

The **MERCURY MicroVolt***

JANUARY 2018 VOLUME 18, No. 1

Mercury Amateur Radio Association - MARA
North America - North East

* Ever since I took over the editing and publication of this newsletter from Jeff, KD1WZ, in 2006, it has been known simply as 'The NEWSLETTER'.

Way back, when the Mercury Amateur Radio Association (MARA) was the emergency communications arm of the Church of Jesus Christ of Latter-Day Saints, the name of the newsletter that was used to disseminate information to LDS amateurs was called the 'MARA NEWSLETTER'. Our cousin to the west of us, the Mid West MARA group, called their newsletter the 'MICROVOLT'.

So, in keeping somewhat with tradition, we're renaming our 'NEWSLETTER' the 'MERCURY MICROVOLT'. Catchy combo, what!

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Links that will take you to web locations referenced in this newsletter are shown in [italicized blue text](#).

Past issues of the MARA NE NEWSLETTER may be viewed at <http://ne.mara.net/newsletters.pdf>

E-mail your comments, ideas, or submissions to MARAnet@mara.net or to VE1VQ@eastlink.ca

Grandma Mara's RAMBLINGS...

It's totally unfair! Why is it so hard to lose weight and so easy to put it on. It seems like I struggle to lose a couple of pounds over the length of a week but I can put on five or more over a single day.

I asked my doctor once, why didn't the medical profession have a series of pills for weight loss marked with a number. That number would indicate the amount of poundage you needed to lose. If you wanted to drop twenty-five pounds, they would prescribe you with the appropriately marked pill. She chuckled and said she wished it was that easy also. Perhaps it's one of those conspiracy things where big business/big medicine don't want to rock the financial boat of the diet industry. According to [ABC News](#), "annual revenue of the U.S. weight-loss industry, including diet books, diet drugs and weight-loss surgeries is **\$20 Billion**".



Unlike some Christmases in the past, I managed to avoid very much weight gain. Only a couple of pounds, and that over the whole month. Now it's back to low calorie meals for a few weeks until the downward trend comes back again.

Walter gave me a new radio toy for Christmas - a [Yaesu FT2DR dual band 144/432 MHz handheld](#). Cute little thing, has a color touch screen. Before, where you had buttons to push, now poking at the screen does the deed. I gave Wendy my previous hand held to take back to the west coast.



For Walter's present, I had ordered a model [ZN-QRP key from N3ZN](#), a smaller version of his regular key ZN series. Beautifully made, magnetic action (no springs). I had it shipped to Wendy's parents' address so Walter wouldn't see it in the mailbox.



It was a joy to have Wendy home again, and to

hear first hand what she had been doing, both for her studies, and for her social life on campus. She allowed as how the social aspect of her life was somewhat curtailed by having a boyfriend away on a Church mission. She had found another young woman, also in her first year at the university, in the same situation. On Sundays, at the Singles Ward, they sit together to compare notes and share their common "misery".

She showed us a few of his letters to her. I noticed some pages had been left out. Walter teased her about what might possibly be written on the missing ones.

She said her courses were very interesting, and somewhat challenging more than difficult. Her professors demanded much more than her high school teachers ever did, but she had expected that.

Wendy took the time while she was home to get together with Red. Wendy said she was full of questions about university life, her studies, and where she was going after university. She tried to answer her queries as best she could but admitted that beyond a year or so in the future, she really had no idea.

You know how they say that time speeds up as you get older. It sure is true! Seems like I just get to bed and it's time to get up again, then it's lunch, and next it's dark and then time for bed again. Well, that's what it was like when Wendy was home. Seems like she just got

“Must have been something in my eye, Walter said, on the day she came over to say good-bye.”

here and it was time for her to fly back west. Must have been something in my eye again, Walter said, on the day she came over to say good-bye.

Now that the Christmas busy-period is over, we will settle back into the wait-for-the-winter-to-be-over time. Being retired, makes it a whole lot easier on Walter and I. We can crack an eye open early in the morning, and if it isn't looking good, we get to pull the blankets up a little higher around our ears and go back to sleep.



FIELD DAY STORIES

This time of the year is a good time to think about spring and summer and warmer temperatures. Here are some stories from Field Day 2017.

From Ted, N4TW

I was with the North Country Amateur Radio Club, W2LCA, in Potsdam, New York. Most of our usual spark plugs were busy doing other important things, so our operation was pretty laid back and mellow. We had four operators and made 67 Qs. We had a 40 meter dipole up 5 feet in the center and a 20 meter dipole up 7 feet in the center, 'cos that was as high as we could get them up in the local trees. They both heard well, but most of our transmitted RF was going into the ground (not reflecting off of it).

We did make one DX contact, with S57DX, but as it turned out, he was in some contest over in eastern Europe, not Field Day. He gave us a report and we put him in the log anyway.

It turns out that one of the other operators knows one of my co-workers very well. When I mentioned our meeting to my co-worker, he said he is interested in getting into ham radio, so I hope to be answering questions from time to time and maybe helping him put up HF and VHF antennas.

From Stan, AB3EM

I went to Field Day with the Southern Pennsylvania Communications Group, K3AE, 4A, EPA. We were in Spring Valley County Park in Glen Rock PA with about 20 plus people active for the duration. More for Saturday dinner when family members joined us. People came and went. I helped set up on Saturday and tear down on Sunday.

I worked 40m for an hour showing a first time participant how to "chase" stations. Then he took over and I logged.

I handled the NTS message to the section manager for 100 bonus points and I am an elected

official so brought 100 bonus points by being there. Later I worked 80m from midnight to about 3am and made 40-50 contacts.

Eighty meters was on fire and the next operator found a clear frequency and called CQ and had a line up the rest of the night. He had 300 plus contacts.

The food was good, the weather was perfect. The club just tries to be better each year. I think we did good.

From Steve, VE1WXW

I was able to get out for my first field day with Larry, V01HL. We set up a station at a youth activity. Couldn't get any youth interested.

Larry made about four contacts, some on CW as far away as Russia and Romania. He then turned the mic over to me and we scanned side band and found a station. I was hoping for it to be a good DX station, but turned out to be none other than VE1GFG, George. Haha. Good experience anyway.



ICONS ON WINDOWS 10 DESKTOP MOVE

Recently, the icons on my Windows 10 decided to rearrange themselves for no apparent reason. This, rather annoying happening, takes them from where I've moved them to my liking, and sticks them into alphabetical order.

If this annoying "feature" of Win10 happens to you, here is a "fix" you might like. Download a small program called [DesktopOK](#) from the [SoftwareOK.com](#) web site. Pin it to your taskbar so it will be handy when you need it.

After you arrange your desktop to where you want it, run DesktopOK and save it. If, a couple of days or weeks later, you make more changes, save it again. When (and it will happen) you boot your PC sometime and you find your desktop all messed up, open DesktopOK and it will show you each time you saved it. Choose the one you want and click on RESTORE. Your desktop will return to the saved version.

Take that, Microsoft!

PACIFIC ANTENNAS DUAL BAND DIPOLE

Pacific Antennas/QRP KITS make and sell a nice little dual band trapped dipole kit for 40 and 20 meters. You can check the construction manual out at <http://qrpkits.com/files/2040Dipole20170922.pdf>. The manual gives you almost enough information for you to build it yourself, but for the price of \$25 and shipping, it's cheaper and much more convenient to buy the kit from them.

The trap design is the traditional style with discrete fixed value capacitors in parallel with wire wound coils.



The manual provides plenty of detailed construction information and also walks you through the how-to of tuning. It can be configured as a dipole, an inverted V, or a horizontal V and, according to the manual, is good for one hundred watts RF.



One of the trap coils with circuit board holding the capacitors. The board provides handy points for the coil and antenna connections.

I contacted Pacific Antennas by e-mail to see about the cost of shipment both to northern Montana and southern Alberta. Got an answer back the next day. I ordered one and had it shipped to Canada. I could have had it sent to an address near the Canadian border in Montana. There seems to be one of these businesses near every border crossing in northern Montana, catering mainly to

Canadians. Likely, most of the states bordering Canadian provinces have them. Lots of American suppliers won't ship to Canada as they think it's too difficult or they don't want to be bothered, or if they do, the shipping rates are very high, so this a way around that problem.

Strange, how we can buy something on eBay from China, for a couple of dollars, and it comes with free shipping, but it costs you major bucks to have something shipped between the US and Canada.

In this instance, because we were only going to be in Montana for a week, I had it shipped to my Canadian address. I have to weigh the amount of money I save by having it shipped within the US, with the cost of gas and the hassle of passing through the US and Canadian border crossing people to drive down across the border to pick it up.

At my station location in southern Alberta, where there are no on-the-property trees above six feet, and a wife who is not antenna friendly, a temporary inverted V using my thirty foot telescopic kite/squid pole, bucket and pipe ([see the October 2017 Newsletter](#) and earlier issues), for a center support that I can quickly put up and take down is the most likely solution.

Another thought for a center support, although lower in height, would be a couple of ten foot lengths (1-1.5 inch dia.) of the gray PVC pipe used for electrical conduit. You might get to thirty feet with the larger diameter PVC and a couple of guy ropes in addition to the two wire legs.

MARA FIELD DAY ANYONE?

Seems like every year the topic of holding a MARA Field Day, either in conjunction with or separate from the regular ARRL Field Day, comes up. Most years, nothing much happens and it fades into the forgetter portion of our brains. Will this year be any different? Anyone have any thoughts about one for this year.

MY EARLY FIELD DAY MEMORIES

This was in the late '60s. I had just gotten my CW

continued on page 6 ...

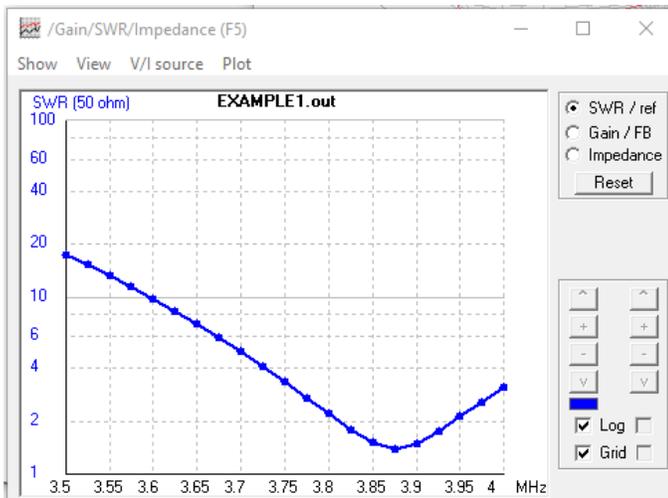
FEATURE ARTICLE

RESTRICTED SPACE HF ANTENNA PART TWO

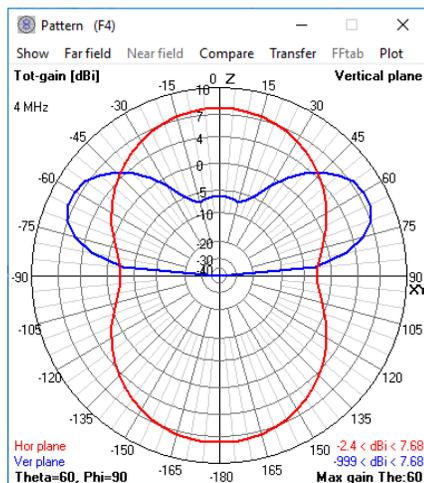
by a contributor, who for personal reasons, requests anonymity until retirement (and perhaps even after!)

Part 1 appeared in the December 2017 Newsletter

Note the calculated VSWR curve displayed below. It indicates the antenna is resonant at our desired frequency of 3872.5 KHz. (I knew from previous simulations a wire length of 125 feet would produce this result. No magic here.)

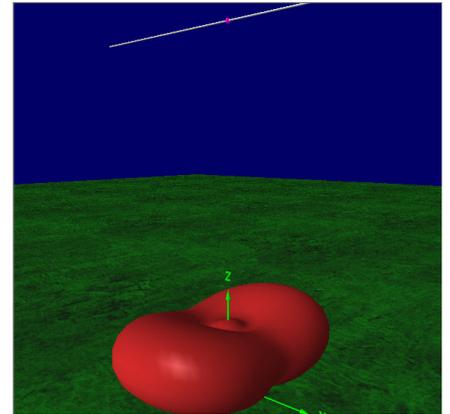


Here is the magic however. The graphic displayed below indicates this antenna at 1/2 wavelength above ground will produce a pattern as shown. The red curve is what could be observed if the pattern could be viewed with the eyes assuming the viewer was hovering over the top of the pattern. The blue curve is what a viewing party would see if positioned to look at the antenna from the end along the length.



Another more detailed view is displayed below of the calculated pattern.

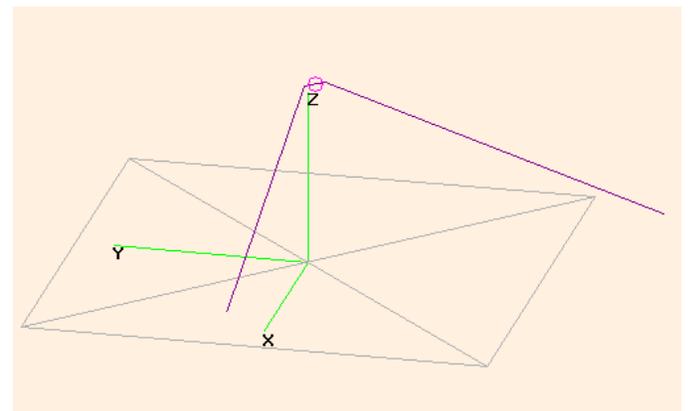
Since we will have an inverted V and the antenna will also be formed to fit the property boundaries the dimensions were changed to reflect the



proposed final configuration to observe the projected effects. Normally the next step would be to lower the antenna height and observe the effect on the pattern. However based on prior experience it is known the pattern of the wire antenna at a reduced height of 35 feet will barely change between the wire being straight at a uniform height and formed into an inverted V bent at a right angle. Thus the simulation will move directly to the antenna geometry proposed for the site at the reduced height. The antenna geometry chart is displayed below:

Nr	Type	Tag	Segs	X1	Y1	Z1	X2	Y2	Z2	Radius	Comment
1	Wire	1	7	0 R	-60 R	15 R	0 R	-3 R	35 R	.0001	
2	Wire	2	1	0 R	-3 R	35 R	3 R	0 R	35 R	.0001	
3	Wire	3	7	3 R	0 R	35 R	60 R	0 R	15 R	.0001	

This results in an antenna that appears in the pictorial below:



The calculated VSWR curve is offset from the

prior curve due mostly to the effects of the ground. We still have a reasonable match at 3872.5 KHz. The actual wire length can be calculated by the reader if interested. Pythagoras rules in calculating the wire length from the co-ordinates. Since each long wire segment traverses only two axis as does the center segment, three dimension calculations are not required to determine the length.

End Part 2 - Part 3 should appear in the February 2018 Newsletter.

MY EARLY FIELD DAY MEMORIES - continued from page 4

ticket. The upgrade for my fone ticket would come a few years later. The local ham radio club had an old converted school bus that they would drive out and park on someone's land where they could set up wire antennas for some of the HF bands. We never used a beam, just dipoles or inverted Vs strung between or over handy trees.

Power was supplied by a generator, probably the club's. Sometimes it ran out of gas and died right in the middle of a contact. Speaking of contacts, we kept logs (as you had to in those days) but never worried about the numbers.

Being as there were some of us "kids", we got to operate through the night and into the dawn hours of the morning when the "sensible old timers" were home in bed. The rigs at that time were powered by tubes and were loaned by club members. I've often wondered if the transmitter finals had to be replaced after the weekend was over, due to lack of proper tuning.

Along with myself, there were several other teen-aged youngsters belonging to

I'm sure there was supposed to be a "responsible" higher class license holder acting as a control operator.

the club, with CW-only tickets. But, on this and following field day weekends, we got to operate on side band. I'm sure there was supposed to be a "responsible" higher class license holder acting as a control operator. I don't remember any one of that type being around after about midnight. I think I'm safe in saying that now, as I'm certain the statute of

limitations must have run out on such a thing!

One of the members was a Ford mechanic. He was the one who made sure the bus made it out and back. He didn't have a ham license - he had a problem and couldn't pass the code part of the exam. This was his chance to get on the air on SSB, and make some contacts.

I don't remember who cooked the food or what it was (probably burgers, hot dogs, potato chips) but I do remember it was good and there was lots of it - an important thing for a growing teenager.

**The MARA NE Newsletter
is always looking for articles
of interest to LDS Hams.**

If you have a radio related project, or simply something you think might be of interest to the readers, please contact Dave at VE1VQ@eastlink.ca

A new rig, a ham experience you've had, a DX-pedition to your backyard. Whatever it is, we would like to hear about it. Don't be shy!

**QUOTE
OF THE MONTH**

**Ten years from now, make sure
you can say that you chose your
life, you didn't settle for it.**

Unknown

MARA Northeast has come into the possession of some documents of historical significance to MARA - Mercury Amateur Radio Association. As appropriate, some of these papers will be re-printed from time to time in this newsletter, and then posted to the main MARA web site.



April 24, 1996

To All MARA Area Coordinators,

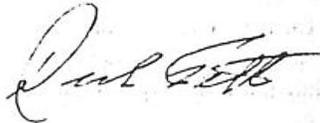
In a MARA Board meeting held April 16, 1996, a decision was made that affects the structure of the Executive Board and the local chapters. For several years the need for the MARA headquarters to remain closely aligned to our former sponsor, The Church of Jesus Christ of Latter-day Saints, has greatly diminished. With this de-emphasis the need to maintain a Salt Lake City Headquarters organization is no longer essential to the mission of MARA. After considering the desire and success of a couple of chapter organizations which have organized locally, the MARA Executive Board is informing you of the following changes:

1. The MARA Executive Board is being dissolved on or about July 1, 1996
2. The MARA membership is free to organize itself locally. They may use the MARA name in conjunction with a geographic area, i.e. MARA Midwest. Officers, bylaws, charters are to be determined by local consensus. It is hoped that the original missions and goals of the traditional MARA organization be maintained.
3. Remaining funds contributed to the MARA Headquarters organization will be transferred to local groups wishing to organize. Such funds will be based on paid memberships of record. Copies of legal documents will be made available to other groups for their examination. Perhaps the returned funds may assist in obtaining legal counsel in organizing.
4. The MARA, Inc. corporation will be used for the Utah group.
5. Members may join any organization they desire. Natural boundaries will develop or may be determined between local organizations.
6. MARA organizations will determine any dues structure, newsletters, social functions, and other activities that best meet their needs.
7. The nets will remain in place as a source of training, message handling, and friendship exchanges. We anticipate no changes in the MARA HF digital systems.
8. We encourage the exchange of information between organizations in the form of newsletters, formal correspondence, inter-group bulletins, etc. It is suggested that a liaison in each group be appointed to communicate with other groups.

We feel these changes will strengthen the overall MARA objectives and allow localization and closer association with Church, Welfare Department, and community leaders. The current MARA Executive Board has served from 5 to 14 years and expresses their appreciation for like service from many of our members. We look forward to the increased growth in membership and activities as the new groups form and serve their churches, communities, and others.

We anticipate the above dissolution of the MARA Executive Board effective July 1, 1996. Comments, inquiries, and complements can be sent to any member of the MARA Board.

Best wishes and 73,



Dick Potts, President
N7JID



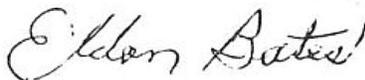
David Christensen, Vice President
KD7UM



Jack Christensen, Vice President
KD7NX



Tim Prinster, Vice President
W7IQY



Eldon Bates, Secretary
KC7DI

FROM THE DESK OF THE PRESIDENT



When we consider emergency preparedness and responding to a civil or ecclesiastical leader's need for communication when common carrier services are not working, one suspects the planning for providing that support is radio centric. What power source will be used, where can the antenna be placed, what field repairs and engineering are feasible, plus within budget constraints?

But what about preparedness of others for which you are responsible? It will be kind of hard to run an effective communication post if your plans and resources are not already in place for your family's welfare.

What about your personal preparedness? Many of us deal with medical and other life issues where daily scheduled medication is needed. Have you actually formulated a plan to address acquisition, storage and access to those pharmaceutical needs, then tried it to see if it works?

When the call came for volunteers to go to the Virgin Islands and Puerto Rico following the recent hurricanes I was all ready to sign up. Reaching for the phone to call ARRL Headquarters, it dawned on me the area was going to be hard pressed to accommodate any special needs I might have. It would have been a great experience but ...

In the end I stayed behind. It simply made sense to financially support the efforts of others without potential medical impediments rather than go there and risk becoming a liability due to personal chronic health issues. In the end, the event served as a wake up to review my personal emergency preparedness plans.

Review your personal, family and emergency communication preparedness plans quarterly. Modify plans as needed. Perform a trial run of all plans. Revise if necessary. It is amazing how the best laid out plans when executed reveal operational flaws of massive proportions that just are not intuitively obvious. In the immortal words of Dirty Harry, "A man's got to know his limitations". Discover yours.

May we never have to use our plans for emergencies, but may we be prepared in the event they are needed.

73,
Chuck
WD4HXG

DI-DAH-DI-DAH ♪

I tell you, I'm looking forward to spring. More and more, every January, I can hardly wait for warmer weather to get here. I was never much of a winter person, perhaps because I grew up as a kid, sleeping in a bedroom with no heat, except for that which came up the stairs and through the floor boards from the first floor.

My first ham station was in that same bedroom. I remember operating CW in the wintertime with very cold fingers. Probably a good thing my first home brew tube rig produced more power in heat than it did for RF radiation from the antenna.

We tend to look back at those early times as "the good old days" and think about how fantastic they were. When really they most likely weren't all that great! Or at least no better than what we are going through right now. I'm sure psychologists and academics have some fancy words for those feelings of the past somehow being so much better in our memory than in reality.

At least I didn't have to walk to school, through waist deep snow, uphill both ways! Like some people I've heard about. Guess I had it pretty good!

Until next month,
VE1VQ

MARA