

# WBEN—The Buffalo Evening News Station Installs New Transmitter

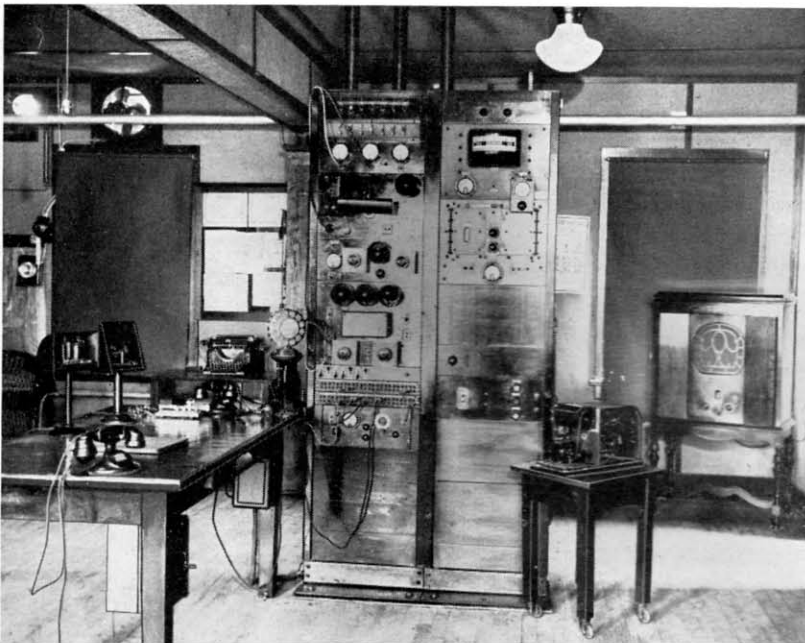
By T. A. SMITH, Sales Engineer, RCA Victor Co., Inc.

ON August 1st, WBEN officially went on the air with its new RCA 1 KW transmitter and since that date many have been the reports received of better reception of that station in the Western New York district.

The new equipment is housed in the same building which contained the old equipment and its installation necessitated the removal of the old and the installation of the new apparatus without loss of time on the air. This was accomplished by the removal of the old equipment and connecting it up in a temporary fashion for use during the three months' period required for the new installation. The installation work was done under the supervision of the WBEN engineering staff while

Two antenna systems are available for use at WBEN. One system uses 200 feet steel masts and is located directly over the transmitter building. The other system is located at some distance from the transmitter and is fed over a seven hundred and thirty foot transmission line. This system is of the inverted "L" type and due to this fact is slightly directional towards Buffalo and the south. To further emphasize this directional effect, a reflector system is used which is located one-quarter wave behind the main antenna and is tuned to the transmitter frequency of 900 kilocycles. By the use of this antenna system the bulk of the signal is to the south and not over Lake Ontario which is located only twenty miles to the north.

for days at a time. Due to its sleet melting equipment, WBEN has so far escaped damage from this source. A closed loop comprises the antenna proper and into this is fed either 110 volts 85 amperes at 25 cycle or if the



THE REMOTE SPEECH INPUT RACK AT WBEN. THE EX-4180 FREQUENCY MONITOR IS IN THE UPPER RIGHT PORTION OF THE PANEL. IT IS READING ZERO DEVIATION FROM WBEN'S ASSIGNED FREQUENCY.

Mr. R. Wilson of the Westinghouse Engineering Staff did the final adjusting of the transmitter. A field survey to be taken soon will show just how much more effective the new transmitter equipment is over the old.

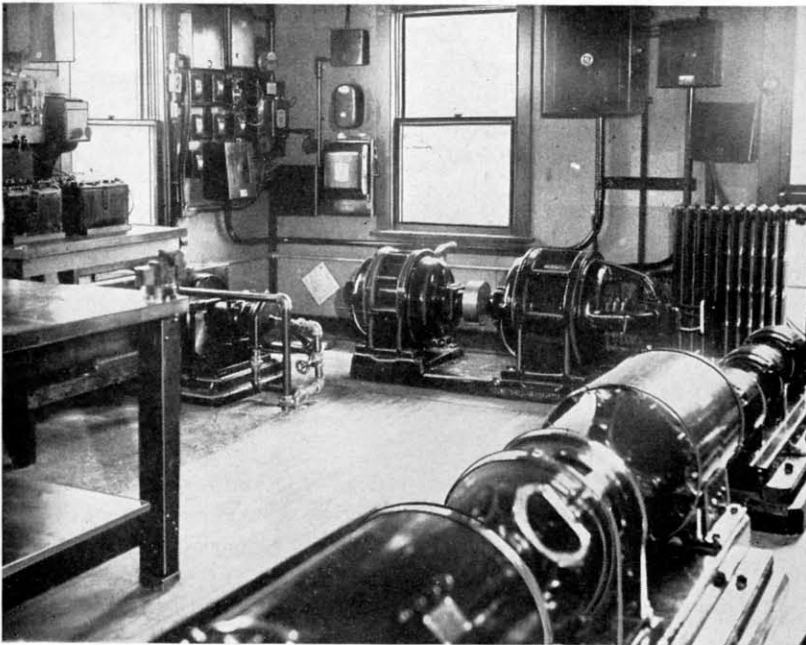
In connection with this antenna system, an ingenious system is used for the melting of ice from the antenna proper in the winter time. It is a frequent occurrence for sleet storms in the Lake region to demolish all radio and telephone systems



THE NEW RCA 1-C TRANSMITTER AT WBEN.

occasion warrants its use, 220 volts 125 amperes at 25 cycle. The heating current is fed into the antenna system through a system of tuned chokes which prevents the loss of R. F. current but allows the heating current to pass through. It is possible to heat the antenna at the same time that a program is on the air without affecting the quality of transmission or introducing objectionable hum.

The possibility of main transmitter failure at WBEN has been largely offset by the use of a duplicate and emergency transmitter located at the studio control room in Buffalo. An automatic starting feature in connection with this transmitter has proved itself to be remarkably effective. If for any reason the main transmitter goes off the air, the Emergency unit goes into operation with only a ten-second break in the program which is necessary for the generators to come up to speed. This is accomplished by means of a com-



POWER ROOM OF WBEN. THE STATION OPERATES FROM A 25 CYCLE SUPPLY AND THE 60 CYCLE CONVERTER IS SHOWN IN THE CENTER BACKGROUND. THE POWER EQUIPMENT FOR THE OLD TRANSMITTER IS STILL IN PLACE.

light in the control room indicates that the emergency unit is going into operation.

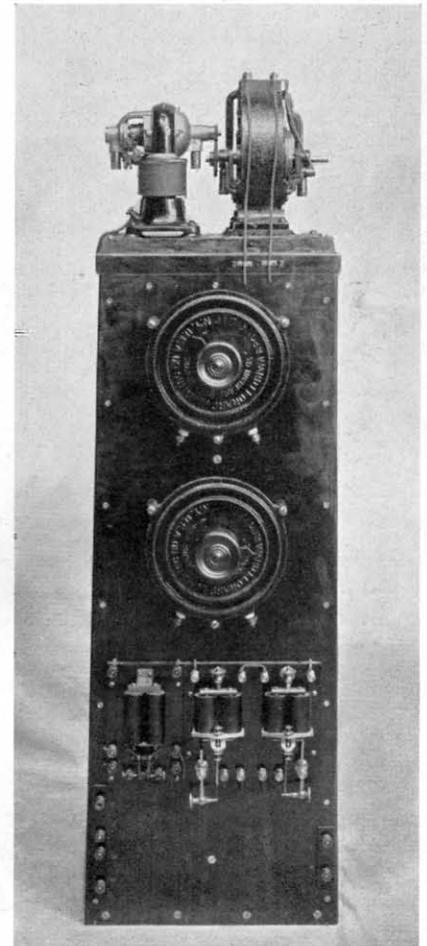
Mr. R. J. Kingsley, Chief Engineer of WBEN, is responsible for many of the unusual features of this station which were worked out in conjunction with Messrs. Horle and Godley. With the double antenna system, the sleet melting device, and the automatic auxiliary transmitter, WBEN has achieved a record for uninterrupted service.

**WHAT IS IT, OLDTIMER??**

**CURIO NO. 2—CAN YOU IDENTIFY IT?**  
LOOK FOR ANSWER IN THE NEXT ISSUE OF "BROADCAST NEWS"

The names of those who communicate with the Editor, furnishing the correct identification of the above antique will be published here next issue.

posite telephone circuit used in connection with the order wire between the control room and main transmitter and by means of relays and this composite circuit, the automatic starting is accomplished. A signal



**ANSWER TO CURIO NO. 1  
IN THE JULY ISSUE:**

The picture shown was that of a "Loose Coupler," manufactured by the Shoemaker Co. between 1905 and 1906. Approximately 30 of these instruments were turned out and placed in service in commercial stations and naval stations, both afloat and ashore. The process of tuning in the desired station, especially when the wavelength was unknown (as was frequently the case in the early days) involved much plugging in and plugging out. Apparently none of our readers remembered that one.

The Voice of The Red Oak  
Radio Corporation

"The Station With A Kick"  
Telephone 1100

RADIO STATION

K I C K

RED OAK, IOWA

August 31, 1932.

Mr. E. Jay Quinby  
R. C. A. Victor Co.  
Camden, N. J.

Dear Mr. Quinby:

In February of 1931, we purchased from the RCA Victor Company, four 866 Radiotrons for use in the new transmitter of Radio Station KICK, which was under construction at that time. We have had such exceptional service from these No. 866 tubes that I felt it expedient to inform you of what we believe to be a record of tube life.

Despite adverse advice from a number of engineers to the effect that these tubes would not withstand our operating conditions, we selected No. 866 for our transmitter. One of the 866 tubes was placed in the transmitter when we opened the station on March 24th, 1931. This tube is operating today, and from all appearances and operating conditions, it will continue to remain efficient for some time to come. To date this tube has operated 6,303 hours, and the other three approximately 2,862 hours.

As one of the construction engineers and Chief engineer of Radio Station KICK, I feel in a position to compliment you on the RCA Victor transmitting equipment, and although we have a composite job in our operating room (including a new RCA Victor Frequency Monitor), should occasion arise we will certainly recommend RCA Victor equipment. We think your specifications are mighty good.

Sincerely yours,

Radio Station K I C K,  
*M. E. Jones*  
Manager & Chief Engineer.

LK\*MEJ