robin configuration so if you've configured your SSID and passcode correctly it should get accepted eventually. Also,

MY CW CHALLENGE—DID I DO IT?

KARL HEINZ KREMER, K5KHK

We are a few days into the new year, so it's time to check up on a resolution: Last year I challenged myself to having at least one CW QSO per day. In order to find out if I managed to do that, I exported all my CW QSOs from my logging application as an ADIF file and then wrote a Python script to fill in a simple calendar whenever there was a CW QSO for that day. Here is the output of that program:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
January	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
February	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
March	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
April	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
May	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
June	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
July	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
August	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
September	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
October	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
November	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
December	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

I missed two days, but I have an excuse: These two days were on a weekend when we travelled to Maine. You can see that I actually have one day (2/29) on that weekend covered: That was a POTA activation in Maine with a few CW contacts. I even got my “at least one a day” during the time I had what we now call “not the flu” – strong flu-like symptoms, but with a negative flu test early in February.

Most of these contacts were short, because most of them were POTA contacts, so just a TU ES GM UR 599 599 NY type of contacts, but I am counting them ☺

Some were longer rag chew type contacts - and I'd like to thank Joe AG2Y for providing two 30 minute rag chews a week for several months.

In case anybody is curious about how many CW contacts I have in the log for last year: 1532

RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN

20 Years Ago, February 2001

The theme of the meeting this month follows that of the club itself, a legacy of years of public service communications activity. A proud partnership in such endeavors brings together RARA and the Monroe County Office of Emergency Preparedness (OEP). We pretty much know what RaRa brings to the table but this night Program Chairman Peter Fournia, W2SKY, has arranged for the OEP Administrator, Ms. Muffy Meisenzahl, to tell all about the purpose and functions that occur within the walls of 1190 Scottsville Road. Continuing in this issue was a report by Richard Goslee, K2VCZ, who told of the new RARA Scholarship program available to members made possible by generous donations in memory of Bill Buchan W2OMV and William Resch K4VOS. Readers also heard from RARA's Public Relations Director, Keith Freeberg N2BEL, who wrote explaining the new Great Rochester Area Youth Net (GRAYN). The net, held alternately on the .79 or .88 repeaters, offered a chance for Rochester area young operators to chat with their own people, on their own net and on their own topics. Lloyd Caves delighted members with his series of articles telling of plans for the 2001 Rochester Hamfest. Here he told of firm plans to date including VE Testing headed by George Platteter AA2FO (sk), a new subject of Radio Control Modeling by Mark Wharton K0LO, a planned meeting of the Western NY Section Net with Scott Bauer W2LC, an always eagerly attended gathering with Bill Thompson, W2MTA (sk), this time chatting about the ARRL National Traffic System and finally a joint Army/Air Force MARS meeting with Wayne Lightsey AAR2NY, representing Army MARS and Wells Farr AFF1NY, from Air Force MARS. Lloyd closed his column urging readers to come back next month for information on additional programs for the three day 2001, Rochester Hamfest and Atlantic Division Convention. Ed Holdsworth, Public Service Director, wrote to tell of these firm activities scheduled so far for 2001: Skywarn Training, Ginna Radiological Pre-Drill, Formal Ginna Radiological Drill, Tour de Cure, Stuart Horse Trials and the Walnut Hill Carriage Show. Tim Magee, WB2KAO, detailed the results of the recently completed

Fall RARA Licensing Classes. There were way too many graduates of 5 WPM code, Technician, General and Extra class graduates to list here indicating a very successful fall season. Tim also announced detailed plans for the already set to go 2001, spring session. Two additional columns by your very active Vice-President, Peter Fournia W2SKY, where first, he told of the very successful joint effort by RARA and the RDXA in the just completed ham radio display at the Rochester Museum and Science Center. Excellent radio conditions thrilled and amazed attendees as comfortable 5x9 SSB signals were routinely conducted with all parts of the world. Peter continued with his second column announcing the June 16th RARA Picnic to be held at the Creekside Cabin, Ellison Park, in Penfield. Pater says come and enjoy lounging in a chair or run around the park during several Fox Hunts... your choice. Rachel Schweig KC2DKB, writing for the RARRA, told of their unusual January 19th meeting where the program was watching the movie "Frequency" where the story line involves a son talking to his deceased father via an old ham radio set. Rachel didn't report if popcorn was served. Ed Gable's (K2MP) DX/Contesting report included the talk of the DX town as suddenly, with no notice, 3Y0C showed up on the bands from super rare and #11 on the DX Wanted list, Bouvet Island. This was not a DXpedition but rather a Scientific Exploration group and ham radio was only on free time basis by one of the scientists. None-the-less many DX'ers, including this writer, happily logged an ATNO. (ATNO = All time new one) But wait, there's more as the YK9A DXpedition came up from Syria and with a US QSL manager. So. Shetland Island also made for an exciting month as CE9/R1ANF became active on 30 meters with excellent propagation into Antarctica on that band. Finally, both JD1's were workable at the same time from Minami Torishima and Ogasawara. It was announced that RDXA had a new website to be found at www.qsl.net/rdxa. It was reported that John Tillotson N2XUY, was reported a Silent Key. From the Want Ads you could buy a Dentron DTR1200L Amplifier from K2MP for a reasonable \$195.00. A new commercial Advertiser was the RF/MAX Realty Group featuring Sales Agent Paul Mackanos K2DB



the RARA RAG

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Office Of Emergency Preparedness At Feb. Meeting

Peter Fournia, W2SKY

October 1996 was the last time the Monroe County Office of Emergency Preparedness addressed RARA. George Lloyd, N2UIO wrote the topic announcement at the time. His write up is applicable now and is repeated below.

As you all know, the Rochester Amateur Radio Association is mainly a public service oriented club. Many of us have participated in a wide range of public service events that the club has involved itself with. Everything from foot races to horse shows. But there is one public service that stands out from them all and I believe is the most important to each and every one of us. I am speaking about public safety and our club's role in association with the Monroe County Office of Emergency Preparedness.

Amateur radio operators have always volunteered to assist the community by providing emergency communications whenever possible during times of disaster and RARA is certainly no exception. Many of our members have done just that. We are all very fortunate indeed to live in a county that has such an extensive public safety program.

I have invited the Administrator of Monroe County's Office of Emergency Preparedness, Muffy Meisenzahl, to visit us and speak about OEP and the various services that they provide our community. I think her visit will be a real "eye-opener" for those who aren't too familiar with OEP and what they do. I for one have seen the OEP in action last year during the Ginna nuclear power plant drill and pre drill when I volunteered to participate by sending ATV pictures back to the command center at Westfall Rd. I was impressed to see what lengths civil servants and amateur radio volunteers go to in order to insure our safety. This was and is a prime example of amateur radio serving the community for the common good.

Ms. Meisenzahl will discuss many aspects of the Office of Emergency Preparedness such as the Ginna drills, assorted emergency services, civil

continued on page 2

Scholarship Available To Members

Richard Goslee, K2VCZ

RARA is pleased to announce that a \$300 scholarship is available to a student attending College next fall. The "Rochester Amateur Radio Association Memorial Scholarship" has been established with generous donations made in memory of William Buchan, W2OMV and William Resch, K4VOS. The scholarship is available to any licensed Amateur Radio operator who is or will be pursuing any degree of Associate level or higher in any accredited school beyond high school. The individual must be a member of RARA and a resident of New York State. The scholarship is for one individual for one year, but the recipient may reapply for subsequent years.

Applications are due no later than April 15th. The RARA Board of Directors and Scholarship Committee will make a final decision by May 15th of each year. The actual award will be presented at the annual RARA Hamfest Banquet held shortly thereafter.

Applications for the scholarship may be obtained at the February, March and April RARA general meetings, by mail at P.O. Box 93333, Rochester, NY 14692-8333 or by calling the RARA phone at 442-0587. Additional information and a copy of the application is available on the RARA web site at <http://www.ggv.org/rara/scholarship.htm>, or from one of the officers.

Additional "tax exempt donations" in memory W2OMV, K4VOS or any other silent key may be sent to: Rochester Amateur Radio Association, Inc., Memorial Scholarship, P.O. Box 93333, Rochester, NY 4692-8333.

RARA Meeting
February 2, 2001
Henrietta Fire Hall,
3129 E. Henrietta Rd.

Office Of Emergency Preparedness
Presented by Muffy Meisenzahl

RARA Vice-President and Program Chairman Don Drennon, W2EBF, opened this issue by announcing a very interesting program on the Radio Telescope facility at Arecibo, Puerto Rico. The slide program was presented by Mr. George Peter, a research engineer at Cornell University. (Note, the Arecibo facility was destroyed last month due to a storm damaged cable system failure that held the elevated feed horn in place – Ed) RARA meetings at this time were held at the Statesman Club on top of the First Federal building in downtown Rochester. This meeting venue, after the 3rd meeting held there, was getting mixed reviews. Lee Van Grol, WA2YEK, described the planned February 14th RARA Dinner Dance to be held at the Beahan Party House with the Peter Matina Orchestra putting party goers in the mood. For some reason this was a short, four page issue. Irv Goodman, AF2K, RARA Membership Chairman, reported there were 684 current members, slightly down from last year at this time. The FCC issued a new Form 610 for immediate use and implementing a new Phase Three callsign issuing process. The new form required applicants to request keeping their current callsigns even for something as simple as an address change. Not doing so would automatically issue a new callsign, much to the dismay of those not reading the instructions. Ed Holdsworth, N2EH, penned an article telling of the next planned RARA Code and Theory classes. This spring class would feature new Advanced Class Theory sessions conducted by Harold Munday, KD2K. Rick Berg, WA2RLQ, inserted an article for the Rochester DX association (RDXA) where he told of a new venue for their monthly meetings and their pre-meeting dinners to be the Colonial Hotel at 1129 Empire Blvd. President Otto Bluntzer, WB2RJB, inside his “RARA and You” President’s column, wrote a very nice piece on the upcoming work of the annual Nominating Committee. There, Otto urged all members to become active and when seeing good work being done by a potential candidate, to be proactive and make your thoughts known to members of the Nominating Committee to be listed in the Rag. There were no Silent Keys listed but you could buy a Tempo FMH 2 Mtr FM hand held with six sets of crystals for \$150.00 from Carty Ellis, KA2Y. A long term Commercial Advertiser was the Heathkit Electronic Center at 937 Jefferson Road. This month’s featured sale item was a Log Splitter, no not an electronic contest log organizer, but a real tree limb destroying device offered to RARA members at 5% off. Could it be that this wasn’t a best seller over on Jefferson Road? Perhaps the store manager, who I know reads these Old Timer articles, will respond. (Hint – his name and callsign appear in the 20 year article above)

The RARA RAG

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RADIO TELESCOPE FACILITY ARECIBO, P.R. — FEBRUARY 6th by Don Drennan, W2EBF

The February 6th RaRa meeting will be held at the Statesman’s Club, starting as usual at 8 p.m.

Mr. George Peter, Research Engineer, National Astronomy and Ionospheric Center will present a program on the Radio Telescope Facility located at Arecibo, Puerto Rico. Mr. Peter is a Research Engineer with the Section of the NAIC located at Cornell University. He is supervisor of a group that designs special radio receivers and antennas for use with the radio telescope. He spent two years at the Arecibo facility and will provide us with a description of the facility using slides, and tell what it is designed to do and what the professional people and the hams are doing there.

By now, many of you have attended a meeting at our new home and hence know that the Statesman’s Club is on the 19th floor of the First Federal Savings and Loan Building Plaza located at State and Main Streets. Parking under the First Federal Building is free, secure and dry.

Enter the alley marked Corinthian Street between the American Hotel and First Federal Plaza, off State Street. The end of this alley is a city parking garage which is available to you but is not free. Driving down Corinthian Street, before you get to the city parking watch for the entrance to the First Federal Parking Garage on your right. Stop at the entrance to take off or lower or tie down your antenna. This part is important as an antenna above the car roof may trigger the building sprinklers overhead. “No free car washes allowed please”. A guard will observe your car via closed circuit tv and will ask your destination as you approach the gate. You will reply that your destination is the RaRa Meeting. Then the gate will open for you to enter and park. Get to the lobby via one of the nearby elevators.

Upon arrival in the lobby from the garage elevator you must take a different elevator to the RaRa Meeting rooms on the 19th floor. You will be getting off for the “Statesman’s Club”.

Let’s make it a big turnout.



taking your special Valentine to the RaRa Dinner-Dance

This year February 14th very conveniently falls on the Saturday RaRa picked for the annual Valentine Dinner-Dance. This occasion is a wonderful opportunity to say a special thank you to the YLs for all their patience and consideration towards your ham radio hobby, which absorbs so much time and attention, as we all know.

The location is the Party House, 677 Beahan Road (west of the airport). Cocktail hour will begin at 6:30 p.m. and a cash bar will be set up and operated throughout the evening. Dinner will be served promptly at 7:30. Everyone will be served a Champagne Peach Cocktail as an appetizer. The entree choices this year are: Boneless Stuffed Chicken Breast (stuffed with rice dressing) or Choice Sirloin Strip Steak. Tickets are \$10 each for chicken and \$12 each for steak and will be available at the February meeting, at Heathkit, J.R. Amateur Radio, and from Lee Van Grol, WA2YEK (889-2536). Please try to reserve your tickets as early as possible.

Special this year is a four piece orchestra and vocalist. The orchestra leader is Peter Matina who will play clarinet and sax. On piano will be Ron Terpening, Gary Rathjen on electric bass, Bob Maher on drums and Natalie Flaherty will accompany the group as vocalist. The orchestra,

(Continued on page 2)

VE TEAM

Testing on Saturday February 20th

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://hamstudy.org/sessions/5fbbfa5610802c3eae7b5128/1>

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	w2ned@frontiernet.net
Tim Brown	WB2PAY	Ogden	tjbrown@rochester.rr.com
Pete Fournia	W2SKY	Penfield	pfournia@gmail.com
Bill Hopkins	AA2YV	Brighton	whopkin4@naz.edu
Bob Karz	K2OID	Webster	rkarz@rochester.rr.com
Joe Rowe	AG2Y	Webster	ag2y@rochester.rr.com
Harry Williams	KF2TV	Webster	harryw7872@gmail.com

LICENSE TEST RESULTS

Edward Ellingsworth	N2IUO	G	Isaac Bodder	KD2VKO	T
Gary Dann JR	KD2VKP	T	Scott Stencilik	KD2VKS	T
Michael Kennerknecht	N2MAK	G	David Manley	KD2VKM	T
Craig Howard	KD2VKR	T	Dale McConnell	KD2UWF	G
Gary Dann SR	KD2VKQ	T			

New licensees names are in **BOLD**

Next Testing Session
 Saturday February 20, 2021

RADIO ELMERS

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

RARA CALENDAR

TIM BARRETT, K9VB, MEMBERSHIP SECRETARY

February 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SSB RSGB 80M Club Champ, SSB WW SSB Activity Contest ARS Spartan Sprint	2 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test Fray	3 RaRa Monthly Mtg ONLINE 7pm ROC City Net 1.923 MHz, 7 pm UKEICC 80m Contest VHF/UHF FT8 Contest CW Ops Mini-CWT Test	4 RaRa BoD 6:30pm ONLINE ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NRAU 10m Activity Contest NCCC Sprint Ladder QRP Fox Hunt SKCC Sprint Europe	5 K1USN Slow Speed Test	6 ROC City Net 28.405 MHz, 7:30p VT, BC, MN QSO Parties 10-10 Int Winter Contest SSB EurAsia HF Championship F9AA Cup, WW EU DX Contest Mexico RTTY Contest NA Sprint, CW
7 VT, BC, QSO Parties 10-10 Int Winter Contest SSB F9AA Cup, WW EU DX Contest Mexico RTTY Contest NA Sprint, CW K1USN Slow Speed Test	8 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SSB WW SSB Activity Contest ARRL School Club Roundup	9 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test Fray NAQCC CW Sprint ARRL School Club Roundup	10 VHF/UHF FT8 Contest ARRL School Club Roundup CW Ops Mini-CWT Test RSGB 80M Club Champ, Data	11 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB ARRL School Club Roundup RTTYOPS Weeksprint NCCC RTTY Sprint NCCC Sprint QRP Fox Hunt	12 ARRL School Club Roundup K1USN Slow Speed Test	13 ROC City Net 28.405 MHz, 7:30p AWA AM QSO Party CQ WW RTTY WPX Contest SARL Field Day Asia-Pacific Sprint, CW Dutch PACC Contest SKCC Sprintathon KCJ Topband Contest OMISS QSO Party RSGB Topband Contest
14 AWA AM QSO Party CQ WW RTTY WPX Contest SARL Field Day Dutch PACC Contest SKCC Sprintathon KCJ Topband Contest OMISS QSO Party Balkan HF Contest	15 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SSB WW SSB Activity Contest OK1WC Memorial RSGB FT4 Contest Series	16 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test Fray	17 CW Ops Mini-CWT Test AGCW Semi-Auto Key Evening	18 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB RTTYOPS Weeksprint NCCC RTTY Sprint NCCC Sprint QRP Fox Hunt	19 K1USN Slow Speed Test	20 ROC City Net 28.405 MHz, 7:30p ARRL Int DX Contest, CW Russian PSK WW Contest
21 ARRL Int DX Contest, CW Russian PSK WW Contest FISTS Sunday Sprint Run for the Bacon QRP Contest	22 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SSB WW SSB Activity Contest QCX Challenge	23 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test Fray	24 CW Ops Mini-CWT Test UKEICC 80M Contest	25 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB RTTYOPS Weeksprint NCCC RTTY Sprint NCCC Sprint RSGB 80M Club Champ, CW QRP Fox Hunt	26 K1USN Slow Speed Test	27 ROC City Net 28.405 MHz, 7:30p CQ 160M Contest, SSB REF Contest, SSB FTn DX Contest UBA DX Contest, CW SC QSO Party NA QSO Party, RTTY
28 CQ 160M Contest, SSB REF Contest, SSB FTn DX Contest UBA DX Contest, CW SC, NC QSO Parties NA QSO Party, RTTY High Speed Club CW Contest Classic Exchange, CW						

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

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

ROCHESTER DX ASSOCIATION, RDXA

Tuesday 16 February, 2021 - RDXA zoom meeting - 7:30pm.

Program: TBA

Login information can be found on our website - rdxa.com



ROCHESTER RADIO REPEATER ASSOCIATION

The Rochester Radio Repeater Association, RRRRA will not be having its regular meeting on February 19th due to the Pittsford Town Hall's meeting room being closed. However, the club is having Zoom meetings on our regularly scheduled meeting nights on the 3rd Friday of each month starting at 7:30PM lasting 40 minutes. If you haven't received an invite in your email you can contact Ed Wilkonski KC2WM at wingstwofly@rochester.rr.com for web login info. All you have to do is hit the link in your email, or go to zoom in your browser and type in the meeting ID number and pass code and you're in. You may have to install the Zoom client when prompted. Or go to <https://zoom.us/download>. Remember to activate your video & audio from the bottom of the screen so everyone can see and hear you. If you use the android client for your cell phone you will only be able to see a max of 4 pictures on the screen at a time. If you use the windows client you can have as many as you want. We are currently attempting to modify our club bylaws to resume all our regular meetings on Zoom until Covid-19 passes.

Stay tuned to our web site, www.k2rra.org for current information on whether our meeting place will be available.

The elected RRRRA officers for 2020 - 2021 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

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.

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.

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>

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. Our Chemung County ARES (CCARES) organization meets the first Tuesday of the month except February on Harris Hill, next to the National Soaring Museum. Both organizations serve amateurs in Chemung, Steuben and Schuyler counties in New York and Bradford and Tioga counties in Pennsylvania. All are welcome to attend our meetings.

Both CCARES and ARAST monthly meetings are being held online until further notice. Check out the Upcoming Events at our website, www.arast.info, for details.

Our 2021 Hamfest is set to take place at the Chemung County Fairgrounds in Horseheads, New York, on Saturday, September 25, 2021.

Anyone who currently holds a ticket for our cancelled 2020 Hamfest 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 last year's ticket at this year's Hamfest, or consider it as a donation.

The 2021 Guthrie Wineglass Marathon in the Corning area is scheduled for October 3, 2021. This is our major public service event of the year, and we will again be looking for extra communicators to join us. Email EmergencyCoordinator@stny.rr.com if you'd like to take part.

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.

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 Association Hamfest is scheduled for August 21st at the Howard Community Center and we will have testing for anyone wanting to be a new Ham or upgrade!. For those who want to we offer free camping Friday night, Saturday night and leave by noon Sunday. All part of your Hamfest ticket. Contact KLARA via email if you wish to camp. Hope to see you at the friendliest little hamfest and a great breakfast shared with awesome Hams!

ORLEANS COUNTY AMATEUR RADIO CLUB

The Orleans County ARC meets every 2nd 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.

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. |

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. The meeting for Wednesday, February 17th has not been confirmed yet. We may hold a virtual meeting or an in person meeting with social distancing and masks. Check the SIARC website for updates.

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.

GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email n3dsp@lafireline.net for details.

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

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

ROCHESTER MAKERSPACE

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

ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

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

FOR SALE

Hardware for the Morse Code Multi Tool presented in the October and November 2019 RARA RAG

- Arduino MEGA copy
- 4 x 20 LCD
- SD Card board
- Rotary Encoder
- Speaker

As Is \$25

Contact:

Forest Shick, WA2MZG

fshick3@gmail.com



Hardware for the "Can You Hear Me Now" article from the March 2020 RARA RAG

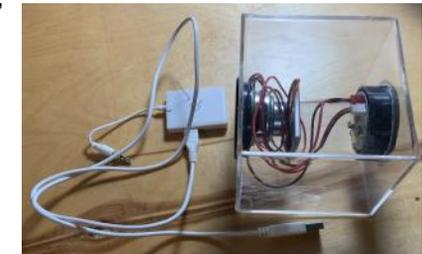
- Bluetooth Speaker
- Bluetooth Transmitter

As Is \$20

Contact:

Forest Shick, WA2MZG

fshick3@gmail.com



FOR FREE

I am offering a free, new in-the-box Kantronics KPC-3 (non plus) packet modem. It has 3 manuals, electrical adapter and various hardware and cables. It has never been used. It needs a good home.



Contact:

Russ Lipp, N2EZX

rlipp1936@gmail.com

RARA OFFICERS, DIRECTORS AND COORDINATORS

OFFICERS

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Drumlins Amateur Radio Club Ltd. (DARC)

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Genesee Valley Amateur Radio Assn.

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Monroe County ARES / RACES

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Rochester Makerspace

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Rochester Radio Repeater Association (RRRA)

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Rochester VHF Group (RVHFG)

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Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR: sbenton2@rochester.rr.com

XRX Amateur Radio Club

Brian Donovan, K2AS: k2as@outlook.com

MARCH RAG DEADLINE FEBRUARY 15, 2021

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

<https://attendee.gotowebinar.com/register/4030428509327091726>

CONTACT WEBMASTER@ROCHESTERHAM.ORG FOR SUPPORT

Rochester Area Repeater Listing

THE RARA RAG

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