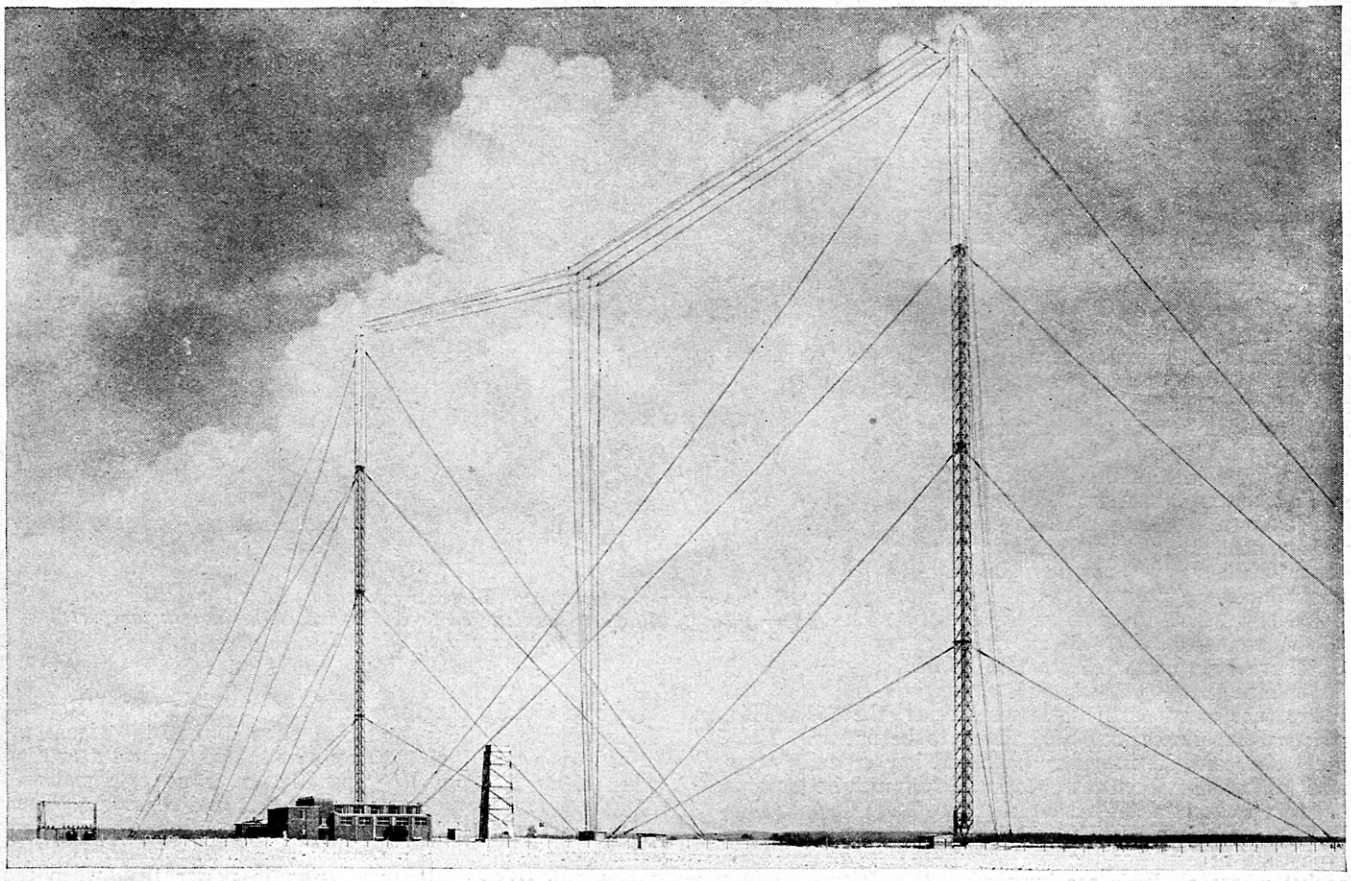


MODERN TOWERS OF BABYLON

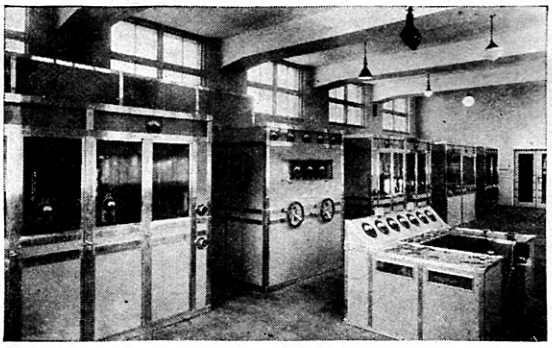
From this gigantic antenna, radio signals are being flung to millions of listeners' earphones on crystal sets throughout the whole of Europe. It will be noticed that the antenna is "T" connected with the four-wire lead-in dropping down at the center to the antenna house

Poland Inaugurates *Long-Wave Super-Power* Broadcasting

A powerful new transmitter recently constructed, along the line of Lieut. Wenstrom's proposed single-coverage station for the United States, has been giving Europe non-fading reception with simple sets

By J. Plebanski

THE new Polish broadcasting station, one of the most powerful in the world, has recently been built, about 165 miles from the Polish city of Warsaw, which gives Polish listeners-in adequate reception on a crystal set. The new station is built along the lines of super-power high wavelength, the antenna rating of the station being 120 k.w. of unmodulated antenna energy. When voice or music signals are impressed on the modulation apparatus, the power immediately increases up to 160 k.w. It is recorded by listeners all over Europe as coming in like a local station without fading or variation.



VIEW OF TRANSMITTER ROOM

The new 160-kw. transmitter is housed according to the latest European design, with a central control bench overlooking all of the transmitter panels

The antenna is carried by two huge steel masts, 650 feet high. Electrical measurements show an effective antenna height of about 400 feet. The actual radiated power, according to these calculations, is thus more than 100 k.w., with a radiation resistance of approximately only 11 ohms. The complete antenna resistance lies between 12 and 13 ohms. This is a figure not met at present in any other broadcasting station in Europe.

The new Warsaw station operates on a wave length of 1414 meters or approximately 212 kilocycles and is of the low-powered modulation type with a number of

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Poland Broadcasts

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power amplifiers connected in cascade. The oscillating system is of a new and ingenious design that permits keeping the frequency of the transmitted energy constant within extremely narrow limits but at the same time allowing frequency changes and adjustments of the circuits to be made with ease. The variation in frequency is claimed to be less than one part in a million. The radiation of harmonics from the antenna is prohibited through the use of special harmonic filters of intricate design inserted between the aerial and the transmitter itself. The plate supply to the tubes is accomplished from an alternating current power line using a mercury arc rectifier with a rather standard British filter system.

The new station was built for Polskie Radia, the Polish broadcasting company, by the Marconi Wireless Telegraph Company, Ltd., of England.

It is interesting to note that here is one of the first European stations to be built employing almost exactly the transmission scheme proposed by Lt. Wenstrom in recent issues of RADIO NEWS. It will be remembered that this proposed system called for high power and a wavelength high enough so that an area of many hundreds of miles could be covered by direct transmission without fading.

The new Warsaw station with its remarkable success during only a short period of operation seems to justify many of the claims made for stations of extremely high power and high wavelength. The fact that distance reception can be obtained from such a station with only a simple receiving set is significant during these times when receivers, economical in cost, are being so widely accepted by prospective listeners.

Backstage in Broadcasting

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of bitterness. But much ire is aroused whenever a network star is snatched by the competing chain. In recent months CBS scored two important victories over the NBC by obtaining Kate Smith and the Boswell Sisters. But it did not take the NBC long to retaliate—and strongly at that—by snatching Jesse Crawford, one of the Nation's best-known organists, from the CBS roster, and also by swerving Station WMAQ, the Columbia Chicago outlet, into the NBC family. Crawford recently completed his fifth year with the Paramount Theatre in New York. The strange part about the whole affair is that the Paramount-Publix Corporation owns a large share of the CBS and Crawford's ether offerings are now being aired over the NBC direct from the key theatre of the Paramount chain. Crawford was born in Woodland, California. He started playing the organ in Spokane, Washington, eighteen years ago. After several years of movie theatre work on the West Coast.