WHY AMERICA LEADS IN RADIO

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Foreword

The real measure of any industry is the public service that it renders. Its final accounting must be its accounting to the public.

The pages that follow tell the story of American leadership in a new and vast system of world communications. They tell of the great contributions made by American inventive genius to an art as limitless as space itself. They tell of the victory of American organization; of the vision and patriotism of American industry.

The history of modern radio is the history of the Radio Corporation of America. Since the urgent call of Government officials brought this Corporation into being, the United States has become the world-center of trans-oceanic wireless communication. Our ship-to-ship and ship-to-shore radio systems cover the seas. Our feats of broadcasting music, entertainment and education to the home have startled the world.

International communication is a two-way circuit. Every intelligent American will realize that subsidized control of radio abroad must be met by a unified system of trans-oceanic radio here. The first real competition in international communications was offered by the Radio Corporation of America; the first fruit of its enterprise was a general reduction in trans-oceanic rates, of direct advantage to the American public.

In the industry developed by radio broadcasting, the Radio Corporation of America occupies a unique position. Every city, every town in the United States, bears witness to the keen and ever-growing competition in the manufacture and sale of radio apparatus. But the titanic voice of radio—the modern broadcasting station, erected and maintained at a great investment of capital—that is the achievement of the Radio Corporation of America and of the manufacturing companies associated with it. It is the symbol of public service offered by an industry to the public which supports it.

J. G. HARBORD,

President,

Radio Corporation of America.

THE BEGINNINGS OF RADIO

Radio literally announced itself to the world by the ringing of a bell in a scientist's laboratory. Weak and trembling was this first approach, as it sought the attention of a human mind absorbed in other electrical researches.

Then came the day when its insistent appeals no longer were ignored, when a startled scientist leaning over a hand-bell still trembling from the blow of an unseen power, conceived the idea that electro-magnetic waves generated by an induction coil in his laboratory would explain the phenomenon. Thus it was that Professor Hertz, a German scientist, was able to announce a momentous fact to the world.

"an unseen power"

This discovery, widely published, registered with deep understanding on the mind of an 18 year old Italian youth, Guglielmo Marconi. If, he argued, it be true that the ether can carry electrical energy, why could not these electro-magnetic waves be used in a system of wireless communication? With this objective, he began his task. First, he developed a method of sending electro-magnetic waves through the air; then, he found a way of intercepting and recording the signals thus flashed from a transmitting station. It was crude and feeble, this first radio circuit. But a great feat had been accomplished. Man had discovered a new method of communication.

"an Italian youth"

Soon many minds in many lands were absorbed in the scientific and technical problems presented by radio. Marconi took his invention to England, where encouraged by public and official opinion, he demonstrated that electro-magnetic waves could travel a mile—five miles—fifty miles, and more.

"fifty miles and more"

SHIP-TO-SHORE COMMUNICATION BY RADIO

"sailed . . . never to return"

Since the dawn of history, the ocean, in men's minds, stood for the terror of the great unknown. From its shores embarked adventure. Men sailed away never to return, their fate enshrouded in eternal silence. Mystery lived in its unfathomable depths. Beyond the dim edge of the seas lay strange lands, strange people, unknown continents. Even modern man, with his ocean-liners, when he took passage abroad, steamed away into silence until reported from shore days or weeks later. It was natural, therefore, that man should turn to the ocean for the first application of radio telegraphy. When ship-to-shore communication had been thoroughly proved, installations followed on many ships.

"a struggling art"

It was not long before fate provided the dramatic moment when the attention of the entire world might be focused on a struggling art. In 1909 the steamship "Republic" of the White Star Line met in collision the Italian ship "Florida"

The RCA equipped S. S. Vacuum, of the Vacuum Oil Company

off Nantucket. The crash came in the middle of the night, and the first call for help flashed from the ocean by a wireless operator thrilled the whole world.

"1500 human beings"

This was the famous C. Q. D. signal sent by Jack Binns, whose coolness and presence of mind resulted in saving the lives of 1,500 human beings on a sinking ship.

"Today All Vessels"

It was this disaster that crystallized to the world, the great value of radio on shipboard. Today all sea-going vessels carrying 50 persons or more are required by international law to carry radio installation and competent operators. An indication of how America has progressed in this phase of the art is shown by the fact that in 1913 there were but 479 American vessels equipped with radio while in 1923 the total was 2,762, an increase during these ten years of 576%.

TRANS-OCEANIC WIRELESS

"under foreign patents"

For a time the development of radio followed the activities of the sea. Installations aboard ships multiplied; coastal stations designed for ship-to-shore communication increased. The Marconi Company of America organized by British interests and operating under foreign patents was the dominant factor in radio in the American field. A number of high-power stations had been erected in the United States for trans-oceanic telegraphy. But here, unfortunately, the industry had grown in advance of the art. The key to constant, reliable trans-oceanic service had not yet been found by those who controlled the basic patents of the art. Existing equipment could not

RADIO CORPORATION SHIPBOARD SET
Installation on S.S. Leviathan

generate sufficient power in suitable form to transmit radio messages continuously across the Atlantic.

"American inventive genius"

It was during this period that American inventive genius, fathered by our great industrial institutions, took up the torch of radio progress. American industrial vision had foreseen that the development of the radio art might require a special type of electrical generating machine of vastly greater range and power than heretofore had been found necessary. In Schenectady the General Electric Company had been engaged for ten years in the colossal task of designing and building a high speed continuous wave alternating current machine which might be used, instead of the

spark apparatus, to transmit signals across the whole breadth of an ocean. Now its great investment of money and time and effort was about to bear fruit. Distinguished representatives of the Marconi Company of England had come to this country to negotiate for the sole and exclusive rights to the "Alexanderson Alternator," as this new and latest giant of radio was called.

"money and time and effort"

Then came the Great War in 1914. Soon it was apparent that no foreign country must be permitted to control our communications of the air; the United States Government took over the high-power stations of the Marconi Company of America. Immediately all negotiations were stopped by the General Electric Company for the sale of the Alexanderson Alternator. Freely and ungrudgingly, the General Electric Company placed its great and costly development at the service of the nation. It installed the Alexanderson Alternator at the New Brunswick (New Jersey) wireless station, then operated by the Government, and remodeled the entire system of wireless transmission. At once the bar that had stood in the way of successful trans-oceanic telegraphy was lifted, and for the first time continuous and practically uninterrupted communication was made possible through the air with the greatest nations of the world.

"Quickly it was apparent"

"for the first time"

"It was the first high-power station on the Atlantic coast which transmitted radio messages continuously and reliably," says the report of the Federal Trade Commission, recently issued by the United States Government.

Great and efficient as were the older forms of communication, the sudden realization brought on by the war, that the cutting of a cable could all

SENTINELS OF WORLD WIDE WIRELESS

Three-Mile Line of the First Twelve Towers at Radio Central, the RCA Trans-oceanic station for Communication with Europe and South America. The Power House is Located in the Center of the Tower Line.

but isolate an entire nation, developed in bold relief the vision and promise of radio telegraphy. Radio became the subject of research and experiment in the great workshops of the nation, and important devices and developments began to flow from the laboratories of the Westinghouse Electric & Manufacturing Company, the General Electric Company, the Western Electric Company and other outstanding elements in the electrical and manufacturing industries of the United States. Each sought the goal of individual leadership; each was spurred on by the achievements of the others; each was actuated by the dominant thought that the hour had struck for America to take the leadership in a new and constantly unfolding art. But none questioned the privilege of the American government to levy upon industry as it had levied upon man-power. The government took rightly enough, where it willed, disregarding patent claims, disregarding property rights, under the stress of the greatest emergency ever faced by our country.

"began to flow"

"each was spurred"

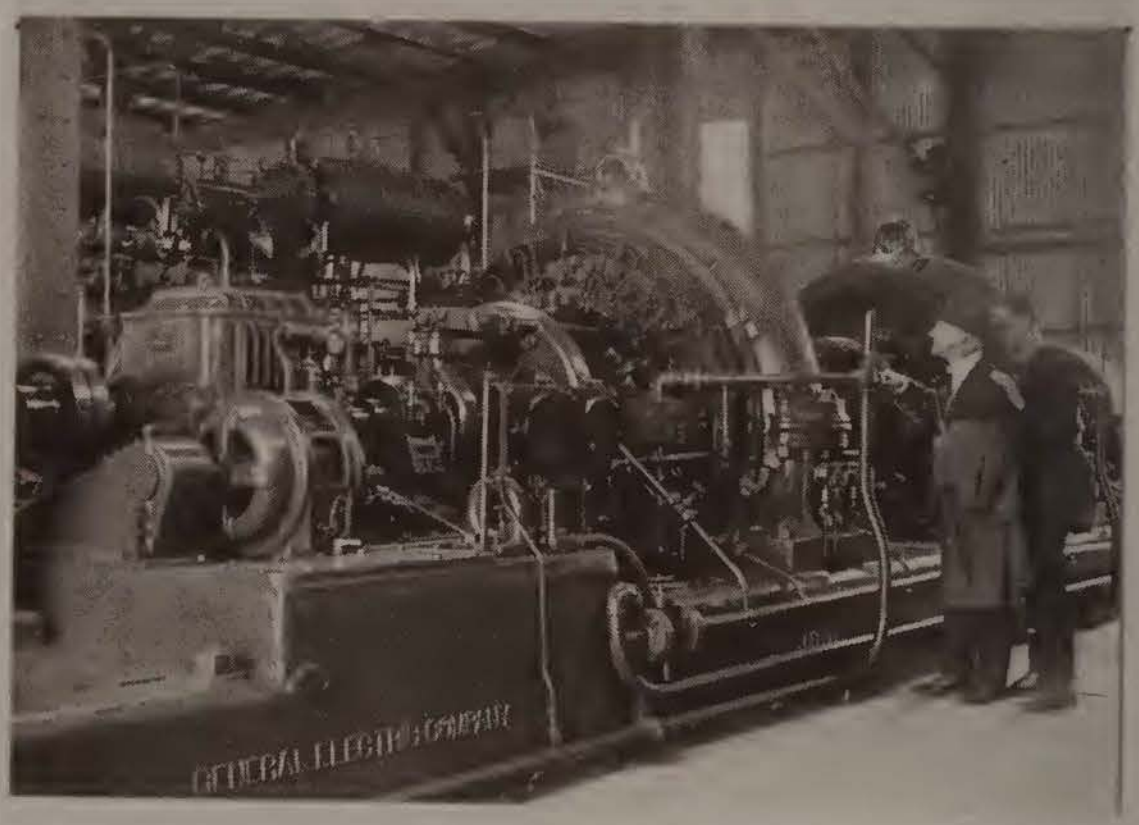
THE PROBLEMS OF PEACE

In radio, as in other activities, peace brought to the United States the problem of demobilization. Should this country tamely relinquish the leadership of the air which American inventive genius, American industrial vision and American capital, had given to the nation? Should our trans-oceanic communications by radio again be permitted to pass under alien control? In a sea of conflicting patent claims, litigation and rights, would the public interest be served better by a number of poorly organized, badly equipped

"tamely relinquish"

"our unified achievements"

transmitting companies each attempting to operate without vital patents held by the others? Or by one thoroughly organized, supremely equipped American company representing our unified achievements in the field of radio? One meant foreign control in any event, for international communication is a stream that must be fed both at its source and at its outlet if it is to reach an economically sound level. With a number of companies—instead of one great corporation—competing with each other for incoming traffic from nations overseas, alien communication systems, not American interests, would have fixed the conditions and terms under which the American people could send wireless messages through stations abroad. Only the presence in the field of a great



TWO 200 K.W. HIGH FREQUENCY ALTERNATORS

Two of the Alternators Used for Transmission at Radio Central. One Alternator is Capable of Furnishing a Continuous Output of 200 Kilowatts at Frequencies Covering a Wavelength Band from 15,000 to 20,000 Meters.

American company, backed by the incomparable resources of American industry, could bring the United States the victory of the air.

"the victory of the air"

Nor was the problem presented by trans-oceanic communication the only problem in radio which cried for solution. The vacuum tube, the promise and hope of modern radio, was tossing in a sea of heated litigation. Silent men working in laboratories, some supported by the resources of great organizations, had evolved striking improvements on the original tube device. Powerful enough at one end to transform the strongest electrical impulse into a series of electro-magnetic waves, and yet so marvelously sensitive at the other end as to register clearly the faintest whisper that floats through the air, the vacuum tube proved to be the very heart of radio. In its depth was the secret of radio broadcasting. Yet there was the basic patent—the Fleming tube—owned and controlled by the Marconi Company of America, and here were the improvements that would make it function as it could not without the help of American inventive genius. Also there were other indispensable radio patents, owned by conflicting interests, each refusing to cross-license the other. Only the master-hand of organization could bring order and progress out of the chaos wherein floated the radio industry at the close of the war.

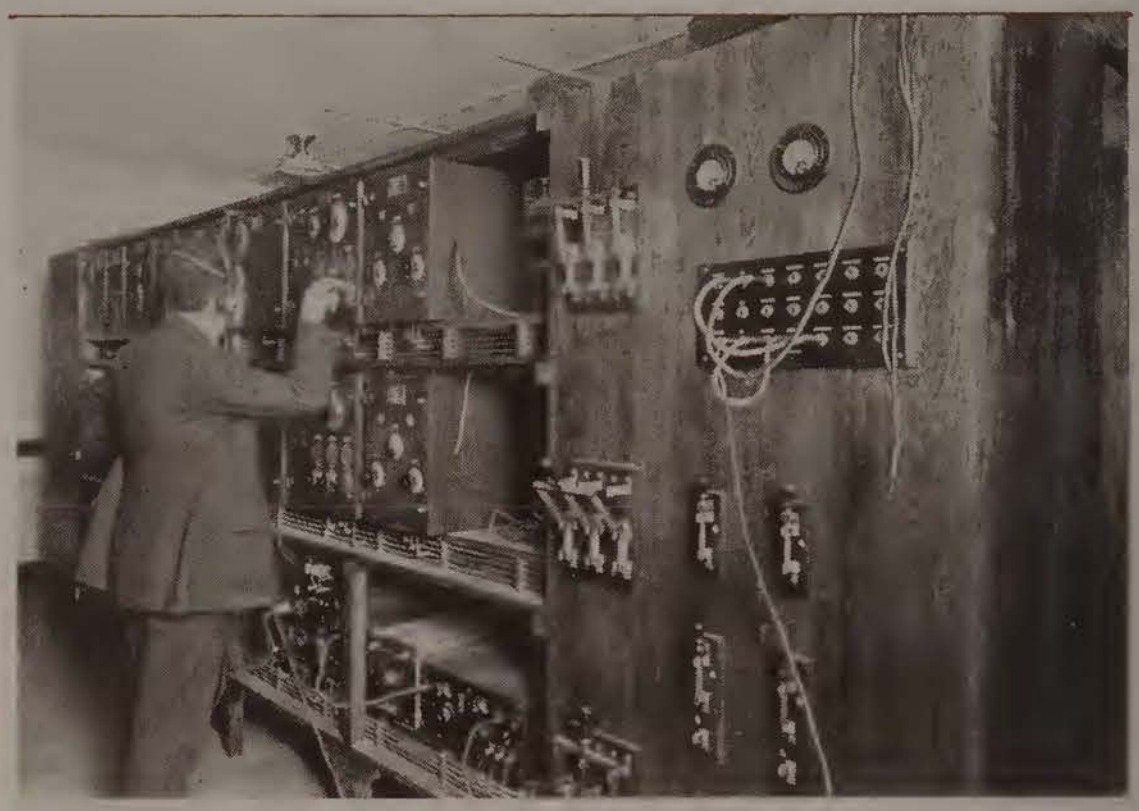
"silent men working"

"the secret of radio"

"indispensable palents"

THE FORMATION OF THE RADIO CORPORATION OF AMERICA

On April 5, 1919, a small group of men, including Owen D. Young, now Chairman of the Board of the Radio Corporation of America, sat in the New York office of the General Electric Company



RECEIVER SECTION AT RIVERHEAD, L. I.

One Section Accommodates Three Receiver Shelves, Each Shelf Composed of All Units Necessary to Receive from One European Station. There are Five of these Sections, thus Affording Fifteen Individual Receiving Circuits.

"of a distinguished officer"

awaiting the visit of a distinguished officer of the United States Navy, the Government's senior representative in control of radio in the United States during the war. Nothing was further from the minds of these leaders of industry than the thought that they might be called upon to organize radio in the United States. The business of the General Electric Company was to design and build special apparatus for sale to its customers. Its trade outposts spread over the earth; its market covered the world; and now it was about to complete negotiations with the Marconi Company of England for the use of the Alexanderson Alternator, the machine that had made commercial trans-oceanic radio possible. Perhaps

the conversation that ensued on the visitor's arrival is best described by Rear Admiral W. H. G. Bullard, U. S. N., the Government's representative at this historic conference.

"this historic conference"

An American Wireless Doctrine

*"As the senior Government representative, I unfolded to these officials (of the General Electric Company) the danger to American interests that would ensue if the Alexanderson machine should be sold to any foreign government or foreign private companies. I pointed out that our citizens had never played any prominent part in cable communications and here was a chance to retain in American hands the complete domination of radio communication in the United States, as well as Central and South America. I made reference to a policy of wireless doctrine, similar to the greater Monroe Doctrine by which the control of radio on this Continent would remain in American hands. . . . The chairman finally announced that as the matter had been presented to them it would be a most unpatriotic action to proceed with the negotiations with the English Company, and as far as the directors then present could do so, they would proceed no further in the contemplated sale of the Alexanderson machine."

"the danger to American interests"

"of wireless doctrine"

Admiral Bullard had hurried to New York immediately upon his return from Paris. The New Brunswick wireless station, he said, equipped with an Alexanderson Alternator, had proved the American radio system the best system in the

"the best system in the world"

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*From Vol. 49 of the U. S. Naval Institute Proceedings.

POWER HOUSE AND COOLING POND

Front View of Power House at Radio Central. In the Foreground is Shown the Cooling Pond for the Water which Circulates through the High Speed Alternators, thereby Permitting Constant Mechanical Operation.

world. To turn this over to the control of foreign interests would be to renounce American leadership in a field which American genius had done so much to develop. It was the patriotic duty of American industry to establish a wholly American company to meet the competition of other radio interests in the world.

In this manner was born the Radio Corporation of America, and from this moment began the mobilization of research and patents and manufacturing facilities that has made America the center of modern world-wide wireless.

"Thus was born"

Radio-Central—The Super-Power Station

On the north shore of Long Island, the Radio Corporation of America began the construction of a Radio Central—a super-power radio system that simultaneously could send and receive messages from the great nations of the world across the ocean. This giant of radio, with its steel towers covering more than ten square miles of land, has made the United States the focal point of the world in the transmission and reception of wireless intelligence. It stands as a monument to American achievement, the greatest milestone in the progress of radio across the oceans.

"across the ocean"

"the greatest milestone"

Radio-Central was opened for public service on November 5, 1921, by the late President Harding, whose message of greeting to the world was the first one sent out from the station.

The message was received simultaneously and directly in 28 different countries of the world, including New Zealand, Australia, Argentina, etc.

The message was as follows:

THE WHITE HOUSE,

Washington, United States of America.

"To be able to transmit a message by radio in expectation that it may reach every radio station in the world, is so marvelous a scientific and technical achievement as to justify special recognition (stop) It affords peculiar gratification that such a message, from the Chief Executive of the United States of America, may be received in every land, from every sky, by peoples with whom our nation is at peace and amity (stop) That this happy situation may ever continue, and that the peace which blesses our own land may presently become the fortune of all lands and peoples, is the earnest hope of the American nation (stop)

(Signed) WARREN G. HARDING."

November 5, 1921.

"in every land from every sky"

OPERATING SECTION

Located in the Heart of New York's Financial District. Here Radiograms are Directly Radioed to and from Europe through Radio Central and other RCA Trans-Atlantic Stations by Means of Special Remote Control.

RADIO BROADCASTING

While one of the leaders of the American electrical industry had been writing the history of radio on and across the ocean, another leading industrial institution was carrying the message of radio to the home. To the Westinghouse Electric and Manufacturing Company had come the vision of radio bringing music and education and entertainment to every home in the land. Late in 1920, the Westinghouse company erected a broadcasting station at its manufacturing plant, located at East Pittsburgh, Pa., and on November 2, 1920, began to send out the first organized and regular program service starting with the announcement of the Presidential election returns. Crude as this service was compared to that rendered by the modern broadcasting station, it was a startling demonstration of the universal and beneficent power of radio. Little did the small groups of pioneer listeners realize that in three years the mighty voice of radio would be heard in over 3,000,000 American homes.

"Late in 1920"

As in trans-oceanic radio, the glowing promise which broadcasting held forth could not be fulfilled, until the Government's appeal for united effort in developing the vacuum tube was answered by the Radio Corporation of America. A wall of patents surrounded this development—patent claims in interference, patent claims in litigation, basic and indispensable patents owned by separate interests declining to license each other. It was this condition that impelled officers of the United States Government on two occasions to urge that the interests concerned should cooperate as public duty.

"a wall of patents"

BROADCASTING ANTENNA OF RCA STATION "WRC"
Atop the Riggs National Bank Building at Washington, D. C.

"The development of the radio industry, both in the manufacture of radio apparatus and in the operation of reliable commercial trans-oceanic systems was retarded while the numerous broad and fundamental radio patents were owned and controlled by opposing interests," according to the report published December 1st, 1923, by the United States Federal Trade Commission. "The very soul of radio, both for commercial operations of commercial systems and to the amateur," to quote testimony published in the Commission's report, "is the three-electrode vacuum tube, and no company which cannot supply equipment designed to be used with these tubes can hope to be a success."

"The very soul of Radio"

And what was the situation that faced the radio industry with regard to the development of the modern vacuum tube? The two-element tube controlled by the Marconi Company of America was not altogether efficient for the purpose of modern broadcasting; the third element covered by another patent was ineffective without the use of the original two-element tube; nor, indeed was the three-element tube altogether satisfactory, before its improvement by still another invention.

"the modern vacuum tube"

The diverse ownership of patents, methods, apparatus and circuits involved in the use of the modern vacuum tube finally impelled the United States Navy Department to write to the interests concerned appealing for an agreement between the holders of permanent patents whereby the public could be freely supplied with tubes.

INTERIOR OF STUDIO "WJZ"
In the Aeolian Building, New York City
Two transmitters and two studios are employed in this station, for simultaneous broadcasting of different programs from "WJZ" and "WJY" on 455 and 405 meters respectively.

"an appeal for the good"

"The situation has become such that it is a public necessity that such arrangement be made without further delay, and this letter may be considered an appeal for the good of the public for a remedy to the situation."

(The above quotation is from the report of the Federal Trade Commission, quoting a letter from the Bureau of Steam Engineering, of the United States Navy, written on January 5, 1920, to the General Electric Company.)

The manner in which the Radio Corporation of America accepted this great responsibility, the spirit of public service which it brought to the task, and the success with which it organized the necessary manufacturing facilities, are best re-

flected in the record of its achievements that follows. It is a work unparalleled in American industrial history. Over 10,000,000 people in 3,000,000 homes throughout the United States are the direct beneficiaries of the vision and faith of its founders.

"over 10,000,000 people"

THREE YEARS OF ACHIEVEMENT

The Radio Corporation of America was born at the urgent call of public service, in the twilight period of a developing art. Its mission was to secure for America unquestionable supremacy in radio communications, to which the contributions of American inventive genius, American industrial organization and American capital, justly entitled us. And this is the record of its achievement and position—

"justly entitled us"

In Trans-oceanic Radio:

(1) The United States has become the center of world wide wireless as a result of the organization of the Radio Corporation of America. With a system of seven high power transmitting units on the Atlantic coast and a great central receiving station on the shores of Long Island, this country for the first time has reached out through the air to Great Britain, France, Germany, Poland, Norway and Italy, in Europe. From San Francisco, this same American company spans through the air the great Pacific, via Hawaii, to Japan. Again, from New York a direct radio link has recently been established to Buenos Aires, and other points in South America.

"world wide wireless"

(2) The general reduction during 1923 in trans-oceanic message rates is a direct result of

"cheaper and better"

the competition offered by radio to the cables. Thus the unified control of trans-oceanic wireless by the Radio Corporation of America has made the American public the beneficiaries of cheaper and better international communications than for any period during the past 40 years.

In Marine Radio:

"humanitarian services"

(1) The Radio Corporation of America shares with its several competitors on the Atlantic, Pacific and Gulf coasts, the distinction of having made radio more efficient on the ocean. Radio has not only destroyed the isolation of the sea but it has brought a variety of humanitarian services to every corner of the ocean—medical advice from shore, storm warnings, other weather infor-

CONTROL ROOM OF DUAL STATION "WJZ-WJY"
The Operator Stands before an Oscillograph—a Device for Checking the Characteristics of the Program being Transmitted.

mation and pilotage by wireless. In 1913 there were but 479 American ships equipped with radio. In 1923 there were 2,762 radio equipped American ships—an increase of 576 per cent!

In Radio Broadcasting:

(1) The Radio Corporation of America and its associated companies have initiated, supplied and supported a public service, by the erection of a system of broadcasting stations. Without these great broadcasting stations, radiating every day their programs of music, entertainment and education, every receiving set in the land would be but a piece of silent mechanism. The ten broadcasting stations owned and operated for the benefit of the American public by the Radio Corporation of America and its allied interests, the Westinghouse and the General Electric Companies, represent an investment of approximately $2,000,000, and a yearly operating expense of approximately $1,000,000. Such has been the progress of radio broadcasting, that whereas in 1921 only two broadcasting stations were operating in this country, in 1923 over 500 stations were reaching out through the air to deliver the message of radio to 3,000,000 homes and to 10,000,000 people in the United States.

"radiating every day"

"over 500 stations"

(2) Faced by the competition of more than 3,000 other manufacturers of radio apparatus and supplies in the United States, the Radio Corporation of America has been the one stabilizing influence in the radio indus-

"one stabilizing influence"

THE RCA BUILDING

At 66 Broad Street, New York City; the Home of World Wide Wireless. Here is located the Central Traffic Office, the Heart of the "Via RCA" System.

try. Its first move after placing manufacturing facilities on an economical basis was to *reduce the price of sets.*

(3) The Radio Corporation of America is the only institution that could have met the appeal of the United States Government for a patents agreement that would make possible the manufacture and supply of vacuum tubes to the American radio public. When production was thoroughly organized the Radio Corporation of America *reduced the price of tubes, and this at a time when the demand for these tubes was in excess of the supply.*

(4) The Radio Corporation of America has accepted a responsibility greater than the mere designing and distributing of radio apparatus. It maintains at a large investment of capital a great research laboratory where every new device in a swiftly moving art is examined, tested and tried; where every development that might offer a new service to the public goes under the scrutiny of modern engineering science; and where every type of apparatus and equipment is tested under the microscope of service and achievement before it is put into production and offered for sale.

"a great research laboratory"

Institutions, like men, grow great by service. The success of the Radio Corporation of America exemplifies the highest type of Americanism in business—the principle of unfettered achievement constantly at work to develop an art; of far-sighted industrial organization formed for the purpose of economic production; of leadership and vision pledged to the service of public interest.

"of leadership and vision"

Commentary

What the Federal Trade Commission Reported

(From the Report of the Investigating Committee of the United States Federal Trade Commission.)

"So far as can be determined from the records of the Radio Corporation of America and from investigation among the trade, there appears to be no attempt on the part of any of the manufacturers of radio apparatus to eliminate by unfair methods the general price cutting conditions which prevail in the trade. On the contrary, it does appear that notwithstanding continual price cutting, not only by the distributors of the Radio Corporation, but also by the retail trade, all continue to receive radio apparatus notwithstanding the efforts of that part of the trade that does not cut prices to induce the Radio Corporation and other manufacturers to refuse to make further shipments to the cut-price dealers."

Secretary Hoover's Summary of America's Position in Trans-oceanic Communication

(From the annual report of the Department of Commerce for 1923.)

"Our trans-oceanic system is materially strengthened by the nine radio circuits across the Atlantic and Pacific and additional circuits to Central America. It is estimated by radio-operating companies that from 20 to 30 per cent of the message traffic across the Atlantic and 50 per cent of the trans-Pacific business was handled by radio in 1922. Obviously this forms an important service supplementing cables both in peace and war, safeguarding against interruption in service and is a competitive check which should tend constantly to improve the service at the lowest practicable rates."

America's Progress in Radio Broadcasting Compared to the Progress Made by Foreign Countries

(From Secretary Hoover's annual report for 1923 of the Department of Commerce.)

"Radio broadcasting continues to hold the interest of the public, and is to a limited extent gaining recognition in other countries. We have now 573 broadcasting stations as compared with 382 a year ago. The first broadcasting license was issued in September, 1921. *In foreign countries there are but 63, Canada having 30 of these!*"

(From Secretary Hoover's year-end review of the progress of radio in 1923, published in the newspapers.)

"Radio telegraphic communication with Italy, Poland and Argentina and other South and Central American countries, has been established, additional circuits to Germany and Japan are working, and radio relationships are being established with China and other countries, all marking the initiation of the building up of the international position which rightly belongs to us."

The Radio Corporation of America an American Company Serving the Nation

(From an address over "WRC" by Theodore Roosevelt, Assistant Secretary of the Navy at Washington, August 1, 1923.)

"We cooperated with the General Electric Company and other American companies in the organization of this Radio Corporation of America from where this message is going. This is an American Company financed by Americans and serving our country. At its head is a splendid American — General Harbord — whom I have known for years and am proud to call my friend. The Navy Department is deeply interested in its success and will help where it can, for it feels that it supplies a marked advantage to the United States. There is no divided loyalty in the Radio Corporation of America. Its allegiance is to the United States alone."

The Success of the Radio Corporation Is the Success of American Ideals

(From an address delivered over "WRC" by General John L. Hines, Deputy Chief of Staff of the United States Army, at Washington, D. C., August 1, 1923.)

"It is particularly comforting to realize that this undertaking is in the hands of an organization which in many ways has proven itself to be one hundred per cent American and whose growing success is an indication of American ideals. Its president, General J. G. Harbord, won a world-wide recognition for his solid achievements as a commander of troops and as chief of staff of the A. E. F. Even though I were ignorant of the character of this corporation, the knowledge that its leadership is in the hands of a man like General Harbord would give me assurance that its affairs will always be conducted according to the fine ideals of service for country and for humanity."

Competitive Radio Stations in the United States to the Advantage of Foreign Interests and to Detriment of America

(From a letter of Mr. Owen D. Young, Chairman of the Board of Directors of the Radio Corporation of America, to Secretary Denby of the United States Navy Department, December 22, 1921.)

"Competitive radio stations in the United States for international communications is in the interest of the foreigner and to the detriment of America. May I ask you to consider the position which America would be in if there were competitive radio stations on the Pacific coast? The principal volume of communications across the Pacific is, and probably for many years will be, with Japan. The Japanese end of these communications is controlled by the Japanese Government. Any American stations which lost the Japanese business would become practically valueless. Therefore, the owners of that station would, as a practical business matter, have to accept any terms as to traffic which the Japanese cared to impose. In other words, the control of American wireless communications on the Pacific coast would, under such conditions, pass from the hands of Americans into the hands of the Japanese.

"The real fact of the matter is, Mr. Secretary, that the competition in international communication lies and should lie between the cables as one agency and wireless as another agency. Nothing would

better satisfy the cable interests than a policy of setting up weak competitive radio stations in the United States. Wireless would thereby be proven to be an unremunerative business, and therefore, ineffective as a competitor of the cables."

The Policy of the Radio Corporation of America with Respect to Broadcasting

(From an address by Mr. David Sarnoff, Vice-President and General Manager of the Radio Corporation of America, before the Electrical Supply Jobbers Association at Buffalo, November 15, 1923.)

"The greatest advantage of broadcasting lies in its universality, in its ability to reach everybody, everywhere, anywhere, in giving free entertainment, culture, instruction, and all the items which constitute a program, in doing that which no other agency has yet been able to do, and it is up to us, of the Radio Art and Industry with intelligence and technique and broadness of spirit and vision as to the future, to preserve that most delightful element in the whole situation—the freedom of radio.

"* * * Just as soon as we destroy that freedom and universality of radio and confine it to only those who pay for it—those who pay for the service, in other words—just so soon as we make of broadcasting 'narrowcasting,' we destroy the fundamental of the whole situation. And, therefore, I believe very definitely that broadcasting as constituted today is commercially sound, and that it will remain so in the future, although there may be selective methods and narrowcast methods which will do no harm. These may supplement the situation. There may be wired-wireless and the like. All of these will make their contributions. But fundamentally there will remain, and there must remain and be preserved that element of the

broadcast situation which makes it possible for grand opera to go to the slums and to the districts of the poor as well as the rich, everywhere in the world, without any charge. The real picture of a $15 or a $25 set in the home of the slums, if you please, receiving the magnificent things in the air, is the picture we must preserve."

Freedom of Speech

(From a statement by Mr. David Sarnoff before the House of Representatives, Committee on Merchant Marine and Fisheries at Washington, D. C., on March 13, 1924.)

"I cannot help feeling that not only should the public be left free from the payment of any license fee to the Government or others for the privilege of listening on a broadcast receiver, but that it should also be free from fees or tolls of any kind in the field of broadcasting through space. Furthermore, I believe that the expressions of educators and statesmen should reach them uncensored and uncontrolled. The air belongs to the people. It should be regulated by the will of a majority of the people. Its main highways should be maintained for the main travel. To collect a tax from the radio audience would be a reversion to the days of toll roads and bridges; to the days when schools were not public or free, and when public libraries were unknown.

"In the same way, the drawing of political, racial or religious lines would be a flareback to the day of intolerance and persecution.

"Had there been radio broadcasting in 1858, there might have been no Civil War. The Lincoln-Douglas debates, broadcasted, would have reached the whole nation, and speaking to a larger audience, Lincoln might have achieved his peaceful program.

"Broadcasting stations, in my conception are, indeed, the bar at which causes can be pleaded for the verdicts of public opinion. The public is well aware that radio broadcasting is not confined to the influence of the lone speaker in the broadcast studio; that speeches from public halls even now are constantly heard by a million listeners, and that eventually it will be practicable, if Congress is willing, to turn on the debates in the Federal legislative bodies, so that the radio world may form its own impressions of laws and the way they are made.

"So powerful an instrument for public good should be kept free from partisan manipulations. 'America today may justly be proud of the freedom of its press. In no country in the world has this freedom been preserved more steadfastly.'

"It is the newspapers which have forwarded the movements to expose wrong doing and to establish justice, and it is my hope that the freedom of broadcasting will be maintained in the same American spirit. Not only do I believe that no artificial means should be evolved to restrict or tax the radio listeners, but I believe that the radio audience alone should be the final judge of interest in every radio program."