

ON THE AIR



CAST YOUR
RADIO
BALLOT

•
SEE CENTER
INSERT

STUDY BY WURTS BROS

COMPLIMENTS OF THE NATIONAL BROADCASTING COMPANY



A Symbol of Technical Excellence

The familiar RCA monogram is found on radio sets and tubes in millions of homes, on modern broadcasting stations, marine and airplane radio apparatus, and on sound recorders and reproducers that give voice to the silver screen. It marks radiogram services that flash your messages to far continents and ships at sea.

The intricate technical equipment that gives split-second precision to the National Broadcasting Company's Radio City Plant is but a single evidence of the quality of RCA workmanship. No matter in what phase of radio you may be interested, the RCA monogram stands for the excellence you will need, and expect.

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WHOLLY-OWNED RCA SUBSIDIARY COMPANIES:

National Broadcasting Company

RCA Victor Company

RCA Radiotron Company

RCA Communications, Inc.

Radiomarine Corp. of America

RCA Institutes, Inc.

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RADIO CORPORATION OF AMERICA
RCA Building • 30 Rockefeller Plaza
NEW YORK



RCA Building . . .
NBC Headquarters in Radio City.



● RADIO CITY . . .

GROWN FROM A GARAGE

● In less than fourteen years, broadcasting has grown to its present position, in which it affects vitally the daily lives of millions of persons.

It was born on November 2, 1920, in a Pittsburgh garage, when Dr. Frank Conrad of the Westinghouse Electric and Manufacturing Company broadcast the returns of the Harding election to a handful of excited amateurs.

There had been radio transmission before this, of course, but it had been of a point-to-point nature, not "broadcast." Radio as we know it today dates from that historic evening in the fall of 1920. The station, removed long since from Dr. Conrad's garage, is now known the world around as KDKA.

From that beginning, the great American broadcast structure has

grown with amazing rapidity to its present place of world leadership, which is fittingly exemplified in the National Broadcasting Company's headquarters in Radio City. The contrast between the 1920 garage and the 1934 skyscraper symbolizes the rise of a new industry and a new art.

In 1921, Station WJZ went on the air, followed a year later by WEAJ. These stations now head the two coast-to-coast networks of the National Broadcasting Company, which was founded in 1926 as the world's first great network system.

The two NBC nationwide hook-ups now include 87 stations, linked together by 20,000 miles of specially engineered telephone lines, which form the "networks." Programs originating in the Radio City studios, or elsewhere, are sent out over these miles of high-efficiency wires to the stations affiliated with the National Broadcasting Company, which in turn broadcast them throughout their own areas.

The past fourteen years have seen an interesting electrical experiment in a make-shift laboratory developed into a means of mass communication, entertainment and education of incalculable importance. And the end of that development is not in sight.



Telegraph room of old KDKA, in 1922

● WHO PAYS FOR RADIO PROGRAMS?

● The American system of broadcasting differs from that of most foreign countries. Abroad, in the majority of cases, radio is controlled by the government, while in the United States it is a private enterprise.

In stating the difference between the two systems, it is usually emphasized that in this country, broadcasting is supported by advertisers, whereas in other nations, it is supported by taxes levied against the owners of receiving sets.

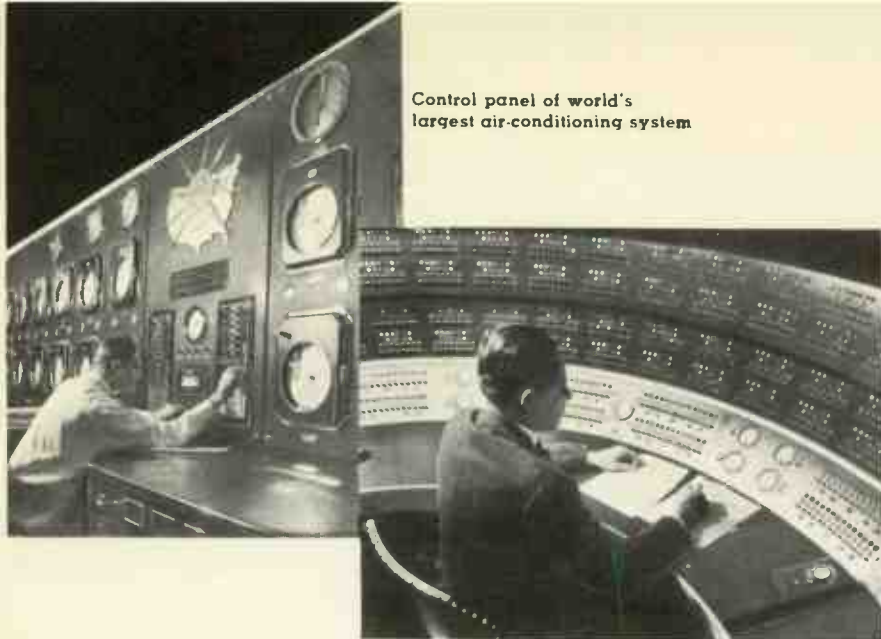
This is, of course, true, but it is not the chief difference, from the point of view of the listener. It is the listener who pays for radio in this country also; pays with one of his most valuable possessions—his time. The shillings, marks or francs which foreign listeners spend for licenses are of trivial worth compared to the time spent in listening.

And in this lies the vital difference. The listener abroad, spending both his time and his money, has no direct control over broadcasting; the listener in the United States, through his time alone, has absolute control. American broadcasting is competitive. Rival networks, stations and advertisers all strive for the attention of the listener. If a program does not please a very large audience, it soon disappears from the air. Thus, the American listener controls as well as pays for his broadcasting service.

Unfortunately, there is a considerable portion of the radio electorate which does not exercise its franchise; does not make known its preferences. Therefore, you can, if you will, help us and yourself by stating quite freely your likes and dislikes, answering the few questions on the center pages of this booklet.

It is our desire to give you an opportunity to state frankly what you think, so that we may receive the benefit of your suggestions in our program building activities.

Control panel of world's
largest air-conditioning system



Radio "nerve centre"
—section of main control
panel of NBC networks

● NBC-RADIO CITY FACTS & FIGURES

● The National Broadcasting Company produces about 50,000 programs each year, involving 500,000 individual appearances before the microphones.

Five hours of rehearsal are required, on the average, for each hour of broadcasting, which accounts for the large number of studios needed.

There are 27 studios in the NBC Radio City headquarters, and there is space reserved, on the entire sixth and seventh floors, for eight more studios.

All studios are built like boxes within boxes, raised from the building floor by felt-covered steel springs. Walls and ceilings are constructed of thick rock-wool covered with perforated asbestos board and cloth, for the purpose of sound-insulation.

Eleven carloads (500,000 pounds) of rock-wool were used, and the

RCA VICTOR RADIOS



VISIT FOREIGN LANDS with this World-Wide radio, Model 240... an 8-tube Superheterodyne (short-wave and standard programs). Automatic volume control, tone control, oversize dynamic speaker. Complete with RCA Radiotrons, \$128.75.

Hear programs at home, exactly as you hear them in this studio...

A MAGIC CARPET SET that brings you the whole world. Model 121... 6-tube Superheterodyne short and standard-receiver. Tone control, automatic volume control, full-vision airplane dial. Table model, complete with RCA Radiotrons, \$58.50.



See your *RCA Victor Dealer*

or write for detailed information...

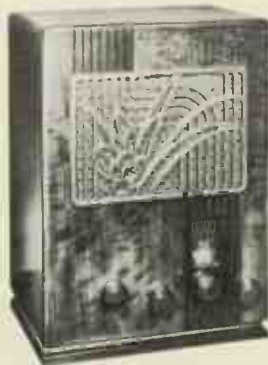


MUSIC WHILE YOU MOTOR, Model M-105 (automobile radio). No extra batteries, but extra performance. Easy to install. Double-purpose RCA Radiotrons. Costs but \$47.50.

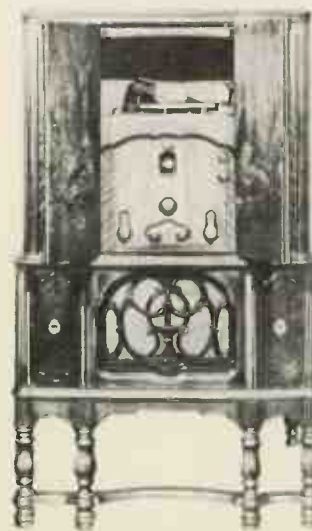


HANDY, COMPACT AC-DC SET, Model 102. Surprisingly good tone, sensitivity and selectivity. Some police calls. Metal case, complete with RCA Radiotrons, only \$18.75.

VERY UNUSUAL DESIGN... note illuminated dial on left, on Model 124. 6-tube Superheterodyne, police calls, automatic volume control, tone control, handsome cabinet. Complete, with RCA Radiotrons, \$46.50.



FOR 2-IN-1 MUSIC, Model 380... a de luxe 12-tube "Bi-Acoustic" automatic Superheterodyne-phonograph. One of RCA Victor's masterpieces of tone perfection for radio and phonograph records. Exquisite cabinet with record album space. \$365.00.



Prices subject to change without notice.



RADIO AND RECORDS Duo Model 301, all-electric phonograph. 10 and 12-inch records, radio, police calls. RCA Radiotrons, \$54.50.

POPULAR PRICE CONSOLE Model 210, 5-tube advanced type Superheterodyne, police calls, illuminated dial, latest style console, \$52.50.



RCA VICTOR COMPANY, Inc., "Radio Headquarters", Camden, N. J.

Mussolini, of King George and Pope Pius, have resounded through millions of American homes.

Yet it was only five years ago, on February 1, 1929, that the first foreign program was scheduled for rebroadcast here, and carried over the NBC networks. It was a concert from Queen's Hall, London. Before that, English programs had been picked up experimentally, but 1929 saw the first pre-arranged, international rebroadcast.

Since then, country after country has been added to the list, and radio engineers have perfected their equipment to such a point that a foreign program now is often as clear as one originating in the local studios.

The programs are shot into the air three, or six or ten thousand miles away, flashed across oceans by short-wave at the speed of light, picked up at American receiving stations, transformed into long waves, carried over the networks, shot into the air again by broadcasting transmitters all over this country, and finally converted back into sound by tens of thousands of loudspeakers. And the whole process takes a fraction of a second.

Sooner or later, sight as well as sound will be flashed around the world. The great men and the great events of all countries will be seen as well as heard in American homes. Engineers are working steadily toward this end, and are making rapid progress. In a comparatively few years, it will be as common-place to see the world's leaders as it is today to hear them.

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Radio City Visitor, looking at motor generators: "Is this where the static is made?"

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When a sound effects man, in order to turn a page of script, stopped thumping his chest while being a galloping horse during a recent program, the horse, of course, quit running. So the pause was used to indicate a water jump.

walls and ceilings are covered with 244,908 square feet of decorative textile fabrics.

Because the whole studio section is windowless, for purposes of sound-insulation, a huge air-conditioning plant supplies all the air for the studio section of the building, forcing it through the studios at the rate of 15 miles an hour. Twenty million cubic feet of purified air are used hourly.

Twelve hundred miles of wire was used in connecting up the technical equipment in the studios and control rooms. It is cut into 10,000,000 pieces, of varying lengths, each of which had to be connected by hand.

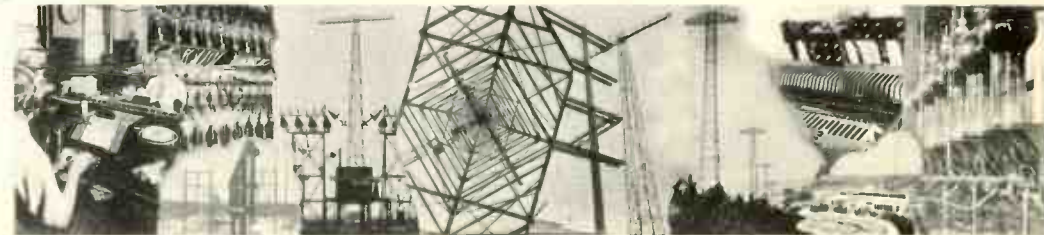
The Auditorium Studio is the biggest broadcasting studio ever built, measuring 78 by 132 feet, and is three stories in height. It will accommodate a 400-piece orchestra and an audience of a thousand people at the same time.

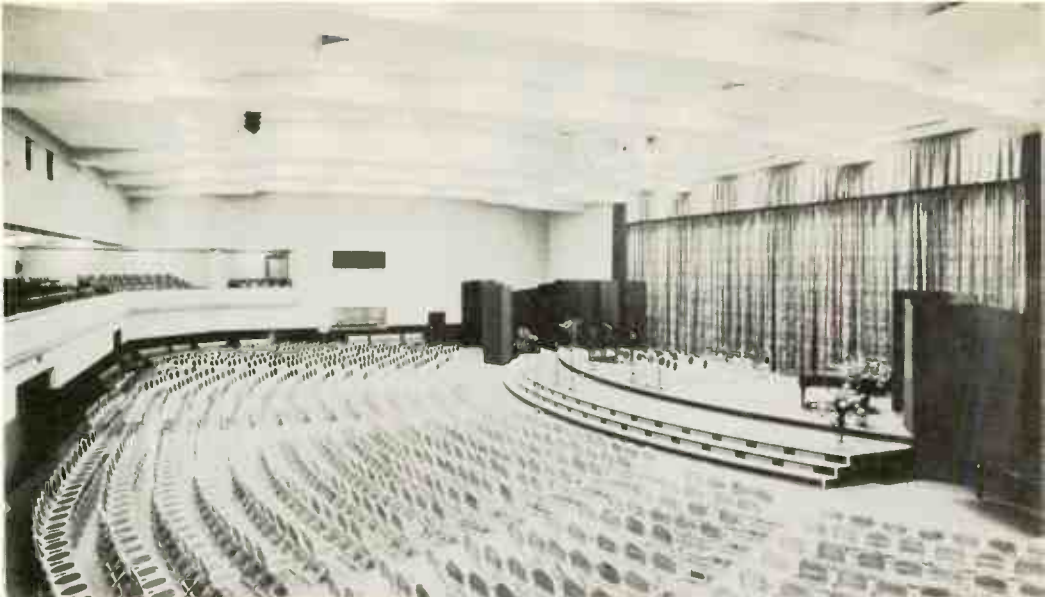
● THE WORLD THROUGH A LOUDSPEAKER

● International broadcasting is almost a commonplace today. It causes no comment when the voices of men and women speaking in London, or Moscow, or Tokyo are heard in homes throughout the United States. We have become so accustomed to electrical and mechanical wonders that we take them for granted.

During the past year, the National Broadcasting Company carried over its networks 150 programs originating in foreign countries. More than a score of different nations were represented. The voices of Hitler and

Continued on Page 8





World's largest studio



One of four typical
"speaker" studios

● WORLD'S LARGEST "AIR CASTLE"

● The Radio City headquarters of the National Broadcasting Company is the largest broadcasting plant ever built, as well as the best equipped. It was designed and constructed under the direct supervision of the NBC engineering department.



Grand stairway to
Mezzanine Rotunda

Looking to the needs of the future, as well as to those of the present, the engineers and architects of the company have built to meet developments in the art of broadcasting as they occur.

For example, while they decline to predict the date of the advent of practical television broadcasting, they have made extensive plans for its arrival. The studio section is honey-combed with ducts through which the wiring for "sight" programs can be run, and the lighting equipment is capable of carrying the extra load which television will require.

Also, two whole floors of the studio section, the sixth and seventh, have been left entirely unfinished, so that any unforeseen needs may be



met as they arise. As far as is humanly possible, the engineers have prepared for every eventuality.

In addition to the studios and control rooms, NBC's Radio City headquarters contains a complete experimental laboratory, where tests are constantly being conducted in an effort to improve existing equipment, and develop new and better technical devices.

Radio broadcasting has grown to its present position in fourteen years. What it will be in another fourteen years, or another four years for that matter, is something which no one can foresee.

But the engineers don't plan to be caught napping, and as a rule, they are a goodly distance ahead of the radio parade. As new developments occur, these able technicians will be prepared to meet them.



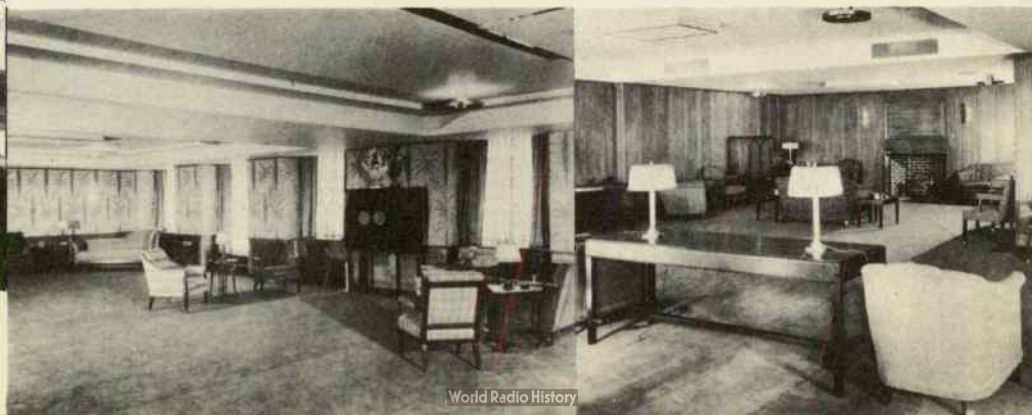
Guide: "You will notice that all these studios are completely sound-proof."

Henpecked Husband: "What a place to keep my wife!"



The NBC statistical department conducted a survey to find out which of the common words causes the most stumbling over the air. It's "statistics."

Main reception desk adjoining north and south reception rooms



NBC NETWORK STATIONS



"NBC IS BROADCASTING HEADQUARTERS,"
serving 87 leading radio stations from coast to coast.



NATIONAL BROADCASTING COMPANY · INC.
RCA BUILDING · 30 ROCKEFELLER PLAZA · NEW YORK

MERCHANDISE MART · CHICAGO · ILLINOIS
III SUTTER STREET · SAN FRANCISCO · CALIFORNIA

RADIO CITY STATIONS USE RCA RADIO TUBES

The radio apparatus in Radio City — most modern in the world — is equipped with RCA Radio Tubes. So also are the other large broadcasting transmitters in the United States. Broadcast engineers know that they can safely entrust their carefully planned and expensively executed programs only to the finest transmitting tubes — RCA Tubes. In the same way, listeners who want to hear the programs as they are sent, insist on the finest receiving tubes — the new Micro-Sensitive RCA Radio Tubes — as advanced in design and as skillfully manufactured as the big RCA broadcasting tubes.

Quicker Start! More Power! Better Tone!

It really means new life for your set when you replace old, worn radio tubes with these new Micro-Sensitive tubes by RCA. These are the only tubes guaranteed by RCA Radiotron Company to give you 5 important improvements in tube performance ... Have your dealer test your tubes today and replace those that are worn. Insist on RCA Radio Tubes — and bring back the thrill of radio.



Paul Whiteman points out one of the 100-kilowatt RCA Radio Tubes to a Radio City visitor

New Micro-Sensitive RCA Radio Tubes

give you:

- 1 Quicker Start
- 2 Quieter Operation
- 3 Uniform Volume
- 4 Uniform Performance
- 5 Every Tube is Matched



Lunningham Radiotron

