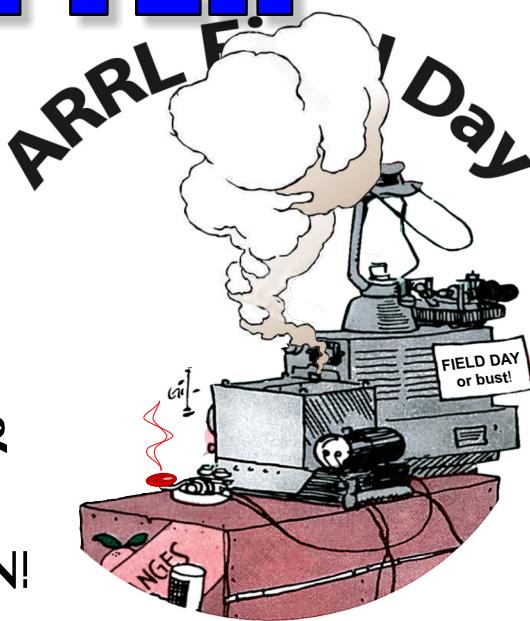


The NEWSLETTER

JULY 2017 VOLUME 17, No. 7

Mercury Amateur Radio Association - MARA
North America - North East

GOOD THING
WE'VE GOT
A WHOLE YEAR
FOR THE GEAR
TO COOL DOWN!



APOLOGIES (AGAIN!) TO PHIL GILDERSLEVE, W1CJD (SK)

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- ANOTHER YEAR AND NO FIELD DAY!

OTHER STUFF

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

Grandma Mara's RAMBLINGS..

It was an absolutely fantastic Field Day. When the "planets all align". When you have no equipment failure (Murphy is busy somewhere else plaguing someone else), when the antennas all stay up despite the occasional gust of wind, when the generator doesn't add any interference to the rigs' reception, just purring along, and when the food and friends are fantastic, you know life is better than good - as Tony the Tiger would say - [it's] grrrrreat!

The whole gang was there. Wendy and her beau, her mother and father and brother, and Fred and Emily and the other folks from the Senior's complex - even several of the park rangers who've been "with us" from the start joined in to operate from a SSB station when their schedules allowed.

Speaking of Wendy and her boyfriend - on Saturday afternoon,

right in the middle of a twenty meter sideband run she was having, he presented her with a sterling silver infinity knot promise ring. Flustered her so much that she forgot what she was doing and who she was talking with! Her family was happy, as they quite like him. Walter commented to me how cute she was, admiring the ring on her finger when she thought no one was looking. Of course, the word spread through the ladies from the Seniors' like the subject at a greased pig competition at a rodeo, and they all asked Wendy for a peek.

And the food! The Seniors' group provided breakfast and supper on Saturday. The "cook" was a retired chef in her former life and said she was delighted to be able to "be of some use once again". Breakfast was pancakes and syrup (chocolate or maple or blueberry or peach), eggs done several

ways, with bacon and ham, along with toast and jams. The evening meal was salad followed by steak cooked to your taste, on a very large barbecue, with fancy potatoes and several other vegetables. Desert was ice cream with cake or pie (or both). After each of these meals several of the operators (including Walter!) had to be reminded when it was their turn at the rigs, as they had kind of dozed off.

Grandma kept the operators supplied with her chocolate cake and root beer whenever they felt their energy level getting low.

While Grandma and Walter, and Wendy and her family ceased their operating Saturday night, several of the seniors kept going until the very last minute on Sunday. We went over to the park at the end to help with the tear down, the packing away, and the clean up.

A couple of dozen folks stopped by to see what was going on Saturday when Walter and I were there. One elderly gent told me he had been a radio operator in the Air Force during Korea and had gotten his license

after returning home, but then marriage and family had gotten in the way and he had let it lapse. He asked if it would be all right if he listened to some code. I cleared my spot at the twenty meter position next to Walter, and the man hesitantly put the headphones on. A slow smile appeared on his face and he closed his eyes. I thought perhaps he had fallen asleep until about five minutes or so later when he opened his eyes and spoke softly.

"After over sixty years, I can still copy code. I've always wondered if I would be able to."

Walter told me later that the old timer was copying at speeds up to 30 words per minute without any difficulty.

Another one that sticks out was a red-headed, young girl of about twelve or thirteen who watched intently as Wendy worked SSB stations at one of the positions. I watched her as she whispered to the lady she was with, whom I took to be her mother. The older woman smiled and said, "Go ahead and

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“After over sixty years, I can still copy code. I've always wondered if I would be able to.”

A HANDY PIECE OF TEST EQUIPMENT

These days the first piece of test equipment you own will likely be a digital multi-meter. Perhaps it will be a cheapie from [Harbor Freight](#) or [Canadian Tire](#) (depending on which side of the border you are shopping on) or a slightly more expensive unit from [Fluke](#). Any of these can be used for basic troubleshooting around your home or station.

Unlike even only a few years ago, now your home has more than just 120 volt AC wiring crossing your attic and snaking through your basement. Now we have computer network wiring, intercom wiring, alarm wiring, cable tv, etc. added to the mix.

Recently, I had to connect a motion sensor to the western house alarm system. The wiring had already been installed so the job should have been a simple thing. It turned out not to be! At the panel in the mechanical room, even with most of the sensors connected, there are still a dozen or so (white) quad cables (some are alarm and some are for power for closed circuit tv) waiting to be used. Running back and forth from the wall sensor to the alarm panel, carrying a six foot step ladder each way gets tiring very quickly. Using a digital ohm meter to check for continuity in each cable with a pair intentionally shorted at one end should, in theory, eventually let me locate the right one. What happens when it doesn't?



That's where a wire tracing device really pays for itself. Or it would if I was doing this task for a paying customer. At home, it pays for itself in reduced frustration.

These consist of a tone generator and



Figure 1 - A low cost [wire tracer pair](#) from Amazon.

ask her, I'm sure she won't bite!" Wendy looked up at hearing this, smiled and beckoned the young girl over indicating that she should sit in the chair beside her. Soon the youngster was bombarding Wendy with questions. Wendy looked over at me

and smiled, both of us thinking the same thing; that it was only a few years ago that she was doing the very same.

While the red head tuned around the band listening, Wendy stepped away and spoke with the woman. Turned out I was close in my guess as it was the step-mother. She said her step-daughter was normally painfully shy but had almost dragged her over after seeing the antennas from their camp site. When they were closer and they could see the radios, she was even more determined. Wendy and the mom exchanged e-mail addresses and promised to follow up.

When Wendy returned to the rig she asked her if she wanted to talk with someone? The reply was hesitantly affirmative. Wendy explained that she would make the contact and pass the mic over. She found a female UK station calling CQ who sounded as if she wasn't particularly in a hurry and gave her a call. The contact came right back and Wendy explained to her what she was about to do. The YL agreed and she and the youngster talked for quite some time before the former had to sign, saying she would send a QSL to Wendy for her.

I think we might have the makings of a new ham. Red (she told us that was her nickname) asked Wendy if she could come back over after the evening meal. When her step-mom was hesitant, saying she didn't want to bother us, Wendy assured them both that they would both be more than welcome.

That's the joy of having a "helping heart" and for being in it for the enjoyment and not for the score.



an audio pick-up receiver/probe.

The tone generator usually has a distinctive dual audio frequency output and also an LED to indicate if the pair being tested is shorted or open. The probe has a speaker to let you hear when you find the correct wire or wire pair.

Most, if not all of the tone generators for sale have an RJ-11 plug to trace house telephone wiring without having to take the plate off the wall. That same plug will also fit an RJ-45 jack.

Amazon lists several for under \$50 (some under \$25) or you can pay several hundred dollars for a professional kit giving you more options. Like many things in life, you most often get what you pay for. For home or casual use most likely even the low end ones will do. Just make sure you get one with a receiver volume control. Being able to lower the audio level as you get closer to the wire you are searching for makes it easier to zero in on the exact one.

Being in the alarm business, I've used these tracers for years. For some reason, I didn't have one on hand out west.

Amazon to the rescue! I ordered a ***Fluke Tone Generator and Probe Kit***.

Within a few days of placing the order it was at my local post office. Soon after that my elusive cable was located and my motion sensor was connected.

Normally, you turn on the transmitter unit and connect the clips to the pair of wires you are searching for. On the other end, where you want to find the pair, you wave the probe around the rats-nest of wires. As you get closer, the tone volume level increases.



Figure 2 - A slightly more expensive cable tracer pair made by Fluke.
Note the better quality clips and RJ11 plug. Although you can't see it in the picture, the plastic cases are heavier built compared to the less expensive ones. It comes with a well made carrying/storage case. The claim is also made that it will send a signal ten miles (sixteen kilometers) along a wire pair!

Searching for a Category 5 or 6 cable may be a bit more of a challenge. Wire pairs in these are wound in such a way that crosstalk to adjacent pairs is minimized. Often wiping the pick-up tip along one of these you will find low and high volume levels of tone. You may find it better to connect the transmitter clips to wires of different pairs, or clipping the red clip to a single wire only and letting the black one hang free. If the cable is in metal conduit, it may work better if you connect the black clip to the metal pipe. Once you think you have found your pair, touch the probe tip to the end (copper) of the cable pairs. If you have the right one the tone will leap out at you.

In a pinch, you can use these to track a wall outlet back to the AC panel. Before you connect to the actual wiring, **make absolutely sure** that the AC power has been switched off. Use the main house breaker if you have to. The tone transmitters take violent offence at being connected to a live AC line!

Check out <https://www.youtube.com/watch?v=apIpHPgkevQ> for a good video on how to use a tone generator and the probe receiver.

SQUID POLE VERTICAL ANTENNA MOUNT

When I first started playing outside with the squid pole antenna, I whipped up a mount made out of pieces of scrap lumber. (See the [September 2013 Newsletter](#) for a picture and more information.) It was stable so long as there was no wind movement of any kind (think slight breeze max). In order to keep things up in the air, I had to use some handy rocks (rocks are one thing easily available in Atlantic Canada) as weight. I had thought to make a replacement up out of pvc pipe that I could assemble and take apart easily out in the field. (See the [January 2013 Newsletter](#) for more information on this concept.)



Recently, I priced pipe at Home Depot and Lowes and came away suffering from sticker shock!

Looking for something that will be stable in the wind but for which I will not have to get a second mortgage to acquire, I came up with the idea of a bucket and cover and a single piece of PVC plastic

pipe, more or less of the right inside diameter to fit the fibreglass pole and with small rocks or sand as a weight.

Home Depot have their distinctive orange five gallon buckets with matching lids at a fairly inexpensive price. Drill a few $\frac{1}{4}$ -inch holes in the bottom to allow any rain collected to drain out.

I would have preferred two and a half inch inside diameter PVC pipe to more closely fit the fibreglass pole but the nearest I could get was three inch. Fasten the pipe to the center of the bottom of the bucket with an end cap. Fill the bottom of the bucket with sufficient crushed rock or sand for weight to keep it from tipping over from the wind



Figure 3 - Combined drawing with a photo of a Home Depot bucket showing how the pipe and rock weight are assembled to make an antenna mounting base.

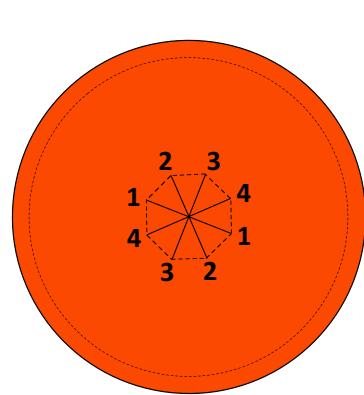


Figure 4 - Make four cuts (solid lines) in the center of the cover to make "triangles" such that the pipe is held snugly in place.

load on the vertical fibreglass pole. Cut a reasonably snug fitting hole or use the triangle pattern in the lid for the vertical pvc pipe (see Fig. 4).

And there you have it!

Carry the prepared bucket to the area where you want to install the antenna. Raise the sections of the pole and fasten the coil and radiating wire. Insert the base of the fibreglass pole into the plastic pipe. Connect the plug on the end of the wire into the junction box. Connect the coax transmission line and lay out the tape measure radials.

If you plan to use whatever is available for weight at your operating site, omit the cover and do not glue the pipe to the cap at the bottom of the bucket. When you arrive on site, insert the pipe in the end cap and plumb it vertical with whatever you find on hand.

Using some variation of the bucket and pipe holder combination might well be suitable for the temporary installation of any lightweight antenna support or vertical antenna.

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

Perhaps it is an antenna you made or a new station you assembled, a two meter mobile installation, a new handheld you bought, a field day operation or a mini DX-pedition that you could write about. Whatever it is, we would sure like to hear about it.

ACCESSORIES FOR THE RASPBERRY PI 3

Up until recently, I'd been using a cast off keyboard and a corded mouse from a defunct desktop computer to do anything with the Raspberry Pi 3. I wanted something a bit more compact to better fit on the equipment shelving unit in the media room*.

Searching the AdaFruit web site one evening I came across the [Adafruit 1738 wireless keyboard and mouse combination](#) for \$19.95 USD.

It's amazing what a flat piece of plastic and online ordering can get for you.

It is suggested you make the following changes to configure the Pi for the new keyboard, things you would likely do anyway for the preferred North American keyboard layout.

- Locate the keyboard dongle (mine was in the battery compartment of the keyboard) and plug it into the Raspberry Pi 3.
- Install the proper batteries in the keyboard and in the mouse.
- Power on the Raspberry Pi and wait for it to boot.
- Once the screen displays, click on the raspberry symbol in the upper left corner of the screen.
- Click on "Raspberry Pi Configuration".
- Click on "Localisation".
- Click on "Set Locale".
- Set the Language to en (English)
- Set the Country to Canada or the US (USA)
- Set the Character Set to UTF-8
- Click on the OK block under the UTF-8 block.
- Click on "Set Keyboard".
- Set the Country and Variant (language).
- Click on "OK".
- Click on OK at the bottom of the Raspberry Pi Configuration window.



works.

The mouse works through the keyboard so nothing has to be changed for that to function correctly. Best of all, you only use one USB port on the Pi instead of the two required if you were using separate mouse and keyboard as I was before.

The other thing I picked up was the [AdaFruit 1151 HDMI to VGA adapter](#)

(\$18.95 USD). Every time I wanted to change anything with the Pi I had to drag it upstairs to the flat screen

TV with an HDMI input, or turn on the overhead projector in the media room and work with my back to the screen. Using this adapter lets me use a spare (VGA) computer monitor I have in my office.

The picture quality is not quite as good as HDMI but it's an "almost".



THE LATEST PIECE OF \$&!@# RANSOMWARE

The latest piece of ransomware to hit the world's computers is Petya (NotPetya/SortaPetya/Petna). Seems that this is not as bad as the last one in that the experts quickly found a flaw in the code and came up with a "vaccine". Go to <https://www.bleepingcomputer.com/news/security/vaccine-not-killswitch-found-for-petya-notpetya-ransomware-outbreak/> for instructions on how to create the files to prevent it from infecting your PC.

Apparently this one strikes computer users who do not keep their software up to date, such as companies still running Windows 7 and earlier. Those running Win10 are supposed to be safe.



If this the first time booting the Raspberry Pi 3 you will have to do other configuration steps for the system board as well. If you are only replacing the keyboard on an already configured Pi then you may find the settings are already changed to what

* media room - this used to be called a theatre/theater room. Before that it was called a "den" or a "rec room". I guess that every now and then someone in the Realtor business thinks the name has to sound fancier, perhaps to sell more "stuff".

How about a photo of you at your station? If you are bashful, a picture of your station (without you) will do.

I'M GETTING RID OF IT and YOU CAN HAVE IT!

THE WAY IT WORKS IS THIS...

You have to be *a member of MARA NorthEast* to submit an item or items to give away - and it (or they) must be free (except for any shipping costs).

You must be a member of MARA Northeast to claim and receive an item or items.

The two of you will have to agree who is paying for the shipping, if you are not within driving distance to pick the stuff up in person.

Doesn't have to be amateur related. It can be anything you want to get rid of.

No getting it for free and then selling it on E-Bay. You (or a family member) have to personally have a use for it.

Submit your item or items to VE1VQ@eastlink.ca to be listed in the next newsletter.

Provide some text describing what it is and its condition (and a picture if you have one).

The item/s will stay listed for six newsletters (or less, if you notify us that it has been given away).

QUOTE OF THE MONTH

A man sitting at the breakfast table says to his wife, "I don't want snap, crackle and pop. I get enough of that getting out of bed every morning."

Dana Summers
Cartoonist
Bound and Gagged comic

both sides of the border - all suppliers had the same sizes; too large or too small. In the end, compromise was necessary, but it came too late for this year's Field Day.

I'm hoping some of you got out for it. I'm also hoping a few of you took pictures and will be willing to write a piece describing your experience. Please share your adventures with the rest of us. Perhaps your doings will inspire us (and especially me!) to emulate what you did and get some signals out over the air next June.

Perhaps, next year I will have run out of excuses.

Until September,
VE1VQ

DI-DAH-DI-DAH?

Another Field Day gone, and again I didn't get on the air. For something so simple, the bucket and pipe project shown in this issue of the Newsletter took a lot longer than I thought it would. I wanted a specific inner diameter size pipe but no matter where I looked - either in store or on line, on