

WSRS . . . 250W AM/FM

Cleveland Heights, Ohio

by

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Cleveland's "family station" (WSRS), which first went on the air on December 7, 1947, is now providing coverage with both AM and FM services. The station maintains and operates an RCA 250 Watt AM transmitter (type BTA-250L) at 1490 KC—and an RCA 250 Watt FM transmitter (type BTF-250A) at 95.3 megacycles. Station performance has proved to be very satisfactory for both AM and FM.

Transmitters

The 250 Watt AM and FM transmitters (as well as studio and associated equipment) are housed in a brick-constructed building located in Cleveland Heights, Ohio. The AM and FM transmitters are flush mounted "in-line" with two monitoring, test and audio equipment racks (see Fig. 1 and floor plan of Fig. 5). Transmitter room doors provide access to the master control room. The centralized transmitter room arrangement enables flexible transmitter control from one location.

Antennas

AM power is radiated from the Truscon tower (see Figs. 2, 3 and 4) which was erected on top of the two-story WSRS building. The tower erection and Pylon

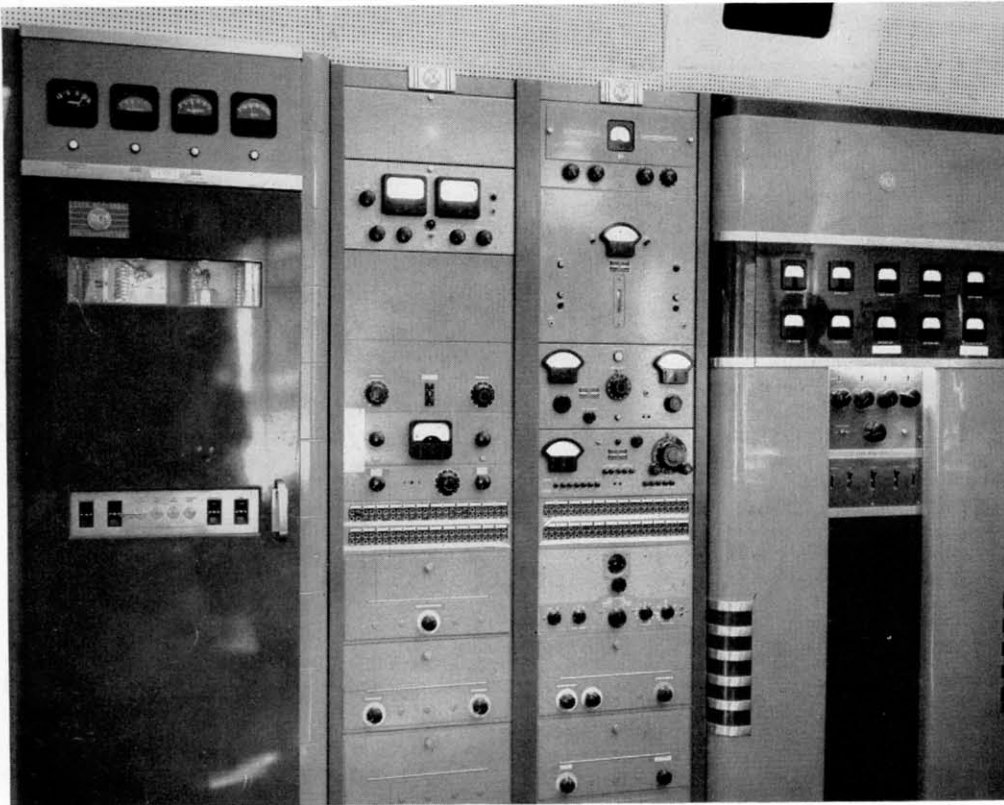


FIG. 1. (above). 250-watt RCA FM transmitter at left, two monitoring, test and audio racks center, and 250-watt RCA AM transmitter right are flush-mounted "in-line," as shown here.

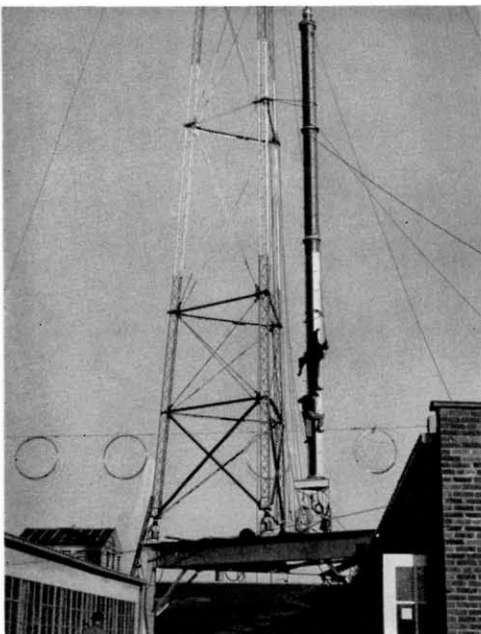


FIG. 2. Four-section Pylon completely assembled is shown here ready to be hoisted up the tower.

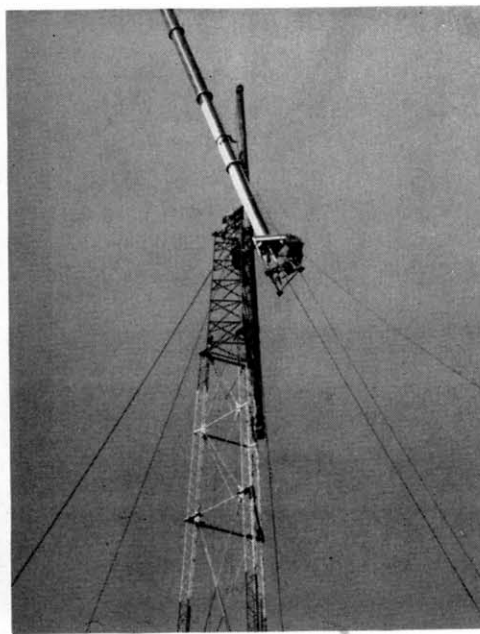


FIG. 3. The RCA, FM Pylon just before placement atop the WSRS tower.

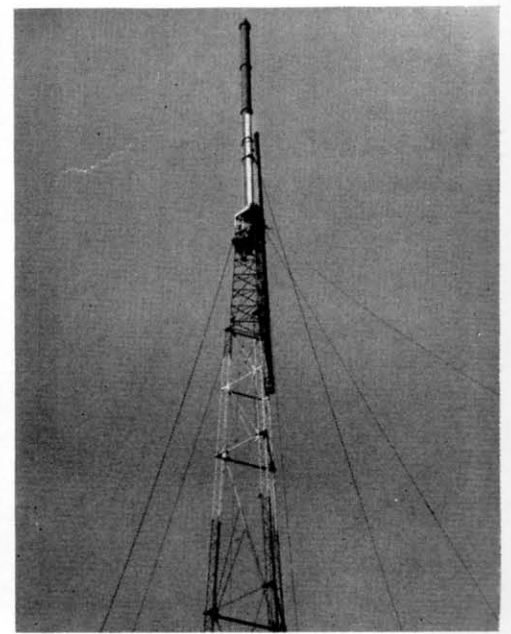


FIG. 4. View showing the 4-section Pylon as it appears installed atop the supporting tower.

installation was completed by Vogt and Conant Contractors, Cleveland, Ohio. An RCA AM/FM isolation unit was used at the tower base, thus making it possible to accomplish both AM and FM operation from one tower. The RCA Type BAF-14A FM-AM Isolation Unit transfers FM power across the insulating zone of the AM antenna tower to feed the FM Pylon antenna mounted atop the tower. It is designed to provide complete isolation of FM and AM signals and provide efficient operation over the entire FM frequency range.

The FM antenna used was an RCA four-section Pylon which was hoisted and installed as a single unit. This procedure proved to be easiest to handle, since the entire installation is situated on top of the building. The Pylon was assembled entirely in a horizontal position on the roof, then mounted on the top six-foot section of the tower. Although this added to the weight to be hoisted, it gave us protection for the transmission line protruding from the bottom of the Pylon. It may be interesting to note that since this was a roof-top installation, the erection crew could not bring power winches close enough to use. Consequently, the entire Tower and Pylon were erected by hand winches. (The Pylon and six-foot section of tower weigh approximately 3,000 lbs.)

Photos show in the foreground the messenger cable and coils of copper wire which make up the counter-poise system. At the completion of the tower erection, the copper wire was fastened to the AM tower base at every 3 degree radial.

Studios

WSRS (as shown in floor plan of Fig. 5) employs a studio setup which, in effect,

FIG. 6 (at right). Control room for studio "A" showing RCA 76-B4 consolette and 70-D transcription turntables (equipped with recording attachments).



FIG. 7. Samuel R. Sague, President and General Manager of WSRS broadcast facilities and operation.

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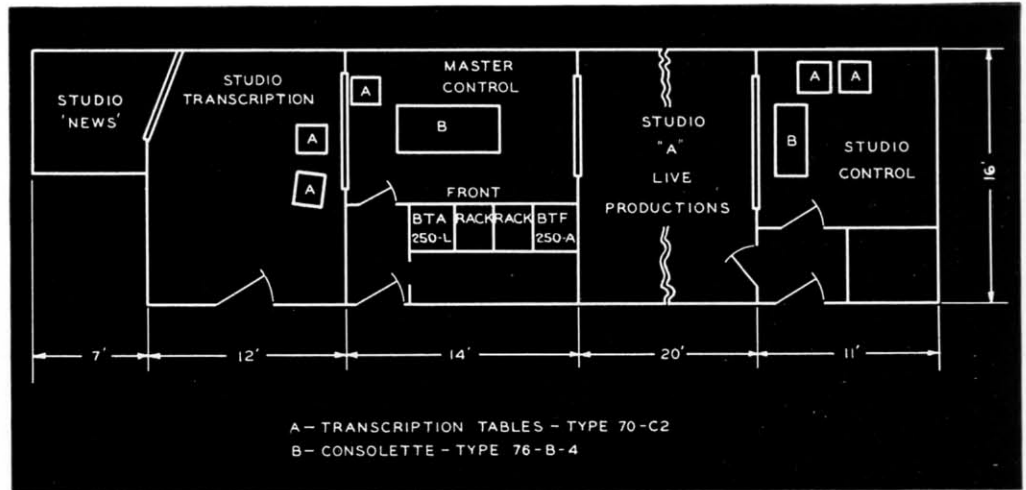


FIG. 5 (above). The WSRS single-floor station plan showing transmitter room and studio layout.

provides three studios for regular operation, plus a large automobile showroom situated on the ground floor of the building.

The studios are adequately handled by the two control rooms; master control and control for WSRS studio "A" (15 x 27 feet). Two RCA recording attachment units are mounted on type 70-D turntables located in the studio "A" control room (see Fig. 6). Large shows and plays are accommodated by studio "A" arrangement.

An RCA Type 76 Consolette is used in master control and another in "A" studio control. Normal disc shows and news announcements are handled directly from the master control position. Master control consists of the operator's desk, consolette, turntable, an RCA Type BCS-2A switching console and a remote panel box. With some minor modifications and rewiring of consolettes, WSRS has arrived at a rather "semi-custombuilt" installation which is extremely flexible and easy to operate.

