

**William Manfrass 8BMK - W8CEQ - \*1898-1975\*** Born 3 November 1898 in Portage County, Ohio. In Bill's own words giving a radio seminar: I was raised on a farm in Streetsboro, 7 miles north of Kent.

A friend of mine who lived just one mile away and in the same grade at school and I got interested in wireless as a hobby by reading in the newspaper about a ship in the Atlantic which had gotten into trouble and all passengers were saved by having a radio aboard and received help in time. This was 1912 and some how we got a copy of Modern Electrics and sent to Electro Importing Co and Nicholis Electric Co for their catalogues. (Bill has a son who was a pilot for Capitol Air Lines, flew Akron to Youngstown daily.)

Being mighty short of funds we settled for a 10 cent galena detector and a 40 ohm receiver phone and 100 ft aluminum wire from Electro Importing Co for \$1.60.

After putting up the antenna and wiring up the detector and phone we sat and patiently adjusting that galena detector cat whisker, about a week and one morning about 0200 we heard WCX Cleveland make a short transmission - That without a doubt was the greatest thrill of my life. This started my friend and myself on our radio hobby.

After building a tuning coil on a salt box for the receiver and a transmitter using a Ford spark coil a spark gap between 2 nails across antenna and ground. We were off.

I received the 2<sup>nd</sup> thrill of my life when my friend using a 1 inch spark coil and I make our first contact between our home a whole mile apart.

This was of course long before we had any commercial electricity. The only power I had was the dry batteries that during the day time were used to run the gasoline engine for pumping water.

Signals were very weak at first, but we soon were using a tuning coil in our transmitter and a condenser made by wrapping tin foil on the outside of a fruit jar and filling the inside with salt water. With this improvement signals were much more acceptable.

Later hearing about a ham in Aurora who was giving up the hobby I bought from him a 1/4 KW open core transformer for \$2.50. So by the time 1914 had arrived we had a 32 volt DC lighting plant at our home and of course I had to build something to interrupt the input to the transformer. So after experimenting with an interrupter, made from a small glass

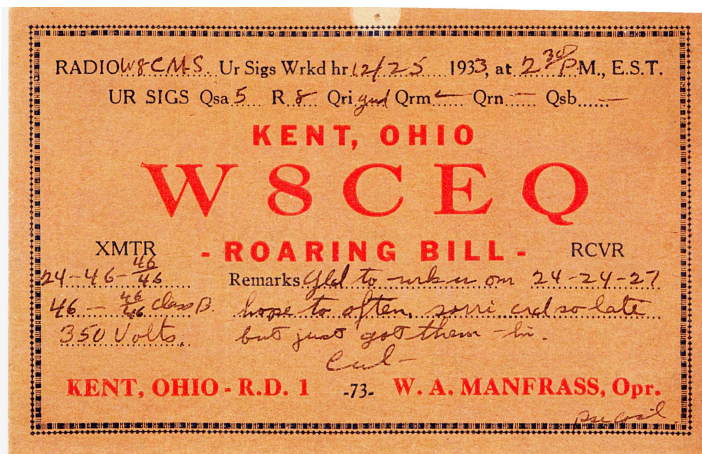
tubing drawn to a small diameter in the middle and bent in a V shape filled with mercury.

This worked after a fashion but the tone was very rough so I built an electrolytic interrupter using a small jar with 10% sulfuric acid solution and lead electrode

and aluminum rod just touching the solution. This outfit using a home made quenched spark gap increased our transmitting distance to about 10 miles. By this time we were using a much improved receiver. Silicon detectors, lose coupler tuning and condenser and better head phones.

We could by now receive many commercial stations and after winding tuning coils on 4 inch cardboard tubing 30 inches long with about 1000 to 1200 turns.

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Then we could tune in Arlington NAA on 2677 meters (112 kc) and Sayville NSS Annapolis MD on 17150 meters (17.5 kc) we copied weather reports and press from them which gave us good code practice.

In May 1914, The ARRL was started and the first QST was issued December 1915. The only magazines we could get before this with any construction articles in them were Modern Electrics - Electric Experimenter.

Soon Wireless Age appeared and just about the time we got going good it was April 1917 and all transmitters and receiving sets had to be dismantled for the duration of the war. That also meant antennas had to come down. In April 1919 we were allowed to put our antennas up for receiving only and Sept. 1919 amateurs transmitters were Oked back on the air.

By this time we had 120 Volts AC out in the country and I used the spark equipment I have here for the next 2 years. I will demonstrate it a little later but first I will bore you with my further experiences in Wireless.

Up to this time 1921 we had no license to operate as the understanding was that if your signal did not cross the state line you didn't need one. So actually we were not bootlegging, so we looked at it that way.

In December 1920 the first 3 element receiving tube came on the market the UV201, which was a great boom in receiving and in March 1921 the first transmitting tube the UV202 - 5 watter came on the market.

So in July 1921 I got my first license with call of (8BMK) They called me the (Big Mean Kid) The transmitter consisted of a UX202 as an oscillator with 350 volts at 40mills on the plate on about 200 meters or there about, just so we stayed blow the commercial stations.

For plate voltage we used a 500 volt each side of center home made transformer and rectified

it with a home made rectifier consisting of 24 jars filled with a saturated solution of 20 Mule Team Borax and lead and aluminum electrode, in each jar, which was good for 50 volts and 40 mills per square inch of electrode. What a Mess!!!

The output was finally easy to filter but had about 30% voltage drop. For phone operation we usually just put a microphone transformer in the grid lead of the oscillator.

Anyway with this transmitter we were able to work all states east of the Rocky Mountains on CW and 400 to 500 miles in the evening on phone.

The only place in Arkon to buy any ham gear was Don Hoffman W8UX who had a small stock in his home on Kirkwood Road. Quite a number of hams in Cleveland were broadcasting phonograph music each evening and believe me they had quite a few listeners.

I even put on several concerts myself. We had about 10 hams in Kent at this time and had a good radio club who put on a radio dance one night with the music I was transmitting from my home.

In 1922 music by amateurs was banned and from 1922 to 1928 all amateurs had to observe quiet hours from 8 PM until 10-30PM to keep from interfering with broadcasts.

Up to this time all receiving tube filaments had to be operated on DC and it wasn't until 1927 the first receiving tubes to operate with AC on the filaments were on the market. Also in 1927 all spark transmitters were outlawed and hams were allowed to operate only above 1715 kc by the Radio Act of 1927.

So much for early days of ham operation, now I would like to bore you for a few minutes with what I considered my contribution to putting radio in the good of humanity.

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As many of you know I started working for the City of Akron Water Works pumping station at Lake Rockwell in 1917 and stayed there 47 years.

The Cuyahoga River pumping station north of Kent pumped water into the Goodyear Heights Reservoir, from where most of Akron was supplied by gravity pressure. Well that Reservoir is 30 ft deep and holds 20 million gallons of water.

But the only way we at the pumping station had of knowing how full the reservoir, was to make a long distance telephone call to the caretaker and have him go up and check. Our desire of course was to keep it as full as possible to help the pressure in the city and still not run it over.

There were many times when the telephones were out of order and some one had to drive to Akron to get the information.

So in 1925 I suggested I could build a automatic radio transmitter which would send out the reservoir elevations every hour to be received at the pumping station. I got the go ahead to build it and secure a license for it. I got the license for the station with call 8CUI in 1926 to be operated under my operators license and be used in the amateur bands.

I built the transmitter using two UX210's 7 and a half watt tubes in an oscillating circuit modulated with a buzzer in the grid lead and all the other automatic equipment for sending out just numbers 0 to 9 - each number meaning a certain elevation of water, each number was keyed by a rotating disc notched out to operate the key in the transmitter and the correct disk was selected by a float in the reservoir. We made a regular large pendulum clock with a contact at 5 minutes of the hour to operate the relays and systems.

We also had a 24 hour clock to silence the

transmitter from 8 to 10-30PM for quiet periods. The transmitter was on the air only 45 seconds each hour which was time enough to send the correct number about 4 times on 1715KC. The receiver at the pumping station was a conventional home made Reinharts circuit with two stage audio amplifier and a Magnavox horn speaker and could be heard all over the engine room. This was also automatically turned on by a clock synchronized with the one at the transmitter.

So as Helen Waterhouse said in the Beacon Journal, Every time you put the tea kettle on or take a bath you broadcast it on the radio! Many newspapers and magazines carried articles on its design and use.

Well, everything worked beautifully until the license which was for two years expired and I applied for a renewal.

The 1927 regulations were now in effect and we received from Washington a letter that they thought that perhaps the station should be classified as a point to point communication and therefore be classified commercial. But they requested that Supt La Due and myself come to Washington to talk it over and they set a date for us to be there.

Well, just before the date of the meeting we received a notice that the meeting would have to be postponed and they would let us know when to come.

We took it for granted we could operate until the meeting because we were not told to shut it down. But we never heard from them again. Well, everything kept working fine on 1715kc (no complaints, no QRM) until 1941 when the country became very defense conscious.

One day two Radio Inspectors from Detroit showed up at the transmitter and called us in for a consultation. They had heard the signals and being unable to figure them out. They started to track them down. Continued last P.

Which was a rough job because of the short time on the air and it took them 3 months to find it.

They were very nice and could see the advantages of it but suggested we transmit the signals by land line to the fire station and let them relay them to Kent by radio, which we did until the water department got their own radio gear much later.



this one—And while you are still sitting quiet and all together I would like to know if you know anything about any of these old hams in Akron who I used to talk to but have lost all track of.

\*Author note; Obviously we will never know who the hams were that Bill referred to however it would appear his story was hooked up to a demonstration of a spark set that he used in

the early days of wireless.

So much for that. In 1928 I had the misfortune of a fire which burned all my radio equipment including my license and in the delay in trying to get a duplicate it expired and they had assigned my call to some one else and I had to take the examination again and was issued my present W8CEQ.

Mike Serotko advised your author, Roaring Bill got his handle because of the way he spoke, always very loudly. He was a cigar smoker.

I hope I haven't bored you too much with my old experiences, but believe me when you get to my age you get a big kick of recalling all the trials, tribulations and failures and happy moments you had.

The Claire Sutton estate W8CMS has that equipment still. I am hoping the family will give me a chance to purchase some of it.

Kent Ohio	
Radio <i>8DAX</i>	signals were <i>received</i> here <i>1/26/26</i>
your <i>phone</i>	at <i>5:15</i> P.M. Audability <i>8304</i> Tone or Mod <i>good</i>
Wave <i>160</i>	Character <i>good</i> Readable <i>yes</i>
Trans. hr.	Receiver hr.
10 Watt C. W.	Reinartz and
5 Watt Fone.	on e step
Input <i>4050w.</i>	audio
Antenna <i>2</i>	wire flat top <i>60</i> foot long <i>35</i> foot high.
Remarks <i>Very good to work on over range to often seems good to work on fore sign after making low pass</i>	
<div style="border: 2px solid red; padding: 5px; display: inline-block;"> <b>8BMK</b>  <b>A R R L</b> </div>	
WILLIAM A MANFRASS	

W8SU 2002 added 2015

A big thrill was to get many SWL cards like