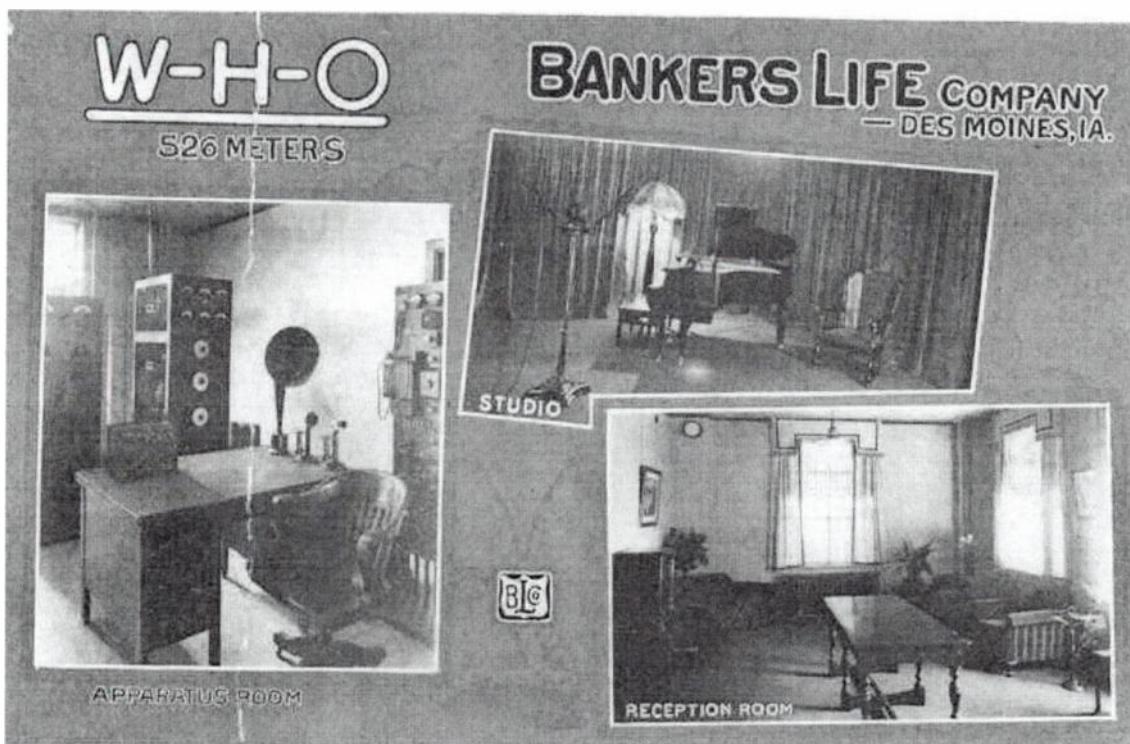


DesMoinesBroadcasting.com

A BRIEF HISTORY OF THE 50,000 WATT, CLEAR CHANNEL VOICE OF THE MIDDLE WEST, WHO, DES MOINES

By George Davison



WHO, Des Moines, began operations in April 1924 on 570 kHz with 500 watts. The station was owned by Bankers Life, an insurance company which is now known as The Principal. Company president, George Kuhns, promoted creation of the station.

- Studios and transmitter were on the top floor of the Liberty Building at 418 Sixth Avenue in downtown Des Moines. Kuhns chose the call letters WHO because at the time people searching the radio dial for stations would ask, "Who is it?"
- WHO would identify itself during Bankers Life ownership as, "This is WHO - Who? - Banker's Life, Des Moines."
- The song Who from the musical "Sunny" was used as a theme for the station.
- Power was increased to 1,000 watts, and then, to 5,000 watts. Based upon incomplete records it appears that these power increases occurred in 1925.
- WHO became an NBC network affiliate on September 27, 1927. By this time the station

was broadcasting from 6:00 AM until Midnight.

In 1928 following creation of the Federal Radio Commission by the United States Congress, WHO was ordered to share the frequency of 1000 kHz with WOC, Davenport. WOC was owned by the Palmer College of Chiropractic, and it was the first commercial station in the state of Iowa. Both WHO and WOC protested the marriage, but the Federal Radio Commission ordered the two stations to share time on 1000 kHz, each with 5,000 watts, effective November 11, 1928. 1000 kHz is one of the eight clear channels assigned to Zone 4 under the FRC plan and other regulations.

- **For about a year the two stations would alternate portions of the broadcast day. One week WHO would be on during the day; WOC would be on at night. The next week, the stations would operate on an opposite schedule.**
- **Bankers Life left the broadcasting business in 1930 when it sold WHO to Central Broadcasting Company, an entity formed by B.J. Palmer and several associates to acquire WHO.**

During the early years of control of WHO by the Palmer interests, experimentation was conducted to allow synchronous operation of the two stations. Telephone lines connected the WHO and WOC transmitters. Modifications were made to the transmitters to improve frequency stability. The two stations were on the air at the same time, broadcasting the same programs. There was a serious problem with synchronous operation, however. Neither station could be heard in an area about 30 miles wide half way between Des Moines and Davenport.

While experiments continued with synchronous operation, Central Broadcasting Company on October 7, 1930, applied for a construction permit to build a 50,000 watt transmitting plant. The construction permit was granted November 17, 1931, but the location for the new transmitter was not specified. On February 10, 1932, another construction permit was granted, authorizing a 50,000 watt transmitter for stations WHO-WOC at Mitchellville, Iowa.

In April 1932 the WHO studios moved from the Liberty Building to new facilities on the second floor of the Stoner Building at 914 Walnut Street. Construction began on the Mitchellville transmitter site. Work would take about a year.

On April 22, 1933, the 50,000 watt transmitter went on the air from the Mitchellville site. The transmitter was connected to a wire antenna which stretched about 750 feet. The antenna wire was supported by two 300 foot towers.

In May 1933 the WOC studios in Davenport are closed, and personnel from Davenport move to Des Moines. Among the persons coming from Davenport to Des Moines are sportscaster/announcer Ronald Reagan. The station is identified as WHO-WOC until November 11, 1933 (WOC returns to the air as a separate station in November 1934).

The wire antenna system was replaced with a vertical radiator manufactured by Blaw Knox November 23, 1934. The Blaw Knox tower had a distinctive diamond shape and was 532 feet tall.

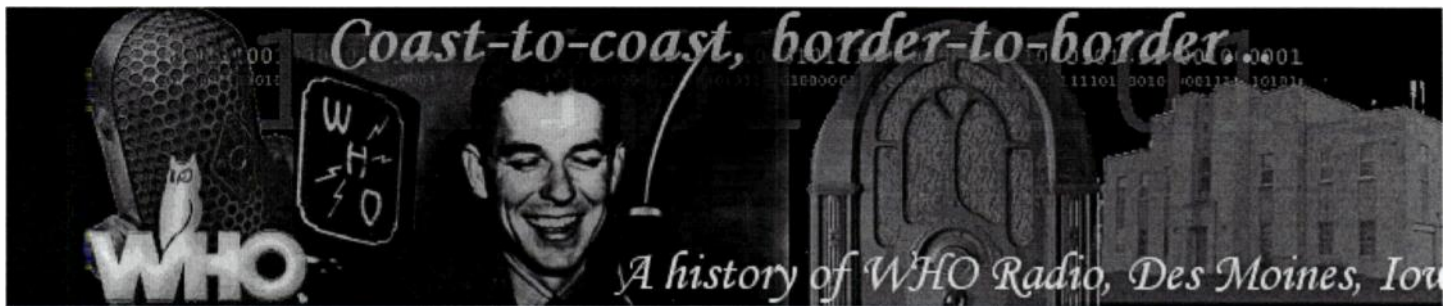
- **An application for experimental operation of WHO at 500,000 watts was made in December 1935. The application was dismissed in May 1938.**
- **Beginning in July 1937 WHO was authorized to transmit photographs by facsimile. The experiment continued until August 1940 when it was discontinued. While the process**

was technically successful, it did not produce revenue.

WHO moved to its familiar 1040 kHz frequency on March 29, 1941. This was part of a general realignment of radio stations in the United States, required to comply with provisions of the North American Radio Agreement.

In 1950 a new Westinghouse 50,000 watt transmitter was installed to replace the RCA transmitter which began service in 1933. A new tower, designed by WHO engineers, was erected. The tower is a modified Franklin design. The tower is grounded at the base and insulated at approximately 390 feet (about half way). Each section of the tower is fed by the transmission line. The design is intended to maximize the ground signal and reduce nighttime fading. The tower is 780 feet tall, and at one time it was the tallest structure in Iowa. The tower continues to be used to broadcast WHO's 50,000 watt signal from "coast to coast, border to border, and then some." (phrase used on Country Music USA which was on WHO from 10:30 PM until 5:00 AM during the 1960s, 1970s, and early 1980s). The tower is now fed from one of two solid state Harris 50,000 watt transmitters. The shell of the Westinghouse transmitter remains, but it is no longer operable.

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Brief History



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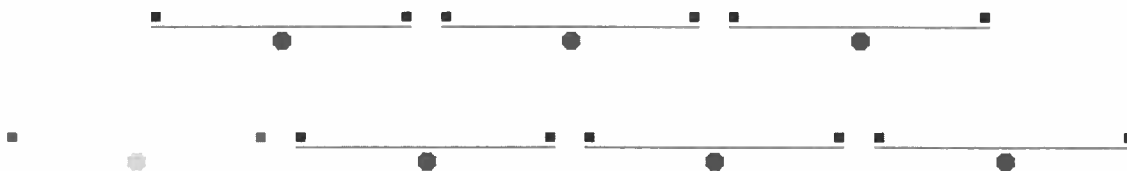
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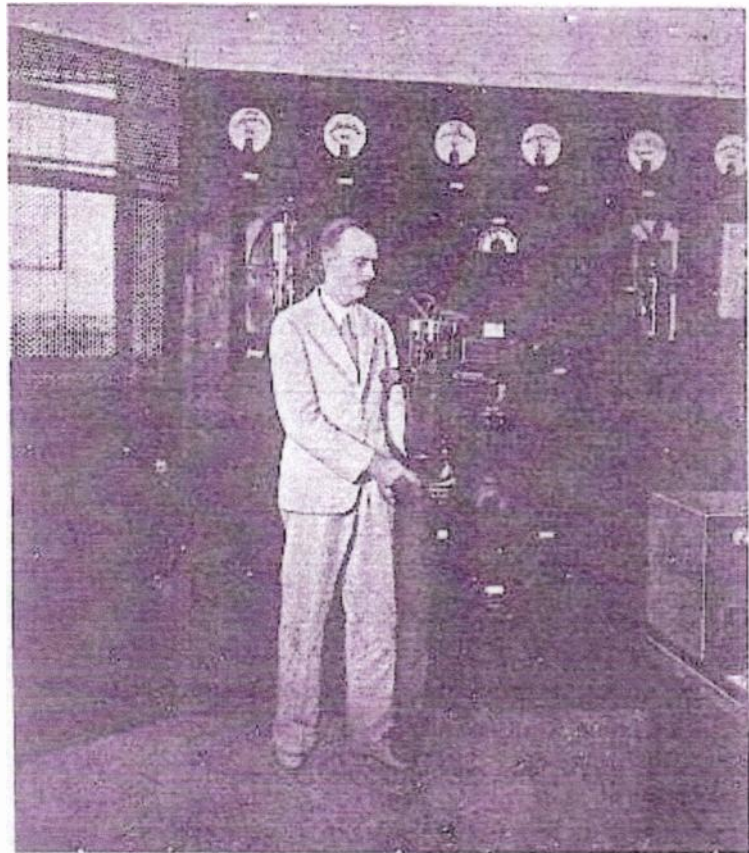
Increased Power for WOC-WHO

By P. A. LOYET, Technical Director, Central Broadcasting Co.

APRIL 22nd, 1933, marked the inaugural of another giant of the ether—the fifty kilowatt station of WOC-WHO, Des Moines, Iowa. The two old and well known 5,000 watt stations of the middle west went off the air to make way for the new RCA 50,000 watt transmitter located at Mitchellville, Iowa, fifteen miles airline east of Des Moines.

In the middle of a short dedicatory address by Col. B. I. Palmer, Managing Director of the Central Broadcasting Company, the two synchronized 5,000 watt stations in Davenport and Des Moines were shut down and the new fifty kilowatt station made its debut.

Three days later, on April 25th, a formal opening program was presented the station by the National Broadcasting Company, which was carried by the Red network. For three quarters of an hour a wonderful array of talent was presented from Washington, New York and Chicago, after which the program was fed directly from the WOC-WHO studios in Des Moines and Davenport. Outstanding on this part of the program was the excel-



P. A. LOYET, TECHNICAL DIRECTOR OF THE CENTRAL BROADCASTING COMPANY, HOLDING ONE OF THE HUNDRED KILOWATT RADIOTRONS BEFORE THE MAIN TRANSFORMER OF WOC-WHO.



MAIN TRANSMITTER ROOM OF THE NEW RCA 50,000 W. STATION FOR WOC-WHO, DES MOINES, IOWA.

lent congratulatory talk by Governor Clyde E. Herring of the state of Iowa.

The opening of the new fifty kilowatt plant occurred almost to a day on the first anniversary of the dedication of the new WOC-WHO studios in Des Moines.

Location of Transmitter

As far as radio assets are concerned, Iowa with its corn land presents one of the best prospects in the United States. After extensive field strength measurements the conductivity of the soil was found to be 180×10^{-15} EMU, which is probably the best inland conductivity ever measured. In actual measurement this transmitter lays down a

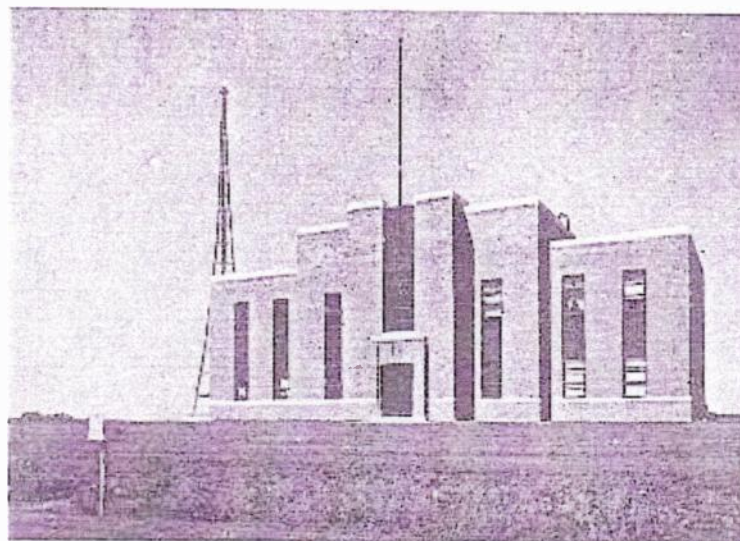


1,460 mv./in signal in a park in Davenport, 143 miles away, which is greatly in excess of that calculated. The whole of the 75 acres used for this installation has a $3\frac{1}{2}$ foot black loam topsoil overlaid with blue clay, which bears water at three gallons per minute, the static head standing only $5\frac{1}{2}$ feet below the surface. Truly, this is the ideal site for a wonderful buried ground system.

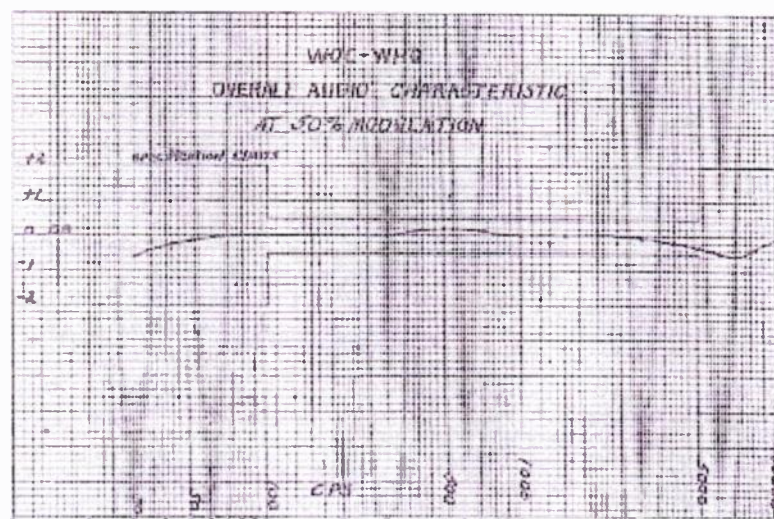
The site is located fifteen miles airline east of Des Moines, and one half mile south of National Highway No. 6, which is most desirable from a publicity and accessibility standpoint.

Power and Telephone Facilities

Two substations feed the transmitter and are each situated at opposite ends of the property, each



THE TRANSMITTER BUILDING OF WOC-WHO, DES MOINES, IOWA. HERE THE RCA 500 WATT TRANSMITTER AND AUXILIARY EQUIPMENT IS INSTALLED. THE BUILDING IS ATTRACTIVELY FINISHED IN WHITE TRAVERTINE, EXCEPT FOR THE VERTICAL PANELS OF DIAGONALLY SET BRICK, WHICH ARE GREEN. ONE OF THE 300,000 WATT POWER MAY BE SEEN IN THE BACKGROUND.



900 feet away from the transmitter building. The 2,300 volt supply from both substations is fed the whole 900 feet underground. The regular supply is from a 44,000 volt line and emergency from 6,900 volt line. Manual switching in the transmitter building is used for changeover.

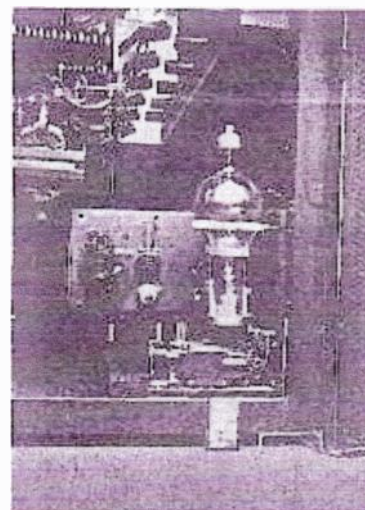
A ten pair telephone cable, buried three feet underground for a distance of 3,000 feet away from the transmitter building, brings broadcast amps and telephone line to the building. Both regular and emergency broadcast lines are equalized within 1.5 DB from 30 to 14,000

cycles, giving the station two of the finest transmitter feeds in the country. The telephone at the transmitter is a long line adjunct of the studio PAX system through the control room, and can be used to call and talk to any station in the broadcasting system, as well as dial any number on the Des Moines exchange.

Housing

The transmitter building is a completely fireproofed brick structure of two stories above ground and a large basement for water pumping and hearing apparatus exclusively.

The building is rather unique in that completely conditioned air is used throughout. All air enters the building through a set of cleaning saws and is forced by blower through a numerous set of radiators, constructed much the same as an automobile radiator, except for size. In the winter the oil burning boiler supplies hot water to this large radiator and the air is preheated



VIEW OF BACK OF MAIN RECTIFIER AT WOC-WHO, SHOWING STANDING VOLTAGE HEATER PANEL.

before entering the heating tunnels. The air is automatically humidified by spraying water controlled by a

valve actuated in turn by a bimetal in the transmitter room.

In the summer, the boiler is shut down and fifteen gallons of water per minute is pumped from a deep well through the heating coils of the blower unit, cooling the air before entering the panels. This method of cooling seems to be superior to other spray types in this geographical location, due to the dehumidifying effect caused by passing the warm air over cold coils, extracting water from the air in the form of sweat on the coils. This water is drained off the unit and, on very humid days considerable water seems to flow.

In spite of a relatively large surface, the hot water heating system was considered to supply the building heating needs. The pumping unit, all water drain needs, 15 g. per min., and to supply this demand the well had to be drilled to a depth of 1,150 feet. The static level is 140 feet with a draw down of some 150 additional feet at 15 g. per min., making it necessary to set



APARTMENT UNIT ONE OF THE APARTMENTS PROVIDED FOR THE CREW OF THE TRANSMITTER BUILDING OF WOC-WHO

to pump in a small pool. As of the latter landscaping is yet to be completed.

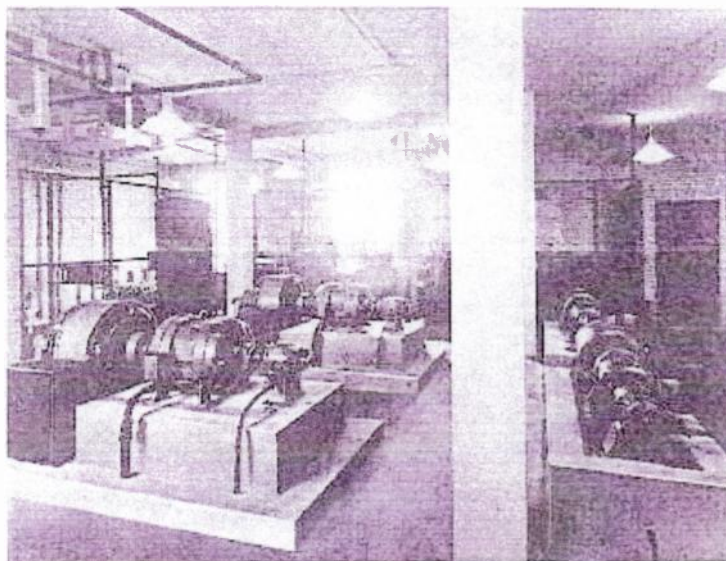
All water and heating equipment occupies the large basement, making four half of the building. This construction simplifies the air con-

ding, the radio equipment and large entrance. The two horizontal legs would represent the two wings of the building.

A spacious three-car garage occupies the first floor of the left wing. A large office, kitchen and a storeroom form the upper floor of this wing. The right wing is reserved exclusively for personnel with private entrance and separate stairway. This wing can be completely isolated from the transmitter section for privacy. The single men's apartment, comprised of, bedroom, bath and kitchen, occupies the first floor, and the married men's apartment, consisting of living room, bedroom, kitchen and bath, occupies the wings second floor.

On each side of the spacious entrance first floor is a large store room for spare equipment with a small store room off the garage for building and ground equipment such as hose, wrenches, mowers, etc.

The large room immediately confronting the spectator entering the first floor entrance, houses the heating machinery and power transformers. The continuity of the grid work around the high voltage transformers is not broken in the rear of the room, but is carried out by the wall casing of the water and pump room. The still and spare storage tank are also included in the room.



POWER ROOM AT THE GROUND LEVEL OF THE TRANSMITTER BUILDING, AT WOC-WHO

the pump consider at a length of 330 feet. This setting requires a real man-sized pump and unit.

After the water is passed through the cooling coil it is either wasted in a large tile drain field or used from the sill cocks to water the shrubbery and lawn, and supply a

conditioning problem in that the heating tunnels are run the whole length of the building and risers from the tunnels are carried in the walls to the two floors above.

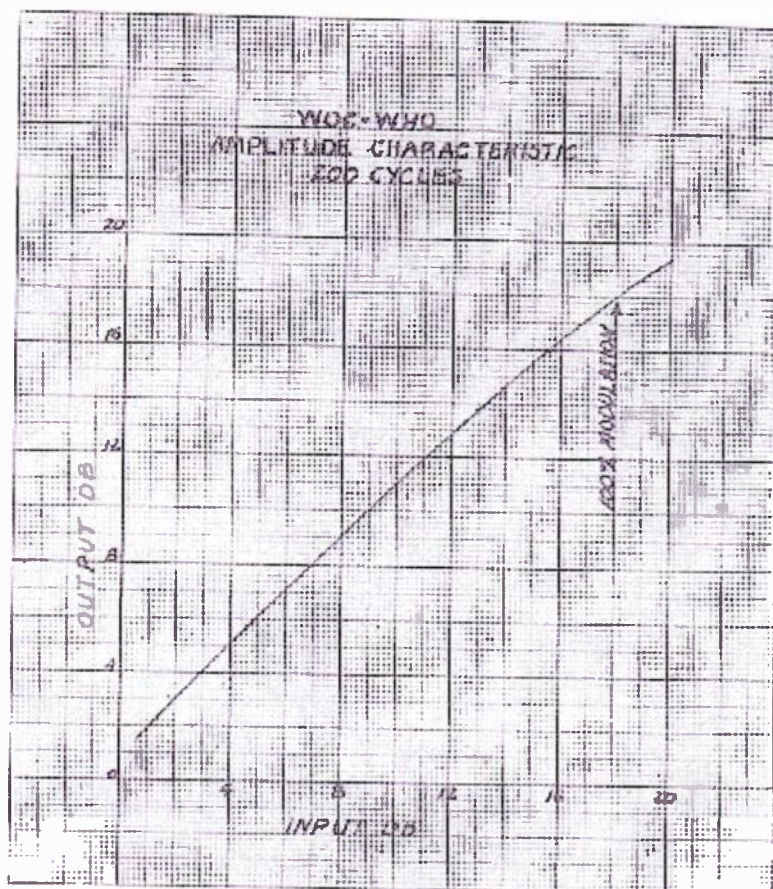
A bird's eye view of the building would show a large cross, the vertical leg or main structure, meas-

From rear of the pump room is the one-story high cooling room and supply switching vault.

Upon entering the second floor entrance from the stair well, one faces the U-shaped configuration of panels making up the transmitter, with the 50 KW amplifier and control panel forming the center of the U. The transmitter is completely enclosed by grill work, leaving enough space for maintenance inside the cage and a four foot rise all around the outside for visitors to see from the rear of all units.

It is interesting to note that there are no insulators or tubing fastened to anything. All taping is done all by the frames of the cage or the grill work itself. The lower half of this grill is solid sheet to within six inches of the door. The latter space is left to facilitate cleaning the floor.

Immediately to the front of the transmitter and to the left of the stair well entrance, the control room is a room 10 feet x 14 feet and noise sealed. The outer or grounded shield is common copper to where and the inner bearing shield No. 15 copper sheet mesh to the inch. The two are separated by air walls and floor. The common shield is continuously connected to ground. It has a reverberation time of 0.3 second and the material is well insulated over the wall and ceiling from above a four foot waistline.



WOC-WHO AMPLITUDE CHARACTERISTIC

Three seven foot speech racks carry the speech input equipment which is entirely operated by A.C. The gain level is well below up

100 dB in view of the flat 30 to 10,000 cycle response of the speech input equipment and the proximity of amplifier noise. The monitor is mounted in the center ray of the speech rack assembly providing an extremely rigid and large area bulb, which together with the acoustic balance of the room makes the best of monitoring facilities.

The Antenna and Feeders

A 400 meter antenna is used operating at 5% of the fundamental and hung between two 400 foot insulated towers spaced 750 feet apart. The towers are operated grounded following many tests of detuning.

The antenna tuning equipment is fed by means of a three wire feed system, rather than the conventional two wire design. The center wire is grounded at both ends serving as a metallic connector between the antenna ground and the transmitter ground systems.



ANTENNA TUNING VACUUMS WOC-WHO—THE HELIPARK ANTENNA IN THE BACKGROUND CREDIT: A. J. HARRIS

BRIEF HISTORY OF RADIO STATION WHO

WHO is a merger of WHO, established by the Bankers Life Company of Des Moines on April 10, 1924, and WOC of Davenport which began broadcasting about May 10, 1922. They were recognized as two of the leading stations in the Middle West. In November 1928, both stations were reduced to half time each on 1000 kc. after WHO having broadcast for years on 560 kc and WOC on 620 kc. More than 800,000 letters of protest were sent in by listeners to the Federal Radio Commission.

By 1929, WHO represented a loss of approximately \$600,000 to the Bankers Life Company and \$440,000 to the Palmer School of Chiropractic with the result that both stations were transferred to a new corporation, the Central Broadcasting Company, on December 31, 1929. The call letters were WOC-WHO. The new company began an extensive series of experiments in synchronization and both stations began simultaneous operation on the same channel in February 1930. Land lines were used between Davenport and Des Moines at a cost of \$40,000 per year so that programs were originated from both cities. Although experimentation was continued for three years with extraordinary outlay in money and engineering, synchronization of two stations that were about 160 miles apart was not satisfactory because of the impossibility of serving properly a strip midway between the two cities that was about 30 miles wide. WOC-WHO were probably the first radio stations to operate continuously with synchronized transmitters.

During the fall of 1932 and early months of 1933 when business was at its lowest ebb and bank credit not available because very bank in Davenport, Rock Island, and Moline was closed, the Central Broadcasting Company financed and constructed a 50,000 watt transmitter and arranged for the rental of excellent modern studios and offices at Des Moines. The future outlook for success was so dark that the two leading members of the board of directors resigned and sold their entire stock holdings to other members of the company.

On April 22, 1933, WOC-WHO began operating with 50,000 watts of power on 1000 kc. Call letters changed to WHO on November 11, 1933. A new vertical radiator antenna system was constructed November 25, 1934. New ground system was completed April 23, 1935. A Western Electric 110A Program Amplifier was installed February 26, 1937.

Practically every new improvement in transmission and speech input equipment has been installed by WHO in order to utilize its facilities to the greatest possible extent.

WHY RADIO STATION WHO IS
SEEKING GREATER POWER.....

In the early days of broadcasting, facilities were granted to WHO for the purpose of furnishing a statewide service to the citizens of Iowa. During the past 14 years, program service and station policies have been to accomplish this purpose and at the same time to take good care of local needs. Des Moines is the capital of the state of Iowa and is considered by most of the citizens as the principal source of information in political, social and economic matters.

Social and economic conditions are practically the same throughout the entire state. Agricultural activities and conditions are very similar in nearly every county. There are no large cities. Des Moines, the largest city with a population of 142,559 represents less than 6% of the total state population of 2,470,900 people.

Iowa is a large state, being about 316 miles wide and 218 miles north and south. The Janaky & Bailey field strength survey of daytime coverage of WHO present equipment shows that parts of nine counties out of the 99 Iowa counties fail to receive a 0.5 millivolt signal and that five of the principal cities - Davenport, Sioux City, Clinton, Council Bluffs and Dubuque - do not receive a 2 millivolt signal. Other cities within the 0.5 millivolt contour that do not receive a 2 millivolt signal are Rock Island, Moline, Kewanee, Galena, St. Joseph, Marshall, Moberly, Quincy and Austin.

A careful analysis of 89,578 letters received by WHO in response to daytime program offers shows that the percentage of mail response to number of radio families drops very sharply in the counties bordering the Mississippi River on the east and the Missouri River on the west.



Page Three

A survey based upon personal interviews of 5000 farm and small town families conducted entirely under the supervision of Dr. H. B. Summers of Kansas State College with trained investigators in 45 alternate counties in Iowa shows that whereas the percentage of radio families listening most to WHO will average about 70% in the central, north central, south, and south-west counties, the percentage drops to 5 to 16% in some border counties with as low as 1% in Allamakee County in the extreme north-east corner of the state. The average percentage of the state is approximately 50%.

The density of population per square mile in Iowa varies from a high of 297 in Polk County where Des Moines is located to a low of 24.2 per square mile with an average of 44.5 or about 11 people per quarter section of land in the state.

The density of population in Cook County, Illinois where Chicago is located is 4,268.1 per square mile; in Wayne County, Michigan where Detroit is located is 3,046.7 per square mile; in New York County which is part of New York City is 84,877.8 per square mile.

An increase of 450,000 watts experimental power will extend the WHO daytime signal of 0.5 millivolt about 41 miles beyond its present boundaries. This will enable the station to deliver a signal of 0.5 millivolt to all parts of Iowa including a 2 millivolt signal to the five larger cities of Davenport, Dubuque, Clinton, Council Bluffs and Sioux City.

This will give the broadcasting industry an opportunity to experiment with 500,000 watts of power in an area that is primarily agricultural in character and also one of the most prosperous sections of the country as compared with present experiments with WLN in a territory that is primarily industrial in character and with a density of population of 163.1 in Ohio and 89.8 in Indiana.

A Brief History
of
Radio Station WHO
Des Moines, Iowa

Radio Station WHO was established in the spring of 1924 by Bankers Life Company, a life insurance company with home offices in Des Moines, with a power of 500 watts and on a frequency of 570 kilocycles by authority of the Department of Commerce. Power was increased to 5000 watts in 1925. Frequency was changed to 1000 kilocycles November 11, 1928, and to 1040 kilocycles on March 29, 1941. Power was increased to 50,000 watts in 1933. WHO is a 1-A clear channel station.

At midnight, Friday, February 14, 1930, Central Broadcasting Company, B. J. Palmer, president, became owner and operator of WHO, and in 1932 moved the station to modern studios and administrative headquarters at 914 Walnut Street, Des Moines, where the company now owns an entire quarter block.

The first regularly scheduled broadcast from WHO was made April 10, 1924 and a daily schedule of 1½ hours from 7:30-9 PM was established. Later there were added three short broadcast periods each day, one to five minutes in duration, when market and weather reports were made. One of these was around 9:45 AM, the second around 12 Noon and then at 3 o'clock in the afternoon. Original studios of WHO were on the 11th floor of the Liberty Building, where the insurance company had the sixth to the eleventh floors.

The next development was sharing the frequency with WOC-Davenport. One day WHO would broadcast from 6 AM to Noon, then WOC would take over Noon to 6 PM, and back to WHO for 6 PM to Midnight; the next day was just the reverse with WHO taking the Noon to 6 PM hitch. From February 1930 to April 1933, WHO, Des Moines and WOC, Davenport, were synchronized, a noteworthy engineering achievement, broadcasting simultaneously under the call letters, WOC-WHO. Shortly thereafter power was increased to 50,000 watts, the new transmitter was built a mile south of Mitchellville, nineteen miles east of Des Moines, and WHO and WOC were divorced. In the fall of 1934 a new 532 foot vertical radiator antenna was built.

In 1927 WHO became affiliated with the National Broadcasting Company and broadcast from 6 AM until midnight daily.

In the early days there were special broadcasts at 4 AM "For London" or "For Honolulu;" and the station had lines into all the large hotels in Des Moines to pick up dance bands.

At one time, George Kuhns, then president of Bankers Life Company, offered a pound of corn sugar to each listener who wrote in. The offer was made on Little Jack Little's program, and more than 100,000 listeners answered. WHO wished corn sugar had never been mentioned.

From Dr. F. L. Iman's Iowa Radio Audience Survey, which in 1947 interviewed 8,262 radio families, or 1 out of every 81 radio homes, we glean the following bits of information: In Iowa people spend four hours listening to the radio for every hour spent reading newspapers, magazines and books combined; WHO was named as the station "listened to most" in daytime by 47.7%, nighttime, 56.9%; WHO was named as the station "heard regularly" in daytime by 78.9%, nighttime by 86.4%.

A five year study of WHO's public service broadcasts in peace time, prior to the war, showed on average for the five years was 32% of all broadcast time devoted to public service broadcasting...This included today such programs as the Veterans Forum, Iowa indubitable, etc.

WHO has a news department unique and outstanding in its organization and operation; WHO had one of the first farm service departments in radio, organized in 1936, and a model for many similar departments at other radio stations.

WHO has one of the largest talent staffs of all independent radio stations, made up of persons who excel in their particular talents, persons who have had years of study, and are graduates of the college of experience. This staff is presented in many hours of "live" programs through the week and appears each Saturday night in the famous Iowa Barn Dance Frolic.

The Iowa Barn Dance Frolic was originated as a half-hour Saturday night show in Davenport, Iowa, in 1931. After a season in Davenport it was moved to Des Moines where a 1300-seat house, The President Theater, soon proved inadequate to accommodate the audiences. The show was expanded to a three-hour production and in the fall of 1935 moved to Shrine Auditorium, now Radio Theater, where the 4200-seats have been filled and the SHO hung out on more than one occasion to take care of the throngs that come and pay to see the broadcast. The show has grown from a half-hour production to a two-hour and fifteen minute stage show and broadcast. More than a million people have witnessed broadcast of the Iowa Barn Dance Frolic.

WHO will stage the Sixth Annual WHO Plowing Match and Soil Conservation Field Day this September in Dallas county. This event was named by Dr. Hugh H. Bennett, chief of U. S. Soils Conservation Service, Washington, D. C. as "the most important thing that has taken place on American farm lands for 350 years." And the same event won for WHO the 1946 Dupont Radio Award.

In January WHO held the 11th annual Corn Festival...Last summer WHO called upon listeners to aid the flood stricken people of southern Iowa, and 6222 remittances totalled \$96,520.16....Each year WHO cooperates in rural fire prevention, sponsoring a contest for rural schools....The War Service Billboard was instrumental in disseminating vital war information to the people; and sold War Bonds to a value of \$6,153,400.00 to more than 25,000 investors in 46 states, 3 territories and the District of Columbia...WHO accepted no money for time, talent or programs in the war effort, but if time given to the programs in the war effort had been sold, it would have had cash value of \$1,161,558.50.

Hundreds of destitute persons in the war torn countries of Europe have reason to be glad there is a WHO with its thousands of friendly listeners. As of March 26, 1947 15,109 individuals and groups in the WHO listening family had sent more than 14,391 packages, weighing better than 28 tons, containing relief items, principally clothing, to Europeans whose names were collected and sent to the WHO News Bureau for distribution to listeners who sent packages direct. Postage expense along, paid by the senders, totalled more than \$81,000.00.

WHO has grown from a staff of five persons with 500 watts at their fingertips to a 50,000 watt clear channel station with a payroll of nearly 150. Of the 140 plus persons on the WHO payroll, in Des Moines, Davenport and Mitchellville, today 32 are college graduates, six have masters' degrees, 29 are college trained, five have business college training, three are attending school and 30 have special radio training.

WHO staff's accumulated know-how is alerted to the unlimited horizons in radio and television. WHO-FM went on the air February 1, 1948; and WHO-TV is in advanced planning stage in summer of 1948.

3 July 1948

V I S T O R Y-

W O T T E R H O U S E - 30 WG-2
Serial # 3

January 18th. ~~1950~~ First R.F. Output - Low Power.
January 20th: Full 30 KW. -- R.F. Only.
January 24th. First Modulation- (Tone 1000)
Feb. 2nd. Station Break Announcements.
Feb. 3rd. Test Program from Studio. 1:47:05AM to 3:00:05AM.
Feb. 6th. Place in regular service - 5:23:20 AM.
Feb. 8th. Feeding new tower at bottom. 3:04:50AM
Feb. 9th. Feeding tower at center 3:22AM
Due to trouble returned to feeding tower at bottom 6:50 AM.

March 1952 - Started Midnite operation , 24 hours a day- Conelrad Key Station.

Radio Station WHO was established in the spring of 1924 by Bankers Life Company, a life insurance company with home offices in Des Moines, with a power of 500 watts and on a frequency of 570 kilocycles by authority of the Department of Commerce. Power was increased to 5000 watts in 1925. Frequency was changed to 1000 kilocycles November 11, 1928, and to 1040 kilocycles on March 29, 1941. Power was increased to 50,000 watts in 1933. WHO is a 1-A clear channel station.

What do the call letters W H O stand for? That is a frequent question. Mr. George Kuhns, president of Bankers Life Company when it established the radio station, was a "DX" or long distance listener. Because listeners when tuning in to distant stations would always ask "Who is it?", he thought that W H O would be very appropriate station call letters. Incidentally, the song "Who" from the musical "Bunny" was used for many years as a station theme song.

At midnight, Friday, February 14, 1930, Central Broadcasting Company, Col. B.J. Palmer president, became owner and operator of WHO, and in 1932 moved the station to modern studios and administrative headquarters at 914 Walnut Street, Des Moines, where the company now owns an entire quarter block.

The first regularly scheduled broadcast from WHO was made April 10, 1924 and a daily schedule of $1\frac{1}{2}$ hours from 7:30 to 9 PM was established. Later there were added three short broadcast periods each day, one to five minutes in duration, when market and weather reports were made. One of these was around 9:45 AM, the second around 12 Noon and then at 3 o'clock in the afternoon. Original studios of WHO were on the 11th floor of the Liberty Building, where the insurance company occupied the sixth to the eleventh floors.

Immediately after the purchase of WHO by Central Broadcasting Company, the station began a period of sharing the frequency with WOC-Davenport, first station west of the Mississippi, which was established by B. J. Palmer in 1922. One day WHO would broadcast from 6 AM to Noon, then WOC would take over Noon to 6 PM, and back to WHO from 6 PM to Midnight; the next day was just the reverse with WHO taking the Noon to 6 PM hitch. From February 1930 to April 1933, WHO, Des Moines and WOC-Davenport, were synchronized, a noteworthy engineering achievement, broadcasting simultaneously under the call letters, WOC-WHO. Shortly thereafter power was increased to 50,000 watts, the new transmitter was built 2 mile south of Mitchellville, nineteen miles east of Des Moines, and WHO and WOC were divorced. In the fall of 1934, a 532 foot vertical radiator antenna was built.

On February 1, 1948, Central Broadcasting Company added another form of radio transmission to its service, that of Frequency Modulation. On that day, WHO-FM went on the air with a regular schedule of programs from 3 to 9 PM daily. In April, WHO-FM revised its schedule to duplicate all WHO programs between the hours of 9 AM and 11:30 PM. The FM transmitter, a 3 kilowatt unit with 5 kilowatt ERP, was housed in the tower atop the Equitable Building and reached by elevator, six flights of stairs and one ladder...with experiences and tales which make for good "remember when" conversation. This interim operation was discontinued on May 25, 1950.

In July 1949, Central Broadcasting Company purchased two new transmitters, a 50,000 watt AM transmitter to replace the unit installed in 1933; and a 50,000 watt FM transmitter with effective radiated power of 400,000 watts. At the same time, the company purchased a new 780-foot steel antenna which includes an AM radiator, which supports a 12-bay FM radiator, which will be topped by the TV antenna when TV comes to WHO and Des Moines. The quarter-million dollar investment was made in full recognition of responsibility to serve the public interest.

The new AM transmitter was placed in service at 5:28:23 AM February 6, 1950; WHO-FM returned to the air December 6, 1950, duplicating WHO programs, and on January 8, 1951 established a regular schedule for separate programming between the hours of 2 and 5:58 PM daily. The old 532' was taken out of service following sign-off on Sunday night, October 6, 1950; and the new 780 foot tower was initiated beginning with program service at 5:30 AM Monday, October 7.

The new tower, designed in WHO laboratories over a period of five years; planning and proving, dwarfs its 532 foot predecessor with its 780 foot reach into the sky. There are $137\frac{1}{2}$ tons of steel in the structure, 8800 pounds of steel in each of the 3 top guy wires which measure $1\frac{5}{8}$ inches across; and 3160 pounds in each of the three lower guys measuring $1\frac{1}{8}$ inches across. These guys, pulling the tower snug against the earth on a 1-foot square insulator, give the new tower a "thrust weight" of 423,890 pounds.

The new equipment was designed to increase WHO's nighttime primary coverage, and to improve service to listeners already within the primary coverage area by pushing the "fading zone" far beyond its old boundaries and by intensifying the ground signal from WHO to listeners within the area. The new equipment is designed to increase daytime listening from 73,000 square miles to 125,300 square miles, or an increase of 52,300 square miles. (The area of State of Iowa is 52,680 square miles.) Population served increases from 3,162,400 under the old equipment to 6,096,300 - or an increase of 92%. The skywave contour of 0.5 millivolt signal has a radius of 790 miles, as compared to 687 miles by the old equipment. Distant listeners will be added by the skywave also, as the 0.1 millivolt signal is extended from a radius of 1242 miles by the old equipment to 1400 by the new....and 1400 miles reaches south to the southern border of Texas, north to the northern tip of Lake Winnipeg, to Staten Island on the East - and just west of Salt Lake City on the West - as the crow flies....Since WHO is a clear channel station, this entire coverage can be realized. And by the time these potent waves bounce off the nighttime Heaviside layer, their reflections are picked up by listeners at sea, on Wake Island, in England and around the world. As evidenced by the volume of mail throughout World War II when Iowa servicemen reported hearing the Voice of the Middle West at sea and abroad on standard listening equipment.

The hard cold statistics show the folks at WHO that there are 6,096,300 potential listeners in our enlarged back yard. Cold statistics that represent individual human beings whose living standards and tastes run the gamut of the social scale. Only with a loyal following of a vast majority of this mass a large percentage of the time does a station with the power and prestige of WHO justify its existence. They are the life and blood of a broadcaster. Without listeners, there would be no reason to broadcast entertainment, information and education. It is the potential of millions of listeners, their fidelity, that a sponsor buys when he buys time on WHO. To those listeners, each and every one, WHO and its staff members have a great responsibility - a responsibility for unimpaired technical service, for sound moral program principals, for integrity and honesty in the information it disseminates.

The Iowa Radio Audience Survey - the 14th of which was made during March 1951 by Dr. F. L. Wham and his staff - is considered the outstanding audience tabulation in the radio industry. WHO's continuing study of the radio audience, its listening habits and desires, is considered one of the great contributions to the broadcasting industry in its never-ending attempt to sound out, analyze, and satisfy the listeners. The continuing study shows a rapid increase in radio ownership, and a vast increase in the number of homes with more than one set. At the same time, the radio picture in Iowa reflects the increase in the number of stations in 1942 - 18, to 48 in 1951.

The 1950 Iowa Radio Audience Survey interviewed 9,215 radio families, or 1 out of every 76 homes. WHO was named as the station "listened to Most" in daytime by 37.2%, nighttime, 43.9%; WHO was named as the station "Heard Regularly" in daytime by 72.8%, nighttime by 78.5%.

A five year study of WHO's public service broadcasts in peace time, prior to World War II, showed an average for the five years was 32% of all broadcast time devoted to public service broadcasting. This includes today such programs as Iowa Roundtable, Des Moines church services, the Billboard, and programs by the American Legion, VFW, Anvets and DAV. During periods of national emergency, time for public service broadcasts is greatly increased in the interest of national security, information and recruitment of manpower.

WHO has a news department unique and outstanding in its organization and operation. Its writers and broadcasters are trained in news. They have access to more leased wire service than any other station between Chicago and the west coast, served by United Press, Associated Press and International News Service. The coverage of Iowa and northern Missouri is bolstered by a staff of 70 reporters who cover local stories, telephoning or telegraphing their reports for newscasts. This system, in operation since World War II, has proven itself in a number of scoops and time-beats, giving WHO news a superior service.

WHO had one of the first farm service departments in radio, organized in 1936, and a model for many similar departments at other radio stations. Through its farm service department, the station has pioneered continually in the interests of soil conservation. It inaugurated the Soil Conservation Field Day in 1946 with a day-long demonstration of conservation methods and resultant rebuilding of the subject farm. This event attracted more than 50,000 spectators. It was described by Dr. Hugh H. Bennett, then chief of U. S. Soils Conservation Service, Washington, D. C. as "The most important thing that has taken place on American farm lands for 350 years." This event won for WHO the 1946 DuPont Radio Award, the Pulitzer prize of the ether waves. The DuPont Award was presented "in recognition and appreciation of outstanding public service in encouraging, promoting and developing American ideals of freedom and for loyal, devoted service to the nation and to the community it serves." The farm service department has been instrumental in placing Iowa 4-H activities at the head of the nation, and its highlighting of Iowa agricultural events has been a stimulus to all agricultural producers in the state which proved itself the "breadbasket" of the world during and since World War II.

WHO has one of the largest talent staffs of all independent radio stations, made up of persons who excel in their particular talents, persons who have had years of study and more years of experience. This staff was formed as the foundation for the cast of the famous 2-hour Iowa Barn Dance Frolic heard each Saturday night on WHO, and units and individuals are heard throughout the week in "live" programs of shorter duration.

The Iowa Barn Dance Frolic was originated as a half-hour Saturday night show in Davenport, Iowa, in 1931. After a season in Davenport it was moved to Des Moines where a 1300-seat house, The President Theater, soon proved inadequate to accommodate the audiences. The show was expanded to a three-hour production and in the fall of 1935 moved to Shrine Auditorium, now Radio Theater, where the 4200-seats were filled and the SRO hung out on more than one occasion, to take care of the throngs that wanted to come and pay to see the broadcast. For the past three seasons, the show has been taken to towns in Iowa on a number of occasions, broadcasting on Saturday nights from special events in the local communities. In recent weeks, the show played a series of Saturday nights in the 4-H Club auditorium on Iowa State Fair Grounds, with square dancing following the broadcast until midnight.

In 1947, WHO asked its listeners to aid the flood stricken people of southern Iowa, and 6227 remittances totalled \$96,520.16...The War Service Billboard was instrumental in disseminating vital war information to the people; and sold War Bonds to a value of \$6,153,400.00 to more than 25,000 investors in 46 states, 3 territories and the District of Columbia. . . WHO accepted no money for time, talent, or programs in the war effort, but if time given to the programs in the war effort had been sold, it would have had cash value of \$1,161,558.50.

The war left multitudes of destitute persons in the countries of Europe. Hundreds of these people have given thanks to WHO and its beneficent listeners. More than 17,051 individuals and groups in the WHO listening family have sent more than 260,000 packages, weighing more than 1,430 tons, containing relief items, principally clothing, to Europeans whose names were collected and sent to the WHO News Bureau for distribution to listeners who sent packages direct. Postage expense alone - paid by the senders, WHO listeners - totalled more than \$390,000! The packages were bundles of democracy, and they went to Greece, Italy, France, Germany, Norway, Sweden, the Netherlands, and England. . . The letters of gratitude reveal conditions such as Americans have never known.

On Christmas Eve, 1949, the Salvation Army Commander for Iowa said, "This is the first Christmas that the Salvation Army in Des Moines will not have to refuse assistance to a deserving family. This year we have enough money to provide for all." That money - 'enough' - came from the pennies, dimes and dollars contributed by the same generous folks who had responded to the call before - the WHO listener - in response to WHO's Tree of Lights campaign for the Salvation Army. The goal for the 1949 Christmas fund was \$10,000, and \$15,961.15 was collected; in 1950, \$17,711.56 was raised. Money over and above the Christmas budget paid expenses of needy mothers and their children in Salvation Army summer camp.

This spring - or during the belated winter of 1950-51 - WHO was called upon by organizations and groups in its listening area for assistance when the snows, ice and blizzards paralyzed the state. WHO broadcast without charge, between March 10 and March 28, 2,795 public service announcements regarding meeting cancellations and school closings. If these announcements had been sold as chainbreaks they would have cost an approximate total of \$155,740; as one-minute announcements, they would have cost an approximate total of \$221,630. Several weeks later, a letter from a reader printed in the Des Moines Register, said, "WHO certainly deserves a word of appreciation for its public service during our recent snowstorm. Don't any of you ever think that you will get the same service everywhere in the U. S."

WHO added an intensive schedule of sports broadcasts to its schedule in the spring of 1949. Since that time the station has given extensive coverage to high school sports, with about 300 high school reporters, including students, coaches and townspeople, giving WHO detailed reviews of sports activities, and up-to-the-minute telephone reports of scores on basketball and football. The sports program has always included the big names of the professional sports world; comprehensive coverage by interview and reports of Big Ten football and basketball, and a continuing service in the interests of fish and game conservation with its coverage of fishing and hunting.

The Iowa State Fair is site of WHO broadcasts for more than a week each August - this year the fair opens on August 25 and runs through Labor Day, September 3 - when locally produced programs originate in the WHO Tent just across Grand Avenue from the Amphitheater. Literally thousands of persons pack the canvas top throughout the day to see and hear their favorite entertainers. WHO is happy to meet the folks from beyond the microphones each year; and the Iowa State Fair Board is high in its praise of the publicity and interest created by the broadcasts from the main thoroughfare - for WHO takes everything but the aroma of the Midway to its listening audience, and before the fair ends, many a person who was home in his easy chair the first day is filing through the admission gate to join the throng.



The WHO payroll supports a family of 354 and this family drives 93 automobiles and owns - or is buying - 81 homes. Their hobbies are diverse, their interests keen, and they continue learning more each day about the business of radio.

The 139 persons on the WHO payroll today in Mitchellville, Des Moines and Davenport represent an accumulation of 1409 years in the broadcasting industry - which itself is only 29 years old. Of this total, 1155 of the years have been with WHO. Of the 139 on the staff today, 36 are college graduates, four have advanced degrees, 25 have college training, 44 have special radio training and 9 have business training; 48 have been with the station more than 10 years. The WHO staff's accumulated know-how is alerted to the unlimited horizons which are radio's as well as television's.

Many a WHO home boasts a television aerial, for these folks in radio look forward to the day when, as a part of the WHO family, they will be working before the cameras and behind the scenes of the newer medium; they are preparing for the advent of WHO-TV, which at this writing is at least 18 months away. Meanwhile, many WHO staffers are gaining experience in the operation of WOC-TV in Davenport, operated by Central Broadcasting Company.

WHO has been affiliated with the nation's number one network, National Broadcasting Company, since September 4, 1927.

Officers of Central Broadcasting Company are Col. B. J. Palmer, President; D. D. Palmer, Vice President and Treasurer; Ralph Evans, Executive Vice President; Paul A. Loyet, Vice President and Resident Manager; and William D. Wagner, Secretary. W. W. Woods is Assistant Manager; Reed Snyder, Chief Engineer; Harold W. Fulton, Sales Manager; Jack Kerrigan, Program Director; Robert H. Harter, Regional Sales Manager; Kenneth Gfeller, Production Manager; Jack Shelley, WHO News Bureau Manager; and Herb Plumbeck, WHO Farm Service Director.

14 June 1951

WHO—DES MOINES
AM—FM—TV
MEMORANDUM

April 5, 1962

Dave Palmer

Dear Dave:

Here is the history.

Also enclosed in my personal copy of "Interesting Sidelights" which may be helpful on some details. The two glossy prints were reproduced in our photo lab from pictures in the book and I believe this technique can be used for any pictures in the book if the original prints cannot be found.

I would like very much to have this book returned to me.

Thank you.

Sincerely,

Paul A. Loyet

March 28, 1962

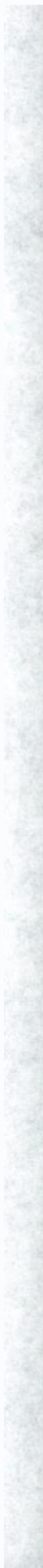
History of WHO - WOC

The Central Broadcasting Company, an Iowa Corporation, came into being in February of 1930. It was created expressly to effect the purchase of WHO, Des Moines, Iowa and merge its operations with WOC, Davenport, Iowa. Each of these entities had been granted share time operation on a clear channel assigned the State of Iowa in a general reallocation of radio facilities by the Federal Radio Commission in November 1928.

To gain a clear picture, then, of its officers, directors, policies, and general operations, we should appraise the histories of both stations WOC and WHO.

WOC was started in 1921 and completed in February 1922 by the Karlowa Radio Company of Rock Island, Illinois. A federal license to operate under the call letters WOC was issued this company on February 18, 1922.

Although its predecessor 9BY had been doing some special broadcasting for some time before on a DeForest transmitter with a so-called 5 watt rating, a new DeForest transmitter with a thousand watt input and about two hundred fifty watts output was installed under the new permit. This unit was operated only about five months in Rock Island and at such expense that Karlowa looked about for a purchaser. The pioneering work was so beclouded with uncertainties, and required such technical knowledge and accompanying expense hazards the takers were few and eventually the Palmer School of Chiropractic was contacted to assume the load of such pioneering magnitude. At this stage of radio history even the thought of remuneration or profit was almost ridiculous. After considerable thought and some misgivings the principals of the Palmer School of Chiropractic finally agreed to assume the task and in May 1922 the license was transferred from the



Karlowa Radio Company to the Palmer School of Chiropractic, with the permission of the Department of Commerce, and the equipment was moved to the property of the Palmer School, 1002 Brady Street, Davenport, Iowa.

Even with the time's early use of low frequencies the service area of this equipment was deemed inadequate by the owners; and a new Western Electric 500-watt transmitter was installed, with the permission of the Department of Commerce, in July 1922.

It is an important historic item to note that at this stage in radio only the following broadcasting stations were rendering scheduled public services, covering market and weather reports, music, concerts, lectures, etc., to-wit: WWJ, WSZ, WOU, WGH, WOZ, WMH, KIZ, WFO, WHO, WLB, WIHA, WOQ and WOC.

This list appears in the United States Department of Commerce Radio Service Bulletin -- Government publication #59. In view of present legal requirements of public interest, convenience and necessity, the above list contributes valuable information as to the view of the U. S. Government authorities in determining and designating the radio stations volunteering this earliest public service, which is now a legal requirement. It is quite as interesting to note the limited number of survivors of this group of pioneers.

In addition to the regular program transmissions, WOC as early as 1922, under a special call AZ-3, was rendering a daily service to the United States Army Posts at Rock Island and Fort Sheridan and designated as a part of the Army network since the Army had no station in the immediate area. WOC has a prized complimentary and thankful acknowledgment of this service to the

United States Army from the then Commanding General of the U. S. Army Signal Corps, General Charles McK. Saltzman who later became Chairman of the Federal Radio Commission.

The trail was blazed by the covered wagons and no word picture can make it impressive or realistic to the present passengers who have since climbed aboard Air-lanes Unlimited.

As to the service rendered by radio stations it is to be assumed that the predecessors of the Federal Communications Commission, namely the Department of Commerce and the Federal Radio Commission, continually and carefully reappraised the early service of radio broadcasting stations. From the inception of radio down to the present moment insofar as the State of Iowa is concerned, WOC and WHIO have always been recognized as rendering an outstandingly acceptable service.

WHIO was established in the spring of 1924 by the Bankers Life Company, a life insurance company with home offices in Des Moines, with a power of 500 watts and on a frequency of 570 kc by authority of the Department of Commerce. Power was increased to 5000 watts in 1925. Operating quarters and studios were located in the Liberty Building, Sixth and Grand Avenues in Des Moines, and all equipment used was Western Electric, as was that at WOC in Davenport. This fact led later to an easier solution to the synchronization of the two stations.

In the general reallocation by the Federal Radio Commission on November 1 1928, WOC and WHIO were the two Iowa radio stations selected to occupy a cleared channel. The Iowa quota rated approximately one cleared channel and

these two stations were assigned to it, dividing time. WOC had been operating since the fall of 1924 with 5 KW on 620 KC unlimited and WHIO since early 1925 with 5 KW on 570 KC unlimited. They were assigned 1000 KC and each to operate with 5 KW.

Accepting this predicament, WOC sought to evolve a solution whereby the penalty imposed upon the respective listening audiences might be lessened. The solution required extensive investigation and considerable engineering expense, but compared with the original pioneering effort was just one more problem to be solved. The first obstacle, an engineering one, was partially solved by experimental confirmation of the feasibility of asynchronous operation. This confirmation led to the second problem, the diversified interests of the two stations. This was met by bringing about a consolidation of the two stations under the common ownership of the Central Broadcasting Company which was organized early in 1930 and which action was approved by the Federal Radio Commission about February 15, 1930.

It might be pertinent to point out that at the time of purchase of the two stations by the Central Broadcasting Company, the combined stations represented a total loss of about \$1,040,000, \$600,000 by the Bankers Life Company and \$440,000 by the Palmer School of Chiropractic. These figures would be impressive today but were considerably more fearsome in 1930 when the country was in an extremely grave depression with half the nation's banks closed or in near panic.

So grave had this situation become that public subscription to Central Broadcasting Company stock was sought over WOC by Central's head, Dr. B. J. Palmer, on Sunday, December 22, 1929. He urged the friends of WOC who were

in position to do so, to subscribe for stock immediately, since the option on the Des Moines station, WHO, had to be exercised by January 31, 1930. The Daily Times, Davenport, Iowa, in an editorial Wednesday, December 25, 1929, commented, "The joys of Christmas in thousands of homes in this section of Iowa and Illinois would have been enhanced by the broadcasting through WOC of the feature programs arranged for last evening and today. But this time belonged to WHO at Des Moines, with whom WOC shares a clear channel, therefore the local station had no time until 5 PM today. This situation, no fault of either station, deprived many listeners of this locality of such reception as makes for the fullest enjoyment of radio entertainment. The experience lends emphasis to the communal interest in the project which has been formulated to merge the two leading Iowa stations and to synchronize them in a manner which will permit both WHIO and WOC to have full time on the air."

Further along in the same editorial, the following quotation appeared, "Community interest should elicit a most favorable response to the bid for financial support which Dr. Palmer addresses to our people. The pleasure to be derived from radio is heightened by proximity to a station of its high type. WOC has given this city nation-wide advertising of a value far in excess of the amount which is sought in order to exercise the option on WHO."

The financial response to this offering was not heartening. Many loyal citizens responded by purchasing a few shares but the real load of financing remained with the Palmer School of Chiropractic owners. Of the \$480,000 (of \$500,000 authorized) offered to citizens, officers, and employees of the corporation, 272,000 shares were never issued. The new company was financed on a rather minimum basis by the owners of WOC and a handful of Davenport's

more affluent businessmen and the option taken up on WHO within the time limit designated.

During the formation of the Central Broadcasting Company, continuous experimentation had been done at Davenport, using a closed circuit technique, to determine the feasibility of a synchronous operation of the two transmitters at WOC and WIIO using direct crystal control on each transmitter. The Western Electric transmitters in use depended on bi-metallic thermostats to hold a constant temperature on the relatively unstable cut of crystals used at that time. In spite of these impediments, it was determined that the job could be done by an improved crystal control box utilizing a better type of more permanent thermostat. Permission for further tests to permit the simultaneous operation of these two stations was sought and granted almost immediately by the Federal Radio Commission. Collaboration with the Bell Telephone Laboratories confirmed that such boxes could be made and fitted to the transmitters involved. The chief collaborator was John H. DeWitt, Jr., now president of the National Life and Accident station, WSM, at Nashville, Tennessee. Under his supervision, the original Western Electric 700-A boxes, involving special cut crystals and sealed mercury thermostats, were constructed along with more stable oscillator equipment. This development was to be of importance to the whole industry in tightening frequency control on the rapid influx of new stations. Simultaneously a remote control unit was developed for installation midway between the transmitters to feed back a monitoring signal to Davenport to direct variation of minute frequency variation to conform with the carrier of WHO in Des Moines. This equipment was installed in June of 1930.

In hearing before the Federal Radio Commission, Docket Number 882, Tuesday, October 7, 1930, on the original application for 50 kilowatts, it was pointed out that an area of more than 3000 square miles, approximately midway between these two stations, was being deprived of service from either station which they had received fairly well before. It was shown that a quarter-million citizens of Iowa, living in this area, were unable to receive satisfactory radio service from a clear channel allocated the State of Iowa. In addition, of course, there were impaired reception areas in the state which had not been adequately served by either station with 5000 watts power. At the time of this hearing, the synchronization of the two stations had been going on for over four months. In addition to the difficulties from synchronization from a mechanical standpoint, it was necessary of course to have identical programs which meant the virtual elimination of local sponsored programs or spot advertising from either Davenport or Des Moines. Both stations were operating under the conditions of a 50 kilowatt without possessing the enlarged service area accompanying such power, which - when viewed from an economic standpoint - was somewhat similar to operating a 5 kilowatt station at the cost of a 50 kilowatt. The synchronized operation was continued until April 1933 when WHIO-WOC took the air from Des Moines, Iowa (with transmitter at Mitchellville) with 50 kw. Naturally, during the whole time of synchronization, and for some time after the advent of 50 kilowatts, the combined stations were known as WOC-WHO, alternately with WHO-WOC.

A construction permit for 50 kw one mile south of Mitchellville, Iowa was granted WHIO-WOC February 10, 1932, and the new single transmitter of these combined stations took the air on April 22, 1933. Simultaneously, of course, both the plant at WHO and the 5000-watt transmitting station at Davenport



were shut down, although broadcasts continued to be emanated from both studio locations. It is highly important to note here that there was no further transmission from the Davenport location until November 11, 1934, when WOC went back on the air, utilizing the moved transmission facilities and license of KICK - Carter Lake, Iowa, which was the only technique then available under the quota system for gaining a license. Until that time, the 50 kilowatt plant with studios in Davenport and Des Moines operated under the combined call WOC-WIIO alternated with WHO-WOC.

WOC transmitter 5 KW directional, 1420 KC, was moved to its present location, north and slightly east of Bettendorf in 1942. FM was inaugurated October 1948 with a 10 KW transmitter. WOC-TV started telecasting October 31, 1949 on Channel 5, later being switched to Channel 6 with maximum power of 100 KW.

The original WOC "family" consisted of

(1) B. J. Palmer, President, (deceased). Dr. B. J. Palmer - "B. J." - probably pioneered exactitude in correct pronunciation of even remote geographical locations, exact time announcements, and brevity of all announcements, including commercials (later.)

(2) Dave Palmer, Station Assistant. Dr. David D. Palmer is now the President and Treasurer of Central Broadcasting Company, owner and operator of WIIO - AM-FM-TV in Des Moines, Iowa, and its subsidiary, Tri-City Broadcasting Company, owner and operator of WOC - AM-FM-TV in Davenport, Iowa. Dr. Dave, as owner, operator, and employee, is the only surviving employee of the original staff.



(3) Frank W. Elliott, Business Manager. Dr. Elliott was one of the organizers of the National Association of Broadcasters in 1922; and served as an early President. He was also a member of the Iowa General Assembly. Dr. Elliott is now a practicing Chiropractor in Denver, Colorado.

(4) Stanley W. Barnett was the original Technical Director and Announcer. Stan was for years General Manager of WOOD - Grand Rapids, Michigan, and is now a practicing Chiropractor in _____, Michigan.

(5) Franklin W. Pierce, Radio Operator and Technician. Mr. Pierce formerly worked for Karlowa and moved the equipment to the Palmer School of Chiropractic in Davenport. He still resides in Rock Island, Illinois, and is a practicing electronics engineer.

The oldest employee , in service, is Paul Loyet, Vice President and General Manager of WHIO - AM-FM-TV, Des Moines, Iowa , director of both Central and Tri-City Broadcasting Company, owner and operator of WOC - AM-FM-TV - Davenport, Iowa, who joined WOC as an engineer in December 1924. That December marked the opening of the new Western Electric water-cooled 5-KW transmitter, then a real wonder of science.

WHO - History
March 28, 1962

Original 50 KW CP - No Location	Nov 17, 1931
Renewal at Mitchellville	Feb 10, 1932
On air 7:00 PM	Apr 22, 1933
New Tower 532'	Nov 23, 1934
(WOC Back on Air - Ex KICK)	Nov 11, 1934
Experimental Facsimile License	July 20, 1937
Thru	Aug 1, 1940
1000 watt devel broadcast license	Oct 18, 1938 - W9XC
150 KW Devel Broadcast License	Jan 20, 1942
24-hr Key Operation start	Oct 19, 1942
24-hr Key Operation stop	Oct 30, 1943
Pulse Trans - 200 KW Pks	1947 & 1948
Collins Coop	Winter 1948-49
Receiving Direct Antenna tests for FCC-2 field strength meters	Feb-Mar 1949
CP for Westinghouse AM & FM	Apr 26, 1949
New AM on	Feb 6, 1950
New Tower	Oct 9, 1950
New FM	Dec 6, 1950
Present 24-hr Conelrad start	Feb 2, 1952

WHO BROADCASTING COMPANY

HISTORY

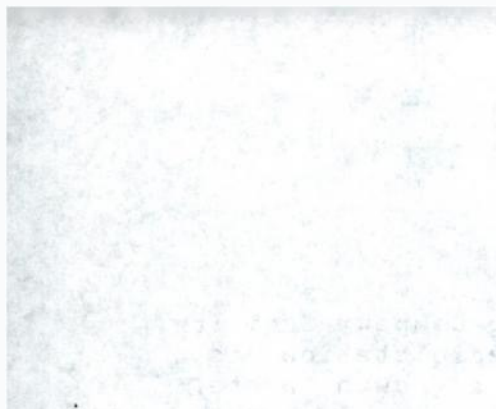
The history and expansion of WHO Broadcasting Company from its beginnings on April 10, 1924 as a 5,000-watt radio station is a fascinating story. It is a story that reflects a growth in staff size, facilities and the very best in broadcasting service to the public...one striving for continued quality and responsibility in its programming.

WHO was originally owned by the Bankers Life of Des Moines when radio was still considered novel, with stations broadcasting without individual identification. Eventually, the station was asked to choose call letters. "WHO" was chosen by the company's manager in response to inquiries of "Who is this?" and "Who are we listening to?" In 1930, Colonel B. J. Palmer, noted for his progressive thinking, purchased WHO Radio and plans were made for expansion. In 1933, WHO was granted an increase in its operating power to 50,000 watts, making it one of the few stations in the country with such a vast coverage area. The extension in power enabled WHO to reach the entire Middle West and far beyond. Mail was received from Maine and Louisiana, remarking how clearly the signal was received.

To better reach the needs of its far-reaching audience, the WHO Radio News Bureau was created, bringing a professionally-staffed, fully-equipped news department to the public in 1935. Because 25% of all Grade A farmland was served by WHO's extended signal, the station then established the country's first farm news department. Although it started as an experiment in 1936, the Farm Service Department quickly became a model for others in the radio broadcast industry.

Early listeners to WHO Radio were tapping their feet to the Iowa Barn Dance Frolic, a local program of music and comedy on Saturday nights. WHO's first Sports Director, President Ronald Reagan, did play-by-play broadcasts of University of Iowa football games from 1932 to 1937, as well as "recreations" of baseball games from within the studios. On the scene reports from newsmen Jack Shelley and Herb Plambeck during World War II, brought first-hand accounts to the homes of thousands. And the origination of "National Soil Conservation Days" provided listeners with agricultural updates and know-how.

After 63 years of service, WHO Radio continues to maintain its high standards, with comprehensive, award-winning news coverage and programming. 21 updated farm reports are heard daily, and listeners are able to hear discussions with guests and experts. Increased sports coverage, ranging from high school and college athletics to professional, brings the best in sports to our listeners.



WHO has always prided itself on its involvement with the lives of Iowans. Although much has been written here of the past, the future holds even greater responsibility.

In 1948, WHO was joined by its "sister" station, WHO-FM. Broadcasting on the FM frequency, the station offered high school sporting events, updated newscasts and music. As times changed, so did the role of FM stations. In 1973, new all-stereo equipment replaced the old and the station changed its call letters to KLYF. Adult Contemporary music can be heard on KLYF 100 FM 24 hours a day in homes, cars, office buildings and stores.

On April 26, 1954, WHO-TV was authorized to telecast on Channel 13 with maximum power. Since its beginning, the station has been affiliated with the NBC network. Early viewers saw local live programming featuring many of their radio favorites...Slim Hayes, Jack Shelley, Bill Austin, the Buckaroos, and Herb Plambeck. "Romper Room" with Miss Nancy and Duane Ellett and Floppy kept the youngsters entertained. Network programming was primarily in the evening, and offered viewers such shows as "Groucho," "Dragnet," and the "NBC News" with Chet Huntley and David Brinkley.

As equipment became more sophisticated, the public was able to see events of national interest. WHO-TV's first remote broadcast was on August 10, 1954, from West Branch, Iowa, where former President Herbert Hoover celebrated his 80th birthday. The program was fed through WHO equipment to the NBC network.

Improving and extending the broadcast signal to a larger area then became a goal. In 1972, a new 2,000-foot tower and transmitter were constructed in Alleman, Iowa. The new equipment projected WHO-TV's coverage to a 90-mile radius of Des Moines in central Iowa.

Numerous awards have been received by the WHO-TV news teams, but perhaps the most noteworthy was the coveted George F. Peabody Award, when our photographer was able to capture the formation and patterns of two tornadoes on film, which had never been done before.

Television weather has also become more sophisticated in the past few years. Color weather radar, Doppler radar and satellite weather graphics aid our meteorologists at the Weathercenter in bringing the most comprehensive and accurate weather forecasting to our broadcast area.

Today, our "Live Eye" mobile unit enables reporters to transmit their stories live from the scene to the studios and out to the public. This, plus an enlarged professional news staff, has further increased the reporting reliability of WHO-TV's Newscenter 13.

With an eye to the future, property at 1801 Grand was purchased and groundbreaking ceremonies held on April 10, 1981. Now, our beautiful three-story structure, containing more than 65,000 square feet of office and studio space on 2.5 acres of land, houses WHO Broadcasting Company and the corporate offices for its parent company, Palmer Communications, Incorporated. The occupancy of the new building is yet another milestone in the fascinating history of the company, and opens more doors for future growth and added service to the community.

WHO Radio, KLYF-FM and WHO-TV 13 take pride in their past and are committed to providing the best broadcast service possible in years to come.

1987

