SO YOU HEARD 3XN -- WAS IT IN WHIPPANY, NEW JERSEY?

by Gene Martin

The establishment of the first 50,000-watt transmitters west of the Appalachians was a major event in radio history in the United States. In the days when stations placed a premium on the skywave and service to large areas, the first 50-kilowatters in Cincinnati and Chicago became the first stations actually able to serve tremendous areas of the nation.

In the fall of 1927, 50,000-watt stations were located in New York, Schenectady, and Pittsburgh -- WEAF (now WNBC), WGY and KDKA, respectively. However, transmission conditions were and are always unfavorable in the region from Pittsburgh on eastward, and none of these three ever managed to deliver a potent signal across great distances. WJZ, New York (now WABC), was rated at 30 kilowatts.

The story of high power at Cincinnati began in another place altogether, with station No. 296 in my logbook, a mystery station in a strange place and with a totally different sort of call letters. The notation reads, "3XN, Whittany, N.J., 428.3 meters, Bell Telephone Co. experimental station. Organ, Song of the Wanderer, testing, 11:40 p.m. Nov. 4, 1927." It was not until some time later that I learned the name of the town was Whippany, and that there was good reason for testing on that wavelength, which is 700 kc.

As it turns out, this same transmitter makes a second appearance in my DXing records, as No. 396, on Oct. 18, 1928. The notation reads, "W8XAL, Cincinnati, Ohio, Channel 70, 50,000 watts, 11:29 p.m., testing," and I added the comment, "Tremendous signal strength." At that time, I was living in Dallas, my DXing location from 1926 to 1931.

I do not know whether Powell Crosley commissioned Bell Telephone to build that transmitter for WLW, or whether Bell built it on its own first and then sold it to Crosley, but whichever way it was, that transmitter first took the air in New Jersey. It soon supplanted the 5,000-watt WLW of 1928, and the radio audience across the nation got its first taste of a full-time, far-ranging skywave service. WLW was commonly described as "like a local" at night from Maine to Texas, and from Florida to Montana.

Today's DXers should remember that these were the days of flattop transmission antennas which radiate highly-superior skywaves, as compared to today's vertical radiators. As an oldtime DXer, I am halfway persuaded that today's 50-thousand-watt stations deliver skywaves not much stronger than the 5,000-watt transmitters of that era. The present WLW with its vertical radiator concentrates remarkably-steady signal strength within about 175 miles from Mason, Ohio, at which distance its first fading zone begins. The purpose of the vertical radiator is to improve the signal in the primary area, yet it reduces it at distant points.

Meanwhile, the first 50,000-watt station took the air in Chicago. It made its first appearance in my logbook on March 27, 1928. The notation reads, "W9XF, Downers Grove, Ill., 288.3 meters, (1040 kc) 50,000 watts, 4:06 a.m. The new transmitter of WENR-WBCN."

WBCN of that day soon merged into WENR and became extinct, which is the story of so many old stations. After this, the 50-kw WENR divided time for about three years with a 5-kw WLS until the latter began using the same transmitter, too. It was in the 1940's when the newborn ABC Network purchased both stations, put the venerable WENR to death, and left WLS as the 50-kilowatt survivor.

(For at least 35 years of its life, WLS was mainly known as a country music station on a par with WSM. The younger generation of the Thirties, Forties and Fifties would not have been found dead listening to WLS.)

By the fall of 1928, two 50-kw stations were on the air in the Midwest, but the Chicago station was only a half-time affair, and its program quality never came up to the fine signal it radiated. Meantime, WLW was beginning its astounding 25 years in which those call letters became the most distinguished in the world, and a professional career at WLW became the equivalent of a degree from Harvard. Many major contributions to big-time radio, both in program fare and commercially, were originated and perfected in the old Arlington Street headquarters of WLW in Cincinnati's Mill Creek valley. I will name just one, the first soap opera: "Ma Perkins." Some may sneer at the soap opera, but also remember that it dominated daytime network radio for 20 years. NBC filled the daytime period with about eight hours of soap opera, and CBS "soapers" weren't far behind. Soap opera was born at WLW.

No other station ever influenced the whole structure of broadcasting to the same extent, and set the standards for excellence over such a long period of time. WLW spent heavily for talent and program development in these early days before radio fully realized it was soon to be the No. 1 advertising medium.

Within two years of the inauguration of 50,000 watts at Cincinnati, WLW advertising rates were the highest in the nation. Programming enterprise hitched to that far-ranging clear channel signal gave it a large and far-flung audience numbering in the millions. As a slogan, "The Nation's Station" contained as much truth as puffery.

In the period of 1929-30, there was even a small station in the Arkansas Ozarks which relayed WLW after sundown as its regular night-time program fare, taking Cincinnati right off the air and feeding it into the transmitter. I can't imagine how they handled the commercials, or if they carried them gratis. I believe this station was KFPW, Siloam Springs, Arkansas.

On November 10, 1928, the Federal Radio Commission announced grants for higher power to many stations, and the system of classifying frequencies as clear, regional, and local was discernible for the first time.

Stations authorized to build to 50 kilowatts included WSM, KMOX, KFI, WTIC, WJZ (now WABC), WBAP, WFAA, and WOAI. Ten-thousand-watt authorizations were given to KRLD, KGO, WHAS, KTCO, and WTFF (now WTOP). KOA was authorized to build to 12,500 watts.

Five-thousand-watt grants went to WAFI, KNX, KPO (now KNBR), WSB, WMAQ, WOWO, WOI, KMOX, WWL, KFAB, WPTF, WRVA, KJR, WWVA, WRR, KYW Chicago, KTNT Muscatine, Iowa (now extinct), and KFKB, Milford, Kansas, the ancestor of the present KFDI, Wichita.

(KYW is the most extensively-traveled set of call letters in radio, for Westinghouse has transferred it from its original Chicago to Philadelphia to Cleveland and back to Philadelphia.)

Various small stations now set out to become as large as the major powerhouses of WLW and WENR. For the Dallas Morning News, this meant building WFAA from 500 watts to 50,000, and for Earle C. Anthony, the Los Angeles-San Francisco Packard automobile dealer, it meant raising KFI from 4,000 to 50,000.

The race to become the 6th 50,000-watt station in the U.S. was won by WFAA, which took the air May 10, 1930, on 800 kc. WFAA was the first 50-kilowatter in the South, and the first one west of Chicago. For the delivery of a potent skywave, WFAA outperformed both WENR and WLW, an outgrowth of its more Southern location. During the years of its flattop antenna operation with 50 kw, I heard it with the greatest volume from Colorado, Northern Wisconsin, New York City, and many other points between. The WFAA flattop was mounted on 300-foot towers, 700 feet apart.

WFAA was another half-time station, sharing 800 with a ten-kilowatt WBAP, which never got around to building its own 50-kw plant. By the late 1930's, however, WBAP was using the WFAA transmitter at Grapevine, equidistant from Dallas and Ft. Worth. Then in 1970, WBAP took over this transmitter full-time and WFAA dropped to the status of a 5,000-watt regional station at 570. WBAP paid $3½ million to WFAA as this switch was made.

By November of 1930, three more 50-kilowatt stations make their appearance in the listings: WOAI, KMOX and WTAM (now WKYC). WGN and WBBM are rated at 25 kw at this time while WBZ is listed at 15 kw.

Almost a year and a half later, February, 1932, the 50-kilowatt ranks have been swelled by KFI, WTIC, WABC (now WCBS) and WLS, which had begun to hitchhike on the WENR Downers Grove transmitter. WBZ, by this time, is up to 25 kw, while WJR and WOAU are listed at 10 kw.

Radio Index ("Radex") of February, 1932, also shows the existence of a split-frequency post of the worst order, XER, 75 kw, at 735 kc, Villa Acuña, Mexico. This was the relatively short-lived border station erected by Dr. John R. Brinkley of Milford, Kansas, known far and wide as the "goat gland surgeon," and in bad repute with the American Medical Association. I don't recall when XER suffered its demise, but it took place years ago.

(Ed. note: Dr. Brinkley started KFKB, Milford, and moved to Mexico after the Federal Radio Commission, predecessor of today's FCC, revoked KFKB's license, the first U.S. radio license to ever be revoked for non-technical reasons. The existence of XER on a split frequency probably led to the establishment of the six Mexican clear channels in the 1940 NARBA, three of which program XER-type programs in English to North America with super power. -BH.)

As the 50-kilowatters spread across the country during the mid-1930's, WLW could foresee its own position of eminence threatened, and reacted in characteristic fashion. In the summer of 1934, W8XO began test broadcasts from Mason, Ohio, 500,000 watts on 700. By the following winter, this had become the regular WLW transmitter, and that stentorian voice could be heard over much of the world. WLW engineers in the late 1940's showed me a greatly-prized reception report of 1937 from King Haakon VII of Norway. He was a DXer too, and was reporting fine reception of Cincinnati in the Royal Palace.

WLW with half-a-million watts remained the giant of American radio for seven years. Its coverage was so great and its commercial rates so high that only national sponsors could afford it; thus it competed for sponsors with the networks rather than other stations in its immediate area. As a point of interest to DXers, the WLW engineering staff numbered about 60, and the total payroll on the station numbered as high as 600. It was the third largest radio payroll in the nation, exceeded only by NBC and CBS.

What was it like listening to a 500-kilowatt station? My interest in DXing had waned during these years, but I listened regularly to it from Texas, Kansas, and Colorado. It was substantially stronger than the 50-kilowatt WLW, all right, but probably no more than twice as strong. On this point, I would like to hear from club members who go that far back, who also pondered that question at that time. 500 kilowatts is how much stronger than 50?

In 1935-38, I worked in the KLZ newsroom beginning my career as a radio news writer and news editor. We regularly monitored the 11 p.m. WLW news show with Paul Sullivan, using a Hallicrafters, its aerial on the roof of the Shirley-Savoy Hotel in downtown Denver. We were mainly interested in picking up pointers on style and technique, and the Paul Sullivan news was the best educator in the business. But I do remember that it boomed into the newsroom with scarcely a ripple of extraneous noise. It was superb.

Of course, I didn't dream at that time that in another ten years, I would find myself writing the 11 p.m. WLW news for Peter Grant, and that I would spend 1944-1950 at "The Nation's Station."

Seven years of 500-kilowatt operation at WLW was brought to an end through the old American mistrust of bigness and competitive pressures translated into political action. No other station had followed WLW into the use of super-power, although the road was open for any station which wanted to vault into the Bigtime.

Over the years, many stations in the eastern half of the nation found that they were losing sizeable portions of what they had thought was their audience to the big station in Cincinnati. It is at least possible that some of those listeners had gravitated over to 700 because they preferred what they heard there.

But then, as now, radio station managements had a tendency to take their competitive problems to Washington for a solution. Many other stations wanted WLW muffled, and their combined clamor finally reached Capitol Hill. Senator Burton K. Wheeler, Montana Democrat, introduced a resolution expressing it as the sense of the U.S. Senate that no American station should be permitted to use more than 50,000 watts. The resolution was adopted in 1941, and WLW returned to being a 50-kilowatt station, the giant brought down by pygmies.

Unless things have changed recently, that half-million-watt transmitter is still housed intact there at Mason, Ohio, lined up along 40 feet of the north wall at the WLW transmitter.

The Wheeler resolution was adopted more than 30 years ago, but its effects were far-reaching, and they are still with us.

For one thing, it committed the U.S. to a policy of limiting the kilowatts. This is the reason why the largest American stations today are considerably less powerful than in many other countries of the world.

The limitation on power also set the stage for the incredible number of AM stations existing today, the bedlam of thousands of small voices, each of them reaching a sliver of audience.

Out of this vast proliferation of stations has come that other aspect of broadcasting, carefully-contrived program formats in which each station seeks out a narrow niche for itself and slavishly adheres to it. Stations have turned to narrow specialization as a means of economic survival in the over-crowded broadcast spectrum. The competitive struggle is going to be intensified in the future through the growth of community antenna television systems with many spare channels capable of feeding audio programs into homes by direct wire, thus abolishing radio.

As an un-reconstructed oldtimer, I cannot see how the present number of AM and FM stations can continue to survive economically. A spokesman for the Colorado Association of Broadcasters paints a gloomy picture already; he says about one-third of the radio stations in this state are losing money -- another third are breaking even -- and the other third are making a profit.

Finally, I nominate as the worst thing which ever happened to radio broadcasting in the U.S. not the birth of television, but the existence through all these years of a Federal Communications Commission which never knew when to stop issuing more licenses.

--by Gene Martin, 3303 E. Evans Ave., Denver, CO, 80210.