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RCA



WHAT IT IS - WHAT IT DOES 1955

MAY 20 1955



## RADIO CORPORATION OF AMERICA

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## WHAT IT IS - WHAT IT DOES

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### BROADCASTING: RADIO AND TELEVISION



### CONSUMER PRODUCTS



### ELECTRONIC PRODUCTS



### SALES AND SERVICE



### INTERNATIONAL



### COMMUNICATIONS



Published by the Department of Information  
**RADIO CORPORATION OF AMERICA**  
RCA BUILDING • 30 ROCKEFELLER PLAZA • NEW YORK 20, N.Y.







Turning his thoughts toward progress in American business, Ralph Waldo Emerson once wrote: "Let one man in a company be wise and all are wise . . ."

The Radio Corporation of America is fortunate to have such a man, in David Sarnoff, at its helm.

In the coming year—1956—General Sarnoff will complete half a century of service in the field of radio, television and electronics. He entered the radio communications field as a messenger boy at the age of fifteen. After serving as a wireless operator and in various positions with the Marconi Wireless Telegraph Company of America, which was acquired by RCA when it was formed in 1919, David Sarnoff continued to advance in the new organization.

Elected Vice President and General Manager in 1922, he became a member of the Board of Directors in 1927 and, in 1929, was elected Executive Vice President. In 1930, at age 39, he was named President of the Corporation. The Board elected him as Chairman in 1947, and he continued also as President until December, 1948. He has since served as Chairman of the Board and chief executive officer of RCA and as a director of the National Broadcasting Company and of RCA Communications, Inc.

There are many who believe General Sarnoff was the greatest asset that RCA gained in the acquisition of the Marconi Company. Into the new Corporation, he brought a broad knowledge of communications, coupled with sound business judgment, common sense and vision—essentials in the advancement of the radio art, science and industry.

Under his guidance, the 35-year growth of RCA has been epic. During its first year of operation, gross income was but \$2,095,000 and employees totaled 500 persons. As the year 1954 ended, there were 70,500 employees, and for the eighth consecutive year sales of RCA products and services had set an all-time record.

This record gross income of \$940,950,000 bettered by 10 per cent the previous high of \$853,000,000 established by RCA in 1953, and was triple the business volume of the Corporation only seven years ago.

RCA is a symbol of pioneering and progress. Its scientific research has led to major advances in world-wide radiotelegraphy, in radio broadcasting and television, to the development of new electron tubes, the electron microscope, radio relay systems, radar and, more recently, transistors and compatible color television.

The "RCA" monogram, RCA Victor and Nipper, listening to "His Master's Voice," are known to millions throughout the world as trademarks denoting quality and dependability.

It is the purpose of this brochure to present—by questions and answers—all of the facts about RCA that may help people at home, as well as in far off places, to know our Corporation better and to obtain a clearer understanding of our efforts to contribute to progress, to the public welfare and to our Nation's strength.



President  
Radio Corporation of America

**BOARD OF DIRECTORS**

FRANK M. FOLSOM, *President*



JOHN T. CAHILL



GEORGE L. HARRISON



JOHN HAYS HAMMOND, JR.



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*Chairman of the Board*

EDWARD F. McGRADY



CHARLES B. JOLLIFFE



ELMER W. ENGSTROM



HARRY C. INGLES





## WHAT IT IS - WHAT IT DOES

**When was RCA organized?** In 1919; the first Chairman of the Board was Owen D. Young; the first President, Edward J. Nally; David Sarnoff, now Chairman of the Board and Chief Executive Officer, was then the Commercial Manager.

**What led to the formation of RCA?** Prior to and during the first World War, the United States depended largely upon foreign-owned cables and wireless stations for communications with many important parts of the globe. Great Britain was the communications center of the world. The war revealed to Americans that radio offered a new and competitive system, an opportunity to win pre-eminence for the United States in radio communication.

Subsequently, RCA was formed as a result of suggestions by the United States Navy. Arrangements were made to acquire the assets of the Marconi Wireless Telegraph Company of America. A charter was granted RCA under the corporation laws of the State of Delaware on October 17, 1919. The business and property of the American Marconi Company were acquired by RCA on November 20, 1919.

On December 1, 1919, RCA began business as an all-American organization. Its charter provides that no person shall be eligible for election as a Director or officer of the Corporation who is not at the time of such election a citizen of the United States. The charter also specifies that the Corporation may, by contract or otherwise, permit such participation in the administration of its affairs by

the Government of the United States as the Board of Directors deems advisable. A clause in the charter provides that at least 80% of the RCA stock outstanding shall be held by citizens of the United States.

**What is the nature of RCA's business, as outlined in its original charter?** To send and receive signals, messages and communications; to create, install and operate a system of communication which may be international; to improve and prosecute the art and business of electric communication; to radiate, receive and utilize electromagnetic waves; to create, manufacture and sell goods and merchandise, and



"His Master's Voice" — an RCA trademark that signifies quality and dependability.

to hold and own patents, patent rights, copyrights and other real and personal property of every description.

**What is "RCA"?** The letters "RCA" are the initials of Radio Corporation of America, which is engaged in numerous phases of radio, television and electronics: research and engineering, design and development, manufacturing, domestic and foreign sales, communications, broadcasting, technical training and servicing. These activities are conducted through the RCA divisions and wholly-owned subsidiaries:

- RCA Laboratories
- National Broadcasting Company, Inc.
- RCA Victor Television Division
- RCA Victor Radio and "Victrola" Division
- RCA Victor Record Division
- RCA Victor Home Appliance Division
- RCA Engineering Products Division
- RCA Tube Division
- Radiomarine Corporation of America
- RCA Service Company, Inc.
- RCA Victor Distributing Corp.
- RCA Institutes, Inc.
- RCA International Division
- RCA Communications, Inc.

**What is the income of RCA?** In 1954, RCA did the largest volume of business in its 35-year history, with sales of products and services amounting to \$940,950,000. This is a growth of \$938,855,000 over the \$2,095,000 total products and services sold by RCA in 1920, the first year of operation.

The Corporation's record gross income in 1954 bettered by 10 per cent the previous all-time high of \$853,000,000 established by RCA in the preceding year, and was triple the business volume of only seven years ago.

Net profit in 1954, before Federal income taxes was \$83,501,000, and after taxes, \$40,525,000, compared with \$35,325,000 in 1953. Earnings per share of common stock were \$2.66 in 1954, compared with \$2.27 in 1953.

**Where are the RCA executive offices?**

The headquarters of Radio Corporation of America are in the RCA Building, 30 Rockefeller Plaza, New York City. This building is the tallest in Rockefeller Center, popularly known as "Radio City."

**How did RCA enter the manufacturing business?**

When Radio Corporation of America was formed in 1919, its primary activities consisted of international and marine radio communications. Shortly thereafter, radio broadcasting began and RCA initiated the sale of radio products manufactured by General Electric Company and Westinghouse Electric & Manufacturing Company. The rapid development of this new industry made it necessary for RCA so to organize its business in 1929 that it could combine manufacture and sales under a unified management.

To obtain manufacturing facilities, RCA in 1929 acquired the Victor Talking Machine Company—a company whose beginning dates back to 1898. In the latter part of 1934, the various units engaged in the manufacture and sale of RCA products were unified as the RCA Manufacturing Company, Inc. On December 31, 1942, this company was merged into Radio Corporation of America as the RCA Victor Division.

To keep pace with the continued growth of RCA's business, the Corporation realigned its organizational structure early in 1954. All manufacturing activities, including those conducted by the RCA Victor Division and other units of RCA, were grouped into two separate categories, namely: consumer products and electronic products. In addition to manufacturing activities, the sales and service subsidiaries were grouped for more efficient operation.

**How many people are employed by RCA?**

On January 1, 1955, RCA and its subsidiaries had 70,500 employees; when RCA began operations in 1919 it had 500 employees.



**Does RCA have a retirement plan?** Yes; all regular RCA employees are eligible for membership in the plan after three years of service. Retirement benefits are provided under the plan by contributions made by employees from their salaries and contributions made by the Corporation. The normal retirement age is 65.

**What are RCA's labor policies?** The management recognizes that the loyal cooperation of its employees is important to the success and progress of RCA. The company maintains competent personnel administration in all units including facilities for recreational and personal development. Candidates for employment are selected on the basis of ability, without regard to race, creed, color or national origin. Promotion is on the basis of merit and ability.

It is RCA's policy to pay as high wages, under as favorable hours and working conditions in similar classes of work, as those prevailing in the areas in which the company's operations are conducted. Where employees choose to bargain collectively, the company deals willingly and frankly with their authorized representatives. At present, there are in force contracts between various divisions and subsidiaries of RCA and 77 separate bargaining agencies. Of these, all but 12 are affiliated with the A. F. of L., or C. I. O.

**How many stockholders does RCA have?**

Ownership of RCA is widely distributed among approximately 173,000 stockholders, in every state of the Union. No stockholder holds of record, or to the knowledge of the Directors and Officers owns beneficially, as much as 4% of the outstanding stock of the Radio Corporation of America.

**What is RCA's capital stock?** There are two classes of RCA stock: 900,824 shares of \$3.50 cumulative first preferred; and 14,031,016 shares of common stock issued.

**Do RCA stocks pay dividends?** Quarterly dividends, at the rate of \$3.50 per share per year have been paid regularly on the preferred stock since it was issued in 1936. These dividends amounted to \$3,153,000 in 1954.

Dividends totaling \$123,005,000 have been paid on the common stock since 1937, including \$18,899,000 for the year 1954. Dividend payments on the common stock for 1954 were \$1.35 per share, including 35 cents extra.

Both preferred and common stock dividends are paid on a quarterly basis.

**Does RCA have a centralized display of its products and services?**

Yes; the RCA Exhibition Hall at 40 West 49th Street, New York. The Hall, free to the public, is open daily and Sundays from 11 a.m. to 9 p.m. Other exhibits of RCA products are at the Corporation's manufacturing plant in Camden, N. J., and at the Chicago Museum of Science and Industry.

**When did RCA enter the broadcasting field?**

The first broadcast program presented by RCA was the Dempsey-Carpentier heavyweight championship boxing match in Jersey City on July 2, 1921. The blow-by-blow description was telephoned to station WJY, temporarily installed by RCA at Hoboken, and then read over the air to an estimated 200,000 listeners.

RCA's first regularly operated broadcasting station, WDY in Roselle Park, N. J., was licensed September 19, 1921, and went on the air December 14 of that year to provide programs to the New York metropolitan area. Use of this station was discontinued in February, 1922, when RCA entered into an arrangement with Westinghouse Electric & Manufacturing Company for the operation of Station WJZ at Newark. RCA acquired full ownership of this station in the spring of 1923, and studios were installed in Aeolian Hall, New York. The Company also constructed Station WRC in Washington, D. C., which went on the air August 1, 1923.

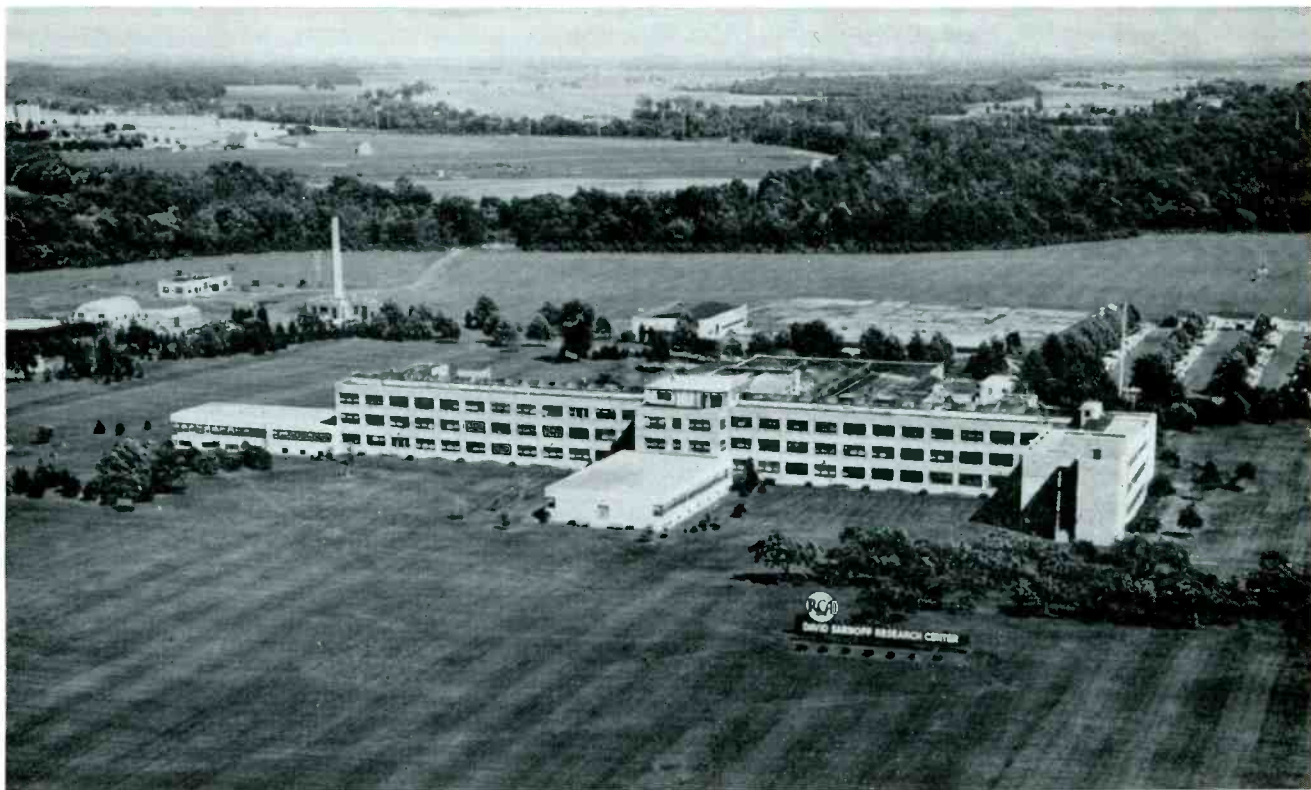
# RESEARCH



**DR. E. W. ENGSTROM**  
*Executive Vice-President  
Research and Engineering*

**What is RCA Laboratories?** RCA Laboratories with headquarters at the David Sarnoff Research Center at Princeton, N. J., is the principal research organization of RCA. The outgrowth of radio research activities which began with the founding of RCA in 1919, RCA Laboratories today is a leading center of the basic and applied electronic research which guarantees progress and strengthens the national defense. RCA scientists and research engineers are constantly at work improving existing electronic systems and creating the

ideas from which new products and services may develop. At the same time, fundamental research is contributing to greater understanding of electron behavior in a wide range of materials, providing the foundation for future advances in electronic science. While a large part of RCA's scientific work is performed at the Princeton Laboratories, other laboratories are located in New York City; Newark, N. J.; Riverhead and Rocky Point, L. I., N. Y.; Chicago, Ill.; Hollywood, Calif., and Washington, D. C.



The David Sarnoff Research Center of RCA at Princeton, N. J., where scientists explore new horizons of electronics.



**What is the scope of RCA research?** Starting with investigations in the field of radio thirty-five years ago, RCA research has evolved into a major program of exploration over a broad area of electronics and inter-related sciences, including physics, acoustics, optics, chemistry and nucleonics.

**How is research organized at RCA?** To facilitate its research in the broad field of electronics, RCA Laboratories has organized its research staff into seven separate laboratories, each covering a specific field or several closely related areas, and all brought together under a single director of research. These laboratories are: Electronic Research Laboratory, Acoustical and Electro-Mechanical Research Laboratory, Physical and Chemical Research Laboratory, Radio Research Laboratory, Systems Research Laboratory, Special Projects Research Laboratory and the Industry Service Laboratory, which maintains facilities in New York City, Newark and Princeton, N. J., Chicago and Hollywood, Calif.

**How does RCA share results of research?** To encourage electronic progress on the widest basis, RCA makes its inventions and patents available to all by means of patent licenses at reasonable royalty rates and without restriction.

Both technical and commercial data resulting from research at RCA Laboratories are disseminated by RCA. In contributing to scientific and technical organizations and their publications, RCA Laboratories' authors presented 169 papers at scientific meetings in 1954, while 85 of their papers were published in more than 20 journals, magazines and books. In addition, RCA Laboratories publishes a quarterly technical journal, "RCA Review," as well as numerous technical and engineering books and pamphlets.

**What is RCA's role in color television?**

RCA pioneered and developed compatible color television. Hundreds of man-years of inventive research and development by RCA scientists and engineers, extending as far back



General Sarnoff watching demonstration of RCA's electronic light amplifier.

as the 1920's, led to the RCA compatible color television system, operating on the signal standards approved for commercial use by the Federal Communications Commission on December 17, 1953.

Modification and improvement of various parts of the color system, such as cameras, transmitters and receivers are now helping to establish the RCA color television system as a new nationwide service. An example of such improvement is the RCA 21-inch color television picture tube, demonstrated at RCA Laboratories in September, 1954, and now in commercial production. RCA spent \$50 million in research and development of black-and-white television and spent another \$50 million to advance compatible color television from the laboratory to commercial reality.

**Has RCA developed a TV magnetic tape recorder?** A system for recording and reproducing television signals, both in color and black-and-white, by means of magnetic tape

was demonstrated by RCA in 1953. During 1954, intensive research and development continued, and in early 1955 a television tape recorder was installed at NBC in New York for field testing. The advantages of tape recording compared with film recording are three-fold: First, magnetic tape recording of television programs is a practical, low-cost solution to the problems faced by the industry in recording for quick playback and rapid distribution of programs. Second, the program can be preserved indefinitely or be electronically erased and the tape reused many times. Third, a tape recording can be played back immediately, whereas several hours are required for processing film before it can be viewed. This new type of tape recorder can provide useful services not only in TV broadcasting, but also in the motion picture and theatre industry, in home entertainment and education as well as in industry in general.

**What is the latest progress report on the RCA electronic cooling system?** Representing a research and engineering development of major importance to the future of refrigeration and air conditioning, RCA scientists have produced an all-electronic cooling system. As a result, a small experimental electronic refrigerator has been demonstrated, and it is believed to be the first device of its kind to achieve refrigeration at room temperatures entirely by electronic means. As further progress is made in development of this cooling system, it will permit construction of a self-contained electronic air conditioner for home use, without any moving parts, motors or compressors, and noiseless in operation.

**What is the RCA electronic music synthesizer?** An RCA instrument, known as the music synthesizer, has been constructed which can electronically generate signals representing any possible tone or combination of musical tones. It can imitate any musical instrument, and also create a multiplicity of sounds for which there is no known mechanical means of generation. Therefore, since many of these sounds have never been heard, the synthesizer offers new and fascinating possibilities, especially in the field of recorded music. Performing as an electronic instrument, the synthesizer produces music without instrumentalists and without musical instruments. It creates an unlimited variety of tone colors and has an endless capacity for rhythmical variety. It is expected to lead to an entirely new concept of music, because the entire world of sound can now be tapped for the creation of yet unheard musical forms. Endless new timbres can be invented and great voices of the past can be reconstructed.

**How does the RCA electronic light amplifier perform?** A light amplifier is a device which, when actuated by visible or invisible light of low intensity, produces visible light of high intensity. For example, a dim picture projected on one side of a light amplifier panel might be viewed as a bright picture on the other side. Such a device has been under development at the David Sarnoff Research Center. Light amplification by this means, with a gain of more than twenty to one, has been achieved. There are many fields in which a light amplifier eventually will find application, including television, x-ray fluoroscopy, and radar.

**What is Electrofax?** A new system called "Electrofax" has been developed at the RCA Laboratories for making copies of printed



New RCA 21-inch color TV tube is shown in comparison with the earlier 15-inch color tube.



material. The process employed is electrophotography, but unlike earlier systems of electrophotography, no plate or intermediate process is involved. The print is made directly on Electrofax paper. This is a coated paper electrically charged in the dark, exposed to an image of the material to be copied, and developed by brushing the surface with pigmented powder. The powder is then fused into the paper by baking for a fraction of a minute, creating a permanent image. Electrofax should prove valuable in numerous applications where single copies of printed material are required, and RCA scientists have developed a mechanical Electrofax system that may find use with computers or in other applications where a flow of visual material must be recorded.

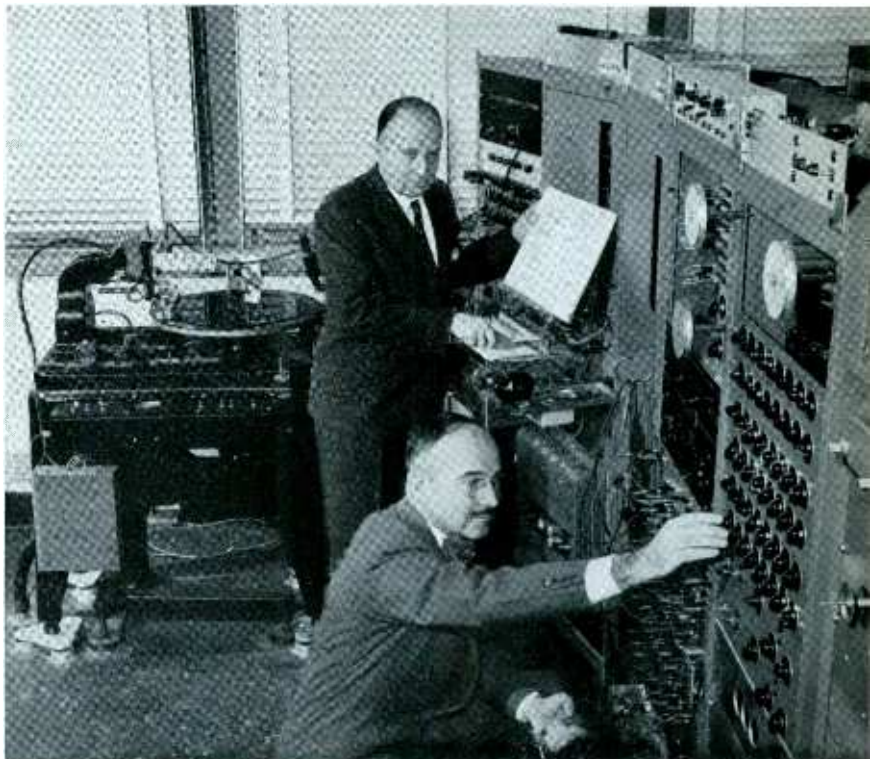
**What are some of the outstanding achievements of RCA research?** The scope of RCA research has resulted in numerous electronic developments of great value now in common use as well as many new devices and systems that are only now moving out of the laboratory stage. Examples of RCA developments that have found standard application are the electron microscope, whose ability to magnify far beyond the power of the light microscope has contributed immeasurably to new biological, medical and chemical knowledge; ultra high frequency (UHF) television, whose development has widened the range of television services available to the public; improved sound reproduction systems, which have set new standards for recorded music.

Recent and current RCA research has produced a variety of promising devices and systems that will find wide application in the future.

The RCA electronic music synthesizer can create an unlimited range of tone variations and synthesize familiar sounds.



Engineer of RCA Laboratories points to cooling unit of RCA's experimental all-electronic refrigerator.



## **BROADCASTING: RADIO AND TELEVISION**



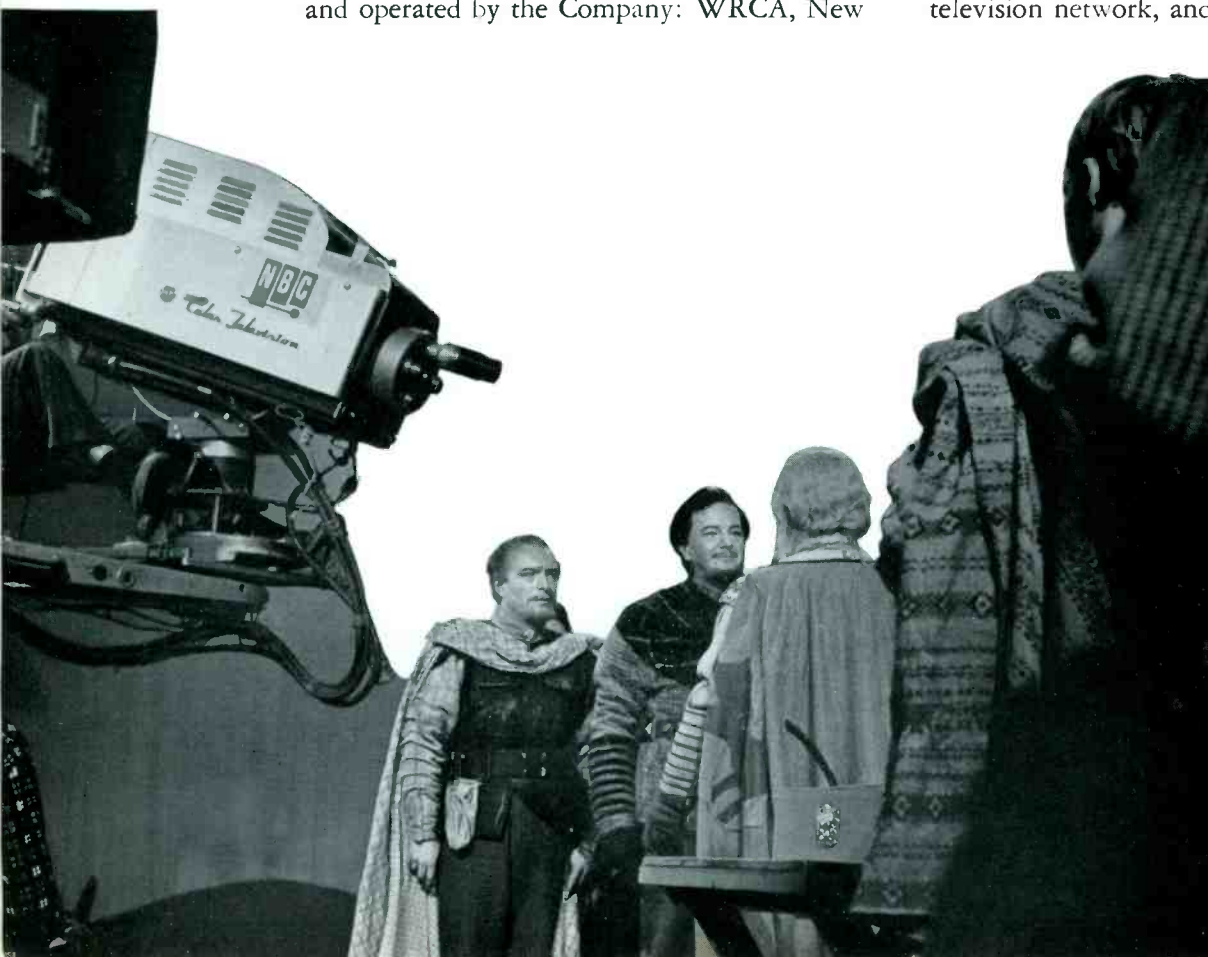
**SYLVESTER L. WEAVER, JR.**  
*President  
National Broadcasting Company, Inc.*

**What is NBC?** The letters NBC are the initials of the National Broadcasting Company, Inc., which was established by RCA on September 9, 1926, as America's first network, "to provide the best programs available." NBC's inaugural network program, on November 26, 1926, was broadcast by 24 stations in 21 cities extending from the Eastern seaboard to Kansas City. On January 1, 1927, NBC broadcast the first coast-to-coast program, the Rose Bowl football game at Pasadena, Calif.

As of April, 1955, the NBC radio network comprised 211 stations, five of them owned and operated by the Company: WRCA, New

York; WRC, Washington; WTAM, Cleveland; WMAQ, Chicago; and KNBC, San Francisco. These stations broadcast all programs simultaneously over standard AM (amplitude modulation) and FM (frequency modulation) facilities.

A pioneer in both radio and television broadcasting, NBC introduced television as a regular service to the public in 1939 at the New York World's Fair. Two years later, the Company's station atop the Empire State Building became the first commercially licensed television transmitter to go on the air. In 1951, NBC inaugurated its coast-to-coast television network, and in 1953, began trans-



Scene from  
colorcast of  
Shakespeare's "Macbeth,"  
starring  
Maurice Evans.



mitting commercial color TV programs, using the RCA compatible color system. As of April, 1955, there were 188 stations on the TV network, 155 of them inter-connected. Five of these stations are owned and operated by the Company: WRCA-TV, New York; WRC-TV, Washington, D. C.; WNBK, Cleveland; WNBQ, Chicago; and KRCA, Los Angeles.

On January 7, 1955, NBC announced the purchase, subject to Federal Communications Commission approval, of the New Britain Broadcasting Company, which operates UHF television station WKNB-TV and radio station WKNB in New Britain, Conn.

On March 11, 1955, NBC announced the purchase of UHF station WBUF-TV in Buffalo, N. Y. The purchase is subject to Federal Communications Commission approval.

**How did the idea of broadcasting to the public originate?** David Sarnoff was the first man to propose that programs be broadcast over the air for public consumption. In 1916, when he was Assistant Traffic Manager of the Marconi Wireless Telegraph Company of America, Sarnoff suggested the manufacture of "radio music boxes" so that purchasers could enjoy "concerts, lectures, music, recitals, etc." His memorandum to the late E. J. Nally, who was Vice President and General Manager of that Company, said: "I have in mind a plan of development which would make radio a household utility in the same sense as a piano or a phonograph. The idea is to bring music into the house by wireless. . . . For example, a radio telephone transmitter having a range of say 25 to 50 miles can be installed at a fixed point where instrumental or vocal music or both are produced. . . . The receiver can be designed in the form of a simple 'radio music box' and arranged for several different wave lengths, which should be changeable with the throwing of a single switch or pressing a single button. . . . The same principle can be extended to numerous other fields—as for example—receiving lectures at home which can be made perfectly audible; also events of national importance can be simultaneously announced



Donald Voorhees conducts the "Telephone Hour" orchestra each week on the NBC Radio network.

and received. This proposition would be especially interesting to farmers and others living in outlying districts removed from cities. By the purchase of a 'radio music box' they could enjoy concerts, lectures, music, recitals, etc., which may be going on in the nearest city within their radius. . . . Should this plan materialize, it would seem reasonable to expect sales of 1,000,000 'radio music boxes' within a period of three years."

Demonstration of the practical value of the Sarnoff plan was delayed by World War I. However, on November 2, 1920, when the Westinghouse station, KDKA, Pittsburgh, broadcast the Harding-Cox election returns, the "radio music box" became a reality. The approximately 129,000,000 radio sets now in use, including 29,600,000 in automobiles, attest to the impressive growth of this medium.



Mary Martin starred in the NBC color-cast of "Peter Pan," first full-length Broadway production on color TV.



Another scene from "Peter Pan" which was viewed by a television audience of 65 million persons.



### **What color TV programs does NBC provide?**

NBC is dedicated to making compatible color television, pioneered and developed by RCA, a reality for the vast American audience as swiftly as possible. In line with this policy, NBC has been broadcasting a regular schedule of color programs. By the summer of 1954, NBC had completed its "Introductory Year" for color, with virtually all NBC's major programs having been presented at least once in color.

Beginning with the Tournament of Roses Parade on January 1—the first West-to-East transcontinental transmission of color—NBC recorded a series of historic firsts in color television during 1954. Among the highlights were the first network telecast in color of a sports event—a boxing match at New York's Madison Square Garden; the first color telecast from the Metropolitan Museum of Art in New York; and the first network transmission of 35mm color film.

In September, 1954, NBC made color television a reality as a national service by presenting the first of a series of 33 sponsored "Spectaculars" in color.

**When did NBC begin its experimental broadcasts in color TV?** On February 20, 1941, NBC transmitted its first color television pictures in motion over experimental station W2XBS in New York using mechanical methods. Later development in color transmission centered around the RCA all-electronic, compatible color system, on which were based the all-industry standards approved by the Federal Communications Commission on December 17, 1953. NBC was the first network to go on the air with a color TV signal under the new FCC regulations, the signal being broadcast within minutes after the announcement.

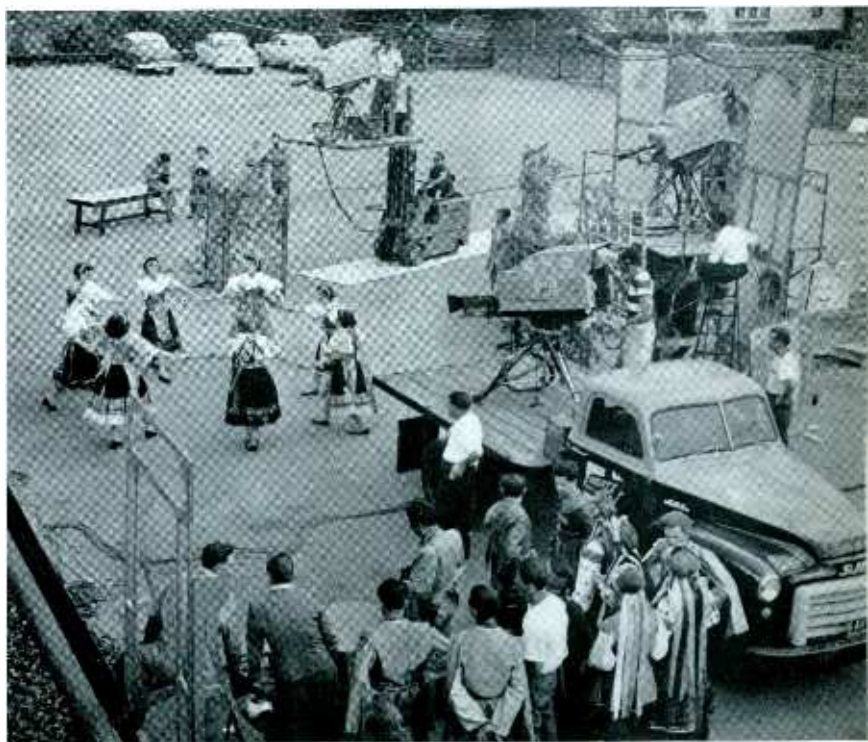
### **What are NBC's color production facilities?**

As of April, 1955, NBC had technical facilities for producing an estimated sixty hours of color programming per month. Main color

production center in New York was NBC's Brooklyn studio, the world's largest television facility. Also located in New York is NBC's Colonial Theatre, world's first fully equipped color television studio. Another NBC color facility in New York is Studio 3-H.

In California, NBC color television activities were expanded on March 27, 1955 with the dedication of Color City at Burbank. This studio, the first to be built specifically for color telecasting, has become NBC's West Coast color headquarters. Situated on a 50-acre tract, Color City incorporated features stemming from NBC engineers' experience in the design and operation of color TV studios and can handle productions of any size with convenience. The new studio contains the latest RCA technical equipment and the

A folk dance in Cleveland being televised by NBC color TV camera crew.





Mendes-France is one of the many international figures who have appeared on the NBC-TV and radio program, "Meet the Press."

world's most elaborate lighting system. A large-screen color TV projector, developed by RCA, allows the studio audience to watch the performance in color on a 15-by 20-foot screen.

The NBC color mobile unit provides the network with flexibility of color origination and can operate many miles from the nearest network line through a built-in radio relay.

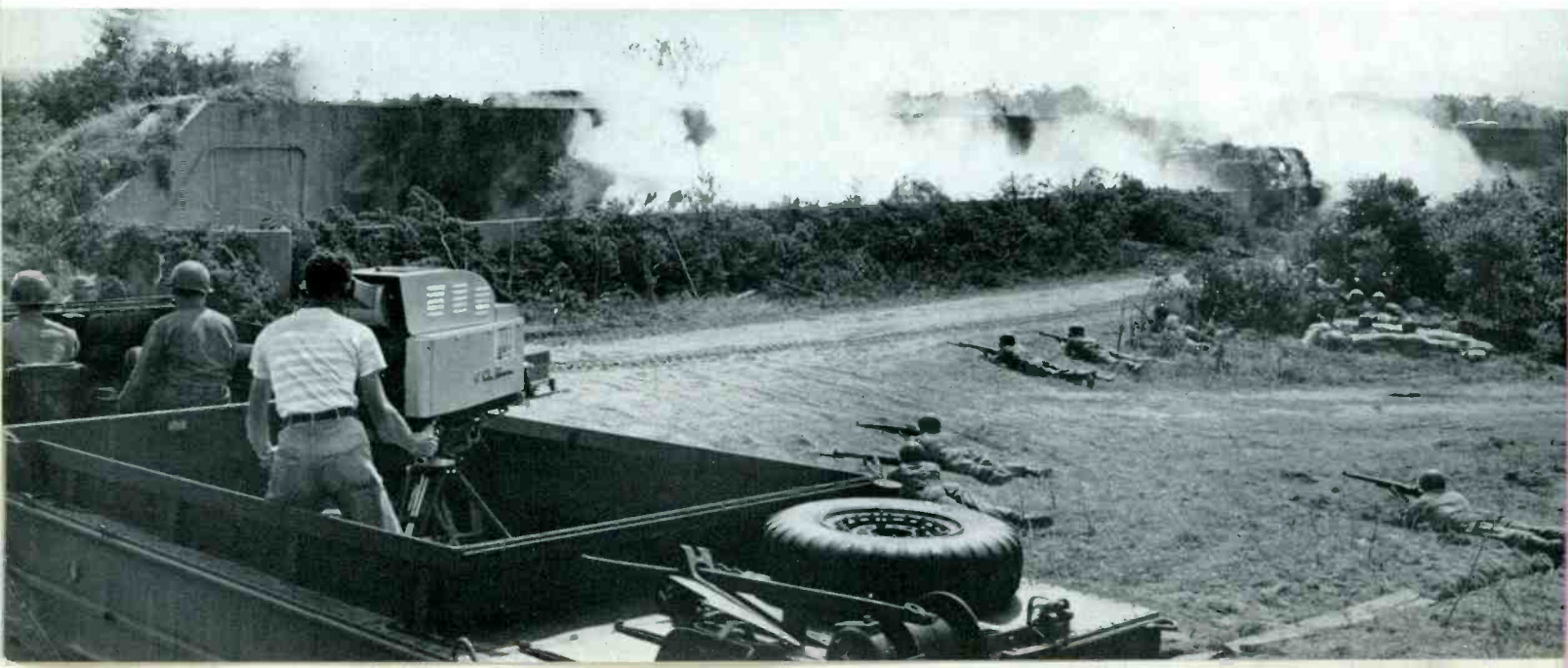
As of April 1, live studio color programs could be originated at eight points on the NBC

network—New York, Hollywood, Oklahoma City, Fort Worth, Milwaukee, Baltimore, New Orleans and San Francisco. A total of 95 NBC affiliates were equipped to broadcast network-originated color programs, making the shows available to more than 90 per cent of all television homes.

**How does NBC gather its news?** NBC has a staff of accredited reporters and cameramen on all world news fronts to provide material for the network's radio and television news programs. In addition, NBC receives the full service of the Associated Press, United Press and International News Service. NBC maintains news bureaus in principal American cities and in foreign capitals. Each correspondent is equipped with a tape recorder in order to bring on-the-spot recordings direct to the radio audience. NBC also has special arrangements for exchange of news film with agencies in various European countries.

**What is the NBC Film Division?** The NBC Film Division was established in 1953 as one of the company's major operating divisions. It supplies thousands of syndicated film pro-

Mounted on an amphibious vehicle, a color camera focuses on troops in first demonstration of Combat Television at Ft. Meade, Md.







Dennis Day in a scene from the color television Spectacular, "Babes in Toyland".

grams to television stations. The films provide a flexible and economical advertising vehicle for all categories of TV clients. During 1954, the Division supplied TV stations with 736 weekly half-hours of local programming compared with 235 the previous year.

The Division produced the historic TV documentary "Victory at Sea." This series, made into a full-length feature film and released in July, 1954, was the first theatrically released film produced by a company engaged primarily in TV programming.

The NBC Film Library is the largest of its kind in the world. It was augmented in 1954 by 10,000,000 feet of "March of Time" library film and now stores more than 30,000,000 feet of minutely cross-indexed stock film.

The NBC Film Exchange ships 1600 prints a week, covering 4,000 weekly playdates, to 360 TV stations in the United States, its possessions and territories and foreign countries. These prints include syndicated film programs distributed by the Film Division, prints of NBC television network film shows, and kinescope prints of "live" NBC shows.

**May the public visit NBC studios and attend broadcasts?** NBC is pleased to have the public take its guided tour through the Radio City studios in New York. Paying a nominal fee, some 500,000 persons took this tour in 1954. Tickets to attend broadcasts may be obtained free of charge by writing at least two weeks in advance to the Guest Relations Department of NBC.

# CONSUMER PRODUCTS



ROBERT A. SEIDEL  
*Executive Vice-President  
Consumer Products*

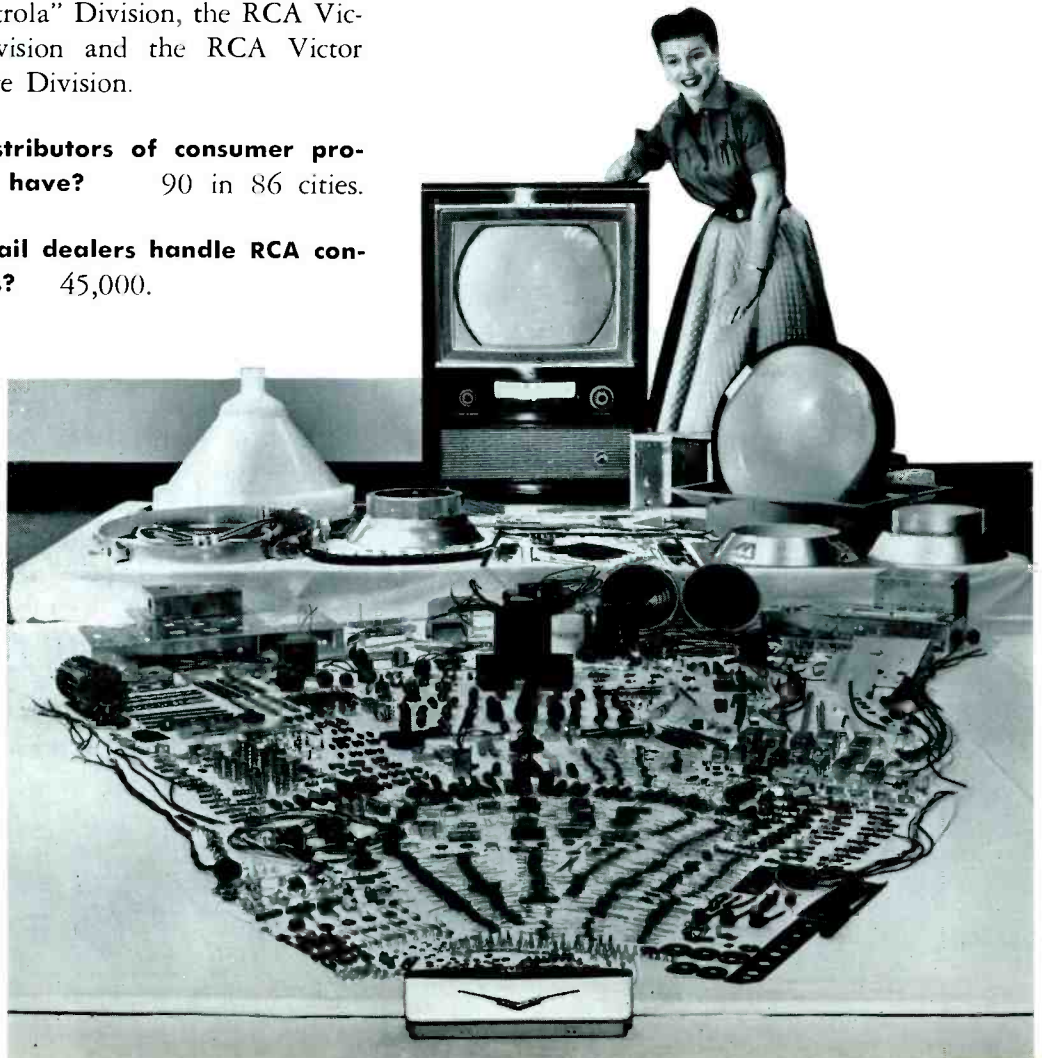
**What are RCA's activities in the field of consumer products?** RCA designs, develops, manufactures and merchandises consumer products including radio and television receivers, "Victrola"® phonographs, phonograph records, and RCA Estate gas and electric ranges. RCA also merchandises home air conditioners.

These activities are conducted by the RCA Victor Television Division, the RCA Victor Radio and "Victrola" Division, the RCA Victor Record Division and the RCA Victor Home Appliance Division.

**How many distributors of consumer products does RCA have?** 90 in 86 cities.

**How many retail dealers handle RCA consumer products?** 45,000.

More than 2,070 parts are used in the 21-inch RCA Victor color TV set, and 600 suppliers provide these components.





**Where are RCA's consumer products manufacturing plants located and what do they make?**

- Bloomington, Ind. — television receivers
- Cambridge, Ohio — record players, television receiver parts
- Canonsburg, Pa. — radio receivers, "Victrola" phonographs
- Hamilton, Ohio — gas and electric ranges
- Hollywood, Calif. — recording studio, custom record pressing
- Indianapolis, Ind. — television receivers, phonograph records
- Monticello, Ind. — television cabinets
- New York, N. Y. — record pressing, recording studio
- Rockaway, N. J. — phonograph records

**How did the RCA Victor dog trade-mark originate?**

One of the most famous American trade-marks wherever it appears on RCA products throughout the world, was born in a painting entitled "His Master's Voice," created by Francis Barraud in 1899. The dog featured in the painting was the artist's fox terrier named "Nipper." Through the Victor Talking Machine Company, RCA acquired rights to this trade-mark and for many years it has symbolized the high quality of all RCA products on which it appears.

**RCA VICTOR TELEVISION DIVISION**

**What is the RCA Victor Television Division?**

This Division engineers, designs and manufactures for consumer sales black-and-white and color television receivers in a wide variety of styles, finishes and screen sizes.

**Can ultra-high-frequency (UHF) television stations be received by RCA Victor sets?**

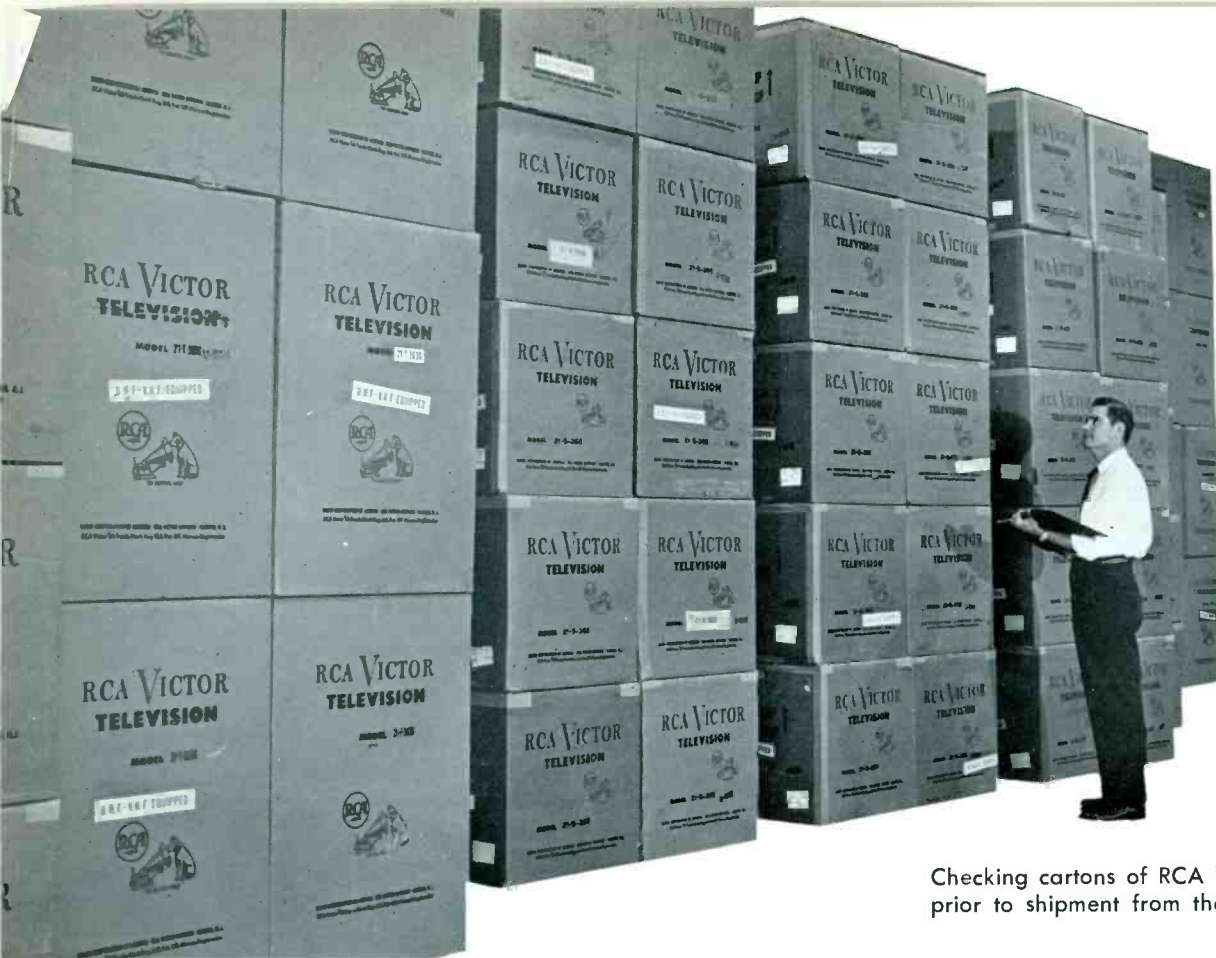
Yes; RCA Victor television receivers are equipped for either VHF (very high frequency, channels 2 to 13) reception or with combination tuners for VHF and UHF (ultra high frequency, channels 14 to 83).



Skilled workers wiring circuits for RCA Victor 21-inch color television receivers at plant in Bloomington, Ind.

Frank M. Folsom, President of RCA, explains TV to the family of young Lorraine Hatcher, who was the 10-millionth visitor at RCA Exhibition Hall in New York City.





Checking cartons of RCA Victor television receivers prior to shipment from the factory.

**Are color TV receivers available?** Yes; in mid-1954, RCA Victor introduced its first commercial color television set with a 15-inch color picture tube. In December, RCA Victor introduced the first color receiver with a 21-inch color tube. This set provides a viewing area of 255 square inches, approximately 25 per cent greater than any previous commercially available color receiver.

**Does a color television set receive black-and-white programs as well as colorcasts?** Yes; because of the compatible color television standards, pioneered and developed by RCA, a color set receives black-and-white programs in black-and-white pictures. These standards also permit owners of black-and-white sets to receive color programs in black-and-white without making any changes on their sets. Programs transmitted in color are received in color only on a color set.

**Why is a color television receiver more expensive than a black-and-white set?** A color set has many more parts and requires more man-hours of labor to build. It functions as a black-and-white set; it also receives color signals and "translates" them into color pic-

45-rpm "Victrola" phonographs near end of assembly line at RCA's Cambridge, Ohio, plant.





tures. The color picture tube, a vital part of the color set, is more complicated than the black-and-white picture tube. RCA continually strives to achieve cost reduction which results in lower consumer prices. The first 15-inch color set was introduced at the suggested retail price of \$1,000. The price of the larger-sized 21-inch color receiver introduced nine months later was \$895.

**Is a black-and-white set still a good investment?** Yes; television programming has reached new heights in the fields of entertainment, information and education. The value of RCA Victor TV receivers has never been greater and they are at their lowest price in history.

#### **RCA VICTOR RADIO AND "VICTROLA" DIVISION**

**What is the RCA Victor Radio and "Victrola" Division?** It is the organization responsible for the development, manufacture and distribution of all radios and record players bearing the RCA Victor trademark. These products include a full line of 45-rpm and three-speed "Victrola" phonographs, as well as New Orthophonic High Fidelity instruments. The radio line includes a full selection, in all price ranges, of table models, clock-radios and portables featuring advanced styling and unsurpassed performance.

**What is RCA's position in the radio and phonograph industry?** Known around the world as a pioneer in radio, RCA and RCA Victor have an impressive background in the phonograph industry. It was the Victor Talking Machine Company, a predecessor company, which led the world in the early progress of the phonograph with the well-known "Victrola" instrument. RCA Victor since has pioneered in the development and introduction of the universally-accepted 45-rpm system of recording and reproduction; has made important contributions in the field of High Fidelity; and has generally led the industry in its march of progress.

**What are some new developments in RCA Victor radios?** Early in 1955, RCA Victor introduced a new line of portable radios which, for the first time in the history of the industry, were housed in nonbreakable plastic cases. A newly-developed feature of various RCA Victor clock radios enables the instruments automatically to change stations while the radio portion of the sets are turned off — thus permitting listeners to go to sleep while listening to one station and to awake listening to another.

**What are the advantages of RCA Victor High Fidelity "Victrola" phonographs?** High Fidelity "Victrola" phonographs, plus New Orthophonic RCA Victor high fidelity recordings, combine to bring home listeners new realism in music. The instruments are the result of nearly a half-a-century of developments in sound reproduction and contain RCA Victor's famous "Golden Throat" tone system, newly-designed loudspeakers (with some multi-speaker instruments), powerful amplifiers and a high-quality three-speed record changer. Models are available in either table or console models and in a variety of styles.

**Where are the Division's engineering and manufacturing facilities located?** The RCA Victor Radio and "Victrola" Division has its offices and engineering headquarters, where research and developmental work is conducted at Cherry Hill, a suburb of Camden, N. J. Extensive and completely modern manufacturing facilities devoted to the manufacture of radios and "Victrola" phonographs, respectively, are situated at Canonsburg, Pa., and Cambridge, Ohio.

Newly-designed RCA Victor clock-radios in production at Canonsburg, Pa.





RCA Victor record albums include a wide selection of classical, popular, jazz and musical comedy favorites by the world's greatest artists.

## RCA VICTOR RECORD DIVISION

### What is the RCA Victor Record Division?

Since 1901, RCA Victor Record Division and its predecessor company, the Victor Talking Machine Co., have produced quality phonograph records of the world's great music. Today, the RCA Victor Record Division is the leader in the industry, a position that was established by a combination of unexcelled artists, repertoire and engineering skill. Through the years, the Division has pioneered in improving techniques in reproduction, including the recent introduction of "New Orthophonic" high-fidelity sound.

At the outset of 1955, RCA Victor Record Division further strengthened its position as the leader in the industry by reducing prices on long playing discs by more than 30 per cent. The move represented one of the most

significant forward steps ever taken to bring recorded music to the general public at low prices.

The Division now manufactures records under the labels "RCA Victor," "RCA Victor Red Seal," "Camden," "Bluebird," "X," and "Groove." Custom-made records and transcribed radio programs are among other services offered by the Division.

### What part has RCA played in the field of high fidelity?

Since 1949, RCA has been making the industry's most complete line of high-fidelity recordings. As a result, in 1954 RCA had the widest variety of high-fidelity recordings in the world, including everything from classical to country-western. These "New Orthophonic" high-fidelity discs were made possible by the use of special microphones and the most advanced type of studio acoustics, which produce a brilliant highly defined sound with a maximum of separation between instrumental choirs and exceptional clarity on the solo instruments. RCA contributed greatly to the growing appreciation of high fidelity with the introduction of a demonstration record, "Hearing Is Believing." The disc, which demonstrates the contrast between selections recorded under earlier systems with those made under new high-fidelity standards, sold over 500,000 copies.

### What are the advantages of the new record speeds?

The RCA Victor 45-rpm phonograph system introduced shortly after World War II has become firmly established as a superior method of reproducing recorded music and now is the largest selling segment of the industry. A vital factor in the merchandising of 45-rpm records was the amazingly rapid growth of the "Extended Play" 45's which play twice as long as standard 45's. RCA Victor also has been the leader in the sale of classical, jazz and show albums on the long-playing 33 $\frac{1}{3}$ -rpm records. The flexibility afforded by the 45 and 33 $\frac{1}{3}$  speeds permits each composition to be recorded and merchandised in the speed for which it is best suited.



**What types of entertainment are available on RCA Victor Records?**

In addition to a complete repertoire of popular, classical and jazz selections, RCA Victor also produces children's songs and stories, country and western hits, the increasingly important rhythm and blues records and international music. The introducing of records on label "X" for package jazz selections as well as popular numbers, the new label "Groove" for rhythm and blues, development of the "Camden" label at a new budget price, along with the continuing success of the "Bluebird" label and new low prices for RCA Victor, enables the Division to offer quality records in every price range.

**What special services are offered by the RCA Victor Record Division?**

The Division's Custom Record Department not only affords a complete service for pressing the brand line records of other manufacturers but also for production of special records for radio transcriptions, spot commercials, professional sales training, educational, slide film and other specialty recordings. Through its Recorded Program Service, the Division is one of the top producers and distributors of transcribed programs for radio broadcasting. The RCA Thesaurus library service offers radio programs in every musical category for station broadcast. RCA Victor Record Division also maintains five recording studios throughout the United States, the facilities of which are available to other companies.

RCA room air conditioners are available in 22 different models for home or office.



**RCA VICTOR HOME APPLIANCE DIVISION**

**What is the RCA Victor Home Appliance Division?**

It is the organization responsible for the manufacture and distribution of RCA room air conditioners and RCA Estate gas and electric ranges.

**What models of RCA room air conditioners are available and where can they be purchased?**

Twenty-two different models of room air conditioners for home or office comprise the RCA line. All of them feature the latest engineering and styling advances and are available in flush-mounted window or console styles, including units designed for casement windows. Five models have built-in electric heaters to warm conditioned air when desired. RCA room air conditioners are sold by authorized dealers from coast-to-coast. Contracts providing expert installation and maintenance are available from local branches of the RCA Service Company. A dehumidifier unit also is marketed by RCA.

**What is RCA's background in the kitchen range industry?**

RCA entered this facet of the appliance industry in 1952 with the purchase of the century-old Estate Stove Company of Hamilton, Ohio. RCA has completely renovated and modernized this plant and now manufactures a line of kitchen ranges that are gaining constantly expanding acceptance because of improved design, modern styling and dependable performance. Nine gas and seven electric ranges can be obtained in either 30-inch or 40-inch models.



Final assembly of RCA Estate electric kitchen ranges at Hamilton, Ohio.

# ELECTRONIC PRODUCTS



W. WALTER WATTS  
*Executive Vice-President  
Electronic Products*

**What are RCA's activities in the field of electronic products?** RCA designs, develops, manufactures and merchandises electronic products for industry, science and government — including broadcast, communications, theatre and industrial equipment; receiving tubes and transistors, cathode-ray and power tubes; electronic components, equipment and parts; marine radio communications equipment and electronic navigational devices.

These activities are conducted by RCA Engineering Products Division, RCA Tube Division and Radiomarine Corporation of America.

**Where are RCA's electronic products manufacturing plants, and what do they make?**

Camden, N. J. — government and communications equipment; broadcasting, theatre, sound and industrial equipment; television apparatus

Cincinnati, Ohio — miniature tubes

Detroit, Mich. — motion picture projectors

Findlay, Ohio — electronic components

Harrison, N. J. — receiving tubes, transistors

Indianapolis, Ind. — receiving tubes

Lancaster, Pa. — kinescopes, power tubes, television camera and special purpose tubes

Los Angeles, Calif. — government communication equipment

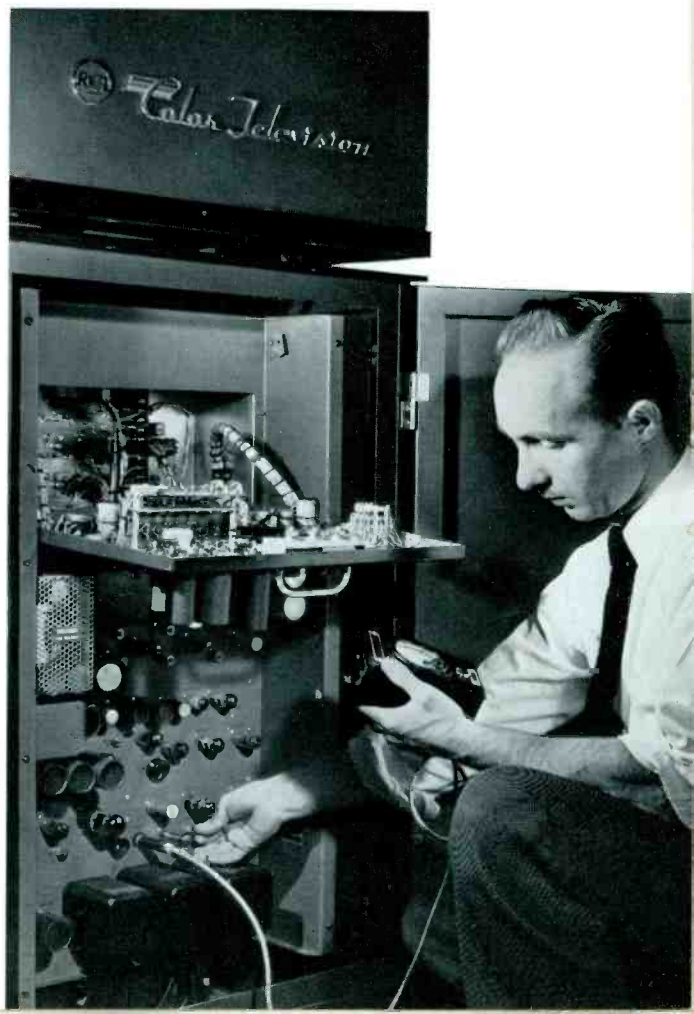
Marion, Ind. — kinescope tubes, luminescent powder

Moorestown, N. J. — government apparatus

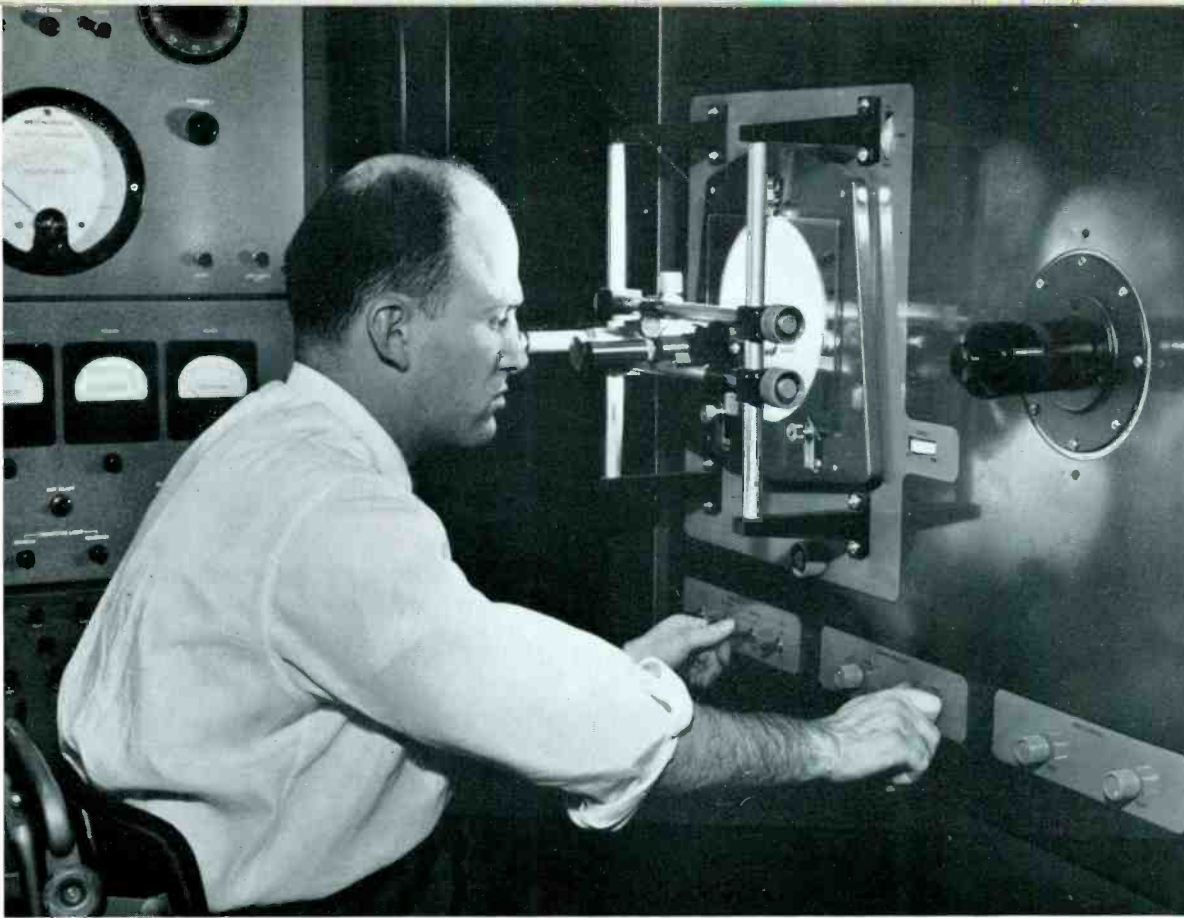
New York, N. Y. — marine radio communications equipment, electronic navigational devices

Woodbridge, N. J. — receiving tubes

Engineer checking operation of three-vidicon film camera used to project films for colorcasting.







Technician at controls of developmental RCA color corrector designed for use in the graphic arts industry.

## **RCA ENGINEERING PRODUCTS DIVISION**

**What is the RCA Engineering Products Division?** The Engineering Products Division designs, develops, and produces most of RCA's numerous types of electronic equipment for industrial, military, educational, theatre and business services as well as radio and TV broadcast transmitters and studio equipment.

### **How many suppliers does RCA have?**

RCA purchases materials and components from 7,500 suppliers located in almost every State of the Union. During 1954, the Corporation paid \$512,236,000 to other companies for materials and services it bought.

**What products does RCA make for the Armed Forces?** As one of the nation's leading suppliers of equipment to the Government, RCA develops and produces for all branches of the Armed Forces electronic equipment such as: navigation and communications sys-

tems; walkie-talkies; mobile TV transmitters; radar; and complex electronic control devices for gun fire and guided missiles. RCA also designs and manufactures specialized airborne electronic equipment for military, commercial, and private aircraft. This equipment includes transmitters and receivers, highly accurate altimeters which utilize radar principles, and weather-detection radar systems which enable pilots to "see" through storms and select the safest airpaths.

### **What equipment does RCA manufacture for radio and television stations?**

RCA manufactures virtually all types of equipment necessary for AM and FM radio stations and for VHF (very high frequency) and UHF (ultra high frequency), and color television stations. This equipment ranges from transmitters, antennas, and control equipment, to "live" and film cameras, monitoring and test equipment, studio turntables, disc and tape recorders. For color television broadcasting, RCA has supplied many independent and network stations



RCA electron microscopes nearing completion at Camden, N. J., plant of Engineering Products Division. The instruments are used extensively for research in the fields of chemistry, metallurgy, medicine, bacteriology and biology.



This RCA "TV Eye" camera is the heart of a closed-circuit television system used in business and industry.

with RCA-developed compatible color TV cameras for "live" programming, and three-Vidicon color film cameras for televising color motion picture film and slides.

**What types of products does RCA manufacture for industry?** RCA manufactures numerous types of electronic devices which enable modern industrial plants to produce new products and to introduce greater efficiency, safety and economy in manufacturing operations. Typical of these RCA products are beverage inspection machines, metal detectors, automatic counters, closed-circuit television systems for production control and observation; nuclear radiation detection equipment and test and measuring equipment.

**What products does RCA supply the theatre and film industry?** RCA markets virtually all equipment and accessories for the completely equipped theatre, from projection, sound and screen products to theatre carpet and seating. Specialized equipment is manufactured for Drive-In theatres and for movie houses converting their facilities for wide-screen film projection. RCA also manufactures professional disc, film, and magnetic tape recording equipment for use by studios in recording the sound portion of motion picture films.

In addition to 35mm sound-film motion picture projectors for theatres, RCA produces 16mm equipment for use in education, commerce, and industry, and for operation with television equipment for televising films.

**Does RCA make microwave and mobile radio equipment?** Yes; RCA develops and produces microwave and mobile radio equipment for all types of civil and industrial communications. Microwave equipment is being used increasingly by utilities, pipeline operations and turnpike commissions. By the end of 1954, RCA microwave relay in use around the world totaled more than 255,000 channel miles. RCA two-way radio communications systems are used by police, fire and forestry departments, public utilities, oil, construction and





Testing 21-inch color television tubes at the RCA Tube Division plant in Lancaster, Pa.

transportation companies, as well as industrial and taxicab fleets.

**Where is the RCA electron microscope used?**

Approximately 500 RCA electron microscopes are now in use at leading manufacturing centers, government bureaus, foundations, hospitals, college laboratories and other important research centers throughout the world. During 1954, RCA developed and introduced a new type of electron microscope, twice as powerful as previously available types, which will permit study of particles smaller than one 10-millionth of an inch in diameter and provide useful photographic enlargements up to 200,000 times the size of the specimen.

**How are engineering products marketed?**

Electronic equipment for theatres, schools, and other users of motion picture, sound distribution and associated products are sold through RCA distributors and dealers. Broadcast, two-way radio, microwave and a number of industrial products are sold direct to customers by RCA field sales representatives.

**RCA TUBE DIVISION**

**What is the RCA Tube Division?** The RCA Tube Division designs, develops, manufactures, and merchandises RCA electron receiving tubes, cathode ray tubes, power tubes, transistors, electronic components, and service parts. These are used for the operation, maintenance, and design improvement of home radios, phonographs, and television instruments; radio and TV broadcast equipment; and a wide range of industrial and military control and communications equipment. The Division also markets a full line of test instruments used in the production and servicing of electronic equipment, and designs tube parts and tube making machinery, for its own use as well as for sale to other manufacturers of electron tubes.

**Are Tube Division products used extensively in the home?** Yes; millions of Americans are in daily contact with products of the RCA Tube Division. Broad categories of Tube Division products for initial or replacement service



Delicate parts used in electron gun of a color television picture tube are assembled under magnifying glass.



Many skilled hands are required in the production of RCA electron tubes at Harrison, N. J.

in electronic devices used in the home include: electron receiving tubes for all types and makes of home radio, phonograph, black-and-white TV, and color TV instruments; black-and-white picture tubes for virtually all makes of home TV receivers; color television picture tubes; service parts and components for virtually all types of electronic devices in home use; transistors for hearing aids; a complete line of dry batteries for portable and farm-home radios; phototubes for automobile headlight dimming and for photoelectric applications within the home; and a wide range of tubes and components for amateur radio operators.

**Did RCA Tube Division produce the first commercial color TV tubes?** Yes; in December, 1953, the RCA Tube Division announced as a commercial product a 15-inch color television picture tube, together with deflecting yokes, transformers, and other essential circuit components for compatible color receivers. Within a year, the Division was in commercial production on the industry's largest color tube, a 21-inch type representing a major step toward large-screen home color sets at mass-market prices.

**How many types of electron tubes does RCA market?** The RCA Tube Division currently sells more than 750 different types of tubes for industry, communications, and home entertainment equipment.

**Does RCA manufacture electronic components?** RCA makes a variety of components that are widely used by the electronic industry in the manufacture of new equipment and by the servicing industry in the maintenance of television and radio receivers.

## **RADIOMARINE CORPORATION OF AMERICA**

**What is Radiomarine Corporation of America?** Radiomarine Corporation of America, formed on December 31, 1927, as a wholly-owned subsidiary of RCA, develops,





Making final adjustments on radar antenna units for small craft vessels at Radiomarine plant in New York City.

produces, sells and services marine radio communications equipment and electronic navigational devices. This equipment includes ship-board radars, loran receivers, radiotelegraph transmitters and receivers, automatic radio alarms, radio direction finders, lifeboat radios, radiotelephones, depth recorders and specialized electronic equipment. Radiomarine also operates a radiotelegraph and radiotelephone communications system for contact with ships in all parts of the world.

**Does Radiomarine operate branch sales and service offices?** Yes; Radiomarine has such offices located in all principal seaports of the United States as well as on the Great Lakes and inland rivers. These offices render installation, maintenance, repair and inspection service on all types of radiotelegraph, radiotelephone and marine electronic apparatus.

**Does Radiomarine have a dealer organization?** Yes; more than 200 authorized dealers throughout the country sell and service Radiomarine small craft radiotelephones, depth sounding equipment and radio direction finders.

**What is the role of Radiomarine's communication service?** Radiomarine is engaged in commercial shore-to-ship, ship-to-shore and ship-to-ship radiotelegraph and radiotelephone communications. It maintains 11 coastal stations and two affiliates on the Atlantic, Pacific and Gulf Coasts, the Great Lakes and inland waterways. This network handles radiograms, government weather reports, news bulletins, medical advice to vessels not carrying doctors, "Gifts-by-Radio" and plane-to-shore service. Radiograms to ships may be filed at any RCA Communications, Inc., or Western Union office. They should be marked "Via RCA".

**Does Radiomarine manufacture equipment for the Armed Forces?** Yes; Radiomarine has designed, developed and manufactured radio and electronic equipment for the United States Army, Navy, Air Force and Coast Guard.

## **SALES AND SERVICE SUBSIDIARIES**

### **What are RCA's sales and service subsidiaries and what are the activities of each?**

The sales and service subsidiaries of RCA are: the RCA Service Company, Inc., which installs, maintains and services RCA consumer and technical products; the RCA Victor Distributing Corp., which distributes products made by RCA and other companies; and RCA Institutes, Inc., which trains students in the technical phases of radio, television and electronics.

### **RCA SERVICE COMPANY, INC.**

#### **What is the RCA Service Company, Inc.?**

The RCA Service Company, Inc., is a specialized organization set up expressly to handle field installation and service activities. One of its principal roles is to develop and promote skillful installation and servicing methods and facilities for RCA products. The Company's success has been an important factor in making RCA products preeminent in their fields. The organization also does an extensive contract installation and maintenance servicing business with consumers, industrial and scientific organizations, as well as municipalities and the Government. The Company's activities are grouped in three major fields: Consumer Products, Technical Products and Government.

The RCA Service Company provides technical assistance for the installation of television station antennas.



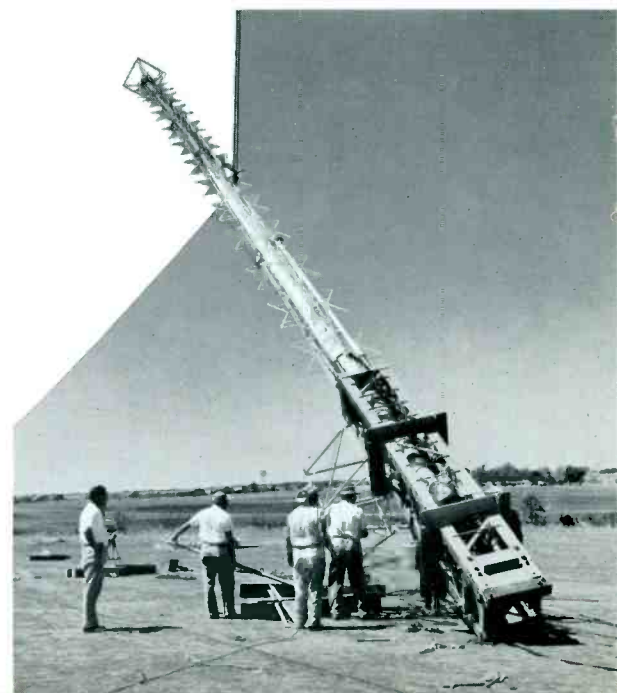
**CHARLES M. ODORIZZI**  
*Executive Vice-President  
Corporate Staff*

### **What are the Consumer Products services?**

One of the most widely recognized Consumer Products services is a nationwide network of factory service branches for the installation and servicing of such products as RCA Victor television receivers and RCA air conditioners. The extensive technical assistance the Company provides to RCA Victor distributors, their dealers, and independent servicemen everywhere on all types of RCA Consumer Products is of equal importance. Besides furnishing a comprehensive array of technical manuals, it annually sponsors a nationwide series of free service instruction clinics which have a total annual attendance of up to 50,000 persons.

### **What is the RCA Factory Service Contract, and to whom is it available?**

An RCA Factory Service Contract provides the purchaser with RCA factory branch installation and/or maintenance services on a specified fee





basis for a stated term. Such a contract usually includes complete component protection features as well as labor services.

RCA Factory Service Contracts are available to all RCA Victor television and RCA air conditioner owners residing within the operating zone of an RCA Factory Service branch. These branches are located in the principal market centers of the United States and Hawaii.

**Can a non-contract owner of an RCA Victor television set or RCA air conditioner also obtain RCA Factory Branch Service?**

Yes; if the owner resides in an area served by one of these branches. Such non-contract services are provided on a time and parts plus basis.

**What steps have been taken to assure skillful servicing of color television receivers?**

Comprehensive manuals and service notes dealing with color TV sets have been published and distributed by the Service Company. In addition, special training clinics devoted exclusively to color television have been conducted to train dealer and independent servicemen as well as the RCA factory branch technicians in this newest phase of the TV art.

**What are the Technical Products services?**

A specialized organization operating through field office locations throughout the country provides nationwide installation, preventive maintenance and component protection plans for a wide variety of electronic products used in theatre, business, industrial, or scientific applications. These services cover motion picture sound, television apparatus for theatres, transmitters, antennas, studio equipment for radio and television broadcast stations, microwave equipment, electron microscopes, various types of electronic inspection and classifying machines, sound systems, industrial television systems and industrial radio frequency generators.

**Are the Technical Products services limited to RCA manufactured equipment?**

No; the RCA Service Company handles installation and servicing of much equipment in the tech-



Technician showing new owner how to get best picture results on RCA Victor TV set.

nical products classification which is neither manufactured nor sold by RCA. The Company's facilities are available for the servicing of any type or make equipment within its field of activities.

**Are repair and overhaul facilities available for technical products?**

Yes; facilities for repair and overhaul of television studio equipment, RCA test and measuring equipment and other RCA technical products are available for users who require these services.

**What services are performed for the Government?**

The RCA Service Company, through a specialized field engineering and technician force numbering in the thousands, provides supporting services for RCA defense products and world-wide assistance to Armed Forces personnel on the installation, operation and maintenance of all types of military electronics equipment. It also prepares special training devices, training manuals, operating and maintenance instructions, and installation plans for all forms of military electronics apparatus. In addition, the Company undertakes special operating projects on behalf of the Armed Forces. Its operation of the Air Force Guided Missile Test Range is a typical example.

**RCA VICTOR  
DISTRIBUTING CORP.**

**What is the RCA Victor Distributing Corp.?**

This organization, with headquarters in Chicago, is responsible for the distribution of



Students of RCA Institutes learning oscilloscope technique in a laboratory experiment.

RCA Victor and other products through dealers served by its branches. These branches are located in Los Angeles, Calif.; Chicago, Ill.; Davenport, Iowa; Kansas City, Kan.; Detroit, Mich., and Buffalo, N. Y. The Distributing Corp., also maintains branch warehouses in Rochester, N. Y.; Chicago, Ill.; Grand Rapids, Mich.; Rockford, Ill.; Springfield, Mo., and Wichita, Kan.

#### **RCA INSTITUTES, INC.**

**What is RCA Institutes, Inc.?** RCA Institutes, founded in 1909, pioneered in teaching radio-television electronics and today is recognized as one of the foremost technical schools in the United States. The school offers courses in Advanced Technology, Radio and Television Broadcasting, Radio and Television Servicing, Advanced Television Servicing and Radio Telegraph Operating. The design, operation and maintenance of the complete TV system are covered in the Advanced Technology Course. Maintenance and operation of the complete TV system are taught in the Broadcasting Course. The installation and repair of TV receivers are included in the Servicing Course. Students enrolled in courses dealing with television receive additional instruction covering the basic principles of color television with special emphasis on new equipment.

**Does RCA Institutes conduct day and evening classes?** Yes; day and evening classes are conducted in all courses except the Advanced Television Servicing Course, offered only in the Evening School. Classes are in session for 49 weeks each year, closing the three weeks preceding Labor Day. New terms start approximately the first of March, June, Sep-

tember and December. New students may enroll for any term in advance of their starting date. Some high school education is necessary for all courses. Candidates for admission into the Advanced Technology Course must be high school graduates. The minimum entrance age is seventeen. All courses are open to the general public and are approved for veteran trainees. Anyone with the proper educational background may enroll.

**Does RCA Institutes offer any Home Study or Correspondence Courses?** Yes; the school offers a thorough course in Television Receiver Servicing, written and administered by qualified teachers and technicians. Behind this course is the RCA background of TV design, manufacture and customer service and the knowledge gained in applying this course to the training of several thousand technicians. A color television home study course is available to technicians with experience in servicing black-and-white receivers. Descriptive bulletins are available upon request.

**Does RCA Institutes maintain a Job Placement Service?** Yes; to assist students in obtaining satisfactory positions, RCA Institutes maintains an active placement service. Practically all of its graduates who desire employment find suitable jobs. The principal fields of employment are in testing and design work with radio-electronic manufacturers; as technicians in broadcasting stations, or as technicians with radio and television service companies.

**How may detailed information about RCA Institutes courses be obtained?** Write for a catalog or call at the school from 9 a.m. to 8 p.m. on school days (Monday through Friday), at 350 West 4th Street, New York City.



# INTERNATIONAL



MEADE BRUNET  
*Vice-President of RCA  
and Managing Director  
RCA International Division*

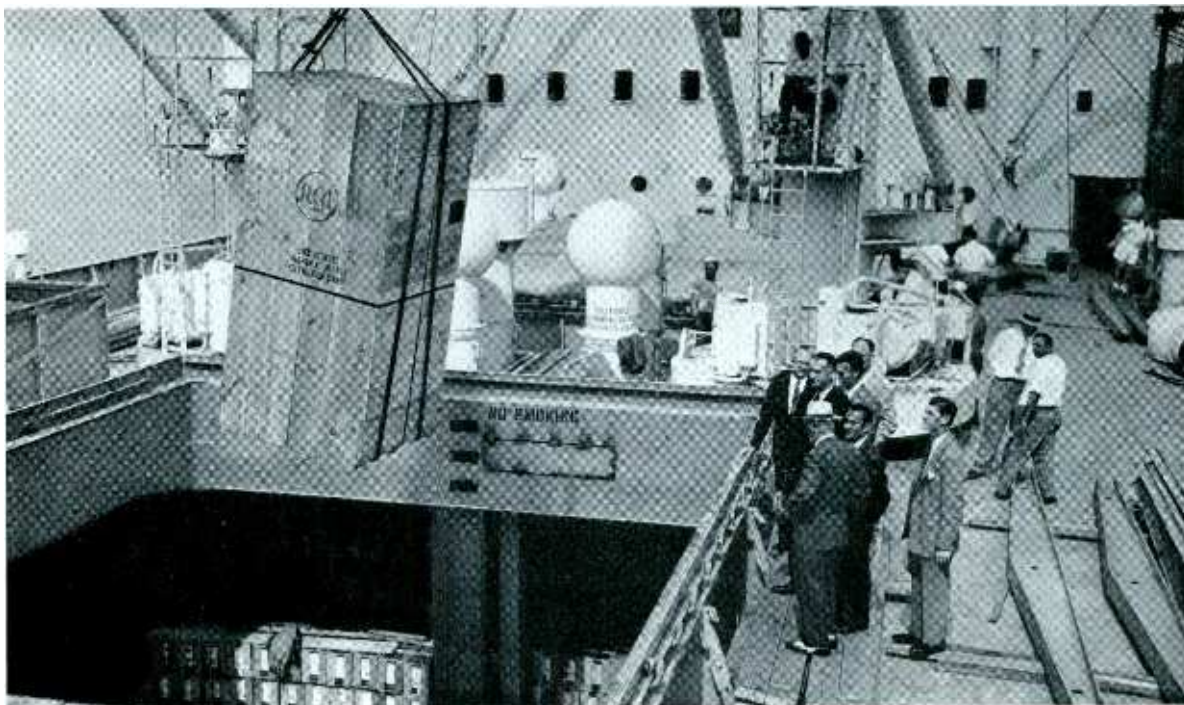
## What is the RCA International Division?

Foreign trade activities of the Radio Corporation of America are consolidated in the RCA International Division, whose headquarters are located at 30 Rockefeller Plaza, New York. The Division's business includes: (1) direct export from the United States of RCA

products to 200 major distributors; (2) manufacturing, service and distribution functions of 12 associated companies for which the Division provides management counsel.

The direct export operations of RCA embrace all its products from a tiny transistor to a complete microwave system. The Division

RCA TV station equipment hoisted for shipment to Thailand.



markets abroad a complete line of RCA refrigerators, freezers and power generators. It also distributes home laundry, heating and equipment manufactured by other companies.

The RCA associated companies are:

RCA Victor Argentina, Buenos Aires  
RCA Photophone of Australia Proprietary, Ltd., Sydney  
RCA Victor Radio, Rio de Janeiro, Brazil  
RCA Victor Co., Ltd., Montreal, Canada  
Corporacion de Radio de Chile, Santiago  
American Radio Television (Hellás), Athens, Greece  
Radio Fernseh Elektro Gmb H., Frankfort, Germany  
RCA Photophone, Ltd., London, England  
Photophone Equipments, Ltd., Bombay, India  
RCA Italiana, S.p.A., Rome, Italy  
RCA Victor Mexicana, Mexico, D. F.  
Industria Electronica, Madrid, Spain

**What products and services are handled by RCA's associated companies?**

TV sets are made or assembled in RCA factories in Argentina, Brazil, Canada and Mexico. The associated companies in Argentina, Brazil, Canada, Chile and Mexico manufacture and distribute phonograph records, radio receivers — including automobile radios in Canada — broadcast transmitters and special communications apparatus. In Germany, the company has radio sets manufactured for distribution. The company in Greece makes and distributes radio receivers. The factories in Italy and Spain produce and distribute phonograph records. Plastic products are made in the Argentine factory.

In Argentina, Brazil and Mexico, the RCA companies distribute motion picture equipment, sound products, as well as transmitting and communications products manufactured in the United States.

The Australian, English and Indian companies handle distribution of RCA motion picture and sound equipment, and other products.

They install and service equipment in theatres and supply technical service to the motion picture studios and to film recording licensees.

**How does RCA International contribute to a nation's progress?**

RCA International contributes to a nation's progress in many ways. For countries such as Brazil, Burma, Canada, Chile, Colombia, Cuba, Dominican Republic, Indonesia, Korea, Liberia, Mexico, Pakistan, Peru, South Africa, Thailand and Turkey, it has provided improved national or international radio communications. RCA International has equipped the fishing or commercial fleets of the Belgian Congo, Japan and Norway with radar. Through communications equipment, the Division has aided the steel industries in Brazil and Venezuela, oil in the Middle East, public utilities in Australia and Canada. Agricultural, industrial or health programs in Argentina, Brazil, Egypt, England, France, Portugal, Sweden, Switzerland and Venezuela have been advanced by use of the RCA electron microscope.

**Is RCA expanding its international activities?**

RCA is broadening and diversifying its distribution facilities around the world, to assure specialized merchandise services for the ultimate consumer, in package goods and in the major electronic fields. The manufacturing facilities of the RCA associated companies are also expanding. In England, new facilities have been established by the RCA associated company for the manufacture of sonar equipment. Two new factories are in operation in Canada, one is producing records and the other is manufacturing radio and TV sets. Six new sales and distribution centers have been completed in Canada. New factories in Italy and Spain are in full production on records, with provision for expansion in other fields. RCA tubes will be made at new factories in Brazil and Chile.



# COMMUNICATIONS



THOMPSON H. MITCHELL  
*President*  
*RCA Communications, Inc.*

## **What is RCA Communications, Inc.?**

In 1919, the first activity of Radio Corporation of America was the establishment of a worldwide radiotelegraph system to provide the American public with facilities for independent international communications. Ten years later, the growth of this system had progressed to a point where RCA Communications, Inc., was formed as a wholly owned subsidiary of RCA. Today, international telegrams can be sent from the United States "Via RCA" directly to 68 foreign countries.

**How is a radiogram sent?** RCA maintains many traffic offices conveniently located in the business districts of New York, San Francisco, and Washington, D. C. Elsewhere in the United States, direct RCA service may be obtained by sending overseas messages through any telegraph office and writing the free routing indicator "Via RCA" after the city of destination.

RCA also owns and operates traffic offices and transmitting and receiving stations in Honolulu, Guam, Manila, Tangier, Ciudad Trujillo (Dominican Republic), Port-au-Prince (Haiti), San Juan (Puerto Rico) and Havana (Cuba Transatlantic Radio).

## **What other communications services are operated by RCA?**

RCA's Overseas Teletypewriter Exchange Service (TEX) permits subscribers in New York City and Washington, D. C. to "talk-in-writing" by means of radioteletypewriters with their correspondents in 15 transatlantic countries. The service is also available between San Francisco, Calif. and Honolulu, T.H.

RCA also offers radiophoto service between the United States and 41 foreign points for the fast transmission of news pictures, blueprints, legal documents and other material not readily convertible to telegraph message form.

For the international exchange of news

This teletypewriter console enables rapid processing of international telegrams.



commentary and broadcast studio programs, RCA provides Program Transmission Service. Over 75% of programs of foreign origin heard by the American radio audience are received from abroad by RCA. Similarly, American programs are transmitted overseas to foreign broadcasting agencies.

RCA operates Volume Press Service by which large quantities of press dispatches may be sent abroad at low word-rates. Special transmissions of press to overseas points are also handled for the United States Department of State.

One of RCA's fastest growing services is the leasing of private radio channels to the military and large commercial firms. Leased on a monthly basis, these facilities enable sub-

scribers to maintain 24-hour-a-day, two-way communication with their overseas offices.

**How has RCA improved its international communications services in recent years?**

To achieve greater speed and efficiency in handling increased volumes of traffic, RCA has perfected a system for mechanically processing messages and coupled it with a world-girdling network of automatic radio relays. This advanced system employs time-and-motion saving tape relay operation which eliminates letter-by-letter manual processing except at the point where a message is prepared for original transmission. At the ultimate destination, a page teleprinter is substituted for tape reception and the message is received in printed form, ready for delivery.

Customer filing message at United Nations branch of RCA Communications, U. N. Building, New York City.





## PIONEERING IN RADIO, TELEVISION AND ELECTRONICS

**1920** World-wide communication inaugurated by RCA in 1920 was greatly extended in 1921 with the opening of "Radio Central" at Rocky Point, N. Y., featuring the 200-kilowatt Alexanderson alternators.

**1921** Dempsey-Carpentier fight on July 2, broadcast by RCA from Boyle's Thirty Acres in Jersey City as the first heavyweight championship bout on the air.

**1923** Dr. V. K. Zworykin, now Honorary Vice President of RCA, applied for patent on the iconoscope, television's first electronic "eye" on December 29.

**1924** First radiophoto transmitted by RCA across the Atlantic was of Charles Evans Hughes. It was sent from New York to London on July 6, and instantly radioed back and recorded in New York.

**1925** First rebroadcast from London heard on February 14, through RCA stations WJZ, New York, and WRC, Washington.

RCA broadcasting transmitters participated in 24-station hook-up for Coolidge inaugural, first event of its kind on the air.

**1926** World series baseball games broadcast for the first time by WJZ in October.

**1927** Radio sets and tubes designed for alternating current operation introduced by RCA.

**1928** The diversity reception system, which contributes to the stability and reliability of shortwave communication, introduced by RCA.

RCA successfully demonstrated motion pictures with sound on 16mm film.

**1929** An all-electronic television receiver using the kinescope as the picture tube was demonstrated on November 18 by Dr. V. K. Zworykin, who developed the tube.

**1930** Television on a 6-by 8-foot screen was shown by RCA January 16 at RKO-Proctor's 58th Street Theatre, New York.

**1931** RCA perfected the velocity microphone, which became the standard of broadcasting stations. In 1934, it introduced the uni-directional microphone, used in film and phonograph recording, broadcasting and TV.

Empire State Building, world's loftiest skyscraper, was selected in June as new site for RCA-NBC television transmitter, W2XBS. The station began regular television and facsimile operations on December 22.

**1932** Automatic very-short-wave radio station, designed to relay television pictures and forms of radio communication from city to city, shown by RCA.

NBC began experimenting from W2XBS on February 6 with live talent.

**1934** RCA, at the Navy's request, began development work on sonar, an underwater sound system, following considerable independent research by RCA scientists and engineers.

**1935** Automatic SOS alarm for vessels not having a radio operator on constant watch, introduced by RCA.

**1936** Outdoor television pickups demonstrated on April 24 by RCA at Camden, N. J., on 6-meter wave over distance of a mile.

**1937** First full-size symphony orchestra organized exclusively for broadcasting introduced by NBC with Maestro Arturo Toscanini as conductor.

**1938** Scenes from Broadway play, "Susan and God," starring Gertrude Lawrence, telecast from NBC studios in Radio City, New York on June 7.

**1939** RCA and NBC introduced television as a service to the public on April 30 at opening ceremonies of New York World's Fair, featuring President Roosevelt as first Chief Executive to be seen by television.

Dr. V. K. Zworykin of RCA announced in December that he and his associates were work-

ing on the development of an electron microscope; in April 1940 the instrument was completed. It has attained magnifications of more than 300,000 diameters.

RCA receiver in plane over Washington on October 17 picked up telecast from NBC station in New York, 200 miles away.

**1940** NBC station W2XWG, first FM station established in New York by any network broadcaster, began operation on January 11.

RCA demonstrated to the FCC on February 6, at Camden, N. J., a television receiver producing images in color by electronic and optical means, without moving mechanism.

Coaxial cable used for first time in television program service by NBC on June 21 in bringing scenes at Republican National Convention in Philadelphia to transmitter in New York.

**1941** Demonstrating television progress to the FCC, RCA exhibited on January 24 a projection-type home receiver featuring a screen 13½ by 18 inches . . . Television pictures including a prize fight from Madison Square Garden and a baseball game at Ebbets Field, Brooklyn, were projected on a 15- by 20-foot screen in the New Yorker Theatre . . . Scenes at Camp Upton, Long Island, were automatically relayed by radio to New York establishing a record as the first remote pickups handled by radio-relay stations.

Color television pictures in motion were put on the air by NBC on February 20 in the first telecast in color by mechanical means from a TV studio.

Ground broken on August 8, for new RCA Laboratories at Princeton, N. J., to be one of the foremost centers of radio and electronic research; cornerstone laid on November 15.

**1942** Advanced types of miniature tubes were introduced by RCA.

**1943** The electron microanalyzer, growing out of research on the electron microscope, was a new development at RCA Laboratories.

**1944** Radio-frequency equipment for the bulk dehydration of penicillin was developed

and installed by RCA at the plant of E. R. Squibb & Sons, New Brunswick, N.J., May 5.

**1945** Capable of operating over distances of 1,000 miles or more, new lifeboat radio equipment that automatically transmits SOS and direction finder signals announced by Radiomarine Corporation of America.

RCA showed projection-type television set with screen 18 by 24 inches on March 15.

A new FM radio circuit, called the Ratio Detector, invented by Stuart W. Seeley, manager of RCA Industry Service Laboratory; was revealed October 3.

Supersensitive RCA image orthicon tube was introduced on October 25 for television studio and outdoor pickups.

A new system of air navigation, proposed by RCA, based on wartime developments in radar and television and known as "Teleran," was described before a technical symposium in New York City on December 8.

Improved black-and-white television pictures and color television in three dimensions demonstrated by RCA on December 13. Color system was mechanical; the black-and-white, all-electronic.

**1946** Shoran, a precision-radar system developed by RCA as an aid to blind bombing in war, was revealed on January 22. So precise is Shoran that it can measure distances up to 250 miles over land or water with almost pinpoint accuracy.

Airborne television, as developed during the war by RCA and NBC in cooperation with U. S. Navy, U. S. Army Air Forces and the National Defense Research Council, was demonstrated on March 21 at U. S. Naval Air Station, Anacostia, D. C.

RCA introduced post-war television sets on September 17.

Color television pictures on 15- by 20-inch screen, produced by all-electronic means, were demonstrated publicly for the first time on October 30 by RCA.

**1947** Philadelphia audience saw color TV



pictures produced on 10-foot theatre screen by RCA all-electronic system on April 30.

Development of a revolutionary system of high-speed communications capable of transmitting and receiving written or printed messages and documents at the rate of a million words a minute was disclosed by RCA-NBC on June 23, and demonstrated to the public on October 21, 1948, at the Library of Congress, Washington, D. C. Called "Ultrafax," the system was developed by RCA and the Eastman Kodak Company.

Televised pictures of surgical operations were transmitted through the air for the first time by RCA September 7-12 from operating room in New York hospital and viewed by American College of Surgeons.

**1948** New method of highly accurate frequency control for transmitter circuits, based on the effects of radio on certain gases announced by RCA in March.

NBC Symphony Orchestra with Maestro Arturo Toscanini conducting an all-Wagnerian broadcast concert, simulcast on television for first time on March 20.

Republican and Democratic National Conventions at Philadelphia telecast by NBC during June and July.

RCA, in cooperation with NBC, in September instituted simultaneous tests of television program transmissions on 67 and 505 megacycles from station WNBW, Washington, D. C., as part of a study of propagation characteristics of ultra-high-frequency waves.

**1949** Direct-view metal-cone television picture tube, 16 inches in diameter, disclosed by RCA on January 3.

An entirely new system for the reproduction of recorded music in the home, based on a vinylite record  $6\frac{7}{8}$  inches in diameter and a fast-changing record player operating at 45-rpm, was announced January 11, by RCA.

Scenes at inaugural of President Truman, on January 20, were transmitted from Washington, D.C., over the 15-station NBC television network from Boston to St. Louis.

Improved reception of television stations

assigned to the same channel was achieved by a new system, developed by RCA Laboratories, of offsetting one or more of the conflicting carrier frequencies in June.

Large-screen theatre television was introduced on July 27 with the signing of a contract with Fabian Theatres, Inc., and RCA for the first permanent installation of theatre-size TV projection equipment.

A new all-electronic, high-definition, fully-compatible color television system was announced by RCA on August 25 to the Federal Communications Commission. The system maintains the standards of black-and-white service and will not make obsolete receivers in use, since they can receive RCA color telecasts in high-definition black and white without touching the receiver.

NBC's experimental ultra-high-frequency television station, KC2XAK, near Bridgeport, Conn., began operation on December 30.

**1950** Development by RCA of a new transmitting tube capable of delivering 500 kilowatts of radio-frequency power was announced on February 1.

A new system of industrial television, simpler, more compact and less costly, was demonstrated by RCA on March 7. The system incorporates a diminutive pickup tube, the Vidicon, which operates in a camera no larger than a 16-millimeter movie camera.

A pocket-size superheterodyne radio receiver, smaller than any previously designed with a loudspeaker, was demonstrated by RCA Laboratories' engineers at a meeting of the I.R.E. on March 9.

Color kinescopes (direct-view type) demonstrated by RCA on March 23 to members of FCC at Washington, D. C.; one tube used a single electron gun; the other, three guns—one for each primary color.

RCA-NBC engineers designed, developed and tested a multiple antenna system, first of its kind, to permit five TV stations and three FM stations to operate from atop the Empire State Building in New York.

An electronic analogue computer designed

to evaluate the performance of guided missiles, airplanes and ships was demonstrated by RCA on November 21 at Princeton, N. J.

**1951** Extension of the range, power and versatility of the light microscope by use of industrial television cameras was demonstrated by RCA and Princeton University on January 9.

A new portable television camera and transmitting station, designed by RCA Laboratories to operate in the field as a one-man back-pack unit, was demonstrated March 22. The back-pack station has its own battery-power supply.

A 21-inch direct-view color picture tube, making possible larger color pictures for the home was shown by RCA on July 9.

Transmission of compatible color television programs was field-tested over coaxial line and radio-relay facilities between New York and Washington, D. C., on September 20.

RCA exhibited on October 16 a color TV projector which provided color pictures on a 9-by 12-foot theatre screen, at the Colonial Theatre, New York.

**1952** Three dimensional television pictures of microscopic specimens were produced by RCA on April 15 by mounting two industrial TV cameras side by side, with audience viewing images through polarized spectacles.

A machine that automatically uncases milk bottles and washes them at a rate up to 576 bottles a minute was demonstrated by RCA in Chicago on April 17.

A three-speed "Victrola" record player was introduced to the trade on April 21.

First electronic means of achieving color reproduction in the graphic arts was revealed on May 7, as a joint experimental development of RCA and the Interchemical Corporation. Called a Color Correction Machine, the device operates with error limits of only plus or minus 2 per cent.

Development of point-contact transistors which can oscillate at frequencies up to 200 megacycles, announced by RCA on June 26.

A new, longer playing 45-rpm record, called the EP, or Extended Play, was introduced by RCA on July 31. Utilizing a greater playing

surface the new record plays up to eight minutes on each side.

Utilizing RCA equipment, the nation's first commercial UHF station went on the air October 1 with regular programs in Portland, Ore., using call letters of KPTV.

First demonstrations showing the scientific progress made toward harnessing the transistor in applications useful to radio, television and industry were held on November 17, at the David Sarnoff Research Center.

**1953** A color television camera equipped with a single tri-color tube, instead of three color pick-up tubes, was demonstrated by RCA on April 14 to the House Committee on Interstate and Foreign Commerce and the FCC.

The RCA "TV Eye," a relatively inexpensive closed circuit television system, was introduced during May. The system includes a simplified four-pound TV camera and a compact control unit.

RCA-NBC petitioned the FCC on June 25 to adopt the compatible technical signal specifications used by the RCA color television system as standards for commercial color TV.

Development of experimental point-contact transistors which oscillate at more than 400 mc. per second, disclosed by RCA on July 7.

The first publicly announced experimental broadcast in compatible color television of a network program was presented by NBC featuring "Kukla, Fran and Ollie" on August 30.

NBC presented the opera "Carmen" in color October 31, marking the first time an opera had been telecast in color and the first production of a full-hour program in compatible color television.

A live show from the NBC Colonial Theatre studio in New York was transmitted by RCA compatible color television via radio relay to Burbank, Calif., in the first transcontinental color television demonstration; color film was also transmitted by television for the first time from East to West coast on November 3.

The most powerful military radio transmitter in the world, built by RCA in cooperation with the U. S. Navy, was put into operation by



the Navy at Jim Creek Valley, Washington, on November 18. The 1,200,000-watt transmitter provides world-wide communications with naval units on the land, in the air, and on and under the surface of the seas.

Magnetic tape recording of both color and black-and-white television programs was shown by RCA on December 1, at its Princeton laboratories. The new method was heralded as a major step into a new era of "electronic photography."

RCA's 15-inch color TV tube was announced in December as a commercial product.

**1954** The Tournament of Roses Parade at Pasadena, Calif., was telecast in color by 21 stations of NBC's coast-to-coast network on January 1. This colorcast marked a series of significant "firsts" in television history including: the first use of NBC's new mobile color TV unit; the first West-to-East transcontinental transmission of color TV; the first West Coast origination of a color program under compatible color standards; and the first broadcast of a network color program by a coast-to-coast series of stations.

A new method which converts atomic energy into small but usable quantities of electrical energy was demonstrated by RCA for the first time on January 26. Using this method, an experimental RCA Atomic Battery operated a transistor to produce audible tones.

The "Sanguinometer," a closed-circuit industrial TV system combined with an optical microscope and a computer, was developed in January by RCA engineers and the Sloan-Kettering Institute. Equipment provides a rapid, accurate method of taking blood counts.

First compatible color TV cameras and associated equipment to leave production lines were shipped from RCA plant in Camden, N. J., on March 4.

First network colorcast of a sports event, a boxing match from Madison Square Garden was presented by NBC on March 19.

Production of RCA's first commercial color TV sets equipped with a 15-inch picture tube began on March 25 at Bloomington, Ind.

NBC-TV became the first network to broadcast 35mm color film on June 25.

A miniature 8-watt TV station, built by RCA, was officially previewed at U. S. Air Force Base at Limestone, Me., on June 30. It transmits programs over a three mile radius.

RCA announced in July development of a new and improved 21-inch color kinescope with a picture area of 255 square inches.

Use of television in warfare was demonstrated for the first time by RCA-NBC in cooperation with the Army Signal Corps at Fort Meade, Md., on August 11.

NBC presented the first of its 90-minute color TV "Spectaculars," on September 12.

A new 21-inch RCA color picture tube and a simplified color TV receiver were demonstrated at the David Sarnoff Research Center on September 15.

Development of a theatre color TV system which projects pictures in sizes up to 15 by 20 feet was described by RCA engineers at Los Angeles in October.

In December, RCA began commercial production of color TV sets incorporating the new 21-inch picture tube. The tube was placed in production during November.

**1955** Color television of government-approved standards was used for the first time on January 19 as a means of inter-city consultation and diagnosis by pathologists in combating disease. The closed-circuit telecast, presented by the Armed Forces Institute of Pathology in cooperation with RCA, linked Philadelphia, Baltimore and Washington.

New developments of great promise for the future—an electronic music synthesizer, an electronic cooling system, an electronic light amplifier and a TV magnetic tape recorder were described by Brig. General Sarnoff at the Winter Meeting of the A.I.E.E. on January 31, in New York.

NBC's Color City in Burbank, Calif., first TV studio ever constructed specifically for colorcasting, was dedicated on March 27 during a 90-minute color Spectacular, "Entertainment 1955."

## RESULTS AT A GLANCE

### WHERE IT CAME FROM

#### A SUMMARY OF PRODUCTS AND SERVICES SOLD DURING THE YEAR

	1954		1953	
	AMOUNT	%	AMOUNT	%
RCA — Includes all divisions and domestic subsidiaries other than those listed below	\$709 984 000	75.5	\$645 117 000	75.6
National Broadcasting Company	200 423 000	21.3	176 052 000	20.6
RCA Communications	18 183 000	1.9	17 939 000	2.1
Radiomarine Corporation of America	17 524 000	1.9	18 662 000	2.2
RCA Institutes	1 304 000	.1	960 000	.1
<i>Less:</i> Inter-company transactions	6 468 000	.7	5 676 000	.6
<b>TOTALS</b>	<b>\$940 950 000</b>	<b>100.0</b>	<b>\$853 054 000</b>	<b>100.0</b>

### WHERE IT WENT

#### HOW THE SALES DOLLAR WAS APPLIED DURING THE YEAR

	1954		1953	
	AMOUNT	%	AMOUNT	%
Materials and services bought from others	\$512 236 000	54.4	\$456 367 000	53.5
Wages and salaries	298 289 000	31.7	281 769 000	33.0
Pensions, social security taxes, insurance and other benefits	19 938 000	2.1	18 470 000	2.2
Depreciation and patent amortization	17 314 000	1.9	15 174 000	1.8
Interest on long-term debt	4 875 000	.5	4 595 000	.5
Taxes on income and property	47 772 000	5.1	41 657 000	4.9
Dividends declared for year	22 052 000	2.3	19 963 000	2.3
First quarter 1955 dividends declared in 1954	4 284 000	.5		
First quarter 1954 dividends declared in 1953	4 290 000	.5	4 290 000	.5
Reinvested in the business	18 480 000	2.0	10 769 000	1.3
<b>TOTALS</b>	<b>\$940 950 000</b>	<b>100.0</b>	<b>\$853 054 000</b>	<b>100.0</b>



# CONSOLIDATED FINANCIAL POSITION

## ASSETS

	<u>DEC. 31, 1954</u>	<u>DEC. 31, 1953</u>
CURRENT ASSETS:		
Cash . . . . .	\$ 65 271 117	\$ 57 876 177
U. S. Government securities, at cost . . . . .	57 624 567	50 844 144
Receivables, less reserves . . . . .	145 456 250	124 270 741
Inventories, at lower of cost or market . . . . .	109 641 218	108 179 915
Prepaid expenses . . . . .	8 529 369	8 563 984
<b>TOTAL CURRENT ASSETS</b> . . . . .	<b>386 522 521</b>	<b>349 734 961</b>
INVESTMENTS IN WHOLLY-OWNED FOREIGN SUBSIDIARIES . . . . .	4 573 294	3 905 125
OTHER INVESTMENTS AT COST (Less reserves: 1954 — \$2,253,484; 1953 — \$2,065,298) . . . . .	1 893 392	1 503 665
PLANT AND EQUIPMENT, AT COST . . . . .	251 412 936	226 617 673
Less: Accumulated depreciation . . . . .	99 953 872	92 436 155
	151 459 064	134 181 518
PATENTS AND PATENT RIGHTS . . . . .	8 602 350	10 795 636
Less: Accumulated amortization . . . . .	6 423 448	8 770 364
	2 178 902	2 025 272
DEFERRED CHARGES . . . . .	1 698 071	2 274 189
<b>TOTAL ASSETS</b> . . . . .	<b>\$548 325 244</b>	<b>\$493 624 730</b>

## LIABILITIES AND STOCKHOLDERS' EQUITY

	<u>DEC. 31, 1954</u>	<u>DEC. 31, 1953</u>
CURRENT LIABILITIES:		
Accounts payable and accruals . . . . .	\$134 562 259	\$104 897 559
Federal taxes on income less U. S. Government securities, 1954 \$42,976,000, 1953 \$38,375,000 . . . . .	7 129 273	8 016 761
Dividends payable on preferred stock . . . . .	1 576 474	1 576 476
Dividends payable on common stock . . . . .	8 389 411	6 303 600
<b>TOTAL CURRENT LIABILITIES</b> . . . . .	<b>151 657 417</b>	<b>120 794 396</b>
PROMISSORY NOTES, DUE 1970-1977 . . . . .	150 000 000	150 000 000
INCENTIVE PLAN		
Awards payable (less cost of common stock held for distribution under the Plan, \$1,055,298) . . . . .	796 998	—
Incentive reserve — unawarded balance . . . . .	1 140 302	—
DEFERRED INCOME ON INSTALLMENT CONTRACTS RECEIVABLE . . . . .	10 531 338	7 111 347
STOCKHOLDERS' EQUITY:		
\$3.50 Cumulative First Preferred Stock, no par, shares authorized 920,300, outstanding 900,824 (preference on involuntary liquidation \$100 per share or a total of \$90,082,400), at a stated value of . . . . .	14 574 441	14 574 441
Common Stock, no par, shares authorized 18,500,000, outstanding 14,031,016 shares at a stated value of . . . . .	28 062 032	28 062 032
Capital surplus . . . . .	9 014 203	9 014 203
Reinvested earnings . . . . .	182 548 513	164 068 311
<b>TOTAL STOCKHOLDERS' EQUITY</b> . . . . .	<b>234 199 189</b>	<b>215 718 987</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b> . . . . .	<b>\$548 325 244</b>	<b>\$493 624 730</b>

For more complete financial data, refer to the 1954 Annual Report of Radio Corporation of America.

# RADIO CORPORATION OF AMERICA

## PRODUCTS AND SERVICES

### **RCA CONSUMER PRODUCTS:**

ROBERT A. SEIDEL, Executive Vice-President

### **RCA VICTOR TELEVISION DIVISION**

H. G. BAKER, Vice-President and General Manager

### **RCA VICTOR RADIO and "VICTROLA" DIVISION**

JAMES M. TONEY, General Manager

### **RCA VICTOR HOME APPLIANCE DIVISION**

JOHN W. CRAIG, Vice-President and General Manager

RCA Room Air Conditioning Department,  
AUSTIN RISING, General Manager  
Room Air Conditioners.

RCA Estate Appliance Department,  
PAUL A. BARKMEIER, Vice-President and General Manager  
RCA Estate Electric and Gas Ranges (stoves).

### **RCA VICTOR RECORD DIVISION**

EMANUEL SACKS, Vice-President and General Manager

Phonograph Records; Custom Records.

### **RCA ELECTRONIC PRODUCTS:**

W. WALTER WATTS, Executive Vice-President

### **RCA TUBE DIVISION**

DOUGLAS Y. SMITH, Vice-President and General Manager

Tubes, Tube Parts, Tube Making Machinery, Radio Batteries.

### **RCA ENGINEERING PRODUCTS DIVISION**

T. A. SMITH, Vice-President and General Manager

Equipment for radio and television broadcasting,  
mobile and microwave communication,  
motion picture recording and reproduction,  
magnetic tape recorders,  
intermatched high fidelity components, sound systems,  
industrial electronics, scientific instruments,  
specially engineered military electronic apparatus.

### **RADIOMARINE CORPORATION OF AMERICA**

THOMAS P. WYNKOOP, President

Development, production, sale and service of marine  
communication equipment and electronic devices —  
Commercial shore-to-ship, ship-to-shore and ship-to-ship  
radiotelegraph and radiotelephone communications.

### **RCA SALES AND SERVICE SUBSIDIARIES:**

CHARLES M. ODORIZZI, Executive Vice-President,  
Corporate Staff

### **RCA VICTOR DISTRIBUTING CORP.**

WALTER M. NORTON, President

Supervises distribution of RCA products through dealers.

### **RCA SERVICE COMPANY, INC.**

E. C. CAHILL, President

Provides installation and service on  
RCA Victor television receivers and other RCA products  
through branches in principal cities and television areas.  
Assigns technicians under contract with  
the U.S. Armed Services throughout the world.

### **RCA INSTITUTES, INC.**

GEORGE F. MAEDEL, President

Technical instruction in radio, television and electronics.

### **RCA LABORATORIES**

DR. E. W. ENGSTROM, Executive Vice-President

Fundamental research in electronics including the physics  
and chemistry of electronically active solids — Applied  
research in radio, electronics, acoustics, sound recording  
and reproduction, television, tubes and transistors —  
Laboratory and Technical Service to RCA Licensees.

### **NATIONAL BROADCASTING COMPANY, INC.**

SYLVESTER L. WEAVER, JR., President

ROBERT W. SARNOFF, Executive Vice-President

National Network and Local Standard and FM Broadcasting —  
Television Film Distribution — National Network and  
Local Television Broadcasting — National Spot Representation.

### **RCA INTERNATIONAL DIVISION**

MEADE BRUNET, Vice-President and Managing Director

Distribution and sale of RCA products abroad; supervision  
of RCA-associated companies in foreign lands.

### **RCA COMMUNICATIONS, INC.**

THOMPSON H. MITCHELL, President

International Radiotelegraph, Radiotelephone, Radiophoto,  
Program Transmission, Teleprinter Exchange,  
and Leased Channel Service.



Los Angeles, Calif.



Findlay, Ohio



Marion, Ind.

## LOCATION OF RCA PLANTS IN THE UNITED STATES

Bloomington, Ind.  
Cambridge, Ohio  
Camden, N. J.  
Canonsburg, Pa.  
Cincinnati, Ohio

Detroit, Mich.  
Findlay, Ohio  
Hamilton, Ohio  
Harrison, N. J.  
Hollywood, Calif.

Indianapolis, Ind.  
Lancaster, Pa.  
Los Angeles, Calif.  
Marion, Ind.  
Monticello, Ind.

Moorestown, N. J.  
New York, N. Y.  
Rockaway, N. J.  
Woodbridge, N. J.



**For general information concerning RCA, its products and services, write:**

Department of Information, Radio Corporation of America,  
RCA Building, 30 Rockefeller Plaza  
New York 20, N. Y.

- RCA TV RECEIVERS:**
- RADIOS and PHONOGRAPHS:**
- AIR CONDITIONERS and RANGES**  
(Gas and Electric):
- RCA VICTOR RECORDS:**
- ELECTRONIC PRODUCTS:**
- ELECTRON TUBES and COMPONENTS:**
- MARITIME ELECTRONICS:**
- INSTALLATION and MAINTENANCE:**
- TECHNICAL TRAINING:**
- RESEARCH:**
- BROADCASTING:**
- FOREIGN TRADE:**
- INTERNATIONAL COMMUNICATIONS:**
- PROFESSIONAL and ADMINISTRATIVE EMPLOYMENT:**

- RCA VICTOR TELEVISION DIVISION . . . . . *Cherry Hill, Camden 8, N. J.*
- RCA VICTOR RADIO AND "VICTROLA" DIVISION *Cherry Hill, Camden 8, N. J.*
- RCA VICTOR HOME APPLIANCE DIVISION . . . . . *Camden, N. J.*
- RCA VICTOR RECORD DIVISION . . . . . *630 Fifth Avenue, New York 20, N. Y.*
- RCA ENGINEERING PRODUCTS DIVISION . . . . . *Camden, N. J.*
- RCA TUBE DIVISION . . . . . *Harrison, N. J.*
- RADIOMARINE CORP. OF AMERICA . . . . . *75 Varick Street, New York 13, N. Y.*
- RCA SERVICE COMPANY, INC. . . . . *Cherry Hill, Camden 8, N. J.*
- RCA INSTITUTES, INC. . . . . *350 West 4th Street, New York 14, N. Y.*
- RCA LABORATORIES, DAVID SARNOFF RESEARCH CENTER . . . . . *Princeton, N. J.*
- NATIONAL BROADCASTING COMPANY, INC.  
30 Rockefeller Plaza, New York 20, N. Y.
- RCA INTERNATIONAL DIVISION . . . . . *30 Rockefeller Plaza, New York 20, N. Y.*
- RCA COMMUNICATIONS, INC. . . . . *66 Broad Street, New York 4, N. Y.*
- RCA, DEPARTMENT 151 . . . . . *30 Rockefeller Plaza, New York 20, N. Y.*

**RCA REGIONAL OFFICES**

- Northeastern Region**
- Eastern Region**
- Southern Region**
- Eastern Central Region**
- Central Region**
- West Central Region**
- Southwestern Region**
- Western Region**

- 2301 John Hancock Bldg., 200 Berkley Street . . . . . Boston 16, Mass.*
- 36 West 49th Street . . . . . New York 20, N. Y.*
- 522 Forsyth Bldg. . . . . Atlanta 3, Ga.*
- 718 Keith Bldg. . . . . Cleveland 15, Ohio*
- American Furniture Mart, 666 North Lake Shore Drive . . . . . Chicago 11, Ill.*
- 340 Dierks Bldg. . . . . Kansas City 6, Mo.*
- 1907-11 McKinney Avenue . . . . . Dallas 1, Tex.*
- RCA Bldg., 1560 N. Vine Street . . . . . Hollywood 28, Calif.*

**NBC OWNED AND OPERATED STATIONS**

- WRCA, WRCA-FM, WRCA-TV**
- WMAQ, WMAQ-FM, WNBQ**
- WTAM, WTAM-FM, WNBK**
- KRCA**
- KNBC, KNBC-FM**
- WRC, WRC-FM, WRC-TV**

- RCA Bldg., 30 Rockefeller Plaza . . . . . New York 20, N. Y.*
- Merchandise Mart . . . . . Chicago 54, Ill.*
- 815 Superior Avenue . . . . . Cleveland 14, Ohio*
- Sunset Boulevard and Vine Street . . . . . Hollywood 28, Calif.*
- Taylor and O'Farrell Streets . . . . . San Francisco 2, Calif.*
- The Sheraton Park Hotel . . . . . Washington, D. C.*

**RCA COMMUNICATIONS, INC., DISTRICT OFFICES**

- New York District**
- Washington District**
- San Francisco District**

- 66 Broad Street . . . . . New York 4, N. Y.*
- 1812 M Street, N.W. . . . . Washington 6, D. C.*
- 135 Market Street . . . . . San Francisco 5, Calif.*

**RADIOMARINE CORPORATION OF AMERICA SALES OFFICES**

- Boston 10, Mass. . . . . 470 Atlantic Avenue*
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- New Orleans 3, La. . . . . 500 St. Peter Street*
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- San Francisco 5, Calif. . . . . 1075 Folsom Street*
- Wilmington, Calif. . . . . 437 North Avalon Blvd.*
- Seattle 4, Wash. . . . . 1008 Western Avenue*

**TELEVISION PROGRAMS SPONSORED BY RCA OVER NBC**

"Caesar's Hour"—3 out of 4 Mondays at 8 p.m., EST  
"Producers' Showcase"—every 4th Monday at 8 p.m., EST





RADIO CORPORATION OF AMERICA