

## Commander Eugene F. McDonald, Jr.

Electronics Industry Pioneer and  
Founder-President of Zenith Radio  
1886-1958

Biographical Sketch  
Courtesy Zenith Radio Corporation

The late Commander E. F. McDonald, Jr., founder-president and first board chairman of Zenith Radio Corporation, served the company for almost forty years as its chief executive officer. Under his leadership Zenith grew from a kitchen table workshop to a leading position in the radio-television industry.

McDonald was a business leader and prominent citizen in Chicago from 1910 until his death in April of 1958. He was noted as a dynamic merchandiser, innovator, and explorer.

In 1921, after serving through World War I in Naval Intelligence, McDonald joined forces with two young radio amateurs, Karl Hassel and R. H. G. Matthews, who had formed a partnership called the Chicago Radio Laboratory, and were engaged in manufacturing and selling radio receivers. McDonald

provided capital and promotion, and became general manager of the firm. From the call letters, 9ZN, of their amateur radio station they coined the trade name Z-Nith. In 1923, Zenith Radio Corporation was formed with McDonald as president.

From the very first days of the Chicago Radio Laboratory, and through the years in which Zenith has grown to its present high stature, the company and McDonald personally have pioneered continuously in the field of broadcasting. From this pioneering have come many important contributions to the art, some of a technical nature and others in the development of new broadcast programs and public service.

In 1923, McDonald established one of the nation's first broadcast stations, WJAZ, with studios in the Edgewater Beach Hotel. This station pioneered many program innovations, including the presentation of grand opera, special transmission of news, and messages to members of an Arctic expedition.

In 1923 also, McDonald organized and became the first president of the National Association of Broadcasters. In that year he contributed to the development of commercial broadcasting, arranging to have a group of member stations broadcast excerpts from a radio magazine then on the newsstands. The publisher paid the NAB a \$1,000 fee for this service. Results were so successful that the arrangement was continued. This is believed to be the first use of radio as a national advertising medium.

McDonald pioneered the development of short-wave radio for long-distance communications by outfitting the 1923 Donald B. MacMillan Arctic Expedition with transmitters and receivers. This equipment permitted MacMillan to keep in touch with the United States through the long Arctic night, the first Arctic expedition in history to do so. Radio station WJAZ broadcast special programs of news and messages to members of the expedition, a feature that became very popular with the radio listening audience.

At that time during the state of radio's development, the short wave band was considered of little practical value and assigned to radio amateurs. The U. S. and other navies, and the merchant marines of the world, were equipped with long wave radio which could not maintain day-time contact with shore stations when the vessels were a few hundred miles

(Continued on page 18)



Photo Courtesy Zenith Radio Corp.

In 1925, the U.S. Fleet had scheduled a goodwill tour to New Zealand, Tasmania and Australia. It was also the year Commander McDonald went north on the MacMillan - National Geographic Arctic Expedition. The MacMillan expedition, aboard the *Perry*, reached Etah, Greenland, only 11 degrees from the North Pole, while the U.S.S. *Seattle* was off the coast of Tasmania, 12,000 miles away. Commander gave a convincing demonstration of the capability of short wave radio by putting a group of Eskimo singers before the microphone and sending their voices to Admiral Coon on the *Seattle*, almost exactly half the world away.



Photo Courtesy Zenith Radio Corporation

## Commander Eugene F. McDonald, Jr.

Electronics Industry Pioneer and  
Founder-President of Zenith Radio  
1886-1958



Photo Courtesy Zenith Radio Corporation

*THE FIRST SESSIONS OF THE NAB* brought many letters of inquiries and information. The first president and organizer of the NAB was Comdr. Eugene F. McDonald, Jr. (fourth from left), the first president of Zenith Radio Corporation. At this 1923 meeting of the pioneer NAB board in Chicago's Drake Hotel were: (left to right): Raymond Walker; C. H. Anderson; Frank W. Elliott, WHO Des Moines, later an NAB president; Comdr. McDonald; Paul Klugh, manager of WJAZ (Zenith's early AM station); William S. Hedges, radio editor of the Chicago Daily News, then operating WMAQ; Elliott Jenkins, WDAP Chicago (now WGN); A. B. Cooper; John Shepard, 3rd; Powel Crosley, Jr., WLW, Cincinnati.

### Comdr. E.F. McDonald, Jr.

*(Continued from page 16)*

from land, and which were limited in range even at night.

Realizing that there were wavebands in the short wave spectrum that would permit great distance with relatively low power, McDonald early in 1925 demonstrated the efficiency of short wave to the U. S. Navy by persuading Admiral Ridley McLean to send an amateur with Zenith equipment on the fleet's good will cruise which began in Pacific waters. Then McDonald took similar equipment to Greenland with the MacMillan National Geographic Arctic Expedition, maintaining radio contact while the expedition was en route to Etah, Greenland and the U. S. fleet steamed across the Pacific. From Etah, within 11 degrees of the North Pole, McDonald sent singing voices of Eskimos to the fleet while it cruised off the coast of Tasmania, 12,000 miles away.

That was the start of practical use of short wave radio by the U. S. Navy. It is interesting to note that since that date *all* of radio's expansion into new channels—international communications, ship-to-shore, VHF and UHF television, radar, etc.—has been in that short wave spectrum below 50 meters which McDonald so effectively demonstrated to the world.

In 1925 radio broadcasting was under jurisdiction of the Secretary of Commerce. McDonald told the then Secretary, Herbert Hoover, that this was too much power to be in the hands of one man, and then deliberately jumped a Canadian frequency. In the resulting court test, McDonald's position was confirmed. This led to establishment of the Radio Commission, which has since been superseded by the Federal Communications Commission.

Under McDonald's direction, Zenith's experimental work in television began in 1931. At that time, because of his conviction that advertisers would not be able to finance new motion pictures and other box office features on television, Zenith began research on finding a method of subscription television. He demon-

strated Phonevision, the first such system, in 1947, conducted a limited commercial test in Chicago in 1951, and until his death, spearheaded the pro-subscription TV drive on this highly controversial issue.

On February 2, 1939, Zenith went on the air with W9XZV, the nation's first all-electronic television station built to then current standards.

In 1940-41, the first color TV broadcasts in Chicago were transmitted by W9XZV, using a VHF transmitter, receiver, and studio equipment, including direct pickup cameras, that were constructed in Zenith's laboratories. The colorcasts were used to test the company's receiver design.

In 1950 the station moved to the Field Building. There, under new call letters, K2XBS, it broadcast the experimental test of Zenith's Phonevision system of subscription television. The station later proved invaluable to the television industry during development of the NTSC system of color television.

McDonald's early interest in FM put Zenith on the air in February, 1940, with one of the nation's first FM stations, now operating under the call letters WEFM. Through the war WEFM created and broadcast special programs for industry which were put on the speaker systems of war factories to relieve worker fatigue, and act as a stimulus to production. From its beginning for over 26 years, this station was operated as a public service, presenting a program of fine music without the sale of advertising. On February 14, 1966, the station began broadcasting a new programming format from new Stereo FM facilities described by station engineers as "the most advanced in the country."

It was at McDonald's suggestion that most radio manufacturers granted the government a free license under all of their patents during World War II.

In April 1942, long before there was any talk of renegotiating war contracts, Zenith directors resolved

*(Continued on next page)*

## Comdr. E.F. McDonald, Jr.

(Continued from preceding page)

that the company would voluntarily return to the government any amount that it considered over and above a reasonable profit from war business. These refunds aggregated millions of dollars before the renegotiation act went into effect.

In 1943, McDonald launched a "crusade to lower the cost of hearing" by introduction of an efficient hearing aid for \$40, about one-fourth the price of other good instruments then on the market. Within a matter of months Zenith became and has remained the world's largest manufacturer of hearing aids.

During World War II, Zenith was a 5-time winner of the Army-Navy E, as was its wholly owned subsidiary, the Wincharger Corporation of Sioux City, Iowa. During the war Zenith passed along to competitors, free of charge, many production techniques that made for greater efficiency in war production, even though they represented short cuts that would have been valuable peacetime production secrets.

As president of Zenith, McDonald was insistent on quality, and stimulated the development of many new and novel features. From the company's laboratories came the industry's first all-electric receiver that eliminated storage batteries from the living room; the first automatic radio tuners; the first ultrasonic wireless remote control for home TV sets; a glare proof black-and-white TV picture tube; and many other advances.

As an explorer, McDonald participated in a command capacity on two Arctic expeditions, sought the original site of Stevenson's Treasure Island, and discovered the wreckage of what may have been LaSalle's lost ship *Le Griffon* which disappeared in the Great Lakes several centuries ago. During his lifetime he owned more than 30 boats, ranging from

his first canoe to the 185-foot *Mizpah*, which was known throughout the world, and on which he lived for many years until the ship went to the Navy in World War II.

McDonald authored numerous magazine articles and a book, *Youth Must Fly*, published by Harper's in 1941. He played a leading role in having glider instructions given to our armed forces prior to U. S. entry into World War II.

McDonald was a Fellow of the Royal Geographic Society of London; member of the Racquet, Chicago Athletic, and Tavern clubs of Chicago; Mackinac Island Yacht Club; Royal Canadian Yacht Club; and Explorers Club of New York.

McDonald was born at Syracuse, New York, in 1886, the son of Eugene F. and Mary McDonald. From early childhood he was fascinated by things electrical and mechanical, and by the time he entered high school had developed a business installing and repairing electric door bells.

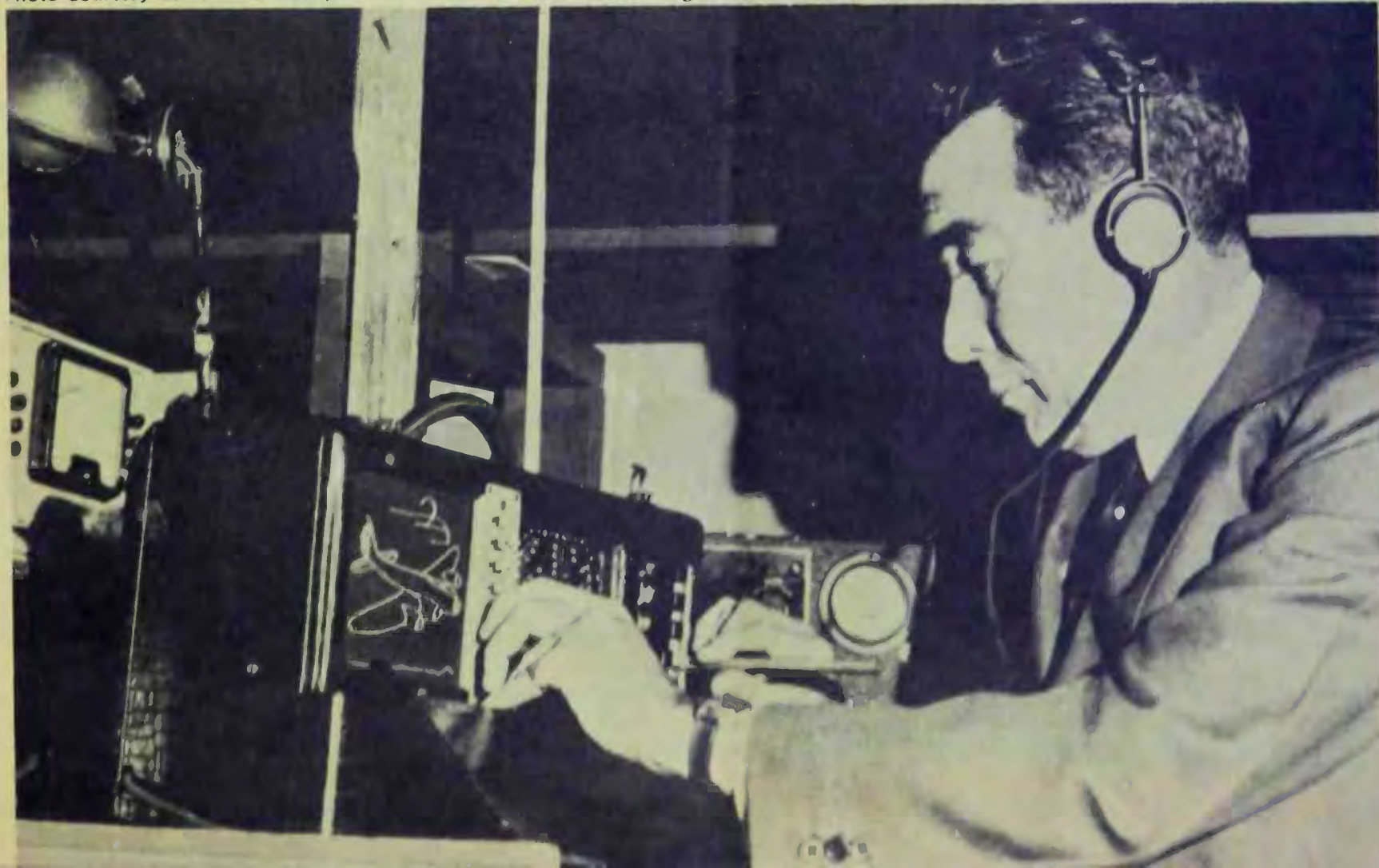
He left high school after two years to become a factory worker in the Franklin Automobile Company, soon became southern sales manager, and in 1910 became sales manager of the Imperial Motor Company. Then he moved to Chicago to distribute an automobile self-starter, and was soon in the automobile sales business.

In 1912, McDonald launched an innovation in the automobile industry, the sale of commercial cars on time payments. At that time small business men could buy almost anything but cars on credit. McDonald set up a company to finance their purchases on time payments and was soon handling more than 20,000 cars a year.

When the United States entered World War I, McDonald sold his business and joined the Navy. He held the rank of lieutenant-commander.

*THE LAST TRANS-OCEANIC shortwave receiver produced before Zenith Radio Corporation converted all production to war work during the World War II era is put through its paces by the late Commander Eugene F. McDonald, Jr., Zenith's founder-president.*

Photo Courtesy Zenith Radio Corporation



## A Mobile Radio Broadcasting Station in 1925

Compare this portable radio broadcasting station with the compact, streamlined, systems used by today's radio and television stations, and you will agree that we "have come a long way in forty-six years"

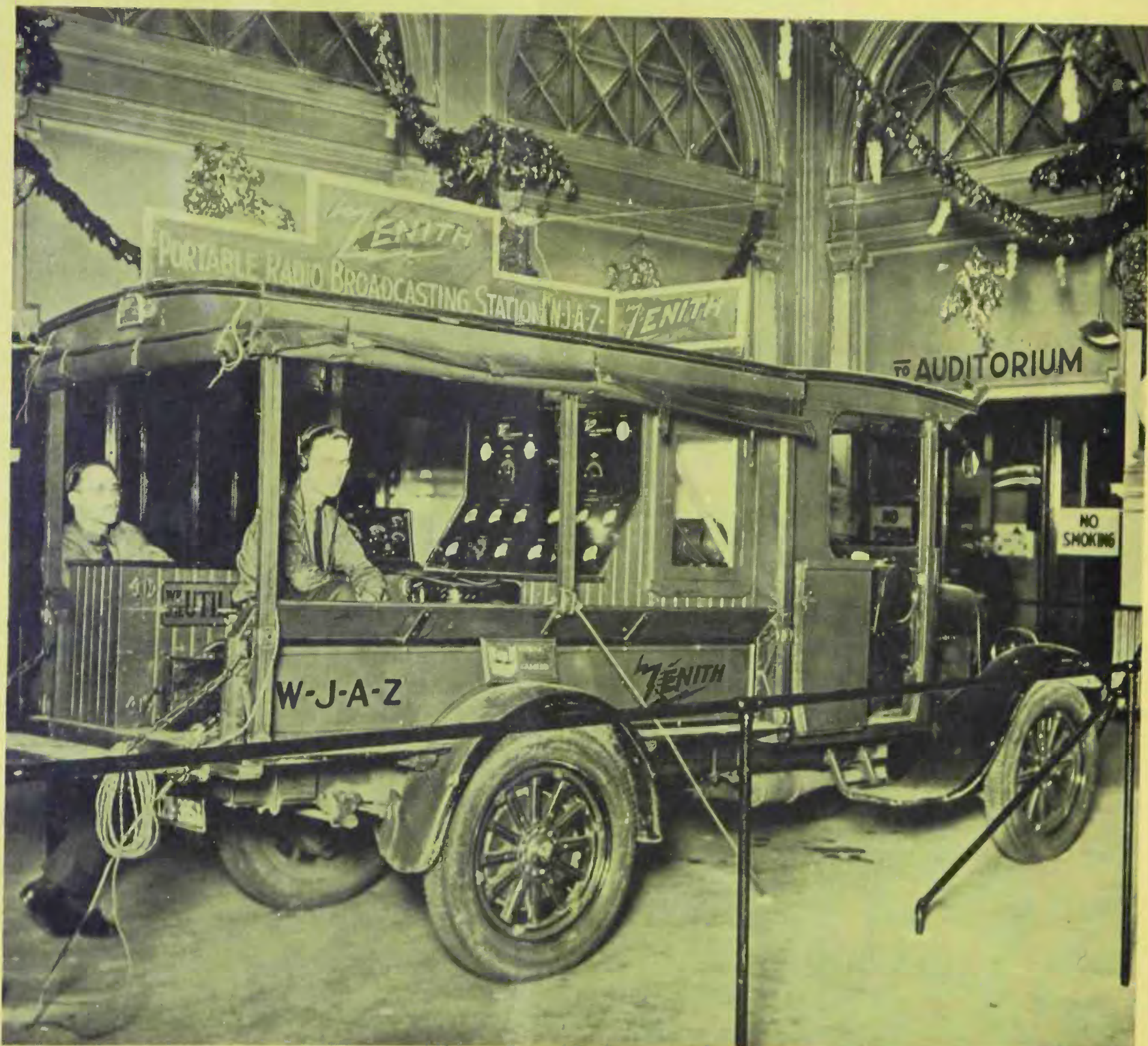


Photo Courtesy Zenith Radio Corporation

*This old photograph displays the very latest in portable radio broadcasting stations forty-six years ago. It is the Zenith Radio Corporation's mobile radio station, WJAZ, and the year was 1925. The base station studios were built in 1922 in Chicago's famous Edgewater Beach Hotel.*