

# The NEWSLETTER

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Mercury Amateur Radio Association - MARA - North America - North East



**A** single snow storm is enough to cover everything and turn it into a **W**inter **W**onderland.

After that, the **W**ONDER is *gone!*

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## OTHER STUFF

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*Links that will take you to web locations referenced in this newsletter are shown in **blue**.*

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# Grandma Mara's RAMBLINGS

Why is it Grandma gets this burning desire to build antennas in the wintertime? Why can't I want to measure wire in July when the weather is warm and you don't need an extra high wattage gun or a propane torch to solder wire joints? Perhaps it's something in the wiring of the brain of a true ham.

There is a theory you hear every once in a while, likely postulated by Murphy, to the effect that antennas built in cold weather work better than those built in mid-summer. I don't know of anyone who has ever tried building identical radiators in both summer and winter to test out this theory so I can't say definitively whether or not it's true. All I know is when the snow starts falling, my soldering gun trigger finger starts to develop an itch.

So there I was last winter, out in back of the house and the shack trying to snow-blow a path through the white stuff so I can lay out and measure some wire that stubbornly wanted to curl itself up (probably wanted to keep warm!). I'd had this stranded wire for eons; some I bought a long time ago from a mom and pop hardware store after the husband died and they were going out of business. Hey, you get a chance to stock up on things good for ham radio you take the opportunity!

Antenna raising day wasn't a bad one. The sun was out, the wind started out low, and the temperature was just below freezing, after a week of ear numbing/nose reddening days. By the time I had the wire for the 160 meter dipole measured and cut, Walter had arrived with his air-powered tennis ball

launcher. With that and a portable air tank he proceeded to make short work of stringing the support lines over two conveniently located trees. Up went the dipole to the operating height, and on went the analyzer at the end of the coax in the radio room.

Because I had cut the wire lengths long in the beginning, it was an easy thing to shorten them to bring it to resonance. Well, saying it in one short sentence is easy! It actually involved quite a few trips between the shack and the antenna before Walter and I were satisfied. It would definitely be a lot harder using an old fashioned SWR meter to approach the resonant point. You don't want to go too far and slide up the other side, but still you want to get it as good as you can. With the analyzer showing the SWR curve on the screen it wasn't nearly as bad; in fact it was quite fun to watch it slide up to the desired center frequency!

So what's the moral of this story? Keep your eyes open for "deals" on wire and, by extension, anything useful to ham radio, but support local businesses as well. Get help from another person and it will be

easier to finish the job in a reasonable length of time. Using good test equipment makes working on antennas much easier. As does a bite of chocolate! And why does there have to be a moral to every story anyway?

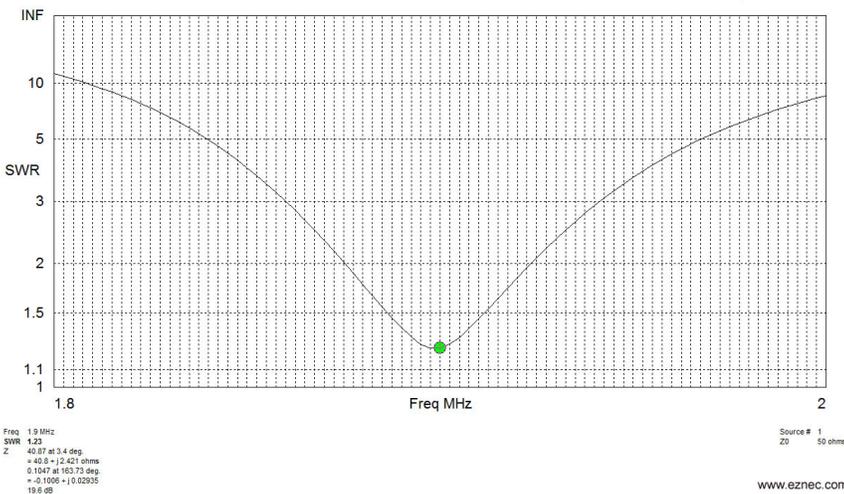
Does it work better for being built in the cold rather than the heat of summer? I don't know! I just wanted a new antenna on a band I haven't worked much before. Maybe you should go ask Murphy for the answer!



**RHODE & SCHWARZ MODEL ZVH antenna analyzer.** It's one of those things that if you have to ask the price, you can't afford it!



Walter's new **RIGEXPERT AA-54 analyzer.** Not bad for the price (~\$350.00). Reviews rate it higher than the MFJ line of analyzers. Not an R&S but then not much (if anything) is better than a piece of test equipment made by Rhode & Schwarz!



Grandma Mara's 160m dipole at 75 feet in the air, fed with 50 ohm RG-213 and plotted with EZNEC. The final adjusted scan on Walter's analyzer was a very close match.

# CULTURED CORNER

by ANØNMS

Because of ANØNMS' ongoing situation the decision was made to give guest columnists a chance at the "big time" by providing them space in this newsletter. Each month for the near future we had decided to feature a new and promising person in this column.

Unfortunately, today's generation of aspiring columnists want money for writing what they consider cultured material. They want the big bucks right after taking a correspondence course or a couple of evening writing classes, and being as this is a no-budget publication we haven't been able to get anyone capable of writing a coherent sentence let alone a whole paragraph for the money which we are willing to pay (none!).

Instead, to fill the space, we've got some links to places so as to give you the type of culture you've gotten used to, over the past months. Can life get any better? Enjoy!

The [Metropolitan Opera](#)

*The New York Philharmonic Orchestra*

*The Bolshoi Ballet*

The [Boston Symphony Orchestra](#)

**The Grand Ole Opry**

*Country Poetry*



## GOT SOMETHING YOU CARE TO SHARE?

A construction project, pictures of your station... home or mobile; a Field Day station at the chapel or elsewhere, a trip in the woods or some remote location with a portable rig, or maybe an antenna in your back yard. A poem or fiction or a real life story involving ham radio would be just fine as well.

Whatever it is, share it with us. Send it to one of the e-mail addresses shown on page one. Don't be shy now!

# TECHSTUFF

by VE1VQ

It used to be that most hams built their own gear out of necessity, or (after World War II and Korea) used military surplus, from the key to the antenna and everything in between. One reason being that there weren't any Ham Radio Outlets or similar suppliers around back then. After the war, parts or whole units could be picked from various surplus outlets around the country. For those of you old enough to remember, "Command" receivers and transmitters and other ex-military equipment provided many hams with components or complete stations. All of the ham magazines abounded with modifications for things



SCR-274-N: Receivers BC-454-B, BC-453-B, BC-455-B in Rack FT-220-A. All of the receivers (and transmitters) shared a common case design. The 454 tuned from 3.0 MHz to 6.0 MHz, the 453 covered 190 KHz to 550 KHz (just below the AM Broadcast Band), and the 455 from 6.0 MHz to 9.1 MHz. The 453 was often used by hams as a tunable IF (intermediate frequency) for other receivers. The US Army Signal Corps used the SCR-274-N designation while the later JAN (Joint Army Navy) designation became the AN/ARC-5. Different configurations were used by the different branches. Photo from Wikipedia.

the design engineers never imagined.

The Command series receivers and transmitters were officially known as [SCR-274-N](#) or [AN/ARC](#) depending on the branch of the military and the time they were manufactured. I remember reading articles in QST and CQ magazines about all kinds of modifications, some of which I did myself. I bought some of these from military surplus in the late 1960s, brand new unused - still in sealed cartons - for \$9.95 each. For some years, I ran a forty meter CW station with the BC-455 receiver and BC-459 transmitter. Frequency stability was excellent (for the time) on both units. The forty meter band was only a small part of the receiver

tuning dial so "bandsread" was a common mod.

The "black thing" on the rear of the receivers (shown above) was a dynamotor power supply. These were usually the first thing removed by hams and replaced with an external AC power supply. With the recommended DC supply voltages, the carrier power output was around 8 watts for AM and 25 watts for CW. Not a powerhouse but then you have to remember that most hams in the fifties and sixties



SCR-274-N: Transmitters BC-457-A and BC-459-A in Rack FT-226-A. The 457-A and 459-A covered 4.0 MHz - 5.3 MHz and 7.0 MHz - 9.1 MHz respectively. The BC-696-A tuning from 3.0 to 4.0 was the other one interesting to amateurs for the 80M band. Besides a lot of modification to these units, they were often stripped of electronics and the remaining coil and capacitors used as a tuner. Photo from Wikipedia.

were running a hundred watts or less as kilowatt amplifiers were not as common as they are now and interference to television and radio was much more prevalent.

The antenna connectors are shown on the top left corner and the output circuits were designed to feed a short aircraft antenna with a 5-ohm impedance. Using a 50-ohm coax fed antenna, the resulting mismatch could (and did) cause problems with harmonic filtering and led in many cases to the reputation of these transmitters being TVI (television interference) generators. I used (by luck rather than design and planning) an end fed L antenna with an old broadcast band radio tuning capacitor wired in series that worked just fine.

That mint BC-459-A that I paid just under \$10 all those years ago is now going for \$85 in "good" condition at [Fair Radio Sales](#). Guess maybe I should have bought a truckload of them! Better gains than the stock market!



## Pictures and Words

How about sending a picture of you and your station? If so inclined, send me a write-up about your ham radio career. And if you have one, send me a copy of your QSL card.

You're thinking, "no one wants to hear about me!" That's not true because everyone has an interesting story to tell.

Send it to [VE1VQ@eastlink.ca](mailto:VE1VQ@eastlink.ca) in whatever format you want - even scribbled in pencil on a piece of paper.

## QUOTE OF THE MONTH

*God grant me the courage not to give up what I think is right even though I think it is hopeless.*

~ Chester W. Nimitz

## ARRL Field Day is June 23-24, 2012

ARRL Field Day is the largest on-the-air operating event in Amateur Radio. It draws tens of thousands to the airwaves each year, bringing both new and experienced amateur radio operators together for a weekend of fun!

# DI-DAH-DI-DAH<sup>D</sup>

**S**o, how's the new year's resolutions doing? Are you like most people who make them, breaking them by the time the clock strikes the noon hour on the second day of January? Maybe you could start out easy. Say something like resolving to get on the air sometime this year. That shouldn't be that hard should it? Once this year? If you're looking for a frequency to start, how about 3.8725 MHz? A good time would be around 7:30am (Eastern) on Saturday morning.

That wouldn't be too hard would it? Get on the air once during 2012 on the 75 meter MARA NE Saturday morning net.

Easiest New Year's resolution you ever kept!

Until next month,  
VE1VQ



## **LDS AMATEUR RADIO PIONEER DAY CONTEST JULY 21, 2012**

**There's been some talk on the reflector about a Field Day contest of sorts. The suggested date is 21 July (Saturday prior to Pioneer Day on the 24th) and the suggested operating time is a four hour block out of seven hours total.**

**This will be open to all radio amateurs.**

**Frequencies and rules will be published when they get settled.**