



# THE MESSENGER



VOLUME XVIII, ISSUE 1

APRIL 2018

## WHY ARE YOU A HAM?

It's a safe assumption that nearly everyone reading this entered ham radio in a different way. There are close to 750,000 licensed hams in the US with about the same number or maybe a little more in the rest of the world. More are coming along every year. Fairly reliable estimates, however, state that more than half of those holding valid licenses, in this country at least, are not active. In fact, a surprising number have never been on the air and many do not plan to ever own a radio. You may rightfully wonder why they bothered to study the material and take the exams necessary to obtain a license. There are different reasons, but I've found that often, it's just a "bucket list" item, something they wanted to check off while they are still here with us. That's too bad but what can we say? Some people dive out of aircraft, some dive deep underwater and some get a ham license, all possibly just because they can. Realizing that, however, skews the conclusion that our ham population is truly increasing.

In this epistle, I wish to speak about the minority population who chose to follow and develop interests in Amateur radio and use their privileges to operate some sort of a station. I can understand why they do it. The fact that you have read this far suggests that you probably can as well. Many of you came to ham radio though Citizens Band use. I was never involved with that activity since I was already a ham when the truckers launched their CB fad in the 70s. Possibly, if I share my story with you, it will let you appreciate the many ways we have traveled to reach our present position.

Interest in ham radio bit me hard at about eight years of age when with my father, I would listen nearly every late night to hams

returning to the air following World War II during which all hams were taken off the air by the War Department. We had an Atwater Kent radio with "shortwave" coverage. We could receive 75-meter phone. That's AM, not SSB which hadn't been introduced yet. I really enjoyed doing that. It was also about the only time I could see my dad since he was running his pharmacy every day until 10PM. Later, I saw him more when I worked in the store, but that wasn't quality one on one time. I listened to that radio until my mom would yell at me to "...go to bed. You have school tomorrow." On weekends, we sometimes listened until well past midnight. We heard stations in the south, Canada and out to the Rocky Mountains. Somehow at the time, I was led to believe that one needed to be 18 years old or more to hold any federal license. Even though I imagined becoming a ham and transmitting from my own station some day, I never thought I could go further than that and become a high-ranking DX chaser like some I read about in Radio World or Popular Electronics. These guys were rock stars, the top of the heap with big antennas sitting high up on towers, six-foot-tall transmitters. I couldn't imagine getting close to that level. That was so far above me that it didn't seem possible.

I did not have personal contact with any actual hams at the time except for one gentleman who lived near my father's drug store. I was afraid to speak to him for fear of offending him. After all, he was one of my dad's customers and I didn't want to annoy him with silly questions. When I reached 14 years old and had saved up to buy a Hallicrafters SX-71 receiver, one afternoon I overheard a couple of locals on 10 meters. One gave his actual address which

### INSIDE THIS ISSUE:

PRESIDENT'S MESSAGE SPRING 2018 4

A SIMPLE DESIGN FOR A LIMITED SPACE ANTENNA 5

was only a few blocks from me, a short bike ride away. I jumped on my bike and headed that way. W1UKC, Ed Papski was very friendly and quickly cleared up my misinformation concerning the need to be 18. A few weeks later, Ed arranged a ride for me to the Customhouse in Boston to take the feared government license examination which I failed. I had not studied enough, but a couple of months later, I found another ride to Boston and passed. Thirteen weeks later, my Novice license arrived in the mail and as is often said, the rest is history. Failing a test in the early 50s meant that you couldn't return to the FCC to try again until 30 or more days had passed. Today, you may simply take a different version and test again right there in the same VE session or go to a different test session if you wished. This could be on the same day if you wished. Exam sessions are much more accommodating and friendly now. Once you pass, you don't need to wait three months or more for the FCC to produce your ticket, either.

Assuming that you are one of the minority (<40%) who actually plan to use your ham ticket, finding your special niche in ham radio isn't easy but I shall tell you here that doing so is very important if you hope to find satisfaction in your pursuits. I received my Novice ticket in June 1953 and made CW contacts on only 80 meters with my Windom antenna and kit built 75-watt transmitter using four crystal frequencies; 3.707, 3.715, 3.730 and 3.735 MHz. Why only those four frequencies? Because those crystals were sold on the military surplus market for 35-50 cents each. Hundreds of others in the country had the same crystals. So, there were little pile-ups on each of those popular frequencies and little activity a few KHz. away. Of course, we couldn't simply touch the VFO and be on that open spot. It was normal to call CQ and then tune up and down from your frequency for a call. We transmitted in one spot but listened over the entire band. Novice stations were mandated to use crystal-controlled oscillators and no more than 75 watts of power, using CW only. I managed to work 38 of the 48 states at the time. Lots of late nights and careful listening

“I HAD MORE THAN FOUR FREQUENCIES AND OTHER BANDS TOO. LIFE COULDN'T GET BETTER!”

paid off.

I skipped getting a Technician ticket and passed the General test nine months after getting the Novice license and started using my Christmas present from my parents, a Viking II with a VFO, 150 watts on all bands with a VFO. I had more than four frequencies and other bands too. Life couldn't get better! I was sitting in the catbird seat. Spent time handling messages on different nets for a few years while graduating from high school and going off to college. My life was quite turbulent during those years. Found a job at Raytheon in Massachusetts where some ham friends worked, got married, all within a few years. Then, our daughter and son were born, and we built a house in Cumberland. Both of my parents passed away within a few months of one another. Ham radio had to fight for a place at the table, but it was still there. Life in the fast lane hardly describes it.

In 1962, I met someone who changed my ham life dramatically. I had been spending what little ham time I had available joining this net or that one. None of them led anywhere or did any good for me. It was meaningless. At the Swampscott Hamfest in about 1962, now called the Boxboro Convention, I was introduced to an older gentleman, Charles Mellen W1FH. I didn't know him at all. The person who introduced me, Gene W1DK from East Providence, thought that was hilarious. “W1FH is the top DXer in the world”, Gene shouted in my ear. He held the first DXCC certificates ever issued in Phone and Mixed modes. In the DX parade, everyone else in the world marches behind Charlie Mellen, W1FH and I didn't know him from Col. Sanders. Can you imagine meeting Ted Williams, Tom Brady or Bobby Orr and not knowing him from the guy standing next to him? I was mortified. I think Charlie immediately felt sorry for me. He put his hand on my shoulder and told me not to let that guy bother me. “Do you like to work DX?”, he asked. I nervously nodded and said, “yes sir, but I haven't worked very much.” We chatted for a while and he asked me if he could call me on the phone when some good one is on the air. I

quickly agreed and gave him my phone number. My ham life was never the same again.

Over time, Charlie became my hero and my dear friend. I wanted to be just like him. He was a terrific operator and very humble about it. By contrast, his rival, Don Wallace W6AM in California was boisterous, loved attention and commanded a small army of volunteers at his multi acre hill top antenna farm with separate rhombic antennas pointing to each six-degree intervals on the compass. His ham shack was elaborate with several very high-power transmitters and multiple receivers. Charlie, by comparison in downtown Boston, had a triband beam on a windmill tower and a couple of dipoles for the low bands. His shack was an appendage to his small garage where he shared space with his lawnmower and yard tools. Yet, Charlie was ahead of Don in the worldwide DX standings. Why? It couldn't be a better station. It was his superior operating skill. All through my life, I have attempted to be a superior operator in using my skill and limited station to contact DX stations.

One of my wishes today is that Charlie and my dad could be with us to see what I've done with the trust and support they gave me. I'm confident that they would be proud. I now have 370 entities confirmed with 340 after deleted entities are discounted. That places me at the top of the DXCC Honor Roll. There are no more recognized places left to work. DX Century Club is an award conferred upon hams who have made contact with 100 or more different entities confirmed by QSL card or electronic matching. The climb from 100 to 340 took me about 30 years, during which I worked some incredible hours at Raytheon supporting my family. Now that I am retired after a 42-year career, I am a full-time ham and spend much more time on the air and in projects.

Active hams normally select one or two specialties to pursue. Why? Simply in the interest of time and funding. We have a limited quantity of each. Trying to do too much will result in not being very accomplished in anything. Emergency communications, nets of various

types, mobiling, QRP, repeater work, satellite communications, moon bounce and others are all legitimate on-air pursuits. Just as interesting to many are off-air activities such as design and building, experimenting, teaching, advocacy, repair and restoration. These and others do not require much on air activity although they surely are important aspects of our hobby. But, in 1963 at age 24, after holding a ham ticket for ten years, I was hooked on DXing. I considered DX to be the king of ham radio work. The best hams were DXers, in my judgement. Like a sports fan, I knew who the rock stars in DX were and followed world wide DX activity in the magazines. But I never thought that I would ever reach the same level that they have. I knew that I would never reach the levels of Charlie, W1FH except in my wildest dreams. This man had forgotten more about DX than I will learn in my lifetime.

By simply being there and serving as a model to follow, he taught me just about everything I know about chasing DX. After he became a Silent Key in 2006, Charlie's wife and daughter gave me permission to request his call be assigned to the Southern New England DX Association. In that way, the call sign W1FH can live on and be heard in the pile-ups for years to come.

So, if you are still reading, you must spend some time reflecting on your own story. You probably didn't follow the same road as I. But I'll bet it was an interesting one. Today, there's so much to compete for a young person's attention and technology is all around us. The magic in ham radio that hooked me is often lost with today's kids. Their smart phone can communicate to any part the world. If all that attracts a potential new ham is limited to simply being able to talk to someone over the radio, there's very little hope that he or she will find a life long love for Amateur radio. That sort of goal is little more than being able to use a telephone. However, if that person sees the magic in being able to communicate by only using what he/she has assembled using an antenna that he/she made and threw over a tree branch and without using any infrastruc-



ture like Internet, phone line or maybe even commercial power, there may be hope.

I can promise you that you will derive far more enjoyment from our hobby if you invest some of your time in helping to bring some new hams along with you. If you have special knowledge gained from your training in the military, college or simply life experience, you can make a difference in the lives of others who need some guidance to appreciate and enjoy Amateur Radio as you and I do.



There are literally hundreds of ham radio clubs in the country. Some are truly active and booming, but most are not. In fact, many clubs struggle to exist. Statistically, only about 10 to 15% of license holders belong to and support at least one club. Some belong to more than one. I am a paid-up member of three chartered clubs, two in RI and one in Texas. Beyond that, I am a member of three DX clubs, in California, Texas and England. Over the top? Possibly but I don't think so. Keeping a club healthy and viable is not easy at all. Among the clubs I am familiar with, they are successful and growing because they are always looking for new ways to reach out into the community to get involve with something new, conducting classes, exam sessions, mentor programs, repeaters, newsletters, on-air programs such as nets, contests, fox hints,

stimulating outreach effort by all members.

But, some clubs seem to exist for little more than self-indulgence without much effort to recruit new members or encourage participation in the hobby to those outside their club. Members of some old clubs may believe that they are above all that. What a terrible shame! To paraphrase an old expression, you never stand so tall as when you bend down to help a new ham.

In closing, I want to share with you some of the reasons why after more than 70 years, I can honestly say that I am as interested in Amateur radio now as I was when the bug bit me as I listened late in the evening with my father, to the hams returning to the 75-meter AM band after World War II, excited and delighted to get back on the air. In my memory, I can vividly hear Harry, W8RHZ in Twinsburg, Ohio booming through the speaker of our Atwater Kent radio just about every night. It is a lifelong hobby if you are fortunate enough to discover it early in your life. But, even if you are finding it in your retirement years, Amateur radio will still fill the voids in your day or night for all the days and years you have left. I am never lonesome if some band is open to somewhere. I hope to see you on the air. 73 Bob Beaudet W1YRC

## PRESIDENT'S MESSAGE SPRING 2018

As I write this, spring is hopefully upon us, which means better weather and better propagation with any luck. Over the last couple meetings we have created a Field Day committee, thanks to Marc W1MCX, Mickey K1WMZ, and Bruce K1BRU for stepping up to run the committee. They have been in contact with the town about the Field Day site and the pending construction of the town's new Police Station. We are still going to be on Chopmist Hill behind the Senior Center, just a little closer to the parking lot and garden.

Congratulations to Judson W1JMZ for getting the new version of the club website up and running, and it is great. Also congratulations

to Bob W1YRC, who wrote an article for April 2018 QST about the Consortium; maybe we'll start seeing consortiums popping up in other clubs across the country.

One thing brought up was an idea passed on from Bruce WA1BZQ in Tuscon AZ. The club he belongs to does an event called "Day in the Park." The club out there selects a park in the city of Tuscon, they set up a pop up tent, a couple radios running off solar or battery power, and a couple portable antennas. The idea is to get out and demonstrate Amateur Radio to the community and give publicity to the club. They operate for 4 to 6 hours typically. Of course the weather there allows them to oper-

ate 12 months a year, but we can do a similar type of event, maybe May, June, July, August, and September. At the February meeting, the membership was in favor of setting up and doing this. More planning is needed but we can get out and have some fun, and if you don't have a HF setup at home, this is a good time to get out and operate.

Also, the club has had a couple hams donate their stations to us, as they were getting out of the hobby. This month Bob W1YRC is going to compile a list and the club will have a silent

auction for those items in May/June.

And finally, Field Day is June 23rd and 24th this year. Preliminary plan is to set up the club trailer Friday late morning and start operating at 2 PM Saturday. I'll still be planning on staying over Friday through Sunday; more details and planning to come.

With that, see you at the next meeting, April 30th 7:30PM at the Slatersville Congregational Church 25 Green St Slatersville RI. 73 Matt NAIQ

## A SIMPLE DESIGN FOR A LIMITED SPACE ANTENNA

### Getting Started

Ok so you just came by a HF transceiver maybe from a generous Elmer or an estate sale or you just won the lottery and plunked down the cash for a band new "rig". Now what? Now it's time to think about an antenna. You've been to the BVARC Consortiums and listened as presenters described the characteristics of dipoles, beams and verticals. You realize that the antennas described all have common requirements-they all need some sort of support structure and space.

Your space is limited, there are no trees, you live in an apartment or you just don't have the enough real estate to put up multi-band antennas. If this pretty much describes your situation, then read on.

It is possible to build (yes you build it) a wire antenna that would have a length of between 24 and 60 feet and yield good performance on the 6-40-meter bands. You will be able to configure the antenna to conform to your situation, bending, curving, making a horizontal, vertical or even a sloped configuration. This antenna is a proven design and if you were to purchase all of the parts new, the antenna should cost less than twenty-five dollars.

I'm going to postpone the technical aspects of the antenna until the construction is fully described. First let's list the parts required:

1 Small plastic enclosure 3x4x1 inches (approx.) <https://www.allelectronics.com/>

[item/mb-173/abs-project-box-4-x-3-x-1.6/1.html](https://www.allelectronics.com/item/mb-173/abs-project-box-4-x-3-x-1.6/1.html)

1 Powdered iron toroid T 130-2 DIGI-KEY.COM

3 20-inch pieces of 22 AWG solid insulated copper wire in red, green, and black

2 #8-32 x 3/4 hex head machine screws

2 #8 lock washers

2 #8 ring wire lugs

2 #8 flat washers

2 #8 lock washer/nut combination

2 #8 wing nut

1 3/8-inch ring connector

1 BNC panel mount connector

30' #18 AWG insulated stranded wire antenna with ring lug attached



Figure 1

### PREPARING THE PLASTIC ENCLOSURE

Start by drilling a 3/8 inch hole (in one end of the plastic enclosure) for the BNC connector, and two 11/64 inch holes (one on each side of the plastic enclosure) for the counterpoise and antenna connections.

### WINDING THE TOROID

First some notes on toroid winding.

The number of turns on the toroid are counted by the number of times the wire(s) pass through the center of the toroid.

I prefer to wind in a counter clockwise direction.

Begin by winding the three 20 inch pieces of insulated wire onto the toroid. Wrap 9 turns of wire on to the toroid. When you finish this step, your toroid should look like figure 2.

Refer to the following steps using figure 3 and 4 as guides.

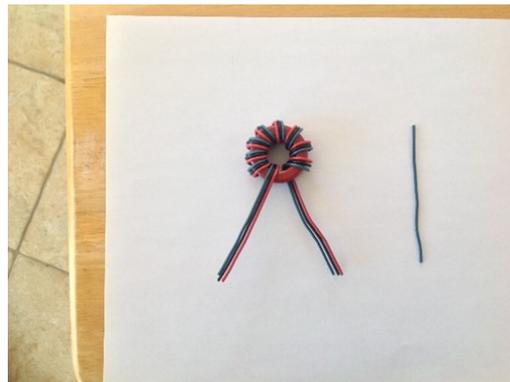


Figure 2

Crimp together and solder the left black wire with the right red wire. When completed, it will look like figure 3.

Refer to figure 4.

Crimp and solder a #8 lug to the left red wire about 2 inches from the toroid. This lug will later connect to the antenna bolt.

Twist the left green wire with the right black wire. Strip the ends of the two wires and twist them together at about 2 inches. This twisted pair will be soldered to the center connector of the BNC connector.



Figure 3

Trim and strip the remaining right green wire at about 2 inches. Cut an additional 2 inch piece of green wire and crimp and solder both wires to a #8 lug. The 2 inch green wire will connect to the ground connector on the BNC connector which should be installed in the enclosure. Strip the remaining green wire end 3/8 of an inch and connect it to the 3/8 inch ring connector at the BNC connector. Solder the green and black twisted pair to the BNC center connector. Solder the green wire stripped end to the ground lug on the BNC connector.

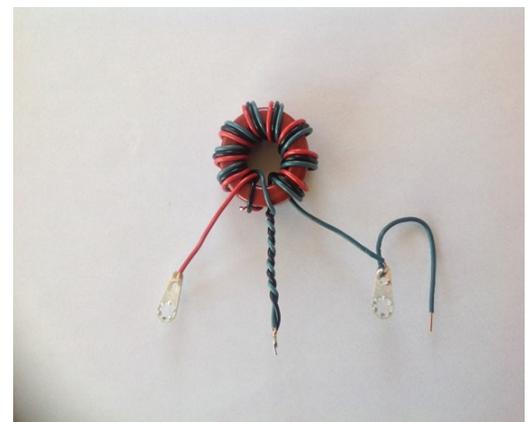


Figure 4

Complete the rest of the assembly as shown in figure 5. Secure the toroid to the enclosure by using a small amount of clear silicone caulking. Position the toroid inside the box to allow connection of the red antenna wire to an 8

-32 machine screw and lock washer on the box side. Place a flat washer on the outside of the box followed with a #8 wing nut.

### ADDING THE ANTENNA WIRE

Performance of the antenna will be determined by two factors. The length of the antenna wire, and the capability of the tuner (if your transceiver has a built in ATU you're good to go). The length of the antenna wire should be between 24 and 60 feet for best performance. The addition of a counterpoise wire will not normally be required.



Figure 5

(You remember we added that lug-just in case) the coax shield will provide the counterpoise function (You do remember the difference between radials and counterpoise-of course you do). When the antenna length exceeds 60 feet, chances are that impedances will be difficult to match. Antennas shorter than 24 feet may not radiate properly. It is recommended that you start with a 30 foot length of 18 AWG stranded insulated wire. Crimp and solder a #8 lug to one end of the antenna wire. The 30 foot length should not require a counterpoise. You may have to experiment

with different lengths to get the antenna to perform on 80-6 meters. As stated earlier this end fed antenna should work well in horizontal, sloped, and vertical configurations. Additionally, the antenna as built is rated at 100 watts or less of power.

### THE TECHNICAL STUFF

The toroid described in this project is a 9:1 transformer (unbalanced to unbalanced). The end fed wire will have a nominal impedance of 450 ohms. The transformer serves as a matching device between the two impedances – antenna to transmitter. The design requires the use of an antenna tuner (either internal or external to the transmitter). The length of coax feedline to start with is 16 feet (at 16 feet, RG-174 should work). The combination of length and weight of the antenna using RG-174 make this antenna ideal for portable operation. An inexpensive fiberglass or painters pole will serve as a mount for the end of the antenna thus making it easy to move and take advantage of changes in propagation.

REMEMBER:

**KEEP ALL ANTENNAS CLEAR OF POWER LINES.**

**KEEP AMATEUR RADIO FUN AND SAFE!**

THIS ANTENNA WILL HANDLE 100 WATTS OF POWER.

CREDIT:

This project is based upon an idea put together by the EMERGENCY AMATEUR RADIO CLUB. Modifications to the original design made by K1GND Jim, BVARC/Consortium instructor.