RCA

WHAT IT IS

WHAT IT DOES

1943

QUESTIONS *and* ANSWERS

ANSWERS TO QUESTIONS

THAT ARE OFTEN ASKED

(COMPLETE INDEX ON PAGE 12)

1943

RADIO CORPORATION OF AMERICA

RCA BUILDING, 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

FOREWORD

A new chapter in the history of radio began in 1919. The Armistice of 1918 ended the "wireless" era. Wireless became radio! Wartime developments of the vacuum tube, short waves and the radiophone were new keys to progress. Broadcasting became a new post-war industry with tremendous potentialities for service to the public and to the nation.

War had revealed to America that it should have a world-wide radio communication system that would make it independent of foreign countries in communicating with other nations, with its own outlying possessions, merchant marine, battle fleets and any American Expeditionary Force.

So that America would have this independence, ashore and afloat, in peace and in war, the Radio Corporation of America was formed in 1919 to serve the interests of the public and the government; to establish American preeminence in radio. The wireless stations, physical equipment, patent rights and the good will of the Marconi

Wireless Telegraph Company of America were acquired as the nucleus of the new all-American radio organization — RCA. The growth of radio in the United States since that day is a story of radio progress throughout the world.

The United States went to war again in 1941. RCA's laboratory facilities, manufacturing machinery, radio stations and communication services were enlisted in the all-out effort to help win the war. Radio reached out as a great force for unity that linked free people everywhere, as well as the United Nations fighting for democracy and freedom on a world-wide front.

Since its formation, RCA through research and pioneering has helped to put the United States in the forefront of every great advance in radio. It has contributed largely to making this nation the communication center of the world. Maintaining modern and efficient services to the public, to trade and commerce, RCA has continually strengthened and extended the usefulness of radio to this country—on land, sea and in the air.

COMMUNICATIONS • BROADCASTING

RCA Building, Radio City, New York, is a world-center of radio. It is the home of the Radio Corporation of America, National Broadcasting Company and Blue Network Company.

RCA WHAT IT IS *and* WHAT IT DOES

What is "RCA"?

The letters "RCA" are the initials of the Radio Corporation of America, the parent company of: RCA Victor Division, National Broadcasting Company, Inc., Blue Network Company, Inc., R.C.A. Communications, Inc., Radiomarine Corporation of America, RCA Institutes, Inc., and RCA Laboratories.

What led to the formation of RCA?

Prior to and during the first World War, the United States depended largely upon British cables and foreign-owned wireless stations for communication with many important parts of the world. Great Britain was the communication center of the world. The war revealed to Americans that radio offered a new and competitive system; a startling opportunity for dissemination of intelligence. Development of radio would give the United States preeminence in radio communication, independent of other countries.

To accomplish this, RCA was formed by the General Electric Company, as a result of suggestions by officials of 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 21, 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 deem 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.

The first Chairman of the Board of RCA was Owen D. Young; the first President, Edward J. Nally; David Sarnoff was Commercial Manager.

BOARD OF DIRECTORS of RCA

JAMES G. HARBORD

DAVID SARNOFF

GEORGE K. THROCKMORTON

GANO DUNN

EDWARD F. McGRADY

ARTHUR E. BRAUN

JOHN HAYS HAMMOND, JR.

CHARLES G. DAWES

EDWARD J. NALLY

DeWITT MILLHAUSER

EDWARD W. HARDEN

BERTRAM CUTLER

What is the nature of RCA's business, as outlined in its original charter?

1. To send and receive signals, messages and communications.
2. To create, install and operate a system of communication which may be international.
3. To improve and prosecute the art and business of electric communication.
4. To radiate, receive and utilize electromagnetic waves.
5. To create and manufacture consumer goods, and to hold patent rights in radio, electronics and other fields.

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What are the industrial activities of RCA?

The Radio Corporation of America is the world's foremost radio organization. Through its various divisions and wholly-owned subsidiaries, it is engaged in every phase of radio: research and engineering, design and development, manufacturing, communications, broadcasting and technical training.

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Is RCA engaged in Electronics?

Yes; RCA has pioneered in the science of electronics, and its Laboratories are a foremost center of radio-electronic research, the key of which is the radio tube. The RCA Victor Division, the world's largest manufacturer of radio tubes, makes a wide variety of electronic instruments.

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Where are the executive offices of RCA?

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

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When did the RCA transoceanic service begin?

In February, 1920, the stations which the government had taken over from the American Marconi Company during the war, were turned back to the new RCA and a new communication service was inaugurated to foreign lands. One of the principal stations was in New Brunswick, N. J. During that year service was established with England, France, Norway, Hawaii, Japan and Germany.

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How many people are employed by RCA and its subsidiaries?

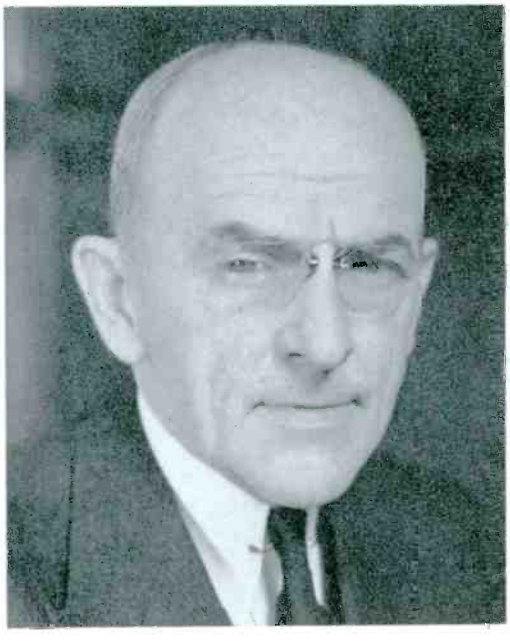
At the opening of 1943, RCA and associated companies had 35,587 employees, of whom 18,746 or 53% were men, and 16,841 or 47% were women.

OFFICERS
of the
RADIO CORPORATION OF AMERICA

JAMES G. HARBORD
Chairman of the Board

DAVID SARNOFF
President

OTTO S. SCHAIRER
Vice-President in charge of RCA Laboratories



GEORGE K. THROCKMORTON
Vice-President in charge of RCA Victor Division

EDWARD F. McGRADY
Vice-President in charge of Labor Relations

HENRY A. SULLIVAN
Controller

GEORGE S. De SOUSA
Vice-President and Treasurer

LEWIS MacCONNACH
Secretary

What are RCA's wage and labor policies?

The management recognizes that the loyal cooperation of employees is of basic importance to the success and progress of RCA. It is the company'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 plants are located or operations are carried on. The most modern working conditions conducive to health, safety and comfort are maintained, together with a wide variety of educational, training, social and recreational facilities.

In instances where employees choose to bargain collectively, the employing company deals willingly and frankly with their authorized representatives. At present there are in force a number of contracts between the various companies and the unions, of which several are affiliated with A. F. of L., several with C.I.O., and one is independent.

Edward F. McGrady, who for four years had been Assistant Secretary of Labor, in 1937 became RCA's Vice President in charge of Labor Relations and a member of the Board of Directors.

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Who owns the Radio Corporation of America?

Ownership of RCA is widely distributed among approximately 235,000 stockholders, in every state of the Union. No individual owner of record holds as much as one-half of 1% of the stock. Less than 6% of the stock is held by foreign stockholders.

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What is RCA's capital structure?

There are two classes of RCA stock:

	Shares Outstanding
$3.50 Cumulative First Preferred . . .	900,824
Common	13,881,016

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Do all RCA stocks pay dividends?

Regular quarterly dividends have been paid on the Preferred stock. In 1942 these dividends amounted to $3,213,768. Annual dividends at the rate of 20 cents per share of Common stock have been paid for the past six years. Common dividends for the year 1942 amounted to $2,771,056. Total 1942 dividends paid to RCA stockholders amounted to $5,984,824.

In 1942, net earnings were more than 2.8 times dividend requirements on the First Preferred stock. During the six-year period, 1937 to 1942, inclusive, net earnings averaged more than 2.7 times these requirements. In the same six-year period, dividends on Common stock have totalled $16,625,120, and the company's earned surplus has been increased by $17,990,840.

What was RCA's volume of business in 1942?

The Consolidated Gross Income of RCA for the year 1942 (exclusive of foreign subsidiaries) was $197,024,056.

WHERE IT CAME FROM	
Manufacturing	$122,595,597
Broadcasting	52,613,910
Communications	14,497,197
All Other Sources	7,317,352
Total	$197,024,056

WHERE IT WENT	
Cost of Raw Materials, Supplies, Sustaining Program Talent, Rent, Sales and Advertising; Payments to Associated Broadcasting Stations; Research, Administration, and Other Operating Expenses	$ 92,267,770
Wages and Salaries to Employees	68,129,079
Depreciation and Interest	4,762,157
Taxes	22,862,613
Dividends to Stockholders	5,984,825
Carried to Surplus	3,017,612
Total	$197,024,056

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What is RCA's record of earnings for the past 10 years?

The earnings of RCA during the ten-year period from 1933 to 1942, inclusive, were as follows:

(The figures shown for all years prior to 1941 include Foreign Subsidiaries)

Year	Gross Income	Net Profit Before Federal Income Taxes	Federal Income Taxes	Net Profit After Federal Income Taxes	Earnings Per Share on Common Stock *(Based on present capitalization)*
1933	$ 62,333,496	$ *582,094**	——	$ *582,094**	——
1934	78,756,994	5,055,114	$ 805,850	4,249,264	$.074
1935	89,228,898	6,026,673	899,800	5,126,873	.137
1936	101,186,310	7,293,037	1,137,100	6,155,937	.212
1937	112,639,498	11,142,158	2,117,300	9,024,858	.418
1938	99,968,110	9,095,772	1,683,700	7,412,072	.302
1939	110,494,398	10,149,511	2,066,700	8,082,811	.350
1940	128,491,611	13,364,656	4,251,500	9,113,156	.425
1941	158,695,722	26,566,316	16,373,600	10,192,716	.502
1942	197,024,056	28,077,287	19,074,850	9,002,437	.417

**Loss.*

What are the working capital and net worth of RCA?

RCA's working capital (the excess of current assets over current liabilities) at December 31, 1942, amounted to $104,813,081. RCA's net worth on the same date was $81,357,902.

The total assets of RCA, as shown by its consolidated balance sheet on December 31, 1942, were $212,082,759, divided as follows:

Current Assets		
Cash and Government Securities		$75,598,697
Notes and Accounts Receivable (less reserves)		31,701,981
Inventories (less reserves)		49,254,446
Total Current Assets		$156,555,124
Investments in and Advances to subsidiary and other companies*		$11,187,033
Plant and Equipment (less reserves)		32,390,284
Patents (less reserve) and Goodwill		8,941,659
Other Assets		3,008,659
Total Assets		$212,082,759

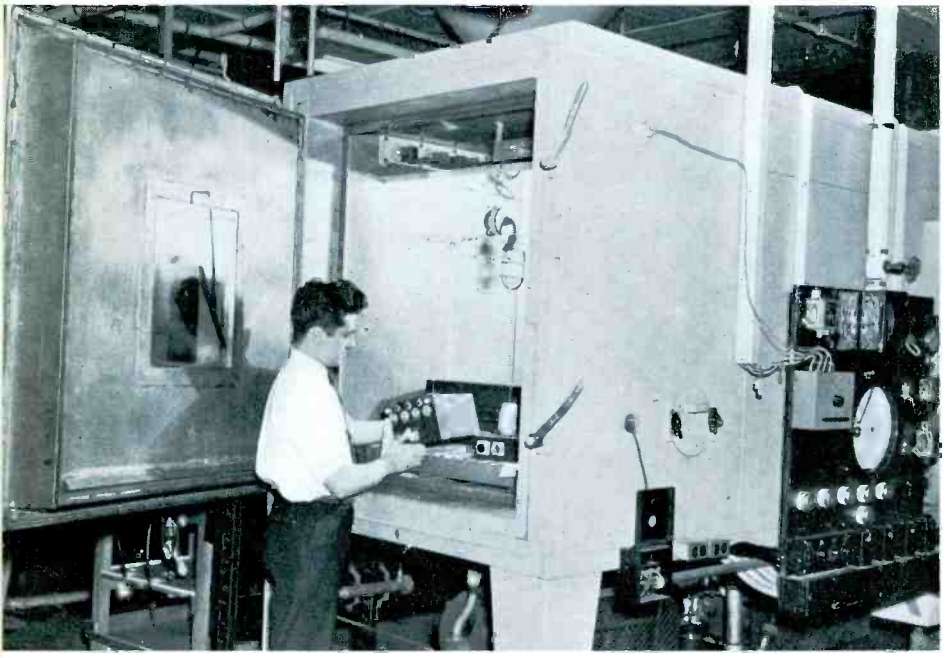
The total liabilities were:

Current Liabilities		
Accounts Payable and Accruals		$25,448,352
Provision for Federal Income Taxes		22,719,567
Dividends Payable		3,574,124
Total Current Liabilities		$51,742,043
Bank Loans and Contract Payable		75,200,000
Reserve for Contingencies		3,782,814
Total Liabilities		$130,724,857
Net Worth consisted of		
General Reserve	$ 5,441,301	
Capital Stock, at a stated value of	42,591,112	
Earned Surplus	33,325,489	
Total Net Worth		81,357,902
Total Liabilities and Capital		$212,082,759

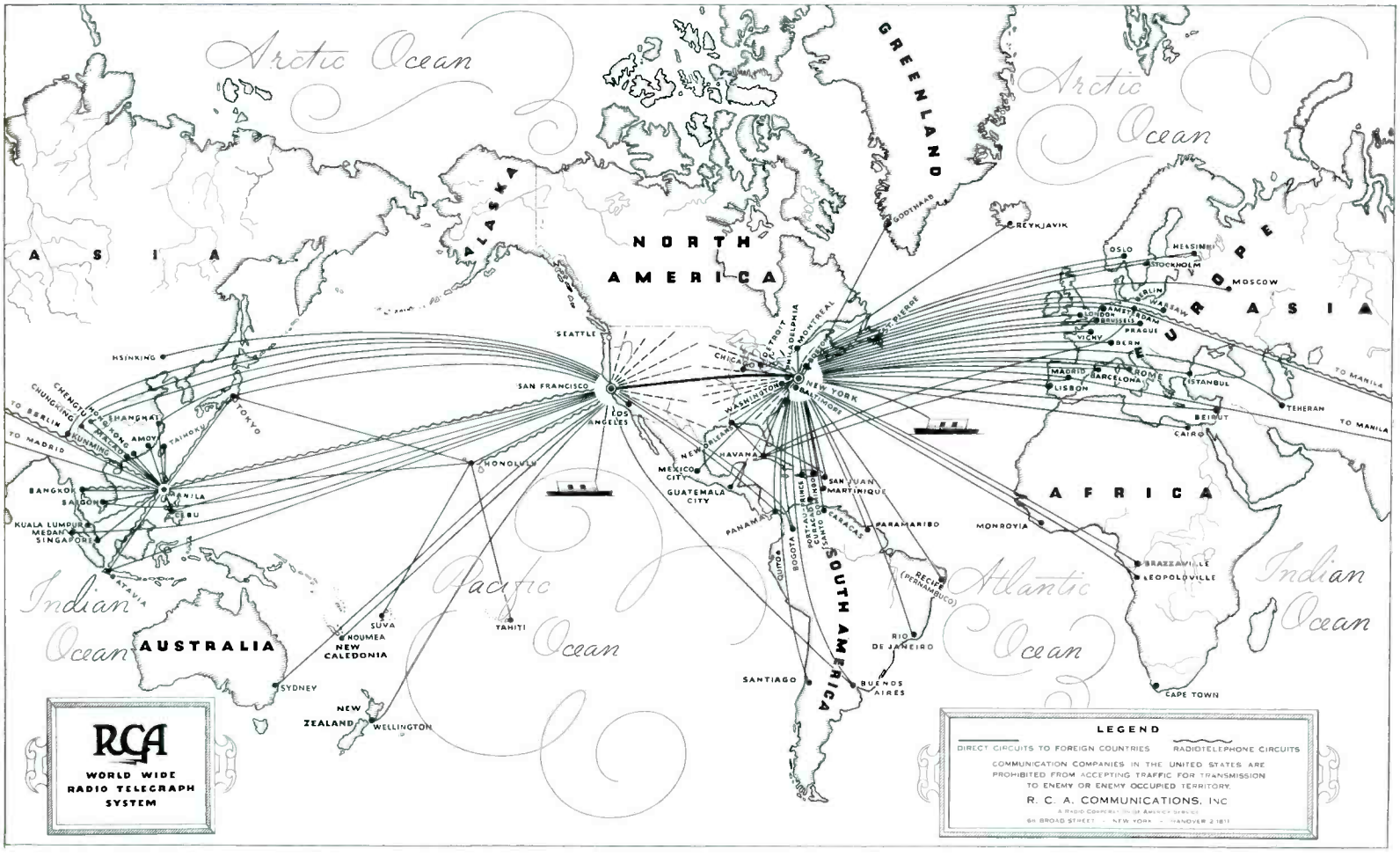
*This includes investments in foreign subsidiaries, at an amount representing approximately 4.7% of net worth. More than nine-tenths of the net assets of these foreign investments are located in Canada and Latin America.

NOTE: The Assets, Liabilities and Capital, as tabulated on this page, are merely a summary of the Consolidated Balance Sheet of RCA on December 31, 1942. For complete facts and figures, please refer to the Annual Report of Radio Corporation of America for the year 1942.

Skilled women workers of RCA have an important part in the assembly of radio equipment used in the war. →



← To withstand the wide variety of climatic conditions to which radio sets are subjected in wartime, RCA receivers undergo tests of 152° heat and 22° below zero. In this chamber, humidity tests are applied.



RCA radiotelegraph circuits help to make the United States the communication center of the world.

What is RCA's role in the war?

Radio is a powerful arm of modern warfare. RCA personnel, facilities and services are concentrated to the utmost to make the radio arm of the United States strong and efficient to help in every way possible to win the war. Of the more than 4,000 RCA employees, who have joined the armed forces of the United States, sixteen have given their lives to the Nation's cause.

Plants of the RCA Victor Division are "arsenals" of radio apparatus essential for successful conduct of the war by the military and naval forces of the United States and its allies. Geared for all-out wartime production, RCA is a bulwark of the nation's radio communication lines. War called for total effort, and the workers on the production lines responded. They worked to produce the finest radio equipment in the world. They increased their efficiency and conserved materials essential to the war-effort. Work hours were increased; speed of production accelerated.

Radiotelegraph circuits normally are operated by R.C.A. Communications, Inc., to fifty-one countries, providing the United States with an international web of communication. In wartime these circuits assure continued contact with outposts near and far regardless of enemy activity or control over intervening seas or territories.

In RCA Laboratories research and development are being expanded. Research fortifies the nation's radio communication. Under the impetus and demands of war, achievements of scientists are multiplied. In normal times the inventions of RCA are made available to competing manufacturers by means of licenses. During the war the Government is licensed under RCA patent rights to make, and to have others make, various types of radio apparatus for war use.

In this war, which strikes directly at civilian populations, radio broadcasting, undeveloped in the first World War, now is a powerful factor. It is a voice of civilian defense. The National Broadcasting Company and the Blue Network Company—services of RCA—are keeping the people informed. The international short-wave beams of NBC are giant spearheads of truth that penetrate those areas of the world where facts are blacked out.

To every vessel radio is of increased importance in wartime. The Radiomarine Corporation of America is helping to equip the Liberty Fleet with radio installations. Through its specially designed marine apparatus, RCA is safeguarding life and property at sea; radio is an invisible guard of the convoy.

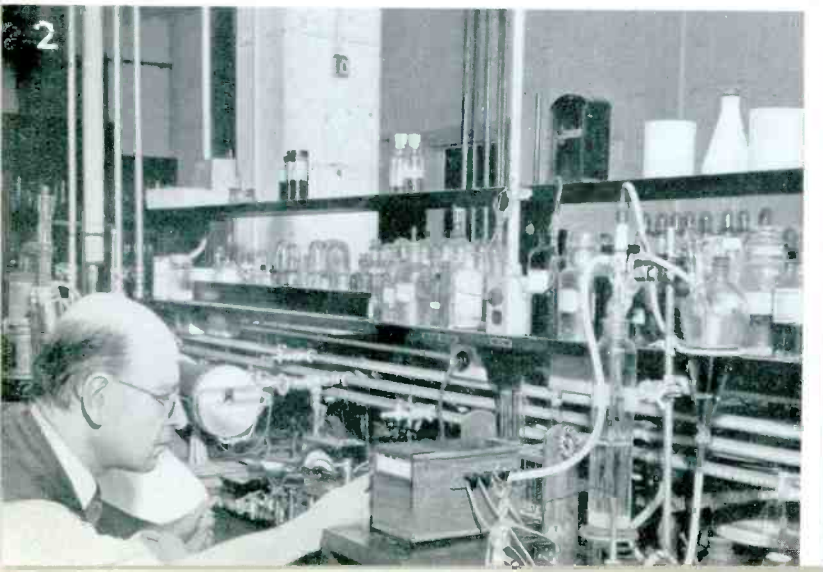
To operate the mighty radio communication system of this nation calls for manpower as well as kilowatts. RCA Institutes, New York, the oldest radio training school of its kind in the United States, has war-radio as its No. 1 course.

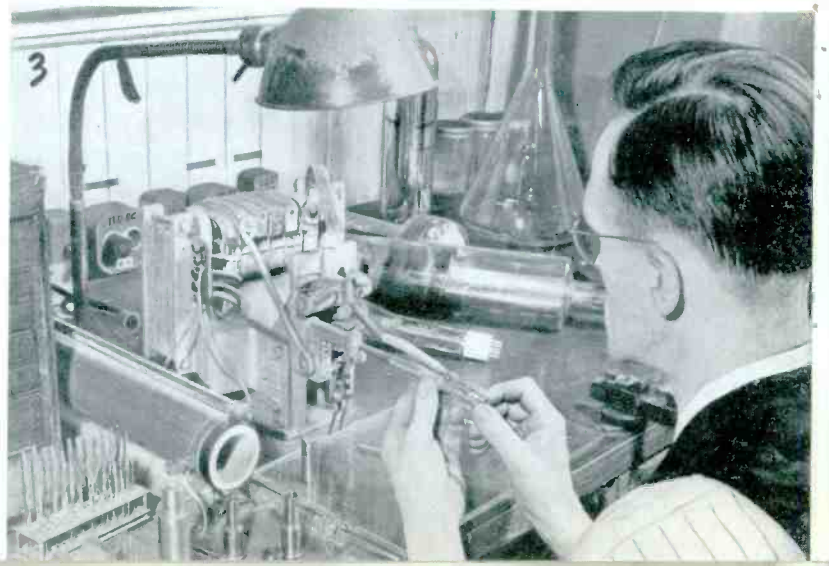
RCA Laboratories, a new center of radio and electronic research, at Princeton, N. J.

(1) The first RCA Laboratory, in 1919, was located in a tent at Riverhead, L. I., which became the site of RCA's "Radio Central" for world-wide communication.

(2) The chemical section of RCA Laboratories plays an important part in the development of electron tubes.

(3) Building an electron gun is a meticulous job for it is a delicate, yet powerful element in the "eye" of the television camera and receiver.





RESEARCH AND ENGINEERING

What is the policy of RCA toward scientific research?

Since its formation, the Radio Corporation of America always has conducted progressive research. It recognizes research as the guarantee of continued progress. Research in radio is basic insurance for the future, for it assures steady growth and increased efficiency as well as successful competition. RCA research activities are centralized in new RCA Laboratories, designed to be the foremost center of radio and electronic research in the world.

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What is the purpose of RCA Laboratories?

The primary aim of RCA Laboratories is to increase the usefulness of radio and electronics to the nation, to the public and to industry. The further objective is to discover the needs for, and to create new products, services and markets. Scientific investigations continuously conducted by RCA are directed toward constant improvement in methods and devices for every branch of radio and its production processes.

Scientists and engineers in the Laboratories have discovered keys of science that have unlocked the gateways of ethereal communication from international short-wave radio to television. It is through long years of tireless work in the laboratory, and in field tests conducted on a globe-girdling scale, that the utility of radio has been extended as a service to the American people. The horizons of these services are ever-widening. It is research that keeps the sphere of radio spinning in its orbit of technical progress.

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Is RCA research confined to radio?

Since modern radio is so closely allied with many branches of science such as electronics and optics, the practical application of inventions in radio leads naturally into related fields including acoustics and the general applications of sound. RCA research, therefore, continually is spreading. For example, as a result of research in television, RCA has developed extremely important "by-products." Investigations directed to the advance of radio and electronics are extending deeply into the fields of chemistry, physics and metallurgy, encompassing such studies as luminescent and fluorescent materials, glass, lenses and specialized work in plastics.

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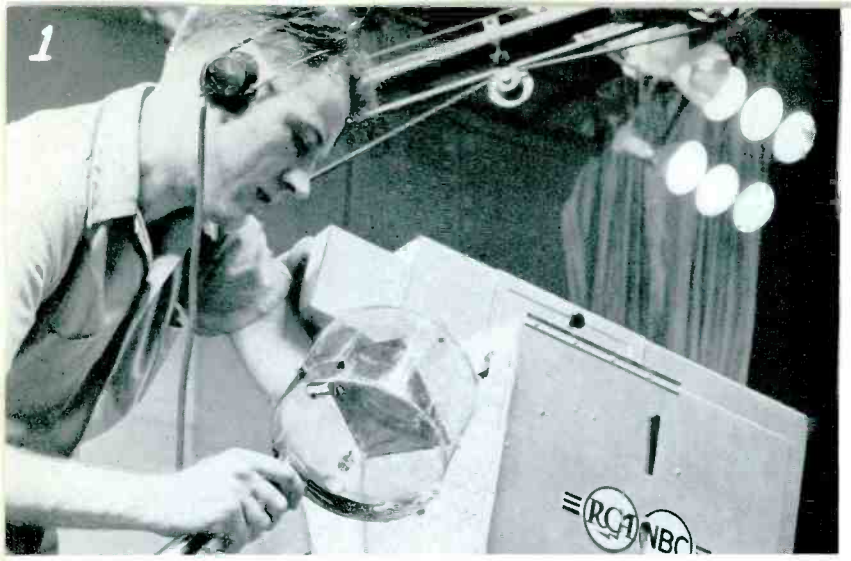
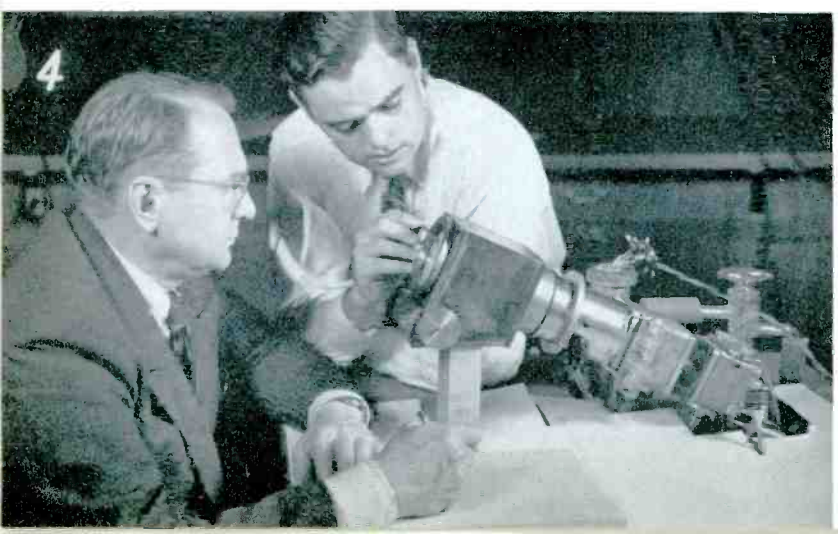
Does RCA make its inventions and patents available to other manufacturers?

RCA has more than 170 patent licensees, competitive manufacturers in radio and other fields. Under the company's license policy numerous sources of supply are open to the Government and to the public. To assist its licensees, RCA Laboratories maintains an Industrial Service Section through which licensees are kept informed of new technical developments and are advised how best to apply them.





(1) The electronic eye of television, known as the Iconoscope, is a development of RCA Laboratories.

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(2) Aircraft radio equipment built by RCA is put through rigid tests in the rarefied atmosphere of an altitude chamber.

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(3) By replacing worn-out elements, skilled RCA workers instituted an extensive program for reclaiming radio tubes for the war effort.

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(4) Dr. V. K. Zworykin and Dr. James Hillier demonstrating an experimental model of new RCA portable electron microscope, 16-inches long and capable of magnification equal to that of the standard-size instrument.

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(5) Radio facsimile receiver-printer developed in RCA Laboratories for reproducing a newspaper by radio in home or office, or shipboard or in a plane.

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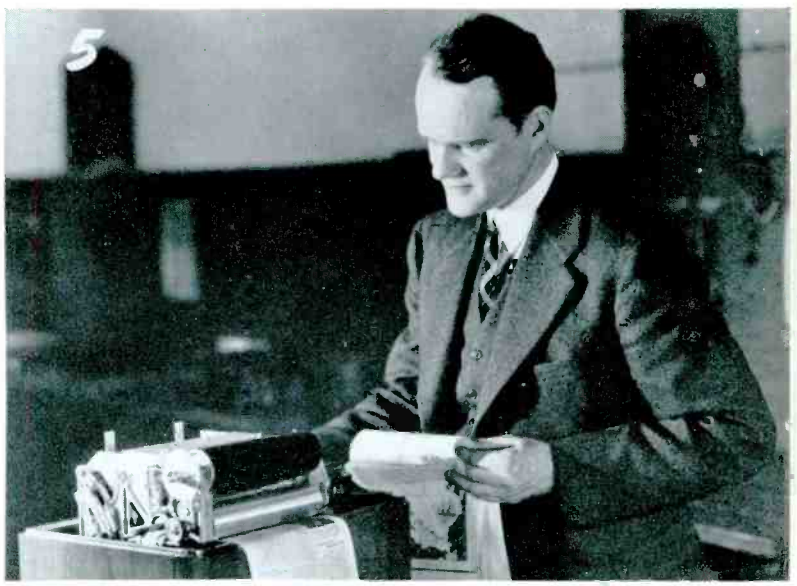
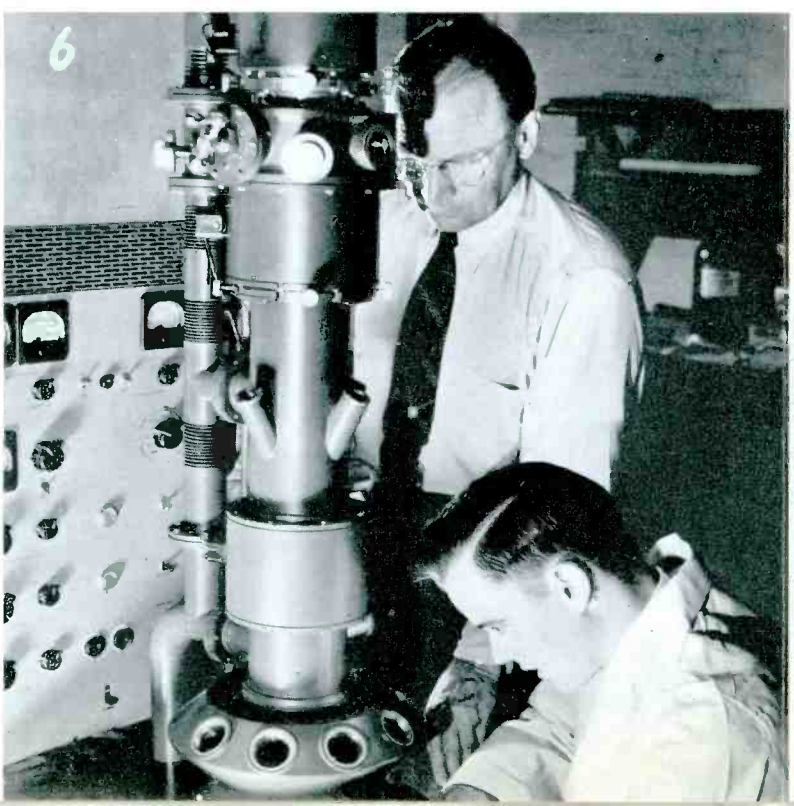
(6) The RCA Electron microscope, which can magnify up to 100,000 times, has opened the unseen, submicroscopic world for exploration by the human eye.





What are some of the outstanding developments of RCA research?

RCA's pioneering work has made many of the foremost contributions to world-wide radio communications. High on the list of developments is the electronic system of high definition television, which makes radiovision all-electronic by dispensing with moving mechanical parts such as motors and revolving disks. Pursuing original investigations in ultra-high frequencies, new applications have been made in this spectrum of tiny waves, including uses in television and in automatic radio-relay stations. Sound being the backbone of radio, widespread research has been conducted with fruitful results in acoustics; also in recording and reproduction of sound, in domestic and international broadcasting, as well as in the motion picture and phonograph fields. Research in television, which led into the realm of electron optics, has brought numerous revolutionary developments, including the RCA electron microscope. Many types of vacuum tubes have been created for myriad uses in radio and industry. The electron multiplier tube, designed to convert a feeble light impulse into electricity and multiply its strength, is one of the most fascinating devices now in the hands of the scientist.

Explorations in radio have pointed the way to useful developments applicable to other fields; for example, efforts in television research to find a way of eliminating reflections from glass, led to RCA's chemical process for making reflectionless glass, and the Magicote process that greatly increases the efficiency of lenses. Extensive investigations are being made in radiothermics, the application of heat generated by high-frequency radio waves, and in supersonics.

The RCA radiophoto system brings pictures in a few minutes over long distances, and when war created the need, RCA opened new circuits for reception of photographs from Russia and Australia when no other means of quick delivery were available to match radio's speed. Research made that possible. Facsimile transmission and reception multiplexed with sound is another RCA development. High-speed automatic sending and receiving machines, including automatic printers, now operate on the communication channels.

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What is the RCA electron microscope?

As perfected in RCA Laboratories, the electron microscope is an epochal development in scientific instruments. Using electrons — infinitesimal bits of electricity—instead of rays of light, and magnetic or electrostatic fields instead of glass lenses, it enables the human eye to see deeply into the sub-microscopic world. Magnifications up to 100,000 diameters are obtainable. This instrument made it possible for the first time to photograph the tiny influenza virus and many other infinitesimal organisms, revealing their shapes as well as size. The electron microscope used by science and industry, in laboratories, universities and hospitals is finding ever-increasing service. It is an instrument in the all-out war effort.

PIONEERING

What are some of the RCA "FIRSTS" in the Radio Field?

World-wide communication inaugurated by RCA in 1920 was greatly extended in 1921 with the opening of "Radio Central" on Long Island, featuring the 200-kilowatt Alexanderson alternators.

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

High-speed transmitters and automatic receivers installed on ocean liners in 1923 to handle increased radio traffic.

Short waves applied in 1924 to RCA transatlantic communication featuring vacuum tubes rated at 20 kilowatts.

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

Pictures of President Coolidge, Prince of Wales and others sent by RCA radio facsimile from London to New York on November 30, 1924.

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

Broadcasting transmitters of RCA participated in 24 station hook-up handling Coolidge inaugural in 1925, first event of its kind on the air.

Initial international broadcast program transmitted from Chelmsford, England, picked up at Belfast, Maine, and relayed by short wave to New York, for rebroadcast by RCA's station WJZ, March 1925.

Radio facsimile messages, maps and pictures sent by RCA radiophoto system on May 7, 1925, from New York to Honolulu.

Picturegram of a check sent from London to New York by RCA radiophoto on April 20, 1926, was honored and cashed in New York.

Radio receiving sets and tubes designed for complete alternating current operation, introduced by RCA for home use in 1927.

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

National Broadcasting Company organized as a service of RCA on September 9, 1926, to conduct nationwide network broadcasting.

The Radiomarine Corporation of America—a service of RCA—was organized on December 31, 1927 to operate in the marine communication field.

R.C.A. Communications, Inc., organized January 3, 1929, to conduct RCA's international radio-telegraph service; many new circuits having been opened since organization of the Radio Corporation of America in 1919.

RCA communication circuits efficiently and expeditiously handled greatly increased volume of transatlantic traffic as earthquake on November 18, 1929, snapped 10 cables on bed of the North Atlantic.

Television on a 6x8 foot screen shown by RCA on January 16, 1930, at RKO Proctors 58th Street Theatre, New York; pictures transmitted from station W2XBS, 411 Fifth Avenue.

New noiseless system of recording introduced to the motion picture industry by RCA in 1931; also a low-cost sound-picture producer for alternating current operation.

Empire State Building selected in June, 1931, as site for RCA-NBC television station for experimental field tests.

Self-contained, portable ultra-high frequency knapsack transmitter built by RCA in 1932 for use in broadcasts of outdoor events and for military scouts in the field.

Electron multiplier tube developed by RCA Laboratories demonstrated in 1935, multiplies amplification hundreds of thousands of times within a single tube.

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

First ultra-high frequency automatic relay circuit opened by RCA in 1936, between New York and Philadelphia, transmits simultaneously facsimile and multiple radiotelegraph messages.

Television outdoors demonstrated by RCA on April 24, 1936, at Camden, N. J.

Electron projection "gun" demonstrated on May 12, 1937, by RCA engineers at I.R.E. Convention, projected television pictures on screen 8 by 10 feet.

Testing the range of ultra-short wave television signals, RCA experiment in plane 20,000 feet over Washington, D. C., picked up pictures from NBC studios in Radio City, on October 17, 1939.

First full-size symphony orchestra organized exclusively for broadcasting introduced by NBC under Arturo Toscanini, conductor, in 1937.

Mobile television station of RCA-NBC appeared on streets of New York for first time, December, 1937.

RCA announced on October 20, 1938, at Radio Manufacturers Association meeting, that television sets would be offered to the public in April 1939 as a feature of the New York World's Fair.

Opening ceremonies on April 30, 1939, of New York World's Fair televised by RCA-NBC, including President Roosevelt as first Chief Executive to be seen on television.

Columbia-Princeton baseball game of May 17, 1939, televised by RCA-NBC as "a first from the diamond."

Improved television "eye" called the "Orthicon" introduced by RCA on June 7, 1939, to give greater clarity and depth to television pictures.

First college football game, Fordham-Waynesburg, televised by RCA-NBC on September 30, 1939.

Portable television equipment demonstrated to FCC by RCA on December 1, 1939, dispensed with motor truck mobile stations.

Dr. V. K. Zworykin of RCA Laboratories, in December 1939, at the annual meeting of the American Association for the Advancement of Science, announced that he was working on the development of an electron microscope; in April 1940 he announced the completion of the instrument which has attained magnifications up to 100,000 diameters.

Color television demonstrated to FCC by RCA on February 6, 1940, at Camden, N. J.

Television on 4½ by 6-foot screen demonstrated by RCA at stockholders meeting on May 7, 1940.

Election returns on November 5, 1940, telecast for the first time as RCA-NBC showed teletypes of press associations reporting the news, as well as commentators at the microphones.

Television progress demonstrated to FCC on January 24, 1941, included: home-television receiver with 13½ by 18" translucent screen; television pictures 15 by 20 feet at New Yorker Theatre screen; pictures relayed by radio from Camp Upton, L. I., to New York; also facsimile multiplexed with frequency modulation sound broadcast.

Large-screen television featuring Overlin-Soose prize fight on May 9, 1941, at Madison Square Garden, demonstrated by RCA at New Yorker Theatre; also on following days, baseball games from Ebbets Field, Brooklyn.

Radiophotos, the first ever received in New York from Moscow, picked up by RCA on July 8, 1941.

RCA Alert Receiver turned on and off by a special signal from broadcast transmitter, rings bell, lights electric lamp or blows siren to summon listeners, demonstrated on July 28, 1941, for use in civilian defense.

Ground broken on August 8, 1941, for new RCA Laboratories at Princeton, N. J., to be the foremost center of radio and electronic research in the world; cornerstone laid on November 15, 1941.

RCA electron microscope at the University of Pennsylvania magnified the influenza virus 65,000 times, making possible the first photograph ever taken of the virus, as announced on November 22, 1941.

First direct radiophoto circuit between Australia and United States opened by RCA (March 20, 1942); between New York and Cairo, (June 24, 1942); first radiophoto from Sweden received in New York, (Nov. 16, 1942); New York-Dakar circuit opened March 10, 1943.

BROADCASTING

How did the idea of broadcasting as a public service originate?

In 1916, David Sarnoff, then Assistant Traffic Manager of the Marconi Wireless Telegraph Company of America, proposed a "radio music box," in a memorandum to E. J. Nally, General Manager. Said Mr. Sarnoff: "I have in mind a plan of development which would make radio a household utility in the same sense as a piano or 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 of 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 and received. Baseball scores can be transmitted in the air by the use of one set installed at the Polo Grounds. The same would be true of other cities. 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."

The World War delayed demonstration of the practical value of the idea, but on November 2, 1920, when the Westinghouse station, KDKA, Pittsburgh, broadcast the Harding-Cox election returns, the "radio music box" became front-page news; and again in 1921, when RCA station WJY broadcast the Dempsey-Carpentier championship fight at Jersey City.

•

When did RCA enter the broadcasting field?

RCA's station WDY, at Roselle Park, New Jersey, licensed September 19, 1921, went on the air December 14, 1921, as a pioneer broadcaster in the New York area.

•

How long has the National Broadcasting Company been on the air?

In September 1926, the National Broadcasting Company was organized as a service of RCA. At that time statistics indicated 5,000,000 homes were equipped with radio, and to serve them the aim of the NBC was "to provide the best programs available for broadcasting."

To accomplish this NBC had two stations in New York. WJZ, originally operated by the Westinghouse Electric & Manufacturing Company at Newark, N. J., had been acquired by RCA in 1923 when the station was moved to New York City atop Aeolian Hall on 42nd Street. Station WEAF, New York, was purchased by RCA in 1926 from the American Telephone and Telegraph Company.

Did NBC always operate two networks?

After NBC formed the Red network in 1926, with WEAF, New York, as the key station, it became apparent that a single network service was not enough to satisfy the demands of the radio audience for diversified programs of national interest and importance. Station owners, particularly in cities where their competitors had made program service arrangements with the Red network, pressed for network affiliations. To accommodate this demand and the public interest, less than two months after the first NBC network service began, a second network—the Blue—with WJZ, New York, as the key station, was formed.

NBC for 15 years operated these two networks. The Blue network was organized as a separate company on January 9, 1942, becoming a wholly-owned subsidiary of RCA.

•

Where are the NBC and Blue Network studios located?

Main offices and studios of the National Broadcasting Company and the Blue Network Company are located in the RCA Building, New York City. They also have offices and studios in Chicago, Illinois; Hollywood, California; and Washington, D. C.

•

How many stations are affiliated with the NBC network?

139 stations are affiliated with NBC. Six stations are owned by NBC. They are: WEAF, New York; WRC, Washington; WTAM, Cleveland; WMAQ, Chicago; KOA, Denver; KPO, San Francisco.

•

How many stations are on the Blue Network?

147 stations are affiliated with the Blue Network Company. It owns three stations: WJZ, New York; WENR, Chicago; KGO, San Francisco.

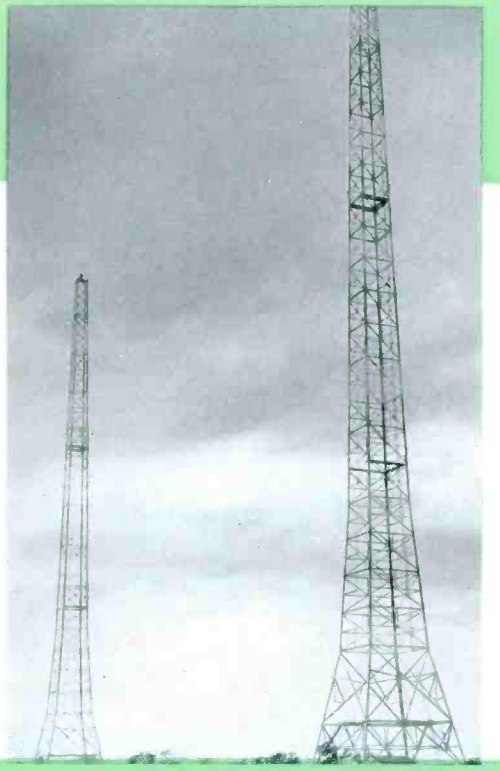
•

What percentage of NBC and Blue Network program hours are sponsored?

Approximately 42% ; the remaining 58% are presented at the expense of the Companies themselves. For example, several of the outstanding sustaining programs—those which are not commercially sponsored —are the Farm and Home Hour, America's Town Meeting of the Air, the NBC Symphony Orchestra, Boston Symphony Orchestra, the "Army Hour," the Red Cross program, "That They Might Live," the University of Chicago Roundtable, the various religious and educational programs as well as numerous patriotic broadcasts.

Joe Louis, heavyweight champion of the world broadcasting on "the Army Hour," while the son of Col. Neil J. O'Brien is happy to be at the radio "ringside."

Millions of guests have passed through this entrance to NBC's studios at Radio City to watch the broadcast entertainers in action at the microphones.



From these lofty towers on Long Island, WEAF's programs are broadcast.

Niles Trammell, President of the National Broadcasting Company.

The master control board of NBC is a central point where stations scattered across the country are linked with Radio City to form a nationwide network.

The international division of NBC is staffed by linguists and those who handle thousands of letters received from all parts of the world.

British evacuee children, a sister and her brothers in Radio City, talking with their parents in England.

NBC Symphony Orchestra under the direction of Maestro Arturo Toscanini, broadcasting to a nation-wide audience.

Mark Woods, President of the Blue Network Company, Inc.

The new stage, band-stand and seating arrangement of NBC's studio 8-H, largest in the world, at Radio City.

Does NBC broadcast by short-wave to foreign countries?

The NBC, through its International Division, broadcasts programs in nine languages by short wave to all parts of the world, totaling 22¾ hours a day, through its 50,000-watt transmitters WRCA-WNBI, Bound Brook, N. J. Since the Government pooling arrangement of short-wave transmitters, these transmitters are at times used to carry programs other than those of NBC, while additional transmitters are assigned to carry NBC programs, — this to secure maximum efficiency in short-waving the message of the United States abroad.

•

Are short-wave broadcasts heard everywhere?

This depends on the aerial and the frequency (wavelength) used for transmission. Broadcasts from non-directional aerials can be heard over widely scattered areas. However, in short-wave broadcasting on an international scale, the modern practice is to use a highly directional aerial which concentrates and multiplies the signal output in a pre-determined direction, in much the same way that a searchlight casts its beam. Certain frequencies are excellent for daytime transmission but totally ineffective at night. Other frequencies are best adapted to the twilight periods, and still others are satisfactory only at night.

•

What languages does NBC use in international short-wave broadcasting?

During the daytime, NBC's schedule calls for programs to Europe in English, French, German, Italian, Swedish, Danish and Turkish. At 5:00 P.M. EWT. NBC begins its programs to Latin America in Spanish and Portuguese. Program schedules are worked out in close cooperation with the Government agencies, the OWI for short-waving to Europe and the CIAA for short-waving to Latin America.

•

Are there any radio networks in Latin America?

Yes, several countries such as Cuba, Mexico, Chile, Argentina, Uruguay, Venezuela, Colombia and Brazil have local networks that operate along the same lines as networks in the United States. More than a hundred stations in Latin America are affiliated with NBC and rebroadcast many of NBC's short-waved programs.

•

Does the NBC International Division accept commercial programs?

The NBC International Division did operate commercially on short wave, but today all short-wave programs from the United States are non-commercial on a public service basis. American sponsors throughout the country make their programs available for the entertainment on short-wave of the armed forces of the United States abroad.

Do listeners in Europe hear NBC's short-wave programs?

Letters from many parts of the world, including the conquered countries, express appreciation for NBC short-wave broadcasts and for the accurate news and truth which they carry. They applaud the fact that freedom rides these short-wave radio beams from the United States.

•

What is the NBC Advisory Council?

The NBC Advisory Council, composed of distinguished persons representing a diversity of public interests, first met in February 1927 to help NBC formulate policies and create standards which would give the American listening public, without charge, "the best programs available for broadcasting in the United States."

Membership of the Council now includes:

Dr. James Rowland Angell
President Emeritus of Yale University and now Educational Counselor to NBC

Mrs. August Belmont
Prominent in social and philanthropic work

Henry Sloane Coffin
President, Union Theological Seminary

Ada Comstock
President, Radcliffe College

Dr. Karl T. Compton
President, Massachusetts Institute of Technology

Dr. Walter Damrosch
Music Counsel of NBC

John W. Davis
Attorney and former U. S. Ambassador to the Court of St. James's

Dr. Francis D. Farrell
President, Kansas State College

William Green
President, American Federation of Labor

Lieut. General J. G. Harbord
Chairman of the Board, Radio Corporation of America, and Director, NBC

David Sarnoff
President, RCA, and Chairman of the Board, NBC

Alfred E. Smith
Former Governor of New York

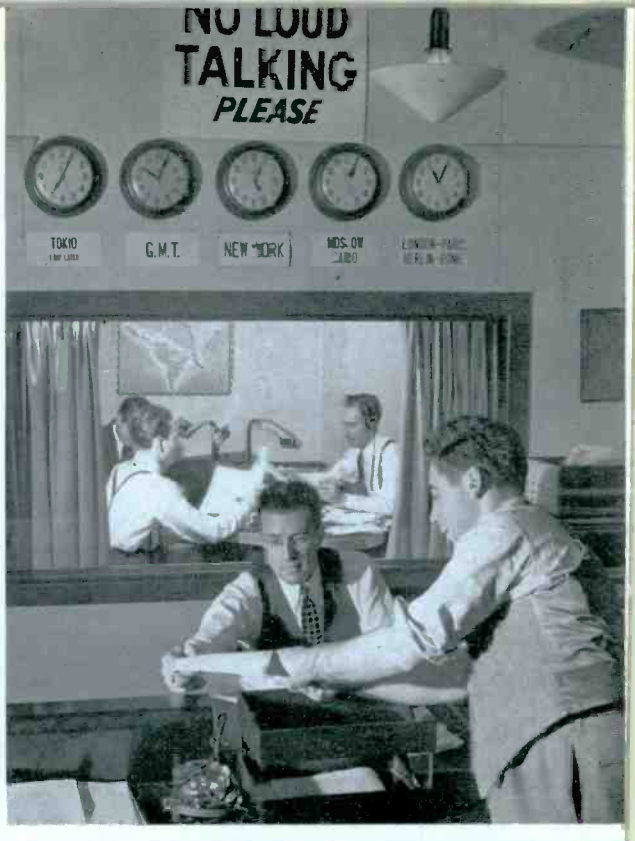
Owen D. Young
Chairman of the NBC Advisory Council and former Chairman of the Board, Radio Corporation of America

•

Do NBC and the Blue Network conduct auditions to find new talent, and if so, how does one arrange for an audition?

Yes; NBC and the Blue Network Company will give an audition to any person who believes he has talent that will qualify him for broadcasting. They conduct several thousand auditions a year, on an average of 50 a week in the dramatic field alone. Applications should be made to the Auditions Department.

Leopold Stokowski conducting
the NBC Symphony Orchestra



War has made news parallel in importance to entertainment on the air.

Choral singers lift their voices on
high through the NBC microphone.

Boston Symphony Orchestra with Dr. Serge Koussevitzky on
the conductor's stand, broadcasting over the Blue Network.

If one has an idea for a radio script or program, how may it be presented for consideration?

NBC and the Blue Network Company welcome new ideas for radio programs, as well as criticism. All program ideas must be submitted in writing on forms which may be obtained from the Program Department. They will not be accepted orally. Program ideas are handled by the Play-Reading Committee of the Script Division.

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How can tickets be obtained for admission to broadcast programs?

By writing at least two weeks in advance to the Guest Relations Division of NBC or the Blue Network. Cards of admission, if available, will be supplied.

•

Where do NBC and the Blue Network get their news bulletins?

From the leading press associations. The Associated Press, United Press and International News Service have teletype machines in the News Divisions of both NBC and the Blue Network, and make their latest news available for broadcast bulletin service.

•

Are all NBC and Blue Network overseas commentators American citizens?

Yes; all NBC and Blue Network correspondents in foreign countries are American citizens.

•

Did NBC have a coast-to-coast network when it started?

No; there was no coast-to-coast network until January 1, 1927, when the first transcontinental hook-up was arranged by NBC to broadcast a football game in the Bowl of Roses at Pasadena, Cal.

•

What was the first international broadcast?

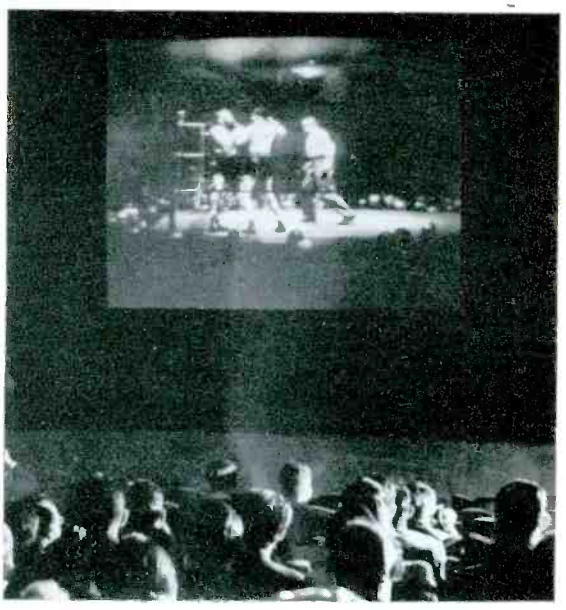
On February 14, 1925, RCA stations WJZ, New York, and WRC, Washington, D.C., rebroadcast a program sent on long waves (1,600 meters) from Chelmsford, England. The signals were picked up at Belfast, Maine, and relayed by short waves to New York. On March 12, 1925, WJZ, New York, and WRC, Washington, rebroadcast the sound of Big Ben atop the House of Parliament for the first time in America.

•

Is NBC active in "FM" broadcasting?

Yes; at the present time NBC is furnishing its network programs to five FM transmitters operated experimentally by associated network stations, as well as to its own FM station, W2XWG, New York.

Air-raid wardens in New York watching a lecture demonstration through an RCA television receiver.



Theatre television developed by RCA and demonstrated in the New Yorker Theatre featured a bout at Madison Square Garden.

Under the eye of the NBC television camera, how to fight incendiary bombs is demonstrated to air-raid wardens. ↓

1,250 feet above the sidewalks of New York, NBC television programs take wing from this modernistic antenna atop the Empire State Bldg.

Mobile television vans of RCA-NBC make it possible to televize football, baseball and other outdoor events. ↓

When did RCA start work on television?

All of RCA's activities in research and communications naturally led to television, and in 1925 definite steps were under way in the laboratory to test the possibilities of both mechanical and electronic television as a service to the public. The Iconoscope, which is the "eye" of the television camera, was invented by Dr. V. K. Zworykin, Associate Director of RCA Laboratories. The Kinescope, which serves as the "screen" of home-television sets, also was developed by Dr. Zworykin, who publicly demonstrated the electronic system of television based upon these developments in November 1929.

•

Does RCA operate television as a service to the public?

Yes; WNBT, New York's pioneer television station, with studios in the RCA Building at Radio City, is owned and operated by NBC —a service of RCA. The transmitter and aerial are atop the Empire State Building. Extensive television field tests were instituted by NBC from the Empire State Building transmitter on June 29, 1936. Since that date NBC, in cooperation with RCA engineers, has demonstrated various steps in the development of television apparatus, programs as a service to the public, and television in color.

On June 16, 1941, applications were filed by NBC with the FCC for licenses to operate commercial television stations in New York, Philadelphia and Washington. Commercial operation of television was authorized by the FCC to begin July 1, 1941, at which time WNBT went on the air as the pioneer commercial television station. Since the United States entered the war, the station has devoted much of its time to air-raid warden instructions, through the NBC's cooperation with the New York Police Department.

•

Why are ultra short-waves used for television?

Because only the ultra short-wave spectrum makes available the wide path needed for transmission of pictures in motion. It has the added advantages of minimum fading and freedom from static.

•

What is the difference between radio facsimile and television?

Facsimile is the process of transmitting still pictures or printed matter by radio and recording the subject on paper at the receiving end. The radiophotos published in newspapers are sent by a facsimile process, which is extremely rapid, though not instantaneous.

Television is transmission and instantaneous reception of both sound and sight. The images may be moving persons or scenes, which are reproduced in motion on a lighted screen. Motion pictures also can be transmitted by television.

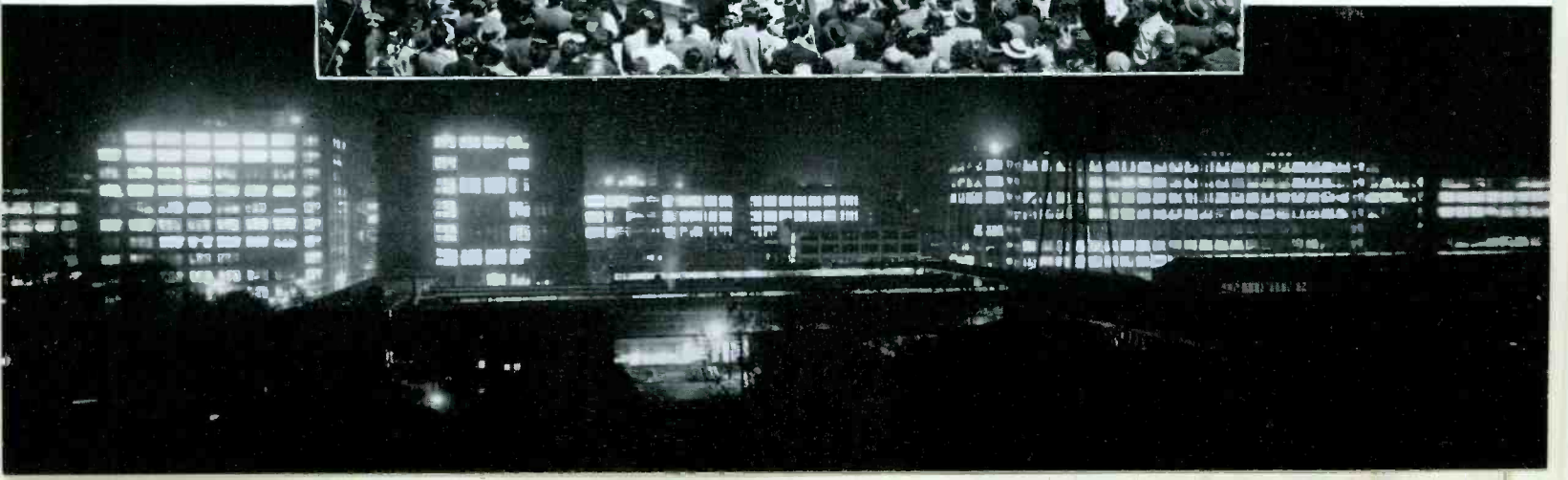
Phonograph records and electrical transcriptions are important products of the RCA Victor Division.

President Roosevelt, at the White House, presents Edwin C. Tracy the WPB's highest award for Individual Production Merit, while another RCA man, Stanley Crawford (left background) received a Certificate of Individual Production Merit.

Robert Shannon, General Manager, RCA Victor Division.

Three RCA plants have been awarded Army-Navy "E" flags for war production achievement; here the presentation of the flag is being made to the RCA Victor Division, Camden, N. J.

In wartime, RCA manufacturing plants are arsenals of radio, producing equipment for America's armed forces on land, sea and in the air.



MANUFACTURING

When was the Manufacturing Division of RCA organized?

When RCA was formed its primary activity was in transoceanic and marine communications. Agreements were made whereby the General Electric Company and Westinghouse Electric & Mfg. Co. would manufacture the radio products and RCA would sell them. So rapid were the developments and changes in the newly created art and industry that by 1929 it became necessary for RCA so to organize its business that it could combine manufacture with sales under unified management. RCA at that time had no manufacturing rights or manufacturing facilities. Coupled with this fact, it became evident that radio and the phonograph were by nature complementary in the home entertainment field, with a common future.

Therefore, to obtain manufacturing facilities as well as an established phonograph and record business, RCA in 1929 acquired the Victor Talking Machine Company. Arrangements were made near the end of 1932 whereby RCA acquired manufacturing rights and radio manufacturing facilities from the General Electric and Westinghouse Companies. RCA's manufacturing activities may therefore be said to date from 1933, although it was not until the latter part of 1934 that the various units engaged in the manufacture and sale of RCA products were brought together under unified management in the RCA Manufacturing Company, a newly formed, wholly-owned subsidiary of RCA. Effective December 31, 1942, RCA Manufacturing Company, Inc., was consolidated with Radio Corporation of America, becoming the RCA Victor Division of the Company.

•

What are the products of the RCA Victor Division?

War shifted manufacturing in RCA plants to a wartime basis. Production of apparatus for the armed services has the right of way. Many of the principal peacetime products of normal times, as listed below, have been adapted to war requirements, or their manufacture discontinued since this Division is engaged almost entirely in war work.

Apparatus and technical services for the United States Government

RCA Victor Radio Receivers

RCA Victor Radio-Phonographs

Radio and Electronic Tubes

Broadcasting Transmitters and Studio Equipment including microphones, control panels, etc.

Television Receivers, Transmitters and Studio Equipment

Equipment for Radio Communication and Facsimile Systems

Aircraft and Airport Radio Equipment

Police Radio Systems

Aviation Radio Systems

Radio Laboratory and Test Equipment

Victor and Bluebird Records

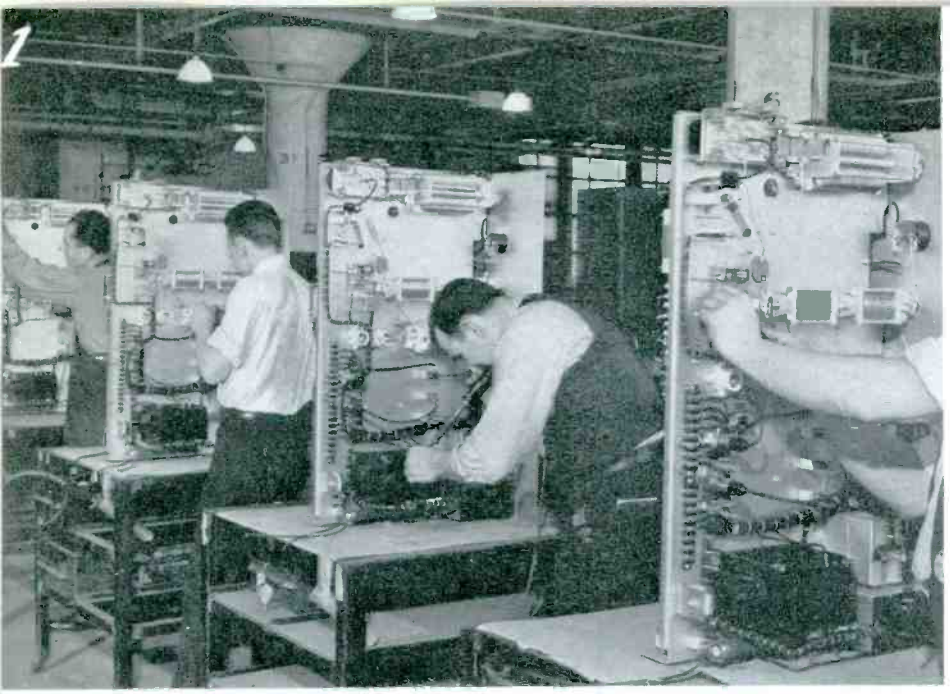
Photophone Sound Equipment for Motion Picture Studios and Theatres

Sound Systems for Educational and Industrial Uses

16 mm. Motion Picture Projectors for School and Home

Equipment for Amateur Stations

Electron Microscopes



(1) Radio transmitters on the RCA assembly line.

•

(2) Following the blueprints, RCA technicians build marine radio sets designed to withstand the rigors of the sea.

•

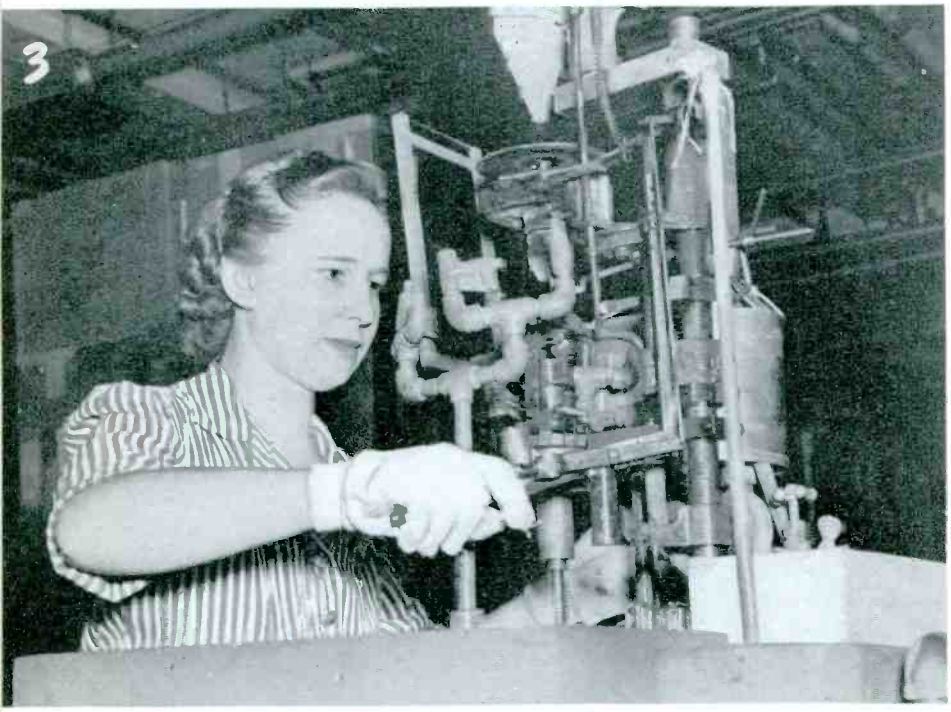
(3) Through skilled hands and machinery, thousands of RCA tubes daily find their way into production for wartime service in radio and industrial fields.

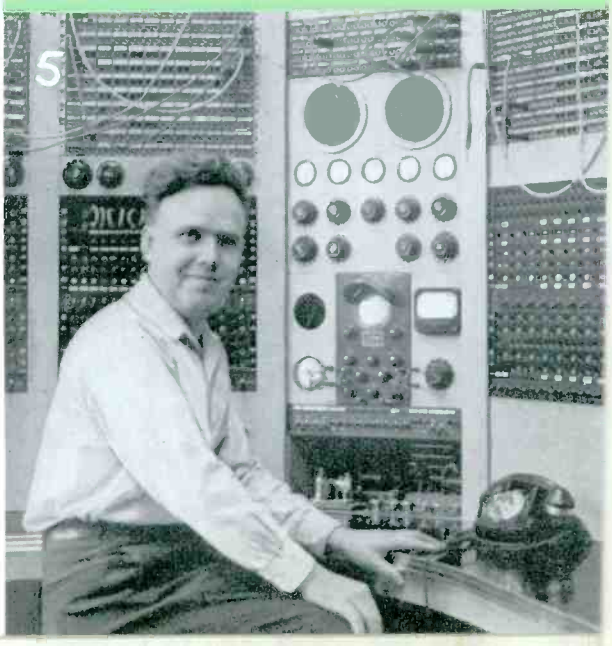
•

(4) Delicate, precision radio-tube assembly in the RCA Victor plant is done to the tune of music; note the overhead loudspeakers.

•

(5) Through this unique radio switchboard, at Rocky Point, L. I., as many as 12 different long-distance radiotelegraph transmitters can be controlled over a single pair of wires from RCA's operating terminal in New York.





Where are RCA manufacturing plants located?

The RCA Victor Division has six plants. Two are located in New Jersey, two in Indiana, one in Pennsylvania, and one in California.

The company has foreign subsidiary manufacturing companies with plants located in Montreal, Canada; Mexico City, Mexico; Buenos Aires, Argentina; Rio de Janeiro, Brazil; Santiago, Chile; London, England; and Sydney, Australia.

•

Has the war curtailed the manufacture of home-radio sets?

The RCA Victor Division, following the outbreak of the war in Europe in September 1939, planned and instituted a program of conversion of plant, machinery and man-power from a commercial to a war production basis.

The War Production Board, on March 7, 1942, ordered that the manufacture of radio sets and phonographs for civilian use be discontinued after April 22, so that the fifty-five manufacturers in the industry could devote their plants to war production; chiefly, radio apparatus for the Army and Navy.

For outstanding results in production the RCA Victor Division at Camden, N. J., has been awarded the Army-Navy "E" flag with two stars, while the radio tube plant at Harrison, N. J., also flies the Army-Navy "E".

•

Does RCA make phonograph records?

Since 1901, the RCA Victor Division and its predecessor in the phonograph field — the Victor Talking Machine Company — have been recognized as leaders in the technical development and commercial expansion of sound recording and reproduction for the home. Victor developed the phonograph as a musical instrument and introduced it into millions of homes. RCA Victor, drawing on the new-found knowledge of radio research, modernized the instrument and the art of electrical recording to a high state of perfection.

The company has contributed immeasurably to the public's acceptance of recordings by its long established policy of presenting the works of distinguished artists and musical groups, from Caruso to Toscanini and the NBC Symphony Orchestra. Another important factor is the presentation of popular music on Blue Bird Records.

•

Where can I buy an RCA radio?

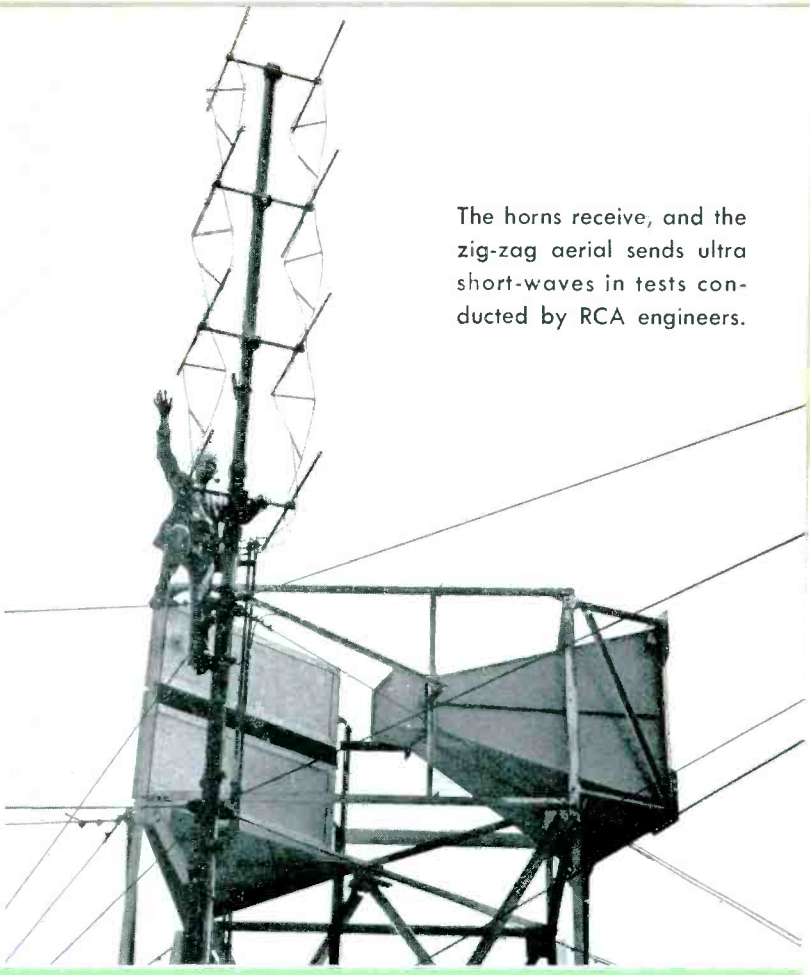
In normal times, RCA radios, tubes and phonograph records are sold by retail merchants in every important city and town in the country.

•

What is RCA Photophone?

RCA Photophone is a perfected method of recording and reproducing sound on film. Today, Photophone equipment is used in theatres throughout the world. RCA Laboratories has pioneered in development of many technical improvements in motion-picture sound. RCA Photophone equipment is playing an important part in war operations. This sound-motion picture apparatus is being used extensively by the armed services for training purposes.

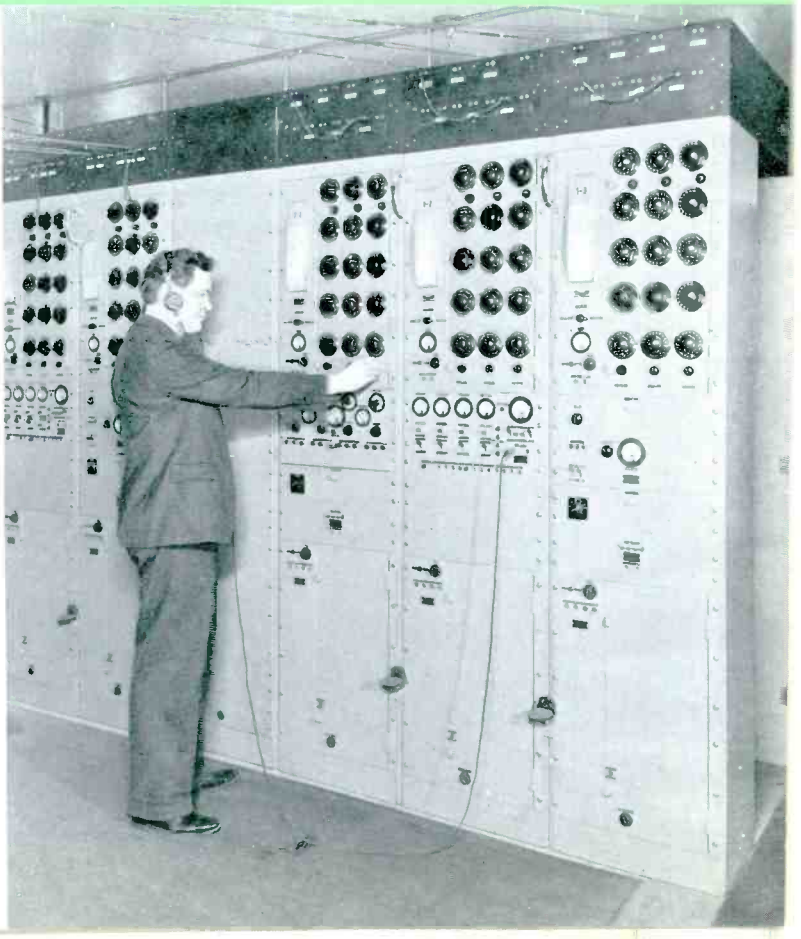
William A. Winterbottom
Vice-President and General Manager
of R.C.A. Communications, Inc.



The horns receive, and the zig-zag aerial sends ultra short-waves in tests conducted by RCA engineers.

Along RCA's radio runway to South America automatic sending machines and tape receivers handle the traffic at high speed.

Diversity short-wave receivers, an RCA development installed at "Radio Central's" receiving outpost at Riverhead, Long Island, are a great boon to international reception.



COMMUNICATIONS

What is R.C.A. Communications, Inc.?

Following its organization in 1919, the Radio Corporation of America promptly undertook the task of establishing an independent all-American, world-wide radiotelegraph system. RCA's international communication service, therefore, was one of its first activities. By 1929 the system had become so extensive that on January 3, R.C.A. Communications, Inc., was created as a separate company instead of a department of RCA. It is, however, wholly-owned by the Radio Corporation of America and is engaged primarily in international message (Radiogram) communication as a service to the public.

•

What is the extent of RCAC radiotelegraph service?

Direct radiotelegraph circuits with 51 countries in Central and South America, the West Indies, Europe, Asia, Africa and Australasia, normally are operated by RCAC. While the war has caused temporary suspension of communication on several of the circuits, it also has resulted in important extensions. Through the available circuits Radiograms may be delivered directly or forwarded by relay to practically any place in the world.

•

Where are RCAC's main transmitting and receiving stations?

RCAC's main transatlantic stations are located on Long Island, with the receiving station at Riverhead and the transmitters at Rocky Point. Supplementary transmitting stations are located at New Brunswick, and Tuckerton, N. J., and Marion, Mass. All are linked directly with New York and are operated by remote control from the company's Central Radio Office at 64 Broad Street. Incoming signals received at Riverhead are relayed automatically to the Central Radio Office.

The main transpacific office of RCAC is in San Francisco. The transmitting and receiving stations are located respectively at Bolinas and Point Reyes, Cal.

•

Can radiotelegraph messages be sent to cities within the United States?

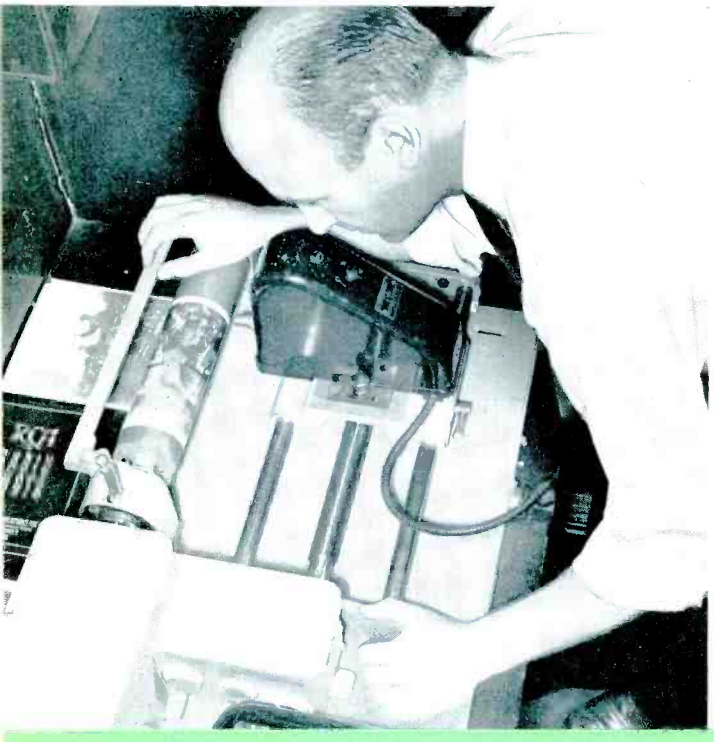
Not in wartime; prior to the war RCAC maintained a domestic radiotelegraph service linking 12 important cities: New York, Boston, Baltimore, Camden, Chicago, Detroit, Los Angeles, New Orleans, Philadelphia, San Francisco, Seattle and Washington, D. C. By order of the Board of War Communications all domestic radiotelegraph circuits were closed effective June 30, 1942.

•

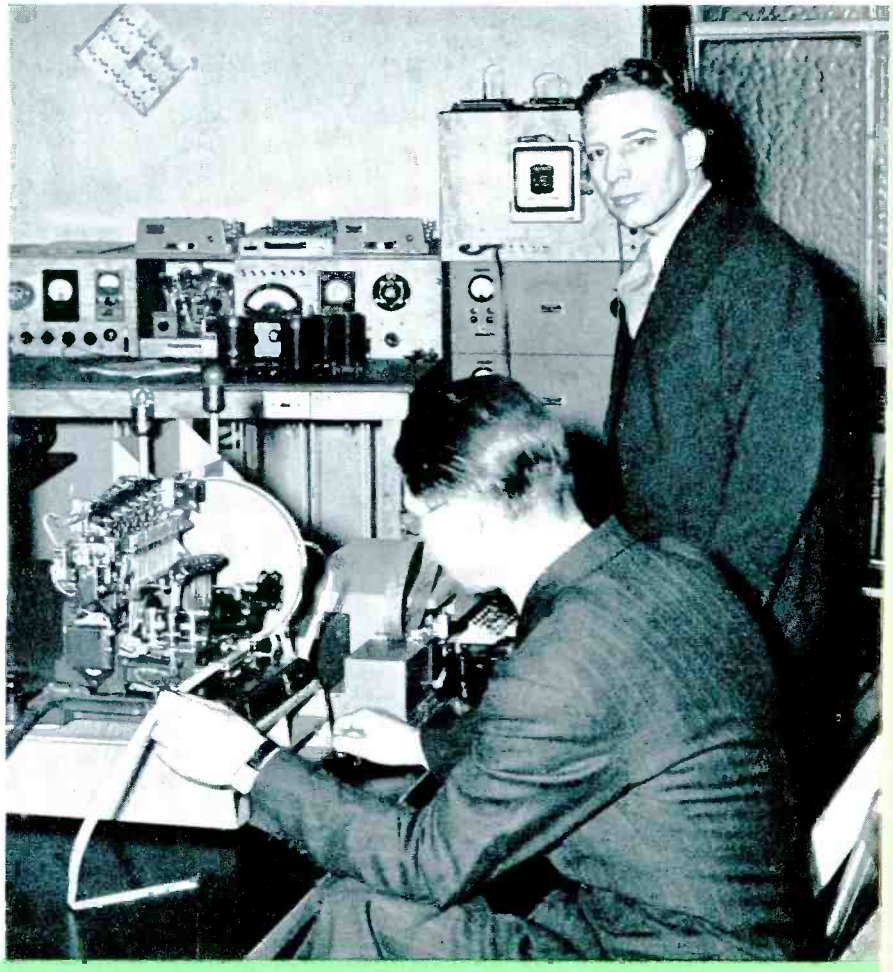
How does one send a Radiogram?

Radiograms are accepted to any part of the world where service is available. RCAC has offices in New York, Washington, D. C., and San Francisco. When radiograms are filed in Western Union or Postal offices, messages should be marked "Via RCA," for which routing indication there is no extra charge.

RCA's "Radio Central" at Rocky Point, Long Island, is a hub of international radio.



These radiophotos coming in on RCA's New York receiving cylinder have traveled 4,615 miles across the Great Circle route, through the air from Moscow.



The error-proof radio printer developed by RCA Laboratories for use on the high-speed communication circuits.

Does the war impose restrictions on the use of RCAC services?

Yes, in common with the services of other telegraph companies, all international messages leaving or entering the United States are subject to U. S. censorship regulations. RCAC publishes a booklet periodically giving full particulars of the latest censorship restrictions imposed by the United States and foreign governments. Copies may be obtained upon request at any RCAC office.

•

Are RCAC Radiograms "broadcast" so that they are heard by people for whom they are not intended?

Radiograms are not broadcast in the sense that they can be picked up by the general public. Directive aerials project the transmitted energy toward the desired receiving terminal in the form of a concentrated beam, somewhat analogous to the beam of a searchlight. High-speed automatic transmitters are used and the messages can be recorded only by special receiving apparatus. Simultaneous transmission of two or more messages on a single radio channel—known as multiplexing—results in effective "scrambling" of the message, which can be detected or "unscrambled" only by special synchronized equipment. Most multiplex channels are equipped with high-speed automatic printers of a special type which eliminate circuit errors.

•

Are Radiograms sent by voice or in radio code?

Radiograms are sent either by means of radiotelegraph code or by automatic printer. It is the modern practice to use automatic sending machines which operate at speeds up to 650 words a minute, even on direct circuits over a distance of thousands of miles. At the receiving office the message is recorded by automatic equipment.

•

Is RCAC's service confined to radiotelegraph messages?

No; two additional services are operated by RCAC: Program Transmission Service is maintained to arrange international program circuits and to pick up foreign programs for the major American broadcasting networks, as well as to transmit American programs to foreign countries. Through the program transmission service facilities of RCAC a large number of the war commentaries from abroad are delivered on order to the competing American networks for regular broadcast programs.

RCAC also operates direct radiophoto service between: New York and London, Moscow, Cairo, Buenos Aires and Stockholm; RCAC's radiophoto terminal at San Francisco serves Melbourne and Honolulu. Until the United States entered the war, direct radiophoto circuits were maintained between New York and Berlin and San Francisco and Tokio. A large and increasing number of radiophotos from war sectors is being handled over these circuits keeping the American public photographically informed of world-wide war activities.

Charles J. Pannill, President
Radiomarine Corporation of America

(1) Rear Admiral W. C. Watts (right) and Brig. General R. K. Robertson (center) presenting the Army-Navy "E" flag to Radiomarine Corporation of America.

•

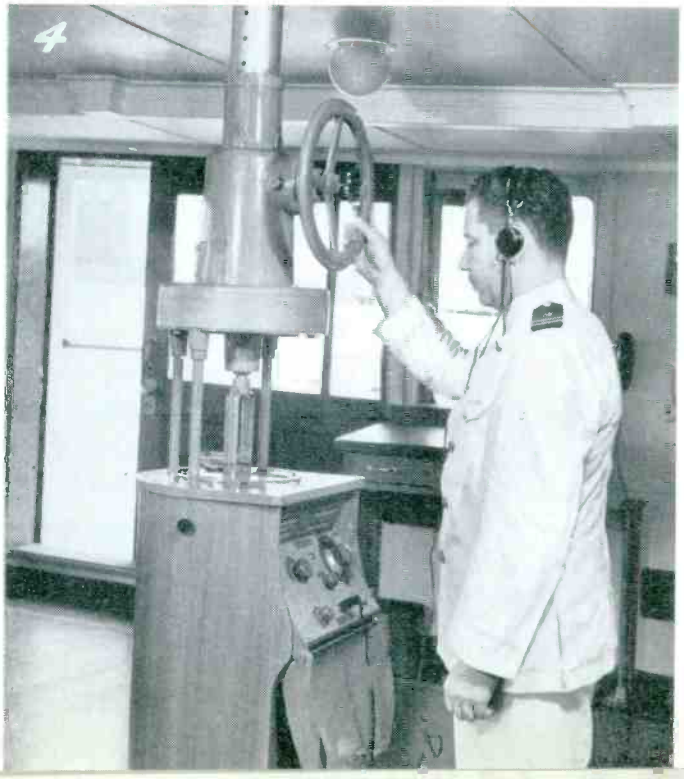
(2) Rear Admiral H. L. Vickery, U.S.N., Vice-Chairman of the U. S. Maritime Commission *(right)*, presenting the Maritime "M" for achievement in war production to the Radiomarine Corporation of America, represented *(right to left)* by Charles J. Pannill, President of Radio Marine, I. F. Byrnes, Chief Engineer, and H. A. Saul, Production Superintendent.

•

(3) Radiomarine's self-contained shipboard radio unit includes two transmitters, two receivers and an automatic alarm.

•

(4) The RCA direction finder or radio compass enables ships to take bearings on beacon stations no matter how thick the weather.



What is the Radiomarine Corporation of America?

Radiomarine is the service of RCA engaged in the marine radio field. It is producing and installing both radiotelephone and radio telegraph equipment for American ships. Radiomarine engineers have contributed much to the development and design of radio instruments for marine services. In addition to radio telephone and radiotelegraph apparatus, Radiomarine produces automatic alarms, direction finders and compact emergency radio apparatus for lifeboats. Special equipment is made for Government Departments, and at present Radiomarine's activities are fully engaged in the war effort.

In recognition of Radiomarine's performance in the war effort, the Corporation has been awarded the Army-Navy "E" flag and the U. S. Maritime Commission "M" pennant and Victory Fleet flag.

•

When was Radiomarine Corporation of America organized?

RCA has been engaged in marine radio communication since its formation. As the business expanded, the Radiomarine Corporation of America was formed on December 31, 1927, as a wholly-owned subsidiary of RCA entirely devoted to marine radio activities.

•

Does Radiomarine operate branch offices outside of New York City?

Yes; Radiomarine has 18 branch offices in principal ports of the United States, on the Atlantic, Gulf and Pacific coasts, the Mississippi and the Great Lakes. Radiomarine installs and services marine radio equipment on vessels and at shipyards throughout the country.

•

Does Radiomarine maintain other services?

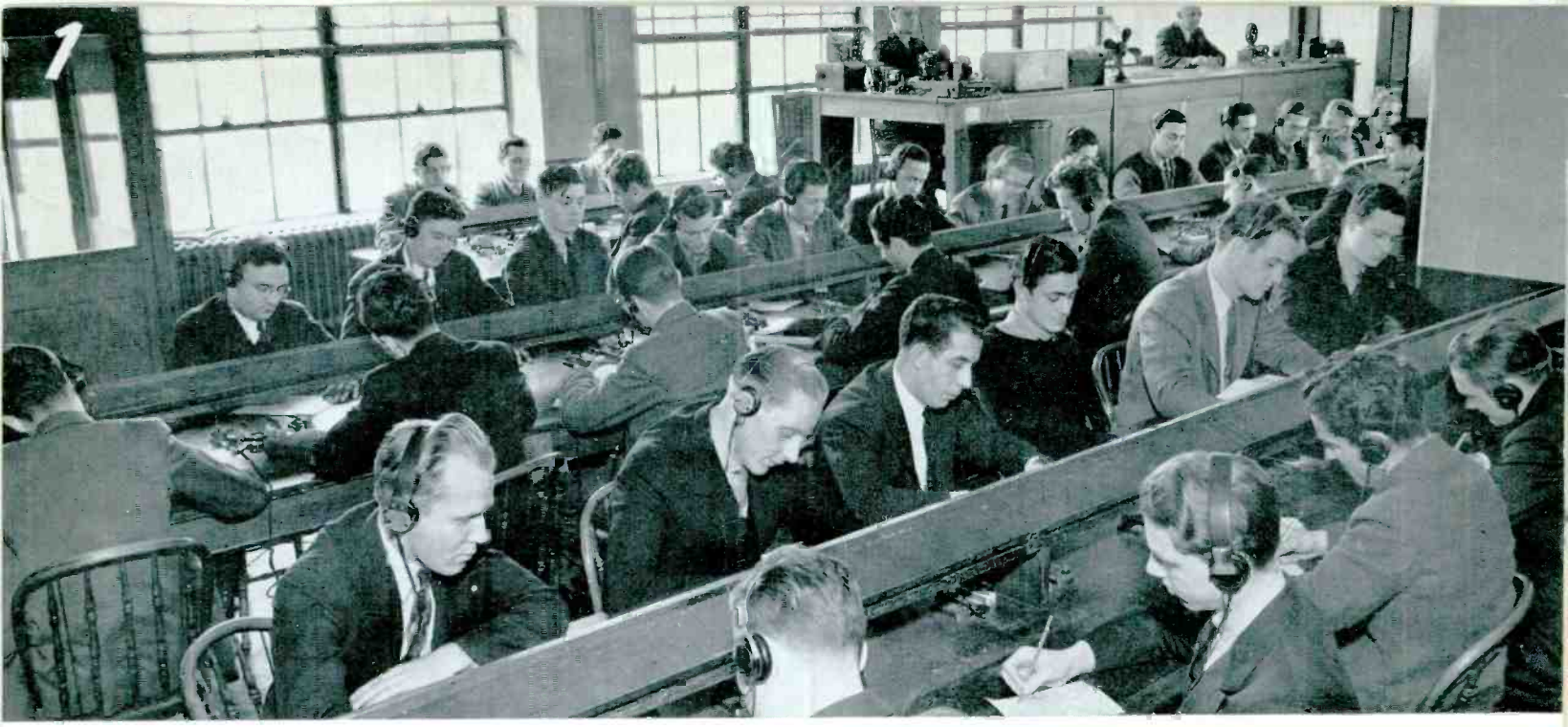
In normal times, Radiomarine, in addition to its many other activities in the marine radio field, is engaged in shore-to-ship and ship-to-shore radio communication, maintaining coastal stations on the Atlantic, Pacific and Gulf Coasts and on the Great Lakes. This service includes handling of Radiograms, weather reports for the Government, press bulletins and transmission of free medical advice for the benefit of sick and injured personnel on vessels which do not carry a doctor. Such services, of course, are curtailed in wartime.

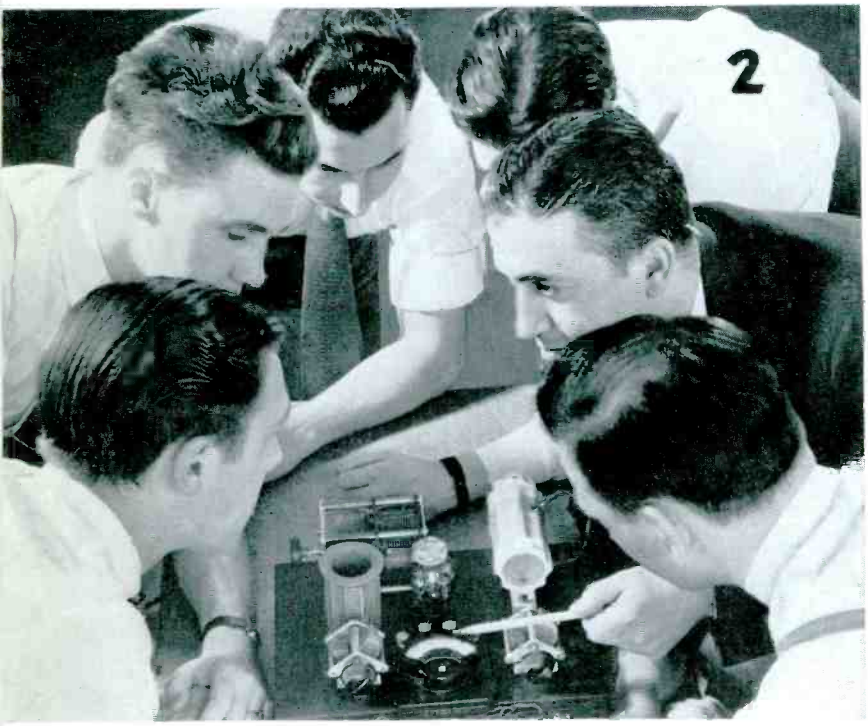
•

When was radio first used at sea?

The history of radio is linked with the sea. The main use foreseen for wireless in the Nineties was for communication to and from ships. This idea prevailed so strongly that Marconi went to London, the center of world shipping, to demonstrate and to promote his invention. In 1897, Marconi, on a tugboat received messages from Needles on the Isle of Wight, and the first paid message was sent from that station on June 3, 1898.

Along the English coast Marconi conducted experiments and endeavored to prove the worth of wireless, yet it was not until the wreck of S. S. Republic in 1909, and the S. S. Titanic disaster in 1912, that the great value of radio was appreciated in marine circles and by the public in general.





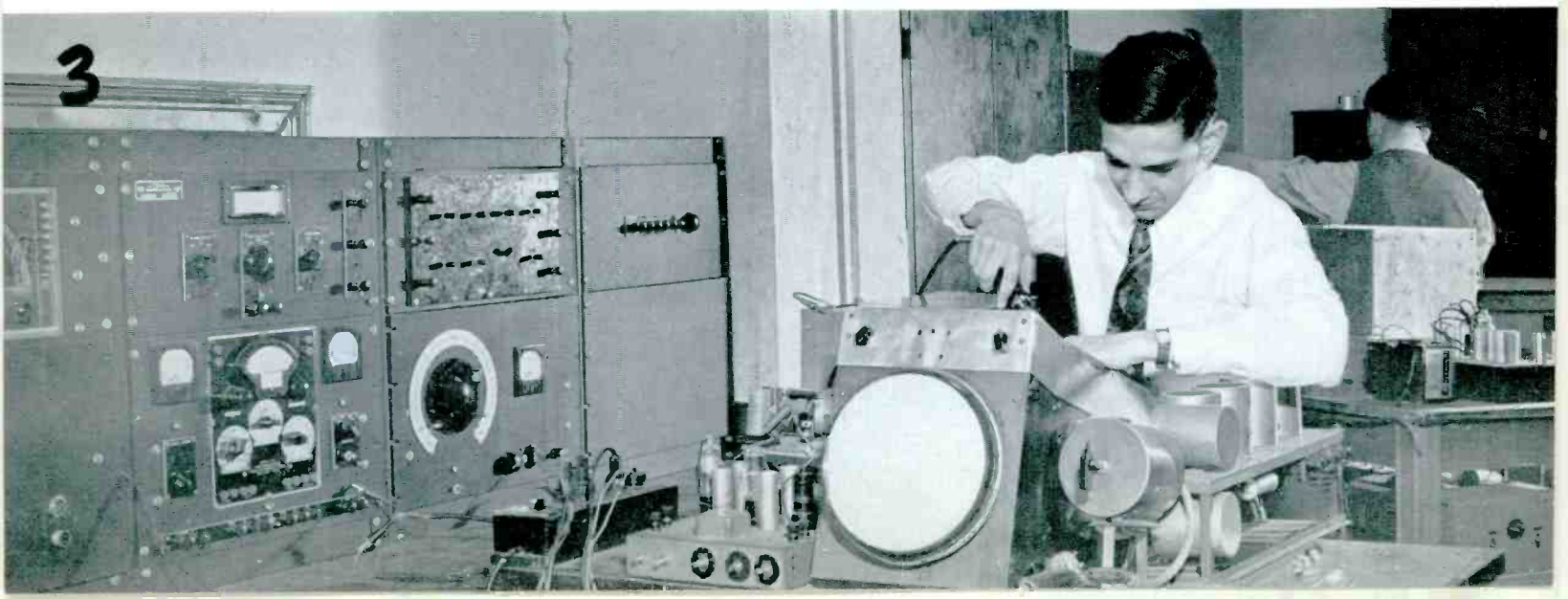
(1) Students of radio learning the wireless code at RCA Institutes.

•

(2) Instructors at RCA Institutes give individual attention to the students in explaining how radio sets are put together and how they work.

•

(3) In the classroom of RCA Insfitutes, students learn the principles of the cathode ray tube — used in television, as well as the rudiments of standard radio tubes.



What is RCA Institutes, Inc.?

RCA Institutes is a technical school devoted exclusively to instruction in radio and electrical communications and associated electronic arts. It is the oldest radio training school of its kind in the United States. Completely equipped laboratory and classroom facilities are maintained at the Institute's headquarters, 75 Varick St., New York City.

•

Is the year at RCA Institutes divided according to "college terms"?

Classes are in session for fifty weeks each year, closing only for the two weeks preceding Labor Day. New terms start approximately the first of March, June, September and December.

•

Does RCA Institutes operate day or evening classes?

Both day and evening classes are conducted; day courses vary from 6 months to 2 years depending upon the subjects. Evening courses are from 1 to 5 years. No home study courses are offered.

•

How much does it cost to take a course at RCA Institutes?

The cost of tuition varies with the length of the course. Tuition fees are paid weekly in most cases. Complete information concerning the school tuition fees and expenses and a detailed survey of the instruction are contained in the illustrated catalogue, which will be gladly mailed on request.

•

Does RCAI have a course in television?

Yes; television instruction is included in both the General Course and the Radio and Television Service Course.

•

What are the qualifications for a student to enter RCA Institutes?

Grammar school education is sufficient for the vocational courses, such as radio operating, radio and television servicing and aviation communication. For the General Course, a high school background is desirable. Candidates wishing to take the General Course, but who lack a high school education, may qualify by taking the Institutes' Preparatory Course, which includes high school algebra, geometry and physics.

•

May women attend RCA Institutes?

Yes; an ever increasing number of young women are enrolled in all the courses.

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FOR ADDITIONAL INFORMATION

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Should further information be desired on the following subjects, please write to:

RADIO MANUFACTURING	RCA Victor Division Camden, N. J.
BROADCASTING	National Broadcasting Company, Inc. or Blue Network Company, Inc. 30 Rockefeller Plaza New York, N. Y.
RADIOTELEGRAPH	R.C.A. Communications, Inc. 66 Broad Street New York, N. Y.
MARINE RADIO	Radiomarine Corporation of America 75 Varick Street New York, N. Y.
TECHNICAL TRAINING	R.C.A. Institutes, Inc. 75 Varick Street New York, N. Y.
GENERAL INFORMATION ON RCA AND VARIOUS ACTIVITIES OF RADIO	Department of Information Radio Corporation of America 30 Rockefeller Plaza New York, N. Y.

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