

## Radio as it Used to Be

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— 1927 —

**M**y father had a friend who was a salesman for General Electric Lamp Division of Nela Park (Cleveland). Since the salesman was going to buy a new radio, he offered my father his old one at a very reasonable price. Thus, we became the first family on the block to have a radio, although second hand.

The set was a 1924 Radiola III-A, manufactured by Radio Corporation of America, and originally retailed for \$83.00. The little wooden box was 6 1/4" high, 12" wide, and 6 3/4" deep. It used four type WD-11 tubes (detector, audio, and push-pull output). The speaker was a Farrand cone type.

The batteries required were six No.6 dry cells connected in parallel for tube filaments, a 4 1/2 volt C battery for bias, and two 45 volt B batteries for the plate supply.

The "aerial" lead from the radio went through a hole in the living room floor, out the basement wall through a porcelain tube, and up the side of the house on porcelain nail-on insulators. The flat portion of the "aerial" was fastened beneath the overhang of the roof and went completely around the house. The ground system was something to behold; it consisted of a Model T Ford radiator buried in the ground until the neck of the radiator was even with the surface of the ground. A wire was clamped to the neck of the radiator and went into the house and up through the floor to the radio. My father kept the radiator filled with salt water "to make a good ground," he said.

Finally the radio was ready to try out. All batteries were connected and the aerial and ground leads were attached. The speaker was placed on the table beside the little box. My father rotated the two FILAMENT rheostats and the tubes began to glow. There were noises from the speaker like two cats on a back fence, but soon my father adjusted the STATION SELECTOR and AMPLIFICATION knobs to obtain a clear station. We listened for the station announcement; and the station turned out to be WSPD, Toledo Ohio. With some further adjustment of the STATION SELECTOR, other stations were heard; WWJ and WJR, both of Detroit, and WTAM, Cleveland. Truly, the radio was an instrument for the man of the house with its complicated tuning procedures.

However, my mother became skilled at tuning the Radiola III-A and listened to the breakfast club, morning cooking programs, and the news programs.

We lived across the street from the public school. I could sleep late and still get to school on time in the morning. Another advantage was that I could run home at noon for lunch -- being a "big" third-grader.

Friday, May 20th, I came home at noon, as usual, ready for my lunch. My mother told me the latest news: a former airmail pilot named Charles A. Lindbergh had taken off at dawn from Roosevelt Field, Long Island, New York, and was on his way across the Atlantic Ocean headed nonstop for Paris, France. I went back to school and told the teacher of the news.

The following evening, Saturday, May 21st, we listened to the radio as usual. It was after supper when the news flash came from WWJ Detroit: Charles Lindbergh had safely landed at Le Bourget Aerodrome, Paris, France, at 10:22 PM French time!

The flight from New York to Paris had taken 33 hours, 30 minutes. Lindbergh's plane, "The Spirit of St. Louis", was built by Ryan Airlines, Inc., San Diego, California. The plane was powered by a Wright Whirlwind J-5C rated at 220 hp.

An interesting sidelight to this story is that a young man who worked on the Ryan "Spirit of St. Louis" at the San Diego factory was later to become famous in his own right; his name was Douglas Corrigan!

— 1934 —

It was the spring of 1934. I had just finished building a two-tube radio from plans published in an issue of Radio News by Hugo Gernsback. Let me describe the set for you.

It was built on a piece of wood taken from the end of an orange crate. The board was sanded smooth and given two coats of clear shellac. The radio panel was Masonite, drilled to mount the two variable condensers, a rheostat and a phone jack. The Masonite was also given two coats of clear shellac, and then followed two coats of Pratt & Lambert black enamel.

The circuit consisted of a 201A tube as a regenerative detector with plug-in coils, a 5:1 ratio audio transformer, and a second 201-A tube as the audio amplifier. Headphones were "Brandes Superior" 2000-ohm units. The 60-foot antenna of stranded copper wire ran through the window sill of my bedroom and out to a peach tree in the back yard. The ground wire ran to a water pipe in the basement.

Each day I would ride my bicycle to the local telephone office and check their trash pile for batteries. Soon I had several Eveready "Columbia" Gray Label Long Life telephone cells with Fahnestock clips. I checked them all and finally selected four "good" dry cells for use on my radio as filament batteries.

I saved my money and finally went to Harry's Auto stores (Ohio's equivalent of Pep Boys) and purchased two 45-volt Eveready "Layerbuilt" "B" batteries for the receiver (\$1.95 each

for the medium size).

Late in April of 1934 all batteries were connected and after reversing the tickler coil leads (a common problem), the set worked. I listened to hams on 160 meters and to stations on the standard broadcast band. I could hear WSPD Toledo, WTAM Cleveland, WWJ and WJR Detroit, and WLW Cincinnati among other popular stations of the day.

Of course, many of these early radios were regenerative receivers and to a great extent, the strength of the received signal determined the audio output in the headphones. No such thing as automatic volume control (AVC) on my receiver.

When I tuned in WLW on 700 Kilocycles (428.3 meters or 700 kHz) late in the evening, I could listen to the music of Shep Fields and his "Rippling Rhythm Orchestra" playing at the Netherland Plaza in downtown Cincinnati. (WKRP and Jennifer weren't even thought of then.)

The clear-channel station WLW ran 50 kilowatts and was heard very well at night in northern Ohio where I lived. Then came the news that WLW was going "higher power." On May 2, 1934, I listened carefully to WLW throughout the evening and at 9:02 PM something "really big" happened. In Washington D.C., President Franklin Delano Roosevelt signalled the WLW transmitter to apply plate voltage to the super-power 500-kilowatt unit! Imagine, 500,000 watts of output power went on the air to be radiated from a single 831-foot-high vertical antenna!

With my little two-tube receiver, I did detect a noticeable increase in audio output and no fading of received signal--but I was a little disappointed in the results. I expected more audio I guess. (dBs were unknown to me.)

WLW began to operate regularly on high power as a clear-channel super-power 500 kW AM station. Eventually WLW employed a directional antenna system after local sundown to protect a station in Ontario, Canada, and continued to operate high power until 1939 when, at the FCC's request, the station reverted to 50 kilowatts.