Station WWNC Spea

Lowdown On Origin Of Those Sounds In Your Radio Is Given

By JOHN E. JONES

This is Radio Station WWNC, Asheville, North Carolina. The voice heard when such an announcement is made from the radio station here may be that of Ezra McIntosh, the program director, but it's highly probable that he is not near the microphone.

These station announcements are made by means of an attachment containing many feet of moving picture film with sound track. By pressing a button, the station engineer is able to provide the station announcements at desired intervals. Thus, the routine work of the radio announcers is lessened to a great degree.

This unusual gadget has made some of the employees of WWNC appear as prevaricators in recent months. On one occasion, the automatic station announcements proceeded as usual, using the voice of Program Director McIntosh. And then the telephone rang!

"Let me speak to Mr. McIntosh," was the request from the other end of the line.

"Mr. McIntosh is out of the city—he is in New York."

"Oh yeah! I just heard him making a station announcement on the radio," was the retort.

The radio station, in many ways, is an interesting place. It depicts life on a "sound stage" for countless thousands of listeners during each of 17 1-2 hours in the day. There never is a "quiet time"—the show must go on as the actors say, and there must ever be "sound." If the studio is not occupied by a hillbilly or cowboy band or some other variety of live talent, programs are being received from the National Broadcasting company chain.

Great Care Necessary

Radio station officials have to use extreme care in the selection of religious and political programs for broadcasting. Not so long ago, John D. Hamilton, Republican leader, was speaking on a network program.

The telephone bell sounded. Came an excited voice: "Who is the man who is that fellow on the radio?"

The response: "That is Mr. Hamilton, the Republican leader."

In a mumbled manner came something like this: "Oh, it is. Thanks."

Apparently a faithful Republican has mistaken the voice for that of a Democratic foe.

The radio station receives compliments and criticisms of various kinds from many persons. In some instances, however, the response is too small. It is not rare for a station to lose a network program due to the poor support of listeners in purchasing the products of the sponsor and in writing praises for the program. Just such an incident occurred recently in the case of a chain dairy program, which was dropped from the Asheville station.

In another instance, it required a
In the Studio, WWNC Speaking

Chief Engineer Cecil H. Hoskins is shown here in his room adjoining the studio of Radio Station WWNC operating the equipment during the broadcasting of a local radio program. As the program progresses, the engineer furnishes the proper blending of music and speech by the adjustment of dials on the table before him. Some of the equipment used in broadcasting is shown in the background.

A great deal of local "pressure" to keep a well known automobile program on the schedule of Radio Station WWNC. Occasionally, it becomes necessary for the alert radio station staff to come to the front for the listeners. Not so long ago, President Roosevelt was scheduled to speak over the radio network of NBC, from Manteo. The program was not offered to Asheville and other nearby stations. The officials of the station here got in touch with New York NBC authorities. The result: Asheville listeners heard the President over WWNC.

Calls For Help

There come to the radio station sundry calls for help. A frantic mother loses her child; a wife becomes desperately ill while her husband is on a hunting trip; a local larder plans an "open house," and there are dozens of situations in which the radio station is asked to assist.

Many of these requests find their way to one of two places: the business office of the station or the sheriff's department of the county. When the sheriff recommends that a distress announcement be put on the air, it is usually done.

As in other kinds of activity, radio has its slips, and once the words have begun their air journey, there is no means of correction.

It was in the description of a festival parade here that an announcer referred to a 93-year-old father as being "prolific." Another announcer, unacquainted with dairy animals, referred to a fine milk cow on a dairy float as an ox.

Radio as a business affords experience in several types of endeavor. There is the salesmanship type—a typical advertising business; the production end with its preparation and broadcasting of programs; and the engineer's technical side. Although different in many respects, these types have a close relationship in radio.

Probably the most fascinating phase of radio for some is the engineers' nook. There are several large, black metal cabinets brimming with gadgets that bear names that mean little to one not familiar with radio terms. An explanation of the apparatus, with its dials, tubes, amplifiers, etc., is highly complicated.

Although complicated and technical, the engineer and his apparatus are the "key" to broadcasting. The pleasant voice of the Esso reporter (regular newscast feature) would not go far but for the activity of the engineer's room equipment.

Note Followed

For the sake of getting a general idea of what the complicated apparatus is used for, it may be well to follow a musical note through the broadcasting process. Beginning at the "mike" and carrying through to the antenna.

The note begins its journey toward the listener in the odd-shaped instrument called the microphone—an instrument for converting sound vibrations into electrical energy. The resultant output of electrical energy is so low in volume it requires a

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great deal of amplifying. From the mike, the note is fed into a pre-amplifier, and then into a network commonly known as the fader—this feature is comparable to the volume control on a radio receiver.

Each of the several microphones in the studio follow this same procedure to the fader. Thus, the engineer can operate the dials and produce a balance and blending of music and conversation. Often, the music is softened and the announcements superimposed—this is accomplished by cutting down the volume of music and leaving the announcing mike at a normal output.

The output of the mixing system proceeds into another amplifier, known as the program amplifier, which boosts the volume to the proper level for the transmitter. There still are two other stages of amplification in the transmitter, the output of the program amplifier first going to the speech amplifier tube and then to the modulator tube. By modulation, is meant to superimpose audio frequencies onto the carrier frequencies, by varying the amplitude of the carrier.

Leads Into Amplifier

This modulated stage then feeds into the final amplifier of the transmitter, which further amplifies programs to the assigned power of 1,000 watts. The output of this stage is coupled to the antenna, or radiating system, situated on the towers above the Flat Iron building studios.

An even frequency is maintained by the means of a crystal control—regarded as one of the more reliable methods in radio circles.

Operating the equipment requires a running load of 20 kilowatts during each of the 17 1-2 hours a day. This means the radio station consumes in five hours or so about the same quantity of electric current that is used in the average home in a month.

The radio equipment also is very expensive and highly delicate. One particular tube in the transmitter costs $225. And the equipment has several tubes, too. The average life of one of these tubes, Chief Engineer Cecil H. Hoskins says, is 2,400 hours. Each tube is guaranteed for 1,000 hours. A supply of tubes values at $1,000 or more is carried in the stockroom to insure radio broadcasting service at all times.

Network programs of the National Broadcasting company are received by WWNC on lines of the Southern Bell Telephone and Telegraph company. The principal task of the radio engineer here on network programs is to maintain the proper volume.

The task is not so simple in the same 25 daily local programs, however. In these, the engineer operates the "fader" for the mixes and phonograph turntables and provides the proper blending of music and speech. The engineer's room and the broadcasting studio are connected by a double glass window, which the announcer or performers can "talk" with the engineer by means of a "sign" language.
The Talent Offered

Approximately 50 per cent of the local broadcast market is used by talent and there are numerous auditions for groups and individuals. The station is able to provide a fair amount of local talent.

Radio programs, in general, are expensive and are appearing on networks. It is estimated that a 15-minute program is over $1000 per week. This is attributed to the cost of recording and transmission.

Records are becoming more expensive and are being recorded at the station.

The station equipment also includes a mechanism for recording programs and a mechanism for recording phonograph records and radio programs on the phonograph.

The studio is equipped with a microphone, a telephone, and a mechanism for recording phonograph records. Hundreds of records are scattered about the studio. The equipment is used for broadcasting and recording.