

## THE FLOUNDERING '50S: "A PROFOUND DISTURBANCE...BROUGHT ABOUT BY THIS THING CALLED TV..."

What a difference a decade made! Fast forward to the early 1950's, and the contrast is stark and stunning. Classical music formatted WSM-FM Nashville Tennessee, which as W47NV earned the distinction of being America's first commercial FM station, (predating W45D by about 10 weeks) went dark in 1951. While this study is meant to highlight Michigan FM radio, it is worth discussing W47NV/WSM-FM a bit more because of its many firsts. They signed on March 1, 1941, with 70 hours of weekly programming. The FCC had initially wanted all the stations in the first group on the air in January and actually at one time discussed canceling licenses for stations that didn't make it, however none of them were ready and in fact the March 1<sup>st</sup> date achieved by W47NV was the earliest in the nation—a feat made possible in part by the fact that WSM engineers built their own 20kw transmitter. Mr. H.H. Campbell, President of the Standard Candy Company, presented what would become the first commercial ever to air on an FM station (see article with pictures in *Broadcasting Magazine* March 10, 1941, page 46). As also pointed out in *Broadcasting* articles, their original antenna and mast were placed on top of the WSM (AM) tower, an unusual and untested method in the earliest days of FM because filtering and isolation techniques were as yet unproven. WSM eventually bought an FM station in the 1960s and re-flagged it WSM-FM at 95.5MHz.

Broadcasters who were at first enthusiastic were now abandoning the medium. Perhaps the most infamous story was that of WMCA-FM in New York. That station's owner, Nathan Staus, who also owned WMCA-AM, actually published a letter in the *New York Times* in 1950, bitterly alleging that FM had no advantages over AM and that nobody listened to FM because it was basically a fraud. He further charged that he had not even been able to give WMCA-FM away. This earned him angry rebukes from MAJ Armstrong, Milton B. Sleeper of *FM and Television Magazine*, and other champions of FM. And as *FM and Television Magazine* mentioned in March 1950, it also earned him several offers to buy the station, one of which he accepted (Note: The station today is WXRK at 92.3MHz). And as for the optimism shown by the *Milwaukee Journal's* Walter Damm in the section above, that abruptly ended on April 2, 1950, when WTMJ-FM and its companion, WSAU-FM in Wausau, went dark. Here is a portion of the front-page article that appeared in the *Journal* on March 26, 1950, comments that could be applied to many Michigan stations as well, referring to the letter Damm wrote to the FCC asking for the cancellation of the licenses:

"The Journal Co. does not sell time on WTMJ-FM or WSAU-FM," Damm wrote. "Since it derives no financial revenue from either station, the only justification for underwriting the cost of continued service would be a body of listeners far greater than the very limited one which our research has shown to be in existence at the present time and shows no signs of material growth...We had high hopes for FM as evidenced by our heavy investment in two 50 kilowatt transmitting plants, the first on the old low band and the second on the present high band...In 1948 we added a 10 kilowatt plant at Wausau. Much to our regret, FM has not lived up to its bright promise of 10 years ago."

Damm went on to blame many factors, especially the war, which suspended FM radio production, as well as the popularity of television. He indicated that 225 FM authorizations (operating stations and construction permits) had already been cancelled and he listed about a dozen stations in various cities that had already gone dark. While

he did not mention any in Michigan, he certainly could have as Michigan stations were following the trend. And that trend was just beginning in 1950 when Damm made his comments. In fact, the December 1955 *Broadcasting Yearbook* listed 552 FM stations, down 17 from the year before and still continuing to decline. As for the FM stations that survived (which included both pre-war Detroit stations by then called WWJ-FM and WJLB-FM), the excitement of W45D's inaugural broadcast was long gone. In its place were stations that simulcast their AM programs, which in those days meant network feeds generally not carried over high quality phone lines and local programs that originated in AM studios few of which were of good fidelity. Many stations did not even acknowledge the existence of their FM stations in advertising or on the air, save for a quick "This is WJBK AM and FM Detroit" (some stations even suppressed the FM ID on their AM carriers). Ads for WWJ programs in 1962 carried a large banner that said "WWJ 950", and only at the bottom in much smaller print did it mention "and FM 97.1".

An ad card from Detroit's WLDM circa 1958 (from my personal collection of FM artifacts) says: "WLDM (now WKQI), America's Foremost FM Station, is the ONLY High Fidelity music station in Detroit." It claimed to serve 800,000 FM radio homes over 7,500 square miles. There were other Detroit FM stations, of course, but none broadcast high fidelity sound. In addition, many venerable equipment manufacturers such as Collins Radio ended production of FM exciters and transmitters. These setbacks culminated in an unspeakably sad tragedy on February 1, 1954. That's when MAJ Armstrong donned his suit and overcoat, stepped to the balcony of his apartment at 435 East 52<sup>nd</sup> Street in New York, and jumped to his death, a man broken by countless patent disputes and the troubles with FM. (See <http://users.erols.com/oldradio/>). It is worth briefly reviewing the cause of the famous and bitter rift that erupted between Armstrong and David Sarnoff of RCA, who had commissioned Armstrong's work in eliminating radio static.

By the 1930's, radio had entered its "Golden Age" of coast-to-coast network programming. However, one problem remained, and that was static which could make listeners, especially in rural areas, unable to get any reception when lightening storms were active nearby. While magazines offered various contraptions to attach to radios to block static—the radio equivalent of patent medicines, none worked and the research of Sarnoff's engineers produced no solution either. Armstrong understood that frequency modulation was the answer because static itself has AM characteristics. Sarnoff's response to FM was extremely negative for a variety of reasons. The first issue was that, rather than a "magic box" that could be added to RCA radios, FM would have rendered every radio and transmitter (for which RCA held a plethora of patents) obsolete—based on an article in *Broadcasting* dated March 15, 1935, that was 21.3 Million radios! Secondly, while broadcasters certainly liked the high fidelity characteristics of FM, Sarnoff, who had just wired the continent, certainly understood that network programs would sound like they came out of a tin can vis-à-vis live programs carried over an FM signal. And then, while broadcasters were clamoring for a wide bandwidth so they could load SCA's with background music and newspapers through the air, Sarnoff had lots of plans for bandwidth—chief among them television—that he would have to cede to FM broadcasters. Here is a concise explanation from the book *Please Stand By: A Prehistory of Television* by Michael Richtie (1994), pp.34-35.

"Sarnoff met Edwin Armstrong in 1913 when they were students together, and decades later the general would list Armstrong as one of his few close friends. Edwin even married Sarnoff's secretary. With a secure monopoly on radio receivers, Sarnoff put his friend to work developing a better broadcast technology than the AM band of radio.

Armstrong took a dozen years to complete his assignment, developing the technology we now call FM. With Sarnoff's support, Armstrong went so far as to build an operational FM transmitter in RCA's space at the Empire State Building. Sarnoff had grown to love AM, not because it was technically satisfactory, but because the National Broadcasting Company (NBC), the broadcast division of RCA, had two of the three networks (NBC's "Red" and NBC's "Blue"), and was selling or licensing most of the radios in the marketplace. It was a sweet deal and getting sweeter. Why should FM, which would throw open hundreds of new broadcast frequencies, be rushed into the marketplace? At the 1935 stockholders' convention, Armstrong was baffled that Sarnoff spoke glowingly of the future of AM radio and television, but never mentioned FM. Armstrong was even more surprised a few days later when Sarnoff instructed RCA to stop producing FM sets. Armstrong was then evicted from his own studio and notified that the space he occupied would be used to develop television technologies."

The outgrowth of this was bitter litigation over patents made even more convoluted and contentious as RCA adopted FM for television audio. After Armstrong's death, his wife Marion, engaged attorney Dana Raymond, to continue the fight, begun in 1948, on behalf of the Armstrong estate, which was nearly broke. In 1955, they won \$1 Million from RCA. Additional litigation continued, with Armstrong prevailing in every case, until 1967 when the final settlement with Motorola was reached. Mr. Raymond died on August 3, 2003, and his obituary is contained in the August 20, 2003 edition of the *New York Times*. On March 8, 1954, Armstrong's long-time experimental FM station in Alpine, New Jersey (W2XMN) fell silent on what had to be FM's darkest day. MAJ Armstrong's tower, which he built after General Sarnoff took over his space in the Empire State Building, is still there- holding cellular telephone and pager equipment and was ironically pressed into service again to hold temporary antennas for several New York City FM and TV stations that lost their main and back up facilities on September 11, 2001. While there were exceptions, through the 1950s the FM landscape was mostly barren.