

## WITN Goes On The Air and My WITN Experience

By

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After over a year at WNCT-TV, on August 26, 1955, I went to work for WITN. It was not WITN-TV then. The station was just a shell of a couple of buildings, the studio in Chocowinity and the transmitter site near Grifton. The engineering staff consisted of Lou Hiland, Chief Engineer, Ed Piligard, transmitter supervisor and Harvey Mason, studio supervisor. I was the first Staff Engineer and I had just turned 20 years old.



For three weeks, I continued working at WNCT-TV on the evening shift and working at WITN installing the electronic equipment during the day.

Since the studio was not ready for equipment the first week, Harvey and I went to the Dr. Pepper plant warehouse owned by Roberson Beverages. W. R. Roberson, Jr., was majority owner and manager of WITN. The new GE studio equipment was stored among the stacks of Dr. Pepper, orange, grape and other flavors of soft drinks. Harvey and I unpacked the 2 studio cameras and assembled them on the tripods. When we finished all we could do there, the studio was finished enough to take them from Washington to Chocowinity. We put them in the back of Harvey's pickup and he drove the three miles to the studio while I sat on one of the tripods under a camera and held the other one steady. We had a lot of folks watching us going slowly down US-17 as that was a rare sight seeing the big TV cameras going down the highway. I fired up the cameras for the first time a few days later and got them set up ready for the WITN live shows. I continued working at the studio installing the control room equipment until September 15.

On September 14, I worked my last day at WNCT. Lou told me that we were going to Winston Salem to get the old WSJS-TV transmitter on Thursday September 15 and would leave after working most of the day at the studio. WITN had bought the old GE Channel 12 WSJS-TV (now WXII-TV) transmitter located on US-70 between Winston Salem and Greensboro. WSJS had recently installed a new transmitter and tower on Sauratown Mountain.

Lou Hiland, Ed Piligard and I got to Winston Salem about 11 PM on Thursday night with me driving a green Ford station wagon with WITN lettering on the doors. I was surprised when I saw the WSJS engineer waiting for us. It was Beacham Leonard who had known me all my life. He and my mother grew up next door to each other in Nash County.

We all started to work removing the wiring harness, disassembling the transmitter and get it ready to load in a truck. We finished about 8 AM on Friday morning and called several trucking companies. They had nothing available that day and we would have to wait until Saturday to load it and take it back to Grifton. Lou, Ed and I got a motel room and got some sleep during the day.

As a side note, on Friday, Lou, Ed and I drove up to the new WXII-TV transmitter site on top of Sauratown Mountain in Stokes County North of Winston Salem. It was late in the day

when we went there and the sun was going down when we left. After looking over their new facility, we headed back to Winston Salem to the motel. At the bottom of the mountain, a fellow standing beside his car that was in the ditch, waved us down. I was driving and Ed was in the front seat with me. Lou was sitting behind Ed. Lou rolled down his window and the man stuck his head in the window and asked us to help get his car out of the ditch. You could tell from his manner and speech that he had probably been partaking of the local "white lightning" that the county was known for. Lou told him we couldn't help but we would call for a wrecker for him. He then pulled a big switchblade knife and quickly put it up to Lou's throat. It had about a 6 inch blade. He said we were going to help or he would cut Lou's throat. Lou talked to him a couple of minutes and then the fellow looked over at me. I couldn't drive off because he had his head and arms in the car window and the knife against Lou's throat. When he looked over at me, he said. "You're the driver, what are you going to do, help or not?" At first I didn't know what to say, but then I said, "Okay, we will help you. Move so I can park the car in front of yours." When he backed out, I put the pedal on the floorboard and left as fast as that station wagon would go. We didn't know if he had a gun, but we didn't stick around long enough to find out. Lou and Ed said they couldn't figure out what to do to get the man to get out of the way, but it came to me that he might back off if I told him that we would help and needed to park the car. I haven't stop to help anyone at night since then!

The next morning on Saturday, we went back to the old WXII-TV transmitter site and loaded the transmitter on the truck. We arrived back in Washington that afternoon and I picked up my car at Harvey's house and headed to Grifton. I picked up a sandwich at a service station in Chocowinity (no such thing as Hardee's back then) to eat along the way as it was close to 6 PM. When I got to Grifton, the truck from Winston-Salem had arrived and was being unloaded. Max Jordan, from Vanceboro, had just started with the station. Ed, Max and I were the transmitter staff. A GE engineer was there for assistance with the installation.

Less than an hour later, a truck arrived from Los Angeles. It had the used GE TV transmitter 20 KW amplifiers that came from KABC-TV, Channel 7. The equipment was unloaded and we started connecting the wiring harness to the transmitter. The harness was in trenches under the transmitter. We all worked until about 11 PM. We were scheduled to go on the air on September 26, just eight days away. It was going to be 16 hour days to get it done. The antenna crew had not completed the tower installation and had just lifted the antenna to the top of the tower. The 4½ ton gin pole was still at the top with an extra set of guy wires for extra safety.

I went to my home in Aurora and arrived about 12 Midnight. I had to get my suitcase and other items to move to a room in Grifton since I was going to be assigned to the transmitter facility. I had planned to go back Sunday morning. BUT, guess what! Hurricane Ione paid a visit and all day Sunday and early Monday it came through the area. I figured that I couldn't get to Grifton on Sunday, but I also woke up that morning with food poisoning. That sandwich that I picked up at the Chocowinity service station was the problem.

I was okay Monday morning and after the hurricane passed I headed to Grifton and arrived about the middle of the day. When I arrived at the transmitter site, there were several men standing in front of the building about 300 feet away. That was as close as anyone could get. The building looked like it was in the middle of a lake with about 2 feet of water on the floor and the entire transmitter wiring harness in the trench that we had installed Saturday night under the

transmitter was under water. The tower crew supervisor said he sat in his truck during the hurricane and watched the tower to see if it would fall. He said with the 90 MPH wind gusts, the tower looked like a snake wiggling up and down. He thought sure it would fall with that 4½ ton gin pole still at the top of the tower. He said the only reason it didn't fall was because of the extra set of guy wires on the gin pole.

On Tuesday morning, the water had gone down and we were able to get back into the building. First we had to bail water out of the wiring trenches under the transmitter and then big floor fans were brought in to blow in the cabinets and trenches to dry the wiring and transmitter. We also started installing the associated equipment and the tower crew was finishing up the tower and painting it.

A couple of days later, I was sitting on a short stool working in the back of a transmitter cabinet and all of a sudden, there was a big bang over my head and the roof and building shook. We ran outside to see what had happened and if someone had fallen off the tower. A tower crewman had dropped a gallon of unopened white paint from about 200 feet above the building and it hit the roof on the side of the can. We went on top of the building to check for damage. You couldn't tell which was the top or bottom because it had blown out both ends of the can and the flattened can looked like a car had run over it. White paint had splattered about 20 feet on both sides of the can. It's a good thing the building had a concrete roof or someone inside could have been hurt.

One of the pieces of equipment installed was a microwave that carried the local programs from the studio to the transmitter site. To save network delivery charges, management had the telephone company send the NBC feed directly to the transmitter site since it took one less microwave hop and it was cheaper. The transmitter engineer on duty would follow the same program schedule and switch between the studio and NBC. He had to monitor the network and cut back for local programs and commercials. The problem was when the local microwave was installed we could not get a signal from Chocowinity.

On Monday, September 26, WITN was supposed to go on the air and broadcast the first World Series broadcast in color from NBC starting Wednesday. We had the wiring mostly completed, but still had not applied power to the transmitter. We were giving it as much time as possible to dry from the flood a week earlier. Finally on Monday, the GE Engineer applied power to the transmitter and the fans came on and the tubes were glowing. Then he started making measurements and adjustments to retune the transmitters to Channel 7. It had to be moved down from Channel 12, the Winston Salem channel. The amplifiers were just a touchup since they have been used on Channel 7 in Los Angeles. After running a few hours, he tried to put the visual transmitter on the air. But there were problems and it did not work. Troubleshooting began that lasted until late the next day.

A not so funny thing happened on Monday with the aural amplifier from KABC. When the transmitter filaments were turned on for the first time, the fans for the visual transmitter tubes came up but the aural fans did not. The GE engineer said he would turn them on later and apply filament power later. A little later, I notice that the filament breaker was on but the fans were not. A relay would keep the filaments off if there was not air pressure. I looked in the front window of the aural amplifier and the filaments were lit. I notified the GE engineer and he said that couldn't be because the fans were off. The 2 amplifier tubes were 6166's and they will run about 10,000 watts each and cost \$920 each in 1955. The tubes were about 10 inches tall, about 6 inches in diameter and heavy. The GE engineer



**David Langley in 1954**

immediately shut the filaments off. Checking inside the back of the cabinet, the 2 tubes had been so hot that they melted the solder from the tubes down into the cavity. Now to figure out why the tubes were lit and the cooling fan was off. The problem was that a relay that had a small air shutter on it to control the relay with the air pressure. No pressure and the relay would open the filament line. The shutter had been blocked closed so they would not flop around while being shipped from California. The blocking cardboard was not removed when it arrived at Grifton. The tubes were now soldered to the cavity and the cavity was destroyed and could not be repaired. A new cavity and 2 new tubes had to be replaced. The cavity replacement would cost about \$50,000! This was 1955 and in the early 21st Century, it would probably be 10 times that. There was a big discussion (argument) who would pay for the parts and repairs. WITN management said it was GE's responsibility because their engineer was still in charge of getting the equipment on the air. GE said WITN engineers should have unpacked the equipment properly. After several days of 'discussions', GE agreed to pay for the parts and repairs. The new cavity came in about 2 weeks later and was installed. For the first two weeks, we only ran about 30 KW ERP without the amplifier on the aural instead of the required 158 KW ERP. No one could tell the difference and years later the FCC dropped the aural requirements to 10 percent of the visual. WITN visual power was 316 KW ERP.

On Tuesday, we had visitors from the competing TV station to see how we were doing. We had already missed the Monday sign on and the World Series was closing in on us. Everyone was still working on getting the visual on the air. The GE Engineer said the aural transmitter would be no problem. Late on Tuesday afternoon, we were told that NBC had been told that we would not be able to get on the air in time for the World Series. We were told that if we did not get on the air by midnight, that the other station would get the Series because it had offered to run the World Series free of charge.

Bill Roberson, manager of the station, and a couple of other station executives were at the transmitter site with us anxiously waiting to see if we could get on the air by midnight. Finally, the GE Engineer got the visual on the air several minutes after 11 PM. He said the aural would be no problem. He said NBC just said we had to be able to get the transmitter on the air by midnight. Since we only had a picture from NBC via the telephone company microwave and not

the studio, we used the network and had it turned to black. We needed a picture so about 11:30 PM, I was told to put the NBC picture on the air. I faded in the video of Steve Allen Show (later it was the Parr, Carson and Leno shows). Someone said we needed a signal report from the outside. I made an offer and called my Dad, (Bill) W. W. Langley, about 11:40 PM in Aurora. He was awakened and I told him to turn on the TV and tune to Channel 7. He reported that it was a very clear picture of someone talking (Steve Allen) but it did not have any sound. I told him that we didn't have sound but would get it on tomorrow morning before the World Series started. NBC was notified that we had a picture on the air. They said that we could carry the World Series starting at 11:30 AM the next day on Wednesday, September 28.

Wednesday morning, the GE engineer started working to get the aural transmitter that we got from WSJS on the air so we could sign on at 11:30. BUT the aural transmitter did not want to cooperate. It would go on the air but drop out a few seconds later. And while this was going on, we were working to get a feed from the studio but had nothing but noise.

To have local announcements, we at least needed audio. The transmitter control console had an audio input for a microphone. The building also had living quarters with a kitchen, bath and bedroom. An announcer, Carl Caudill, was sent over to make station breaks during the baseball game. The microphone with a long cable was taken to the back bedroom (it was quieter there) along with a 17-inch B&W home TV set, our only off the air monitor! Since we had no furniture in the bedroom, Carl and I set up couple of metal folding chairs facing each other. The TV set was placed on one chair in front of the announcer. Carl and I had to coordinate when he was suppose to talk after we got on the air since we could not see each other or had any type of communications. I was operating the console and I told Carl when he saw the picture go to black when there was a local cut, he would have about 2 seconds to turn the audio down on the TV and then I would turn on his mike. I guess I was the first director at WITN although I didn't sign up for that job! We were scheduled to go in the air about a minute before going to the network at 11:30 so Carl could make a sign on announcement.

As 11:30 approached, the visual transmitter was put on the air about 11 AM with the picture from NBC set to black. At 11:30, the World Series pregame show, in color for the first time, started and the aural transmitter still would not stay on the air. Still not on the air, the minutes were going by fast as we watched the pregame show and at 11:45, the GE Engineer yelled that the aural transmitter was up and running so we could start the World Series. I switched on the video and audio and the first program came up in color with the United States flag waving at the ballpark filling the screen. Then the National Anthem started for the World Series. WITN signed on with the National Anthem and the color US flag by a lucky break because we had no way to have local video at that time. It was almost like a Hollywood script! There probably were not a dozen color TV sets in Eastern NC and we didn't have one at the transmitter site. I could monitor the color burst on the oscilloscope to confirm that we were transmitting in color.

There were 10 to 15 people at the transmitter site watching the events to see if and when we were going to get on the air. They included Bill Roberson, manager of the station, and some other officers and employees of the station. I remember Carl Caudill standing near me so we

could coordinate the first station break at 12 Noon. Everyone was very pleased when the National Anthem and flag came up for sign on.

At the first break at 12 Noon, I faded the NBC video and audio and switched the audio to the mike and turned it up about 2 seconds later. Carl made a sign-on announcement and informed the public that we would only have audio station breaks with a black picture. This was the first local audio and it was 15 minutes after we were on the air. There would be no audio for much of the breaks after a short announcement and station identification. At the end of the ball game, Carl announced that we were signing off until the second game started on Thursday at 11:30 AM since we had no microwave studio signal and no local picture.

Then we went back to work checking out the equipment and working on the studio to transmitter microwave. About half way through the first ball game, for the first time, we saw a faint test pattern coming though from the studio. We had communications with the control room with a two-way radio. After the ball game, the microwave signal from the studio was getting better.

The next day, we went on the air about 11 AM with the audio and video from NBC tuned down until the 11:30. About 11:29, I turned the mike on and from our "bedroom studio", Carl Caudill signed on and made the same announcements as the first day. After World Series game two, Carl signed off and announced that we would return to the air at 6 PM with news and entertainment and the NBC Thursday night lineup. Still not a good picture from Chocowinity but it was getting better. Just before 6 PM, we had the transmitter back on the air with a slightly noisy test pattern from the studio.

About the middle of the day on Thursday, FCC Inspector Bennett from the Norfolk office arrived at the site unannounced. He had 'heard' that we might not be in compliance with FCC regulations and he wanted to inspect the facility. He was there while we had the second World Series game on the air and he took a lot of notes walking all around the facility. Everyone was worried that he would tell us to shut down and we would not be able to carry the World Series. There was still a station ready to carry it if we couldn't. After the inspection, he wrote out ten citations that included no frequency monitor, no audio level monitor, no test oscilloscope, only a volt-ohmmeter for test equipment, no permission to run low power on the aural transmitter, inadequate spare tube supply and parts and other problems. The monitors did not arrive at the site until about a week later. It was on back order. Mr. Bennett said we could stay on the air but we had to fix and reply to every citation. He did not remember me, but he gave me the Morse code test and exams for my first Amateur Radio license, W4YDY, three years earlier in Norfolk when I was still in high school. He was a very nice man. I think he took in consideration that we had many problems due to the Hurricane a week earlier.

At 6 PM on Thursday, the first local program and local video started with the 15 minute news block followed by the "Camel News Caravan" a 15-minute newscast hosted on-camera by John Cameron Swayze. Later during the NBC evening lineup, the signal from the studio got weaker and weaker. By 10 PM, it was gone. I informed the studio that I was not getting a signal and they told me to make announcements on the NBC station breaks and sign off after the NBC shows finished at 11 PM. I hooked up the microphone at the transmitter console, wrote a very short script and made the station breaks announcing there were technical difficulties. I signed off

at 11 PM and announced that we would be back on Friday at 11:30 AM for World Series game three.

When we went back on the air on Friday, the microwave was better but still some noise. For the next week, the microwave would fade out so it was not usable after about 10 PM. So Max Jordan or I just made the announcements and signed off at 11 PM. A new microwave system was installed and that fixed the problem after the first two weeks on the air. A Motorola one watt microwave operating at about 7000 MHz replaced the GE 10 watt unit operating at 2000 MHz. We rarely had trouble with the Motorola unit.

So when WITN signed on, the first 1½ days only had NBC network pictures and all audio originated from the transmitter site by Carl Cardill with a black screen. It was 6 PM on September 29, 1955 that the first local program came from the studio in Chocowinity. The studio was not flooded, only the transmitter site. The problem with local programming was the faulty microwave system between the Chocowinity studio and Grifton transmitter.

After the World Series and getting a good picture from the studio, we would sign on at 2 PM with some NBC programming. That included the Howdy Doody Show, the first TV series to be aired in color starting in 1955. It was the first NBC series to air five days per week and first children's series to be broadcast nationwide. Max Jordan and I would work the shift work and Supervisor Ed Piligard would fill in when we needed vacation time. Max and I would normally get off duty after the local news and signoff at 11:15.

One night a week, each had to stay over until 4 AM, Max on Tuesday night and Thursday night was my turn, doing maintenance on the equipment that included checking tubes when we could borrow the tube checker from the studio. The station had only one oscilloscope that was kept at the studio. We borrowed it from time to time and to help out, Ed brought his Heathkit oscilloscope from home at other times. We also had to clean the equipment cabinets inside and out, mop the floors and clean the bathroom! Ed would come in for a few hours sometime to help with maintenance on the equipment when two persons were required. Sometimes field mice (we were in the middle of farm fields) would come in the building and get inside the transmitters. When they got on the 10,000 volts, it sounded like a 22 rifle going off and the transmitter would shut down. We would hit the button and it would come back on. After signoff, then one would have to go in the back of the cabinet and scrap the mouse or what was left of him off the walls! It looked like it was in hundreds of pieces.

The transmitter site was not air conditioned. During the summer it was very hot with the temperature in the nineties at the console. Since I was there by myself most of the time, I would put on my bathing suit and tried to stay cool with a big fan blowing nearby. We couldn't leave the console long because we had to switch between NBC and the studio and also monitor the equipment. Thank goodness that the bathroom had a shower. After signoff, I would take a shower before going home. It felt like a hot shower in the transmitter room.

A side note, in early 1956, Mr. Roberson gave me permission to put a Amateur Radio station next to the control console. He signed the FCC application and I sent it in. I was assigned a second station call sign, K4IWJ. I set up a receiver (Hallicrafters SX-71) and 150 watt AM transmitter (Heathkit DX-100) next to the console and put an antenna up the tower about 120 feet

high. It worked great on 75 meters but I couldn't use 10 meters when WITN was on the air because it caused faint wiggle lines on the TV signal going to the TV transmitter. Not good! I didn't want TVI all over Eastern Carolina! I was able to get on the ham radio and monitor the TV at the same time. Naturally if something came up that needed attention on the TV, the ham radio took a back seat. If for some reason I lost the 2-way radio and telephone, I would still have the ham radio for communications as long as we had electricity. Once that did happen. I contacted someone to relay a message to the studio that we had lost the telephone and I couldn't raise them on the 2-way radio because their volume was turned down.

On December 6, 1956, I worked my last day at WITN. On December 7, 1956, I started working for WRAL-TV in Raleigh helping with the installation about a week before they went on the air.