



# Full Quieting

The Official Journal of The Bellbrook Amateur Radio Club



December 2022 — Issue 16

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## From the Editor

Happy December! Already? How did that happen? I wonder that every year.

The weather is unsettled as I write this, we had thunderstorms roll through last night, now the temperature is plummeting with high wind chill! Time to get the firewood all set up for a cozy room to sit in. December!!!

The Holiday season has snuck up on us. Whether you celebrate Christmas, Hannukah, or something else, please take a moment this month and think fondly of our club, its members, and what we've accomplished this year. Pray for our (club and member) health and well being if you feel inspired to do so. I've enjoyed this year as Full Quieting Editor and will continue to do so in 2023. Thanks for reading!

The one area where I will continually speak about is **getting more of you involved in writing articles**. We have some gaps in the newsletter that I would like to fix next year. CW, for example, is an area where I lack expertise, but there is a lot of club interest. Another would be contesting. I have blind spots to those areas and it would help for you accomplished writers to send me items in those areas, or frankly, any item that is of interest to you. Chances are, there are many BARC members that share that interest and would enjoy reading about it.

Another area of interest is our Member Biographies. I will drop off sheets in the BARC Clubhouse (at the sign in podium) describing the kinds of things you may want to include (however there is no required format for your bio). Also look at the guidelines on page 2 and the back of the newsletter. Feel free to send a bio, it's a good way for us to get to know each other better!

**73, Ray Hitt, [N8VMX](#)**  
(937) 974-6781



<http://www.clipartbest.com/>

**Your views are important to BARC and  
to *Full Quieting***  
**Please make yourself heard at the club,  
via [email](#), and on the air...**

## **2022 BARC Officers and Directors**

President: Paul Sharp, [KD8OPN](#)

Vice President: Vacant

Secretary: Jim Gifford, [KD8APT](#)

Treasurer: John Westerkamp, [W8LRJ](#)

Senior Director: Jacalyn Parrett, [KE8LZE](#)

Junior Director: Don Parker, [KB8PSL](#)

## **2022 Coordinators**

Clubhouse: Jim Lusk, [KC8EFD](#)

Comm Center: John Westerkamp, [W8LRJ](#)

Contesting: Ken Gunton, [W8ASA](#)

Education: Jim Dean, [W8UD](#)

Emerg Preparedness: Roger Parrett, [NQ8RP](#)

Field Day: Ray Hitt, [N8VMX](#)

Full Quieting Editor: Ray Hitt, [N8VMX](#)

Hospitality & Librarian: Natinka Siwecki, [KD8NUA](#)

IT: Vacant

Lunch Bunch: Jim Totten, [WA8HUB](#)

Net: Paul Sharp, [KD8OPN](#)

Public Service: Don Parker, [KB8PSL](#)

QSLs: Roger Hoffman, [WB9BXT](#)

Repeater: Russ Roysden, [N8NPT](#)

TechNight/Workbench: Trevor Clarke, [K8TRC](#)

Webmaster: John Westerkamp, [W8LRJ](#)

## **BARC Net: Every Sunday, 8 PM Local**

147.045 (+) (no PL)

[Alt = 443.675]

## **Directions to BARC Clubhouse and Comm Center**

Rooms 1 & 3 Lower Level Sugar creek Elementary School

51 S. East Street, Bellbrook (One block east & one block south from the traffic light in downtown Bellbrook)

Enter at South end of building

# Member Interviews

BARC wants to hear from you!

Whether you're a long-time BARC member or a brand new one, young or old, please tell us about yourself. Here are some simple guidelines, although you're free to use whatever format you're comfortable with.

This page is all about you. It's your chance to let BARC members to get to know you better.

Here's are a few sample questions to help get you started, but you can write whatever you want.

Please send us some pictures of anything you want BARC to see (you, station, antennas, pets, family, anything)

- When you were first licensed?
- How did you learn about Ham Radio (HR)?
- Why did you become a Ham?
- What are your current HR interests?
- What are you most passionate about regarding HR?
- Tell us about your stations (past, present, and future)
- What was the most exciting thing that happened to you in HR?
- What do you do for a living?
- Would you like to say something about your family?
- Do you have other hobbies or interests?
- Any other comments for BARC?



# What's Up BARC?

Ray Hitt, [N8VMX](#)

What's Up BARC?



Announcements regarding any member news including: new equipment, antennas, grandchildren, children, pets, operating news, etc.

## New Ham!

**Jordan Rio** passed his Technician License exam and is now **KE8VYB**. Congratulations Jordan!!!

## For Sale

**Yaesu FT-70DR 144/430 MHz Digital/Analog Handheld Transceiver - System Fusion C4FM / FDMA**

Includes two extra batteries (total 3), comes with the rapid charging cradle not supplied with radio so was extra cost. Total cost of extras alone is \$96.00. I am asking \$199.95 for everything. Radio works great, I just don't have a need for it anymore.

Larry Baker, KB8EMD

937-750-1053 (cell)

[llbaker4330@hotmail.com](mailto:llbaker4330@hotmail.com)

## BARC Club Dues for 2023:

You still have time to pay the 2023 BARC Membership Dues and become eligible for fabulous prizes! Dues are \$15 per member per year or \$18 per family per year. You can bring cash or a check made out to BARC to any Membership Meeting or send a check made out to BARC to:

BARC

P.O. Box 73

Bellbrook, OH 45305

For your convenience, you can also send your payment via PayPal to [w8lrj@arrl.net](mailto:w8lrj@arrl.net). Please include your name and callsign in the Comments.



# Greeter's Greetings

Glenn Rodgers, [KE8LZD](#)

Hello BARC... I want to begin by saying I'm sorry I couldn't be with you all at the November Membership Meeting, but I was traveling at that time. It's an annual trip for my family and one that we look forward to every year. Our destination is Amelia Island, Florida, for our yearly family reunion (on Marian's side of the family). As many as possible congregate on Fernandina Beach, where some live, others rent beach houses, and we all get together for a week of fun, food, and remembering of the family history and stories. It's really a wonderful week of family, food, and beach!



But this offering does have some relationship to BARC and ham radio, as I'm going off in "another direction" this year... expanding both my radio activities and fun. I'm planning to try some QRP radio (a great excuse to play with my new Xiegu X6100 radio). I'm still getting familiar with it, though I have had it just long enough to start making some "improvements" to it. The first upgrade was addition of protective side handles (which included a piece of parachute cord for making a carrying handle). I then added a couple of



"heat sinks" I picked up from Amazon, as I'd noticed some heat buildup (not hot... just heat)... want to take every precaution I can for keeping my new toy well and happy! It has a very nice built in tuner, and a decent internal battery which will get me 5



watts. With my Bio-eneo battery I can reach out to the world with a mighty 10 watts! ...but back to our trip...

Marian is from Alcoa, TN (just south of Knoxville) and grew up looking at the Great Smokey Mountains each morning... I can see how that gets in your blood, as we have to visit at least a couple times a year for her to get her "Mountain Fix" (or else she gets a bit touchy). So we've gotten in the routine of leaving for the annual reunion a few days early, staying somewhere in Maryville or Townsend, TN ... very close to the park, but far enough away from Gatlinburg to avoid (some) of the traffic. The first place we return to is Cades Cove in the Great Smokey Mountain National Park. She grew up making the 17 mile circle, looking at cabins, churches, and cemetery's from the first settlers of this beautiful area. She knows all the trails (many unmarked) as well as the names and history of the original residents and their families. She knows the history of the park and works done by the CCC when it was formed, the good times and the bad... and probably all of it hard times for these folk. I first made this drive with her, and my soon to be in-laws, over 40 years ago... and have come to love the area and look forward to our visits almost as much as she does. But this visit was going to have something new added... I promised to stop and try to make a 40m contact, and try different areas of the route until I succeeded (if possible in the mountains... with only 5 watts)...



## Greeter's Greetings (continued)



Trying to keep it as simple (and quick to setup) as possible... my plan was to try the 6100 using just the internal battery, a telescoping 40m antenna attached directly to the radio, and a counterpoise clipped onto the antenna. I'm not really sure how or why... but it actually worked on the first try! I found I could receive a number of people, reception was much better than I'd anticipated. And surprising myself, I was actually able to get a comeback while calling CQ. Pretty weak, but understandable on both ends... total success! Marian was exceedingly patient and supportive of my efforts and even took a few pictures of the effort... she's definitely a keeper, I'm a lucky man. I also decided this was not the ideal way to work this radio... even though it worked. But I'm sure the "fatal flaw" in my plan / setup, is in using the antenna connected directly to the radio (BNC). As I walked along (dragging the counterpoise behind)... never mind that I got a lot of weird looks and questions from folks at the pull-out where I was operating... but I quickly realized the antenna was "unwieldy" and somewhat questionable as to how well the radio's BNC connection would hold up to this abuse. I decided for the rest of this loop... any activity would need to be "stationary" with my trying not to put any strain on the

mount. Seemed to work well enough, but I'm not planning to do it this way again. Better to setup (whatever) antenna I use with a fixed mount and coax connection to the little 6100... I'm certain it will last much longer this way.

So there you have my; reason for missing the last meeting, a solid recommendation for Cades Cove (if you haven't made this trip already), and the 1st activation of my QRP X6100 radio! This reunion will have quite a few "First's" I hope... After making it to the beach house on Sunday evening... I made my 1st Echolink connection, called into our Sunday Night Net and got through. So my suggestion for you (especially new hams)... stay connected, take a radio with you whenever you're on any kind of trip, doesn't matter if it's HF or VHF, there's someone to talk to... and it's just another way to get on the air....

**73, Glenn, [KE8LZD](#)**



# Officer, Director, and Coordinator Inputs

## BARC has six Officers and Directors and 15 Coordinators

- Some have monthly columns, and the rest can use this space to let you know what they're doing and what's happening in their areas of responsibilities.
- Feel free to contact them if you have specific requests. All their emails are listed and hyperlinked.

- **BARC Net: Paul Sharp, KD8OPN:** Every Sunday at 8:00 PM you can listen to and participate in the exciting BARC Net, on 147.045. For November there were approximately 63 check-ins lasting 139 informative minutes. Topics range from Open Mike, what is on your workbench for the fall and winter time frame, plans for Thanksgiving and what we are thankful for. We often have non BARC members checking in to enjoy the Net.

Our faithful Net Controllers are Jim Dean W8UD, Eric Vinande KG6NFJ, Tink Siwecki KD8NUA, Paul Sharp KD8OPN, and John Westerkamp W8LRJ.

- **Treasurer: John Westerkamp, W8LRJ:** November saw a lot of dues income and a generous \$100 donation from Roger (NQ8RP) and Jackie (KE8LZE) Parrett. Expenses were for the Lions Club Parade and the Spectrum Internet service. We are in a great position financially as we close out 2022 and enter 2023. Remember that November marks the beginning of the 2023 dues season so get your payments in when you can. Yearly membership is \$15 (\$18 per family). You can send a check made out to BARC to the club P.O. Box 73, Bellbrook, OH 45305, or pay via PayPal by sending to [w8lrj@arrl.net](mailto:w8lrj@arrl.net). Thank you so much for your support!
- **Repeater Network and Nodes: John Westerkamp, W8LRJ:** Want to see what a repeater site looks like? Watch for upcoming Shack Tours where we hope to schedule a trip to the BARC repeater site for a tour. A reminder that when using Allstar or Echolink, if the repeater is in constant use and unable to drop the carrier, a local user will not be able to send a \*73 to disconnect and the connection will remain active forever! I have since taken steps to prevent this, but if it happens to you, please text me at 937-271-3119 and I can disconnect the node for you. You can also use the Contact Form on the website to reach me.
- **Website: John Westerkamp, W8LRJ:** Be sure to watch the website for various winter events and contests as we enter the heavy contesting season that began in October. Don't forget about the Member Forum where you can ask questions and make announcements. The website has a new section *Mentors and Experts!* You can find a list of experts by selecting *Mentors and Experts* under the *Membership* tab. We have already had several questions via the Contact page for our Experts!
- **Communication Center: John Westerkamp, W8LRJ:** Lots is happening at the Communication Center! BARC installed a new Spectrum Internet service that comes into the clubhouse and include phone service so we have a clubhouse phone once again. With the Internet modem in the clubhouse, we can move our router into the clubhouse, too, making it much easier to maintain our network. This month we began installing a tilt-over mount for the R9 after scouting out possible locations on the rooftop. Hopefully, we will get the R9 up before the weather turns against us.
- **Full Quieting Editor: Ray Hitt, N8VMX:** See [Page 1](#)
- **Greeter: Glenn Rodgers, KE8LZD:** See [Page 4](#)
- **Lunch Bunch: Jim Totten, WA8HUB:** See [Page 7-8](#)
- **Field Day Coordinator: Ray Hitt, N8VMX:** See [Page 10](#)



# Lunch Bunch

Jim Totten, [WA8HUB](#)

Hello my fellow lunch lovers. It is now the very end of November 2022. It is time to take a hard look at how our lunch bunch will work forward into December and the new year 2023.

First I want to thank all of you who responded to my letter/note/email sent Nov. 25, 2022. My conclusions from your response next.

1. We will have lunch on December 6, 2022. The restaurant is Another Broken Egg Cafe. The invitation/announcement message went out November 29, 2022. We already have a group signed on.

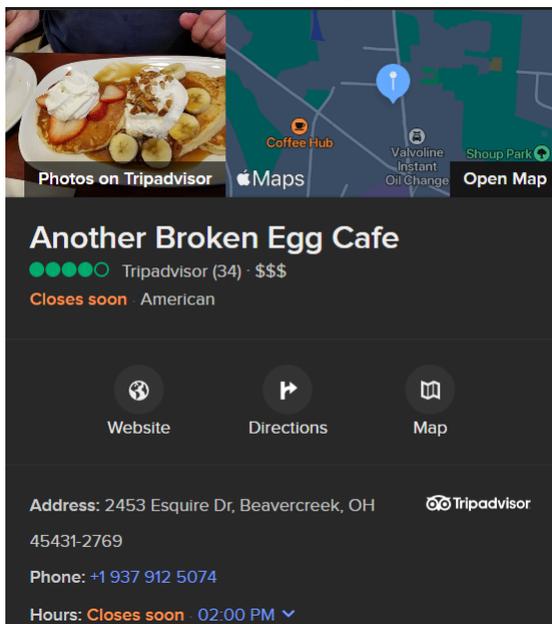
2. The consensus was that two lunches per month was a good schedule. Previously, I had been just going with every other week regardless of how they lined up with position in the month. I think that we should have a schedule much like our club activities. Example, Planning meeting is always First Thursday; General meeting Third Thursday. My proposed Schedule is the Second and Fourth Tuesday of each month. If a scheduled Tuesday gets slammed by some unforeseen event the lunch is just cancelled. The invitation messages will go out Wednesday or Thursday of the previous week.

Now, how will the lunches be selected? Accompanying this information page is a new chart listing our current set of restaurants. The restaurants are listed in the order most popular (at least for the first few) and with a balance variation. No two chicken restaurants in sequence. This published list is the order we will select each lunch day. You now know what the whole order is and know what's coming next.



73, Jim, [WA8HUB](#)

**December 6th, 2022, 11:15am**



# Lunch Bunch 2023 List

Jim Totten, [WA8HUB](#)

| Date     | Restaurant   | Address                                       | City                          | Phone Number   |
|----------|--|---|-------------------------------|----------------|
|          | Cherry House Cafe  | 1241 Meadowbridge Dr.                         | Beavercreek, OH 45434         | (937) 320-6200 |
| 12/06/22 | <b>Another Broken Egg Café<br/>(open 7:00 am to 2:00 pm)</b> | 2453 Esquire Dr.                              | Beavercreek, OH 45431         | (937) 912-5074 |
|          | China Garden Buffet  | 112 Woodman Dr.<br>Airway Shopping Center     | Dayton, OH 45431              | (937) 781-9999 |
|          | First Watch<br>7:00 am to 2:30 pm                            | 5245 Cornerstone North Blvd                   | Sugarcreek Township, OH 45440 | (937) 732-9013 |
|          | Submarine House  | 3195 Dayton-Xenia Rd.                         | Beavercreek, OH 45434         | (937) 429-8650 |
|          | Roosters Wings   | 2430 N. Fairfield<br><i>The Shoppes at FC</i> | Beavercreek, OH 45431         | (937) 702-9500 |
|          | Yaffa Grill<br>Mediterranean Food                            | 2844 Colonel Glenn Hwy                        | Fairborn, OH 45324            | (937) 429-4959 |
|          | Chic-Fil-A   | 5301 Cornerstone N Blvd,                      | Sugarcreek Township, OH 45440 | (937) 439-1700 |
|          | City Barbecue  | 2330 N. Fairfield Rd.                         | Beavercreek, OH 45431         | (937) 320-0000 |
|          | Giovanni's Pizzeria e<br>Ristorante Italiano                 | 215 W Main St.                                | Fairborn, OH 45324            | (937) 878-1611 |
|          | Marion's Piazza  | 1320 N Fairfield Rd.                          | Beavercreek, OH 45432         | (937) 429-3393 |
|          | Red Robin  | 2671 Fairfield Commons Blvd.                  | Beavercreek, OH 45431         | (937) 320-9800 |
|          | Beavercreek Pizza Dive                                       | 4021Dayton-Xenia Rd.                          | Beavercreek, OH 45432         | (937) 431-8669 |



# On Air Quick & Cheap!

Glenn Rodgers, [KE8LZD](#)

Ever taken a drive and wished you had a radio along, maybe reach out a bit further than with your HT when you can't reach a repeater? Or maybe you've thought about a POTA activation, or just going portable to see if you could make a few contacts? But you haven't quite got that 'super duty do all go box' completed (or maybe you do but it's too much work for just an hour or so)? Well I found a radio that I can take anywhere, relatively cheap, and quick to setup... works for me and fun to play with.



I ordered a Xiegu X6100 after a bit of YouTube videos, considered the good & bad reviews and issues, and took the chance. It does have a lot going for it: internal battery good for 5 watts, internal tuner 5:1, onboard SWR graph, and not too expensive for me to take a chance on. I did order

'side handles' to offer some protection for the knobs & buttons... and it included some paracord to fashion a carry handle. Since the Xiegu radios are known to generate a bit of heat, I ordered a couple of aluminum heat-sinks from Amazon. All I need is an antenna and I'm ready for a quick setup.

I was getting ready for our annual family reunion on Fernandina Beach, FL, and had seen a video on making a 20m antenna from lamp cord... and just happened to have some around the shack. To make the antenna, I started with a dual terminal BNC connector, attached the light cord wires to the terminal posts. Then I measured about 16' and cut one of the wires. Cut the second wire about 35' and separated the wires... and made a small loop in the 16' vertical, attached a fishing snap swivel to the 35' counterpoise.

That was my antenna for the beach. The idea was to use a 16' lightweight telescoping antenna stuck in the sand to get the antenna up... put fishing sinkers on the counterpoise and get it out in water. I was thinking the ocean should make a great ground-plane, and that I could cut down the counterpoise or vertical as needed to get a tuneable SWR. It works better than expected and without cutting anything!

Now this is my 'take along' radio, and I can skip the lightweight mast if there's a tree handy, or if needed... it's attached to the receiver hitch on my truck. So that's my rig, quick & cheap. Hope this gives you some ideas for the next time you had a radio with you!



73, Glenn, [KE8LZD](#)



# Field Day Coordinator's Report

Ray Hitt, [N8VMX](#)

The December edition of QST had a summary of 2022 ARRL Field Day. I wanted to extract a few bits of information from the article for those of you who either don't get QST or don't want to pour through the multiple pages of very small printing.

## Summary Facts for 2022

According to ARRL, the 2022 ARRL Field Day showed a return to pre-COVID environments (my own opinion is that we still have a way to go). There was a small increase in portable (classes A and B), mobile (class C), and Emergency Operations Center (EOC – Class F) station activations. Even though there was poorer HF propagation than the recent past, 4929 station entries were submitted from the US, Canada, and several DX countries.



Rule changes were implemented because of an ARRL survey conducted last January. Some of the rule changes involved: limiting the highest power level to 100W RF output power; allowing Class D (home) stations to contact other Class D stations for points; allowing aggregation of individual stations together or with club scores; revising the media publicity criteria to require that publicity be obtained and not just attempted.

Due to loosening of public gathering restrictions compared to 2020 and 2021, there was an increase of Class A and Class B stations which now was over 37% of all entries. Meanwhile, Class D and E home stations fell from 67% in 2021 to 58% in 2022. The total number of entries submitted fell 18% from 2021 levels to 4,929 entries in 2022. However, the number of participants increased by 11% to 29,679 participants. While this is less than the pre-COVID level of 36,240 in 2019, there were about 3000 more participants than last year.

## BARC's Results

BARC operated as Class 4A in 2022, that represents 4 transmitters operating as a club in portable operation under emergency power. ARRL reported results in Class A (1A through 17A), Class B, Class C, and Class F. Focusing on the Class 4A results only (to compare apples to apples), the highest score was awarded to Huntsville (Alabama) ARC with 4,682 contacts and 16,650 points. The highest 4A score in Ohio was 2<sup>nd</sup> place Portage County ARC with 3,367 contacts and 11,766 points. BARC was 48<sup>th</sup> out of 153 Class 4A entries with 732 contacts and 3,448 points.

## My Take on Things

BARC pulled together as a club this year, and the event was well executed by a well-oiled machine as compared to years past. We resumed a pre-COVID posture operating at Sackett Wright Park. Our score was off a bit from prior years but was still respectable. We did leave points on the table though, that's an area we can improve on (i.e. public official attendance, copying the ARRL message, and so on). But that was more than offset by the social interactions and outreach we displayed to the community. I'm looking forward to next year's Field Day, after a much-deserved rest for a couple months! Till then...

73, Ray, [N8VMX](#)



# Time in the Field – GPS and NTP (Part 3)

Ray Hitt, [N8VMX](#)

## Intro

This is the third and last part of a series of articles I wrote about setting up GPS as a time source for a computer used in the field, away from the Internet. In Part 1, I showed how to set up a USB GPS puck, *gpsd*, and *ntp* on a Linux computer. In Part 2, I showed how to calibrate the GPS, cancelling most of the timing errors due to receiving data through the GPS's serial port. Here in Part 3, I will describe how to get a USB GPS puck set up in Windows by using Linux in a Virtual Machine (VM) using some software called VirtualBox.

## Description of VirtualBox

Briefly, VirtualBox is software that lets you set up a “virtual environment” where you can install another operating system in a controlled “sandbox” and run software compatible with it, without perturbing the pre-existing software on your computer. VirtualBox can set up a virtual machine (VM) running any version of Windows, Linux, MacOS, etc. In this article, I will create an Ubuntu version 22.04 “VM”(the “guest” operating system) on top of Windows 10 (the “host” operating system). When you create a VM, VirtualBox will set aside some hard drive space for the guest operating system, and allocate some memory and processors for when the guest operating system is running. When Ubuntu is running within VirtualBox, it appears the same as it would if you had installed it on the computer directly, except that it only shows a virtual “hard drive” you set up within VirtualBox (it's really just a file on your host OS), and the amount of memory within Ubuntu is only that amount you set aside for it. It's as if you set aside a “sandbox” for the VM to run in, isolated from the real-world except for the things you allow in.

## Operating System Requirements

VirtualBox can be installed on Windows 10/11, MacOS, and Linux. Within the BIOS, before your computer boots up, there is a setting for virtualization for Intel and AMD processors (depending on what you're using). The setting should be enabled for VirtualBox to work best. Since all the BIOS setup programs are different, I can't really help you on this, you'll have to poke around or research your own computer on the Internet or ask our BARC IT gurus.

VirtualBox also benefits from multiple core processors and lots of RAM; when you run a “virtual machine” (VM), VirtualBox fences off some processor and RAM from your host OS so that the VM “owns” it while it's running. The more processors and RAM you have available, the better your host machine can run while the virtual machine is also running.

## Installing VirtualBox

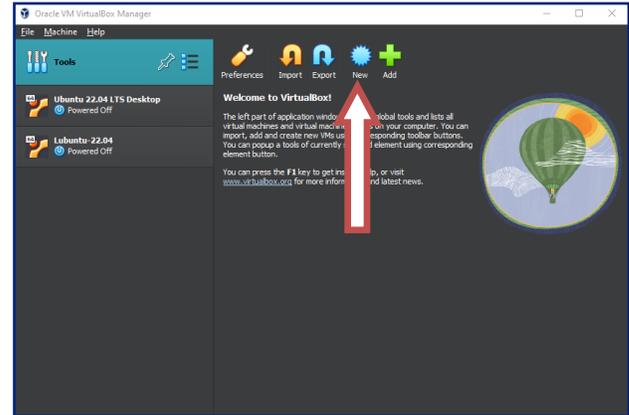
VirtualBox is easy to install, and it's free. Download it from the VirtualBox [download page](#), just select which host operating system you're using; Windows, MacOS, Linux, or Solaris. Once the VirtualBox setup program is downloaded, run it to install VirtualBox. All defaults can be taken with one exception: unless you have Python installed on your computer, you should uncheck the option for VirtualBox Python support, otherwise the installation will fail. Python support would only be needed if you're writing Python programs to directly control VirtualBox, and that's way beyond the scope of this article. If you want to start VirtualBox after the installation has completed, there's a checkbox to do that.



# Time in the Field – GPS and NTP (Part 3) - Continued

## Running VirtualBox

Once VirtualBox starts, you'll need to set up an operating system to run within it. I'll do an example with Ubuntu, which is a very popular version of Linux and what I used in Parts 1 and 2 of this series. Both Ubuntu and Raspberry Pi OS are based on Debian Linux and share mostly identical commands and file structures. Use whichever Linux version you want. If you can't decide, there's no reason you can't set up two, three or more operating systems, just don't try to run them all at once! Just go to the download pages(s) of the operating system(s) you decide on and download an ISO image of the latest version. An iso image is normally used to burn a DVD, but there's no need to do that here, VirtualBox has a virtual DVD-ROM that can map to an ISO file directly. For the latest Ubuntu, download here from the Ubuntu [download site](#). The iso file will be saved into your Windows download folder. It's fine to leave it there, you can map to its location in VirtualBox later.

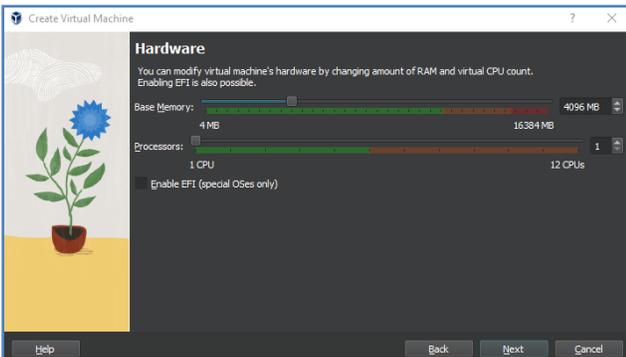
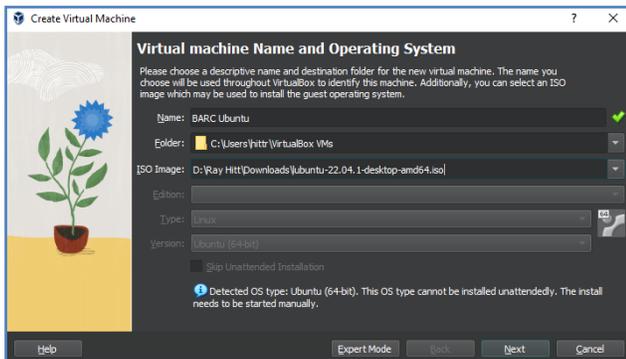


Within VirtualBox, hit the “New” button to create a new virtual machine.

A new dialog box will pop up to create the virtual machine. Give your new VM a name and select the ISO image you downloaded. A new feature is the ability to perform “Unattended installation”. Since there are still problems with that option with the latest version of Ubuntu, I would check the box that says “Skip Unattended Installation” (if it even gives you a choice).

The next dialog allows you to assign hardware resources to the new VM. We can stick to defaults since processing GPS puck data doesn't require a lot of computer resources. You can always increase them later if you decide to do something more in this VM. The downside of allocating too many hardware resources to your VM is that those resources are not available for the host OS while the VM is running. That could affect your system performance. Conversely, if too few resources are allocated to the VM, it will not perform as well.

The next dialog allows you to specify the size set aside for the VM hard drive. You have a lot of discretion for how much space to use. For this example, I will set aside 25.00 GB. This is a small value for a typical VM, normally I would allocate 50-100 GB. This all depends



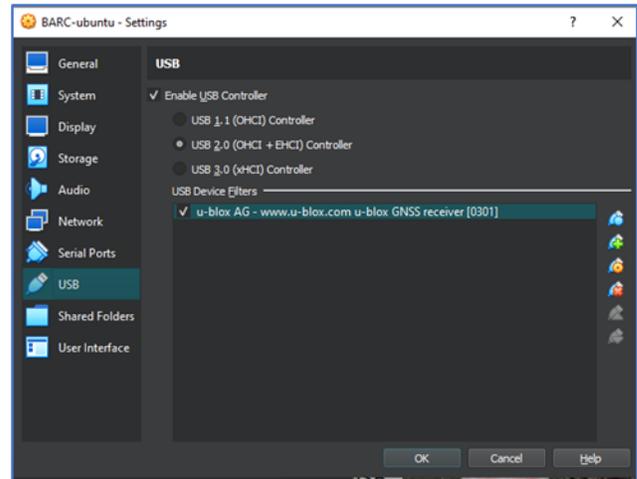
# Time in the Field – GPS and NTP (Part 3) - Continued

on how much hard drive space you have available to devote to the VM. If you intend on using the Ubuntu VM for other things later, go ahead and make the VM hard drive larger now because it's difficult to do later.

A summary screen will then appear, which is your chance to go back and change anything. Once you accept the choices, the VM is ready. Click "Start" to boot up the Ubuntu VM and it will start the Ubuntu installation. I'll leave those details out of this article in the interest of brevity, if anyone has problems, there are good step by step guides on the Internet. I put some references at the end of this article as well.

There is an additional step you need to perform for the GPS puck to be used in the Ubuntu VM. VirtualBox needs to be told that you want the GPS puck to be used in the Ubuntu VM. By default only the keyboard, mouse, and external hard drives are allowed in. But there's a way to detect the GPS puck and let it in.

Plug your GPS puck into the USB port on your computer. With the Ubuntu VM powered off, select it in VirtualBox and then hit "Settings". On the settings dialog, select "USB" and then the "+" button on the right side of the dialog. This will show a drop-down list of USB items that are currently plugged in that you can add to Ubuntu. The exact setting for your GPS puck may be different, but for mine, it showed up as "**u-blox AG – www.u-blox.com u-blox GNSS receiver [0301]**". Select this item then start the Ubuntu VM. During the bootup, you may hear the typical Windows sound for when a USB item is unplugged. That means your GPS puck was "unplugged" from Windows and "plugged" into the Ubuntu VM {it can't exist in both at the same time}. To verify that your GPS can be seen in Ubuntu, open a terminal window and type:



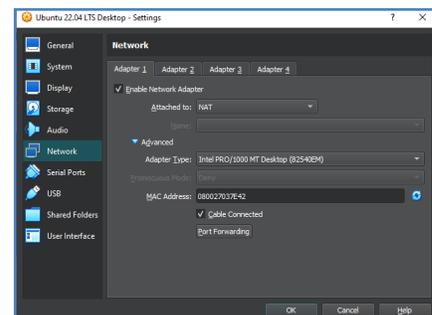
```
ls /dev/ttyA*
```

If your GPS shows up, you should see `/dev/ttyACMO` after entering the command (`ttyACMO` is a serial port).

At this point, you can install `ntp` and `gpsd` as described in Part one of this series. After you're installed them, `ntp` will be working within the Ubuntu VM, however time is still not being passed to the Windows host OS. There's a couple more things to do before that can happen.

**Set Up VirtualBox Virtual Ethernet Adapters:** VirtualBox allows the VM to connect to the outside world in several ways. I won't spend a lot of time discussing all of them, but there are two that I want to set up for this application; the default "NAT" (network address translation), and optional "Host-only" adapter. I will set up the Ubuntu VM to connect to the Internet through Adapter 1 in "NAT" mode and connect to the host Windows 10 system through Adapter 2 in "host-only" mode. Note there are up to 4 Ethernet virtual adapters you can set up in VirtualBox through the GUI, we only need two for this article.

"NAT" mode sets up the VM with an Internet address totally separated from the other computers on your network. In my example, the local computers are on a network based on 192.168.1.xxx (where xxx is 000 through 255). The Ubuntu virtual Ethernet adapter 1 has an address of 10.0.2.xxx. The VM can't see the other computers on the home network through this virtual adapter, but all requests for Internet access from this adapter are routed through your router and out to the Internet.



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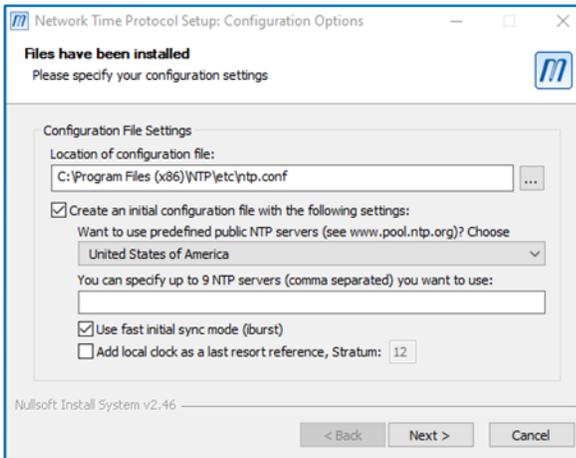
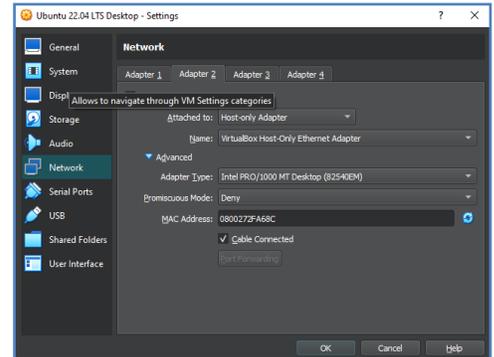


# Time in the Field – GPS and NTP (Part 3) - Continued

This allows NTP from the Ubuntu VM to access the Internet, to access the Internet NTP time server pools, which would be the normal operating mode with the Internet available.

The second adapter configured for “host-only” mode will set up an Internet address on the VM of 192.168.56.109 or something similar. With this IP address, the VM can’t see other computers on the network, or the Internet, but it can see the host OS itself. This is useful to pass NTP information from the Ubuntu VM up to the Windows 10 host OS which will come in handy when the computer is away from the Internet.

**Set Up NTP On Windows Host OS:** By default, Windows uses its own variant of *ntp* called *sntp* to sync the computer clock to (typically) an Internet time source, usually *time.windows.com*. It is possible to disable the default Windows Time Service and use actual *ntp*, as in Linux. Meinberg provides a downloadable version of *ntp* that will set up NTP on Windows. The benefit of this is that you can edit *ntp.conf* as we did in Part 1 for Linux. We can add lines into *ntp.conf* that will point to additional NTP servers, including the NTP server we just set up in the Ubuntu VM. It lets you tweak the NTP update rates and use multiple servers, which is why I dumped *sntp* and now use *ntp* on all my computers.

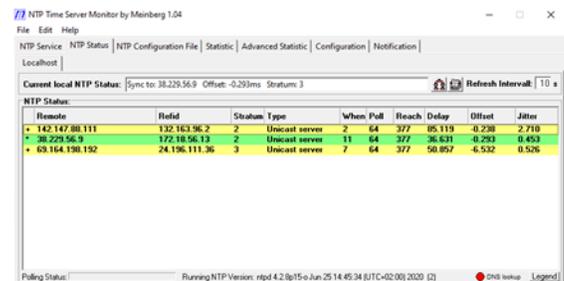


Go to [Meinberg’s download site](#), and download two things, 1) the latest [NTP for Windows](#), 2) the [NTP Time Server Monitor](#). Run the *ntp-4.2.8p15-v2-win32-setup.exe* installation program and accept all defaults for the first few screens. There will be a configuration file where you can specify some default settings, in our case, for the United States, as shown here. Accept all other defaults and let this installer finish up.

After it’s finished, then run the *ntp-time-server-monitor-104.exe* installation program. Accept all defaults for this program. Once it’s installed, you can find it, and the other NTP utilities in the Meinberg folder in the Start Menu. **Pro tip:** if you want to make changes to the *ntp.conf* settings in

Windows once these programs are installed, right click on NTP Time Server Monitor and tell it to “Pin To Taskbar” (this makes it easier to find on your Taskbar), then right click on it down on the Taskbar and tell it to “Run As Administrator”. This will let you make changes to the NTP configuration, then restart the NTP process, which requires administrator privilege.

When the Meinberg NTP Time Server utility is running, you’ll see something like this. However, there is currently no reference to the GPS puck on your Ubuntu VM. You’ll need to add another line in *ntp.conf* to map to the IP address of the Ubuntu VM you set up. How do you do that? Pop back into the Ubuntu VM you set up earlier, and within a terminal window, type `ip addr` Make note of the ip



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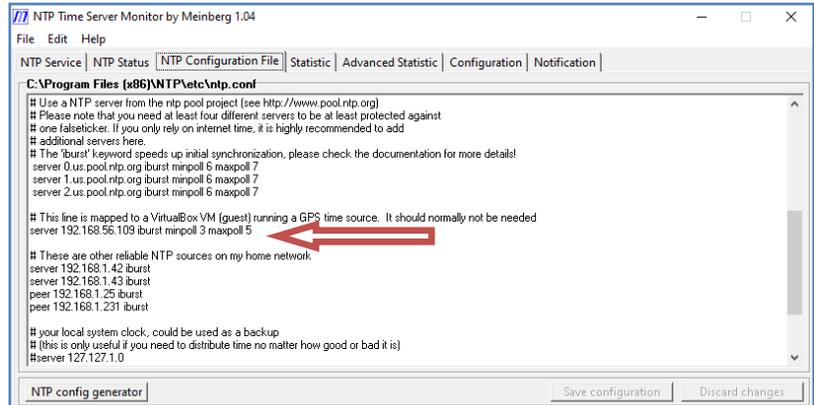
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# Time in the Field – GPS and NTP (Part 3) - Continued

address, then in the “NTP Configuration File” tab in the NTP Time Server Monitor program, add “*server 192.168.56.10x iburst minpoll 3 maxpoll 5*” as shown here. Once you save the configuration, the NTP Time Server Monitor will ask permission to restart NTP which will place all these changes into effect.

This completes all the steps you need to set up NTP. You should see accurate time (within 10 msec) on your computer even without Internet access. If you have difficulty setting this up, we can do a Tech Night project on this, or I can answer questions directly. Good Luck!

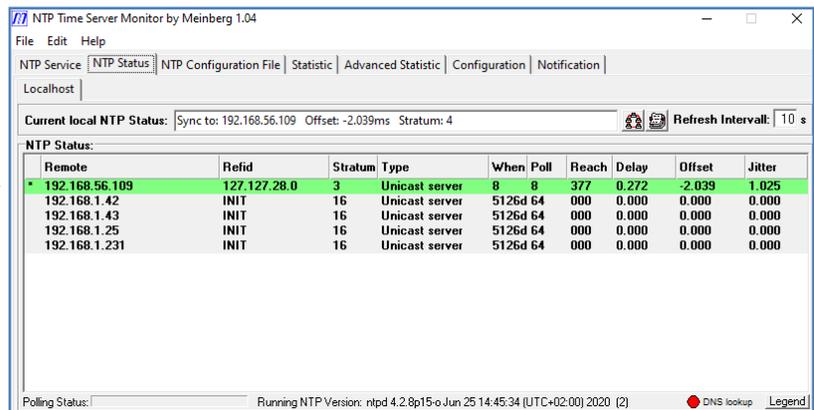


```
C:\Program Files (x86)\NTP\etc\ntp.conf
# Use a NTP server from the ntp pool project (see http://www.pool.ntp.org)
# Please note that you need at least four different servers to be at least protected against
# one falseclocker. If you only rely on internet time, it is highly recommended to add
# additional servers here.
# The 'iburst' keyword speeds up initial synchronization, please check the documentation for more details!
server 0.us.pool.ntp.org iburst minpoll 6 maxpoll 7
server 1.us.pool.ntp.org iburst minpoll 6 maxpoll 7
server 2.us.pool.ntp.org iburst minpoll 6 maxpoll 7

# This line is mapped to a VirtualBox VM (guest) running a GPS time source. It should normally not be needed
server 192.168.56.109 iburst minpoll 3 maxpoll 5

# These are other reliable NTP sources on my home network:
server 192.168.1.42 iburst
server 192.168.1.43 iburst
peer 192.168.1.25 iburst
peer 192.168.1.231 iburst

# your local system clock, could be used as a backup
# (this is only useful if you need to distribute time no matter how good or bad it is)
#server 127.127.1.0
```



Current local NTP Status: Sync to: 192.168.56.109 Offset: -2.039ms Stratum: 4 Refresh Interval: 10 s

| Remote         | Refid        | Stratum | Type           | When  | Poll | Reach | Delay | Offset | Jitter |
|----------------|--------------|---------|----------------|-------|------|-------|-------|--------|--------|
| 192.168.56.109 | 127.127.28.0 | 3       | Unicast server | 8     | 8    | 377   | 0.272 | -2.039 | 1.025  |
| 192.168.1.42   | INIT         | 16      | Unicast server | 5126d | 64   | 000   | 0.000 | 0.000  | 0.000  |
| 192.168.1.43   | INIT         | 16      | Unicast server | 5126d | 64   | 000   | 0.000 | 0.000  | 0.000  |
| 192.168.1.25   | INIT         | 16      | Unicast server | 5126d | 64   | 000   | 0.000 | 0.000  | 0.000  |
| 192.168.1.231  | INIT         | 16      | Unicast server | 5126d | 64   | 000   | 0.000 | 0.000  | 0.000  |

## 73, Ray, [N8VMX](#)

### References:

[Part 1 – October 2022 Full Quieting, Page 22](#)

[Part 2 – November 2022 Full Quieting, Page 10](#)

VirtualBox: <https://www.virtualbox.org/wiki/VirtualBox>

VirtualBox Virtual Networking: <https://www.virtualbox.org/manual/ch06.html>

Ubuntu install tutorial: <https://ubuntu.com/tutorials/install-ubuntu-desktop#1-overview>

How to run Ubuntu in VirtualBox: <https://ubuntu.com/tutorials/how-to-run-ubuntu-desktop-on-a-virtual-machine-using-virtualbox#1-overview>

Meinberg NTP for Windows: <https://www.meinbergglobal.com/download/ntp/windows/ntp-4.2.8p15-v2-win32-setup.exe>

Meinberg NTP Time Server Monitor for Windows: <https://www.meinbergglobal.com/english/sw/ntp-server-monitor.htm#download>



# Special Event Stations (SES)

Paul Sharp, [KD8OPN](#)

Here are a 2 links you can follow to find many SES that suit your varied interests. I may repeat and update some of these links as there are only a few many sites focused on SES.

[http://www.arrl.org/special\\_events/search/page:2/model:Event](http://www.arrl.org/special_events/search/page:2/model:Event).

[https://www.qsl.net/va3rj/spevents\\_dx.html](https://www.qsl.net/va3rj/spevents_dx.html).

Here is my pick of the litter of SES that I think will be of interest to my fellow BARC members. BARC has many current and former members of the US Military many served in WWII and remember the attack on Pearl Harbor, we have dedicated Skywarn members, a few members like and photograph light houses, and perhaps one or two members appreciate and celebrate the 21<sup>st</sup> Amendment. Something for everyone!

**12/02/2022 | W2W Pearl Harbor Day Commemoration.** Dec 2-Dec 12, 1300Z-2200Z, W2W, Baltimore, MD. Amateur Radio Club of the National Electronics Museum. 7.041 7.241 14.041 14.241. Certificate & QSL. K3NY, 108 Brent, Arnold, MD 21012. The Amateur Radio Club of the National Electronics Museum (ARCNEM) will operate W2W in commemoration of the anniversary of Pearl Harbor Day and the role of electronics in WWII. Operation on 80M (3.541, 3.841) and digital modes possible during event. Frequencies +/- according to QRM. QSL and Certificate available via SASE. Details at [ww-2.us](http://ww-2.us)

**12/03/2022 | Anniversary of the Attack on Pearl Harbor.** Dec 3, 1400Z-2000Z, NE1PL, Fall River, MA. USNR. 20 meters 40 meters. QSL. Rick Emord, 135 Wareham st, Middleboro, MA 02344. on phone and digital 20 and 40 meters and any other bands as operators and equipment allow. [www.ne1pl.org](http://www.ne1pl.org)

**12/03/2022 | Celebrating the 21st Amendment to the US Constitution.** Dec 3-Dec 6, 1200Z-0500Z, W8A, Kent, OH. Breweries On The Air. 7.24 14.24 50.175. Certificate. Thomas R Sly, WB8LCD, 1480 Lake Martin Dr, Kent, OH 44240. A good time will be had by all! [www.breweriesontheair.com](http://www.breweriesontheair.com)

**12/03/2022 | Skywarn Recognition Day.** Dec 3-Dec 4, 0000Z-2359Z, W9D, Carol Stream, IL. Anemoi Incident Response. 14.250. Certificate. Thomas Sarlitto, 681 Paxton Place, Carol Stream, IL 60188. Anemoi Incident Response is participating in recognizing Skywarn Storm Spotters in 2022. During severe weather, Storm Spotters play an important role in communication with NWS. <https://www.myanemoi.org>

**12/05/2022 | 75/75 Contest Celebrating Our 75th Anniversary.** Dec 5-Feb 18, 0000Z-2359Z, member call, Various towns and locations. Quarter Century Wireless Association (QCWA). Phone/CW only on 6, 10, 15, 20, 40, 80, and 160 meters. Call "CQ QCWA". This is an operating event. [www.qcwa.org/1-worked-75-75-members-contest.htm](http://www.qcwa.org/1-worked-75-75-members-contest.htm)

**12/08/2022 | Final Moon Landing of Apollo 17.**

Dec 8-Dec 11, 1500Z-2359Z, K5A, Springdale, AR. Razorback Contest Club. 7.040 7.190 14.040 14.260. QSL. Razorback Contest Club, 3407 Diana St., Springdale, AR 72764. Commemorating the final moon landing of Apollo 17. [rccw5yo@cox.net](mailto:rccw5yo@cox.net)

**12/10/2022 | 150th Anniversary: Lighting of Bodie Island Lighthouse.** Dec 10, 1300Z-1900Z, W4PCN, Nags Head, NC. Outer Banks Repeater Association. 7.265 14.265. Certificate & QSL. Use WC5WM@arrl.net for questions. [wc5wm@arrl.com](mailto:wc5wm@arrl.com)



## Special Event Stations (SES) (continued)

**12/10/2022 | Pearl Harbor Remembrance Day (12/7/41).** Dec 10, 1700Z-2359Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 14.070 PSK31 DSTAR on PAPA repeaters. QSL. USS Midway Museum COMEDTRA, 910 N Harbor Drive, San Diego, CA 92101. [www.qrz.com/db/ni6iw](http://www.qrz.com/db/ni6iw)

**12/26/2022 | American Revolution - Battle of Trenton.** Dec 26-Dec 31, 0000Z-2359Z, W2T, Trenton, NJ. Delaware Valley Radio Association. 14.250. Certificate & QSL. DVRA, PO Box 7024, West Trenton, NJ 08628-0024. Certificate of Commission in the Continental Army Signal Corps available. See website. [www.w2zq.com](http://www.w2zq.com)

**01/01/2023 | American Revolution - Battle of Princeton.** Jan 1-Jan 8, 0000Z-2359Z, W2P, Trenton, NJ. Delaware Valley Radio Association. 14.250. Certificate & QSL. DVRA, PO Box 7024, West Trenton, NJ 08628-0024. Certificate of Commission in the Continental Army Signal Corps available. See website. [www.w2zq.com](http://www.w2zq.com)

**01/02/2023 | 17th Annual Straight Key Month.** Jan 2-Jan 31, 0000Z-2359Z, K3Y +, Ellicott City, MD. SKCC - Straight Key Century Club. 3.550 7.055 14.050 21.050. Certificate & QSL. SKCC c/o Ted Rachwal, K8AQM, 6237 Twin Lakes Dr, Smiths Creek, MI 48074. K3Y/0 thru 9 plus KH6, KL7, KP4 and DX member stations in six WAC areas operating straight key, bug and cootie keys. QSL card confirms one QSO per area, up to 19 for all-area sweep. See URL for op sched/map, stats, etc. <https://www.skccgroup.com/k3y>

**73, Paul, [KD8OPN](http://www.qrz.com/db/KD8OPN)**



# Editorial Policy and Style Guidelines for *Full Quieting*

## Editorial Policy

*Full Quieting* welcomes articles from BARC members on any ham radio subject that is relevant to BARC. Our focus is our BARC members. We will not reprint items or articles that are easily available by other means (web, magazines, etc.).

Most articles will be “how to” or “what I did” articles that focus on technical or operational subjects such as a construction (antennas, equipment, stations, etc.), the use of hardware or software, operating in unique/challenging circumstances, or a memoir.

*Full Quieting* will also consider an occasional article on policy issues regarding the various national licensing/regulatory agencies and/or amateur radio associations so long as the article is relevant to BARC members and constructive in tone and recommendations.

Although all *Full Quieting* articles represent the experiences and points-of-view of their authors and not BARC, articles that focus on policy issues will be specifically labeled as a reflection of the author’s opinion.

Regardless of subject, when you submit an article you acknowledge that you are the original author or creator and you grant publication rights to BARC. Anything you submit remains your property and you may have it published elsewhere without the need for permission from *Full Quieting*.

## Style Guidelines

Language: English is the official language of *Full Quieting* and all articles should be submitted in English. Don’t be concerned if English is not your first language: just tell your story in your own voice and use translating tools such as Google Translate to help if necessary.

File format: Submit your article as a Word, Word Perfect, OpenOffice or text file attachment to an email. A shared document available for download (such as a Google Doc) is also okay. **Do not submit as an email or PDF file.**

Pictures and other graphics: Do not embed pictures or tables in the article. Please submit as an email attachment or a shared image available for download. Please reduce the file size of the images before you send them to *Full Quieting*. Large files can be attached to a series of emails. Keep file size in mind regarding publication quality: for example, a half page image in the final PDF version of *Full Quieting* should be at least 400 pixels wide. If a photograph or graphic was taken or created by someone else, you should have their permission to use it and the permission of anyone identifiable in the image. **If you capture images from the web, provide a citation (URL) for that source and make sure the source does not prohibit use of the image in *Full Quieting*.**

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# Editorial Policy and Style Guidelines for *Full Quieting*

(Continued from previous page)

## Use these style conventions

- We are hams, not Hams, and our hobby is ham radio This is a change to our original format
- The name of our organization is: Bellbrook Amateur Radio Club or BARC
- The code we use is Morse (capitalize the M)
- We use Yagi antennas (capitalize the Y)
- Q codes should be capitalized: QRM, QSB QSY
- The plural of QSO is QSOs, not QSO's
- Modes should be capitalized: CW, SSB, FT8, RTTY
- Bands are written as 10 m, 15 m etc.
- The abbreviation for a Silent Key is SK.
- You might have had an Elmer, not an elmer

Bruce N7RR has provided a [two-page check list](#) of common International System of Units (SI) formats and abbreviations.

## Use these formatting conventions:

- Set all borders to 1 inch
- Do not use tabs or spaces at the beginning of a paragraph
- Use only a single paragraph or carriage return at the end of each paragraph



# Misc BARC Info

## REGULARLY SCHEDULED NETS

**Daily (Sunday through Saturday)** 1030, 1615 and 1845 Ohio Single Sideband Net (OSSBN) Primary: 3972.5 KHz LSB Alternates: 3968 & 7272 KHz LSB

**Sundays** 1900 Newcomers & Elmers Net (Cincinnati) 146.670 (-) (123.0 PL) Sundays 2000 BARC Weekly Net 147.045 (+) (no PL) [Alt = 443.675]

**Sundays** 2100 Miami Co. Voice & Data Net (Data Net follows Voice Net) 145.230 (-) (no PL)

**Winlink Tuesdays** GCARES Winlink Net Any time on Tuesdays Eastern Time Send To: W8LRJ, Cc: KE8FMJ W8GCA-10 445.010 (S), W6CDR-10 145.010 (S)

**Tuesdays** 1900 Dayton Veterans Admin Amateur Radio Club Net (W8DVA) 443.850 + 107.2 pl

**Tuesdays** 1915 Ohio ARES HF Net W8SGT Net Control at OEMA HQ Primary: 3902 KHz LSB (+/- QRM) Alternate: 7240 KHz LSB (+/- QRM)

**Tuesdays** 1945 Ohio Digital Emergency Net Primary: 3584.5 KHz USB (1500 WF) Alternate: 7072 KHz USB

**Tuesdays** 2000 MoCoARES Weekly Net 146.640 (-) (123.0 Hz PL) (Except—No Net on last Tuesday of even months (MoCoARES meeting) (Except—On 2nd Tuesday: Voice and Data Net on 444.250 (+) (123.0 PL)

**Tuesdays** 2030 Greene County DMR Net Primary: 444.875+, Color Code 13

**Tuesdays** 2100 GCARES Net (Voice & Data) 146.910 (-)(no PL) [Alt = 442.725]

**Ohio Winlink Wednesdays** OH ARES Winlink Net Any time on Wednesdays Eastern Time Send To: K8EAF, Cc: W8LRJ, KE8FMJ W8GCA-10 445.010 (S), W6CDR-10 145.010 (S)

**Wednesdays** 2000 Ohio District 3 ARES Net (West Central Ohio Regional Net) Primary: 145.110 (-) ( 67.0 PL) Alternate: 146.820 (-) ( 77.0 PL)

**Wednesdays** 2000 Beginners Net (Dayton Area) 444.875 (+) (94.8 PL)

## ZOOM-Basic Setup & Configuration

Here's a link to the Zoom Video Tutorials: [Zoom how-to video tutorials – Zoom Help Center](#)

Also see: "Join a Meeting" and the "Joining & Configuring Audio & Video" tutorials for new users. Send questions or problems to John, [W8LRJ](#) ASAP but BEFORE the next meeting.

## BARC Fundraising Opportunities

**Kroger's Rewards Program** Please use your Kroger Card when shopping at Kroger's and support BARC. If you haven't signed up and need help, bring your Kroger Card to the next BARC meeting, and we'll help you get registered (contact the [Treasurer](#)).

**AmazonSmile Rewards Program** BARC is registered in the rewards program: AmazonSmile. Charitable and non-profit organizations receive 0.5% of total purchase price (small but it adds up over time). A web page of basic Q&A info on the AmazonSmile program is available at: <https://smile.amazon.com/charity/smile/about>. When you sign up for AmazonSmile, simply select Bellbrook Amateur Radio Club as your preferred charity when prompted. AmazonSmile is a simple and automatic way for BARC members (and family and friends) to support BARC, at no cost to you, every time you shop at Amazon. Just log in to Amazon like you usually do and you'll be asked if you want to use AmazonSmile. Just click YES and you're ready to shop. When you shop at smile.amazon.com, you'll find the exact same low prices, vast selection & convenient shopping experience as Amazon.com, with the added bonus that Amazon will donate a portion of the purchase price to BARC. So, be sure to register for BARC in AmazonSmile the next time you shop at Amazon and then select the AmazonSmile option.

**ARRL Discounted Membership Offer** One of the benefits of club membership is the opportunity to become an ARRL member at a discounted price. BARC is an ARRL affiliated club and receives a commission for new first-time ARRL memberships transacted through the club. BARC passes on this commission (discount) as a club membership benefit to promote ARRL membership. BARC members currently receive a \$15 discount on a NEW first year ARRL membership cost when placed through the Club. Please contact the [BARC Treasurer](#) for details

