

NINETEENTH ANNUAL REPORT OF
RADIO CORPORATION OF AMERICA
YEAR ENDED DECEMBER 31, 1938



Printed in U.S.A.

NINETEENTH
ANNUAL REPORT
of
RADIO CORPORATION
OF AMERICA

Year Ended
December 31, 1938



RADIO CORPORATION OF AMERICA
RCA Building • 30 Rockefeller Plaza • New York, N. Y.

RADIO CORPORATION OF AMERICA

BOARD OF DIRECTORS

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TRANSFER AGENT

The Corporation Trust Company, New York, N. Y.

REGISTRARS

Preferred Stocks, The Chase National Bank of the City of
New York, New York, N. Y.

Common Stock, New York Trust Company, New York, N. Y.

TO THE STOCKHOLDERS OF RADIO CORPORATION OF AMERICA

YOUR corporation has come through the past year in a strong financial position. Each of its services — broadcasting, manufacturing, and communications — operated on a profitable basis, and made new advances that hold encouraging promise for the future.

The consolidated statement for the year shows gross income of \$99,968,110, net profits of \$7,412,072, and dividends paid to stockholders of \$5,993,467.

While the general decline in the nation's business resulted in reduced gross income and net profits, as compared with the preceding year, the Company benefited from the broad diversification of its activities. Increases in some divisions partly offset declines in others.

Financial Position

Besides the dividends paid in 1938, RCA reinvested \$4,176,102 in

capital expenditures for additions and improvements to plants and facilities, and additions to the patent account.

Further, it paid off all its serial notes, amounting to \$456,526, and reduced its bank loans by \$2,400,000.

After these disbursements, which totaled \$13,026,095, the Company closed the year with \$28,672,064 net working capital.

This included \$16,877,396 of cash funds, an increase of \$1,774,100 over the previous year.

Out of these cash funds \$3,000,000 has been used in 1939 to further reduce bank loans, which now stand at \$5,000,000, due in April, 1941.

In February of the present year we obtained a reduction in the interest rate on these loans from 2½% to 1¾%.

There was an increase in current assets of \$2,573,215, and in current

COMPARATIVE FIGURES FOR THE LAST SIX YEARS			
<i>Year</i>	<i>Gross Income</i>	<i>Net Profit</i>	<i>Net Loss</i>
1933	\$ 62,333,496	\$ 582,093
1934	78,756,993	\$4,249,263	
1935	89,228,898	5,126,872	
1936	101,186,310	6,155,936	
1937	112,639,498	9,024,858	
1938	99,968,110	7,412,072	

NINETEENTH ANNUAL REPORT TO THE STOCKHOLDERS OF THE

liabilities of \$2,540,587. The ratio of current assets to current liabilities is 3.2 to 1.

Inventories were decreased by \$1,013,418, in accordance with the policy of gearing manufacturing activities to sales demand to insure, so far as possible, against losses from price declines or obsolescence. As has been the practice in the past, the inventories were taken by physical inspection of the component items, under the direction of certified public accountants.

Investments

Investments were reduced during 1938 to the extent of \$1,636,884, partly from the sale to British interests of our investment in the Canadian Marconi Company. This sale resulted in a book profit of \$625,000, which has been added to earned surplus and is not included in the 1938 net profit.

Besides this sale, \$500,000 was received from the sale of securities in the Radio-Keith-Orpheum Corporation, under the option agreement referred to in last year's report. This option expired June 30, 1938.

The proposed reorganization plan for RKO has been approved by the U. S. District Court, subject to the right of dissenting stockholders to appeal.

If the plan becomes operative, RCA will receive 44,855 shares of new RKO preferred stock, 316,820 shares of new common stock, and

555,254 of option warrants. These holdings will entitle RCA to adequate representation on the Board of Directors of the reorganized company during such period as these holdings may be retained.

In the annual report for the year 1936 the sale of the RCA Manufacturing Company's 68% interest in the Victor Talking Machine Company of Japan, Ltd., was reported. Terms of the sale called for payment of \$2,000,000 cash in five installments, and provided for extension of licenses and continuing royalties to RCA. The final installment of \$250,000 was received on January 20, 1939. Accordingly, the book profit of \$667,766 resulting from the sale, which had been carried in general reserves pending the receipt of the final payment, has now been added to earned surplus.

Operations

Broadcasting: Income of RCA's broadcasting service—the National Broadcasting Company—is primarily derived from advertising clients who sponsor programs over its networks. The country's advertising expenditures in 1938 declined sharply. However, the outstanding programs provided by NBC attracted additional stations and clients to its networks, and this resulted in a 4% increase in its volume of sales to advertising clients compared with the preceding year.

Manufacturing: The RCA Manufacturing Company increased the rate and amount of profits earned in 1938, notwithstanding a decline in its receiving set and tube business, which reflected the general decline in the receiving set and tube business of the radio industry. Published trade reports place this decline in the radio industry at 34% compared with the preceding year. The total sales volume of the RCA Manufacturing Company was 12% less than that of 1937. Despite this drop in volume, its net profit was 11% more than for the preceding year.

Communications: Disturbed world conditions during the year adversely affected foreign trade and substantially reduced revenue from international telegraph communications. This situation applied to cable and wire systems as well as to radio. Also, during the year increased wages were paid to labor employed in our communications services. The combination of all these factors had the effect of decreasing the net profits earned from the operations of RCA Communications and Radiomarine by more than half.

Patent Licensing: At December 31, 1938, RCA had 61 competitors licensed under its patents in the set and tube field. Its income from the royalties paid by them depends directly upon the amount of business

they do. Reflecting the general decrease already noted in the set and tube business of the industry, RCA's income from royalties declined substantially.

Consolidated Gross Income: The overall effect of business volume and price declines was that the 1938 consolidated gross income of \$99,968,110 fell below the 1937 gross of \$112,639,498 by \$12,671,388—a decrease of 11.2%. This percentage of decrease is considerably less than that reported for the general business activity of the nation.

Consolidated Net Profits: Accompanying the decrease in gross income, there was a 17.9% decrease in net profits—from \$9,024,858 in 1937 to \$7,412,072 in 1938. The decline in revenue from communications services and from patent licensing more than accounts for this decrease.

Lower Prices — Higher Costs

Published trade reports indicate that in 1938, the industry's average prices of radio sets and of tubes, respectively, were 73% and 50% less than they were in 1929.

Since that time, it has been necessary to meet the new conditions brought about primarily by shorter working hours, higher wages and increased taxes. As an illustration, the average wage rate paid to the employees in our plants is now more than 15% higher than it was in 1929.

NINETEENTH ANNUAL REPORT TO THE STOCKHOLDERS OF THE

The RCA organization has more employees at work now than it had at the close of the year 1929. Then there were 18,020 employees, while at the end of 1938 there were 19,177.

Shorter working hours, higher wages, and increased employment for labor, with lower prices to consumers, is a combination that has been achieved by your company in the face of a general decline in the nation's business and increased taxes.

Taxes

In 1929 we earned \$10.27 on each hundred dollars of gross income. Out of this figure we paid taxes of \$1.55 and had \$8.72 left.

In 1938 we earned \$11.57 on each hundred dollars of gross income, paid or accrued \$4.15 in taxes, and had \$7.42 left.

Direct taxes paid or accrued in 1938 amounted to \$4,154,024 and were equivalent to nearly 30¢ on each share of common stock.

In addition we paid to the Government, Federal excise taxes amounting to \$1,320,027 on radio products sold and radio messages transmitted.

Dividends Paid To Stockholders

During the year a dividend of 20¢ a share was paid on the common stock and regular dividends were paid on the preferred stocks.

The 1938 preferred dividends amounted to \$3,222,743, and the common dividend amounted to \$2,-

770,724. The total paid was \$5,993,-467.

Stockholders

The widespread ownership of RCA represents a cross-section of the American public which it serves. According to a survey made in 1937, nearly half of all RCA stockholders are women. Nearly 35,000 stockholders own only one share each. More than half own ten shares or less. Only one out of every ten owns as many as a hundred shares. No individual stockholder of record owns as much as one-half of one percent of the Company, and less than 6½% of the stock is registered in the names of foreign stockholders.

Operating in every field of radio, RCA seeks public approval of its variety of services and products. The 250,000 RCA stockholders, in all walks of life and from every state in the Union, can be a decisive factor in interpreting to the Company the tastes and requirements of the public.

A continually increasing number of our stockholders are buying, and inducing their friends to buy, RCA products and services. This cooperation is most helpful to the Company.

For your pleasure, and as one means of keeping in touch with the progress of your Corporation, we invite you to tune in every Sunday afternoon at two o'clock, Eastern

Standard Time, to "The Magic Key of RCA." It is broadcast over the Blue network of NBC.

World's Fairs

The millions of visitors who are expected to attend the New York World's Fair and the San Francisco Golden Gate Exposition will find RCA well represented at both. In the RCA Building at the New York fair, and in the Electrical and Communications Building at San Francisco, interesting educational exhibits will be found relating to all the principal RCA products and services. There will also be special television demonstrations at both fairs.

The public address systems employed throughout the fair grounds and buildings are exclusively "RCA All The Way" both at New York and at San Francisco. The Company's exhibits and activities at the two expositions have been carefully planned with a view to their promotional value among RCA distributors, dealers, and other business contacts, as well as with the general public. This opportunity for the public to see at first hand the completeness of RCA's coverage of the radio field, and to witness a demonstration of its various products and services, should be most helpful in promoting sales, both immediate and in the future.

Changes in Directorate

It is with profound regret that we report the death, in 1938, of an

esteemed friend and associate, Mr. James R. Sheffield. He served the Corporation as a Director from the time of its organization, and his able and wise counsel will be deeply missed.

The vacancy in the Board of Directors has been filled by the election, as Director, of Mr. Edward F. McGrady.

During the year the Directors of your Corporation voted to amend the by-laws to change the date of the Annual Meeting to the first Tuesday in May and to provide for voting by the stockholders on independent certified public accountants to examine the accounts of the Corporation and certify them to the stockholders.

Thanks to the loyalty and cooperation of the personnel of each unit of its organization, the Radio Corporation of America continues to maintain its leadership in every field of radio.

A review of the operations of the RCA units, and a report upon our latest television progress, will be found on the pages which immediately follow the consolidated balance sheet and statement of income and surplus beginning on the next page.

For the Board of Directors:

JAMES G. HARBORD, *Chairman*,
DAVID SARNOFF, *President*,

New York, N. Y., February 27,
1939.

RADIO CORPORATION OF AMERICA

CONSOLIDATED BALANCE SHEET

A S S E T S

CURRENT ASSETS:

Cash in Banks and on Hand.....	\$16,877,396.43	
Notes and Accounts Receivable (less Reserves of \$1,643,654.22)	14,249,189.62	
Inventories (at the lower of Cost or Market)....	<u>10,805,338.05</u>	
TOTAL CURRENT ASSETS		\$41,931,924.10

NOTES AND ACCOUNTS RECEIVABLE MATURING AFTER 1939 (less Reserve of \$55,000)		543,685.76
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INVESTMENTS:

Radio-Keith-Orpheum Corporation		
(In proceedings under Section 77B, Act of June 7, 1934) Represented by 555,254 1/10 shares of Common Stock (21.5%) and \$4,485,550.21 of Ten-Year Debentures (38.7%) at cost....	\$ 6,614,434.75	
(The indicated market value of these securities, based on closing New York Stock Exchange prices at December 31, 1938 was \$4,615,607.89)		
Sundry Investments in and Advances to Associated and Other Companies, at Cost (less Reserve of \$3,705,479.45)	<u>550,025.07</u>	
TOTAL INVESTMENTS		7,164,459.82

FIXED ASSETS:

Factories, Radio Communication and Broadcasting Stations, Warehouses, Service Shops, Offices, etc.—Land, Buildings and Equipment, at Cost..	\$84,592,041.50	
Less: Reserve for Depreciation and write-down of Fixed Assets.....	<u>53,503,003.32</u>	
	\$31,089,038.18	
Patents, Contracts and Goodwill..	\$16,257,139.63	
Less: Reserve for Patents....	<u>8,227,530.83</u>	<u>8,029,608.80</u>
TOTAL FIXED ASSETS		39,118,646.98

DEFERRED CHARGES:

Development—Television Field Test (the amount expended in 1938 and included herein was \$372,736.54)	\$1,316,441.07	
Taxes, Insurance—Paid in Advance, etc.....	<u>724,391.24</u>	
TOTAL DEFERRED CHARGES.....		2,040,832.31

TOTAL ASSETS		<u>\$90,799,548.97</u>
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It is intended to begin amortization of deferred television development in 1939.

Net Current Assets of Foreign Subsidiary Companies are converted into dollars at the prevailing exchange export rates at December 31, 1938.

AND SUBSIDIARY COMPANIES
 AT DECEMBER 31, 1938

LIABILITIES AND CAPITAL

CURRENT LIABILITIES:

Accounts Payable and Accruals..... \$13,259,860.07

OTHER LIABILITIES:

Notes Payable to Banks, due April 8, 1941 (These
 Notes have been further reduced to \$5,000,000
 by a payment of \$3,000,000 made on January
 30, 1939) 8,000,000.00

RESERVE FOR CONTINGENCIES (after net charges of
 \$86,287.90 during the year, which included
 increase of \$342,721.05 provided from 1938
 income) 2,407,183.65

GENERAL RESERVE (after transfer to Earned Surplus
 of \$667,766.31, profit on sale of securities in
 1936, previously credited to this account) 5,441,300.79

CAPITAL STOCK:

\$3.50 Cumulative Convertible First Preferred,
 No Par Value—
 Authorized— 920,300 shares
 Issued — 900,844.8 shares
 at a stated value of..... \$14,574,441.45
 (Redemption value in involuntary liquida-
 tion \$100 per share or an aggregate of
 \$90,084,480)

“B” Preferred Cumulative \$5 Dividend,
 No Par Value—
 Authorized and Issued—13,693 shares
 at a stated value of..... 293,226.91
 (Redemption value in involuntary liquida-
 tion \$100 per share or an aggregate of
 \$1,369,300)

Common, No Par Value—
 Authorized—18,500,000 shares
 Issued —13,881,016 shares
 at a stated value of..... 27,762,032.00

TOTAL CAPITAL STOCK..... 42,629,700.36

EARNED SURPLUS 19,061,504.10

TOTAL LIABILITIES AND CAPITAL..... \$90,799,548.97

The common shares shown above as issued include 27,375 shares reserved for issue to stock-
 holders of predecessor company. Funds were deposited in 1936 to provide for the
 redemption of the “A” Preferred Stock, including such stock previously reserved for
 issue to stockholders of predecessor company.

**RADIO CORPORATION OF AMERICA
AND SUBSIDIARY COMPANIES**

**CONSOLIDATED STATEMENT OF INCOME AND EARNED SURPLUS
FOR THE YEAR ENDED DECEMBER 31, 1938**

GROSS INCOME:

From Operations (Note 1)	\$99,200,627.37	
Other Income, including Interest and Dividends from Investments	767,482.21	
TOTAL GROSS INCOME FROM ALL SOURCES.....		\$99,968,109.58
<i>Less:</i> Cost of Goods Sold, General Operating, Development, Selling and Administrative Expenses.....		<u>86,576,979.15</u>

NET INCOME FOR THE YEAR (before Interest, Depreciation, Amortization of Patents and Federal Income Tax)..... **\$13,391,130.43**

Deduct:

Interest	\$ 250,063.31	
Depreciation (Note 2).....	3,445,294.70	
Amortization of Patents (Note 3).....	600,000.00	
Provision for Federal Income Tax.....	<u>1,683,700.00</u>	
TOTAL DEDUCTIONS		<u>5,979,058.01</u>

NET PROFIT FOR THE YEAR, TRANSFERRED TO EARNED SURPLUS.... **\$ 7,412,072.42**

EARNED SURPLUS AT DECEMBER 31, 1937..... **16,528,905.02**

Add:

Profit on sale of securities of Canmar Investment Company, Ltd. (Canadian Marconi Company) (after provision for Federal Income Tax thereon)	\$ 625,000.00	
Profit on sale of securities of Victor Talking Machine Company of Japan, Ltd., in 1936 (previously credited to General Reserve)	<u>667,766.31</u>	
		<u>\$ 1,292,766.31</u>

Less:

Loss on sale under option of part of Radio-Keith-Orpheum Cor- poration securities.....	\$101,312.25	
Excess of cost over Stated Value of 1700 shares of "B" Preferred purchased and retired.....	<u>77,460.58</u>	<u>178,772.83</u>
NET ADDITION		<u>1,113,993.48</u>

\$25,054,970.92

Deduct:

Dividends—		
On Convertible First Preferred.....	\$ 3,152,902.42	
On "B" Preferred	69,840.00	
On Common	<u>2,770,724.40</u>	
TOTAL DIVIDENDS		<u>5,993,466.82</u>

EARNED SURPLUS AT DECEMBER 31, 1938..... **\$19,061,504.10**

See Notes on Opposite Page

Notes on Consolidated Statement of Income and Earned Surplus appearing on the opposite page

Note 1 :

As of January 1, 1938 a policy was adopted, taking into income the profits on sale and rental of photophone equipment as payments became due. In 1937 such profits were recorded as payments were received. If the policy had remained unchanged, income for the year 1938 would have been decreased by \$222,005.69. The status of this branch of the business is now such as to warrant its being placed on a normal accrual basis.

Note 2:

As a result of a detailed engineering study and survey made by competent engineers to determine the present estimated useful life of the physical properties, rates of depreciation, indicating a longer useful life, were established and given effect to in the current year. The previous practice, in the case of manufacturing plants, of charging depreciation based on the activity of each unit was discontinued as of January 1, 1938 and depreciation in 1938 has been charged in full against income. Had the 1937 rates and method been continued the charge against income for depreciation in 1938 would have been greater by approximately \$190,000.

Note 3:

This covers proper amortization of all patents acquired since December 31, 1928, all acquired previously having been reserved for out of Surplus prior to that date.

Note 4:

The directors of National Broadcasting Company, Inc., a 100% owned subsidiary included in the consolidated accounts, discontinued in 1938 the policy of amortizing goodwill which involved an annual charge of \$310,000. The balance of goodwill remaining on this subsidiary's books now stands at \$1,876,721.65.

Note 5:

Operations of Foreign Subsidiary Companies are converted into dollars at the prevailing monthly exchange export rates. A charge to operations is also made for the amount necessary to reduce the net current assets of such subsidiaries to effective rates of exchange at December 31, 1938.

ARTHUR YOUNG & COMPANY
ACCOUNTANTS AND AUDITORS

RADIO AND CABLE ADDRESS
"ARTHYOUNG"

1 CEDAR STREET

NEW YORK

NEW YORK
CHICAGO
PITTSBURGH
KANSAS CITY
MILWAUKEE
LOS ANGELES
DALLAS
TULSA
LONDON, ENGLAND
PARIS, FRANCE

*To the Stockholders of
Radio Corporation of America:*

We have made an examination of the Consolidated Balance Sheet of RADIO CORPORATION OF AMERICA AND SUBSIDIARY COMPANIES as at December 31, 1938, and of the Consolidated Statement of Income and Earned Surplus for the year 1938. In connection therewith, we examined or tested accounting records of the Corporation and its Subsidiaries and other supporting evidence to the extent we considered sufficient and obtained all information and explanations requested by us from officers and employees of the Companies. We also made a general review of the accounting methods and of the operating and income accounts for the year, but we did not make a detailed audit of the transactions. Following the practice of prior years the Companies' methods of taking inventory were reviewed and approved by us; we satisfied ourselves as to prices and computations and made substantial physical tests of quantities at the various locations. For certain foreign subsidiaries, whose assets amount to 3% of the total assets, we have accepted and incorporated in the consolidated statements, after a scrutiny and review sufficient to satisfy ourselves as to the accounting principles followed, the audited accounts prepared by their public accountants as at either October 31st, or November 30th, 1938.

The changes explained in Notes 1 and 4 to the Statement of Income, while they depart from the practice of prior years, are entirely consistent with accepted principles of accounting.

In our opinion, based upon such examination, the accompanying Consolidated Balance Sheet and related Consolidated Statement of Income and Earned Surplus, together with the notes thereon, fairly present, in accordance with accepted principles of accounting which have been consistently maintained by the Corporation, its financial position at December 31, 1938 and the results of its operations for the year ended that date.

New York, N. Y.
February 24, 1939.



REVIEW OF PROGRESS

ALMOST everyone agrees that the radio industry has done an outstanding job in providing the public with better products and services at lower prices.

But many may not realize that this progress in every branch of the industry has continued—and in fact largely taken place—during a period which has been characterized by economic depression and recession, a period which represents about half of the industry's life.

During this time radio sets in American homes and in automobiles have risen from 10,500,000 in 1929 to more than 40,800,000 at the end of 1938.

With less than seven percent of the world's population, our country has about half of its broadcasting stations and receiving sets, and a greater percentage of radio-equipped homes than any other nation.

The American radio industry has grown faster—in units, in dollar volume, and in public service—than that of any other country in the world.

Meanwhile, prices of radio receivers and tubes have declined drastically. Wages, taxes, and other costs have risen. Yet the quality of American radio products and services has improved so greatly that none of us

would be satisfied with those of 1929.

While the nineteen annual reports of RCA constitute a concise cumulative history of how it has held its place in this march of progress, the report for any particular year presents but one phase of a continuous action, like one chapter of a continuing story.

Accordingly we present here, largely for the benefit of new stockholders, some of the highlights of our progress, measured from the depression year 1933, as well as from the peak year 1929.

Since 1933, for instance, our gross income has increased more than 60%. And our net has been converted from a loss in 1933 to a profit substantial enough to permit the payment of dividends on all classes of stocks in 1937 and 1938.

Looking back of 1933 to the peak year 1929, the position of RCA has been substantially strengthened and improved.

The Company's indebtedness and preferred stock have been reduced by millions of dollars. As a consequence, our preferred dividend charges and interest payments have materially decreased—and this is one of the factors that has enabled us to pay dividends on the common stock.

Beyond this, the RCA organization has been able to make valuable contributions to the growth of the radio industry as a whole.

Organized to "expand and improve the uses of radio," one of its early steps was to make available to the industry, through patent licenses, the world's most valuable radio inventions.

The rapid growth of the industry, the placement in homes of high quality sets at low prices—in many cases at prices not much more than the annual tax alone paid by listeners in some countries—have demonstrated beyond any doubt the advantages of the American system of radio that is free to the listeners, and the fact that where competition thrives the public benefits.

Patents

The history of the Radio Corporation of America began immediately after the World War, when high government officials realized the imperative need for an American-owned system of international communications.

That is why this corporation was formed. It also is why its certificate of incorporation provides that at least 80% of its stock must be held by American citizens.

Finding that radio in America was deadlocked through adversely held patents, it not only acquired rights

to American inventions, but also obtained rights to important foreign inventions and finally came to a position where it had, as it now has, the right to make and sell practically every kind of radio apparatus required by the public, by the Government, or by industry.

How important these rights are, is obvious from the fact that about 80 patented inventions are used in making a modern, medium-priced broadcast receiver, while to make commonly used tubes requires the employment of approximately 50 patented inventions.

Such inventions have been made available to the industry, through RCA licenses, at royalty charges which are small in relation to other items entering into the costs and selling prices of receiving sets and tubes. The average royalty per set is measured in cents rather than in dollars, yet it gives the purchaser the benefits of research work done in the principal radio laboratories of the world.

Research

Our service to the radio industry, and consequently our income from it, is made possible only by continuing research, for Radio is an advancing art.

The activities of each RCA research group are coordinated with those of all other groups. This coordination, and the close relationship

between each group and manufacturing and operating executives, makes it possible to focus upon each problem the diversified experiences necessary for the most efficient translation of research into income.

The most important of the newer achievements of the RCA laboratories are television and other developments in the ultra-short wave and micro-wave sections of the radio spectrum. Until a short time ago, so little was known about them they were called the "wastelands" of radio.

Today they have been opened up and have provided several times more space for new services, and for extension of existing services, than at present is utilized by all radio services combined.

With electronic devices created for the purpose, new opportunities have been developed for service in the fields of point-to-point communication, police, fire, and forestry departments, aircraft and navigation, and in broadcasting and television.

Devices for blind flying and instrument landing and for the facsimile production of a radio newspaper in homes have been developed.

Other devices include an electron microscope with possible resolving power 20 to 25 times the magnifying power of existing light microscopes. An electron telescope makes visible objects illuminated by "black light," which otherwise cannot be

seen in haze or darkness. Thus electron optics, in the fields of science, astronomy, medicine, and many industrial applications, open up new and promising opportunities.

Although the operations of our research organization can not be reflected statistically in the profit account of RCA, they have been a most important factor in the earnings of your Corporation. The achievements of the RCA laboratories continue to make the familiar RCA trade-mark the Symbol of the Radio Age.

Television

RCA has pioneered in the development of the new and promising field of television for well over a decade. Its most notable pioneering activities have been in laboratory research, field tests, and in the announced introduction of a regular service.

The National Broadcasting Company will inaugurate limited public service with RCA television in the New York City area commencing with the opening of the New York World's Fair, April 30, 1939. RCA also has announced that its manufacturing company is preparing to make available television receivers in this area at the same time.

Since 1930 the fruits of laboratory research have been taken into the field for test under practical operating conditions. In all tests, successful transmission was accom-

plished, and actual relay of television signals by radio was achieved.

Several important technical developments contributed to the improvement of the RCA television system during 1938. New Iconoscope tubes made possible greater efficiency in televising both outdoor and studio scenes; new transmitting tubes produced greater power for launching the television images into space; and a new transmitting antenna provided the solution to a difficult technical problem of transmission. There were advances in reception, also, and here again new tubes gave increased efficiency of operation, enabling a reduction in the number of tubes necessary to a complete receiver.

Much is being learned as to studio technique and the pickup of events and programs originating outdoors. Television programs produced in 1938 included dramatic productions, a Broadway stage show, vaudeville, comic opera, news events, and the televising of motion picture film. Successful outdoor tests and demonstrations employing television mobile units have been given in New York City and Washington, D. C.

RCA conducted 134 television demonstrations during the year for audiences largely made up of important representatives of industry, advertising, engineering, and the press.

Before network television service, comparable to existing sound broad-

casting facilities, can be realized, many economic and technical requirements will have to be met. Means must be developed for interconnecting stations, either by radio or cable. The possibility of relaying television programs between stations by radio holds interesting promise, as shown by further experiments conducted by the RCA laboratories in 1938, and this work is receiving active attention in the present year. The establishment of television stations in network connection is a long-range program, and it will probably require many years to achieve, first, regional, and ultimately national network service.

Radio Facsimile

RCA's experiments with radio facsimile, looking toward eventual broadcasting service of printed material to the home, moved forward in 1938.

Since last July, the RCA Manufacturing Company, Inc. has been conducting an intensive field test of its new broadcast facsimile system in Camden, N. J.

Facsimile receivers have been placed in the homes of company executives and engineers located in various suburbs of Philadelphia and Camden up to a maximum distance of about forty miles air line from the transmitter. Special tests have also been made up to about 120 miles from the transmitter.

RADIO CORPORATION OF AMERICA R C A BUILDING NEW YORK

Broadcast stations in various cities, which recently announced experimental facsimile broadcasting operations with RCA equipment, will investigate the most desirable type of program material and the general public reaction to this new type of possible public service.

Facsimile offers a new full-time broadcasting service for urban centers by using ultra-short waves, and it should extend the usefulness of the present sound broadcast wavelengths by their use for broadcasting facsimile material during hours when there are no sound-broadcast programs.

Broadcasting

The record of NBC's service spoke very clearly for itself in 1938. The extensive coverage of the European war crisis, and the accomplishment of bringing to American audiences the full text of the Munich Pact only 17 minutes after the close of the conference and 46 minutes ahead of any other agency, typified NBC's alertness in covering news events. The great public response to the NBC Symphony Orchestra under the baton of Arturo Toscanini and other conductors of international fame was evidence of widespread approbation of NBC's high musical standards. And its policy of presenting all sides of questions of public interest — fairly and impartially — was perhaps nowhere so effectively demonstrated as in the Town Meet-

ing of the Air program, which continues to hold the country's close interest. The Music Appreciation Hour, under the direction of the distinguished conductor and teacher, Dr. Walter Damrosch, and the National Farm and Home Hour were other notable offerings by which NBC's accomplishments are measured.

NBC extended its service to the public in 1938 by making its programs available to 25 new stations. The Company now serves through its Red and Blue networks a total of 168 stations, of which 158 are independently owned.

In the field of music, NBC averaged virtually a symphony a day in 1938. There were 3500 hours of dramatic productions. Each phase of entertainment and education, ranging from international news to a championship boxing exhibition, and from the NBC Symphony Orchestra to a swing music festival, was presented over the Red and Blue networks. Speaking over NBC facilities were the President of the United States and heads of other governments, United States Senators and Representatives and other Federal and State officials, labor leaders and spokesmen of business, and religious leaders of the great faiths of the world.

Public interest in national and international affairs is probably more widespread than ever before, and

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NBC's policy of presenting important public issues, completely and impartially, contributed materially to this end.

Assisting the broadcasting company in carrying out this policy is the NBC Advisory Council, whose members are Owen D. Young, Chairman, James Rowland Angell, Mrs. August Belmont, Henry Sloane Coffin, Miss Ada Comstock, Paul D. Cravath, Walter Damrosch, John W. Davis, Francis D. Farrell, William Green, General James G. Harbord, Robert Maynard Hutchins, Henry S. Pritchett, David Sarnoff, and ex-Governor Alfred E. Smith.

The Council this year reaffirmed the NBC policies to provide free time to the principal religious faiths, and not to sell time for religious programs; to sell time during election campaigns only to official representatives of legally qualified political parties and to legally qualified candidates; and to give equal free time to opposing sides of controversial questions that may materially affect the life or welfare of any substantial group — all policies intended to uphold without censorship the freedom of the air.

Of significance to the American audience was the bringing from overseas by short wave of 589 programs for broadcast by NBC. Personages of international importance heard over NBC facilities included

King George VI, President LeBrun of France, ex-President Benes of Czechoslovakia, Prime Minister Chamberlain, Premier Daladier, Premier Mussolini, Chancellor Hitler, and many others.

The National Broadcasting Company's activities last year in sending programs by short wave to other countries brought to the United States leadership in the field of international broadcasting. A total of 16,500 programs—12,150 built especially for the preferences of the language groups to which they were directed—were broadcast to foreign audiences by NBC's International Division. The widest possible international circulation was given to the messages of the President, Cabinet officers, and other Government officials in programs broadcast in Spanish, Portuguese, German, French, Italian, and English. In the promotion of the good neighbor policy, NBC has paid special attention to programs of interest to the republics south of us. Its facilities were used by the Pan-American delegations, including that of the United States, which participated in the Lima Conference.

The National Broadcasting Company is always eager for information as to the interest with which its programs are received. In this constant estimate of public taste it is assisted by letters and telephone calls received from listeners, and by

listener surveys. Upwards of 4,000,000 letters and 50,000 telephone calls commenting on programs were received by NBC in 1938.

NBC instituted studio demonstrations of television in the latter part of the year, with an admission charge to the public. More than 55,000 persons visited these demonstrations in four months. The total attendance during the year at both television and broadcasting studio tours was 441,552. In addition, 712,231 persons attended broadcast programs in the NBC Radio City studios in 1938. Owing to the influx of millions of extra visitors to New York this year, a record number of persons is expected to take the NBC studio tour in Radio City.

NBC made many improvements and additions to its technical facilities, studios, and plant during 1938, for both domestic and short wave use. More powerful transmitters and special antennas for broadcasting to foreign countries have greatly increased the effectiveness with which programs are heard in far-off places.

During 1938 an investigation of broadcasting, with particular reference to networks, was begun by the Federal Communications Commission. NBC presented testimony concerning all of its operations, from station relations to sales, research, advertising and programming. The statement of your Corporation's

president before the Commission on the opening day of the hearings was included with the dividend checks mailed to stockholders on December 14th last.

Manufacturing

RCA's manufacturing operations showed progress on all fronts, with aggressive advertising and sales promotion activities winning still wider public acceptance of products bearing the RCA and Victor trade marks.

Radio Receiving Sets and Tubes: To meet the trend toward lower priced instruments, RCA Manufacturing Company offered an attractive line of home radios, with prices suited to every purse. At the same time, features such as "push button tuning," previously limited to higher priced models, were incorporated in most of the lower cost receivers. Record-playing devices and radios with built-in electric phonographs proved popular. A "pick-me-up" portable battery set was placed on the market and was immediately successful. More radio tubes were sold for replacement purposes than in 1937, but tubes for new sets moved in smaller volume, due to a decrease in instrument production in domestic and foreign markets.

RCA Victor and Blue Bird Records: There was a continued advance in the popularity of recorded music, and sales of both brands of records were increased. There is evidence that the sharp increase of

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record sales in recent years has been greatly stimulated by the broadcasting of many programs of the quality of the NBC Symphony Orchestra, under the direction of Maestro Toscanini and other noted conductors, of the Metropolitan Opera, and other features referred to in the Broadcasting section of this Report.

RCA Photophone Sound Equipment: A new line of theatre sound equipment was developed in 1938. It was well received by exhibitors, although sales to theatres were affected by economic conditions as reflected in the entertainment field. This division now has contracts to service sound equipment in 24% more theatres than at the close of the previous year.

RCA Photophone sound-recording equipment was employed by Warner Brothers, RKO, 20th Century-Fox, Columbia, Republic, and Walt Disney for the production of important feature pictures.

Special Products: New broadcasting transmitters were developed in 1938, together with improved equipment for aviation and police use. Television transmitters of various powers were designed and offered commercially. RCA augmented its line of laboratory and test equipment with a number of new devices. Facsimile transmitting and receiving equipment was made available to radio stations.

International Communications

Your Company was a pioneer in establishing international radio telegraph service. Organized for this purpose, RCA Communications has been doing that job dependably and well.

RCAC also is a common carrier for radio photos and international radio programs. Every foreign radio photo you see and most of the foreign programs you hear come in over its facilities. Pictures of a peace conference in Europe or the latest styles from Paris can be transmitted and delivered to your newspaper by RCAC more quickly than the paper can be printed and put on the street. You can sit for your photograph in London and have an RCAC facsimile of it delivered to your family in New York almost before you get back to your hotel.

You can tune in your favorite broadcast station and listen via RCAC to a King's Coronation, a Parisian celebration of the New Year, or to important political events in far countries, as was so dramatically demonstrated in the recent past. Since RCAC is a common carrier, this service is available to any broadcasting station that wants to engage its facilities.

In addition to our own offices, you can utilize any Western Union office to send a radiogram over RCA's world-wide radio telegraph facilities, which include facilities to

47 foreign countries and between 12 cities* in the United States, simply by marking the message "Via RCA."

The economy and dependability of this service has done much to popularize it. When storm or earthquake has crippled wire lines and cables it has come to the rescue and handled the emergency traffic.

Nor can the invisible links of communication created by international radio telegraph circuits be severed in time of war. Thus RCA's original purpose—to establish a dependable, American-owned system of international communication—has been fulfilled.

Marine Radio

Radiomarine Corporation of America maintained its leadership in this field through 1938, both in its ship-to-shore message service and the furnishing of equipment for shipboard service. Fifteen of the eighteen vessels delivered to the American Merchant Marine last year were RCA-equipped, as were four out of five new trawlers.

The volume of Radiomarine's regular message traffic was lower in 1938 than for the previous year. However, this reduction was not disproportionate to the general loss of traffic by all telegraph carriers due to general conditions.

Radio telephony was made more universally applicable to marine

service during 1938 by the extension of radio telephone shore facilities, and the introduction of shipboard equipment for vessels of various sizes, including pleasure craft.

One of Radiomarine activities is supplying radio equipment to ships. Its equipment was directly instrumental in saving the lives of the survivors of the flying boat *Cavalier*, en route to Bermuda. When the rescue ship, *Esso Baytown*, received the plane's SOS call, relayed from a shore station, its one radio operator was off duty. The signal, however, actuated an RCA automatic alarm, which rang bells on the ship's bridge and in the radio operator's quarters. The tanker's operator was immediately called to his post, and received the information which enabled that vessel to proceed directly to the scene of the accident.

Training Men For Radio

RCA Institutes, which has been offering instruction in radio for many years, inaugurated courses in television during the latter part of 1938. Special television courses were begun for the staffs of the RCA companies, in addition to the courses offered to the public.

New equipment has been developed for the teaching of television, and the Institutes is actively prepar-

* These cities are Baltimore, Boston, Camden, Chicago, Detroit, Los Angeles, New Orleans, New York, Philadelphia, San Francisco, Seattle, Washington, D. C.

ing to help meet the technical requirements of the industry in this new phase of the radio art. The general course has been enlarged and lengthened, and the curriculum has kept pace with developments and improvements throughout the year. At the end of the year, a total of 1053 students were enrolled in the New York and Chicago schools.

The RCA Institutes Technical Press publishes a quarterly journal, "RCA Review," which has attained world-wide recognition in technical circles. During 1938 the Press compiled and published a book titled "Radio Facsimile," as a companion volume to its previous publications on television.

The Future

RCA continues to play its accustomed role of pioneer. The new year we have entered is filled with interesting possibilities and problems, from the varied viewpoints of science, of art, and of economics. Looking into the future, the Directors and management are convinced of the financial stability of your Corporation, of the efficiency and public usefulness of its products and services, and have confidence in the skill and loyalty of the men and women composing its organization. With assets such as these, which no balance sheet is able to evaluate, your Corporation is in a sound position to realize the promises which the future appears to hold.



THE products and services of the Radio Corporation of America are provided by the following Divisions and wholly owned companies which comprise the RCA Family:

BROADCASTING:

National Broadcasting Company, Inc.

MANUFACTURING:

RCA Manufacturing Company, Inc.

COMMUNICATIONS:

International and Inter-city:

R.C.A. Communications, Inc.

Marine:

Radiomarine Corporation of America

PATENTS AND RESEARCH:

RCA Laboratories and Patent Department

INSTRUCTION:

R.C.A. Institutes, Inc.

Principal RCA Products

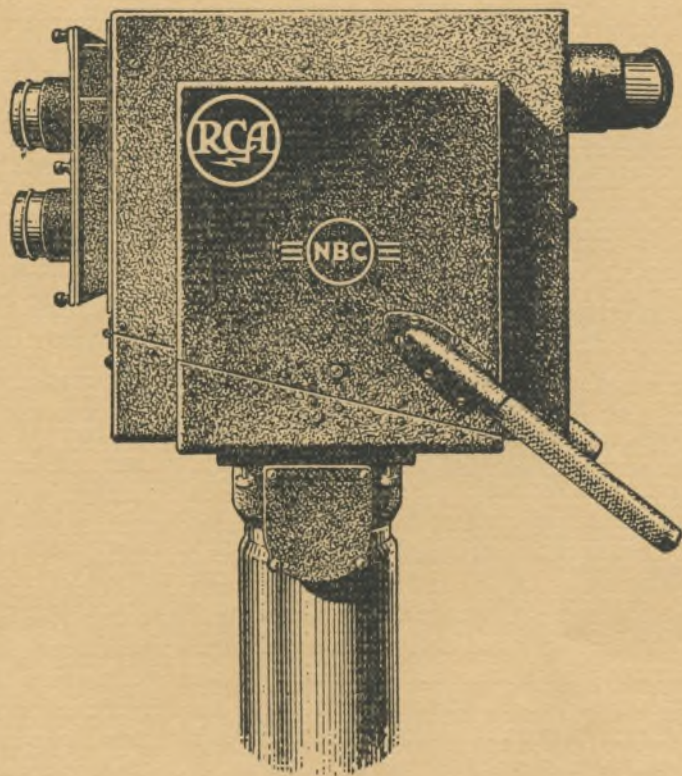
RCA Victor Radio Receiving Sets and Radio-Phonograph Combinations
RCA Victor and Blue Bird Phonograph Records : RCA Radio Tubes
RCA Photophone Equipment for Motion Picture Studios and Theatres
RCA Television Transmitters : RCA Public Address Systems
Police Radio Systems : Aircraft and Airport Radio Equipment
Laboratory and Test Equipment : Radio Equipment for Amateur Use
RCA Equipment for Broadcasting and Communications

Principal RCA Services

NBC Broadcasting through Nationwide "Red" and "Blue" Networks
International and Inter-City Radio Telegraph Service
Marine Communication Service, between Ship and Shore
Training School in Radio and Electronic Subjects

To send a radiogram from any city in this country to a point outside the United States, between cities served by the RCA inter-city service, or to a ship at sea, it is necessary only to mark the message "Via RCA," and to file it at any office of R. C. A. Communications or Western Union.

For information concerning RCA products, address the RCA Manufacturing Company, Inc., Camden, New Jersey. For information concerning RCA services, address the Department of Information, Radio Corporation of America, RCA Building, 30 Rockefeller Plaza, New York, N. Y.



RCA Television Camera

RADIO CORPORATION OF AMERICA