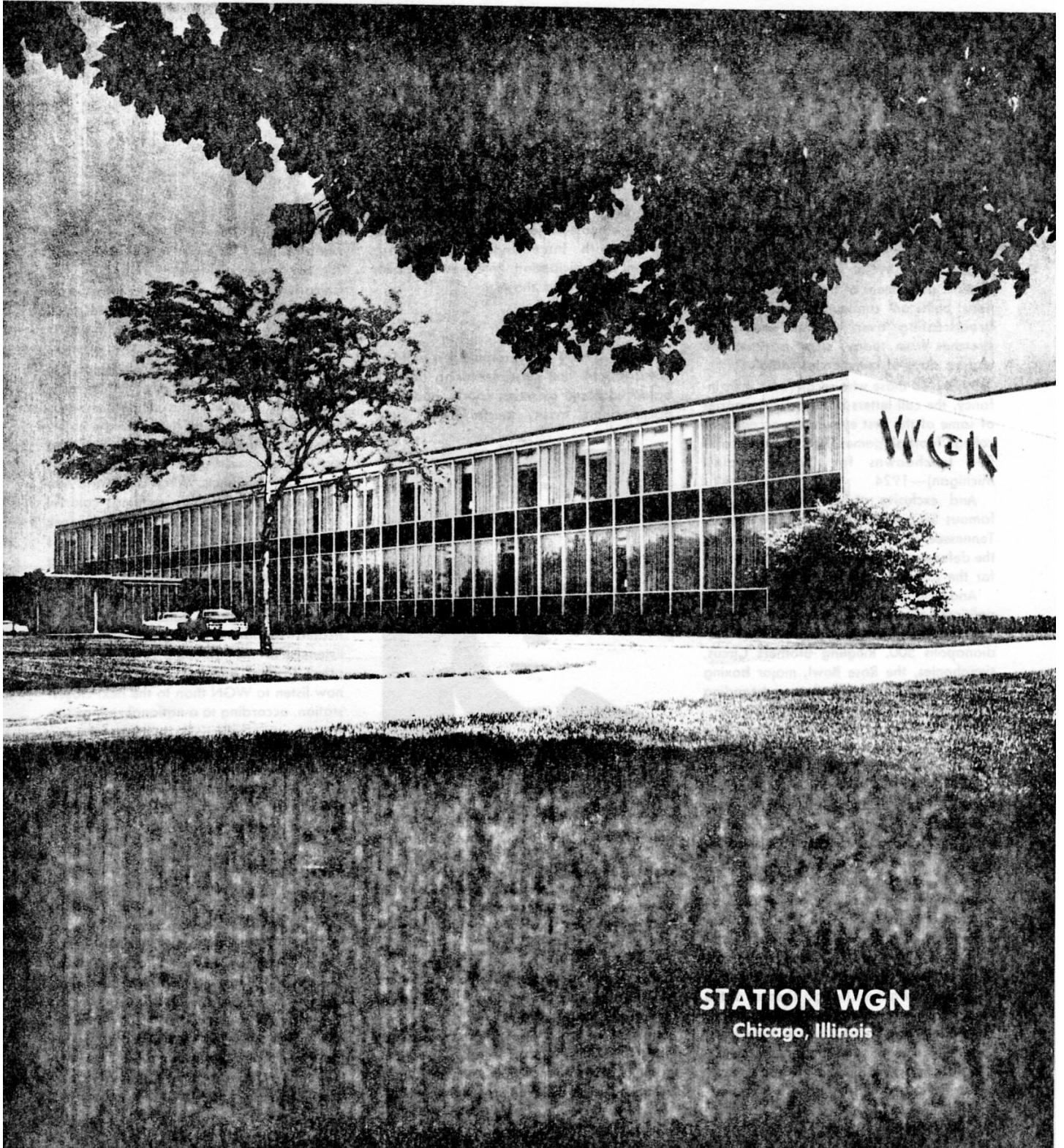


HARRIS *am-fm radio profiles*

Harris/Gates MW-50, Fifty-Kilowatt AM Transmitter Proves Highly Efficient, Very Dependable At Chicago's Top-Rated Radio Station



STATION WGN
Chicago, Illinois



HARRIS
COMMUNICATIONS AND
INFORMATION HANDLING

The WGN Story

"The most respected call letters in broadcasting."

This is the WGN slogan. It is also a realistic assessment of the station's reputation, built on continuous leadership in broadcasting over a time span that stretches from today, clear back to the earliest days of commercial radio.

WGN. To those who recall radio in its infancy, the call letters bring back memories of some of the first eyewitness accounts of college football games (Red Grange scores five touchdowns for Illinois against Michigan)—1924.

And exclusive radio coverage of the famous Scopes "Monkey Trial" in Dayton, Tennessee, that pitted Clarence Darrow for the defense against William Jennings Bryan for the prosecution—1925.

And among the first broadcasts covering political conventions, baseball games, opera, the Kentucky Derby, the Indianapolis 500, Ringling Brothers Circus, symphonies, the Rose Bowl, major boxing matches, and many other outstanding events.

All of this in the 1920's, when radio was very young, and most stations then in existence were sticking pretty close to their studios. It was a time for experiment in broadcasting, and WGN led the way—balancing its impressive list of remotes with such studio originations as the first amateur hour on radio, the first Amos 'n Andy broadcasts (known then as Sam 'n Henry), celebrity interviews, music, etc. It all added up to first class entertainment for radio fans of half-a-century ago.

In the ensuing years, as audience tastes changed, WGN continued to lead. Through the Thirties with the Chicago Theater of the Air operas and concerts; with dance bands from the Aragon and Trianon ballrooms, and the Palmer House and Drake hotels; and with daytime serials such as "Easy Aces". On into the early Forties with a war-

time broadcast pattern. And the Fifties and Sixties with increasing emphasis on audience participation, interviews, public affairs and record shows.

WGN, 1974

Today, WGN's programming is still innovative, still first class, featuring a well-balanced blend of news, sports, audience participation, music, special events and



Ralph F. Batt, Vice President and Manager of Engineering, WGN Continental Broadcasting Company, is one of today's most highly regarded broadcast engineers, and serves on the Engineering Advisory Committee of the National Association of Broadcasters.

public service programs. For instance, WGN is the only Chicago station with trafficcopters (two of them).

In a time when Top 40 dominates the dial, the 1974 WGN format emphasizes adult entertainment, built around "personalities". The best known of these—Wal-

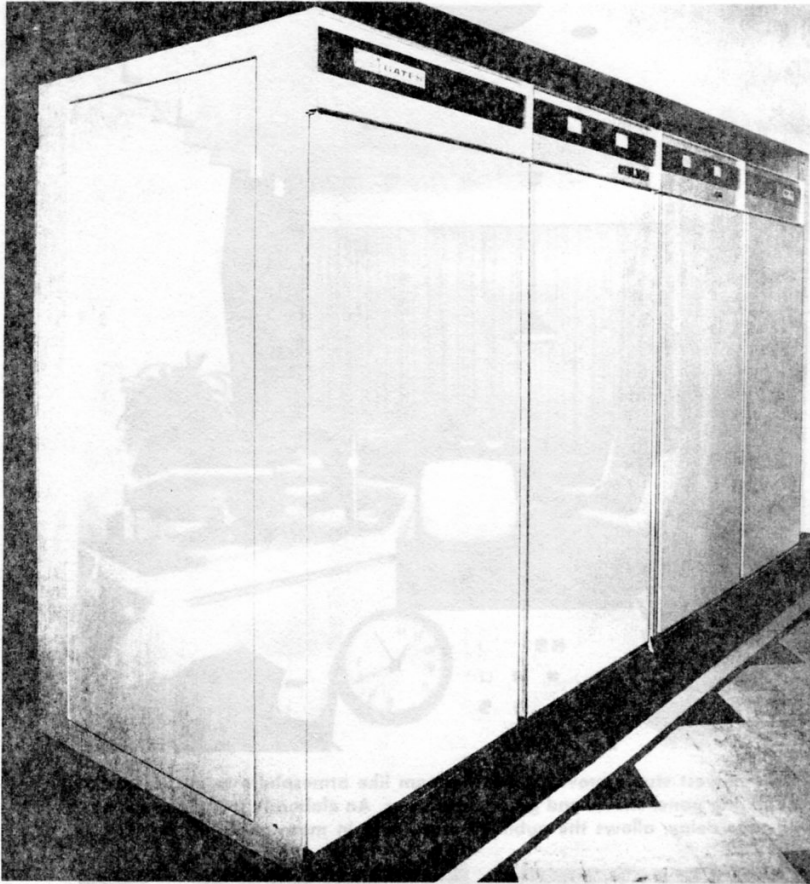
ly Phillips—is Chicago's, and perhaps the nation's best known radio showman. Almost everyone who lives in the Chicagoland area, and owns a radio, is familiar with Wally's quick wit and great sense of the ridiculous that make his weekday show a real entertainment experience.

There are others, also very well known to Chicagoland. Roy Leonard, with his popular show that includes numerous interviews with outstanding figures in the entertainment industry. Bill Berg, a talk host who explores a wide variety of timely, newsworthy subjects. Vince Lloyd and Lou Boudreau, who provide exciting, colorful coverage of Chicago Cubs baseball. Jack Brickhouse and Irv Kupcinet with 21 years of Chicago Bears games on WGN, and Big Ten football. Eddie Hubbard, with "Music Unlimited". And many more. Each contributing his special talent to a sophisticated sound that attracts more adult listeners in the Chicago area than any other station. In fact, 32% more adults now listen to WGN than to the next closest station, according to a national ratings service.

And, as one of the handful of clear channel broadcasters in the country, this 50,000-watt AM station reaches out during the nighttime to some 40 states, and a large portion of Canada.

Technical Progress

As WGN's format has evolved over the years, its technical progress has kept pace. In 1961, WGN Radio and WGN Television moved into the new WGN Continental Broadcast Center—a modern, two-story building (see front cover) that is one of the largest and finest facilities in the world for radio and television broadcasting. Today the center has grown into a 21-acre complex that includes a second building for offices, a Heliport for WGN's trafficcopters,



The Gates MW-50, fifty-kilowatt transmitter employed by WGN, has proven itself a highly efficient and extremely reliable unit. The Pulse Duration Modulator employed in all Gates MW-50's is nearly 90% efficient—allowing an overall transmitter efficiency of 60% or greater!

ample parking lots and handsomely landscaped grounds.

Inside the main building are beautifully designed studios and production facilities for both radio and television, plus offices for administrative, engineering and sales personnel. In keeping with WGN's pioneering spirit, the Broadcasting Center also houses a unique RF control room which is manned 24 hours each day by a first class radio telephone licensed operator. Equipment in this room monitors and controls the radio frequency transmission of all broadcast entities, both standard and television broadcast transmitters, and licensed stations and ancillary equipment connected therewith.

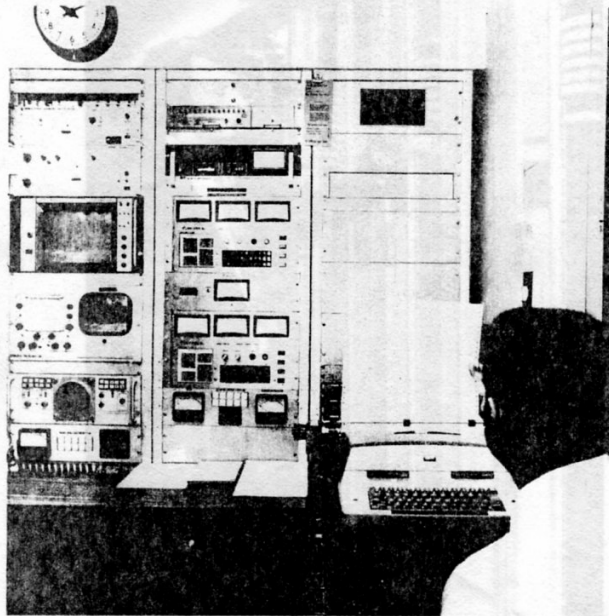
According to Mr. Ralph Batt, Vice President, Manager of Engineering for WGN Continental Broadcasting Company, this complete centralization of RF control is a new concept that few stations have tried. It is proving highly efficient, and highly successful for WGN—and will very probably start a trend toward control centralization by other broadcasters working with more than one medium.

Harris/Gates PDM*

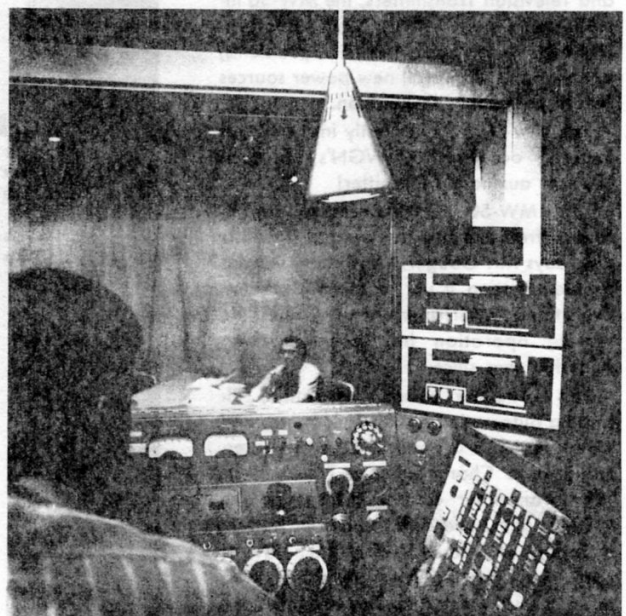
MW-50 Transmitter

To match technical advancements in the control area, in January, 1973, WGN began broadcasting with a Harris/Gates MW-50, fifty-kilowatt transmitter. With excellent results.

* Pulse Duration Modulator



Monitor and controls for both WGN radio and TV transmitters, including that of licensed stations and related ancillary equipment, are located in a single RF control room. Here an RF engineer checks the MW-50 log, which is updated automatically every ten minutes.



WGN's format includes frequent live newscasts—one of which is shown in progress here. During the program the control room engineer inserts commercials, utilizing Gates Criterion Compact tape cartridge units.

"The MW-50 has certainly lived up to our expectations," says Mr. Batt. "The signal is clear, our effective loudness has definitely increased with the same power output, and indications are that our power costs are down."

Although the MW-50 provides 125% positive peak modulation capability, station policy sets a limit of 100% modulation on negative peaks, and 120% on positives, according to Mr. Batt.

"Efficiency was one of the important factors in our selection of the MW-50," comments Woodrow (Woody) Crane, Chief Engineer, WGN Radio/WGN-TV. "This transmitter uses considerably less power than our last one. And it has plenty of reserve—we don't have to use it up to its last ounce of energy to get the signal we want."

"Then, too, it's very reliable," says Mr. Crane. "We have had very few problems. We use a Gates BC-10H, ten-kilowatt transmitter as a back-up unit, but have never had to use it because of trouble with the MW-50...although we do switch over occasionally for maintenance or proof-of-performance. Incidentally, the BC-10H also provides a very fine signal during the short periods we use it."

MW-50 Installation

The WGN radio transmitter building is located on a 101-acre tract of land in Roselle, Illinois, approximately 20 miles from the WGN studios. According to Bruce Gauger, Administrative Supervisor, Radio and Television Transmitters, the MW-50 installation there was...very straightforward, and presented no problems, although we did install new power sources before transmitter installation."

The new MW-50 fit neatly into the spot formerly occupied by WGN's old five-kilowatt auxiliary transmitter!

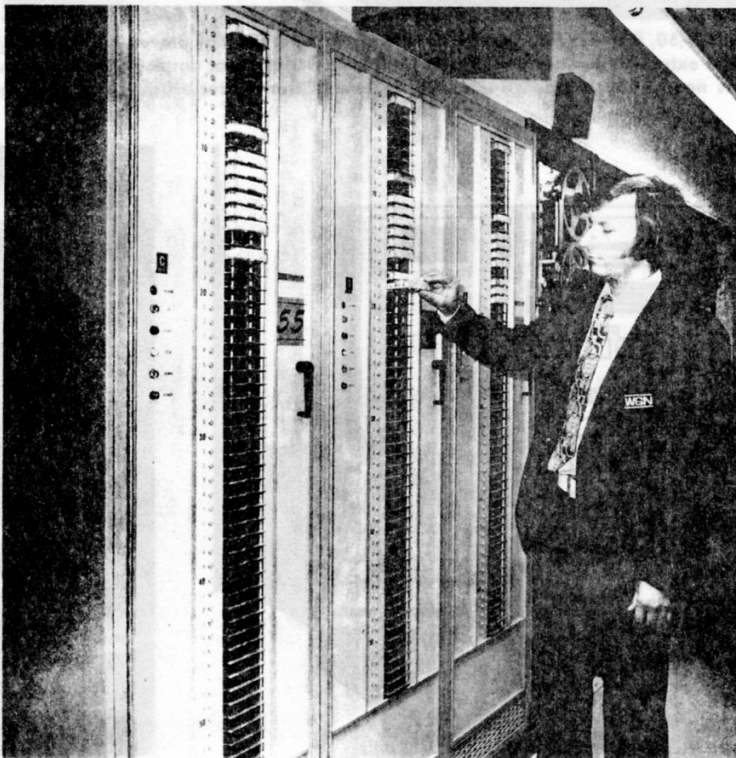
"The MW-50 was operated by remote control from the first day we put it on the air," says Mr. Gauger, "and there was no problem setting it up for remote control. Everything interfaced nicely, and the remote operation has been working smoothly ever since."

This complete remote operation, including automatic transmitter logging, and status alarm, is a boon to Charles Meyer, Engineer in Charge of AM Transmitters. With transmitter control located at the WGN studios, and with the proven dependability of the MW-50, Mr. Meyer can...walk out the door on Friday afternoon at four, with no worries about leaving the transmitting equipment unattended over the week-end!"

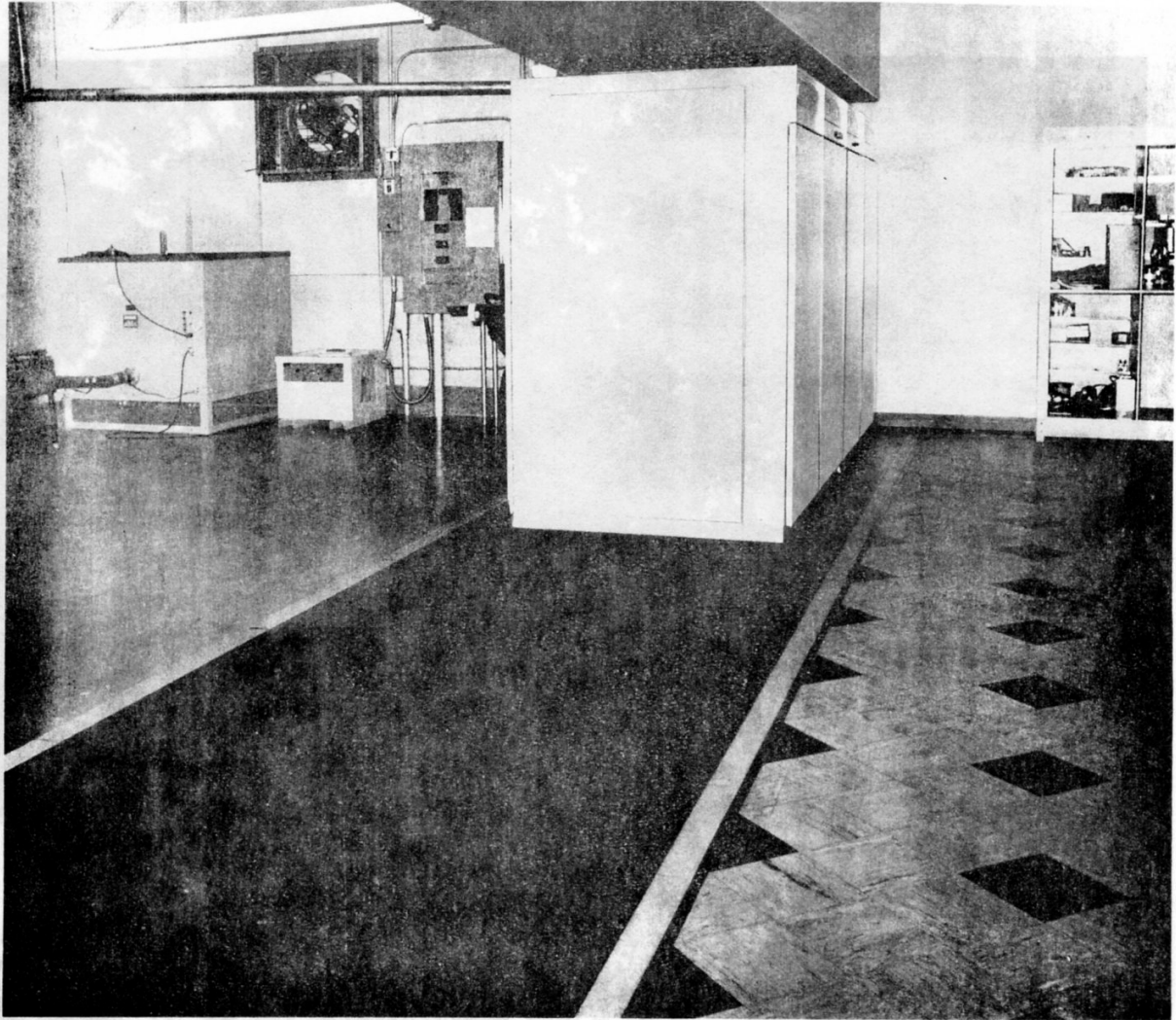
Says Mr. Meyer, "The MW-50 is a very good, very efficient, very reliable



WGN's newest studio provides a living-room like atmosphere to put people at ease during panel shows and group interviews. An elaborate telephone system, with tape delay, allows the public to participate in many of these shows.



Engineer Alan Brezinski loads one of the three Gates Criterion 855's used by WGN, during certain programs, for commercial messages. The 855's, which were specially designed for random access, are controlled from the studio areas, and switched in by remote control.



The compact design of Gates MW-50 is dramatically illustrated in this shot of the WGN installation. The old WGN fifty-kilowatt transmitter occupied most of the dark area shown in the foreground.

transmitter. Prior practice dictated a three-to-four hour sign-off during early morning hours once a week for maintenance—but now, with our MW-50, and utilizing our new auxiliary transmitter when maintenance is needed, we are operating 24 hours a day, seven days a week.

"The MW-50 is really compact, too—saves us a lot of floor space. And spare parts storage space. With our old transmitter, I needed three cubicles in a cabinet to hold the 100% spare tube complement. For the MW-50 I need only one of those cubicles—and have space left over—as there are only five tubes in the whole transmitter!"

Potential Audience Of Many Millions

The WGN non-directional antenna is

located approximately 1,000 feet behind the transmitter building on a 750-foot tower, and beams the 50,000-watt signal over a primary coverage area that includes portions of five states, and a population of over 40,000,000. At night, clear channel 720 can be heard by close to 150,000,000 people!

This is quite an advance from WGN's beginnings in 1922, at a modest 1,000 watts, as Station WDAP. The call letters WGN were assigned in 1924, with the station's purchase by the Chicago Tribune (**World's Greatest Newspaper**), and after that power increases came rapidly. 15,000 watts in 1927, 25,000 watts in 1928, and finally 50,000 watts in 1934. The Class 1-A clear channel frequency was granted in 1927.

Looking back over the past 50 years, it would seem that the WGN story is the

story of commercial broadcasting. Both came into being at about the same time, and both grew up together...exploring, progressing, expanding—and always leading the way in providing entertainment and information for millions of people.

This year is the golden anniversary of WGN, and the station began the celebration by sponsoring a float in the Tournament of Roses Parade on New Year's Day (which won the coveted President's Trophy). Throughout the rest of 1974 there will be a series of special events and programs to mark the occasion—half-a-century of broadcasting. Half-a-century of building a reputation for quality and creativity with audiences and industry peers alike. Half-a-century of firmly establishing WGN as: "The most respected call letters in broadcasting."



WGN Radio
Transmitter Building

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