



The KLARION

Newsletter of the Keuka Lake Amateur Radio Association
Winter 2015

KB2WXV Silent Key

Our friend, Roy Koehler (KB2WXV) has passed away, to a better life. He was taken on December 24th, 2015, after a long and valiant battle with cancer.

Roy was a real “spark plug” for our club, having served in nearly all of the club offices and also serving as trustee of the 145.190 repeater.

For decades, he coordinated volunteer communications for the Wineglass Marathon and the Wine Country Classic Boat Regatta.

Through ham radio he made many close friends. He was a regular HF operator on the Brothers Net (Life Member #227), the 7.272 Ragchew net, and the NorCars net.

He was a regular, both from the house in “Avoker”, and as a mobile anywhere within reach of the repeater on the KLARA Sunday Night Net.

He always had time for anyone who needed help with an antenna... or any other project. The entire club has benefited, at one time or another, from his “good hands” when a supposedly simple project was going sideways.

He is survived by his wife Debbi (KB2WEY) and his children, Frank, Carl, Cassie, and Kristopher.

Please join me in mourning a truly great man, but also in rejoicing that his pain and suffering has finally been alleviated.

I can see him up there now, with Ralph (AA2CJ), the two of them kibitzing in his shop, putting the finishing touches on the Sterba curtain antenna so he can talk with his friends on a different kind of Brothers net.



Several years ago at Dayton Hamfest

With Elliott at the end of the WineGlass Marathon, several years ago.



Field Day at the Whitehead farm



Roy and Dick handle some “small meat for the grill”.



2015 WINEGLASS MARATHON

Since its inception in 1982, the Wineglass Marathon has grown from a small local race with 250 runners to one of the country's top destination marathons in 2015.

During the early years, race organizers experimented with various routes for logistical and safety reasons. One of the first courses stretched from Taylor Winery in Hammondsport to Painted Post before the Wineglass course changed to start in Bath and end on Market Street in Corning.

As the Wineglass Marathon grew in popularity, so did registrations. Today, the Wineglass Marathon serves as a popular Boston Qualifier for many runners.

It was a beautiful morning as the sun rose over the hills of Steuben County on Sunday October 4th. The 26.2 mile Marathon course took runners through Bath, Savona, Campbell, Coopers Plains, Painted Post and Riverside before ending in Corning. The 13.1 mile Half Marathon started in Campbell also ending in Corning.

An integral part of the Wineglass Marathon is communications and this year the Keuka Lake Amateur Radio Association (known as KLARA) provided Ham Radio operators along the race route.

Those Amateur (Ham) Radio operators who participated this year were: Ben Woodruff (KD2HEM), John S. Babbitt (WB2SQX), Ruth Walters (KD2FRT), Dick Walters (KC2SBU), Rick Torrey (W2RMT), Annie Torrey (W2AGT), Belinda Connor (KD2BPJ), Brian Connor (KD2GEB), Randy Gudeahn (N1PTB), Jerrilyn Baker (KE2YB), Joel Fiske (KC2VAW), Ron Boyle (K2TJW), Don Campanelli (W2AC), Pat Campanelli ((W2ABK), Gary Stratton (KC2YTD), Don Stickler (KD2DMD), Dave Beeman (KD2CZX), Donna Fiske (KD2CZY), Roy Koehler (KB2WXV) and Glenn Seiler (W3LSW).

The 34th Annual Wineglass Marathon had 1,927 runners complete the marathon and 2,391 runners finish the half-marathon. The Wineglass Marathon has been named as a top destination race and listed in the top 25 Marathons by the Active Times.

Chairman Ben sends out a humble "Thank-You" to all who participated.

See you next year?

Yes!



Good Morning, Ruth !
What a great smile for such an early hour ...
(KD2FRT)

The Tiger Cubs at a
water stop



Annie and Cat, at the water stop!

(W2AET)



I don't know, Ben. Looks pretty chilly to me!

Ben says it's just "bracing"! (KD2HEM)

Rover 1

And don't believe the bumper sticker ... I've seen John have a ball "playing radio" too!

(WB2SQX)





Gary, following last runner ...

at ½ MPH!

(KC2YTD)

Shucks no, we didn't pose this ... what makes you ask a question like that?

(W2RMT)



Dick looks like he is enjoying himself!

(KC2SBU)

Microphone, coffee cup, big smile
Yup, that's JerryLynn!

(KE2YB)



Happy we
could “hold
back the
trains” for
you!

Mile 8 ...

Are we
having fun
yet?

(KC2VAW)



See you next year!

HISTORY OF THE CAR RADIO

Seems like cars have always had radio's, but they didn't. Here's the story:

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset.

It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car. Lear and Wavering liked the idea. Both men had tinkered with radios (Lear served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't easy: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago. There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator", a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios. Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker. Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard. Good idea, but it didn't work. Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.)

Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention. Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioners could hear it.

That idea worked -- He got enough orders to put the radio into production.

WHAT'S IN A NAME?

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier.

In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - *Radiola*, *Columbiola*, and *Victrola* were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems:

When Motorola went on sale in 1930, it cost about \$110 uninstalled, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.) In 1930, it took two men several days to put in a car radio --The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them.

The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression.

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory. In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores.

By then the price of the radio, with installation included, had dropped to \$55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.)

In the meantime, Galvin continued to develop new uses for car radios. In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts. In 1940 he developed the first hand-held two-way radio -- The Handy-Talkie for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II. In 1947 they came out with the first television for under \$200. In 1956 the company introduced the world's first pager; in 1969 came the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 Motorola invented the world's first hand-held cellular phone. Today Motorola is one of the largest cell phone manufacturers in the world.

And it all started with the car radio.

WHATEVER HAPPENED TO

The two men who installed the first radio in Paul Galvin's car? Elmer Wavering and William Lear, ended up taking very different paths in life.

Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade!)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being! AND it all started with a woman's suggestion!!

Understanding Standing Wave Ratio

Many amateur radio operators treat Standing Wave Ratio (or SWR) as sort of a contest, always striving for, but never quite reaching, the much sought after 1:1 match.

The technical types in the crowd will tell us that, to be very correct, what most of us measure with our antenna analyzers is actually VSWR (an acronym for voltage standing wave ratio). This works something like this:

1. In a typical amateur station a transceiver is attached to a feed line which travels from the transceiver to the antenna.
2. When you key the transmitter, it develops radio frequency voltage, which then travels down the feed line to the antenna. This voltage traveling down the feedline to the antenna is called the forward wave.
3. In some cases, part of this voltage, rather than being radiated by the antenna, is reflected back down the feedline (picture this as sort of like an echo off a cliff).
4. VSWR is a measure of what is happening to these waveforms, the ratio of one to the other, and how they interact.

An SWR of 1:1 just means that the forward wave and the reflected (or reverse) wave are equal.

Back in the days before the antenna analyzer we used a piece of equipment called a Bird meter ... this thing actually measured power (in watts) moving in each direction. The meter used a “slug” of a given load and the “slug” could be turned (rather like a rotary switch) through 180 degrees. Turning the slug towards the antenna measured the forward wave, turning the slug towards the transmitter measured the reverse wave. The idea was to have them as close to the same value as possible.

So a high SWR is bad? Well ... yes and no.

1. Yes, because it will probably put voltage where you do not want it ... on the chassis of your transceiver, leading to a nasty shock. It may also cause excess heat in the final section of your transceiver, leading to damage.
2. No, if you realize you have a problem prior to doing damage or giving yourself a shock and know what to do about it!

How can you fix this situation? Watch the next newsletter for some tips and hints.

Women in Amateur Radio

Clara Reger

W2RUF

Clara Reger, holder of call sign W2RUF (formerly W8KYR) received her license in 1933. She was a member of YLRL, QCWA, ARRL, and the Radio Association of Western New York. She managed disaster communications in the city of Buffalo following World War II.

Clara never tired of helping those who were interested in radio and electronics. To receive one of her "Ruf 'N Ready" awards was a big honor!

She was so proficient at CW that she could receive 50 words a minute ... provided you could send that quickly!

Clara developed the signature that all young ladies use on the air, "33", which translates as "love sealed with friendship". She also received an Edison Award.

Clara passed away in 1980.

In her honor, RAWNY sponsors the "Ruf 'N Ready" code proficiency test in Rochester, during the month of June. Operators who are able to copy at least 7 ½ words per minute receive a beautiful four color certificate showing the date and the speed they achieved.

The USS Little Rock was a guided missile light cruiser. Following her decommissioning in 1976, she was brought to Buffalo and moored in the harbor as a monument to honor naval veterans and as a tourist attraction. In 2006 RAWNY dedicated the rebuilt radio room of the USS Little Rock to Clara Reger, W2RUF.

It was a great honor and a wonderful remembrance for one of the great ladies of amateur radio.

2016 Testing Schedule

- **February 10th, 2016 immediately preceding our monthly meeting - 6:00 PM**
- **April 13th, 2016 immediately preceding our monthly meeting-6:00 PM**
- **June 8th, 2016 immediately preceding our monthly meeting- 6:00 PM**
- **August 6th, 2016 at the KLARA Hamfest at the Howard Community Center – 10:00 AM**
- **September 17th, 2016 at the Civil Defense Training Center – one day technician question review and testing. Question review starts at 8:00 AM, with testing to follow at 3:00 PM.**



The Antenna Page

Something a bit different

For most newsletters I try to carry an article about antennas, generally a design you can build yourself, preferably one I have built myself. In the past there have been articles on the Fan Dipole, the Slingshot antenna, The Delta Loop antenna, and the 43 foot vertical.

For something a little different this time, I thought I might review a couple of commercial designs for 2 meters.

The first I have been using since I was re-licensed in 2006:

The Arrow Antenna Dual Band Open Stub J Pole

This was one of my first purchases as a newly re-licensed amateur operator. The current model number is OSJ 146 / 440. It is built of solid aluminum structural shapes, machined to the proper specifications.

This is a very sound antenna, in the structural sense. I use one of these as the 2 meter FM antenna on my home system. It is mounted on a 20 foot black iron pipe mast, set 4 feet into the ground and secured with concrete.

With just a very small amount of maintenance it will last a lifetime. Maintenance consists of checking and re-torquing the nuts on a regular basis, and assuring that the coaxial cable used as feed line remains sealed from weather intrusion and that the coaxial connectors remain filled with dielectric grease to keep water displaced from this location.

These are also available with the longer element made in two pieces, which makes it easier to pack one in your "go" kit. I have one of these, as well, and have used it at the Boat Regatta, and at numerous emergency drills (Corning Red Cross shelter deployment, Ira Davenport Memorial Hospital Wintercane, etc). With a reasonable length mast, it is an excellent performer. If you would like to see it, just let me know and I'll bring it to meeting night.

Price for these antennas is reasonable. The OSJ 146 / 440 with a one piece element lists at about \$49. The two piece element adds another \$10 for a \$59 total.

Could you make these yourself? Of course you could, the design has been around for a very long time. Many, many examples of this type of antenna have been made by soldering up copper water pipe.

I am not convinced you could build an example with this kind of quality and structural ruggedness for the same price. But, I'd love to be proven wrong, and will be standing in line with an open wallet if you do it!

By the way, Arrow Antenna also manufactures solid element Yagis, if you want to try 2 meter single side band; and solid element satellite antennas (crossed elements, with a built in diplexer). Also outstanding antennas.

National RF Porta Quad

This is a full sized 2 meter quad antenna. It exhibits good front to back ratio and very nice forward gain (about 8 dB over an isotropic and 6 dB over a dipole).

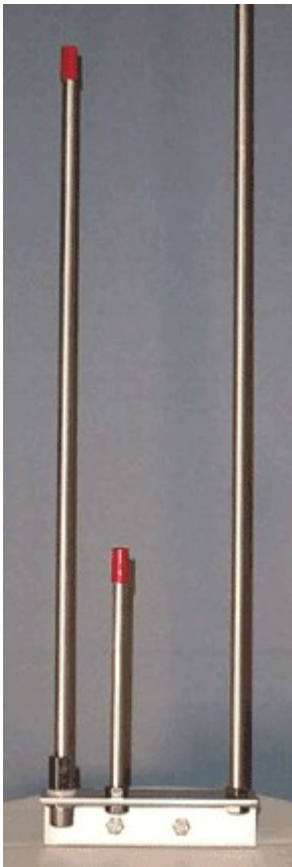
Here again, the antenna is fabricated from good materials and appears to be very rugged. The plastic portions are ABS, other Acrylics, and fiberglass.

Technical specs:

- Frequency Range: 144 to 148 MHz
- VSWR: Less than 1.5 to 1 across the range
- Feed Line Impedence: 50 ohms

The manufacturer claims it is possible to erect or collapse this antenna in less than a minute, once the operator is familiar with the design. I am not sure why this is critical, but it's nice to know.

This antenna is a good deal pricier than the Arrow, beginning at about \$119. It also, more than likely, is capable of a lot more.



Nice shot of the Arrow OSJ



Porta Quad fully deployed

and packed for travel



Thank Yous and Credits

1. Thanks to John Babbit (WB2SQX) for the article and pictures on the Wineglass Marathon. Very nice work, John!
2. Thanks to Dick Walters (KC2SBU) for the article on the history of car radio. Good work, Dick. This is one of the best articles I have read in some time.
3. Thanks to Gary Stratton (KC2YTD) for the idea to write about VSWR and for the 2016 test schedule.
4. Thanks to Nancy Bob (KS2YL) for the idea about an article on Clara Reger.
5. The idea for this month's Antenna Page came from several people simultaneously, with some being club members and some not. I am afraid to recognize a single individual for fear of leaving anyone out. Thanks to all!

Next Time

Next newsletter will be out in late March or very early April. If you have articles or ideas, please let me have them. E-mail is always welcome at KC2VAW@fiskefamily.net or see me at KLARA monthly meetings.

Let me also take a moment to recognize all for the extra work and support with this newsletter. This edition seemed to be extra difficult, for some reason. I thank you all for your understanding and patience.

Until next time ...

And remember,

Operate in public

Explain what you are doing

Use the spectrum or someone else will!

Be a Ham Radio Ambassador!