

The technical equipment at WHHM was chosen and installed with this general idea in mind: to operate well, consistently, with flexibility, and permit operation by relatively inexperienced personnel. In a large measure, these requirements were fulfilled by making the equipment essentially RCA throughout. Operating flexibility has been accomplished by careful equipment facility installation. The transmitter building itself was designed with the idea of keeping expenses as low as possible and including only necessities.

The studios of WHHM are located in a large office building in the downtown section of Memphis. The studio layout consists of lobby offices, an audition room, one large studio, one small studio, and two control rooms.

The studio equipment comprises two RCA 76B Consolettes, two cabinet racks with auxiliary equipment, and four turntables. The equipment is arranged and assembled so that one non-technical combination man can operate it. Consolettes are interlocked so that only one can be on the air at a given time. Studio cue speakers and microphones are interlocked so that it is almost impossible to do anything wrong with them. Each control room operates as nearly as possible like the other.

This lessens operating blunders and makes it lots simpler to train new personnel.

An over-all master intercommunication system, which is interlocked with both control room circuits, connects all offices and operating positions. A house monitoring system enables all offices and audition rooms to monitor all channels with no technical assistance. As the system is centralized, no amplifiers need turning on at any monitoring location.

Auxiliary order wires, phone sets, head phone extensions, telegraph extensions and the like are wired in where they are likely to be needed. Accordingly, very few emergencies or complications arise, in spite of the fact that the station operates with a heavy schedule 24-hours per day.

Servicing is usually accomplished by the very simple non-technical expedient of changing control rooms. This automatically switches all equipment facilities at one time, and leaves the other equipment free for servicing.

The station's transmitter building is located approximately two miles from the studio, and is connected with it by one program line, one auxiliary program line, which doubles as an order wire, and a regular telephone line.

The geographical location of the transmitter is very nearly in the center of the city's population. The transmitter building is located in a large field, zoned commercially, and adjacent to one of the principal railroad yards. All the track nearby probably assists the ground conductivity.

As may be seen in the floor plan, (Fig. 5), the architecture of the building is very simple. It is built on a concrete slab, with walls being constructed of concrete blocks. The cheapest style of construction was used on the roof. About the only unusual thing architecturally is the window construction (Fig. 4). All windows are placed from the ceiling down to about five feet from the floor. This construction facilitates placement of furniture and equipment, since practically all wall space is available with a maximum of light.

The heating system consists of one gas circulating heater. This has been quite satisfactory as the climate of Memphis is temperate. The only noticeable fault in the transmitter building construction is the lack of dead storage space. It is quite likely that in the near future the station will have to construct some smaller building to provide more storage facilities.

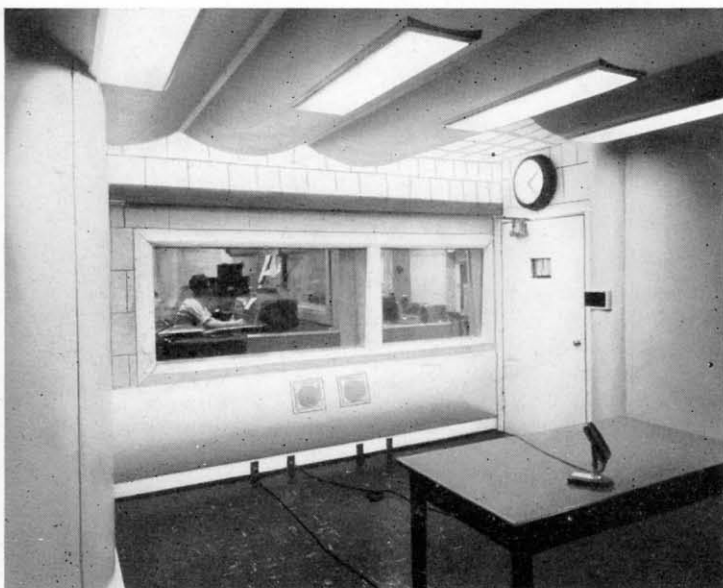


FIG. 1. Shown above is one of the WHHM studios which has been acoustically treated with polycylindrical diffusers. Note that programs can be monitored by either of two control rooms.



FIG. 2. This is control room #2. Window at right opens on another control room containing duplicate equipment. Both open on studio shown in Fig. 1.

In the transmitter building of WHHM, the frequency and modulation monitors are located beside the operator's desk. An aural monitor has a selector switch which enables the operator to check operation at a number of points between the program's arrival and its return off the air.

The RCA 250-watt transmitter is located in the center of the room, giving good access for the occasional service it gets. Power is brought into the house from two separate sources, lessening power failure trouble.

Electrically, there is only one unique feature in the transmitter plant construction. The station installed a relay controlled device for removing the thermocouple and meter from the circuit in the antenna tuning house. This circuit seems to have functioned satisfactorily, since there have been no failures due to lightning.

The transmission line consists of three pieces of RG 8U on top of a barbed wire fence leading from the transmitter building to the tuning house.

The antenna is a Wincharger, which is fed from the small dog-house which contains terminating equipment for the transmission line.

WHHM has operated on a 24 hours a day schedule since its start in 1946. This would appear to present both personnel and technical problems. Actually, the personnel problem is somewhat simplified by using a larger number of operators than would be expected, and paying them per hour worked. A total of seven operators are used for hours varying from seven to

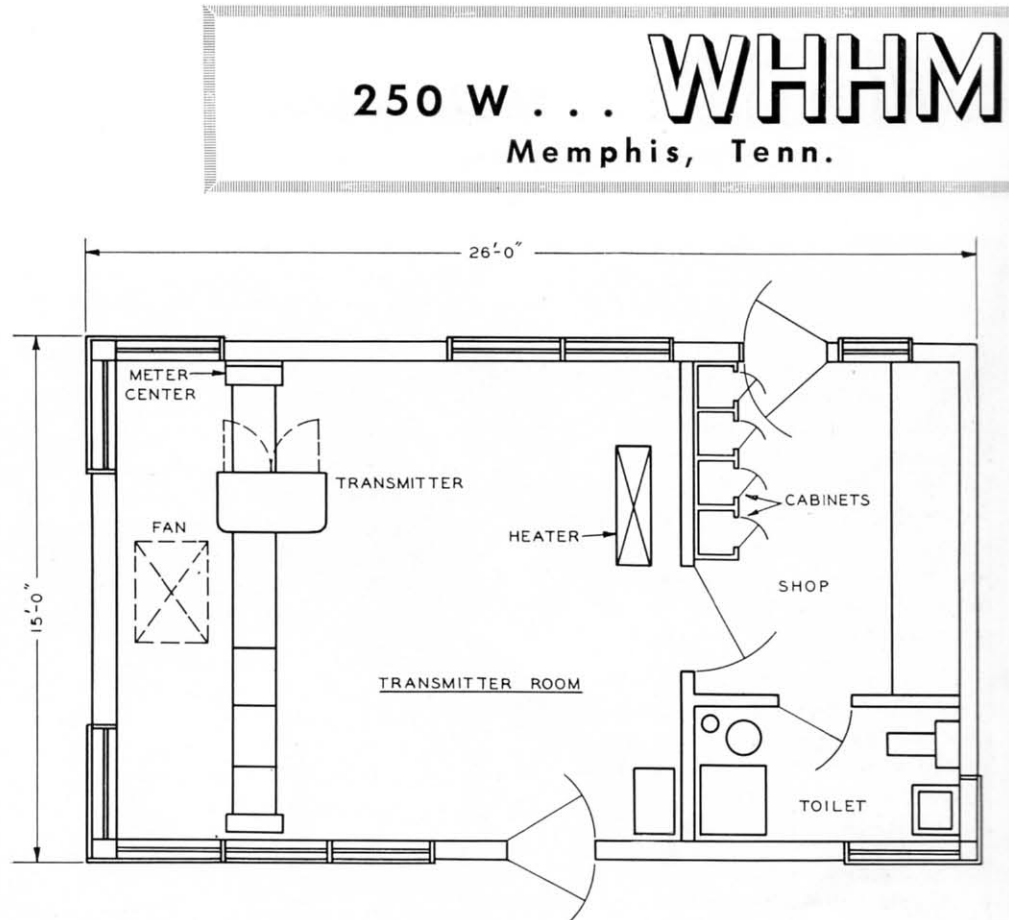


FIG. 5. This floor plan shows the equipment layout of the WHHM transmitter building. Note exhaust fan is mounted in the ceiling near the transmitter. WHHM finds this layout adequate except that it lacks sufficient storage space.

forty-seven per week. Most of the operators are parttime men who attend college in the city.

Since WHHM has only one transmitter, and inasmuch as WHHM has operated 24 hours per day since its start, maintenance

has presented an insolvable problem. The partial solution is to give as little maintenance as possible and that only during emergency conditions. So far, thanks to tough equipment, and good luck, we are still running 24 hours per day with almost no maintenance.



FIG. 3. This photograph of the interior of the WHHM transmitter building shows the operator's desk, the audio and monitor rack, a utility turntable, and the 250-watt RCA transmitter.

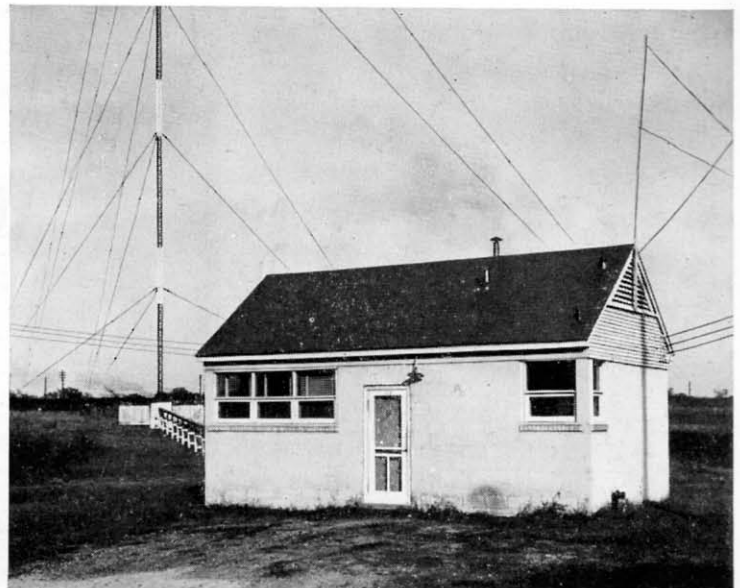


FIG. 4. The WHHM transmitter building is constructed of concrete blocks. The windows were built near the ceiling, permitting a maximum amount of wall space and light.