

A History Of The NBC Chimes

by Bill Harris

©1995, Bill Harris
Used with Mr Harris' Permission

"This is the National Broadcasting Company, Bong Bong Bong." Almost anyone who has ever listened to radio has at some time or other, heard the famous **three note chime** that has been the long time trademark of NBC. These chimes were used on the hour and half-hour to announce station breaks on the network.

I became interested in the history of the chimes after discovering a book at the library titled *The Fourth Chime* by NBC, printed in 1944. I had never heard of a "fourth" chime and my curiosity was aroused. I checked out the book to find out more about this extra chime. However the book told very little about the fourth chime, but dealt mainly with the role NBC played in the reporting of special world-wide news events, primarily during World War II.

I began to seek more information on this fourth chime. Was it a different note from the other three or maybe a repeat of one of the others? Where could I get a recording of this fourth chime?

A letter to the editor of *Antique Radio Classified* brought some results. My request for more information was published in the December 1994 issue of ARC "Radio Miscellanea" column, and shortly I received a letter with a copy of an article by Rod Philips about the history of the chimes. I also made inquiries on the "Old Time Radio Digest" on the Internet computer network. I was particularly looking for a recording of the "fourth chime". The response was great to say the least, and I began to be able to piece the puzzle together.

As I began to gather information, there seemed to be at least two versions of how the chimes came to be. Perhaps only those early radio broadcasters who were involved with the beginning of the chimes know exactly how it happened, but hopefully the information I have collected will shed some light.

The National Broadcasting Company was formed on September 9, 1926. It was a corporation owned jointly by GE, RCA, and Westinghouse. The NBC network began broadcasting on November 15 of the same year from studios WEAJ in New York City. There was a combined group of nineteen scattered affiliated stations, using more that 3500 circuit miles of telephone wires.

As the number of affiliate stations grew, there was some confusion among

the affiliates as to the conclusion of network programming and when the station break should occur on the hour and half-hour. Some sort of coordinating signal was needed to signal the affiliates for these breaks. Three men at NBC were given the task of finding a solution to the problem and coming up with such a coordinating signal. These men were; Oscar Hanson, a former engineer for AT&T, Earnest la Prada, an NBC orchestra leader, and Philip Carlin, an NBC announcer. During the years 1927 and 1928 these men experimented with a seven note sequence of chimes, G-C-F-E-G-C-E, which proved too complicated for the announcers to consistently strike in the correct order, so the sequence was reduced to four notes, G-C-F-E. This was later reduced to the three notes G-E-C, and these three notes were first broadcast on November 29, 1929. The notes were struck at 59 minutes 30 seconds, and 29 minutes 30 seconds past the hour.

I also received information from a person who worked for WSB-TV in Atlanta , Georgia for 24 years, that the chimes had their origin at Atlanta radio station WSB. Supporting this, Paul Terry phoned in the following to the St. Petersburg Times that appeared in the February 9, 1995 "Action" column.

"I read in your Jan. 17 Action column that NBC officials said the chimes used for network identification are the musical notes G, E, and C and originally stood for General Electric Corporation which was part owner of NBC."

"I think if you research this a little further you will find that the chimes really originated in Atlanta, GA., at radio station WSB".

"In the late 1920's, WSB station manager Lambdin Kay began using a miniature xylophone to hit those same three notes to signal station breaks. Later, when WSB joined the NBC network, WSB cut in one day during a Georgia Tech football game with the chimes. NBC liked it so well that it got permission to use the chimes for its own identification."

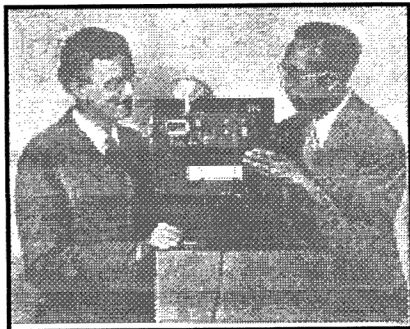
Terry, 87, started working for American Telephone at age 12 and retired 52 years later. When not working he would hang around station WSB, and that is how he came to know about the chimes. Mr. Terry passed away two days after phoning in his story to the St. Petersburg Times. Elmo Ellis who was hired by WSB in 1940 and retired as general manager of that station ten years ago, confirmed Terry's story.

The notes used by WSB were the first three notes of the World War I song *Over There*, which are the notes E-G-C. This becomes important when discussing the fourth chime as I will clarify later. NBC rearranged the notes to G-E-C. Station WSB went on the air in 1922 and became an affiliate of NBC on January 9, 1927 shortly after the formation of NBC.

The original chimes were manufactured by the J. C. Degan Company of

Chicago. Three note bars were mounted on a wooden box that acted as a sound chamber; the bars were padded with leather bumpers on each end. A handle was attached to the side of the box so the announcer could hold it up to the microphone while striking the notes.

Starting in 1932 the, chimes were electronically generated by means of finely tuned metal reeds that were plucked by fingers on a revolving drum, much like a music box. The unit was invented by Richard H. Ranger who also invented the electronic organ (see picture). The reeds formed part of a capacitor in an oscillator circuit to generate the tones, which were amplified and sent out over the network at the push of a button.



Text accompanying photograph: Title "NBC's Chimeless Chimes".
 "Capt. Richard H. Ranger (left), the inventor of the pipeless organ, the bell-less carillon and RCA's facimile transmission, explains his latest invention to O.B. Hanson, manager of Technical Operations and Engineering of the National Broadcasting Company. The new automatic device now supplants the familiar three-note NBC chimes.

The fourth chime, is what started my interest in this subject. The book *The Fourth Chime* stated that it was originally contrived as a confidential alert to signal the members of the NBC news staff, engineers, and other personnel responsible for broadcasting the news to the people. It was first heard on the air with the crash of the dirigible Hindenburg, in 1937 at Lakehurst, New Jersey, and during the Munich crisis in 1938, and sounded again with the news of the bombing of Pearl Harbor.

The fourth chime continued to be used throughout World War II to alert the NBC news department and the radio audience of special news bulletins. According to the book, *The Fourth Chime*; "The Fourth Chime will ring out again and again from the NBC Newsroom in New York whenever events of utmost significance demand the intensive nationwide coverage of the news the American people have come to expect from the National Broadcasting Company."

The home of the chime was the RCA building in NYC, room 404, the "News and Special Event's Room."

I received a tape of a documentary produced by a radio station in Washington D.C., of NBC news broadcasts of the 1944 D-Day invasion of Europe. At one point the chimes using **the fourth chime** were heard. In reading what Rod Phillips wrote in his article on the history of the chimes were he states that the fourth chime was a second strike of the "C" note, I assumed that the fourth chime sequence would be G-E- C-C. I was surprised at what I heard on the tape. The sequence of the notes was B-D-

G-G, in the key of G. If you sound this sequence in the key of C, they become E-G-C-C. As stated in an earlier paragraph the note arrangement of E-G-C are the notes as originally used by radio station WSB, and the first three notes of the World War I song *Over There*.

Why did NBC use that sequence for the fourth chime? Was there a patriotic reason because of the war song, or did it just sound better than G-E-C-C? Why was it sounded in the key of G instead of the key of C?

In 1950, NBC filed with the U. S. Patent Office to make the chimes a registered service mark, the first such audible service mark to be filed with that office. The following is from the Patent Office register;

Serial Number : 72-349496
 Type of Mark: SERVICE MARK
 Mark Drawing Code: (6) NO DRAWING

Description of Mark: THE MARK COMPRISES A SEQUENCE OF CHIME-LIKE MUSICAL NOTES WHICH ARE IN THE KEY OF C AND SOUNDED THE NOTES G, E, C, THE "G" BEING THE ONE JUST BELOW MIDDLE C, THE "E" THE ONE JUST ABOVE MIDDLE C, AND THE "C" BEING MIDDLE C, THEREBY TO IDENTIFY APPLICANT'S BROADCAST SERVICE.

Owner Name: NATIONAL BROADCASTING COMPANY, INC., THE
 Owner Address: 30 ROCKEFELLER PLAZA NEW YORK NEW YORK
 10112 CORPORATION DELAWARE

NBC discontinued the use of the chimes in 1971, however in November of 1976 the network began using the chimes once again following all broadcast in celebration of the 50th anniversary of the network. I have not heard the chimes on radio in several years, but they can still be heard occasionally on the NBC television network.

References:

The Fourth Chime, NBC, 1944
 A Pictorial History of Radio, by Irving Settel
 The Chimes You Hear From Coast to Coast: A History Of The NBC Chimes, by Rod Phillips
 Electronics magazine, October 1932
 The St. Petersburg Times, St. Petersburg, Fl, February 9, 1995
 U. S. Patent Office Register

My thanks to the following individuals who contributed information on the chimes: Richard Paul - WAMU-FM, Washington, DC, recording of the fourth chime Aubrey Bullard - WSB-TV, Atlanta, Ga., information on beginning of chimes at station WSB. Dave Morton - picture of "NBC's chimeless chimes" from Electronics magazine, 1932 Ken Diable - Patent office research

From The Reproducer, the quarterly journal of The Vintage Radio & Phonograph Society, Inc., Irving, Texas



| [BBSs](#) | [BOOKS](#) | [Chat](#) | [FAQS](#) | [GENERAL INFO](#) | [HISTORY](#) | [HUMONGOUS OTR DATABASE SEARCH](#) | [Mail Gps](#)
| [News Gps](#) | [OTR Logs](#) | [Polls](#) | [Privacy](#) | [PROGRAM GUIDE](#) | [REFERENCE](#) | [Sights](#) | [Site Search](#) | [SoftWare](#) |
[SoundBytes](#) | [SoundSnips](#) | [SPONSORS](#) | [Us](#) |



The Original Old Time Radio (OTR) WWW Pages
Copyright © 1994- 2003
Louis V. Genco
webmaster email



More on the NBC Chimes

by
Brian Wickham (bwickham@pipeline.com)

The three-tone NBC chimes as described by Bill Harris in his article A History of the NBC Chimes were found by Brian Wickham. The chimes were later restored, and returned to NBC for their use. The following is Brian's account of the history of the NBC chimes:

The history of the chimes is hazy, but it seems to me I read that they were in use by the General Electric station group that became the backbone of the original radio network.

The chimes are now used to herald "The Ticker" on NBC football games and have been doing so since sometime in the 1994 football season (possibly 1993, it's not something you write down and remember). The actual sound used is a recording of a restored "Electric Chimes Machine" that was found in the garbage at NBC in 1977. The machine, from about 1930, was rescued by a radio engineer and given to me, as I was known to have an interest in these things. It was later returned to NBC and restored by Radio Net Maintenance to good working order and even modified so that it gave a clean ring off.

If you listen to old radio show recordings you will notice that the chimes are always bitten off at the end. The reason for this is that the chimes were rung by an electrically turned drum with metal nibs on it (same as a music box) that pushed down tuned sounding springs and released them. The cycle finished and the amplifier cut off while the "C" spring was still ringing. All of the original machines installed in NBC control rooms sounded this way. Since the chimes were used as a systems cue for switching, everyone assumed that they sounded cut off because someone pulled the switch and cut the ring off to that leg of the net. It is possible that they were designed to cut off because the switch was to be made anyway. (If you look through your old "Radio Age" publications, from Augusta GA, you will find an article on the Electric Chimes.)

The recorded chimes from that machine were used on the NBC Radio Net from about 1979, until, I suppose, it was sold to Westwood. The machine itself was supposed to have been installed on the Executive floor at NBC so that visitors could just push a button and here the original chimes. I don't know what actually happened to them.

My understanding is that it was Dick Ebersol's idea to use the chimes at a

low playback level to alert the viewers to the "Ticker" which gives the current scores in all games. I thought it was a lame idea but when I heard it on the air I had to admit that it sounded pretty good and that it worked as intended. Besides, it's nice to hear the original chimes on the air on a regular basis.

Brian Wickham



[BBSs](#) | [BOOKS](#) | [Chat](#) | [FAQS](#) | [GENERAL INFO](#) | [HISTORY](#) | [HUMONGOUS OTR DATABASE SEARCH](#) | [Mail Gps](#)
| [News Gps](#) | [OTR Logs](#) | [Polls](#) | [Privacy](#) | [PROGRAM GUIDE](#) | [REFERENCE](#) | [Sights](#) | [Site Search](#) | [SoftWare](#) |
[SoundBytes](#) | [SoundSnips](#) | [SPONSORS](#) | [Us](#) |



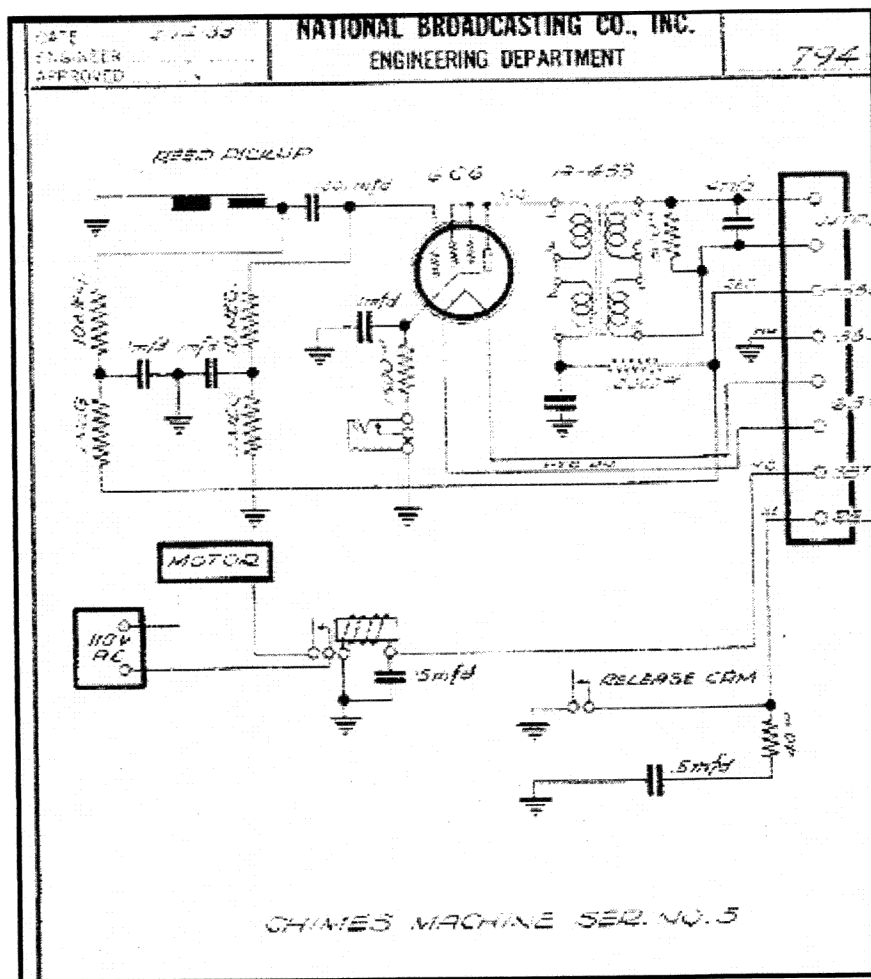
*The Original Old Time Radio (OTR) WWW Pages
Copyright © 1994- 2003
Louis V. Genco
webmaster email*



THE NBC CHIMES MACHINE

Copyright 1999, John F. Schneider

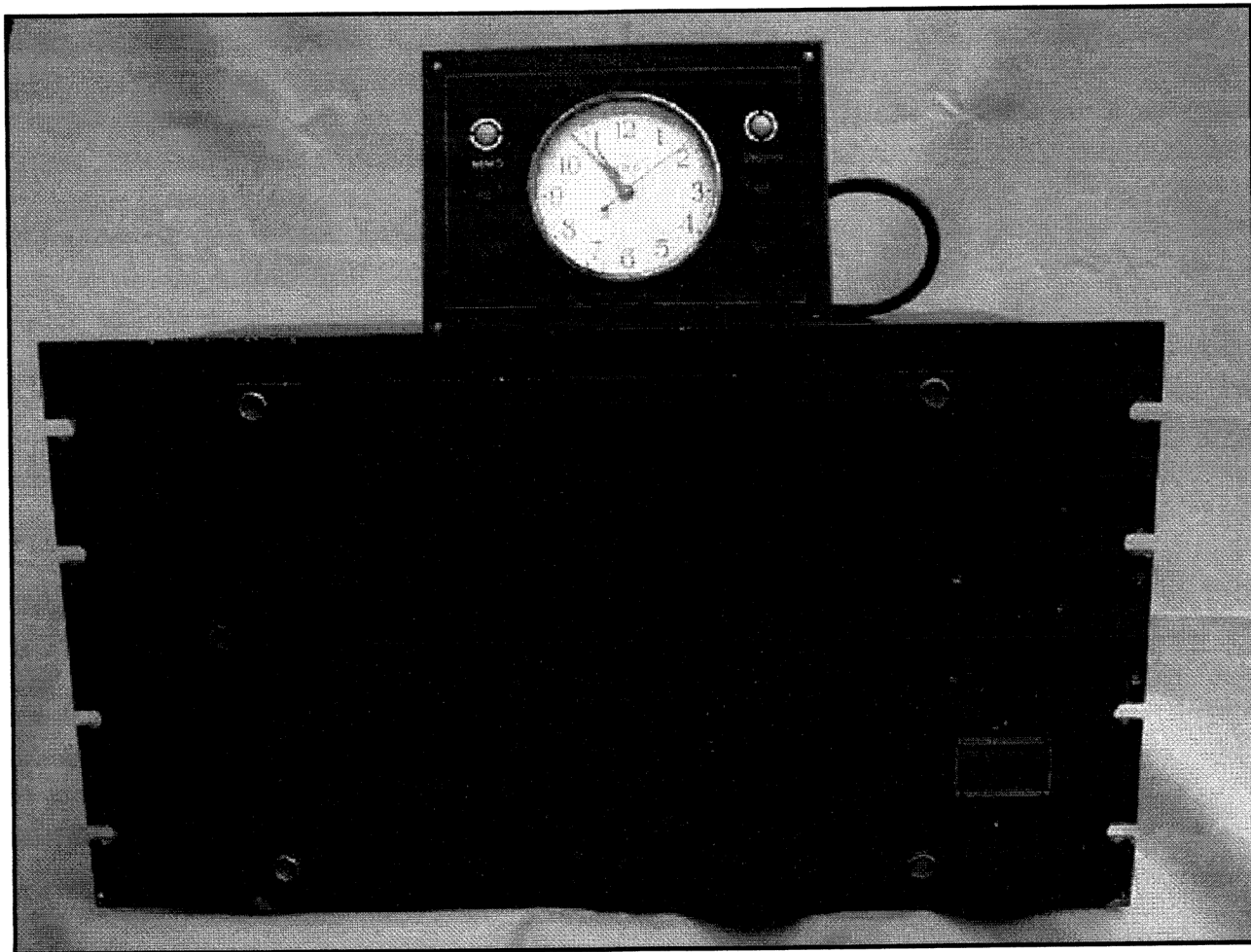
The sound of the NBC chimes is the sound of radio history itself. Probably no single sound better recalls the golden age of radio. The NBC chimes – the musical notes G-E-C – were played at the end of every NBC radio program beginning shortly after the network's inception, and continued in daily use on NBC radio and television until 1971.



Shortly after the formation of the National Broadcasting Company in 1926, network executives became aware of confusion among the affiliate stations as to the exact when a program ended, and when it was safe to cut away for local announcements. The problem was assigned to a committee of three: Oscar Hanson, a former AT&T engineer; Earnest la Prada, an NBC orchestra leader; and Philip Carlin, an NBC announcer. They decided that a musical signal of some kind would be an appropriate way to indicate the ending of all programs. At that time, it was common for radio stations to use the sounds of chimes, gongs, sirens and other mechanical devices as a signature sound for their station, so the choice of a chime by NBC was not unusual or particularly innovative. There is in fact some evidence that the chimes may have been inspired by a similar chime sequence used at that time by NBC affiliate WSB in Atlanta.

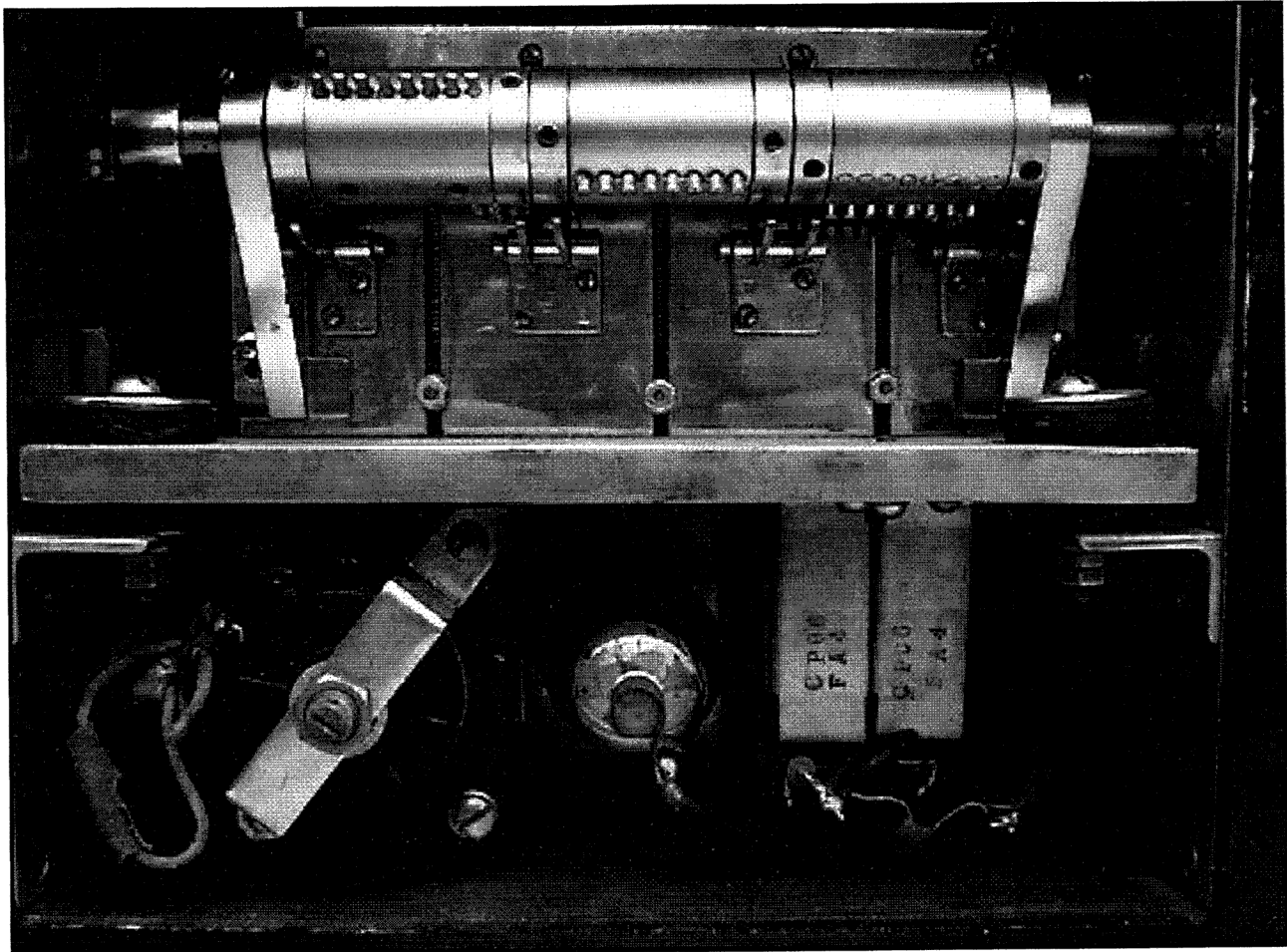
During 1927 and 1928, the committee experimented with several combinations of notes. A seven-note sequence which was first used, G-C-F-E-G-C-E, was determined to be too complicated for the announcers to play correctly on a consistent basis. It was first simplified to G-C-F-E, and finally to just G-E-C. This familiar sequence was heard for the first time on November 29, 1929.

The chimes were sounded at :29:30 and :59:30 of each hour, to indicate the start of the 30 second local station break. They were initially struck by hand by the announcer, using a set of hand-held chimes held up to the microphone. But there were inconsistencies in the way these chimes were played, in tempo, volume, and their exact timing. It was finally determined that the best way to solve these problems was for the chimes to be generated mechanically.



The man who designed the chimes machine was Captain Richard H. Ranger, who was also the inventor of the electronic organ and the RCA facsimile. Ranger created a device resembling a music box, where fingers on a revolving drum plucked a set of reeds. There were three sets of eight reeds, one for each note, allowing the generation of the fundamental note plus several overtones. Each reed formed one plate of a capacitor in an oscillator circuit, and the signal generated by all reeds was amplified by a single 6C6 pentode tube. It was activated by a timer, which would cut off the program two seconds before its end (whether it was finished or not!) and feed the chimes to the network.

NBC built a limited number of chime machines. NBC in San Francisco had two of them - the main and backup machines. Others were installed in other cities around the country where network programs were originated - Los Angeles, Chicago, New York, and perhaps a few others. It is likely that not more than a dozen chimes machines were ever made.

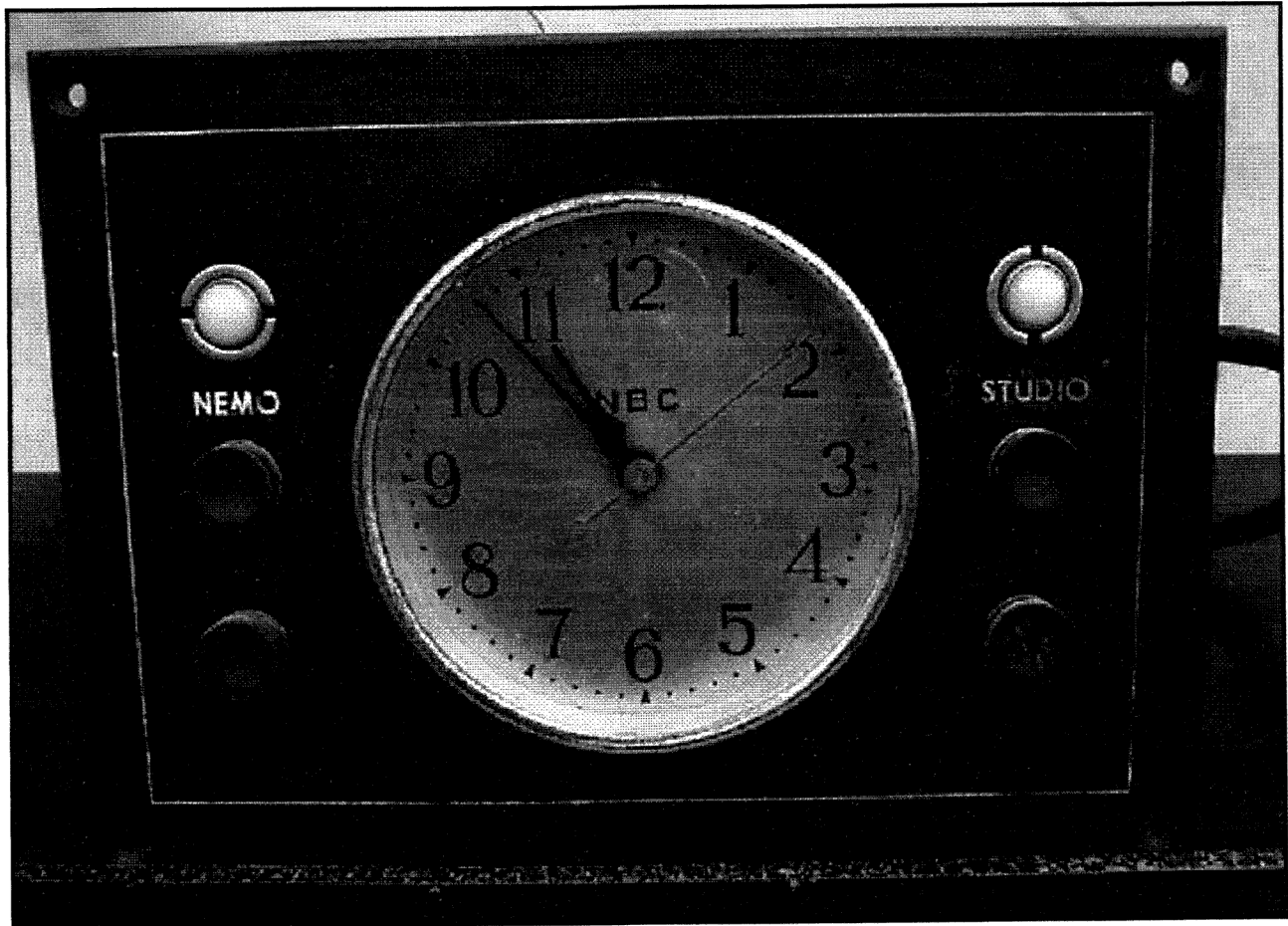


The photos on this page show one of the few chime machines still in existence, now in the hands of a private collector. (NBC had the short-sighted habit of discarding large quantities of historical artifacts throughout its history. It's only through the far-sightedness of a few NBC employees, who saved some of these items from the trash bins, that we can today experience many recorded programs, photos, and other memorabilia from that era.)

The unit shown is the chimes machine serial number 2, probably from the first group ever made. Its mechanical parts, although finely crafted, appear to have been hand made. This unit is no doubt the original chimes machine placed in operation at NBC's studios at 111 Sutter Street in San Francisco. The schematic diagram, also shown, indicates that serial number 5 was fabricated in 1933, so this machine would have predated it. The main cabinet contains the motor drive reed mechanism and amplifier, which is accessed by



removing the front panel's four thumbscrews. The unit operated from an external power source, no doubt the same battery and motor generator system that operated the audio amplifiers in the studios. The smaller box contains the timer and switches that operate the chimes for both studio and "NEMO" broadcast lines. ("NEMO" was a term used in early radio to indicate a remote broadcast. It comes from a telephone term, and stands for "Not Emanating Main Office".) The chime machine could be operated in an automatic mode by the clock, which was the usual method of operation, or manually by the announcer in the event of programs with imprecise ending times, such as sports broadcasts.



The NBC chimes were officially registered with the U.S. Patent Office in 1950 as a registered service mark, the first known case of a sound receiving trademark protection. They were last heard regularly on NBC television in 1976, used to mark the 50th anniversary of the network.

REFERENCES:

A History of the NBC Chimes, by Bill Harris

More on the NBC Chimes, by Brian Wickham

A Backstage Visit to Radio City, by Fred Krock

Author's inspection of a chimes machine in the hands of a private collector

© Copyright 1999 John F. Schneider. All rights reserved.

[\[Return to Index of Articles\]](#) [\[Go to Photo Archive\]](#) [\[Return to Home Page\]](#)

www.adams.net/~jfs

BACK TO THE HOME PAGE

Thanks for visiting ... I hope you find the site interesting!

Copyright 1993-2002, 2003 by Barry Mishkind. This material on this site should not be reproduced or reposted in whole or part without express approval.

It would be a kindness if you'd take a moment and let me know who you are and what interests you have. If you can share some information, or even a picture, that would be great! Just click on the address below. Thanks.

An important note about this resource:

We have used many sources, including FCC files, university lecturers, historical publications and more, and have tried to be as accurate as possible, not repeating many of the myths of the industry (such as the Uncle Don Story) nor histories "manufactured" by promotion departments. However, I can not and do not guarantee total accuracy of what is in the FAQ. If you do see an error or omission, please inform me at: [this email address](#). (be sure to fix the anti-spam part)

The accuracy and expansion of this resource depend upon our SHARING our efforts.

- If you can help, please share your materials or information.
- [email me](#) (be sure to fix the anti-spam part)
- snailmail:

Barry Mishkind
2033 S. Augusta Place
Tucson, Arizona 85710
(520) 296-3797

- *Thanks a megaWatt!*



FastCounter by bCentral