



THE NBC NETWORK CHIMES



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There has been controversy as to the first broadcasting station, but there has been little doubt that the first broadcast network program occurred on January 4, 1923, as a simultaneous transmission from WEAF New York and WNAC Boston of a New York-originated program. This program started at 8:03 PM with the selection "Habanera" from Carmen by Bizet, sung by Davera Nadwernay. This was followed a few months later with a more extensive network transmission originating at Carnegie Hall and broadcast by WEAF New York, WGY Schenectady, KDKA Pittsburgh, and KYW Chicago using facilities supplied by AT&T Co. This was followed quickly during the summer of 1923 with the construction of a second Telephone Company station, WCAP in Washington, D. C., and the regular linking of this and other stations with programs from WEAF. Facilities specially engineered for this purpose were originally called the "Red Layout", later the Red Network.

Operation of the broadcasting network required close coordination between the point of program origination and operating points along the network for proper switching of circuits and for making required station break announcements. It was determined that

NBC moved to 711 Fifth Avenue. Both studios at 195 Broadway were equipped with a four tone chime for network cues.

In 1927 the new NBC broadcasting operation moved from previously used studios at 195 Broadway and 33 West 42 Street the new studios at 711 Fifth Avenue. With this move came many changes, including a change to a simpler three note network cue consisting of the notes G, E and C in that order. This chime cue was also used on the newly formed Blue Network of NBC headed by station WJZ. This method of cueing for station breaks using hand operated chimes and the three note NBC aural logo continued until shortly after the move to Radio City in 1933.

Sometime during the latter part of 1933, O. B. Hanson and R. M. Morris of NBC Engineering Department visited Captain Richard H. Ranger at his home in North Newark. This visit was for the purpose of inspecting and becoming better acquainted with an electronic organ developed by Captain Ranger. This organ, one of the first of its kind, bore little resemblance to later developments in this field, such as the Hammond. It was quite complex and had many features of the pipe organ but the equipment consisting of count-

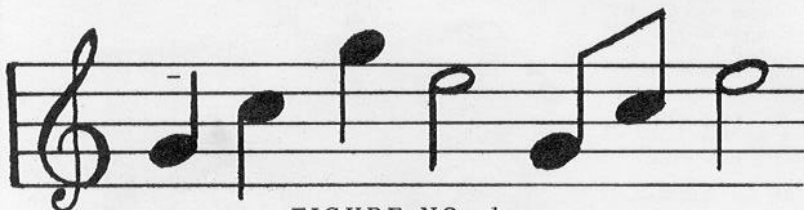


FIGURE NO. 1

some special, readily identifiable, aural cue was needed. Voice cues by the announcer did not work with sufficient reliability to be satisfactory. As a result the four-tone Deegan chime, frequently used to announce dinner, was tried as an aural cue. It is not known who selected the chime melody used, but a seven note series as shown in Figure 1 became the red network cue and was used until operations under

less tubes, relays, oscillators, amplifiers, filters, modulators, etc., occupied all of a two car garage.

Later, the Captain accompanied Mr. Hanson and me back to downtown Newark where we stopped at the Robert Treat Hotel for some refreshment and a continuation of our discussion. It was during this quite informal conference that the subject of the NBC chimes arose with the thought that a push but-

ton operated electric chime would be preferable to the method then used. The discussion concluded with the suggestion that Captain Ranger prepare a design of such a device and present it as a proposal to NBC. It was hoped that a reasonably simple and trouble free design, suitable for network use, would be forthcoming.

Somewhat to the surprise of NBC Engineering it was only a month and a half or so later that Captain Ranger appeared with a working model of his proposal. (See Figure 2) It consisted of a unit suitable for rack mounting in which the chime tones were produced by three sets of 8 metallic reeds which plucked in sequence by studs on three motor driven drums. It was a small electric music box. Tone from the reeds was obtained by capacitive coupling of adjustable fingers mounted above each reed.

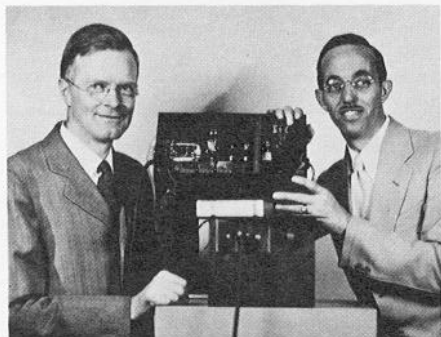


Fig. 2 Col. Ranger and D.B. Hanson holding the first electronic chime.

Tests of the new Rangertone Chime indicated that it had many desirable features but had a tone quality quite different from the soft voiced Deegan chimes. This problem was referred to the music experts of NBC with the result that Ernest LaPrade, concert master for Walter Damresch and the Music Appreciation Hour, was assigned to work with Roland Lynn of the NBC Laboratory to achieve satisfactory tone quality from the new chime machine. After many days of effort, since both men were perfectionists, a pleasing but distinctive tone quality was achieved. After the necessary circuit changes were made in the studio control system, the new electronic chimes were put on

the air in New York, and orders were placed for additional units for other major program originating points.

The Rangertone Chimes were used successfully by NBC for several years until they were replaced by all electronic chimes developed by the NBC Laboratory about 1939. The NBC Chimes were used on early television programs in the forties and early fifties and were even accompanied for a short time by a visual logo of a three bar chime in color. As television became dominant and switching was accomplished on a precision time basis the need for an aural switching cue faded. The three note G - E - C chime had however become well established as a trademark and aural logo of NBC. A musical selection based on the three note theme was written which is still heard as the theme for "NBC Movie of the Week". The three chime notes are also heard regularly as an aural logo for the NBC Evening News programs.

An interesting sidelight on the chimes occurred in 1938 during a trip the author made to England, Holland, Germany and France to observe progress in television in these countries. D. C. Birkenshaw of BBC one evening commented that he frequently listened to programs from the States over short wave from the General Electric stations at Schenectady. He thought it was most ingenious of them to use an aurally coded identification for the G. E. stations by using chimes with the notes G - E - C for General Electric Company. I tried to persuade him that the chime signal came from NBC and had nothing to do with General Electric. I'm not sure he really believed it.

NOTE TO RESTORERS

The "Show and Tell" session at the coming Conference invites everyone to display their restoration projects. --complete or otherwise in process may be displayed on tables during the session. Photos before and after are also of interest. The restorer will be given an opportunity to show and tell about their project. The time: Saturday afternoon, Sept. 29th. ---see you then... Mel Comer