



RICH A REWARDS IN RADIO

Operating on board ship

Television

Broadcasting Stations

Commercial Land Stations

Radio Stores

Radio in Aviation

Spare time set servicing

Radio Factories

RADIOGRAMS

AD'S

Facts about Radio's Growth and *many opportunities*

The Radio business has grown in volume from about two million dollars in 1920 to about one billion dollars in 1929.

Approximately four billion dollars are invested in Radio of which about twenty million dollars are in broadcasting stations and two billion dollars in factories and their equipment.

Only one broadcasting station was in operation in 1920, now there are over 600.

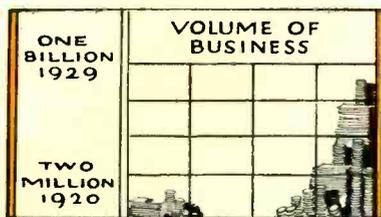
Approximately 100,000 receiving sets were in use in 1920—now there are about 10,000,000.

Where there were a few thousand men employed in the Radio field in 1920, there are now approximately 300,000.

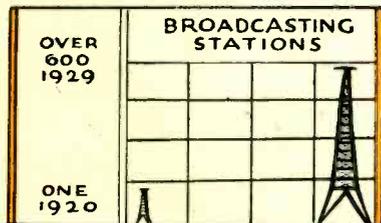
There were practically no Radio stores in 1920—perhaps a few in the larger cities—now there are over 35,000 and many thousands of other stores handling Radios as a side line.

In 1920 there were only a few manufacturers of Radio sets and parts—now the number is over 3,000.

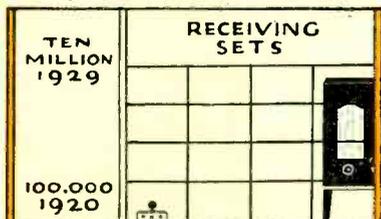
Thousands of ships are equipped with Radio—it is a world wide source of home entertainment—it is used in hundreds of different businesses and for hundreds of different purposes.



In less than ten years Radio has grown from a \$2,000,000 to a \$1,000,000,000 industry.



The amazing growth of Radio is further shown here. From one broadcasting station in 1920 the number has increased to over 600 today.



Today there are 10,000,000 or more receiving sets in use. These facts clearly show why there are so many opportunities in Radio.

More Facts about National Radio Institute's growth and *practical training*

From a small beginning with four students in one room scarcely large enough to accommodate that small class, the National Radio Institute grew until now it has hundreds of students and graduates in all parts of the world.

From about 3 employees in 1914, the total has grown to an average of 120.

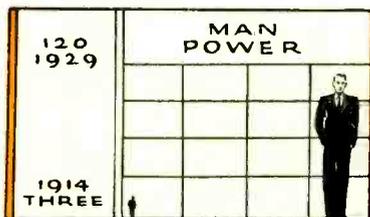
From a few feet of floor space, it has grown to 15,000 square feet.

From a few lessons to be graded and answered, the annual total lessons now submitted for grading is approximately 300,000.

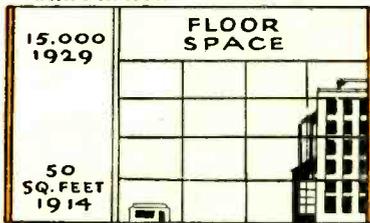
From a few hundred technical letters requesting information, the total has grown to about 20,000 a year.

From one or two graduates in the field, the N. R. I. is now represented by its graduates in almost every large Radio firm in the country.

The total yearly earnings of N. R. I. graduates in the Radio field has been estimated as close to six million dollars.



Today National Radio Institute has a staff of about 120 people employed regularly compared with 3 in 1914.



We occupy three hundred times as much floor space now as we did in 1914.



About seven hundred times as many letters from students and graduates asking for counsel and advice are answered every year.



A book dedicated to ambitious men and young men who want the facts on the **OPPORTUNITIES** in Radio and describing a practical home study training which is showing hundreds every year how to make **more money** as *Radio Experts*.

Read it carefully ---- it may mean more money and greater opportunities for **You**.

By

J. E. Smith, *President*

NATIONAL RADIO INSTITUTE

16th and U Streets, N.W.,

WASHINGTON, D. C.





J. E. SMITH, *President*
NATIONAL RADIO INSTITUTE
Which he founded in
the year 1914

I want You to know—J. E. SMITH

*By the man who
knows him best*



as I do after Our 15 years
together at the N. R. I.

You will find "J. E."—as all of us here at the Institute affectionately call him—more than a great teacher and instructor. You will find him to be a real friend—the type of man who wants your friendship and will strive hard to earn and keep it.

When I first met him about 15 years ago, I was immediately impressed with his sincerity, earnestness and steadfastness of purpose. No one needed to tell me that he had a reputation for being absolutely honest in all his dealings. His personality radiates sincerity and enthusiasm.

Always modest in his statements, considerate, patient and understanding with others, he has won for himself a host of friends, among them many of the leaders in the Radio and Electrical fields.

Mr. Smith is the sort of man who wears well—the longer and the more you know him, the better you like him. These qualities have gone far toward making him the success and leader that he is in his chosen field, and in building the N. R. I. to its present place of leadership in Home-Study Radio training. His ability to inspire confidence, to develop and keep the loyalty of our Institute Staff, counts for much in bringing out the very best in every man and woman in our organization.

It is seldom that you meet a man whose desire to help others is so great as to be reflected in practically every action, every thought and every deed. Mr. Smith has told me time and again that his greatest satisfaction and pleasure comes from helping others. He believes, and I think he is right, that he can do more permanent lasting good by training men and young men to make more money—by fitting them for a fast growing field like Radio—than in most any other way.

Perhaps his ambition and desire to help others is due to his thorough understanding of the difficulties so many men and young men face in getting ahead. This understanding did not come from observation or study, but from actual experience.

There has been no royal road to the success, honor and achievement

that Mr. Smith now enjoys. He has had to work hard to get his education and experience. He worked in shoe factories, attended a telephone switchboard, waited on tables, unloaded cars of lumber, fired a railroad engine, and did many other odd and sometimes strenuous jobs to earn the money to finish up his high school education and go through college.

But no matter how difficult the task, how long the hours, what sacrifices were required, Mr. Smith had set his mind on getting a college degree and graduated from Worcester Polytechnic Institute with a diploma as Bachelor of Science, Electrical Engineer.

That same determination, that same steadfastness of purpose which it was necessary for him to develop and exercise during his early years are still with him and can be seen daily as he goes about tirelessly serving our students and graduates.

He first became interested in Radio about the year 1909 or 1910 when the Naval Radio Station, NAA, was being built at Arlington, right across the Potomac River from Washington. He refers to the building of this Station as the determining factor in his career.

A few years later a few members of a high school class he was teaching at the McKinley Manual Training School, now Technical High School, here in Washington, D. C., asked him to tell them more about Radio. He was quick to accept the invitation and from that small beginning with four students, the National Radio Institute has grown to its present position of leadership in Home-Study Radio training.

Just how well he has succeeded in his chosen profession, the pages in this book will tell you. I am writing this so that you will know Mr. Smith as I and the others here at the Institute know him. I want you to know him as a man, as a friend, as a great teacher and as a helper. I want you to know that above everything else his greatest interest will be in seeing you win success in Radio.

E. R. HAAS,
Vice-President.

America's Outstanding Teacher of Radio

Distinguished engineer, inventor, author—but above all, a teacher who possesses almost incredible ability to bring out the best in every man—that, briefly, is J. E. Smith, President and Active Head of the National Radio Institute, Pioneer and Largest Home-Study Radio School in the world.

Since 1914, Mr. Smith has applied his enormous fund of practical Radio knowledge and his amazing ability for training men to the building of this Institute. A graduate of Worcester Polytechnic Institute, a close student and instructor of Radio almost from its very beginning, he is ideally equipped to train you for success in this field.

During the World War, Mr. Smith gave up his interests at the Institute temporarily to take care of Radio training work for the Army. Gathering a large staff of instructors under him, he directed the training of hundreds of men and young men for the U. S. Army and won the sincere appreciation of the heads of our Government.

Many honors have been showered upon him—he is a member of the Institute of Radio Engineers, a member and past chairman of the Washington Chapter of the American Institute of Electrical Engineers, a member of the committee on Power Development at Great Falls, Patentee of an automatic code teaching instrument and author of books and magazine articles on Radio.

First and foremost, however, he is at the service of his students and graduates. It is his close personal attention, his unselfish devotion to your interest, his friendship and sincerity which will arouse your own enthusiasm when you are his student and will bring out your very best work.

"TUNE-IN" on a big pay job and a *Bright future in Radio*



It is difficult to picture and describe the present size of the Radio industry and its many openings. Many people think of Radio only in terms of receiving sets seen everywhere. They fail to understand that behind these sets, and in many and varied capacities, there is an enormous body of skilled, trained men—men who make up the new Radio profession—a field where more trained men are constantly needed.

Most people fail to realize that the manufacture and sale of sets is only one of the many branches of Radio offering rich opportunities. Broadcasting, for example, is a big field of opportunity employing thousands of trained, skilled men. The use of Radio on board ship requires thousands of trained operators. Those are only a few branches of opportunities. Later in this book I will tell you about many more.

Naturally when a man or young man is face to face with choosing his life's work, or has seen the need of changing over from one line to another because of lack of opportunity where he is, he wants to gather all the facts he can to be able to make an accurate decision. The purpose of this book is to outline the opportunities in the different branches of Radio. I want you to remember, as you read it, that a book five times this size could not possibly cover them all. I have given you as many facts and as much information as space permits.

In addition to entering a field where opportunities exist for a good job after his training has been completed, every man wants to make sure that he has



(Courtesy Wide-World Photos)

Herbert Hoover, Jr., enters Radio

With his father in the most important office the Nation has to offer, Herbert Hoover, Jr., could probably have entered any field of business he wished. His father's influence would have opened the door to any industry or profession for him.

With all the business world to choose from, the President's son chose Radio. The possibilities of this industry must have attracted him more than the other good jobs he could have had. He is now Radio Communication Specialist for the Western Air Express. Opportunities that attracted the President's son are within the grasp of any man who has specialized knowledge of Radio. This is a new, uncrowded field—demanding more trained men.

good opportunities to win advancements and promotions. I believe you realize how small your chances are in a business or profession that is standing still.

This book will prove that Radio is not that kind of a business. It has grown fast, exceedingly fast, but its biggest growth is still ahead. I will prove this to you in this book. So I say, get in this field now—get one of the good jobs paying \$50, \$75 and \$100 a week that are opening regularly. With my training to back you up, you should be able to make good easily, and you will have many opportunities to go up in salary and position with the growth of Radio.

You'll find Radio work extremely fascinating and interesting. There is something about it that grabs your interest and holds it. Besides you will have a wide choice of opportunities. The many different branches mentioned in this catalog each have within themselves many different types of jobs. I am going to tell you about them, so be sure to read every page of this book.

And I am going to tell you about my course—what I offer you and show you what it can do for you, because of what I have done for others. You need not take my word for it when I tell you that my course fits you to make good money in Radio. You take the word of hundreds of my graduates who know what this training did for them and can do for you. Be sure to read every one of the 100 letters from graduates scattered through this book. They show exactly what N. R. I. trains you to do and make. And as you read these letters, remember that I have a better, more thorough course of training today than I had when these men enrolled with me. My course has been revised, improved, enlarged. So your chances of success are even better today than when these men enrolled with me. And the Radio field is better, too—larger, growing faster than ever before.

More than \$400 a month



1484 So. 15th St.,
Salt Lake City, Utah

Dear Mr. Smith:

I really believe that every man should take your course in Radio as there is every chance in the world for a man, if he has anything in him at all, to get some place, as the opportunities in Radio are unlimited. The Radio field is getting bigger and better every day. I had 15 years as traveling salesman and was making good money but could see the opportunities in Radio. Believe me, I am not sorry, for I have made more money than I ever did before. I have made more than \$400 each month and it really was your course that brought me to this. I can't say too much for your school.

Yours very truly,
J. G. DAHLSTEAD

Amazing Growth of Radio *is making* Hundreds of Big Pay jobs every year

You read earlier in this book how the number of broadcasting stations increased from one in 1920 to over 600 at the present time. How the number of Radio dealers, jobbers, Radio manufacturers have increased many times over in this short space of time. How Radio has invaded many industries and is serving many purposes. As an entertainment force it is world-wide. Commercially it is a business necessity.

This amazing growth could have had but one result—the making of hundreds of fine jobs. Since Radio is continuing to grow with amazing speed, many other fine jobs are opening every year. They pay \$50, \$65, \$75 on up to \$100 a week, and in many cases lead quickly to \$150 to \$200 a week.

While Radio has developed far more rapidly than most any other industry, many untouched opportunities are still ahead. Surely common sense tells us that more people can afford Radios than can afford to own a car. At the present time there are approximately twice as many automobiles in use in the U. S. as there are Radio sets.

In these figures you see the reason why far-sighted Radio manufacturers are expanding their plants, why Radio's sales increase every year—why Radio opportunities now are on the up-grade and will be for many years.

Gen. James G. Harbord in a recent interview published in several leading newspapers predicted that:—Television

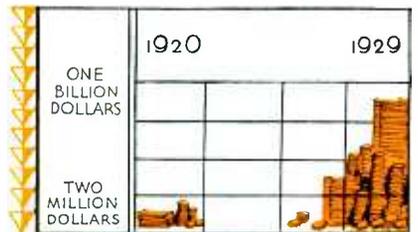
will supplement sound broadcasting—soon we will see as well as hear Radio entertainment:—Home Talking Movies will be an outstanding development of the next few decades:—A vast expansion in Radio circuits and traffic volume impends—short waves will provide many more channels:—With increased communication we may send Radiograms to all parts of the world:—Photographs, drawings, fingerprints and commercial documents will be flashed across oceans and continents.

That Londoners will read New York newspapers the same day, whole newspapers being flashed all around the world. That Radio Telephony as a public or toll service is certain to thrive during the next 20 years. That International exchange of broadcast programs for the near future seems assured. That Radio as an art and science offers a most attractive field of endeavor for young men and women.

Back in the early days of the automobile business, Henry Ford was a mechanic making \$3 a day. Now he is the richest man in the world. Think of some of the tremendous fortunes that have been made, the enormous concerns that have grown up in the automobile industry—General Motors, Hudson-Essex, Packard, Ford and others.

Today you have the same opportunity in Radio you could have had by starting in the automobile industry years ago. Roger Babson, the famous business authority, says: “Our next crop of millionaires is coming from Radio.”

Just see how the Radio business has grown



No wonder there are so many fine jobs opening every year in Radio. This chart of Radio's growth shows the reason.



KDKA—the first broadcasting station as it appeared in 1920. Compare it with the photograph below.



Interior of a section of a modern broadcasting station. Notice the intricate and expensive equipment compared with the photo above.

Making \$3000 to \$4000 a year in his own business



my own and am making lots of money. I have the exclusive franchise for a number of sets and also do repair and service work. Your course has earned about \$3000 for me and if nothing happens I will clear from \$3000 to \$4000 from my business this year. My business is getting better all the time. I am making about four times what I was making before I took the N. R. I. course. If it had not been for the course I would still be fooling around with Radio without knowing what it is all about.

Sincerely yours,

WILLIAM E. RIDDLE

58 Main St.,
Saranac Lake, N. Y.

Dear Mr. Smith:

I was delighted to receive your letter and to hear from you and to know that you are still interested in me as I finished my course with you quite some time ago. I enjoyed your Radio programs very much. Your talk was especially interesting. Mr. Smith, I have opened a store of

Radio Laboratory is valued at \$3000

P. O. Box 221,
Thetford Mines, P. Q., Canada



Dear Mr. Smith:

I took your course as a pastime intending to do consulting work. In 1923 I built over 30 sets, serviced over 75, and cashed in about \$15 daily. Due to my health, I did very little work again until 1927 when I went in for amateur Radio. I had more work than I could handle in spite of having two men working with me. We did servicing on a large scale. I had a nicely equipped laboratory, entered the consulting field, giving advice and getting paid for it. I was entering a new field that paid more than anything I ever did before. Now I am known over a wide area as an expert and my services are called for by men who want reliable service. My laboratory is valued at \$3000 today and is paid up. More valuable than money is the name I have made for myself in Radio. I have been Radio Instructor at the Club here, have written many articles for the local and outside periodicals. I have introduced Radio into this town. I can ask my price for any consultation or servicing and get it.

Sincerely yours,

ALPHY BLAIS

MORE TRAINED MEN *Needed* in all branches of RADIO

In the short space of a few years, Radio has changed our very manner of living. Right now while the Radio industry is making its most sensational strides, is the best time for you to start in it.

Mr. Bond P. Geddes, Executive Vice President of the Radio Manufacturers' Association in a recent article in the Radio Manufacturers' Monthly wrote: "Man power, strange as it may seem, is one of the greatest needs of the Radio industry."

The best evidence of the increasing demand for trained Radio men in all branches of Radio is the fact that my Employment Department up to the time I am writing this book, has this year received three times as many requests for our graduates as we received during the same period of time last year. No matter what your personal inclinations or desires may be, I believe that Radio can satisfy them. First it is a field big enough and broad enough to offer you all of the opportunity you could possibly want for interesting, fascinating employment and for good pay.

Do you like to travel? Radio operating on board ship will appeal to you. Perhaps Radio broadcasting is more to your liking—it is a fascinating field. Do you like to create, develop, design? Then Experimental and Research laboratories are the place for you.

Do you like to sell or service sets?

Radio dealers, jobbers and manufacturers need you. Do you like thrills, excitement? Aviation is needing more trained Radio men every year. Do you like to write? Hundreds of newspapers have Radio Departments edited by trained Radio men and more men are needed continually.

You are going to find that the best things said about my course in this book were not written by me—but by students and graduates—men who have taken my course and who want to let you know their experience with it. I have hundreds of similar letters in my files here, all of which I was at liberty to use in this book. Since I have space for only about 100, I was forced to select those given here from a much larger number.

I believe I have made a fair selection. I haven't quoted some of my most successful graduates, because there are men who have taken my course now in some of the most important positions in the Radio industry. I do not believe it would be fair to hold the success of those men before you, because it stands to reason that only an occasional few can reach the very top. No, I've shown you here what I believe to be a fair average—the kind of success that most any ambitious, hard working student can reasonably expect to make for himself.



Has made between \$2500 and \$3000

"I have made between \$2500 and \$3000 in Radio since I enrolled with you. A great deal of this was from spare time work as it was not until recently that I gave up my other line. But now I am in Radio exclusively and with a much better income and a thousand times more pleasant and congenial work. I have successfully completed a transmitter of 250-watts (designed to operate to 1000-watts) from the information and knowledge I got from my N. R. I. training. It is the transmitter for Station KGJF. I am the Manager and Announcer for this station. Tell your prospective students to write to me if they are not convinced of the merits of your course."

K. W. GRIFFITH,
2320 Maple St., Little Rock, Ark.

SECTION TWO

ISSUED AS A SECTION OF THE SUN.

NEW YORK

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24 PAGES.

Radio Offers Vast Employment

Development of Industry and All Its Branches So Extensive That Need for Men With Proper Training Runs Far Ahead of Supply.

By C. A. REBERGER.

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THIS article is intended for the ambitious young man who would enter the field of radio for a livelihood. While it is primarily for those who are marking out a career it should appeal to others with foresight and integrity, for radio offers many opportunities with rich rewards. Considering the progress that has been made in the last five years and the interest manifest to-

mercial operating. To those who love the sea, love adventure and thrills, this branch should have a strong appeal. True, there is no great future to ship operating, but it is bound to lead to better and bigger things. The majority of men heading large radio organizations today were at one time or another ship operators. Ship operating is the bottom rung on the ladder to success. The ship operator will progress if he will but

Those who love to work in the vicinity of mechanical apparatus will profit by entering the engineering branch of radio. All these companies with their short wave stations will need men for installation and repair work, at salaries ranging from \$200 to \$500 per month, and where men are dispatched to far off countries this stipend will often be offered with board and traveling expenses. Invention takes a leading place here,

"This field is by no means crowded. There is a great demand for men with techn in ou respo future meg, gagec selves Qui movies are in recent only an indication

Reproduced by permission of the New York Sun. The opportunities in Radio are being pointed out continually by America's leading newspapers.

Read what these graduates say

about the bigger money they are able to make in Radio ----- as a Result of N. R. I. Training

Well over \$5000 last year

228-230 W. 7th St.,
Cincinnati, Ohio.

Dear Mr. Smith:

I have put N. R. I. training to a number of tests. First, I went to work for Stewart-Warner in Detroit, doing engineering work. I was practically in charge of the branch, supervising all technical work. Some time ago I left to go with the C. & D. Auto Supply Co., Steinitz Distributors. Here I am Sales Manager.

I am pleased to tell you that last year my income went very much over \$5000. I am not sure that many of your graduates jump from one end of Radio to the other—from engineering to the selling end—one where thorough, accurate and complete technical knowledge is necessary and the other where selling and merchandising knowledge is required. I am certainly glad I took your course, as it served a good basis upon which I was able to build a successful future.

Yours very truly,
ERLE L. CHAMBERS



At least \$4000 this year

2010 First Ave.,
Perry, Iowa.

Dear Mr. Smith:

I would most certainly advise a man to study Radio either for spare time or full time work. My present work is much more congenial and not nearly as hazardous as my previous occupation as a locomotive fireman. My income has been from \$800 to \$1500 a year more than I made before.

I made enough the first year above my regular salary to buy a new automobile and my increase in income has just about doubled each year since completing the course. You can see from these figures that my investment in your course has paid me a very high rate of interest and I am very glad to speak a good word for the N. R. I. My present position as Manager of the Murray Tire Sales Company, Radio Department, is, I feel, going to be a good position. I believe I will earn at least \$4000 this year.

Yours truly,
HARRY LABORDE



Doubted value of course. Now making around \$4000 a year

103 Sussex St.,
Jersey City, N. J.

Dear Mr. Smith:

When I saw your course advertised it took my fancy. Many times while studying I felt doubtful of the opportunity your course had in store. I made up my mind firmly to go on; and now I am thankful to you that I have graduated successfully.

I enjoy working around Radios. I even gave up my old job to make a career of Radio. I find real pleasure in it as well as money. I estimate my earnings at about \$4000 a year. I would advise anyone who wants to learn something about Radio to take up your course. I find through experience that it is supreme. Men who graduate from your school, I can assure anyone, have a thorough knowledge of Radio.

Yours truly,
NICHOLAS HERENCHAK.



Made enough in one week to pay for his course

18 Webster St.,
Haverhill, Mass.

Dear Mr. Smith:

Just a line to let you know that the other week I earned enough to pay for my course and in spare time, too. Telephone calls and letters pour in on me. I have had great success in servicing sets, as well as selling them. I made enough in one month to more than pay for a beautiful console, all-electric, which sells for \$375.

I feel as though I can never stop doing you favors, as you made a lot of luxuries possible for me through your clear training. I have been selling Sparton sets. I have been making around \$75 and \$80 a week. Your course was just as clear as crystal to understand, and with your training any ambitious man or young man cannot find it hard to understand. When I enrolled I did not know the difference between a rheostat and a coil. Now I am making all kinds of money. I can never thank you enough for what you have done for me.

Very sincerely,
EARLE CUMMINGS



Seldom under \$100 a week

1414 W. 48th St.,
Norfolk, Va.

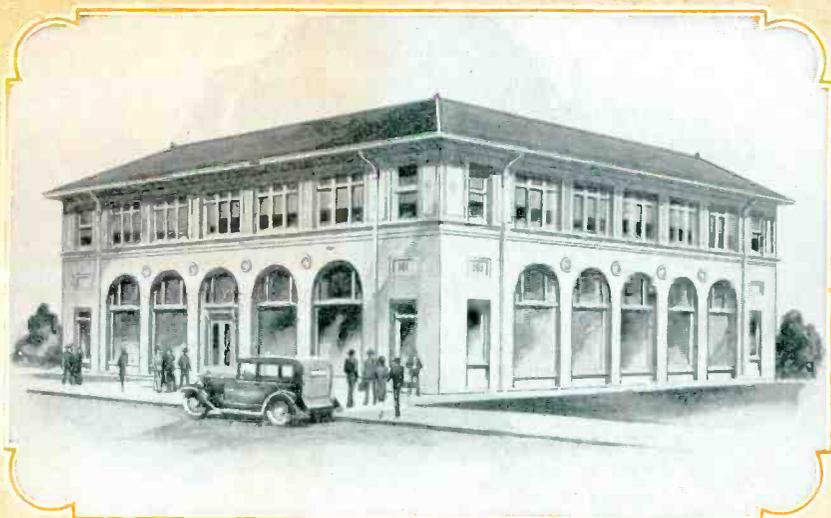
Dear Mr. Smith:

Just a few lines to say "hello" and to tell you that your course has been a Godsend to me. I am busy all the time. My earnings in Radio are many, many times greater than I ever anticipated when I signed up for your course.

For the month of November I made \$577 and for December over \$645, and January, \$465. My earnings seldom fall under \$100 a week. I merely mention this to give you some idea of what a Radio man can do who has the training. I'll say the N. R. I. course is thorough and complete. Oh boy—can you blame me for giving praise for the good old N. R. I. If your course cost four or five times more, I would still consider it a good investment. You give a man more for his money than anybody else. With best wishes for your continued progress, I am,

Your grateful graduate,
E. E. WINBORNE





Our Home

The building on the left is owned and entirely occupied by the National Radio Institute. It is located on Sixteenth Street, known the world over as "The Avenue of the Presidents." The bottom floor is devoted to stocking student supply material, mailing Lessons and Letters, printing, experimenting and developing student outfits. The top floor is devoted to executive offices and to student service.



Our Organization

Above are four interior views of the Institute. The upper left photo shows a section of our Student Service Department. Lower left is our Typing and Stenographic Section. Upper right, our Multi-graphing and Printing Department where model answers and other student supplies are printed. Lower right, a view of another section of our Student Service Department. Opposite this—the key men of my organization in a group photo outside our building.



The World's **F**irst and **L**argest Home Study **R**adio **T**raining **O**rganization

Naturally you want to know about the organization behind the course I am offering you. It is not very likely that any training will be any greater, more thorough, or complete than the Institute giving it. Organized in 1914, the N. R. I. is the Pioneer and World's Largest Radio Organization devoted exclusively to Radio training by home-study methods.

I am proud to be able to say that many of my key men have been with me for over 10 years. The valuable experiences which they naturally would get with me during that long period of time, are drawn on by the Institute in giving what many believe to be the biggest value in Radio training in the world for the money. By concentrating on Radio alone, we believe we are better able to give our students what they need and want to succeed. I believe organizations are like men—when they divide their time between several propositions, all of them are going to suffer. When they concentrate on one, specialize in it, they are going to become expert.

References

For your information I wish to say that we are members of the National Home Study Council, 839 17th St., N. W.; the U. S. Chamber of Commerce and also

the Washington Chamber of Commerce; the Merchants and Manufacturers Association, all of Washington, D. C.; the National Better Business Bureau, Inc., 383 Madison Avenue, New York City. For our financial standing you may have your banker look us up in Bradstreet or write the U. S. Savings Bank or the Merchants Bank and Trust Company of Washington, D. C. Our Diploma is recognized by the U. S. Government.

The N. R. I. was the first to teach Radio by mail—we became the leaders in home-study Radio training in 1914 and have maintained that leadership ever since. We are not a subsidiary of any Radio Corporation, thus we stand on cordial terms with all. All our resources, all our time, the full time of all our employees are devoted to training men and young men for the Radio industry—to serving our students and graduates.

I invite you, any time you are in Washington to drop in and meet the whole Staff. I, or one of my associates, will be very glad to show you around the school, explain our methods, let you meet my Department Heads, talk to them, see how we handle Lessons and letters—satisfy yourself that our methods are efficient and fair.

The Only School Whose Graduates are Recognized as Certified **R**ADIO-**T**RICIANS

Interesting facts about N. R. I. that no one else can match

We grade over 300,000 Lessons every year.

We answer over 20,000 letters from students and graduates every year requesting technical and other information.

We maintain a Staff of about 120 people—more than any other organization of this kind.

We are fitting more men for Radio than all other Radio schools put together.

Fully 75 per cent of all letters are answered and lessons graded within 24 hours after being received.

N. R. I. graduates are to be found high up in the Government Service and in the employ of almost every large Radio concern in the United States.

Members of the Radio Commission, men high up in Government Radio circles, many other men honored in Radio for their accomplishments have done us the honor of visiting our Institute.

Our location is a distinct advantage to you

Washington is the very heart of Radio—the laws governing broadcasting and commercial communication are made here. The requirements for a commercial license are decided here. The great wealth of information gathered by Government experimental stations, the Bureau of Standards and other Government Departments, as well as many private Radio companies and experimental laboratories are within our easy reach. Some of our neighbors, factors in the growth and development of Radio, are pictured on this page. Below I am listing 16—all of which have contributed something to Radio's growth.

- | | |
|----------------------------|------------------------------|
| Bureau of Standards | United States Capitol |
| Department of Commerce | Department of Justice |
| The Navy Department | Coast and Geodetic Survey |
| Naval Research Laboratory | U. S. Coast Guard |
| Civil Service Commission | Forest Service |
| Patent Office | Arlington Radio Station |
| The Treasury Department | National Museum |
| The Post Office Department | National Academy of Sciences |



Department of Interior, home of the Federal Radio Commission, which assigns wave lengths to broadcasting and commercial stations.



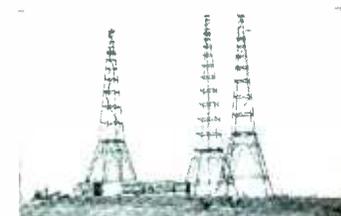
U. S. Capitol where Congress meets. The center of many debates on Radio legislation.



Bureau of Standards. Extensive Radio experiments are carried on here.



Department of Commerce, only a few blocks away. All operators' licenses are issued from here.



Arlington (NAA) powerful Naval Radio Station just across the Potomac River from Washington.



Patent Office, where patents protecting Radio inventors rights are issued.

My Course fits you for fascinating big pay jobs with Broadcasting Stations



The photograph above shows Graduate Hicks on the job

Installed equipment for WAPI

"When the electrical contractor for whom I was working was awarded the contract to install the equipment for Station WAPI, I was placed in charge because of my Radio experience. I placed all the transmitter equipment and was later sent to Montgomery to install a Speech In-put Board which is used as remote control to transmit over this Station. Now I am one of the operators of the Studio Control Room and relief operator at the Transmitter."

S. L. HICKS,
6916 Sloss Ave., Birmingham, Ala.



Chief Operator of KPEC

"It gives me great pleasure to tell you what I think of your Institute. A few years ago when I first took the course, I was a stock boy and now I am Chief Operator of one of the prominent stations here with considerably more pay than I was getting. Personally I think your course is the best in the country. I don't believe it can be improved upon. I wish the Institute the best of success."

R. E. HARTZOG,
670 Going St., Portland, Oregon
Assistant Engineer of Station KWYO

"I have been at KWYO since a short time after I started your course and feel sure that my success here is due in a great measure to your teaching and especially to your Instructors who have given me a great deal of help outside of the course. At the present time I am rated as Assistant Engineer and have charge of all remote broadcasts. I also take a trick at the transmitter quite often and fill in as announcer at various times."

JAMES
HENDERSON,
Radio Station
KWYO,
Laramie, Wyo



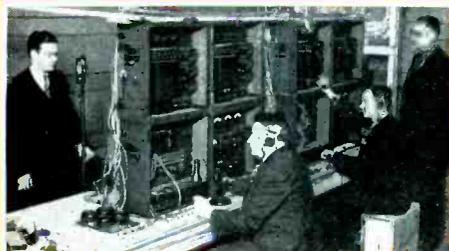
Section of a large broadcasting station studio

There are over 600 broadcasting stations in the U. S.—all of which employ one or more trained men. The larger stations employ as many as 30 to 50. There are so many different jobs in a broadcasting station that it is difficult to name them all. They vary in different stations depending upon their size and importance. In the case of the larger stations there are several announcers, program managers, chief operators and operators' assistants at transmitters, chief remote operators and their assistants, mechanics and electricians. Men trained for this work are in keen demand for jobs paying from \$1800 to \$5000 a year.

The work is fascinating, you will find it a pleasure. You mingle with famous statesmen, financiers, actors, opera singers, authors—the most notable persons of our time. The highest and mightiest in the land turn to broadcasting stations to get their messages to the public. You may have the chance to attend many

interesting events. World series baseball games, political conventions, prize fights, sporting events of all kinds, call for trained men to attend the apparatus.

Broadcasting has expanded and grown tremendously. The first broadcasting took place from KDKA in 1920 when the returns from the Presidential election were sent out. In less than 10 years broadcasting stations have increased in power from five watts to 50,000 watts for some of the larger stations. Stations of this size represent a tremendous investment of money and demand the services of a large body of trained men. It is estimated that as many as 20,000,000 to 30,000,000 people listen-in on events of great national interest such as a Presidential Inauguration. Many N. R. I. graduates are now successfully employed in broadcasting stations. Between 15 and 20 are with the Red Net Work alone.



Special broadcasting apparatus installed in the U. S. Capitol for broadcasting President Hoover's Inauguration Speech



The heart, lungs and nerve center—the control room—of a broadcasting station. Engineers are constantly alert for flaws or defects in programs



Main Operating Room of WENR.



Operator at the transmitter of WSM. Only trained men are trusted with the expensive apparatus in a broadcasting station



I will train you at home for many fine jobs with Radio Dealers and Jobbers

At present there are over 35,000 Radio stores and over 1200 jobbers in the U. S. It is estimated that 10,000,000 receiving sets are now in use in the U. S. alone. If Radio offered no other opportunities than the work of servicing and repairing sets, supplying new parts and accessories—this one branch alone would offer all a man could want in openings and good pay. There is a market right now for approximately 20,000,000 more Radio sets to replace obsolete models still in use and to equip those homes which do not have Radio sets.

The Radio set and parts manufacturers distribute millions of dollars worth of their products through these Radio dealers and jobbers. I need not tell you that activity like this, business volume running into millions of dollars every year, offers many opportunities—open many fine jobs every year.

More than at any time in Radio history, set owners are demanding good service work, good installations. There was a time when most any man could get a job installing and servicing sets. Sometimes it was the butcher boy, sometimes the automobile mechanic who knew a little about electricity. Set owners were satisfied just so they heard something. But now they want good tone quality and faithful reproduction.

As a result many men who have entered the field without a thorough training are being put out of their jobs as fast as competent men can be found to take their places. This replacement alone is opening many fine jobs, not to mention the continued growth and expansion of this branch of Radio. During the past few years, Radio stores have increased from 28,000 to over 35,000—and there are hundreds of towns that still do not have well

equipped Radio stores but must have them soon.

N. R. I. graduates, in large numbers, are entering this branch. Their training fits them thoroughly to understand all types and models of sets. Some earn as high as \$50 to \$100 a week, after completing my training, compared with \$20 to \$30 a week salaries they were making before. You'll find all through this book that my course is practical—its one purpose is to fit you to make more money.

In the panel below I am quoting some salaries paid by dealers and jobbers. These figures vary with the sizes of the store and the importance of the job as well as the volume of business done. Many store managers and buyers make more than the figures quoted below. I have given you the average.

Radio Dealers

Store Managers	Per Week
	about \$50 to \$100
Buyers	about \$50 to \$100
Clerks	about \$30 to \$35
Salesmen	about \$30 to \$75
Servicemen	
	about \$35 to \$60

Radio Jobbers

Outside Salesmen	
	about \$50 to \$100
Sales Promotion Men	
	about \$50 to \$100
Servicemen	
	about \$50 to \$75



\$3000 in Spare Time

"Whether a man intends to give his spare time or full time to Radio, he should certainly study the subject and I know of no better way than through the N. R. I. I should judge that Radio has made about \$3000 for me in spare time. I am now Manager of the Radio Service Department of the A. H. Meyer & Co."

HENRY TYSSE,
88 E. 13th St., Holland, Mich.

\$3000 in Ten Months

"I have a fine job with Grinnell Brothers here, one of the largest music dealers in the Middle West, as Radio Sales and Service Man. Since completing my course I have made as high as \$3000 in ten months, where at my old job in the factory I made \$1500 a year. I think any one who wishes to better his position should study the N. R. I. course."

GLEN C. KING,
231 Carlton Ave.,
Grand Rapids, Mich.

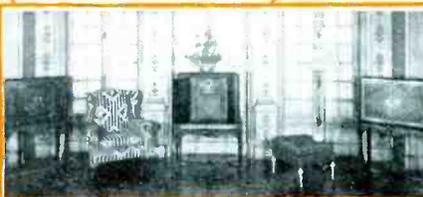
Manager of Radio Department

"I will never regret the money spent in taking your course. Radio is the best field today. I am now Manager of the Radio Department of Mr. Charles P. Maier. I do all kinds of Radio repair work on all types of sets. I also do spare time work and average from \$25 to \$35 a week from it."

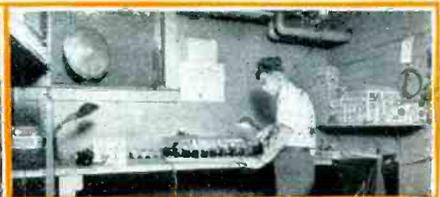
ALOIS R.
ABENDSCHOEN,
71 Marion Ave.,
Newark, N. J.



Selling sets is pleasant and profitable work. Modern stores provide very congenial surroundings. Salesmen usually work on a salary and commission basis.



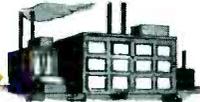
In John Wanamaker's Store, of which this is an interior view, the salons are decorated and arranged to show customers how the various types of Radio sets actually look in the home.



Gustave Vasen, an N. R. I. graduate, testing and servicing a Radio set.



Radio Factories



Averaging \$2600 more a year

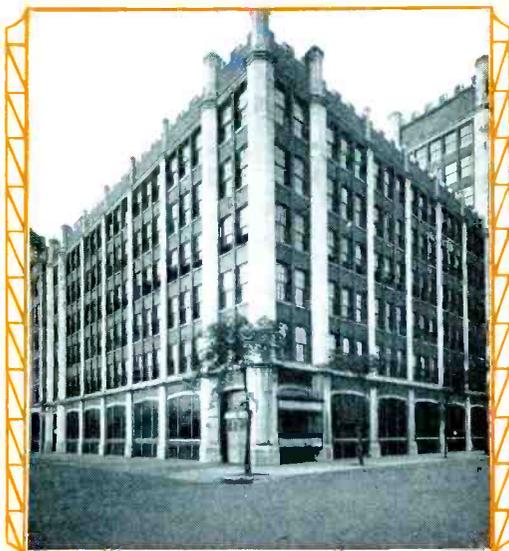


331 Sherman St.,
Buffalo, N. Y.

Dear Mr. Smith:

My first position was with the Buffalo Courier as Radio Editor. After two years, I became Assistant to the Service Manager of the Federal Radio Corporation. I am a confirmed advocate for learning Radio as the means for making a good living. I give the N. R. I. a great portion of the credit for my ability to hold my present position as Assistant Service Manager of one of the largest Radio manufacturers. Without the very enthusiastic help which I received while taking your course, it would never have been possible for me to make this progress. My earnings have increased 200 per cent over the wages I could command some three years ago. In fact during the past three years they have been, on the average, \$2600 a year over the salary I could command previous to enrolling. One thing I find in particular about the N. R. I.—it does not forget its pupils when the tuition fee is paid in full or after graduation.

Respectfully yours,
THEODORE J. TELAAR



Makes as high as \$400 a month

2925 Bowser Avenue,
Fort Wayne, Ind.



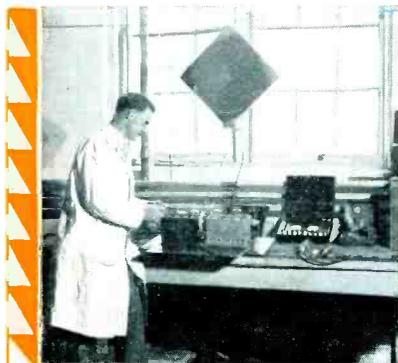
Dear Mr. Smith:

I would advise ambitious young men to study Radio and earn spare time or full time money. It is the most interesting and fascinating work one can find. I am connected with the Slagle Radio Manufacturing Company of this city. I started as an assembler and now am foreman and supervise the assembly of all sets built. I also run a Radio Service Shop on the side. Before studying under your guidance I worked in a factory averaging \$20 a week. My present income runs around \$200 a month. During the winter I average more than double that. I will never stop boosting the N. R. I. I owe all my success to your school which is the best there is.

Yours truly,
HAROLD W. RAMM

The photograph on the left is the Stewart-Warner Speedometer Corporation, large producers of Stewart-Warner sets. Large plants like these need trained men almost continually.

There are many fine openings with manufacturers every year



There are many types and varieties of jobs with Radio factories. This photograph shows H. A. Wilmoth, whose letter is on page 61, testing a receiving set.



Over \$100,000,000 worth of tubes are sold every year. This photograph shows two men testing tubes in a large manufacturing plant.

The jobs in factories are many and varied. Some of the larger plants employ several thousand people. Atwater Kent, Stewart-Warner, Grigsby-Grunow, Crosley, General Electric where Radiolas are made, Sparks-Withington, Federal—to name some of the larger ones—have a large number of splendid highly paid jobs for capable men. The work with Radio manufacturers appeals to many. There is something satisfying about knowing that you have played a part in producing a highly popular set found in hundreds of homes.

Let's look inside a typical factory. Before a set is ready to manufacture, it must be designed by expert engineers. Then models are built and thoroughly tested. So much money is involved in making a set that every detail must be exactly right before production is started. That is why the men who have the responsibility of designing sets draw such good salaries.

There are many problems to work out. The many different parts—panels, dials, condensers, coils, wiring, power packs and others do not fall into their places. An

immense amount of research work and experimenting is required to produce a good set that will sell within a popular price range.

Once a set is in production it comes under the watchful eyes of men of skilled trained ability—production managers, mechanics, assemblers, testers. Even after the set has been made it is not yet on the market. It must be distributed. To get it in the hands of dealers and jobbers requires promotional men, salesmen and service men. That briefly is a word picture of the making and selling of sets. It is a picture of many fine jobs all down the line from the maker to the buyer.

Production managers make as high as \$5000 to \$7000 or more a year. Mechanics about \$30 to \$60 a week. Service Managers about \$4000 to \$6000 a year. Superintendents and inspectors about \$40 to \$100 a week. Engineers from \$30 a week up to \$15,000 a year. Traveling salesmen and service men as much as \$3000 to \$8000 a year. Since there are over 3000 manufacturers of sets and parts you realize at once that there are many fine opportunities every year in this branch for the man who knows Radio thoroughly.

Earn While Learning

Made \$800 in spare time

"Every word I ever read about your course I found to be true. I have made about \$800 in my spare time. Money could not pay for what I got out of it. My work in the Reading Car Shops keeps me away from home from 6 a. m. to 7 p. m. You can see that I have little time but still I am making good money on the side. I didn't know a single thing about Radio before I enrolled and now I am not afraid to repair or build any type of set. I cannot thank the N. R. I. enough for the great help they gave me throughout the course."



MILTON I. LEIBY,
Topton, Pa.

Spare time profits more than \$900

"Perhaps you think I have a big Radio business—well, I haven't. I do all my work in a small spare room. Nevertheless, I have made an extraordinary profit of over \$900 in my spare time in about ten months. The completeness of your course, the personal interest you take in your students in seeing them come out on top, the splendid advice and information you have placed at their disposal is certainly responsible for my success. Thanks a million times."



FRANK GOLDEN,
329 Walnut St., Newark, N. J.

So many opportunities many N. R. I. students make up to \$25 and more a week on the side while learning

Read the letters on this page. They are only a few of the hundreds I receive every year from students who earn their tuition fee and considerably more on the side while learning. Fortunately for you there is a great demand and need in almost every community and neighborhood

for men who know the "how" and "why" of receiving sets.

Of course, the man who has not been trained in this work—the man who does not know "how to do the jobs" or who has not been trained "how to find them" usually is not quick to see these opportunities. N. R. I. not only shows you how to do the jobs but also how to find them.

The number and variety of jobs is interesting and varied. It is surprising how many Radio sets are only working about 40 per cent efficient because of faulty aerials, wrong or run-down tubes, damaged or partly worn out batteries. Most of my students by following the information I give them for doing and getting jobs, are able to open small shops of their own in their basement, in the attic or garage shortly after enrolling.

Many of them on the other hand, work during spare time for Radio stores. Usually there are one or more Radio stores in the average community that do not have enough work to employ a service man full time, or which have an overflow of jobs during their busy season. Read the letters on this page. They show better than I can tell you how much can be made in this work in spare time. I'll do as much for you as I did for these men.

Some of the many jobs I'll show you how to do correctly for extra money

Test and repair Sets, test Tubes, test Power Packs, test Power Amplifiers, balance and neutralize Sets, align Condensers, test Batteries, charge Storage Batteries, rejuvenate Tubes, test efficiency of Radio Frequency Amplifier, test efficiency of Detector, test efficiency of Audio Frequency Amplifier, measure Condenser Valves, measure Resistance Valves, install Magnetic pick ups to use in conjunction with Radio Receivers and Phonographs, install Receivers in automobiles, eliminate interference caused by local conditions, reduce high line voltage to proper value, connect Dynamic and Condenser type speakers on old type Receivers, wind Radio Frequency Transformers, design Radio Receivers, install Power Tubes in old type Receivers, install Aerial and Ground Systems, build Broadcast Receivers, build Short Wave Receivers, build Phonograph Amplifiers, rewire Battery Sets to Electric Sets, build Short Wave Adapters for A. C. and D. C. Receivers, build and install "Selector Units" for making Receivers more sensitive and selective.



Pays balance on home, buys piano and many other things

"As to the benefits of the N. R. I. course and what I think of it—it is the most interesting and easiest course I have ever undertaken. And I have finished five in different schools on different subjects. It has paid one-half the balance and interest on my home, a good high grade piano for the kids and music lessons for three. Besides I have a good savings account started, \$1000 out on interest as well as \$350 outstanding on accounts receivable."

GEORGE C. MEDVED,
731 Charles St., St. Paul, Minn.



\$500 extra money in six months

"I started doing service jobs in a small way. Business picked up right along and about the first of January I really got into it right. In looking over my record I find I made \$500 from the first of January to the middle of May in my spare time. My best week brought me \$107. Now I am busier than ever. I have been Service Manager for the Nite and Day Radio Service Company since last September. We are pushing the Amplifier and Public Address Systems. Just finished an installation in one of the largest hotels in Indianapolis. I have only one regret regarding your course—I should have taken it long ago."

HOYT MOORE,
3301 So. Lyndhurst Drive,
R. C. Box 415,
Indianapolis, Ind.



\$703 in six months spare time

"In the past six months, or since I started my spare time Radio work, my net profits equal \$703. My shop is located in my cellar. I started a special savings account from my Radio work profits. I expect to have enough on deposit to open a full time Radio business soon. I owe all my success to your fine school."

E. F. DONOHUE,
45 Barnet Ave., Trenton, N. J.



Has cleared about \$1000 mostly in spare time

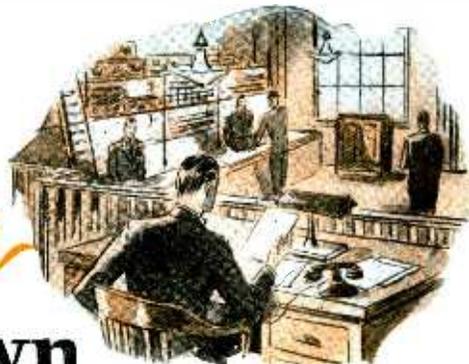
"I am sending you a picture of myself working in the Service Department of the largest Radio store here. I want to thank all of the N. R. I. Staff for my success. My income has been doubled and I expect to triple it soon. Just before the Presidential Campaign I cleared about \$100 on jobs satisfying people with the work of their sets. Since starting your wonderful course I have cleared about \$1000—most of this in spare time."

H. L. PENIE,
812 West High St., Piqua, Ohio.

You be the Boss

There are opportunities everywhere to have

A Radio Business of your Own



Whom do you envy most? Isn't it the man who is his OWN BOSS—the man who owns and runs his business—who isn't tied down to a certain number of hours of work every day?

Of course it is! We all envy him. He has his fun when he wants it. He doesn't lose his pay when he takes an afternoon off to go to a baseball or football game, to play golf or go swimming, hunting or take an auto trip. He doesn't have to be in right on the dot every morning or be called on the carpet and perhaps get fired. He gets around. Meets more people. Is independent of the whims of a boss. He doesn't have to please anyone but himself.

There is practically no limit to the money he can make. He makes money on his own efforts and that of others working for him. Besides he always has that chance to put over a big deal and make as much money in an hour or two as the average salaried man makes in a month.

If that is your desire—this page and the one opposite will interest you particularly. I am going to tell you how you can have one—tell you of the almost unlimited opportunities there are to have a profitable Radio business.

There is a surprising need for good Radio stores almost everywhere. This is particularly true in the smaller towns and farming communities. Broadcasting programs, weather and stock and produce reports that are being sent out for the special benefit of men living on farms are developing new fields of opportunity. I have before me a book which lists the number of Radio and other types of stores in all the counties in every State in the U. S.

For example, Pike County, Illinois, with a population of about 27,000 has over 5,000 automobiles, 6 automobile dealers, 6 furniture stores, 19 hardware stores, 10 jewelry stores, 2 music stores, 5 heating and plumbing stores, but not a single Radio store. Randolph County with a population of 29,000 has only one Radio store. And so it is in the case of almost every county in every State of the Union—many noticeable, striking opportunities for Radio stores that should make a fine living for its owners and managers. A survey made by a Radio magazine some time ago showed the average yearly net profit of Radio stores that answered their questionnaire as \$6,000.



\$7396 business in two and one-half months

"I have opened an exclusive Radio sales and repair shop in one of the best locations in Spencer. My receipts for September were \$2332.16—for October, \$2887.77 and for the first half of November, \$2176.32. My gross receipts for the two and one-half months I have been in business have been \$7396.25. I believe I can net about 20 per cent which would mean a profit of about \$1500."

JOHN F. KIRK,
1514 N. Main St., Spencer, Iowa



About \$2800 in 12 months

"If you were charging \$1000 for your course it could be considered reasonable, due to the many thousands of dollars worth of knowledge printed in the Texts. I have made nearly \$2800 in the Radio business during the past 12 months. My advice to anyone interested in Radio is to study it and take it up as a full time proposition. There is money enough in it to satisfy anybody if they will go after it."

M. MILO KISSEL,
No. Main Road, Mansfield, Ohio



Made over \$300 a month in dull season

"I was a tool maker making good money—\$11.20 for eight hours a day. The best move I made in my life was when I took up Radio. Now I have a nice business, my earnings run far above the old mark as tool maker, what's more I work for myself. I take from 6 to 8 weeks vacation a year, drive a six cylinder car instead of the old Ford, have my home paid for and own other property besides. During May, June, July and August I made \$1219.35. Those are the four dullest months of Radio, too. Those fellows who want work that is clean, interesting, light with extra good pay should get into Radio."

A. R. KREUZER,
P. O. Box 250, Farmington, Mich.



\$3000 a year in own business

"I cannot give too much credit to your Institute for what I have been able to do in Radio. While it is rather hard to give an exact statement of my earnings since completing the course I can safely say that I averaged \$3000 a year for the past three years. That includes sales and service jobs. I am in the Radio business here. There is certainly a lack of trained men for this Industry. Any man who really wants to advance can not go wrong in Radio. I consider all the success I have obtained so far due entirely to your training, so I want to extend my sincere best wishes to every one connected with the Institute."

FRED A. NICHOLS,
Hereford, Colo.



Started with \$50 — Made about \$3000 in one year

"After finishing your course I started with exactly \$50, bought one set and sold it before buying another. That and other schemes has enabled me to build up a good business. My repairing, building and selling in the past year has cleared enough money to buy a Chrysler 62 Sedan (\$1385). I have about \$1000 in sets and equipment, \$400 in the bank, \$500 outstanding due me, and owe no bills. I also do electrical repairing such as motors, fans, generators and small electrical contracting. I wish you all the success in the world as all my success in Radio is due to your course which was rendered so faithfully by your Staff."

HARRY S. WAGNER,
West Main St., Clinton, N. J.

Read what big money these fellows have made ★ in their own businesses

Made over \$1500 last year

"I finished your course in a short time and immediately started into Radio servicing in part time and gradually increased to full time. I made over \$1500 last year in service alone. I am so happy I want to tell the whole world of my success. I owe about 90 per cent of it to N. R. I. training. If anyone is in doubt about N. R. I. just ask them to write me. I was skeptical at first, human nature I suppose, but it didn't take me long to realize that I had done the right thing when I enrolled."



R. S. LEWIS,
Pittsfield, Ill.

Started with \$5

"Can't tell you the feeling of independence N. R. I. has given me. I started in Radio with \$5. With this I purchased a few necessary tools. I circulated my business cards and business picked up to the point where my spare time earnings were my largest income. Then the refinery closed down and I was out of work, speaking literally, but the man with a knowledge of Radio is never without work. I had saved enough to buy accessories and soon I was realizing a good profitable business. I have made a very comfortable living in work that is play."



HOWARD HOUSTON
512 So. Sixth St.,
Laramie, Wyo.

I'll show you how to start a spare time or full time business of your own on extra money made while learning

J. E. A.

Usually it requires thousands of dollars of capital to start and successfully operate a business. That is not true of N. R. I. trained men. Many of them start on spare time earnings—others on as little capital as \$50 or \$100, as you will see from the letters on this page.

Let's look over a few figures—size up your opportunities for a profitable business fairly and squarely. There are now approximately 10,000,000 receiving sets in use in the U. S. This figure is increasing daily. I believe the average set requires from \$5 to \$10 servicing every year. If only \$5 is spent—a gross volume of \$50,000,000 for servicing alone would be assured. Estimate the number of Radio sets in a 5 to 10 mile radius of where you live. Figure out for yourself how much you should make a year on service work alone. The amount will surprise you.

Millions will be made

Then consider this. It is expected that 5,000,000 or more Radio sets will be sold within the next few years. The dealer's average gross profit on a set is about 40 per cent of the sales price. The average sales price is about \$125.00, with accessories about \$150.00. Here again we want to be under rather than over the average, so we'll make it \$125.00—a profit of \$50 on each of the 5,000,000 sets means that \$250,000,000 will go into the pockets of the men in the Radio business within the next few years. Then think of the additional profit to be made on batteries,

tubes, condensers, loud speakers, remodeling sets, converting D. C. sets to A. C. and other needs of set owners.

W. C. Howe, an authority on Radio Merchandising and the Radio Trade, says: "The Radio business can be handled satisfactorily only by men who are acquainted with Radio. A large percentage of the dealers lack this knowledge, and will drop out and be replaced by men who know".

Now is the time to start

Get into Radio now, while the time is right. You can start with little or no capital. I will show you how to make money during your spare time—raise the capital you need in that way. This will give you some mighty fine experience, too. It will build up customers for you—friends and others for whom you did work in spare time, will naturally want to turn to you to help them with their service problems and come to you when they want sets and parts.

I'll show you how others have done it and are doing it now. I will give you the same, yes still better training and attention, than I gave the men whose letters are in this book. My course today is better than when they enrolled. I honestly believe that the man or young man who wants a business of his own cannot find a better field than Radio. And by better field I mean one where it is easier to start and one that offers as many profit opportunities.

\$800 in spare time while learning

"Don't know how much profit I made while taking the course, but judge about \$800. I was in the Coast Guard Service, at sea most of the time, so I think I did pretty well. Upon the expiration of my enlistment I started in business for myself. I have just about all the jobs I can handle. I am entirely satisfied with my training and the prospects for the future are bright. All the credit for my ability and success goes to N. R. I. with my heartiest thanks."

J. H. SHUMAN,
207 17th St., Huntington, W. Va.



Goes in business before graduation

"When you sent me the business cards I certainly had a surprise. Business came so fast that I simply had to call a halt. In the first six days, even with little spare time, I made \$45. It is unbelievable how much of this work there is waiting for the man who can handle it and who will go after it. You can judge for yourself, because it was by means of this opportunity and through your personal help that I have earned enough in spare time to start a nice business even before completing the course—I have a Radio store, with repair, service shop, and battery charging departments."

HARRY G. ANDERSON,
5708a Easton Ave., St. Louis, Mo



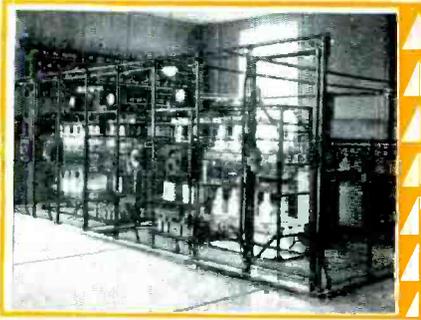
Radio business is rushing

"The Radio business is rather rushing just now. I have built an eight tube Superheterodyne every week for the past six weeks, besides doing installation work and repairing. To the complete and thorough knowledge of Radio which I gained by taking the practical and applied training course in Radio from the National Radio Institute, I owe all my success in the Radio profession."

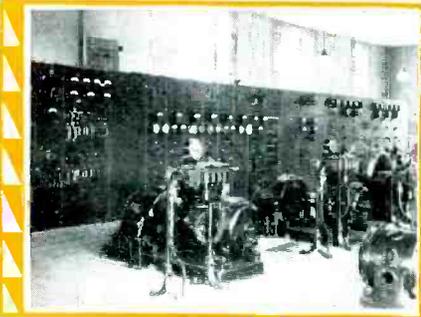
A. J. OMMODT,
Bowman, N. Dak.

It takes trained experts to design, build, install and operate equipment like this

Experimenting and Inventing Offer You Many Rich Rewards



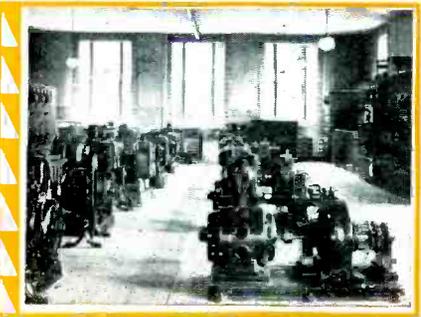
Rectifiers for English and Australian transmitters, Drummondville Beam Station, one of the powerful stations used for commercial communication with countries on the other side of the Atlantic



Power Apparatus Room, showing main control switchboard of the Drummondville Station



Above—Receiver, English and Australian circuits of the Yamachiche Beam Station. Below—Power Apparatus Room, showing incoming power control switchboard on right and main control switchboard on left, Drummondville Station



To be successful as an experimenter, a research expert or an inventor, you must first have a complete and thorough knowledge of Radio. You must know it from one end to the other. Then you can draw ideas from other lines of Radio work that will help you in your problems. If you can cut out waste, improve results, develop some new way of doing things, your future and success are assured.

Perhaps the importance of this work is best shown by the salaries that are paid good men. They range as high as \$5,000 and \$10,000 a year. And as to the rewards for inventions, look over these figures. Dr. Lee deForest's patents, it is estimated, have earned in the neighborhood of \$500,000,000.

H. P. Donle sold his Sodian patent alone for \$300,000. Latour has made \$1,500,000 on his Radio inventions. Hazelton is reported to have made more than \$2,000,000 on his patent. Dr. Fessenden's patent on the heterodyne principles brought \$1,000,000. There is a chance for a big fortune in this work.

My practical course is a very fine foundation for the man who feels the urge to develop—to create. It has often been said that the most interesting work is creative work—it is interesting, satisfying and profitable. I shall give you a list of 100 most needed Radio inventions in my Course. It gives you something to start with—ideas, any one of which properly worked out, should reward you handsomely.

I believe the Radio field offers more possibilities than any other for successful and profitable inventions. No where else is there such an infinite amount of development and expansion possible. No other field, in my opinion, has the great future, the unlimited possibilities of Radio. Many small devices can, and have made great fortunes. Dubilier's fixed condenser, a little contrivance of pasteboard and ink, has made millions.

It doesn't take a genius to invent. Nothing could be farther from the truth. Edison himself says that success in this work is nine-tenths perspiration and one-tenth inspiration. Quite a number of N. R. I. graduates have been granted patents on Radio inventions and it wouldn't surprise me to see one of them become famous and rich on an idea. Who knows—it may be you.

Has made \$10,000 more in Radio

St. Cloud Ave.,
West Orange, N. J.



Dear Mr. Smith:

I am not exaggerating when I say that I didn't know a volt from an ampere at the time I subscribed to your course. My first position was with the Garod Corporation. During my four and one-half years with them I worked successively as bench hand, foreman, superintendent and engineer. Since then I have been employed in engineering work only, first with the Ward Leonard Electric Company and at present with the Conner Crouse Corp. I can safely say that I have made \$10,000 more in Radio than I would have made if I had continued at the old job. Wishing you continued success in your educational work, I am

Very sincerely yours,
VICTOR L. OSGOOD



Miss Elizabeth Zandonini, an N. R. I. graduate, employed by the Bureau of Standards, with some of her amateur equipment



Historical Marconi apparatus used in his first experiments. Radio grew from these crude "jiggers". Below you see Marconi, father of Radio, with some of his equipment



You'll find Thrills and Good Pay in Aviation When you know Radio



The guiding hand of the aviator in the clouds is the Radio man — on the ground.

Thousands of airports are being established all over the world. Large planes used for passengers, express and mail service are being Radio equipped. A recent Radio service bulletin published by the Department of Commerce shows the Boeing Air Transport Company has been granted licenses to operate 32 commercial Radio Aircraft Stations and the Western Air Express also has been granted licenses.

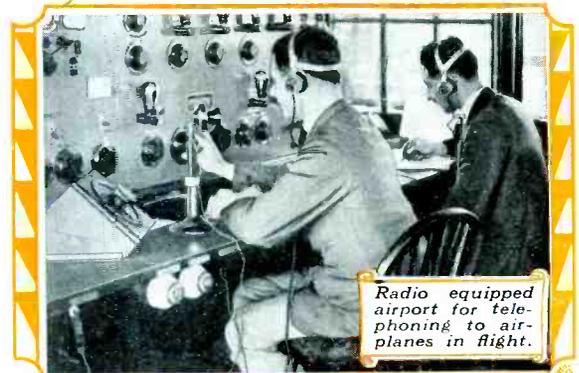
Radio is taking the uncertainty out of flying. Its value on long flights over unmarked territory has been very definitely proven by the success of the flight of the Southern Cross from California to Australia, Commander Byrd's expeditions to the North and South Poles, and on many other occasions. Radio beacons guide planes at night, Radio telephone stations gather weather information for pilots and direct their flight out of the paths of storms.

F. C. Hingsburg, Chief Engineer, Airways Division, Department of Commerce, in a recent letter to us wrote: "The Airways Division of this Bureau maintains Radio aids to air navigation along the various airways throughout the country. There are three classes of stations at present; namely, Radio Beacon, Radio control and point-to-point only. Radio Beacon sta-

tions are in operation at New Brunswick, N. J. (Hadley Field), Bellefonte, Pa., and Cleveland, Ohio. Additional stations are planned for installation along the entire trans-continental airway and along various other civil airways, numbering approximately 85 Radio Beacon stations. Radio control stations are in operation at New Brunswick, N. J., Bellefonte, Pa., and Cleveland, Ohio.

"This type of station includes the operation of Radio Broadcast equipment for broadcasting weather information to aircraft, point-to-point high frequency and intermediate frequency Radio Telegraph communication and teletype operation. Additional stations of this type are being installed along airways and it is expected to have 40 of them in operation within the next six months, with further increases from time to time. Operators for the above stations are employed through the Civil Service Commission. Their salaries range from \$2000 to \$2800 per annum."

Do you want thrills, adventure, good pay? Here is your opportunity to get all three in one job. Picture yourself making long flights that may perhaps bring fame and fortune. Or making hops from city to city in passenger planes. Or working in an airport directing planes and sending weather information, handling messages for passengers. Here is a field where you can find work so interesting, so well paying as to satisfy you for life.



The three letters "N. R. I." must be magic

Box 91,
Iowa City, Iowa.



Dear Mr. Smith:

I started playing with Radio when a crystal detector, a long wave Navy type loose coupler and a pair of phones were the height of Radio sets. Then I enrolled with N. R. I. In High School I was welcomed into the Radio Club and elected President. Since getting my N. R. I. Diploma I have been selling, repairing and building sets. The three letters "N. R. I." must be magic for I get more work than any other Radio man in this city. Mr. Smith, your course is one of the most complete that I have seen. The principles as presented are so simply explained one cannot help but get them firmly fixed in his mind. In short, the N. R. I. course is by far the best. You may be interested to know that my friend and N. R. I. graduate E. W. Novy is with the Vitaphone people. He is in the Research Department conducting experiments on Movietone and Vitaphone apparatus. Graduate S. F. Clark is with the Air Mail Service.

Sincerely yours,
LAWRENCE J. VANEK



Nerve center for Uncle Sam's National System of Civil Airways. Weather reports and other information are transmitted to aviators.



The arrow in this photograph points out a Radio beacon installation on the instrument board of an airplane.



Operator with Radio equipment on Byrd's plane, "America", with which he crossed the Atlantic.



TELEVISION

-the great new Radio development

My Course prepares you to enter this coming field of amazing opportunities



My friend, C. Francis Jenkins, Inventor of a system of Television had me come over to his laboratory to explain his apparatus to me.



Face and voice being sent over wires to New York. An audience in New York saw as well as heard Hon. Herbert Hoover on this occasion.



President Gifford of the American Telephone and Telegraph Co. in New York talking with Mr. Hoover in Washington during a Television test.



Dr. Alexanderson operating his home Television set during a successful demonstration.

It doesn't take a very long stretch of the imagination to realize what is ahead when Television is perfected. Think what it will mean when home receiving sets are equipped so that we can see as well as hear the artists, see our baseball, polo and football games as well as hear the announcers, witness a prize fight blow for blow.

It will mean that the entire Radio industry will be made over again. The millions of receiving sets now in use will be replaced with a new type equipped with Television attachments.

Many of the best engineering minds in the country are working to perfect it. It has almost arrived. It is here to the extent that approximately 20 broadcasting stations are transmitting pictures for experimental purposes. We are promised not only still pictures but moving pictures as well right in your home just as though you were on the spot.

So you see the limit of Radio expansion is as far off as ever. Radio is not standing still. Probably no other industry is being developed so fast, being adapted to so many new uses.

I don't want you to think of this as news. Look behind the scenes. What do you see? Innumerable fine jobs in the making—you see opportunities like those that made men rich in other fields who got in at the right time. Actually you see the opportunity of a lifetime. Chances like this do not come every year or every few years—usually only once in a generation.

Every man of character, of ambition, every good citizen, wants to make enough money not only to have a reasonable number of today's living comforts and enough to enjoy himself thoroughly and at the same time be free from money worries, but enough more to put aside a little nest egg to take care of himself when he reaches the age when he will have to let down. To do this you must get in a field where you don't have to spend 5 to 10 years getting a foothold—and a field where you can forge ahead right from the first month you enter. Today that field is Radio. This new branch adds still more jobs to Radio's many attractive opportunities.

\$48 in one day—\$215 in one week

45 Vernon Place,
Stamford, Conn.

Dear Mr. Smith:

I can say with all sincerity that the fellow trained for Radio can command big wages. I have had the most wonderful experience repairing sets. Always charge \$2 for a general call, \$3 for a full test, \$2 an hour for shop work, \$2.50 an hour for work in the house. I installed and wired the Public Address System at Playland Rye Beach. The Director told me I was a well trained Radio man. On this job my wages were \$48 in one day, \$215 for the whole week. I wish I had taken the course sooner. Your precise, painstaking and perfectly plain way of instructing your students was a wonderful help to me on the Playland job.

As ever your friend,

LEONARD H. MARSHALL





Al Jolson, in the lower right hand corner, is seen here making "The Singing Fool".

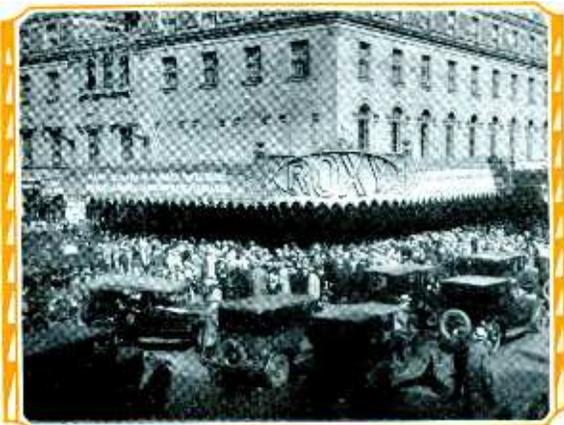


The Vitaphone apparatus used in the recording room is a marvel of delicacy and accuracy.

TALKING PICTURES

*My Course gives you~
the Radio principles
that make talkies possible*

There are approximately 25,000 theatres equipped for Talking Pictures. The need for trained Radio men by film companies was so great when this invention was first brought out that many broadcasting station operators were offered jobs at salaries of \$75 to \$125 a week to enter this field. This is one illustration of the opportunities a trained man in Radio has to get ahead once he gets in. New developments bring new openings requiring trained experienced men and those who make good are usually offered early opportunities for promotion or chances for better connections.



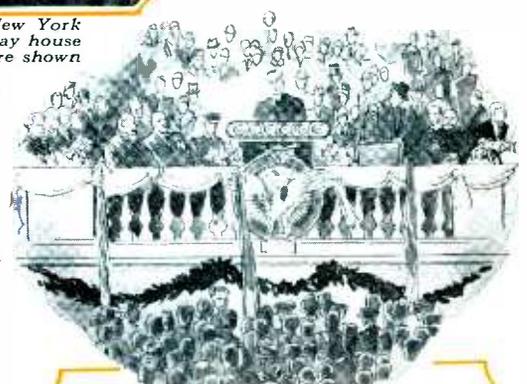
Outside view of Roxy's Theatre, New York City, the largest moving picture play house in the world. Talking pictures are shown here regularly.

With the invention of Talking Pictures, Radio has invaded another new field. It is not generally known that Radio principles are applied and used in connection with the taking and showing of Talking Pictures. There are several systems in use. One is that of recording the voice or music on a phonograph disc and synchronizing the production with the picture. The other consists of recording the sound waves of music, voices and noises on the film, beside the picture. My course covers both systems.

Public Address Systems another field for the Radio Expert

By training you to install and operate Public Address Systems I may be getting away from what might be strictly called the Radio field, but I feel that by doing it, I am opening another way for my men to make money. Radio principles are used in this equipment. The old plan of a speaker yelling himself hoarse to be heard, is being replaced by this new method. The man who knows how to install and operate Public Address Systems can quite often pick up extra money. I know of one fellow who made \$25

in one evening in this work. Churches, railroad stations, auditoriums, political gatherings, and many other occasions and places find use for this invention. The making of this equipment has also reached considerable proportions, opening quite a number of fine jobs with the manufacturers. Likewise, distributing them calls for salesmen, repairmen. No doubt you will often have a chance to pick up some fine money using the knowledge of this subject that I shall give to you.



Has put his Radio knowledge to many uses

"One of my first jobs was with the Chicago Daily News, Radio Department. This work included operating the transmitting apparatus, taking charge of the studio during broadcasting hours when it was necessary, and giving out technical information in the office. A thorough knowledge of almost every type and kind of receiver was necessary. My present position is with the exclusive sales and rental agents for Graybar-Western Electric Public Address Systems and Broadcast Station equipment in this territory. This work deals with speech input equipment including such systems as Vitaphone and other large music and voice amplifiers".



KEITH KIMBALL,
1624 Cherry St.,
Denver, Colo.



Wired Wireless - Locating Ore and Oil - Radio's use by Railroads

OFFER you Splendid opportunities when you have completed my course



Radio operator aboard the Canadian National Railways. Every Radio equipped car is attended by a Radio operator.



By means of this apparatus, travelers aboard Canadian National Railway trains can telephone from moving trains.



Engineer talking with freight train conductor in the caboose.

General George O. Squier is credited with inventing Wired Wireless. It consists of sending broadcasting programs over telephone and electric light lines instead of through the air. A number of advantages are claimed for this invention. The reception is free from static, no expensive home equipment is needed. The system has been thoroughly tested and is now being tried out in Cleveland, Ohio. Since it offers a possibility of developing to a considerable extent, I have included training on Wired Wireless in my course. I have always made it my aim to train my men for every opportunity Radio offers.

Radio has been adapted to another important use—that of locating ore and oil. Oil companies claim it saves them millions of dollars a year that would otherwise be spent digging wells to locate reservoirs of crude oil. By means of Radio detection, the different speeds that sound waves travel through

various earth and rock formations, enables experts to know quite accurately what is below the surface of the earth in the nature of oil or minerals.

Radio has also been found to be valuable in dispatching trains, in communicating between the caboose and engine of a long freight, thereby saving hours of time and hundreds of dollars in the operation of long modern freight trains. Further, the Canadian National Railways are using Radio on passenger trains to entertain travelers. They have 47 cars equipped with Radio sets; the Radio equipment in every car being operated by a uniformed employee.

The use of Radio in these three fields is bound to spread rapidly. In each case it offers an advantage—and when you find a new method doing a better job than an old one, or offering new benefits its use is bound to spread. For that reason I have included training on these subjects in my course. Here again, I am fitting my men so that they will have every possible chance of employment upon graduation—so that there will be no good jobs that they will be left out of because of lack of training.

Still more opportunities Radio offers you

Operating Radio compasses and directional finders as used on board ship and Radio compass stations along our Coast lines.

Radio Journalism is a fine field for those who like to write. Hundreds of newspapers and magazines carry Radio sections and use trained men to edit them.

Oil Companies, Rubber Companies and Mining Companies use Radio for communication between branch offices some distances apart.

Police Departments use Radio in broadcasting criminal information. Schools and colleges use Radio to broadcast educational material.

It is used on dirigibles, submarines, by the Army and Navy extensively. Uncle Sam spends millions of dollars a year on Radio.

Automobile companies are installing Radio sets in their cars as an added feature.

Your opportunities in this field are numerous and varied. I don't believe any one person knows them all. I am merely trying to point out in this book what a big, broad field it has come to be—growing bigger and broader all the time. It is a field for a man or young man with ambition—the man who looks ahead—who wants better things.



Radio Operator with Canadian Nat'l Rys.

6081 Sherbrook St., W.,
Montreal, P. Q., Canada

Dear Mr. Smith:

I found your course very thorough. The more important subjects are explained in considerable detail and in such a manner that anyone can grasp them. Throughout the whole course it is plain that great care has been taken in selecting the material. For anyone wishing to enter the Radio field, it is the ideal thing to study. Should anyone be a bit doubtful about your course I wish they would write me. I mustn't forget to mention your Employment Service to which I am grateful for my present position as Radio Operator with the Canadian National Railways.

Yours sincerely,
L. A. CANNING



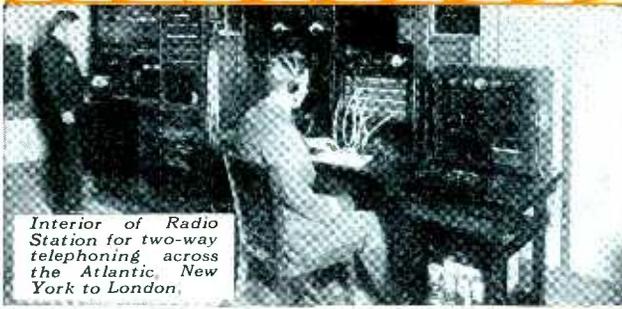
More than doubled his salary

1206 Dominion St.,
Omaha, Nebraska

Dear Mr. Smith:

Just a line to let you know that I am still going forward in Radio and pulling strong for the N. R. I. I appreciate your interest in my progress and the assistance you have given me even though I completed your course a number of years ago. The Radio science is young and a wide awake fellow is bound to expand with it. I was a bank clerk making \$85 a month when I enrolled. Upon completing your course and passing the examination for a commercial license, I immediately obtained a position with a broadcasting station and am now making more than twice my old salary.

Sincerely yours,
WILLIAM J. KOTERA



Interior of Radio Station for two-way telephoning across the Atlantic, New York to London.



Transmitter at Radio Central, Long Island, N. Y., powerful land station.

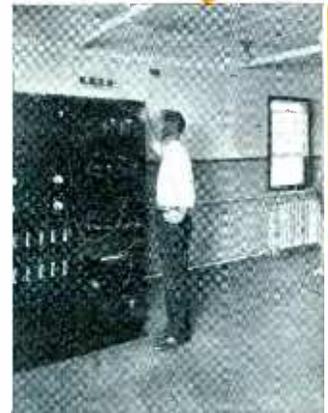
1000 trained men may be needed for commercial land stations *in the next two years*

Many large Radio corporations are going into the building and operating of Commercial Land Stations on a large scale. In the next two years there should be 200 or more stations in as many cities for inter-communication to compete with the present telegraph systems. Universal Wireless Communication Company, Mackay Systems and the Radio Corporation of America are busily engaged building and installing equipment. A number of the stations have already been opened. Many of the wave lengths have been assigned. The future of this development is absolutely assured.

When you stop to consider that every station should need several men to operate and maintain it, an estimate that one thousand men may be needed in the next two years for this branch of Radio alone is very reasonable. Who are going to get these jobs? Where are trained men coming from? Can other branches spare them? Practically every branch of Radio is in need, right now, of additional trained men. The men for these positions must be trained—they will have to come from the outside. Will you answer the call—help yourself by helping Radio?

A short time ago a notable forward step was made in inter-continental communication. Trans-Atlantic telephony was opened to the public. Since this branch is closely allied with commercial land stations, I'll tell you about it here. Now it is possible to pick up a telephone, be connected with a Trans-Atlantic Telephone Station and in a few minutes be talking to your friends across the water. Radio communication in code between countries separated by water is also carried on extensively. Our coast lines are dotted with transmitting and receiving stations. Only trained men who are competent can be trusted with the expensive equipment required to carry on commercial telephone and telegraph communication. There is too much money involved—too much money invested in this equipment to trust the jobs to anyone else.

This is one more instance of Radio's amazing growth—a growth that is making hundreds of fine jobs every year. You're looking for opportunity—here it is—waiting for you to step up and claim your place. And the work is fascinating, your future bright in this field.



Short-wave receiver at Netcong for commercial Radio communication.



Speech input control panels, Deal Beach Station, for trans-Atlantic Radio Telephony.

Paid for \$3000 laboratory and station with Radio earnings

171 N. Summer St.,
Adams, Mass.

Dear Mr. Smith:

I want to tell you what N. R. I. has done for me. I have just completed a \$3000 Radio station that I paid for from the proceeds received doing Radio work. I have built a laboratory which is situated on a hill 200 feet high. I have a Short Wave business which brings me a great deal of money. I receive from \$1.50 to \$2.00 an hour on receivers and \$3.00 an hour on trans-

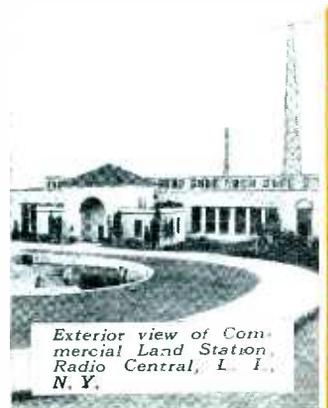


mitters. I am now handling the entire service work of three Radio dealers in town. I wish to extend my greatest appreciation to the N. R. I. Staff for what their course has done for me.

Sincerely yours,

HARRY O. BARSCHDORF

Since writing this letter our Employment Department has placed Barschdorf with the Westinghouse Electric & Manufacturing Co., where he is testing Photophone and Movietone apparatus, also airplane transmitters.



Exterior view of Commercial Land Station Radio Central, L. I., N. Y.

You can travel all over the world *without* expense as a **Radio Operator** on board ship



Famous Eiffel Tower in Paris

Do you long to travel? If you do, you can visit France, England, Italy, Germany—travel all over the world without expense and make good money besides. Where would you like to go? Do you want to head straight across the Atlantic to Europe? Do you want to visit Cuba, Porto Rico, Brazil or other South American countries? Do you long to see Hawaii, the Philippines, Japan, China, Australia, New Zealand?

Over 2,000 American vessels are equipped with Radio apparatus, according to a recent report from the Department of Commerce. They touch practically every port, every continent, every country and every nation. Some are engaged in passenger traffic only, others carry passengers and freight, still others, freight only.

Yachting provides another branch of opportunity for Radio operators. Ocean going yachts, pleasure vehicles of the rich, are equipped with transmitting and receiving apparatus. Coast line traffic enables the operator to visit Portland, Boston, New York, Miami, New Orleans, on the East Coast and on the West Coast, Alaska, British Columbia, Oregon, Washington, California, Chile and many other countries.



Passed for Operator's License easily

"I know you will like to hear how your course has helped me. It enabled me to build up a good reputation as an expert in Radio with the result that many Radio problems here are turned over to me. Your course also helped me to get my Commercial Operator's license. Out of 22 candidates two of us passed the examination. I received almost a perfect mark. So I may justly say that the sound backing of your Institute will help any determined man or young man to get a license. It enabled me to travel over the region of the Great Lakes as Radio operator on the Steamer Cadillac and get paid for it at the equivalent rate of about \$150 a month. My investment in your course has been the soundest I have ever made. It has doubled and tripled my earning power."

J. L. AMBROZICH,
129 E. Chestnut St.,
Chisholm, Minn.



Got two jobs through us

"Before I enrolled I was making \$18 a week in a shoe factory. My first Radio position as service man paid me \$40 to \$45 a week and the work was much easier and more interesting. After three weeks as service man I was promoted to Service Manager. Upon graduation, I passed for my first class license and through your Employment Department, received a position with Station K-WRC. Your Employment Dept. has again come to my aid and has placed me with the Inter-city Radio Telegraph Co. I will certainly recommend the N. R. I. to all interested in the great field of Radio."

SYLVANUS EBERT,
314 N. Water St., Watertown, Wis.

Large passenger ships as shown on the bottom of this page sometimes carry as high as six operators. Passenger ships of smaller size usually carry from one to three, freight ships from one to two, depending upon the cargo and amount of traffic to be handled. It is not unusual for an operator on his first year out to cover 25,000 miles, some even make trips around the world. No matter what type of ship you get on, the best there is is yours, the same consideration, accommodations and general treatment as are furnished to the licensed officers of the ship. You are provided with an officer's stateroom and all of an officer's privileges. While your ship is in port you are usually free to do as you like. Meals and living expenses cost you nothing and for that reason as a ship operator you will find it easy to save money as practically none of your expenses need be paid from your salary.



Canal Scene in Old Venice

Salaries \$85 to \$200 a month

Radio Operators' salaries range from \$85 to \$200 a month in special cases. And remember, this salary is practically free from expense. The lowest paid operator, can, without stinting himself, save from \$500 to \$1000 a year and see the world besides, see places that others pay good money to see.

Since a commercial license is required to be an operator on board ship, if this branch of Radio appeals to you, I suggest that you enroll for my Regular Complete Course with code training included. Page 54 tells you about my Special Code Course for men who want to be Radio operators. All ships use the dot and dash system of sending and receiving messages although a few have been equipped with Radio Telephony so that passengers can talk to friends ashore even while in mid-ocean.



E. N. Pickerell, Radio Operator in charge on board the S. S. Leviathan

Travelled 75,000 to 100,000 miles

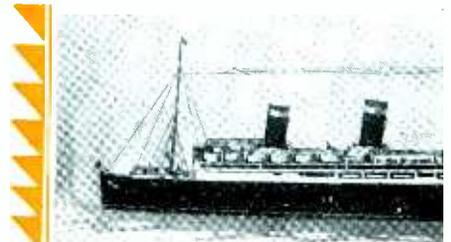
1213 Vermont St.,
Lawrence, Kans.

Dear Mr. Smith:

I took my commercial examination under the Inspector of the 9th District. I do not wish to say this as a boast, but of the men who took the examination, only two, myself and another fellow, passed. I have worked as a relief operator at KMMJ, on board the S. S. Dorchester as Junior Operator, and Chief Operator of the Chester Sun.

It is hard for me to say just what Radio has meant to me, my health and my happiness. I have traveled from 75,000 to 100,000 miles by water, have visited ports in various countries, fished and motored with millionaires in Florida, been on airplane flights, played in the surf and in the pools, played tennis, golf, boxed—really it has been one grand and glorious vacation. I am now with Broadcasting Station WREN. I came here because it has always been my ambition to go through college. I decided that Radio would give me easy, fascinating work—besides the chance to make money. I am maintenance engineer and third operator on a staff of five. With very best wishes to all the N. R. I. staff, I am,

Sincerely yours,
ROBIN D. COMPTON



S. S. Leviathan. Large passenger ships travel, the chance to meet prominent and board ship truly romance

Taste Romance and Adventure in many foreign lands. I will fit you for the fascinating life of a Radio Operator.

The show places of the earth—countries, cities, ports—rich in scenery, famous in history are open to you. Spend a few years or the rest of your life roving the earth's high-ways and by-ways. See for yourself Egypt's pyramids, centuries old, one of the seven wonders of the world, the squalor of China's ancient cities, Buenos Aires, "The Paris of the Americas". Talk from experience of the old ports once pirate strongholds, now draped in traditions; of Constantinople and its great Mosques decorated with cloths of gold and millions of dollars worth of gems; of Monte Carlo, the smallest principality in Europe famous as a great pleasure resort. Walk through the streets of Athens, so prominent in Ancient and Medieval History on up to the Acropolis, now in ruins.

In Asia you may stop off at Jaffa, referred to in the Bible as Joppa, the port of Jerusalem. In Australia and New Zealand meet some of the boys who fought beside you, or your brothers or friends in France.

In France you will see the tomb of Napoleon, the Cathedral of Notre Dame, the Louvre with its world-famous art treasures; in Italy the Coliseum dating back before Christ; in Germany a trip on the Rhine or Blue Danube will reveal marvelous castles. In England visit Westminster Abbey, the Tower of London, the House of Parliament; in Belgium the battleground of Waterloo marking the beginning of the downfall of Napoleon. Everywhere you will

see buildings erected hundreds of years before North America was discovered—famous in history, identified with the lives of Kings and Queens long dead.

To travel is to be liberally educated—to enjoy life. Men and women with money enough to do most anything they choose, spend their playtime visiting places described here. The millions of dollars spent every year by America's rich, to see, to experience the things that you as Radio operator can enjoy without any expense, help to maintain passenger ships; some of the countries of Europe exist almost entirely on tourists' money. Here is interesting, pleasant, fascinating work that is truly romance—Radio operating on board ship. And the door to this great opportunity is wide open to you through N. R. I. training. Many men and young men enter Radio operating as a result of their training with me every year. Get your start now while your opportunities are greatest. Enjoy life—make more money.

Radio operator of the S. S. Avalon, calling a business firm in St. Louis by wireless telephone while the ship is in Mid-Pacific.

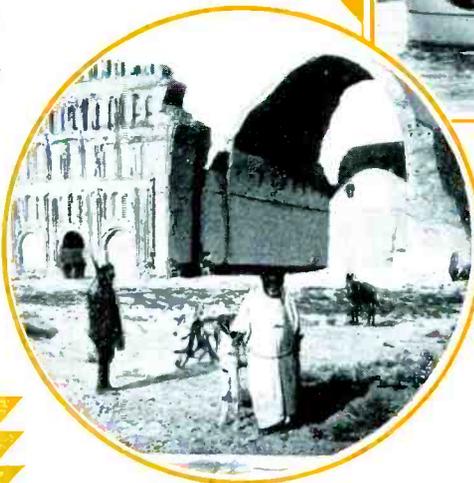
The House of Parliament building, London, England.



Temple of Heaven, Peking, China, built in 1420. The Chinese believe it covers the exact center of the earth.



Many luxurious yachts provide fascinating employment for Radio operators.



Babylonian ruins which stand on the eastern banks of the River Tigris. These are just a few of hundreds of interesting and famous sights many Radio operators enjoy.



carry as high as six operators. Good pay, influential people make operating on

Employment Department gets him job after interesting experiences on board ship

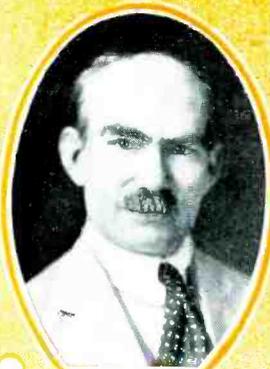
43 Tremont St., Hartford, Conn.
Dear Mr. Smith:

Since finishing your course I have taken in the principal sea ports of the world. I got my first job the next day after receiving my license. One of the biggest advantages of studying Radio with you is this—while taking your course I made more than enough to pay for it in my spare time. I want to thank your Employment Department for its many favors in connection with helping me obtain a shore job. I am with Station WTIC. I consider the salient points of your course—your policy of giving instruction to graduates on new apparatus; revising your course every time a new and practical piece of apparatus comes into use; and the prompt, courteous and careful attention you pay all students and graduates. This service makes the N. R. I. course outstanding and more superior than any other I have yet seen.

Sincerely yours,
WALLACE E. RUSHING



These Famous Radio Men are members of my advisory board



Dr. Lee deForest

Graduate of Yale; perfected the Electrolytic receiver in 1902, invented the three element vacuum tube which has not only made the rapid growth of Radio possible but has extended telephonic communication, also inventor of the Phonofilm system of talking movies. He has received many honorary college degrees.



George Lewis

Was for many years with the Navy in charge of Radio design at the Bureau of Engineering in 1922 joined Crosley as assistant to the President. He has at various times been Manager of the Institute of Radio Engineers; is Chairman of the Vacuum Tube Committee of the Radio Manufacturers Association.



C. M. Jansky, Jr.

From 1920 to July, 1929, had charge of instruction in Radio Engineering at the University of Minnesota, also of the University's broadcasting and experimental station. Now practicing as a Consulting Radio Engineer. A Member of the Board of Directors, Institute of Radio Engineers and American Radio Relay League.



Gen. Geo. O. Squier

Graduate of the U. S. Military Academy. He served in many capacities in the U. S. Army, including that of Chief Signal Officer, Headquarter Department, California. He was U. S. Military Attache, London, England, 1912 to 1916. Has been awarded many medals for scientific accomplishments. Patentee of Wired Wireless.



Paul A. Green

One of the two men to first install a telephone in a lighter than air machine. After the war, went with Western Electric Company—installed 11 of the most powerful stations in U. S. Installed WSAI and managed it for four and a half years. Then went with the Columbia Broadcasting System as Chief Engineer.



Edgar H. Felix

Broadcasting consultant and authority on Radio allocation. Served as Radio Engineer in the Signal Corps. Now Radio Consultant to the Nat'l Electrical Mfgs. Association, contributing Editor to Radio Broadcast, Aero Digest and writes for Radio Retailing, Advertising and Selling. Author of "Using Radio in Sales Promotion".

You get the benefit of their advice to me >>> backed by their great knowledge and experience

You will, no doubt, be glad to see that the National Radio Institute has men on its Advisory Board of nation-wide and world-wide fame. Every one of these men has made an enviable name for himself. Naturally, men of such standing, ability and prominence, as these, are careful of any connections they make. Therefore, I am grateful to them for having consented to serve, because in a way, it indicates that N. R. I. stands high in their opinions as an educational institution and as a necessary and vital organization to Radio's welfare and growth.

Since it is now, as it has always been in the past, my aim to give a training that represents the best thought and talent in Radio, I organized this Board to enable me to secure expert, authoritative advice on instruction information to put into my course. I consult these prominent men regularly for that purpose.

I want you to notice the wide range of experience these men represent.

Dr. Lee deForest is Radio's foremost inventor. He gave Radio the vacuum tube, the outstanding invention that has made Radio the big field that it is today. He has been showered with many honors because of his great work.

General George O. Squier is a recognized authority on Radio in Army circles and is the inventor of Wired Wireless.

Paul A. Green is Chief Engineer of the Columbia Broadcasting Company. His opinion and advice on information pertaining to broadcasting stations should be very valuable to me and my students.

George Lewis, because of his long association with Radio manufacturing, can help me and you, too, by his advice on instruction material covering this branch.

C. M. Jansky, Jr., has taught Radio for many years. His experience and study should be valuable. He has written a number of the Lesson Texts now in my course.

Edgar H. Felix, well known author of books and magazine articles on Radio, has also written some Lesson Texts for me.

By drawing on the experience and advice of these men, by securing the best work of experienced and recognized writers on Radio subjects, and by using the services of my own Staff also to prepare Instruction Material, I believe you will agree with me that I have many advantages to offer over a "one man" course—that I have the training you need to succeed in this field.

Radio Recognizes *✓ ✓ ✓* *your superior knowledge and training* when you become a Certified Radio-Trician

After having spent about 15 years of hard work and thousands upon thousands of dollars building our organization and training to their present position of leadership, it is only natural that we should want to designate graduates of our course by a name that distinguishes them from any other in the Radio field. We want them to benefit from the recognition accorded the high quality of our training, so we have adopted the title "Radio-Trician".

No one else except an N. R. I. graduate has a legal or moral right to call himself a "Radio-Trician". The word has been copyrighted by us. Graduates of our Regular Complete Course are given the title of "Certified Radio-Trician". Graduates of our course with code training included are given the title of "Certified Master Radio-Trician".

That these words have come to mean much in trained, specialized knowledge and ability is proved by the fact that many men in Radio, and firms too, are trying to use it apparently with a view of "cashing-in" on what it stands for.

Realize what it means to you to have the right to use one of these titles on your letterheads, billheads, envelopes, cards and in your advertisements. It means that you have passed the requirements

of the Pioneer and World's Largest Home Study Training Organization devoted only to Radio training. It means the recognition accorded this Institute as the leader in Radio training among the Radio trade is behind you and your efforts for success.

Such recognition cannot be acquired over night or even in a few years. It has to be earned by steadfastly maintaining a quality of training over many years so as to win the respect of those who are high up in Radio and are, therefore, able to judge accurately its completeness and thoroughness.

We have not been idle in the work of establishing the superiority of our training in the minds of Radio's leaders. Thousands of dollars have been spent in advertising and promotional efforts, acquainting the public and employers with our course and what it includes. Complete courses have been sent to many persons and firms with the result that many letters expressing surprise at the great wealth of practical information it includes have been received here.

So when you graduate from N. R. I. you are a recognized Radio Expert, because of your title and what it has come to stand for.



Behind the scenes in a Broadcasting Station. Jobs like these can only be trusted to men of recognized training and ability.



Radio Experts on duty at WGY enjoying pleasant surroundings, fascinating work with great future possibilities.

What our Membership in the National Home Study Council Means to You



The National Home Study Council is an association of the outstanding correspondence schools of the United States with headquarters in Washington, D. C.

Members are admitted only after rigid examination of the training courses offered, of the faculty teaching these courses and of the standards followed in the advertising, selling and conduct of the training. Thus the students of any Council members are assured of both the character, and the educational efficiency of the school in which they are enrolled.

The institutions belonging to the Council are united in the belief that students are entitled to the utmost in efficiency and service, and are constantly striving to increase their ability to help each student achieve the goal sought. The common purpose and aim of these schools constitute perhaps the greatest single factor in the adult education field and give an assurance to you in your consideration of this institution for your training.

The National Radio Institute is a member of the National Home Study Council.

You get these 18 unequaled star features of my course

On this and the following pages I explain the Eighteen Outstanding Star Features of N. R. I. training and service. Be sure to read every word about them, for they are highly important to you. Then you will realize why my graduates are in bigger demand every year, why they go further in Radio, how carefully and thoroughly



N. R. I. training has been prepared. And remember that the training, material, privileges and services which your enrollment will bring you have been under development for 15 years. We believe we have reached a point in perfecting them that no one else can match.



My Money back agreement protects You!



"You kept your promises"

"I made approximately \$700 in my spare time while taking the N. R. I. course. Since graduating I have received several offers by large companies but I feel that I will make more money in business for myself. I want to thank the whole N. R. I. Staff. You certainly stuck to the promises you made me before I enrolled."

JESSE LAUSMAN,
717 S. Shelby St.,
Louisville, Ky.

Within a few hours after your enrollment is received, a Money-Back Agreement identical with the one reproduced here, will be made out in your name and forwarded to you. This agreement is legal and binding upon the Institute. Its terms are clear and broad. It is my way of showing you that all of us here at the Institute are going to do our very best to satisfy you. And if we fail, every penny you pay us in tuition will be refunded.

You can start your training with absolute confidence that you are going to get your money's worth or money back, because you aren't taking any risks—you can't lose a penny. When you finish, you alone will decide whether or not we

have given you a satisfactory Course and whether our Instruction Service was rendered to suit you.

If you want to know more about our responsibility than I give you in this book, have your banker look us up in Bradstreet's, or write to the Merchants Bank and Trust Company or the U. S. Savings Bank, both of Washington, D. C. Or, write to the publisher of any large Radio magazine in the country.

I don't believe I could prove to you in a better way the confidence I have in my training and in my men who will help me train you. All our resources stand behind this Iron Clad assurance of your satisfaction.

MONEY BACK AGREEMENT
An Iron-Clad Assurance of Your Satisfaction

This certifies that

has been enrolled as a student of the National Radio Institute, and as such is entitled to the complete course of training, including all benefits and privileges pertaining thereto.

This further certifies that if after completing the course and paying in full he is not entirely satisfied with the lessons and instruction he has received, then upon returning all apparatus and material furnished to him and making written request, stating clearly his reason for dissatisfaction, within 30 days after he has finished the course, I will refund every cent of the tuition paid.



BANK REFERENCES
Merchants Bank & Trust Company
U. S. Savings Bank
Both of Washington, D. C.
Bradstreet's



President
NATIONAL RADIO INSTITUTE, Inc.
16th and U Streets Northwest
Washington, D. C.

Return this Registration Certificate and Money Back Agreement with your enrollment. It will be made out to you and returned.

"You certainly are fair with your students"

"Before I enrolled I was making \$25 a week as a carpenter's helper. Now I have a first class license and am Chief Operator of one of the best medium powered broadcasting stations in the U. S. I am earning about \$3200 a year, own my home, a good car, and hope soon to be in business for myself. I investigated many courses before enrolling and found N. R. I. training to be one of the best if not the very best. Although there was nothing in your contract to bind you to do so, I received, free of extra charge, quite a number of new Lesson Books that were prepared since I enrolled. You certainly are fair with your students."

HARRY W. ALLEN,
Station WBOW, 24 S. 8th St.,
Terre Haute, Ind.



You
will get

the close personal
attention of an
expert at all times



When we take over the job of preparing you for the Radio field, we are going to do the job right. So we give you close personal, individual instruction all through your course. We work right with you all the time in a personal, friendly way. Your lessons and your letters receive the personal attention of one of the members of our Staff of Instructors. Any time you need or want help on the course you will get it—gladly and quickly—as every member of my Staff is at your service.

I. R. E. men serve you

Every member of my Staff of Instructors is a Member or an Associate Member of the Institute of Radio Engineers. This assures you of getting the services of men whose Radio knowledge and ability are recognized.

Close personal attention and service like this give you confidence in yourself—in the Institute. Every minute a Staff of skilled men is standing behind you, backing you up, seeing that you advance on a sure footing.

The natural results from this kind of training are quick progress, thorough training. By having you answer each and every one of the questions on



each lesson there is not the least chance of your missing something important that you will need on the job, as is many times the case in class-room work. What you learn from us you do not forget. You have it at your finger-tips. You know how to use it.

You deserve a real chance

Maybe you've never had a real chance before—lots of men haven't. Many teachers and most employers try to help others get ahead by making them over on a cut and dried pattern—such methods never got results with human nature and never will. Every man has his good points and it takes personal training to bring them out—to develop them so as to get the best results.

There is no need for you to go through life with the feeling that success is not for you, but for others. You can get your share too, if you will get training which will bring out your ability. I believe this feature of N. R. I. training is responsible in a large measure for much of the success my graduates are enjoying. It is because we stand behind them, not only seeing that they get the knowledge, but more—taking a warm personal interest in helping them use it to the best advantage. I don't want you ever to have the feeling that the relationship between us is that of student and teacher—but instead that of one friend helping another. Our work is that of making you successful. We know our growth and our future success depend upon your making good.

Letters like these
prove the value of
personal training



Personal interest spells success

"Here are approximate figures of my earnings to date. I built 3 receivers that netted \$150 each and 4 others, \$100 each. Rewired two sets at \$25 each. Service work during the past 6 months about \$350. Total \$1250 in spare time. One of the many points I like about the N. R. I. is the personal interest given to students. It certainly spells success for the wide awake student. I am sure that anyone who realizes the future in store for him in Radio will not hesitate a moment in taking your course."

PAUL H. GRAUER,
1809a E. Prairie Ave.,
St. Louis, Mo.



Personal service alone worth the price

"Between October and April I did about 150 repair jobs and realized about \$900 from them. I have done quite a lot of repair work on receivers that others fell down on. I am getting a good start here and by next Fall expect to have plenty of business. For all this I owe thanks to the N. R. I. course. I can't praise it too highly. The personal service alone is worth the price of the course."

J. O. HIGGINS,
306 N. Main St.,
Rushville, Ind.



Course has netted him about \$2000

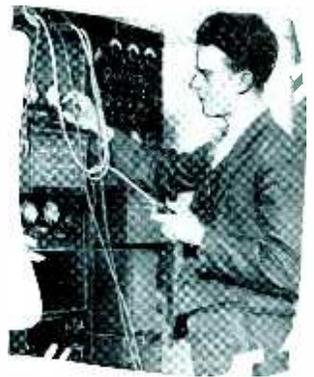
"I wish to express my gratitude to the National Radio Institute for the great benefit that its course has been to me. Before completing I was Radio Expert for the largest sporting goods store in North Carolina. At the present time I have my own shop, building, repairing sets, electric units, etc. The work is pleasant and there is a great deal of money to be made if worked only as a spare time proposition. Since enrolling I have made about \$2000 which is a very good return on the cost of the course. I want to thank the N. R. I. and its very able instructors for the personal instruction and help they gave me."

J. F. HUFF,
1123 Columbia St.,
Houston, Texas

You need not know a thing about Radio or Electricity



I'll give you all you need
of both to be a Radio Expert



Radio Expert operating Equipment installed in Pennsylvania Hotel, New York City.



Didn't know the first thing about Radio

"When I started your course I didn't have a set and didn't know the first thing about one. Frankly, I did not know a grid leak from a rheostat. But the uses of the parts in a circuit are clearly explained in your course. Since I enrolled about two years ago I have made over \$840 actual profit off my Radio sales and repair work—all on the side during my spare time after my regular working hours as bank teller. I want to thank you for your co-operation throughout the course."

B. L. SELLERS,
Monmouth, Oregon



\$3000 since starting—\$900 while learning

"I cannot say too much about your standard of teaching. I finished in about five months, made good money from the start. I have made around \$3000 since I started the course and give the N. R. I. 100 per cent credit because I didn't know enough about Radio to be able to change tubes before I enrolled. I made over \$900 while taking the course."

EARL SMYERS,
418 Dawson St.,
Fort Wayne, Ind.



Knew absolutely nothing about Radio

"When I started to study with N. R. I. I made a resolution to complete the course before doing Radio work of any kind. In spite of this, \$250 found its way into my pocket from building and repairing sets without going after any of the jobs. I knew absolutely nothing about Radio before enrolling. The satisfaction and new friendships gained as a result of enrolling with you has been worth many times the cost of the course."

P. N. KANTEN,
507 28th Ave.,
Seattle, Wash.

You may ask: "How much should I know about Radio or electricity to be assured that I can make a success of your training?" My answer to that question is: "You need not know the first thing about either." I take it for granted that you want to learn everything you need to know to be a Radio Expert and that you expect me to give it to you.

That is exactly what I do. I give you all you need to know about Radio and electricity to be thoroughly fitted for the Radio industry. I start you with the simplest principles, then work up step by step until you have mastered the whole field and its many branches thoroughly.

You supply the ambition—I'll do the rest

I only expect you to bring one thing into this partnership of ours. That is the ambition to succeed, the desire to get ahead, the willingness to try. If you have that—are willing to do your part, follow my instructions, I know you will come out on top and get more than your money's worth.

Many of the graduates whose letters you read in this book did not know a condenser from a rheostat when they enrolled. They did not know the difference between A. C. and D. C. current—but they had the ambition to get ahead—they had faith in themselves and in me—and now they are successful—making more money than they ever did before.

I'll start you at the beginning

This course starts you at the very beginning of Radio. Then it builds up your knowledge just as carefully and systematically as you would lay brick after brick in its place when building a wall. You not only learn the "how" but the "why" also. This way you learn quickly. You get the knowledge you are after—the information and experience, all condensed into a practical training, that the big men in Radio have spent years to discover and work out.

You'll get a lot of personal satisfaction out of studying Radio. You will find it extremely fascinating. There is something thrilling, absorbing, about realizing that as you go along day by day you are mastering this mysterious force. No wonder the Radio Expert finds his work a pleasure. And no wonder that Radio in a few short years has spread over the world like wild fire, growing faster than any industry ever did before.



Had no idea course would be so clear

"After investigating several Radio courses I decided to enroll with the N. R. I. I had no idea a correspondence course could be so clear—cover everything so thoroughly. It was more interesting than any book of fiction I ever read. Before enrolling I didn't even understand the circuit of a crystal set, but now I understand how to service and build Superheterodynes and the latest Screen Grid circuits. I have made hundreds of dollars—in fact, I am averaging around \$40 a month in my spare time. I shall always be glad to recommend the N. R. I. to anyone desiring to become a Radio Expert."

MARVIN BROWN,
Box 13, Garrison, Nebr.



Never dreamed it would be so easy

"I wish to take this opportunity to thank you and the Institute for my Diploma. I never dreamed it would be so easy and complete and contain so many unlimited opportunities. Even though I have been working long hours I have made about \$1000 in my spare time. This is a small fraction of what I would have made in full time. I owe it all to the N. R. I. I wouldn't part with the course for anything. It is the easiest, clearest, most interesting work I have ever done and I recommend the course to anyone regardless of what they may be doing now. I have made as high as \$25 in four hours."

FRED HAUSHALTER,
722 Thorn St., Sewickley, Pa.



As plain as it can be

"The course you give in Radio is as plain as it can be. I knew practically nothing about Radio when I enrolled but it enabled me to make \$600 in my spare time in 1927 and during the first nine months of 1928 I made more than that—all in my spare time. I believe anybody who can read and write can make good money in Radio through your training. I have repaired almost all kinds of Radio sets and have been able to give satisfaction on all of them. I cannot praise the N. R. I. too highly. I believe anyone who will take your course and try as I did can do as well if not better."

R. O. WHEAT,
1828 St. Joseph Ave.,
St. Joseph, Mo.



My Course is

clear, interesting, easy to understand
many of my *Successful Graduates did not finish grade school*

The Fourth Feature of my course is that it is clear, interesting, easy-to-understand. The lessons are written just as I would talk to you—in straightforward, every-day, understandable language.

Most any subject seems simple if it really interests a man. The subject of Radio is highly interesting and fascinating. This is best proved by the fact that hundreds of fellows who had to be literally driven to their regular school studies sit up half the night to tinker with their Radio set, delve into this fascinating subject, and master its principles.

We've made this course interesting

You don't find page after page of dry technical matter in this course. We know that the more interesting we can make this training for you, the easier it will be for you to learn. So we have made the course absorbing, have left out all useless theory that is found in so many other courses.

But this course is not ~~all theory~~. What you learn from the lessons you work out with your own hands with my Eight Outfits that I tell you about later in this book. This method keeps your interest alive, you are always anxious to learn more. And you learn

better. A man forgets the things he doesn't like to learn. This way you learn and remember.

Lack of high school education no drawback

You will get directly to the heart of everything—learn exactly how everything is done. You will learn how to take advantage of all the things that we've learned in our years of experience.

We have written this course for the man who hasn't had the chance to go very far in school because we know that by teaching in simple terms which are easy to understand, we are helping the man who needs our help most. We also know that the fellow who has gone through high school or college will likewise find it interesting and easy to apply himself to the lessons after his daily work. You will look forward to the time you can give your course and home experiments with my outfits as the most interesting and refreshing of the whole day. You will enjoy these lessons—many students say they are as fascinating as books of fiction.



\$400 to \$500 in spare time

1323 Jefferson St.,
Reading, Ohio

Dear Mr. Smith:

I have made very good extra money for myself and family since taking your course. I have made between \$400 and \$500 since enrolling. One afternoon I made \$55. I couldn't begin to tell you all of the jobs I have handled. If any man or young man takes this course and don't make extra money it is his own fault. There is nothing in the course that a man with a common school education cannot understand. I have had quite a few hospital bills and if it hadn't been for the N. R. I. I would have been very badly off financially. I have been making good money right through the Summer, which is supposed to be Radio's duller season. These extra earnings certainly help a man with a family.

Yours truly,
GEORGE V. UIGLEY

Unlimited Consultation Service

*No
Extra Charge*

Meetings like this with my Staff of Instructors and Department Heads come thick and fast these days. There are a lot of problems to decide in an Institution of this size. Radio developments and training problems, the personal progress and problems of students arise continually. Therefore, I get the advice of my men freely and often. Our advice must be accurate, it must be reliable, because many times a student's or graduate's future depends on it.



You get the advice and help of my experts on your problems as often as you wish both while a student and after you graduate



N. R. I. Staff always ready to help

Box 81, Harrisburg, Pa.

Dear Mr. Smith:

It was a lucky day when I picked up a copy of a magazine and saw your ad. I had played with Radio, had progressed by easy stages from the crystal set to the single tube "blooper", reflex, etc. It was great sport, but anyone who has done it knows that it costs money and plenty of it, and the information gained is of doubtful value as you do things and you do not know why you're doing them.

When I took your course I found that people were glad to pay well for placing their sets in working order again. I was certainly happy and tackled the job with enthusiasm. I have kept an accurate count of the actual profits and find that with a few extra hour's work a week, have cleared \$400 in one year. The N. R. I. Staff has always been ready to answer any perplexing questions that came up. I most heartily endorse the National Radio Institute course as practical and will say to those contemplating the course—"Be earnest and you will surely succeed".

Very truly yours,
F. L. BATTLES

You can consult us at any time while a student or after you graduate on any questions concerning your course and your future. You get this service, without extra charge, not only while you are a student but during your entire lifetime.

In a progressive field like Radio, Consultation Service like this is extremely valuable. It means that you can always keep yourself posted on new developments without cost to yourself, no matter how long it has been since you graduated. Each new development, new invention, brings with it new opportunities for the man who understands them thoroughly—and as an N. R. I. man you'll have our whole Staff at your service to keep you informed.

While still a student you can tackle spare time Radio work or even a full time Radio job with confidence because you will know you can get expert advice promptly from N. R. I. headquarters on points you haven't reached in the course yet. At times like these do not fail to call on me to help you out—that's what I am here for. Do it feeling absolutely that you are not imposing upon us in the least.

You may be in the middle of a job which you can't finish until your problem has been solved. Just write or wire me here in Washington and your questions will be answered immediately.

I'll help you with any problems

This Consultation Service is not limited, however, to technical Radio questions and problems alone. If you go in business for yourself, work for a dealer or enter any one of the many other branches of Radio, there may be some problems with regard to advertising, merchandising, locations of stores, and others that are put up to you to solve. We'll give you our best advice and opinion on those, too. In fact, no matter what kind of problem you are up against, give us the first chance to help you. I have a large Staff here, each man of different experiences and training and between us ~~we can~~ we can give you the information you need. I and my Staff want to be more than just teachers and instructors—we want to be your friends, and true friendship always calls for rendering such help as can be given, when it is needed. Whatever you ask us to do for you, whatever you write, will be kept in strict confidence.



I will give You

8 Outfits of Radio Parts

for a Home Experimental Laboratory

I start sending you these Eight Outfits, one at a time, beginning early in your course. With each one I enclose instructions for a number of experiments. By the time you have completed your experiments with all of the outfits, you will have learned the "how" and "why" of over 100 different receiving set circuits. The experiments are complete in every detail so the beginner can understand them without previous experience servicing sets.

You can use batteries or house current

I have taken into consideration that some of my students may not have house current. Therefore, among the experiments there are circuits which operate from either dry cells or storage batteries, and others for which 110 volts of D. C. or A. C. current of any frequency can be used. The experiments you do take up the very beginning of a Radio circuit and go on through the latest developments in Screen-Grid Tubes and push-pull amplification while using the latest types of tubes.

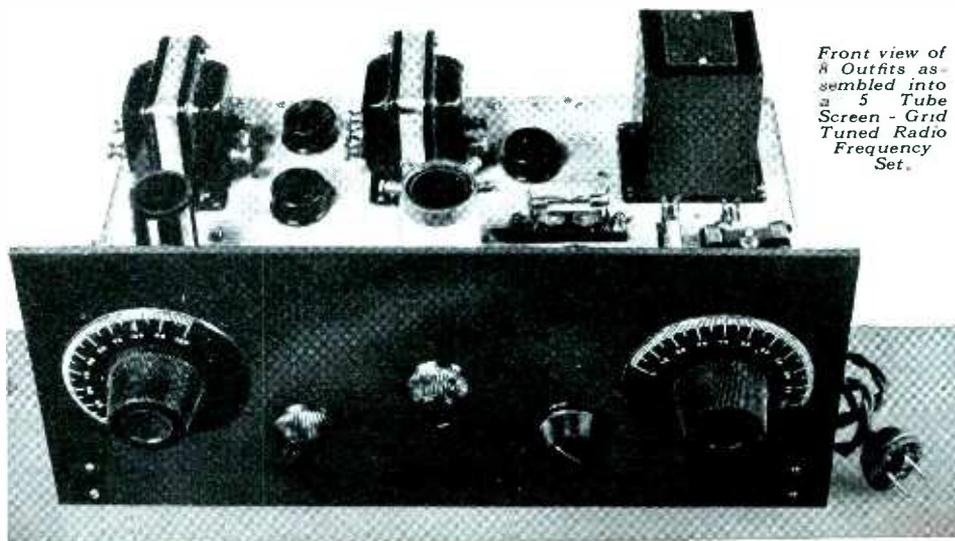
With these outfits you learn all about the circuits in different types of modern sets, how they work, why they work, how they should work, how to make them work when they are not functioning properly. It isn't necessary for you to have even seen a Crosley,

Atwater-Kent, Zenith, Majestic and the other makes to be able to understand and service them properly. Through your experimenting with these outfits you learn the fundamentals of the circuits used in these and many other sets.

Not just "a set"

I could give you a Radio set that you could sell once for a small profit and by buying them in large quantities make it look like you were getting a mighty big value. But you're not taking up Radio to get a Radio set—you're doing it to get a thorough knowledge of Radio. Knowledge is the one thing you can sell over and over again at continually increasing profits.

If you got all your Radio knowledge from books, you might hesitate to tackle the "works" of an expensive set. But by learning both from books and lessons—by doing actual work with these outfits—you don't have to worry. You know from your training and experience exactly what to do—you know the "how" and the "why". This 50-50 idea of teaching Radio—half from books and half from practical experiments originated here at the N. R. I. It makes learning easy, interesting, fascinating. It makes your knowledge complete. No Radio course is complete without it.



Front view of 8 Outfits assembled into a 5 Tube Screen-Grid Tuned Radio Frequency Set.

With these outfits I show you how to build over 100 circuits including

Circuits designed for all types of vacuum tubes
Circuits for UX 227, CX 327, A. C. heater type tubes in all types of stages
Circuits for Screen Grid Tubes for Battery Operation
Circuits for Screen Grid Tubes using alternating current
Circuits for 2, 3, 4 and 5 element tubes
Push-pull Amplification
Circuits for Power Tubes, including the type UX 245
Radio Frequency Amplification
Audio Frequency Amplification
Transformer Coupling
Resistance Coupling Amplification (as used in Television)
Impedance Coupling Amplification
Detection with Grid Leak and Condenser
Circuits for Power Detector
Oscillation Suppression and Neutralization
Short Wave Circuits and Short Wave Adapters
A. C. Filament Circuits
Hum Control
All electric circuits
Circuits showing difference between 3 to 1 and 6 to 1 ratio transformers
Tuned Radio frequency circuits
Neurodyne circuit
Capacity, Resistance and Inductive control of regeneration
Phonograph pick-up attachment
Simple telephone circuit. (Keep in mind that you actually construct this practical circuit in your FIRST unit where you can carry on a conversation over wires between two remote points)

You learn the working principles of the leading Radio sets made

You will design, experiment with and build the fundamental circuits now being used in the sets listed below and many more—

All American	Kolster
American	Kellogg
Bosch	Pilot
Atwater-Kent	Radiola
Crosley	Steinitz
Federal	Stewart-Warner
Earl	Zenith
Grebe	Freed-Eisemann
Amrad	Philco
Fada	Stromberg-Carlson
Eveready	Carlson
Erla	Browning-Drake
Majestic	Edison

This feature of my training is a practical Radio education in itself, but you, as an N. R. I. man will get much more in material and personal service.

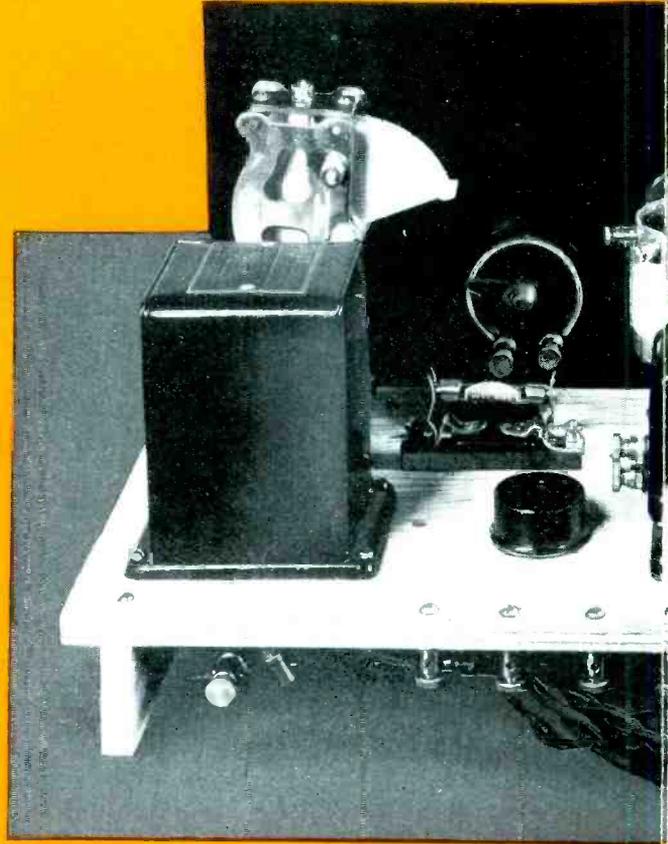
One of the many

Here are the parts you get

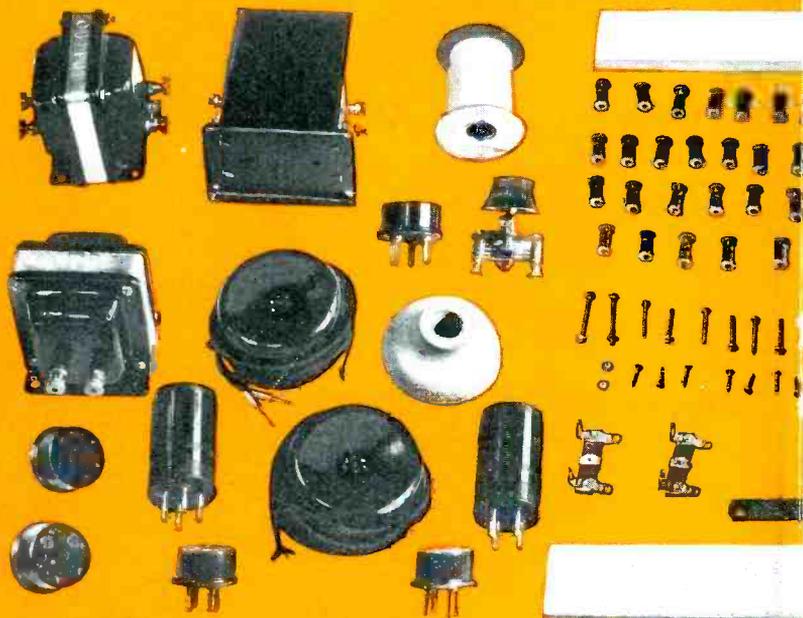
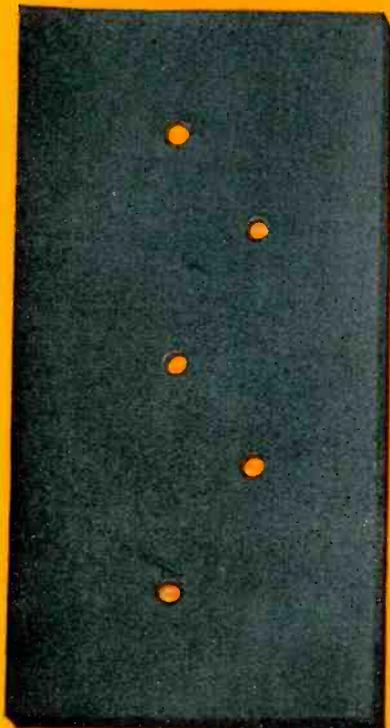
I've spent thousands of dollars developing this home experimental laboratory and am right now spending about \$100,000 a year on Radio parts—on this one feature of my training alone. I tell you this so that you will realize that I spare no expense trying to give you exactly what I think you need and want. The parts listed below are especially selected to serve our method of instruction and we, therefore, do not recommend that others be substituted.

- | | |
|-----------------------------------------|-----------------------------------|
| 1 Hard Rubber Panel. | 1-Push-pull Output Transformer. |
| 1-Drilled Baseboard. | 50 Binding Posts. |
| 2 End Supports. | 2-Dials. |
| 2-Variable Tuning Condensers. | 1-2000 Ohm Resistance. |
| 1-Midget Variable Condenser. | 1-1 mfd. Fixed Condenser. |
| 1-200,000 Ohm Potentiometer. | 1-.001 mfd. Fixed Condenser. |
| 1 Rheostat. | 2-.01 mfd. Fixed Condensers. |
| 2 Plug-in Coils. | 1-Bracket. |
| 1 Fiber Tube 1½ diam. x 2" long. | Hook-up Wire. |
| 1 Coil No. 24 Wire. | 2-Phone Units. |
| 7 Subpanel Sockets. | 12-½ x 4 R. H. Blued Wood Screws. |
| 2 20 Ohm Resistances. | 3-½ x 4 F. H. Blued Wood Screws. |
| 3 Mountings for Grid Leaks. | 4-1¼ x 4 R. H. Blued Wood Screws. |
| 3 Grid Leak Type Resistances. | 10-½ x ½ R. H. Mach. Screws. |
| 1 Grid Condenser. | 6-¾ x ½ R. H. Mach. Screws. |
| 1 Filament Transformer for A. C. Tubes. | 2-1" x ½ R. H. Mach. Screws. |
| 1-Push-pull Input Transformer. | |

We do not furnish aerial equipment, batteries, "B" eliminator or tubes, due to breakage in shipping in single lots and because these are interchangeable articles which you may already have. If you do not have them, you will find that they can be purchased locally or from other sources, as cheaply as we could supply the items. The material listed above, is not going to be so valuable to you—it is the knowledge you will gain from the use of these parts doing the experiments I shall show you. Without the instruction material covering the experiments, the parts are of no great value to anyone. The two go together. This method has been called the most remarkable achievement in practical Radio home-study training that has ever been developed.



I don't send you these parts and let you "go to it to see what you can do" without written directions and diagrams for a number of experiments.



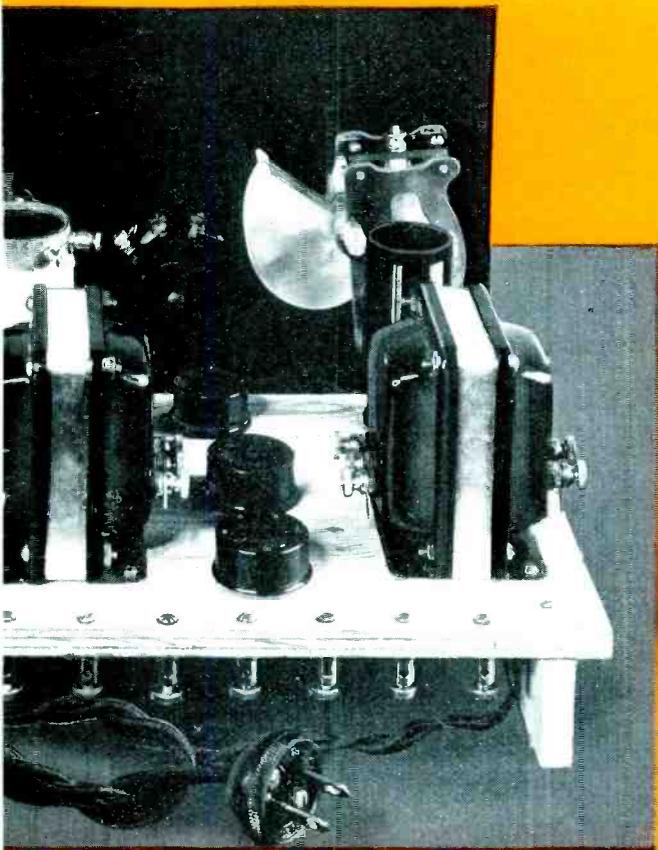
circuits you build

These Outfits give you practical experience equal to two to four years in the field

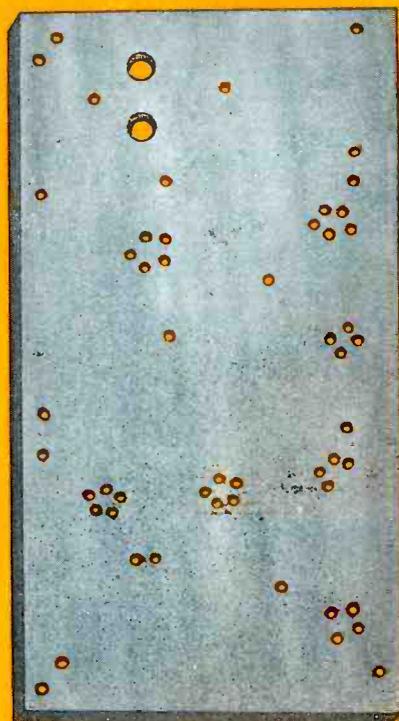
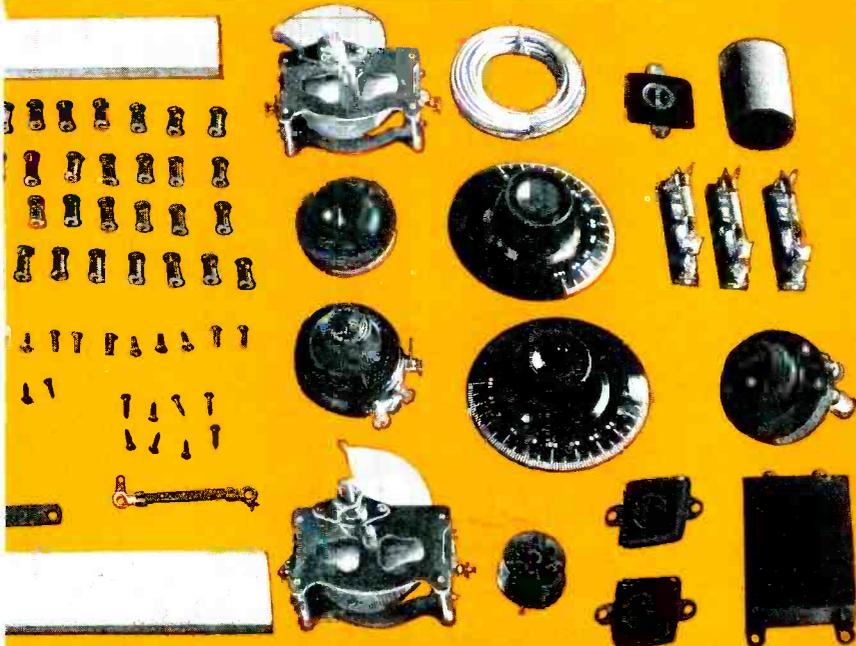
When you have finished your course with N. R. I. you will not need to take a low pay job simply in order to get experience—you will not be trained merely in theory and fundamentals, you will be trained and experienced ready for a good job—ready to take your place along side of many men who have been in Radio from two to four years. It is doubtful whether the average person tinkering with sets or working in the Radio field gets as much experience, such great variety on different types of circuits, in two to four years as you will get during the few months you are training with N. R. I.

Study the action of a vacuum tube or a tuned Radio frequency circuit or any of the others from ordinary books and the chances are you will only half understand it and soon forget it. But study it in our practical Lesson Texts, then work out the very principles with your own hands, and you will understand it thoroughly, find it interesting and absorbing and you will remember how to apply the principles.

You will learn the function and purpose of the parts in a circuit, how to arrange the parts for making any combinations which may be found in hundreds of sets now on the market. When you complete your experiments, you can, if you wish, assemble the parts into a 5 tube, Screen-Grid, Tuned Radio Frequency Receiving Set for home use that will receive on wave lengths of 40 to 600 meters.



an do with them'. With each outfit I send you instructions giving
nts. I want your knowledge to be complete and thorough.



I show you 10 easy ways to make extra money

in your spare time
right in your own neighborhood

the very day you enroll



The 10 Work Sheets you get with your first lessons show you how to do these jobs —

- Testing A, B and C Radio Dry Batteries.
- Testing Vacuum Tubes (AC and DC).
- Installation of Antenna System.
- Storage Batteries and Rechargers.
- Magnetic, Dynamic and other Loud Speakers and How to Use Them.
- How to Solder.
- AC and DC Power Tubes, What they Are and How they are Used.
- Putting new Life in Radio Tubes.
- Winding Radio Coils.
- Designing Coils for Receivers.

This is a reproduction of the Junior Radio-Trician card you will receive when your 9th lesson has been graded.



100 Business Cards like these, with your own name and address, will be ordered without extra charge, when you have finished 18 lessons and should reach you one to two weeks thereafter.



Unlike most any other course, I am going to show you how to begin making extra money in your spare time while studying. You won't have to wait one or two years, as is usually the case, to "cash in" on your knowledge. With the very first assignment of lessons I will send you 10 Work Sheets which will outline 10 jobs that you can do in your neighborhood. You, of course, shall be the only judge as to how much time to give to spare time jobs. It isn't required as a regular part of my training. This is an extra service designed to help you increase your earnings at once and give you some fine experience while you are studying.

And I am going to do more than show you how to do the jobs. I am going to

give you tested plans and ideas for getting them. As soon as you send your answers to the 9th lesson for grading I will send you a Junior Radio-Trician card. This card is your recommendation, so set owners and employers will know that you can be trusted with their service work. Then a little later I will send you 100 business cards as shown on this page. These cards bear your own name and address, advertise what you are qualified to do, and mention your membership in the N. R. I. student family. Many students report that jobs start coming in very quickly after they distribute these cards among their friends, neighbors and Radio stores.

Many fellows make as high as \$5 to \$10 in their spare hours in an evening, and it is nothing out of the ordinary for a student to earn four, five or even ten times the cost of his course before he graduates. All of my instruction, you must remember, is written and arranged so a beginner can understand it—you'll have no trouble learning how to do these jobs and applying what you learn.



\$100 in one month spare time

"Before Radio became so popular I was interested in it and like many others became a 'magazine Radio-Trician,' earning a few dollars now and then. I could hook up a set but now I know the 'why' of the circuit. Then came the real surprise, some business cards from the Institute. I decided to put my new knowledge to work. I have earned in one month in my spare time as high as \$100."

W. W. NIXON,
441 E. Oakdale Ave.,
Glenside, Pa.



Jr. Radio-Trician Card helped him to get jobs

"I think the N. R. I. course and methods of teaching Radio are wonderful. After I received my Jr. Radio-Trician Card I obtained a job as Service Manager for a sales corporation. Your business cards have also helped me to get spare time jobs. My spare time profits amount to \$200 to \$300 with more to come."

JAMES L. E. STULL,
4219 Homerlee Ave.,
East Chicago, Ind.



Makes \$500 to \$600 extra

"I have made \$500 to \$600 servicing, repairing sets, selling parts and accessories. I use your Service and Job Sheets a lot and think they are just fine. I wouldn't take a thousand dollars for the good I received from your course. The lessons are really easy to learn and I recommend your course highly to any one interested in Radio."

WILLIAM C. SCOTT,
6969 Bancroft Ave.,
St. Louis, Mo.

This Course is World Famous



I'll show you how to make extra money at simple jobs you can do in your spare time all through your course

The Work Sheets, Junior Radio-Trician Card and Business Cards mentioned on the opposite page are only the beginning of my help in showing you how to cash in on your training while learning. In addition I give you a large number of Service Sheets, Job Sheets and Service Manuals throughout your course, each of which describes in detail how to handle some specific job or explains how to service some make and model of set.

Even if you don't need the extra money I figure the experience will help you and there are many who do need the money, who might never get the advantages of this course if I did not show them how to make it pay for itself. Many fellows in school don't care to ask their parents for the money to pay

their tuition fee. Many a man with a family has found these spare time jobs very helpful in paying grocery bills, doctor bills, buying little luxuries for his children. Some have even paid off mortgages on their homes.

Your spare hours—say from 7 to 11—in the evening are the ideal time to do the jobs—for those are the hours of most broadcasting, when most receiving set owners discover their set isn't working right. In addition to servicing sets there is always a chance to make a profit on parts you replace and sets, speakers, batteries and accessories that you can sell. Some students make deals with local Radio dealers whereby they get commissions on sets they sell—and it is the man who fixes the set who has the best chance to sell one.



Over \$300 extra one winter

"I made over \$300 in cash and a Twin Evinrude Outboard Motor in trade costing about \$140 in my spare time last winter. I want to thank you for the many Service and Work Sheets. I like the way you keep after your students to get them to study. Most schools would say nothing about sending in lessons as long as the monthly payments came in but not so with N. R. I. I see you want your students to make good."

FRED F. NORRIS,
Nevada, Mo.



Service sheets cover principal sets

"Thanks for the Service Sheets you mailed me. They seem to cover all the principal types of receivers I work with. I find them a great help. I am doing service work and also make money on parts and sets on which I make a profit because I buy them wholesale. Most of my jobs come without solicitation."

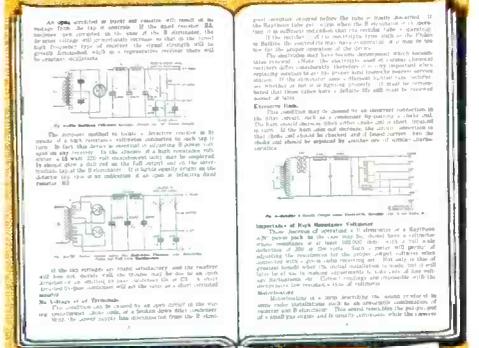
PAUL E. REISS,
3015 Regent Place,
East St. Louis, Ill.



Well over \$300 extra

"Received my Diploma and want to thank you for it. Your service and course have satisfied me thoroughly. I have made over \$300 in my spare time servicing sets. I have made as high as \$40 a month and haven't really tried to get business. Received your Service Sheets and want to thank the Institute for what it has done for me. It is really no trick to make extra money."

ANTHONY YENAS,
269 Vine St.,
Plymouth, Pa.



My Service Sheets, Job Sheets and Service Manuals show you how to do these jobs

- How to use Radio Tools and Meters.
- Improving the Audio Frequency Amplifier.
- Wiring Sets for C Batteries and Power Amplifiers.
- Balancing the Circuits of Radio Receivers.
- Testing Alternating Current Power Packs.
- Locating Troubles in Superheterodyne Receivers.
- Rewiring Radio Receivers for A.C. Tube Operation.

Service

- B Power Supply Units.
- A. C. and D. C. Operated Receivers.
- The Radiola 18.
- The Radiola 60.
- The Crosley Gembox, Showbox and Jewelbox Receivers.
- The Crosley Handbox Receiver.
- The Radiola 25.
- The Radiola 28.
- The Radiola 30.
- The Eveready A. C. Receiver.
- The Crosley Receivers, Models 4-29 and 5-36.
- The Crosley Model RFL 90 Receiver.
- The Grebe Synchrophase Receiver.
- The Kolster Receivers.
- The Super-Zenith Receiver.
- The Philco Receiver.
- The Atwater Kent Receivers.
- The Radiola 20.
- The Crosley Receivers Models AC-7 and AC-7C.
- The Radiola 17.
- The Freed-Eisemann Radio Receivers.
- The Majestic Receivers.
- The Stromberg-Carlson Receivers.

- How to Build a Simple Tungar Battery Charger for use with 110 volts A. C.
- Installation of a Battery Charger and Batteries Using the Farm Lighting Batteries for A, B and C Radio Current.
- How to Build an "A" and "B" Power-Pack for Direct Current.
- How to Build the Electrolytic Type of Rectifier and Filter for a "B" Eliminator.
- How to Build a Plug-in "B" Power Supply Unit.
- Installation of Radio Equipment in Buildings.
- How to Build a "B" Eliminator and Power Amplifier.
- How to Make a Receiving Set more Selective and Sensitive.
- How to Make a Service Testing Outfit.

New Sheets and Service Manuals are added from time to time as they are needed.

as the One that Pays for Itself

I will give You *Special Help* in starting a Business of Your Own



These valuable books cover

How to get a start. Choosing a location. Choosing the right kind of store. Equipment, shelves, show cases, etc. Atmosphere that wins customers. Attitude toward customers' complaints. How to pick employees. How much to promise. How to train employees, and make them work for you.

The right store hours. Liability and insurance. Handling deliveries and installations. Taking care of returned goods. Legal points. Inventory and the cost of doing business. Should you stock nationally advertised or other lines.

How to know what sets will sell in your community.

The buyer's attitude. Selling tactics to beware of.

How to judge the manufacturer. The right assortment of stock.

How turnover makes profit. The patent problem.

How to avoid losses through obsolete material. Private brands in the field. How to judge merchandise.

Getting extra discounts and special terms. Should you handle side lines and what.

How to size up merchandise possibilities.

How to use trade literature. An important credit phase.

How to make the most of your contact with salesmen.

Handling claims and adjustments. How to handle cash discounts.

How to keep a clean record.

How to make the most of your windows. The art of window display.

Displaying merchandise in the store.

Handling counter displays most effectively.

How to advertise.

The best mediums for advertising.

How to use direct mail successfully.

How to use the telephone as a business-getter.

When and how sign-boards and other methods pay.

How much to spend for advertising.

The right time to advertise.

How to check results from ads.

Two distinct varieties of selling effort.

Good and bad demonstrations.

Whether sets should be operated at the front door.

How to gauge a customer's buying capacity.

Home demonstrations—their advantages and dangers.

Meeting competition, mail order and cut price.

The question of "easy terms".

Handling special sales.

Making the most of new goods.

The trade-in problem.

Selling methods to be used by the service department.

Co-operation with organizations and other merchants.

Some "don'ts" of salesmanship.

My Employment Department, as I explain further along in this book, helps students get good jobs on graduation. My Merchandising Department, however, is maintained to help fellows who want businesses of their own to get established. This Department is under the direct supervision of Mr. Gordon Birrel. Members of this Department will advise you freely and frankly out of their experience and out of the experience of graduates who are already operating their own businesses, how to start and manage your own business. This advice and help is yours without extra charge and, to the best of my knowledge, is a service that no other Radio school offers.

First you'll want practical advice on selecting a suitable store location and on selecting tools, instruments and makes of receivers and Radio parts. Then you'll want reliable information on selling on monthly payments, what profits you can take from your work and from the sale of parts and sets without charging so much as to cut down your business. You'll want to know how much you can afford to tie up in stock and how to get by in the beginning with little or no investment. Most beginners in business can only learn by making constant mistakes, but as an N. R. I. man you will avoid many costly errors because we show you the right way to go about everything.

Special Advertising Helps

Any one of the four books shown on this page may save you the cost of your entire course by showing you ways to save money or ways to make money, or both. You will find them valuable in your spare time work and especially helpful if you decide to go into business on a full time basis. But we do more, we have prepared ads for your newspapers, movie slides for your theatres and display cards for windows to advertise yourself. We put your own name, address and telephone number on this material. We do not make a profit on these helps but give you these ads, movie slides, display cards at cost. You can also get bill-heads, job record cards, letterheads and a new supply of business cards in addition to those mentioned earlier in this book and cards on which to keep a record of the jobs you do—that is your

cost in time and material so that you can run your shop on a business-like basis. I am proud of my successful graduates; those in good jobs and those in their own businesses. Read dozens of letters—all I have room to print—from them scattered through this book. See just what National Radio Institute extra service, the extra things I do for "my boys" really mean in bringing increased earnings. Throughout this book you will find that I give my students and graduates many services, privileges and extra material offered by no other Radio school. I want you to use these services and privileges freely because I want you to make good. I want you as a successful graduate — to have every business advantage in becoming truly successful—because in that way I know I will earn and keep your true friendship.

Rushing business for Gottlieb

144 So. George St.,
York, Pa.

Dear Mr. Smith:

I have been very busy. In fact, booked up until after New Year. I built, repaired, remodeled and sold more Radio sets this month than I could keep track of. I also keep an assistant busy. I have earned and received many times the cost of my course. Naturally, I am quite proud of my Alma Mater as N. R. I. may well be of 11417. I have opened, what I believe to be, the finest and largest, exclusive Radio house in Southern Pennsylvania. Have leased quarters in the heart of the business district and extend to you my heartiest invitation to look me up when in this vicinity. With highest regards from an old grad.

Sincerely yours,

MORRIS GOTTLIEB,
Assoc. Member, Inst. of Radio Engineers.



"My Boys" get promotions and raises in pay through my Vocational Service



My Vocational Service is under the direction of Mr. P. J. Murray (also Manager of my Employment Department). As my student, you can get a number of services through this Department. For one thing, Mr. Murray can get in touch with your employer and let him know that you are studying Radio with us. Of course, no one at the Institute would ever write your employer without first getting your permission. So before writing, he will take this matter up with you and will send you a copy of his letter to let you know just what is taking place. As a matter of fact, we wait until the student suggests that we write his employer. So let us know when you feel that a letter from us will help you along—boost you a step up the ladder to bigger pay or a better job.

Some students don't want us to write their employer feeling that it might jeopardize them in their present jobs since they plan to leave them as soon as they graduate. We are extremely careful not to do anything that will hurt your present connection until you are absolutely ready to step out. On



The managers—"We want to tell you how glad we are to know that you are devoting some of your spare time to perfecting your knowledge of Radio. A letter from the N. R. I. just told us about it. That's good news for us. Keep up the good work and some day we may have some good news for you, too."

the other hand, many employers are mighty pleased to know that their employees are studying in their spare time to make themselves more valuable in their organization. Every progressive em-

ployer has his eyes open all the time for men who are fitted to take more responsible jobs. At once you become a marked man in their eyes because of your industriousness, standing above the others who are not doing what you are doing. If you are not in Radio work now, letters from us may help obtain a transfer to the Radio Department.

My Vocational Service has another side to it. One that is even more important than help-

ing you ahead with your present work. It is the fact that upon graduation we help you get into the right line of Radio work, the position for which you are best fitted by previous training and experience, inclination and temperament because when we make your job fit in with all those factors you are going to make a bigger success.

You, like every man, have your own personality, your own tastes, your own inclinations. Mr. Murray is quite an expert in sizing these up, and with your co-operation, and

after consulting with you, he will be able to help you in many ways. Keep this Vocational Service in mind and when you get your training under way and know of any way in which we can help you to get ahead where you are, or make a change to another department, let us know how to do it. We shall certainly do everything in our power to boost you along.

MASON & RISCH, LIMITED
230 Yonge Street
Toronto 2, Ont., Canada

Mr. P. J. Murray,
National Radio Institute,
Washington, D. C.

Dear Mr. Murray:

We have your letter and are very pleased indeed to have the information you give us regarding George McKey, now employed at our St. Catharine's Branch.

The writer is personally acquainted with Mr. McKey and we have always found him to be the right kind of an employee and one who is deserving of encouragement and assistance.

You can rest assured that he will not be overlooked and that if there is any opportunity in our organization where he can be used to better advantage to ourselves, which of course, means to better advantage for himself, he will be given every consideration.

Yours very truly,
MASON & RISCH, Limited
(Signed) F. E. BIGGS,
Retail Manager

FEB/H



When there are important problems to decide it is the man who is thoroughly trained in Radio who is called in and consulted. Believe me, employers like to know that they can depend upon the help and advice of men in their organization in solving their problems. It takes the responsibility off their shoulders—and puts you in good with them, too.



My Employment Department

Will help you find a job
UPON GRADUATION

When you have finished your last lesson and have received your Diploma, we don't turn you loose to "paddle your own canoe". Then is when we step in and perform one of our most valuable services. Through my Employment Department, of which Mr. P. J. Murray is Manager, we help you find a job. We do this work for you without extra charge, and neither do we charge the employer.

To my mind this is one of the most valuable services any school can render its graduates. It is only natural that we should know more avenues leading to possible jobs than our average graduate, because we are better acquainted with the field—because we personally know many of the men high up in the bigger companies who have direct charge of hiring trained men for their plants.

Employers in this and other countries know what N. R. I. training stands for. We spend a great deal of money every year acquainting them with the thoroughness of our training and with the type of man who takes it. Furthermore, the splendid records N. R. I. men are making for themselves everywhere, give you a stand-in with employers.

Some of the men who have direct charge of hiring employees are N. R. I. graduates themselves and naturally they like to give members

Employment Department gets him job



"I trust that you will pardon my delay in not writing to you sooner, but I want you to know what a great help you have been to me in my work here as Program Director and announcer. We have just completed the installation of a new 5000-watt General Electric transmitter of the latest design. I would never had the chance of obtaining this position if I had not been a graduate of your course, since it was thru your Employment Department that I got it. I could never have succeeded without the knowledge gotten from the course."

DONNELL O'CONNOR,
Radio Station WBT,
Charlotte, N. C.



P. J. Murray

I want you to know Mr. Murray. You'll find him a conscientious fellow who will work as hard for you as anyone in my organization. His record for finding jobs is going ahead every month. A natural go-getter, he likes his work, likes to help people. Besides, he says that he gets a kick out of this job that he never got out of any job he ever held before. You can imagine how satisfied a fellow is when Mr. Murray lands him in a good job and how tickled the man is who has been a graduate for several years and comes back and finds he can still get the help of our Employment Department—that we are just as anxious to help him as ever before.



Got his job thru Employment Department

"I believe the N. R. I. course to be the most up-to-date and clearly written Radio training to be had. Your Lesson Texts are easy to understand and cover the Radio field very thoroughly. I passed the Government Operator's license examination with ease, due to my splendid preparation. I am pleased to say that it was thru your Employment Department that I secured the job with Station WSMD after graduation. I have since been transferred to WGH, a station belonging to the same company that operated WSMD. My salary is double that of what I was making before I entered Radio. The work is interesting and agreeable. I certainly thank you for your efforts on my behalf."

DAVID C. WOODS,
Radio Station WGH,
Newport News, Va.

of their school family first choice. Both the Employment Department and the Vocational Service are under the direct and active charge of P. J. Murray. No one will work harder to see you win out in a big way than Mr. Murray. He is for the N. R. I. man first, last and always. He got his job because he has a record of getting what he goes after.

Long experience in the business world has taught me that as a general rule the larger the claims that are made, the smaller the proof to back them up. So instead of giving you promises to judge my Employment Service, I want you to judge it by results. I want you to read the letters on these pages, both from students and employers. I haven't picked letters from the biggest firms only, neither do I give you letters here of all of the men we have placed. Some of the firms you read of here you probably never heard of, others as you will see, are world famous.

N. R. I. placed him with Sears-Roebuck



"I am proud to say that I landed a position in the Radio Department of Sears-Roebuck and Company and feel that you should be credited with it. I like my work and more than appreciate the good co-operation and interest you have taken in helping me secure this position. I cannot give an accurate statement as to what your course has been worth to me but can safely say that I am drawing over twice the salary I was when I enrolled. I was reluctant about enrolling because my education is limited to grammar school. Now I know that I have made no mistake. Your lessons are arranged in a simple and systematic way which can be easily understood. The electrical knowledge alone has been well worth the money invested in your entire course, as during the last three months of my training I earned, in my spare time, without solicitation, more than half the cost of the course. I owe all this to N. R. I. and their wonderful training course together with the personal interest the officials have taken in my success."

J. H. ANDERSON,
1520 S. W. Mims St.,
Atlanta, Ga.

Use this Service

as often and as long
as you wish

Absolutely no extra charge

On the opposite page I told you that we were not going to turn you loose when you finished the course and let you shift for yourself, to make out as well as you could on your own efforts. No, sir. I'll help you as long and as often as you wish without any extra charge.

One year, two years, three years or even many years after you graduate, the services of my Employment Department will be open to you. It is possible that after you graduate you may step into a job that you find on your own efforts or that someone will offer you. Then again, many students have jobs in mind as soon as they graduate. Sometimes these jobs do not turn out as well as expected. I'll be ready and willing to help you in every way I can through my Employment Department.

We spend thousands of dollars yearly finding openings

Although a lot of jobs come to us from employers because they have heard of the Institute or know the reputation of our graduates, we don't sit back and wait for jobs to turn up. We spend thousands of dollars every year advertising in the leading trade publications, writing letters to dealers, jobbers, manufacturers, broadcasting stations, which bring back jobs. We clip the want ads out of the leading papers and answer them, and naturally as you would expect, we find many openings that way. We want to popularize our Institute, popularize our graduates. Therefore we boost them in every way we can. It is to our advantage as much as it is to their own. Our success depends on our graduates' success.

I doubt if there is another Radio school that spends as much time, effort, thought and money on its graduates as the N. R. I. Certainly it is to your advantage to hook up with a school that looks after you when you graduate. Your training is going to be worth only as much to you as the use you make of it.

Other things we do for you

We coach you on writing letters of application, arranging interviews with Employment Managers who want men. A large number of companies have copies of our course in their library. Just recently we got out 40,000 copies of a 16-page booklet describing the Institute and the work it is doing, for the express purpose of boosting the N. R. I. graduate to the firms which have use for your services. So when I tell you we are going to help you find a job I mean that we are going to do a thorough job of it. No halfway effort will do here. Every man and woman in this organization is taught that it is to his or her personal interest to do a thorough job of serving our students and graduates. The better job we do of it that much bigger we are going to grow and the more opportunities they are going to have in our own organization.

These letters show employers recognize worth of N.R.I. men

Unfortunately the letters below are all I have room to show you. On the right, however, I show you how extensively N. R. I. graduates are employed.

RCA calls for our men

"Coincident with the opening of Great Lakes navigation we will require the services of a considerable number of licensed operators for shipboard. Any men you have who are qualified may write us. We will be glad to give them every consideration."

RADIO CORPORATION OF AMERICA
Cleveland, Ohio

Canadian firm likes our men

"Our experience has been that it is very hard to engage men properly qualified for Radio service work, and we take this opportunity of congratulating the National Radio Institute on its work in training men. We have two men who received training through you. We must say that they are about the most capable in the Province of Ontario."

WENTWORTH RADIO SUPPLY CO., Ltd.
31 John St., Hamilton, Ont., Canada

Pleased to have our graduate

"You will recall that several months ago I wrote you to assist me in getting a licensed operator for KGCX. I am pleased to inform you we were fortunate in securing the services of Dallas W. Jensen. Mr. Jensen is a fine type of fellow and we are pleased to have him with us. I will always have a good word for the N. R. I."

E. E. KREBSBACK,
Westland Oil Company,
Minot, N. Dak.

Wanted a sales manager

"We are looking for a sales manager and it occurred to us that you may know of someone whom you think could fill this position. We are willing to pay a salary in keeping with the ability we need."

SUPREME INSTRUMENT CORPORATION,
Greenwood, Miss.

The largest firms call on us

"At the present time we are in need of testers, particularly those familiar with modern tuned frequency sets. If you have any men in this vicinity adaptable for this sort of work let us have their names or ask them to communicate with us."

AMERICAN BOSCH MAGNETO CORP.,
Springfield, Mass.

Cannot thank N. R. I. too much



"I must say that N. R. I. is directly responsible for my getting into broadcasting station operating. While I was in New York City I received word from you that Marquette University (WHAD) wanted an operator. I immediately applied and received word that I was hired. Usually it is getting the first job that is hardest and as N. R. I. did that for me I cannot thank them too much."

PAUL C. ROHWER,
Box 42, Clay Center, Nebr.

11th STAR FEATURE

Some of the firms and broadcasting stations that have employed N. R. I. trained men in the past

Atwater Kent
Alden Mfg. Co.
American Bosch
Brunswick-Balke-Collender Co.
Bremer-Tully Mfg. Co.
Crosley Radio Corp.
Canadian National Railways
DeForest Radio Co.
F. A. D. Andrea Co.
Federal Radio Corp.
Charles Freshman Co., Inc.
Freed-Eisemann Radio Corp.
Grigsby-Grunow Co.
General Electric Mfg. Co.
Montgomery Ward and Co.
National Broadcasting Co.
Philco-Phila. Storage Battery Co.
Radio Corp. of America
Ozarka, Inc.
Sears, Roebuck & Co.
Sparks-Withington Co.
Stewart-Warner Speedometer Corp.
Silver-Marshall, Inc.
Stromberg-Carlson Mfg. Co.
U. S. Naval Research Laboratory
U. S. Bureau of Standards
U. S. Dept. of Commerce
Westinghouse Elec. & Mfg. Co.
Western Electric Co.
Zenith Radio Corp.
Wentworth R. & A. Supply Co.
Acme Wire Co.
Mohawk Electric Corp.
All-American Corp.
American Tel. and Tel. Co.
Buffalo Courier Journal
Doubleday-Hill, Inc.
Detroit Edison Co.
Thomas A. Edison, Inc.
Firestone Tire & Rubber Co.
Great Lakes Tel. Co.
Independent W. T. Co.
Intercity Radio Tel. Co.
Ludwig Baumann & Co.
N. Y. Edison Co.
Penn Central L. & P. Co.
Pacific Air Transport
Sonora Phonograph Corp.
Universal Wireless Comm. Co.
Wright DeCoster, Inc.

Broadcasting Stations:

WRC	WHAD
KSL	WLW
PWX	KFEC
WMAQ	WENR
WJAX	KFJB
WBOW	WKJC
KFBU	WRNY
WOL	WAAM
WCBD	WCSH
KMOX	WGBI
WEMC	KGFI
KWWG	WMBJ
WSIX	WOC
WBBS	WHBY
WSMD	WCOO
WGE	and others.

You will get a Lifetime Subscription

to my Monthly Magazine NATIONAL RADIO NEWS

The day you enroll I will put your name on my list to receive National Radio News regularly. You will be sent a copy of every issue while you are taking your course and as long after you graduate as you want to receive it, without extra charge. Many people are paying \$2 to \$3.50 a year for Radio magazines that haven't a bit more information in them that you can put to use and make money.

National Radio News is not just a "house organ" put out to advertise the N. R. I. Every issue costs me over \$500, but I am willing to spend that to keep "my boys" posted on Radio's growth and development. It comes nearer to being a little book of information than to being a magazine. A wide range of subjects are covered in every issue. A recent issue, for example, carried an article on Geophysical Prospecting by C. M. Jansky, Jr. This article told how Radio is used for locating oil and ore, saving oil companies millions of dollars a year. "Facts about WENR—Largest Broadcasting Station in the World" by E. W. Gager. Mr. Gager is Chief Engineer

of the Great Lakes Broadcasting Company and Mr. Jansky is Associate Professor at the University of Minnesota.

Other articles in this same issue included—"Inside Dope on Television," "Servicing the One Dial Receiver," "Hints on Electrifying a Radio Set," "Akron to Africa Radio Service of the Firestone Rubber Co.," "Government Calls for Radio Men for Airways and Light House Units."

The material is not kept down to dope on Radio, however. Ideas for managing a spare time or full time business, success letters, news items from students and graduates, vocational articles giving tried plans for getting ahead where you are and for getting the job you want, are a few others. A large number of men and Radio firms are getting the News regularly. Radio editors of newspapers and magazines, inspectors, engineers and Libraries too have requested this little magazine for the benefit of its readers. If men and firms like these like the News, I am sure that you will too.



A few of the many interesting articles that have appeared in the "News"

- Adjusting and Neutralizing Crosley Receivers
- Succeeding in the Service and Repair Business
- Servicing Information on Atwater-Kent Receivers, Models 40-42-52
- Regulations Governing the Issuing of Radio Operators' Licenses
- Applying Ohm's Law to "B" Power Dividing Resistances
- Tube Power Supply
- Servicing Information on the Radiola 60
- Designing Small Transformers
- Airplane Altitude Measurements by Radio Echo
- Jenkins Radio Movies
- The Philco A. C. Receiver
- Experiments in Television Reception
- Radio Essential in Aviation
- My Faith in Radio's Future
- by Atwater-Kent
- Servicing Information on Kolster 6 Tube Receivers, Models K-20, K-22, K-25, K-27
- Radio Communication on Trains



Earned \$700 in five months' spare time

537 Elati St., Denver, Colo.

Dear Mr. Smith: Although I have had little time to devote to Radio on account of illness in my family and extra time in my regular job, my spare time earnings for five months after graduation were approximately \$700 on Radio sales, service and repairs. I owe that extra money to your help and interest. Thanks for your interest shown me during the time I studied the course and since graduation, also for National Radio News. I found a great deal of instruction and help in it.

Cordially yours,
CHARLES W. LINSEY

Radio as a side line brings profits of \$1500 to \$1750 in one year

Petersburg, Tenn.

Dear Mr. Smith:

I would not take anything for the knowledge of Radio gained from your course. I have found your course interesting, instructive, easy, written in terms that are easily understood. I am in both the jewelry and the Radio business. My Radio profits during the past year amounted to \$1500 to \$1750.

This is a conservative estimate. One stunt I use is a tag advertising my business and the expert Radio service I can render. I attach one to each battery installed or brought in for charging. I also run ads in newspapers. I am getting all kinds of jobs and am proud to say that I am handling them successfully.

Yours very truly,
I. M. DAVIDSON



My Course gives you *all* you need to know

to make good money and have a foundation
for *quick promotions and advancements in Radio*



It is *Thorough and Complete*

My course stands on its own feet. It is easy to learn. It is practical. It is thorough and complete. When you have completed the N. R. I. course it won't be necessary for you to look for a job where you can get practical experience. Neither will it be necessary for you to take an advanced course of any kind to qualify to get into Radio. The many letters from graduates given in this book prove positively that it fits you to make good money in this ever expanding field.

It goes from one end of Radio to the other. It always builds upon its own foundation. The lessons are so clear, everything is told in such direct, plain terms that most anyone can understand them easily.

N. R. I. is not connected with any outside companies

I firmly believe that a school, in order to serve you faithfully, must be independent of outside control—also free from other things only remotely connected with training. Therefore, I have always steered clear of alliances with other organizations. We are not associated or connected with any other school or any Radio organization financially or otherwise. This gives you as a student and graduate a number of



\$2000 in six months

507 Strongs Ave.,
Stevens Point, Wis.

Dear Mr. Smith:

I would advise the study of Radio for a full time job because it is nice clean work and the more you work at it the better you like it. I am now in the Radio business for myself—selling and servicing Radios. Every year the work gets larger and some day I hope to own a few large Radio stores. The work I did before required all my time and did not pay much. I worked for a railroad, hauling boxes. I have made more than \$2000 in six months. You have left nothing out of your course. Everything that I have run across in Radio has been in your lessons.

Yours truly,

ROBERT SPINDLER

advantages. It enables us to cultivate friendly relations with all Radio companies. As a result, our source of information on Radio sets is not limited to a few manufacturers, but we can choose freely from the very best of them. Thus you get up-to-date, complete and accurate information—not on one or two makes but all of them. We have not allied ourselves exclusively with any engineers or writers but take the work of all we can use. This gives you a broader range of information—equips you better for the Radio field.

This course is up-to-date

In a field growing as fast as Radio, constant changes and revisions are necessary. Our entire course is revised approximately once every year. Old material that has become obsolete through new inventions is thrown out and new material put in. A Radio course that is not kept up to the minute by regular revisions and changes cannot give you what you need to succeed. In my opinion, a training is only as good as what it enables you to do and to make. The best proof that my methods are successful is the many letters from students and graduates in this book.

Business hit \$1700 for one week

P. O. Box 982,
Stockbridge, Mass.

Dear Mr. Smith:

You will be interested to know that from the time I started studying with you until I went in business with a friend in 1928, I made anywhere from \$10 to \$30 a week in my spare time, servicing, repairing, building custom-built sets. My partner and I expected to sell about 45 sets this year, but sales have greatly exceeded our estimate. We have already sold 70 sets averaging \$225 each, list price, and now we expect to sell 150 sets our first year. The average sales and service amount to about \$900 a week. One week it went as high as \$1700. Most of this success I owe to the National Radio Institute and its expert instructors. Wishing you greater success, I am,

Very truly yours,
GEORGE N. HARRINGTON



Has own business. "Course thoroughly covers Radio"

Belle Island, Newfoundland

Dear Mr. Smith

I was an electrician and a Morse telegraph operator of rich experience. I was occupying a splendid position as a telephone superintendent when I decided to enroll, believing that a knowledge of Radio would pave the way for spectacular opportunities. I have not been disappointed. I am now in the Radio business for myself and estimate that Radio will be worth thousands of dollars to me in the next few years. A little while ago I made about \$70 in one day. My new work is much more interesting than telegraphy or ordinary electrical work. I found the N. R. I. instruction service up to date in every respect. It is indeed a wonderful method, and the course so thoroughly covers Radio that when a student obtains his diploma he knows he is ready to step right in.

Your sincere friend,
T. M. WILCOX



You will be Trained for all branches of Radio Opportunities

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STAR
FEATURE

My training fits you to enter any line of Radio you choose. When you learn my way you are not a "one job" man with nowhere else to look should something happen to the one you have. I train you thoroughly so you can step into any one of the many branches of Radio wherever you like.

I can't begin to list all the branches of Radio and its opportunities, but let me name a few. There are over 600 broadcasting stations and the demand for trained men among these many stations is steady. New stations are constantly coming on the air. A single large station employs as many as 30 trained men. If you want a business of your own—and I like to train every student with the idea that some day he will be managing his own place—it isn't easier to get started anywhere than in Radio. I'll help you make a start—almost no capital is required.

You can be an experimenter, a mechanic, a consultant, designer, draftsman, inventor, inspector; you can build, sell, install, repair and remodel receiving sets. Newspapers, magazines, department stores, banks, oil companies, rubber companies, aviation companies, all of them are using Radio more and more widely—new openings for Radio Experts.

The Government spends millions every year on Radio in connection with the Army and Navy, Aviation, experimenting and research. You can be an operator on

an ocean steamship or river craft, on some millionaire's yacht—travel all over the world without expense and make good money besides. Radio factories use designing engineers, inspectors, research engineers, testers, traveling representatives. The use of Radio for commercial communication between cities is growing very rapidly. Hundreds of trained men are going to be needed to design, build, install, operate the equipment.

There are over 35,000 Radio dealers. Some Radio retailing establishments employ as high as 100 men including salesmen, service men, supervisors of service men, buyers, managers.

Radio has a place for every kind of man

So large is the Radio field, so many are the opportunities, that it holds a good chance for practically any kind of man. Men, and some women too, from approximately 134 different professions and occupations last year enrolled with me.

Electrical engineers, boiler makers, farmers, bank clerks, printers, garage owners, draftsmen, doctors, sales managers, contractors, lawyers, bookkeepers—all of these and scores of other occupations were deserted in favor of the greater opportunities for success in Radio. The training that fitted them for bigger success is now open to you.

Look over this long list of different jobs my graduates are holding

Edward Stanko is Chief Operator of Broadcasting Station WGR
Harold W. Ramm is connected with a Radio manufacturer and runs a Radio store on the side
Wm. J. Kotera is Operator of Broadcasting Station WOW
E. E. Winborne is in the Radio business
Harry S. Wagner has built up a fine Radio business of his own
Erle L. Chambers was once in charge of a Stewart-Warner distributing branch and is now Sales Mgr. of the C. & D. Auto Supply Company of Cincinnati
Sylvanus Ebert is on board ship on the Great Lakes
Victor Osgood is with Conner-Crouse, an Engineering Consulting Company
J. H. Anderson is with Sears, Roebuck Company
John E. Fetzer built and now operates Broadcasting Station WEMC.
H. A. Wilmoth is traveling service man with Sparks-Withington Company
Wm. E. Riddle has a very profitable business of his own
Theo. J. Telaak has served as Radio Editor and is now Assistant Service Manager of the Federal Radio Corporation

Those are a few of the hundreds of graduates and students holding good jobs. I have not quoted these to show the number of graduates I have in good jobs, as there are hundreds, but to show the variety of jobs and opportunities open to you when you graduate from a course as complete as mine.

\$750 clear profit in 18 months' spare time

Amsden, Ohio

Dear Mr. Smith:

I want to tell you how glad I am that I took your course. Your personal help alone is worth many times the cost of the lessons for the N. R. I. course makes one feel so sure of himself. I can build or repair any make of receiving set. I have made \$750 in the last 18 months selling sets, repairing them, charging batteries, all in my spare time. I also convert D. C. to A. C. sets and build short wave receivers. I must credit this to N. R. I. training for it is thorough and interesting.

Very cordially,

E. W. NEDERHOUSER



"A man never knows what he can do until he tries"

1103 John St., Covington, Ky.

Dear Mr. Smith:

I have cleared \$586 over and above my regular work since the present Radio season began. I believe that is exceptionally good for this locality as there are so many "bootlegging" Radio Experts here. One week, an exceptionally busy one, I made \$186.50 from repairs and sales. I had the chance lately to get an insight into some lessons of other Radio schools and find that they do not compare with your own. I will always thank you for waking me up to the fact that a man never knows what he can do until he makes a good honest effort. My advice to anyone who has any intention of taking a Radio course is to enroll with N. R. I. It cannot be beaten,

Very truly yours,

EUGENE A. KING



I will give You *all* of these Special Courses *free of extra charge!*

I want to make it clear here that we are continually getting out new instruction material as developments and inventions in the Radio field justify them. Some of these we prepare ourselves, others I go on the outside to have written by various experts. Some of the best men in Radio have contributed to this course. It is my aim, as it will always be in the future, to keep the N. R. I. foremost—have it remain the leader in home-study Radio training. Every one of the Special Courses listed on this page is an addition to my regular complete course. I will send you these courses at the point in your studies where I think they will benefit you the most. And any new courses or lessons that I get out will be sent to you also.

What these extra courses give you

We have developed these special courses because we wish to leave no stone unturned that will insure your success as a graduate of N. R. I. training. We want you to be better trained than the average man who enters the Radio field. I would like to see you aim for the very top rung of the ladder of success.

To be completely successful in Radio, you must understand all of its many branches thoroughly and completely. That's because every branch of this industry is connected in some way with every other branch, and to have a clear understanding of any one you must understand the principles that underlie all. That complete and thorough understanding is given you by my regular course.

Specialization—how it aids in your success

This is a day of specialists. Just as the doctors who specialize in some one part of the human body, and the lawyers who specialize in one branch of law are usually the most successful, so I want to lay the foundation to make it possible for you to specialize in some one branch of Radio.

These Courses give you the fine points of various lines—the things that couldn't be covered in a regular Radio

15th
STAR
FEATURE

Radio Diagrams and Draftsmanship

Making Circuit Diagrams
Learning the Symbols
Constructor's Drawings
Securing Efficient Arrangement of Apparatus
Complete Circuit Drawings

Radio Journalism

The Writer's Market
Newspapers publishing Radio Articles
Types of Articles Used
Advertising and Publicity Work
How to Start as a Radio Writer
Business Paper Writing
Editing the Small Magazine

Organization of a Broadcasting Station

Main Divisions in a Broadcasting Organization
Program Department's Work
Maintaining "Program Balance"
How to Speak for Radio
Carrying Qualities Determining Placement of Musical Instruments
Successful Announcing, a Matter of Preparation
The Amplifier Operator
Duties of Radio Operator

How to Manage a Broadcasting Studio

Studio Technique
Technique of Microphone
Out-of-Studio Broadcasting
Obtaining and Classifying Talent

How to Build a Broadcasting Station

Input Apparatus
Radio Transmitting Apparatus
Power Apparatus
Tuning the Transmitter
Control Apparatus
Studio Construction
Signal and Control Systems

Methods of Testing Radio Receivers

Constructional Details of Attenuator
Vacuum Tube Voltmeter
Modulated Oscillator
Resonance Indicator
Slide-Wire Wheatstone Bridge
Modulated Radio Frequency Oscillator

Practical Servicing of Receivers

Testing Equipment
Universal Radio Set Tester
Eliminator Tester
Radio Testing Bench
Fundamental Faults and their Correction

Talking Motion Pictures

History and Development
General Details of Sound Recording
Talking Picture Systems
Vitaphone Sound Recording
Movietone Sound Recording
Photophone Sound Recording

The Design and Development of Power Packs

The Power Pack
Current Distribution
Voltage Distribution
Formulating Load Currents
Grid Bias Voltages
Ripple Voltages and Current Hum
Choke Coils

Radio Inventions

How to Develop, Protect and Make Money with Radio Inventions
Development of Ideas
What Not to Invent
What is a Patent
How to Establish Priority
Applying for a Patent
Selecting an Attorney
Cost of Patents
Needed Inventions.

course. They take up where the regular course leaves off, and give you the fine points in the particular line or lines you choose to specialize in.

They are not designed to stand alone, and are never sold separately. When you enroll for the regular course, either with or without the code, you get these Special Courses also. You study the ones that interest you the most but it is not necessary that you study any of them to qualify for a Diploma.

Read over the outline of these courses as given on this page. See for yourself how helpful the information they cover will be to you. Then you will realize how far short a course without them would fall of being complete and thorough.

I want you to go far

It is not my object merely to train you so you can get some kind of a job in Radio—just so you can get a start—I want to train you thoroughly so that you will not only be equipped for a good job when you graduate, but also have a foundation upon which to build a real future in this big expanding field. I want to see you up among the leaders in a few years. If you aim high with me, I believe the two of us can put you there. I am going to do my part—I feel sure that you will do your part also. I am counting on you.



\$900 in spare time while taking course

"Before taking up the N. R. I. course I was trying hard to learn the building and servicing of multi-tubed sets by studying from Radio magazines. Although I learned many things, it was not until I enrolled for your course that I started to make real headway. Your thorough manner of explaining each subject in detail, in language that I could understand made it possible for me to service sets within a very short time. My full tuition fee was soon realized from my repair profits. I earned about \$300 in repair work and \$600 from sets that I built and sold. One of the best parts of the course is the co-operation received from all at the Institute. I cannot speak too highly of the course. It has taught me to know what to do and how to do it."

ARTHUR WIELAND,
729 Jackson Ave.,
Elizabeth, N. J.

A *Although my average student graduates
in 6 to 12 months*



I will give You
3 years to finish

The great majority of the fellows who enroll with me do their studying in their spare time. Naturally some have more spare time than others and, therefore, complete in less time. The average time required to complete this course is six to twelve months. Since there are some students who, due to their occupation or other reasons, may not be able to finish in that time, I allow you three whole years in which to finish.

I want to make it clear that I encourage you to progress at the speed which suits you best. If you can give the course more time or master it faster than the average student, that is what I want you to do. You can go as fast as you like with the lessons. If you go too fast to understand them, I will tell you about it, but I will not hold back your lessons to delay you. Yet you can study very slowly if you wish to or have to for any reason—the important thing is that you get this knowledge and get it right while you are about it.

You are in a class by yourself

When you study with me it isn't a case of keeping up with someone else, or being held back by those who may be slower than you are. You set your own pace from start to finish. Your lessons and letters will be handled separately from every other student's. As soon as your enrollment comes in, I'll send your first material immediately. It will include a number of Lesson Texts, Work Sheets and other supplies that you have use for. As soon as you have answered the questions on Lesson No. 1 you are asked to send them in and then go ahead at once and tackle No. 2. We ask this so that we can be grading No. 1 while you are studying No. 2.

When your answers to No. 1 are returned, corrections are noted, a grade is given, and model answers are enclosed so that you can check your answers with absolutely correct ones. And with your graded answers I will send you the next Lesson. In other words, for every Lesson you send for grading, I will send you a new one. This keeps six or more Lessons ahead of you at all times. The Lessons themselves never leave your hands—they, like all the material I give you, become your personal property, are always near you for review or reference.

Your spare time is all you need

Hold your job. You need not give it up and go to a strange city at great expense to become a Radio Expert. I will bring my training to you, and you can study when and where it is most convenient, at times when you feel capable of doing your best work. Your spare time is plenty.



**Profits have gone as high
as \$300 a month**

"My business has been increasing steadily entirely through satisfied customers. The training has been of inestimable help to me and I feel quite confident that I can handle anything that comes along. It is difficult to say how much money I have actually made but last winter which is the best season I made as high as \$300 a month. This was in spare time, too. While that is exceptional it goes to show the opportunities there are. I probably average around \$100 a month."

OLIVER W. ELMS,
2525 7th Ave., W.,
Vancouver, B. C., Canada



**Earnings increased \$15
a week**

"I want to thank you for the text material that you sent me. At the present time I am following Radio only in my spare time as I am preparing for a job as an operator. Before enrolling in your course I was making \$25 a week. Today I am averaging \$40 a week. In the short time since I graduated I have made about \$700. I think your course is complete in every detail."

THURMAN S. NORTON
Radio Station KDLR,
Devil's Lake, N. Dak.

**South American student
makes good**

"The best thing I ever did was to enroll with you for the N. R. I. course. I strongly advise anyone who wishes to better his position to study Radio. I was in a lumber camp in the foothills of the Andes when I took your course. Not much doing there in Radio. Nevertheless, I made quite a lot of money in my spare time, fixing sets that were out of order. When I finished my course I came here and a fine surprise awaited me. My reputation as a Radio doctor had gone before me and I have been literally swamped with requests to repair sets. I have just finished another job making in all \$800 in cash besides expenses and board—just about five times as much as I was making before I took your course. I can conscientiously recommend your course to young and old. It pays."

HAROLD BUXTON,
Pailahueque, Chile, S. A.

One Low Price Covers Everything

You will never be asked to pay one cent more for tuition than the amount given on my enrollment blank



**17th
STAR
FEATURE**



"How can you give so much for so little"

"From October to April, I cleared well over \$250 in my spare time. My wife and I have wondered how it is possible to give so much for such a small sum of money. I chose your course in preference to another that cost about half as much because you offered so much more. If I had to do it over I would choose N. R. I. again. The personal attention alone which you give a student is worth the extra money not to mention the many other things you give."

REX B. SMITH,
600 South St.,
Sault Ste. Marie, Mich.



Course worth ten times the price

"I found your lessons as easy as A B C. Since enrolling I have made over \$500 all in my spare time and most of this money during the past five months. I had two jobs about three weeks ago that netted me \$80. Your course is worth ten times what you ask for it. I am now employed by the Westinghouse Electric & Manufacturing Co. When I showed the Chief Inspector some of the letters I received from you after graduation he hired me. I cannot express my thanks to you and the rest of the Staff for all that you have done for me."

JOSEPH M. TASKER,
36 Monrovia St.,
East Springfield, Mass.



Cost of course mighty small

"I started my activities in Radio by handing out a few business cards. Calls began coming in at once. This surprised me. I thought there were already too many Radio service men. I found out before long that nearly every set owner who called me had paid out good money to have his set repaired but got it back in as bad or even worse condition than it was before. I made \$300 in the past three to four months all in spare time. The cost of the course looks mighty small when I compare it with what it is going to make for me in the future."

C. E. HYRE,
326 Kammer Ave.,
Dayton, Ohio

All the apparatus, instruction material, privileges and services that I give with my course are covered by this one low price

When you become my student, or rather I should say, my partner in this undertaking of preparing you for a bright future in Radio, you need not fear that you will be asked to pay one cent more for tuition fee than the amount given on the enrollment blank

My Lessons and other material are our own copyrighted work and are covered by the tuition fee. The apparatus for practical experience listed on page 32 is also all included.

Furthermore, no matter how much use you make of our Consultation Service, or Employment Service—no matter how often you ask us to help you with Radio problems connected with your course or on spare time or full time jobs—you'll never have to pay one cent more. This applies as well to such features as Vocational Service, Merchandising Counsel and Personal Instruction.

So with me you know exactly what your training is going to cost. It is my policy to live up to every letter of my agreement and further, never to ask a student to do anything for the Institute that he has not agreed to do.

You needn't use your savings for tuition

Naturally a man wants to know just how much money a course of training is going to cost, especially if he is under heavy expense or has to watch pretty closely to make both ends meet. That's why I make this promise.

Under my plan of showing you how to make money in your spare time while taking this course, many students never use any of the money they have saved nor take anything out of their pay for their monthly installments. The money they make on the side pays their tuition fee and leaves enough over to buy many extra things that add so much to a person's happiness, comfort and contentment. I needn't tell you the many uses you will have for an extra \$200, \$500 or \$1000 a year. You know yourself that this sort of money can buy a lot of things that you may have to do without now.

With me your interests come first

When I take over the job of building your future for you—preparing you for your future career—I feel I have accepted a serious responsibility. I feel that you have placed a faith and trust in me that does not allow me for one minute to forget that between us we have the shaping of your future for the next five, ten or perhaps twenty years. I know that I cannot afford to be careless, neglectful, haphazard in my service, incomplete in the information I give in my course, without it affecting your future in some way. It is my idea to make as big a success of you as I can—not to get as much out of you as you'll stand for.

This ENGRAVED DIPLOMA

is your
introduction
to

Radio
Jobs
on
Land
and
Sea



Recognized by the U. S. Government

The N. R. I. Diploma, and the training it stands for, is recognized by the U. S. Government. It

counts for credit when taking the examination for the Government license. Among the Radio trade it stands for the most complete training to be had.

This handsomely engraved Diploma is sent to you free of extra charge, all postage paid, fully engraved, immediately when you finish the course. A Diploma as Certified Radio-Trician is issued to those who take the course without code. A Diploma as Certified Master Radio-Trician is issued to those who include code training. In addition, a Certified Radio-Trician or Certified Master Radio-Trician card is given for convenience in carrying.

You are training yourself to better your position—to increase your earnings. You don't want to stop short of the very best that Radio offers.

That is why I have told you throughout this book about the thoroughness and completeness of my course. Why I give you practical experience with Radio

parts equal to and perhaps more than the average fellow who enters the field without this training gets in two to four years. That is why I show you how to start making money early in your course—to give you valuable experience and make it possible for you to add to your income without waiting a year or two as is usually the case.

You don't have to take another course when you finish this one. All of the practical, result-getting information you need is given in this one training. When you master this course you will be so clearly acquainted with all the "ins and outs" of Radio that additional training—classroom or otherwise, would simply be covering the same ground twice.

Set \$3,000 to \$10,000 a year as your goal. Many salaries in Radio go higher than that. With N. R. I. training behind you, you'll have confidence, regardless how big the job or how high the salary, that you'll have the thorough, practical knowledge to fill it. And long after you graduate, we, here at the Institute, will be watching you, helping you whenever we can so that your highest ambitions can be realized.

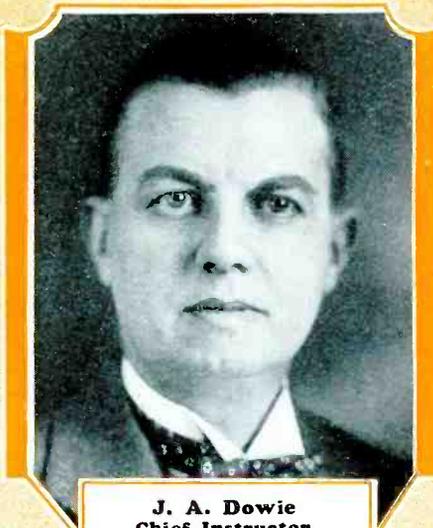


A reproduction of the card furnished upon graduation for convenience in carrying.

These men help me give *You*



P. J. Murray



J. A. Dowie
Chief Instructor



S. M. Armstrong



George J. Rohrich



F. L. Sprayberry



Don B. Looney



David H. Smith



Albert F. Doig



Harold E. Luber

My right hand man in giving you this training is an old timer in the Radio game. Mr. Dowie has been with the Institute over ten years. His long experience serving hundreds of students and graduates makes him an ideal man for his position as Chief Instructor. He knows my course backward and forward, has contributed a great deal toward making it as complete and thorough as it is today. A member of the Institute of Radio Engineers, a contributor to Radio magazines at different times, he has won my confidence in his ability to supervise and direct his assistants. You will enjoy knowing and working with him.

P. J. Murray

Manager of my Employment and Vocational Departments. A live wire, 100 per cent for the N. R. I. man.

S. M. Armstrong

Director of Student Service. He is keenly interested in seeing every N. R. I. student get prompt personal service—one of your most loyal friends here.

George J. Rohrich

His interest in Radio dates back about 15 years. He has charge of the research work we do here in connection with arranging and preparing the practical training we give with a Home-Experimental Laboratory.

F. L. Sprayberry

Instructor under Mr. Dowie in grading Lessons and answering letters from students and graduates.

Don B. Looney

Mr. Dowie's assistant in collecting and preparing up-to-date service information on different makes and models of sets.

David H. Smith

Another Instructor under Mr. Dowie, who grades Lessons and helps answer students and graduates' letters.

Albert F. Doig

Manager of my Mailing Department. He keeps his assistants "stepping" all the time so that you get prompt service. There is no lost motion in getting out Letters, Lessons and Units with Doig on the job.

Harold E. Luber

Student Service man working with Mr. Armstrong for prompt and helpful service.

They have over 100 people helping them to serve you

The men whose pictures I show you on these two pages are my Department Heads and some of their Assistants around whom I have built my organization. I haven't space to show you photographs of all my Staff as there are over 100. All of them give their full time to the Institute. I believe I have a unique, in fact a remarkable organization. I never saw a group of men and women so impressed with the spirit of loyalty and personal service. Everyone seems to realize I depend upon them individually to give his or her best personal efforts to serving you—to be prompt, courteous, accurate and helpful to each student and each graduate, day in and day out. They are not working *for* me—they are working *with* me and working for you to the very limit of their ability.

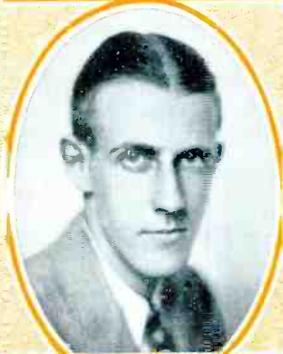
prompt and efficient Service



Gordon Birrel



B. S. Lavins



R. S. Hudiberg



William T. McKenna



E. R. Haas
Vice-President

Mr. Haas assumes the executive and business responsibilities which arise in conducting the Institute, leaving me practically free to give all my time and effort to students, graduates and to the course. He is particularly well qualified by his extensive knowledge of organization methods to administer the business affairs of the Institute. Gifted in business matters and administration, his work in keeping down costs is largely responsible for my being able to give my course for its present low price.

Gordon Birrel

Head of my Merchandising Department, through which he helps students and graduates start and conduct Radio businesses of their own.

B. S. Lavins

Auditor and Chief of my Accounting Department. Accurate and up-to-date records are necessary on every student. Mr. Lavins sees that we have them.

R. S. Hudiberg

Assistant Director of Student Service, full of energy and as loyal as they make them.

William T. McKenna

One of Service Director Armstrong's right hand men.

Edward L. Degener

Director of Publicity. Under his supervision students and graduates are getting favorable write-ups in their local newspapers which is good advertising for them.

John E. Hall

Editor of my monthly student and graduate magazine—"National Radio News."

Carl F. Weber

In charge of student supplies. It is his duty to see that we have sufficient quantities of study material on hand at all times to make prompt shipments to students.

T. A. Lambert

Student Service Expert assisting Mr. Armstrong.



Edward L. Degener



John E. Hall



Carl F. Weber



L. A. Lambert

Your profit from the 15 years it took to build this Organization

You cannot afford to speculate—gamble—on the training on which your entire future depends. Do not risk your future on somebody's "overnight" idea. The National Radio Institute's training is not an experiment. This school, this organization, this course have been developed steadily over 15 years. Back of N. R. I. methods and N. R. I. training stands this unequalled experience in training ambitious men and young men for Radio. It is only natural, therefore, that we can offer more and better training than any organization just starting out or one that has been in existence just a few years.

These Subjects *★and many more* are covered in my Lesson Texts

The subjects listed on this page and pages 51, 52 and 53 are fully and thoroughly explained in my Lesson Texts. Read them over carefully. And remember, this is not my whole course, by any means. You also get a large number of Work Sheets, Job Sheets and Service Manuals, Special Courses and innumerable privileges and services. These Lesson Texts and other material teach you the "why" and then you learn the "how" with your 8 Outfits of Radio Parts



which are your Home Experimental Laboratory. I say, without fear that anyone will contradict me, that I have the most thorough, practical and complete Home Study Radio Course offered today. It is only natural that I should be able to give you bigger value for your money—my long experience specializing in training men and young men for Radio, my larger and superior organization, make it possible.



Worth anything you ask for it

"I don't know just how much I have made since taking your course, but I know it is well over \$300 in spare time. Most of my jobs come from a Radio store about two blocks away. I do all their repair work, with a few exceptions. I have repaired practically every make of set from one tube reflex sets and bloopers to nine tubes. Your course is worth anything you ask for it."

LESLIE ANDERSON,
11649 Mansfield Ave.,
Detroit, Mich.

Early Developments in Radio

Hertz's first discovery—Marconi's great contributions—Edison's addition to Radio science—Lee deForest perfects the vacuum tube.

Nature of Radio Communication

Radio waves and how they are made—Wave-length and its control—Radio and audio frequencies—C. W., I. C. W. and carrier waves.

Radio Broadcasting

Production of sound waves—the Microphone operation—Changing voice waves to Radio waves—Distortion and its causes.

Radio Apparatus

Symbols and their uses—A and B Batteries—Power Packs—Condensers and Coils—Rheostats and transformers—Vario-couplers and variometers.

Building Receiving Sets

Factors which determine the selections—Choosing the right parts—Purchasing the correct articles—Laying out the panel and baseboard—Mounting and wiring the Units.

Installing the Receiver

Guiding points in its location—Neatness in arrangement of accessories—Special care in placing of batteries—Power Units—Simple and concise instruction for operation—Use of switches for disconnecting power—Essential rules for proper upkeep.

Radio Repairs

Instruments required—Proper tools and supplies—Diagnosing for ailment in AC and DC sets—Applying most effective remedy—Final test and replacement in service.

Antenna and Aerial Systems

Types of aeriels—Wave-length of aerial—Aerial wire and insulators—Erection of aerial—Design of loop aeriels—Protective devices—Counterpoises and grounds.

Vacuum Tubes

Principles of operation of various types of DC and AC tubes including Screen Grid Tube—Method of manufacture—Improved type of tubes—Testing tubes—Matching tubes.

Amplification by Tubes

Theory of action—Regeneration—Grid and plate voltages—Selecting proper C battery voltage—Eliminating distortion.

Audio Frequency Amplifiers

Resistance coupling—Transformers and their ratios—Push-pull method—Volume without distortion—Power amplifiers.

Radio Frequency Stages

Transformer design—Tuned and untuned systems—Wiring diagrams—Method used to control oscillation.

A, B and C Batteries

Selection of proper type—Service and life—Testing for condition—Dry and storage types—Care and maintenance.

Design of Broadcast Receivers

Range of frequency to cover—Selection of the tuner—Number of Radio and audio stages—Determining the type of tubes—Making the complete wiring diagram.

Regeneration

The important features of the circuit—How the action takes place—Methods of control—Vital points in its operation—Critical values for each circuit.

Complete, Thorough, Tested and Proven

It makes You a

Recognized Radio Expert

Highly Approved Circuits

Browning-Drake — Roberts — Hi-Q — Equamatic — Loftin-White — Bremer-Tully Counterphase—Grebe Synchronphase.

Neurodyne Receivers

Hazeltine's and Rice's method of control—Neutralizing coupling effects—Neuroformers and neurodons—Simple explanation of the critical angle—Troubles in the neurodyne operation.

Reflex Circuits

What it means to reflex—Simple circuits to illustrate—Use of crystal in reflex—Efficiency in use of tubes—Inverse duplex circuit—Its advantages over others—Circuit diagrams for 2, 3 and 4 tubes.

Super-Heterodyne Circuits

Victoreen — Madison-Moore — St. James — Radiolas—Nine in Line—World's Record.

Construction of Receiving Sets

Pictorial wiring diagrams—the Parts you need—Assembling and testing.

Super-Heterodyne Receivers

Simple explanation of working principles—Developments for efficiency—Simplicity of control—Adding selectivity to the set—Important factor in the construction—Tracing the cause of super troubles.

Trouble Shooting in Receivers

Methods of locating faults—How to test each part—Determining the cause of trouble—Simplest means to remedy it—Methods of locating trouble most quickly in all standard makes of manufactured sets.

Radio Accessories

A-B-C Socket Power Units—Voltmeters and Ammeters — Lightning Arresters — Power Tubes—Tube Adapters—Tube Testers.

Overhauling a Receiver

Inspecting the aerial for defects—Locating loose and faulty connections—How to determine condition of A and B batteries—Checking the tubes for quality—Finding trouble in jacks, phones or transformers.

Building Special Receivers

Regenerative—Reflex—Tuned Radio Frequency—Super-Heterodyne.

Electrical Principles

Nature of electricity—Static and current forms—Law governing flow of current—Types of electric circuits—Measurements and how made.

Radio Disturbances

Common causes—Finding the cause by the noise—Locating the source of trouble—Methods of stopping the disturbances.

Building Power Supply Units

Battery Chargers—"A" and "B" Power Pack for Direct Current and AC Receivers—Plug-in "B" Power Unit—"B" Eliminator and Power Amplifier.

Wave Traps

What they do—How to build one—Places where they are needed—Method of connecting them—Making the proper adjustments.

Winding Coils

Spider-web form—D coil construction—Bank winding (2, 3 and 4 layer). The lattice coil—Honey-comb type.

Broadcasting Stations

Power and classes of stations—Installing the transmitter—Method of obtaining a license—Selecting the artists—Getting on the air.

Radio Transmission

Speed of Radio waves—Types of transmitters—Interference from other stations—Atmospheric disturbance — Absorption of waves.

Radio Measurements

High-frequency resistance—Inductance and capacity—Sharpness of resonance—Power of transmitter—Losses in condensers and coils.

Short-Wave Transmitters and Receivers

Important features in design—Basic principles of operation—Meissner, Colpitts and Hartley circuits—Arrangement of apparatus —Best methods for power supply.

Allocation of Wave Lengths

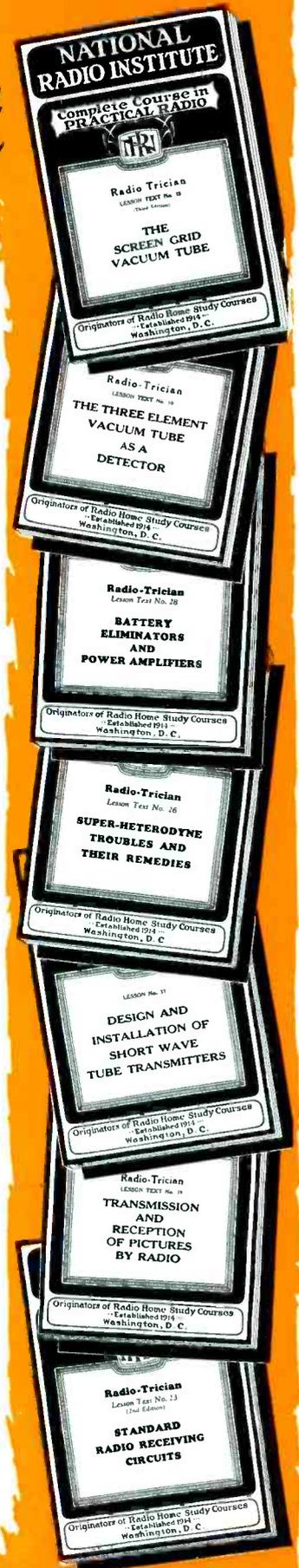
Classification of stations—Channels available for each class—Marine, broadcasting, aircraft and amateur service—Zoning plan to reduce interference—Grouping of wave-bands.

Speech Amplifiers

Types and number of stages—Outside portable pick-up form—Pick-up installations—Control desk and its operator—Power supply and signal lights.

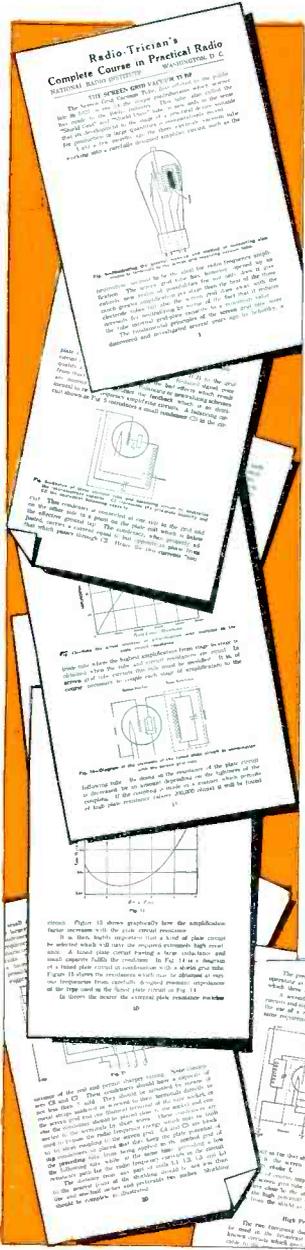
Modulator Operation

Description of each part—Choking out parasitic oscillations—Effective arrangement of tubes—Adjustment of negative grid bias voltage—Method of cooling the tube—Checking the action by the meter readings.



I make learning *easy, interesting, fascinating* with hundreds of diagrams and photographs

A
few pages taken
from Lesson Texts
to show how >>
Clearly Everything
is Explained >>



Tube Oscillator

Typical circuits showing wiring diagrams—Plate, grid and filament supplies—Advantages of the master oscillator—Panel design and layout—Description of condensers, transformers and rectifiers.

Amateur Transmitter

Pointers on tube transmitters—Design and erection of antenna system—Making a five-watt set work—Parallel operation of power tubes—How to install a transmitter—Secrets of successful operation of transmitters.

Radio Beacons and Direction Finders

Directional use of Radio in navigation—Simple explanations of the operating principles—Description of types of Radio compasses—Uses of these devices for locating vessels—New developments for aircraft guidance.

Piloting Ships by Radio

A clear discussion of present methods—Sending out the control waves—Mechanism used in reception and control—Distant control by means of Radiant Energy.

Radio Aids the Newspaper

High-speed automatic transmission—Sending news and pictures across the Atlantic—Diagrams and explanation of Radio print systems—How the impulses form the letters—Making permanent records of speeches.

Trans-Atlantic Relay Stations

History of experiments—Use of wave antenna—Method of rebroadcasting—Theory of operation—Explanation of apparatus—Schematic diagram of entire Trans-Atlantic system.

Trans-Atlantic Radio Telephony

Size, type and character of transmitters—Description of water-cooled tubes—Design and construction of the amplifiers—Theoretical treatment of operation—The effect of static interference—Circuit diagrams of apparatus.

Radio Prospecting

Illustrating the Equi-Potential—Schlumberger Taussig and Chilson Methods—the Hertzian Wave System and Re-Radiation Process—the Circuit Diagrams of Transmitters and Receivers used.

The Beam System of Transmission and Reception

Principle of wave reflection—Shape and size of reflector—Advantages of this system—Construction and operation—Circuit diagram of receiver.

Television by Radio

How the pictures are prepared—Transmitting the picture—The sending circuit—Description of the apparatus—Receiving the picture.

Piezo-Electric Crystal Control for Vacuum Tube Transmitters

History—Research Work at the Naval Research Laboratory—Crystal Holders—Crystal Controlled Power Amplifiers—Protective Devices—Etc.

Construction and Operation of Power Amplifiers

Amplifier Tube Constants—Low Power—Hi-Q Amplifier—Double Impedance Coupled Type—High-Power Amplifier with Full Wave Rectifier System.

Graphs and Charts

Why They Are Used—How to Use Them—Information Obtained by Various Graphs—Charts Illustrating the Static Characteristics of Vacuum Tubes, etc.

Detection

Crystal and Vacuum Tube—Characteristics of Minerals Used for Detectors—Action of Vacuum Tube as Detector—The Effect of Grid and Electron Flow in Vacuum Tubes—Conditions for Detection—Circuit Used for Detection Using Crystal and Vacuum Tube.

Practical, Usable, Knowledge

that can be turned into increased earnings
quickly



Set Tester in large factory

"I want to congratulate you upon offering such a practical Radio course. It has been a great help to me in every way. I enrolled while a Junior in High School. Two weeks later I was hired by a Radio dealer to service his sets in my spare time.

Upon graduation from High School I immediately secured a position as Inspector for a well known Radio manufacturing firm. Later I became a Foreman while still a student of your course. Upon graduation I was able to obtain a position as final tester of Radio sets. I owe most of my success to your splendid course which has been a constant guide to me in my work. I will recommend it to anyone."

DALE H. HOAG,

207 W. Logan St., Tecumseh, Mich.



\$517 in three months' spare time

"It seems like everybody brings their Radio troubles to me. I have not kept tab of the exact amount of money I have made, but during December, January and February I made \$517—and that was in spare time. It shows what a man can make when he studies the N. R. I. course.

I think more young men should study Radio because it is a coming profession. The field is large and expert men are in demand. Besides, the Radio student should make plenty of spare time money while learning. I certainly am kept busy."

STANLEY F. KOCOUREK,

1205 So. 2nd St., West,

Cedar Rapids, Iowa



Added Radio to photo business. Increased income \$900 a year

"Lodi is a town of about 1200 people. I have operated a photo studio here for the past 12 years. Up to about six years ago I was able to save a few dollars, but conditions got worse. I decided that a knowledge of Radio would increase my income so I enrolled with you and have been very successful considering the size of this town. I have been averaging \$500 to \$900 clear a year in Radio alone. I want to thank N. R. I. for what its course has done for me."

WILLIAM E. EVERT,

Lodi, Wisconsin

Fundamental D. C. Theory

Static and Dynamic Electricity—Electrostatic Laws—Units of Electricity—Measuring Instruments—Ohms Law and How to Apply It to Series and Parallel Circuits, etc.

Fundamental A. C. Theory

Electromagnetic Induction—Mutual Induction—Transformer Action—Condensers and Inductance Coils Used in Radio Circuits—Determining the Resistance, Impedance, in Radio Circuits—How Resonance is Obtained in Circuits.

Radio Waves

Wave Motion—Electromagnetic Waves—Sound Waves—Velocity, Frequency and Wavelength of Waves—Different Types of Waves Used for Transmission—Speech and Music Modulated Waves

Radio Sound Reproducers

Telephone Headsets—Horn Type Loud-Speakers and Their Design—Cone Type Speakers, Their Advantages and Disadvantages—The Dynamic Speaker—Field Excitation for Power Cone—Electrical Data and Acoustic Measurement of Loud-Speakers.

Radio Measurements

Design of Coils for Use with a Frequency Meter—Calculation of Frequency and Wavelength Curves—Design and Use of a Frequency Meter for Measuring Frequency Transmitted by a Transmitting Station—Design and Operation of a Vacuum Tube—Continuous or Modulated Continuous Wave Generator.

Alternating Current Operated Radio Receivers

The Difference Between D. C. and A. C. Radio Receivers—Various Types of A. C. Tubes—Various Types of Power and Rectifier Tubes and Where to Use Them—How the Various Voltages are Obtained for A. C. Receivers—Obtaining the C Bias in All-Electric Receivers.

The Screen Grid Vacuum Tube

Comparison with the 3 Electrode Vacuum Tube—How the Control Grid is Placed and the Duty it Performs—How to Use the Screen Grid Vacuum Tube for Radio and Audio Frequency Amplification—Typical Circuit in which the Screen Grid Tube Can Be Used.

Changing Sound to Audio Frequency Current

Single and Double Microphone Circuit—The Transmission Unit and Its Use—Useful Constants Applicable to Speech Input Equipment Used in Broadcasting Stations.

Transmitting Vacuum Tubes

Characteristics of Various Types of Tubes—Operating Limit of a Tube—Water-Cooled Tubes—The Vacuum Tube as a Generator of Oscillations—The Efficiency of a Vacuum Tube Generator—Classification of Various Transmitting Circuits and How They Operate.

Power Supply Apparatus for Transmitting Tubes

How the Power Supply is Obtained—Various Types of Rectifiers Used in Transmitting Stations and the Function of Each—Filters and Choke Coils Used in Power Supply Apparatus.

Public Address Systems

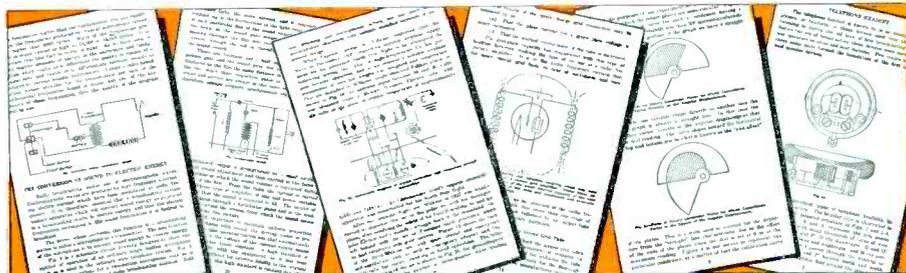
How the Microphone and Magnetic Pickup Work—Amplifiers Used in Public Address Systems—Typical Installation of Various Types of Public Address Systems.

Aircraft Radio Transmitter and Receiver

How Radio Apparatus is Installed on Dirigibles and Airplanes—Problems Affecting Radio Reception and Transmission in Flight—Emergency Radio Equipment—Commercial Aircraft Radio Equipment.

Wired Radio

Commercial Apparatus and Installations—Difference Between Space and Wired Radio—How Telephone and Power Lines act as a Guide to the Waves—How the Carrier Wave is Generated and Modulated—Description of Circuits.



A SPECIAL COURSE *in sending and receiving* *code for those who want a* **GOVERNMENT LICENSE**

This Course of special training is designed to teach you to send and receive messages in the dot and dash alphabet of the Radio Code. It is not a part of my Regular Radio Course and should not be taken except by those men who want to be operators on board ship, operators in commercial land stations, or hold a position in a broadcasting station requiring a license. Understand, some positions in a broadcasting station do not require a license and others do. It is better to take code training and get a license if you want a broadcasting station position, even though you may start out with a job not requiring a license, because then you will be fitted to advance. Some positions in connection with Aviation and experimental work also require a Government license.

There is a small extra charge for this special Code course, as explained on the enclosed enrollment blank. If you are not quite sure whether or not you want one of the positions requiring a Government license, then I suggest that you send in your enrollment for the Regular Radio Course. Should you later decide that you want to enter one of these lines of work, you can get this special course in code then for the difference in price between our Regular Radio Course and the Course with Code. In this way you can be sure you won't have to undergo any unnecessary expense. This Code Course is not sold separately unless you have already taken up our Regular Course, as a knowledge of sending and receiving the code alone is valueless unless you know the fundamentals of Radio also.

This special Code Course includes the lessons outlined below and also the instruments pictured on this page. They are all included in the tuition fee for code training.

Learning to send and receive the code is almost entirely a matter of practice. N. R. I. students learn quickly because of our clear method of teaching and wonderfully helpful instruments we supply them with. The lessons give special exercises designed to teach the subject scientifically so that you learn quickly and thoroughly. Men who already know the telegraph (Morse) code will find their efficiency enables them to learn the Radio code in an unbelievably short time when properly taught. Our students never experience confusion between the two.

Special Lessons given with this Code Course

Transmitters—Installing and operating instructions for Marine Spark and Tube Transmitters—Maintenance—Troubles and repairs on Radio apparatus used on board ships.

Special Questions—and answers on examinations for licenses.

The Alphabet—International Morse code—Translation from code to English—From English to code—Spacing and length of signals—Correct operation of key—Adjustments—Punctuation marks—Learning numerals—Sending code with Learner's Transmitter.

Steps in Learning the Code—Practice exercises in sending—Gaining Speed—Abbreviations—Use of call letters—Method of calling—Distress Signals—Commercial Messages.

Copying Code Messages—Use of Nacometer—Signals—Time signals—Weather reports—Warning messages—Log sheets.

Radio Laws and Regulations—How to get a license—Laws governing Radio operation on the high seas and transmission in the commercial wave bands.

*The Nacometer
Automatic Code Transmitter
made for
The National Radio Institute,
Washington, D. C.*



The Perfect Code Teacher

The Nacometer, pictured here, is sent to you with our Code Course without extra charge. It suits your needs whether you are a beginner, who has never received code before, or an amateur, who is experienced but needs more speed to get a Government license.

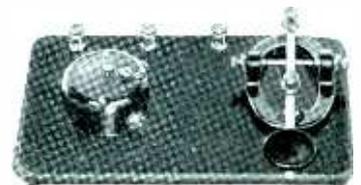
You can regulate it to send to you at the rate of four or five words a minute or anywhere along the line up to eighty. The Nacometer will send to you as long as you wish—any time you want to practice. It never gets tired. The Nacometer has many patented features that make it the perfect code teaching machine.

The tape has two rows of perforated messages. When one side has been sent the full roll is again sent from the opposite side. It is not necessary to rewind. The two rows or perforations run in opposite directions.

The waxed ribbon tape is very strong and will last indefinitely with ordinary care. On a test, one tape was passed through the instrument seven hundred times and showed no signs of wear. Each tape contains approximately four hundred words. A large percentage of the messages are in code so that you will not become familiar with the reading matter to such an extent that you can anticipate the sending. If you wish, you can pass the tape through backward. Three rolls of tape are given with every Nacometer.

The Nacometer is a complete unit. Everything is enclosed in a handsome cabinet with handle attached for convenience in carrying. The crank can be easily removed and put inside. The instrument panel is polished bakelite. You can put the batteries in the cabinet, or hook them up on the outside. It is as simple to operate as a phonograph. Equipped with a silent phonograph motor there is no noise to bother you—no clicking or choppiness.

A Learner's Transmitter is also given



The Learner's Transmitter, pictured above, teaches you to send code messages by means of the spark key. By following our methods of instruction, and with the help of these instruments you should be able to send and receive code as well as many operators of long experience, within a few short months.

My Course Helps the *Experienced* man as well as the *Beginner*

Men who are in Radio or who have done Radio work ask: "Will your Course benefit me also?" My answer to that question is, "yes". Scores of my students have been college graduates, electrical engineers, trained engineers for other fields. Radio dealers, licensed amateurs, "fans", Radio operators in the Army and Navy—men of all these various positions have been able to increase their earnings in Radio through my training.

The man who directs

vs.

the man who does as he is told

Every industry has its big jobs and its little jobs, and in Radio as in other fields, it is the thoroughly trained expert with a completely rounded-out knowledge of every branch, with the necessary understanding to fit him for the best positions, who makes \$3000 to \$5000 a year and up. And that is why I advise any man who really wants to reach the top, to master my complete course from start to finish.

Although experienced men naturally find many things in this Course with which they are familiar, they also find from the very first lesson on, valuable, practical pointers and principles that they cannot afford to be without. Furthermore, the information is systematically arranged in their minds after they have completed—it is not scattered or confused.

The man who has acquired his knowledge of Radio through working with it or making it a hobby—the Radio dealer—the "fan"—will find that this course gives him the firm foundation he has realized more and more he stands in need of. The man who has had previous experience in electricity has a good start, but Radio is such a highly specialized field as compared with electricity that he will find this course will enable him to make a truly worthwhile advancement.

The best jobs in Radio—the jobs at or near the top—are closed to the man who has only the incomplete knowledge which can be gained without thorough study. Often such a man knows a good deal of the "how" but not enough of the "why" and usually his experience has been limited to only a few parts of Radio. You may be one of the many thousands of men engaged in this field. If so, the fact that you are reading this book shows that you have realized that your chance for promotion and a permanent future depends on your learning this subject inside out.

Most men, of course, learn all they can from those they are working with, but remember that no man can teach you more than he himself knows. What it would take you years to pick up working on the job, you can learn in a few months in my course—and learn it better. In this course I give you the fundamentals, the principles, the information on inventions and developments of Radio, its uses and application, that men highly honored in Radio circles spent years, and in some instances, a lifetime to discover and work out.

Course of great value to
experienced. Lands job
with Firestone



1022 So. Ash St.,
Casper, Wyo.

Dear Mr. Smith:

I tinkered with Radio as a hobby from 1911 to 1920. I stored up quite a knowledge of Radio during those nine years, so did not start with you as a rank beginner. I took up your course because I figured it would lay out from the beginning, starting with the simple things and methods and go through to the difficult subjects in logical sequence. Your course did that.

In my opinion your course is of great value to one who is not actually a beginner, as well as the man just starting in. I am far from the centers of broadcasting and have had no opportunity to see how a big station is handled. I feel right now that with the information contained in your course, I could step in and build a real honest-to-goodness station from the studio to the antenna, arrange the pick up systems and do some towards managing it and I know I could operate and repair it.

Very truly yours,

NORMAN R. HOOD

Since writing the above Mr. Hood later wrote: "Have the pleasure of advising you that I have landed and accepted a Radio job with the Firestone Tire and Rubber Company in Akron in their Short Wave Telegraph Department, also in their Radio Research Department. This pays me \$200 a month to start. I thank you for your part in my preparation." His address is now 1449 So. Main St., Akron, Ohio.



Learned Radio the right way from N. R. I.

633 Raleigh Place, S. E.,
Washington, D. C.

Dear Mr. Smith:

I have been in the Radio game ever since the days of the old spark coil, but never until I started in your course did I realize what a chance I was missing in life by not learning more about Radio, and learning it in the right way—as you teach it. When I first read the letters in your book called "Rich Rewards in Radio" I doubted that any individual could put so much feeling in expressing a gratitude for something he had to pay for, but I assure you that I am entirely convinced. I am Assistant Operator at Station WRC and I also do repair and service work on the side. I have made as high as \$150 a week. I have an experimental station. I surely would be glad to work any ham any night if they are interested in your course and want to know about my experience with it. I got the kind of knowledge that I thought was out of my reach.

Cordially,

EARL A. MERRYMAN

These Big men in Radio advise you to get in too



S. L. ROTHAFEL

Known the world over as "Roxy"; served seven years in the U. S. Marine Corps. First theatrical director to sponsor broadcasting from stage of a theatre. Organized "Roxy's Gang" well known to all Radio listeners.



July 14, 1929

Mr. J. F. Smith, President,
National Radio Institute,
1525 16th St. N. W.,
Washington, D. C.

Dear Mr. Smith:

While you and I are engaged in entirely different businesses, we have one thing in common - you planned travelling and you are now in the Radio business. I am a newspaper man and I was the first to sponsor the broadcasting of a program from the stage of a theatre.

We have witnessed a marvelous growth of the Radio business. Haven't you, Mr. Smith?

It appears to me that Radio would offer opportunities for men and women who are interested in the present time.

Your radio growth indicates to me that you are contributing greatly towards fitting men for Radio that is so important.

I am glad to be able to assist you in any way I can and also you every success.

Sincerely yours,
S. L. Rothafel

SLR:12

KOLSTER RADIO CORPORATION
200 Mount Pleasant Avenue
NEWARK, N. J.

July 9, 1929
17 - 104



ELLERY W. STONE

U. S. Radio Inspector in San Francisco 1914-17; fellow Royal Society of Arts, Member, Institute of Radio Engineers, U. S. Naval Institute, Associate Member American Institute of Electrical Engineers.

Mr. J. F. Smith, President,
National Radio Institute,
1525 16th St. N. W.,
Washington, D. C.

Dear Mr. Smith:

The available supply of competent trained radio men seems to be pretty well exhausted.

However, this is not difficult to understand in view of the rapid expansion and development of the Radio Industry.

The field is in a condition to absorb hundreds of good men every year. It offers good good living and, I believe, opportunities for promotion that are hard to find in other industries.

Your work of giving a practical radio course to be developed and finished in the next of November, you are anxious to meet more of them.

Keep up the good work.

Sincerely yours,
Ellery W. Stone

SILVER - MARSHALL, Incorporated



RADIO EQUIPMENT
6401-6451 WEST 65TH ST.
Chicago, U. S. A.

July 11, 1929

Mr. J. F. Smith, President,
National Radio Institute,
Washington, D. C.

Dear Mr. Smith:

First question is to my opinion of the future for a young man who takes up Radio training and how long he will remain.

I should say that such a future should be especially bright. Radio is the highest career for any young man interested in electrical science. An industry which is continually expanding, and one in which the entrance is made upon the most highly skilled workers, rather than remaining in a mere or low fixed position.

This field holds a lure for the individual with an independent and developed mind. Because it is one of continual new developments and because every development perfected, far from being the cause of an incident, gives promise of far greater development to come. Therefore, men opportunities are daily being presented to young men trained on last they can take advantage of them.

Believe me, Radio is no longer a profession for untrained or unskilled men. The real one is for men with real technical and engineering knowledge. The policy is to have the National Radio Institute of actual laboratory training, as well as theory. In the much industry a man might take the requirements of such a course.

With best wishes for the continued success of your really constructive work, I am

Sincerely,
McMurdo Silver
McMurdo Silver

6-2



McMurdo Silver

Well known Radio engineer, one of the youngest, if not the youngest successful Radio manufacturer in the U. S. Pioneer manufacturer of screen grid Radio sets, designer of several well known Radio circuits, Member Institute of Radio Engineers and American Institute of Electrical Engineers.

Austin C. Lescarboura & Staff

Radio
Tulane Building
New York
Columbia-Habon
New York

July 13th, 1929.

Dear Mr. Smith:

I had the opportunity recently of watching your lesson tests, Service Sheets, Job Sheets, Service Manual and the practical training with Radio Radio that you are giving your students.

Mr. Smith, I was moved to find your course so clearly and understandingly written, and so practically learned. And the practical experience which your students get with your outline and the instructions for home experiments that go with the training, give them a big advantage.

Radio manufacturers, engineers, editors, broadcasting stations and other organizations can secure themselves of competent employees by encouraging them to absorb the knowledge of Radio principles, theory and practice you offer.

The Radio Institute is to give you of trained expert service men. In fact, there seems to be a continually shortage of such men in every branch of Radio. Your training should go a long way toward supplying this industry with the trained man-power its rapid growth is creating such a great need for.

You are doing good work, Mr. Smith, and I want to wish you continued success.

Sincerely yours,
Austin C. Lescarboura

412-0



Austin C. Lescarboura

Former editor of Popular Science Monthly and former Managing Editor of Scientific American, now Public Relations Council for most of the leading Radio companies; Member of Institute of Electrical Engineers and Institute of Radio Engineers. Author of popular books on Radio.

Columbia

BROADCASTING SYSTEM, INC.

July 1, 1929

Mr. J. F. Smith, President,
National Radio Institute,
1525 16th St. N. W.,
Washington, D. C.

Dear Mr. Smith:

The Radio Institute has much to offer the public. Right now, the greatest need in the field of broadcasting is man-power.

While many are trying to break into this fascinating work, they are absolutely useless to us unless they have had specialized training.

Cordially and sincerely,
Maj. J. Andrew White
Managing Director.

J. Andrew White/R



Maj. J. Andrew White

Connected with Radio since 1911; first to broadcast a heavyweight fight; has been identified with most epoch-making steps in Radio; has been Vice President and General Manager of a subsidiary of the Radio Corporation of America; now Managing Director of the Columbia Broadcasting System.

Radio's many **\$5,000 \$10,000 and \$15,000**
a year men of the future
Will be picked from
those who get in *Now*

Let's look back a few years—perhaps it will help us to see what is ahead for you in Radio. Let us compare what has taken place in other industries such as motion pictures and the automobile business.

Almost without exception, the men who got into those fields at the right time, now occupy the key positions. They are the \$5,000, \$10,000 and \$15,000 a year men. Why? Because by getting in early they were in line when opportunities for promotion came. Because they grew in position and responsibility with those businesses.

Most of the good opportunities are now used up in those older fields. The chances your father and grandfather had in those businesses are gone. But they are being duplicated for you now, right before your eyes, in Radio. Do you have the vision, the foresight, to realize this?

All of us must keep in mind that this old world of ours does not stand still—it goes forward. So it is with businesses. When the first high wheeled, two cylinder automobile made its appearance and dashed through the city streets at the tremendous speed of 20 miles an hour, the great majority of people thought men with such an idea were "cracked". Only a few looked ahead and saw that the automobile offered a faster and more comfortable means of transportation. That it would develop into a big business. Those few with that foresight who got into the business, had the first chance at the good jobs. When the first crude outfit of coils and crystal made its appearance it was generally thought by the average person to be a play-

thing for young boys to occupy their time and energy. Very few thought of it as the beginning of a faster means of transportation. Those who poked fun at it—who turned their backs and laughed—did not stop to think that Radio, like the automobile, would be improved, perfected, that its uses would be expanded and developed. The men who had faith in its future, who hooked up with the field, had the first chance at the good jobs and you will find almost without exception that the key men in Radio today are those who got in early.

**You'll be kicking yourself
 if you pass up this
 opportunity**

It has often been said and written that the saddest words are—"If I had only". You've heard your neighbors, perhaps your parents, say: "If I had only gotten into the automobile business or the motion picture field when they started—if I had only had the courage and foresight to do it—I would now be independent, perhaps rich."

Isn't that what you are going to be saying a few years from now if you pass up the opportunities in Radio? Don't think for one minute that Radio has reached the limit of its growth and opportunity. The biggest men in the business, the best engineers, predict tremendous future growth. This growth is going to open hundreds of fine jobs—it is opening hundreds of fine jobs every year now.

Who will get those jobs? The men who get in now—who get a thorough foundation on which to build for the future. The \$5,000, \$10,000 and \$15,000 a year jobs of the future that are being made by Radio's growth, are going to those who get in now, and grow up with its growth.

Do you have the ambition to realize this? Do you have the courage to act on your own conclusions? If you have, then you have two of the most essential qualifications for success. You will lose no time getting your Radio training started.



I predict

That the Radio industry will quickly expand and grow to many times its present size.

That before very many years Radio will rank among the very largest of American businesses.

That its use for home entertainment, which today is quite universal, will expand and grow even beyond any prophesies I may try to make.

That in a short time Television will be perfected, which should result in the making of the entire Radio business over again and with its inauguration bring hundreds of new and fine jobs.

That Radio's use for communication purposes between cities will soon become as common as telegraphy is today.

That in a short time we will be able to pick up our telephone receiver and talk to our friends in airplanes, on board ship, just as we now can talk with our friends across the ocean by means of Radio Telephony.

That the number of jobs made to date by Radio's growth and expansion will be insignificant compared with the number that Radio's future growth will make.

That the man who associates himself with this field now and sticks with it, is going to have innumerable opportunities for jobs that should not only enable him to enjoy a comfortable living but lay aside enough to be financially independent.

That the man who takes my advice to get into Radio now will never regret doing it—but thank me later for urging him to open his eyes to the golden opportunities and the rich rewards that Radio offers.

That you will never have another opportunity for success equal to what Radio offers you now.

J. E. SMITH, President.



"Another raise! John, I'm proud of you. Specialized knowledge of the right field certainly brings quick returns."

YOU *Must Choose* the right field for your life's work *to be successful*

Here's why many men work all their lives and never have anything to show for it—
While many "average" men make a lot of money *Quickly*

I believe I am correct in assuming that you are reading this book because you are interested in making more money. You are dissatisfied with your job, with your income, or your future prospects. Being a practical man you realize that you must choose right if you want to share or enjoy success equal to others.

The minute a man starts to think about his future, how to win success, the moment he begins to look around he sees many average men who have made a lot of money quickly—and sees many others who have worked just as hard, as carefully and as conscientiously, have put just as much effort into their business or jobs, but after years of application have very little to show for it. Naturally then, it is of extreme interest and supreme importance to you to analyze the situation to find out why one man is successful and why the other is not. You don't want to make the mistake of the unsuccessful man.

Big growth—that's the secret of most men's success. Getting in the right field—at the right time—has as much to do with the average man's financial worth as most any other single factor. The man, who through lack of foresight or misfortune, connects with a business that stands still hasn't much opportunity. No matter how hard he works or how thorough or complete his knowledge of his duties, he certainly cannot get ahead. There is nothing ahead for him to get.

Now don't you make that mistake — don't you make yourself believe that just because you have worked for one firm or have followed some profession or trade for a

long time without success, that sooner or later it is going to come your way. You cannot get more money out of a business than it is capable of earning.

Dissatisfaction starts many a man ahead

When I see a man who is satisfied; who isn't trying to get ahead; who isn't planning or studying for something better: that man in my opinion might as well walk the streets with a placard on his back reading—"Get away from me with plans for making more money. I'm satisfied. I don't want to be able to wear better clothes, have a better home, drive a better car, earn \$1000 to \$5000 more a year."

Frankly, I cannot help that sort of a man. I am looking for the man who is ambitious, who wants to get ahead, who wants better things. He must want them bad enough to want to do something about it.

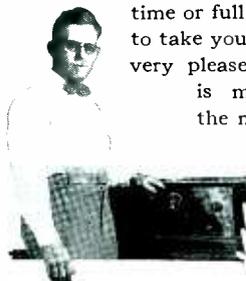
I believe you are that type of man or you would not have written for this book. I believe that you realize that training comes before success. After reading this book I believe you will realize that success comes easier in businesses where there is big growth ahead. I believe you realize that by getting in a fast growing field like Radio, it should be possible for you to accomplish as much in increasing your earnings in 2 to 3 years as you could in all probability do in 5, 10 or 15 years in other businesses.

Finds course more than worth the money. Has made \$4000 out of Radio

109 S. Broad St.,
Hillsboro, Ill.

Dear Mr. Smith:

I had been in the battery and tire business ten years when I took up Radio as a side line. My yearly average income on Radio has been around \$2000. Since starting in the Radio business I have made around \$4000. I would advise anyone interested in Radio as a spare time or full time proposition to take your course. I am very pleased that I did. It is more than worth the money.



Yours with 73s
Amt 9 BXR,
HANS J.
MUELLER



Earnings started after 10 lessons

"After I finished about 10 lessons I started on my first Radio job. My spare time earnings have more than paid for my course. I have earned \$318 that I can account for to date and hardly a week goes by that I do not pick up \$15 or \$20 extra. To think that other people paid for my training is a world-beater. I have never studied anything that was of so much interest to me as your Radio course. I wish to extend my thanks to the N. R. I. Staff for its careful consideration to my interests."

JOHN HEARL,
69-02 Caldwell Ave.,
Maspeh, L. I., N. Y.



Made \$1500 to \$2000 in spare time while taking course

"The training I received from the National Radio Institute has given me a wonderful knowledge and understanding of Radio. It has put me on the road to success. Working only in spare time I made between \$1500 and \$2000 while taking the course. The National Radio Institute has cooperated with me wonderfully while taking the course and after graduation."

CLEO T. RETTER,
30 W. Beechwood Ave.,
Dayton, Ohio



Made extra money after completing 9 lessons

"Before enrolling for your training I was working on a farm for \$40 a month cash and other material worth about the same amount. I was having a hard time making ends meet. A friend of mine who had taken your course and was making a success of it suggested that I enroll also. All I knew about sets at the time was how to tune one. But after completing nine lessons I was able to repair my first Radio set successfully.

When my business cards came I showed them to a few people. In five days I had five repair jobs. From then on profits mounted up fast. Your course offers many advantages. In fact, it pays for itself after the first few lessons and no matter how difficult a problem you are able to take care of it. It can be studied in spare time and anyone can understand it.

I recommend it highly to anyone who wishes to succeed. Your course secured a position for me and about \$500 for spare time work. I hope sometime in the future to have my own business. I wish to thank you for all favors and if this letter will help you in any way to show others the path to success—use it. My motto is—"Every day and every way N. R. I. means more and more to me."

RALPH SEARS,
Cornwallis, W. Va.

These Letters *answer your question* **How Soon can I start making More Money?**

With me to help you, you should start making more money almost at once.

I give you tried and tested plans and ideas for doing it. I give you special training on jobs most common in every neighborhood beginning the very day you enroll for the express purpose of enabling you to begin "cashing in" at once.

The letters on this page prove the practical value of my plan. Read them. Read every word of all of them. But don't think that these are a few of the best. I have hundreds of testimonials on file. I have not made it a point in this book to pick the very best, but have tried to give you a variety to show you what my average student accomplishes.

Some of the letters I have on file that report large earnings, even larger than any of the letters I have given you here, have been left out entirely. I do not want you to feel that success in Radio through my course is possible only for the exceptional—but for the average fellow.

I believe if I show you what my average student accomplishes, that I am being more fair than someone else who might show you what the exceptional student does.

Many men and young men take this course who have no intention of entering the Radio field—only for the sake of the extra spare time earnings it brings them. It helps them pay expenses going through school, pays their doctor bills, buys many things that add so much to happiness that the average salary cannot cover.

Who wouldn't pay the small price of my course for a training that is bringing back \$500 and sometimes more than \$1000 a year when used only in spare time? Who wouldn't make that investment, realizing that spare time returns are only a small part of the total benefit to be received in the long run?



Earnings started after one month

"When I enrolled with the N. R. I. I did not imagine that the course would be so beneficial. I was very much surprised at the simplicity of the lessons. They were so interesting I could not let go of them. After one month as a student I started earning money. I earned \$750 in my spare time while taking the course and I did not have to hustle to do it. Since graduating I have earned \$1700 more—still in my spare time. I have turned down many good Radio positions. To any one interested in Radio I will say—if you want to advance yourself enroll with the N. R. I. I know they will stand behind their statements."

F. J. MARGRAF,
Lapeer, Michigan



Making \$45 to \$60 a week

"I have a position that nets me from \$45 to \$60 a week. Thanks to N. R. I. training. When I was half way through it had more than paid for itself in spare time. I get a lot of kick out of this work. It is like a continuous vacation. The most complicated sets become simple through your easy method of training, but without N. R. I., I would still be wondering what it was all about. I hope this letter and picture will be of some value to the Institute. I am glad to do anything I can for you and your Staff."

ALBERT R. HEDDEN,
914 Chestnut St.,
Hagerstown, Md.



Clear, practical, interesting, brought him \$935 in spare time

"I feel it my duty to express my appreciation for the splendid training you have given me. While I maintain quite a large automobile repair shop, I decided to study Radio, as the field looked promising. I found your course clear, practical, interesting.

Since beginning I have added considerably to my income, even though my business occupies most of my attention. I began earning money quite soon after my first lessons had been finished and in a few short months my profits totaled \$935.80, for installation work, servicing, trouble hunting—on all sorts of sets.

The results of my training with you have been most gratifying—a constantly increasing and profitable business, and the satisfaction of feeling that I am not balked by any Radio problem which may present itself. I will be glad to recommend your course to anyone interested in studying Radio."

GEORGE W. PAGE,
107 Raleigh Apts.,
Nashville, Tenn.

My **50-50 Method** of training you at home in your spare time gives you many advantages

Not so many years ago the only way open to the man or young man who wanted to fit himself for a business or profession was to pack his trunk and go to college, or to a residence trade or business school. This meant giving up his job—his source of income—and being under heavy expense while attending school—tuition fee, room, board and other expenses amounting to a handsome figure—in most cases enough to take just about the last dollar that had been saved from years of hard work, or as a result of careful planning and self denial. The amount of money needed for even a short course placed specialized training beyond the reach of most men and young men who needed it the most.

It is inexpensive

Then came the correspondence course—teaching by means of printed instructions what was regularly given in the classrooms. This method immediately eliminated the heaviest items of expense in getting an education—namely, room, board and other living expenses. It opened the chance to get ahead to the young man whose parents were unable to send him to high school or college. It meant that the man who for family or other reasons could not leave home had a way opened to him to study and win advancement. It meant the man or young man whose regular work kept him busy with only an hour or half-hour a day to spare could fit himself for a new line that would bring better hours and more pay. Men in every walk of life, rich and poor, young and old alike, have benefitted from home study training.

You needn't give up your job

You needn't cut off your source of income to take this course as would be necessary if you attended a residence school. Study when it is most convenient, when you feel like it. Fifteen to thirty minutes a day will enable you to make good headway. Keep your present job until you are ready to step out—until you have another lined up.

You are in a class by yourself

Unlike residence training, you don't have to hustle and cram to keep up with the rest of the class—or you won't be held back because of some backward student. You set your own pace.

It is practical

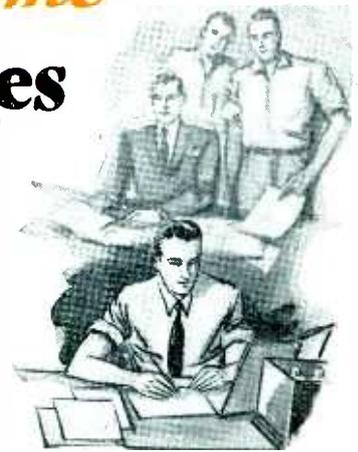
Hundreds of men owe their success to correspondence training. Without it they would not have been able to get ahead. They would not have had the time or the opportunity to study. The many letters from students and graduates in this catalog prove the practical money-making value of N. R. I. training.

It is recognized

Employers prefer men who have the character, the steadfast purpose, the determination to tackle a job and finish it. Correspondence training develops those characteristics. The best minds recognize the value of home study training. Many of today's business leaders are themselves correspondence school graduates.

It is fascinating

My training is not a long series of dry text matter. With it you get Radio parts for practical experiments. You work out with your own hands what you learn in the Lesson Texts. This 50-50 method of training is unequalled. It sends you out a trained experienced man all ready for a good job—not simply looking for a job in order to get experience.



The student of today is the executive of tomorrow. The man who learns more, earns more.



Peak of perfection

"I think the N. R. I. course is the peak of perfection and my statement should carry some weight as I have taken other courses. I have gained more knowledge through N. R. I. in one year than I could have gotten by tinkering for five years, with much less grief and expense. I have mastered Radio to the extent that the most formidable set can't scare me. I have qualified for a Radio Service Expert's Certificate that I prize very highly. I have serviced all kinds and never have fallen down on any. I have my hands full as I am doing automobile work in addition to being the best Radio-Trician in the city. No matter what place in the Radio field you select you will benefit beyond the measure of dollars and cents by taking the N. R. I. course."

OSCAR PRESCOTT,
Vinton, Iowa

The only education worth while is self-education. Show me a man or executive who, in addition to applying himself wholeheartedly to his work, is using his spare time in improving his education, and I will have no hesitancy in saying—There is a man who will make good and go far.

Charles M. Schwab

The work done by correspondence is even better than that done in the classroom. The correspondence student does all the work himself; in fact, he does twenty times as much reciting as he would in a class where there are twenty people. He works out his own problems, and the results stay with him.

Wm. Rainey Harper,
(Late President of the University of Chicago)

Instruction by correspondence is the cheapest and best.

Edison

Correspondence training is the greatest development of the 20th Century. It is doing and will do more to improve and uplift our present-day civilization than any other invention or development we have made.

Theodore Roosevelt

FINAL PROOF

that My Course gives You the *Training* you need *for a good job and a Real Future* in Radio



Builds \$100,000 Station

Station WEMC,
Berrien Springs, Mich.

Dear Mr. Smith:

I might call myself America's Radio Ambassador to Europe. Not that I represented the American Diplomatic Service, of course; my representation was purely of my station WEMC, the Radio Lighthouse. But I want to tell the world about American Radio, and the number of my calls on foreign broadcasters may be judged by the fact that I had five hundred cards when I sailed for Europe—when I stepped on the pier at Hoboken, N. J., just twenty cards remained.

As a result of my trip of inspection, all the best features I had seen in Europe and America were built into WEMC. The station was reported in 40 States on the first program. I designed and constructed the station myself—six months were required for the work. The station is valued at \$100,000 and the reproduction as evidenced by its many listeners speaks for its many refinements.

Now for a few words about the course and what I have accomplished since graduation. As a graduate of your Institution, I, of course, am in a position to judge of the thoroughness of your training and am more than willing to pass this on to others.

As to myself, previous to building the 5,000-watt station, I have just described, I designed and built a 500-watt station here worth \$20,000. I hold the highest government license. I have written extensively for Radio magazines on broadcast designing. I am instructor in Radio at the college here. I will always heartily recommend your Institution to anyone.

Sincerely,

JOHN E. FETZER

Fetzer is now Chief Engineer of Station WEMC, the Radio Lighthouse.

Has made \$5000

3621 E. 107th St.,
Chicago, Ill.

Dear Mr. Smith:

I consider your training excellent. Radio as a life's vocation will give a fellow the chance to get into the most open and highly paid field in the world. Here in my own city, Chicago, the daily papers are continually running ads for trained Radio men. My earnings have increased from \$8 to \$50 a week. Since taking your course I have made about \$5,000. My position with H. A. Heinsen & Co. was as "handy" man when I started—I now manage the Radio Department, doing all the buying and supervise all installations and service work. The money I spent for your course is certainly paying me big dividends.

Your student,
JOHN E. SIOVIC



Jumps from \$35 to \$100 a week

3715 S. Kingshighway, St. Louis, Mo.

Dear Mr. Smith:

It is certainly great sport to do this kind of work and a profitable one too. I had the pleasure of earning \$110 last week servicing and selling Radios. I have made as high as \$241 in two weeks. Before I entered Radio I was making \$35 a week. I am connected with the South Side Radio and Service Co. They employ from 7 to 15 men at all times. I find at a try-out of new men that most of them last only a short time for lack of proper training. My employer never hesitates at any time to put me on any work that comes up. In fact, I am compelled in many cases to straighten out the work of others. I owe my success to the N. R. I. You started me off on the right foot by giving me the knowledge every man should have to succeed in Radio. I feel very proud of my Diploma as I know what it means to have one.

Very truly yours,

J. A. VAUGHN

Salary three times what it used to be

Sparks-Withington Co.
Jackson, Mich.

Dear Mr. Smith:

Naturally you are interested in knowing how your students and graduates get along. I went to work for a local Radio dealer before I completed your course. I was with them four months. Then I applied for and received a position with the Sparks-Withington Company as road service man which enabled me to travel all over the U. S. and parts of Canada and Mexico. As you know, this Company makes the well known Sparton set. I now have a position as Assistant Service Manager. My salary is three times what it was before taking your course. I could not have obtained this position without it. I owe my success to N. R. I. training. It gave me an insight into the fundamentals of Radio that I could not have acquired otherwise. I have recommended your course at different times in the past and will continue to recommend it in the future.

Yours sincerely,

H. A. WILMOTH



In this photograph you see H. A. Wilmoth instructing dealers on Sparton Receiving Sets.



Manager of Radio Department—salary three times larger

362 E. Queen St.,
Stockton, Ill.

Dear Mr. Smith:

Before I took your course I was working in a tire repair shop, and was fairly well paid for that kind of work. But it was a grind and very hard for me. One day I saw your ad in a magazine and sent for literature on your Home-Study Course in Radio. After I finished reading it, I decided right there and then that I should study Radio and get into a better line of business.

After receiving my first few lessons and seeing how easy they were to understand and yet getting over to me the points necessary, I started to study in my spare time. I took the lessons seriously from the start and knew that the more time I put into study the greater would be my benefit.

Then my employer learned that I was taking your course and after he saw I was really getting somewhere he told me I should take a vacation and stop off at Chicago on my way back and spend a week visiting various broadcasting stations and Radio stores and absorb as much general knowledge of Radio as possible. I returned home to find that my employer had opened a real Radio Department in connection with the rest of the store and that the position of Manager was open to me.

Our business has been increasing and enlargements have been made until now we are well established. I have kept at the lessons in my spare time and learn more every time I open a text book. I can say that I would not be today, sitting at my own roll-top desk as Manager of the Radio Department which I have helped to build, had I not signed up with you.

I am here, not because as some would say, "because I'm here," but because I have seen the need of improving myself by study. I did not, however, build this Radio Department by sitting at the above mentioned desk all day. The Radio public is usually willing to pay anything just to have their set working again and, of course, they want them really and truly fixed. I am proud to say that I never have had to turn down a job because I did not have the right training.

I have never failed because I knew and did not guess as so many so-called Radio Experts do. I have even repaired sets which have been returned from the factory that they were unable or wouldn't fix. And when a person fixes a few in that condition he soon gains a reputation. One person tells another and before long a good business is built. In regard to my salary—as near as I can figure, it has increased about 300% over what it was when I started my course. And here's the best news of all—my employer has just offered me a partnership in the business.

Sincerely,

RALPH L. HANSON

Answers to Questions

- 1. What is the price of the course?**

The price and terms are given on the enclosed enrollment blank.
- 2. Do you make any extra charge for the material and services mentioned in this catalog?**

No. You will never be asked to pay one cent more for tuition than the low price given on the enrollment blank, while taking the course or by availing yourself of any of the privileges and services you are entitled to after graduation.
- 3. How long does your average student take to graduate?**

Although the average student graduates in six months to one year, you are allowed three years to complete without extra charge.
- 4. How soon after enrolling will you show me how to make extra money?**

With the very first assignment of lessons I will send you instructions for doing 10 jobs common in most every neighborhood. Throughout your course I will send you instructions for doing other jobs. Many students earn five, seven and ten times the cost of their course before they graduate.
- 5. Will you help me find a job when I complete the course?**

Yes. We will help you as long and as often as you want us to do so. Our Employment Department gives all its time to finding jobs for graduates.
- 6. Must I have had previous Radio or electrical experience?**

No. You need not know a thing about Radio or electricity as I will give you all you need of both.
- 7. Must I have finished high school to make a success of your training?**

No. Many of my most successful graduates did not finish high school. My course is written in a clear, interesting, fascinating style that most anyone can understand. It was written especially with the purpose of helping the fellow who has not had a chance to go very far in school.
- 8. What other courses, if any, do you give besides Radio?**

None. We give all our time and resources to this one subject. We have specialized in it since 1914. We believe the Radio field is big enough and broad enough to offer anything a man could want in opportunity and success. By refusing to divide our time and resources among a number of courses we believe we are better able to maintain the leadership we have held for many years as the Pioneer and Largest Home-Study Radio training organization in the world.
- 9. How much time must I give to the lessons to make satisfactory headway?**

An average of 15 to 30 minutes a day will mean real worthwhile progress.
- 10. What is the lowest grade you will accept as passing?**

The lowest passing grade is 75 per cent.
- 11. Do you pay postage on all material you send me?**

We pay the postage on all lessons, letters and apparatus except the Nacometer, which is sent express collect. Students living in countries that impose duties or taxes on our material, however, are required to pay them.
- 12. Do I need electric power in my house to use your apparatus?**

No. The eight outfits we give can be operated from dry cells or wet batteries if your home is not wired for electricity. The code instruments all operate from dry cells.
- 13. Are any accessories necessary in addition to the Radio apparatus you give for a home experimental laboratory?**

Please refer to page 32. A full explanation and detailed list of what we give is printed there.
- 14. Are any lessons omitted for the man who has had previous Radio training or experience?**

We think it best that every student submit answers to every lesson. Otherwise we cannot grant a Diploma. Men with previous training or experience need not study every lesson. If the subject matter of a lesson is familiar, all they need do is answer the examination questions.
- 15. Do the lessons, eight outfits of parts and other material you furnish become my personal property?**

Absolutely yes—they are yours for keeps—to do with as you like.
- 16. Is the N. R. I. course written in any foreign languages?**

No. Some knowledge of English is necessary. However, we have successfully trained students of every nationality, many of whom had only a slight knowledge of English. Students whose knowledge of English is limited find that our course benefits them in two ways—they not only learn Radio, but improve their knowledge of English and their vocabulary as well.
- 17. Do you have residence classes in Washington?**

No. The improved results obtained from our home study methods have convinced us of the superiority of this type of training. Our residence schools have, therefore, been discontinued entirely in favor of home study training.
- 18. How do I send money to you?**

Make remittances by personal check, bank draft, cashier's check, postal or express money order made payable to the National Radio Institute.
- 19. Should I take your course now without the code, can I get your code course later?**

Yes. The additional cost will be the difference between our price for code training and without code training.
- 20. Does your course completely qualify me for a Government license?**

Positively. Our course with code training included gives you the theory, Radio laws and regulations and other subjects you need to pass the examination. Many graduates pass Government license examinations every year. Furthermore, the fact that you are an N. R. I. graduate gives you credit when you go up for this license.
- 21. What positions require a Government license?**

That of Radio operator on board ship, in a broadcasting station or commercial land station. A license is also necessary for some Radio positions in connection with aviation.
- 22. Are there any physical requirements for getting a Government license?**

No physical or age requirements. Anyone who passes the examination will be granted a license. There is no charge for it.
- 23. Do I have to be an American citizen to get a U. S. Government Radio license?**

No. A license is given to any who pass the examination.
- 24. What protection do you give to assure your students that their investment will be worth while and satisfactory?**

Under the terms of our Money Back Agreement, every penny you pay us in tuition will be refunded if you are not satisfied with the lessons and instructions service upon graduation.

Here is what *your Enrollment* brings you

In Material and Service

In Opportunities



I make this binding agreement with you. If you are not entirely satisfied upon completion with the Lessons and Instruction Service you have received, I will refund every cent you have paid in tuition.



You will receive the personal service and attention, throughout your course, of my instructors, all of whom are under my personal direction.



You need not know a thing about Radio or Electricity. I give you all you need of both to qualify as a Radio Expert.



My course is simple, clear, easy to understand. You need not be a high school or college graduate. Many of my most successful graduates have not finished the grade school.



Unlimited Consultation Service on any problems that come up in the course or in your job after graduation. You may consult us as often as you wish.



I will give you 8 Outfits of Radio Parts for a home experimental laboratory. With them you can build over 100 circuits as used in modern types of sets now on the market. You will get practical experience while learning.



The day you enroll I will send you 10 Work Sheets explaining 10 jobs that you can do in your spare time and make extra money. You will also get a Junior Radio-Trician Card and a supply of business cards early in your course.



I will give you a large number of Service Sheets, Job Sheets and Service Manuals to show you still more ways to make extra money.



I will give you special help in starting and managing a spare time or full time Radio business of your own. You will get four Special Lessons without extra charge, also advertising and merchandising helps.



I will help you get raises in pay through my Vocational Department, also help you choose the branch of Radio for which you are best fitted by temperament, experience and inclination.



I will help you find a job through my Employment Department upon graduation. This is a lifetime service available to you any time you wish it. This same Department will help you advance from one job to another.



You will receive a lifetime subscription to my monthly magazine "National Radio News". It contains valuable information of help to students and graduates on technical and business problems.



My course is thorough, complete and up-to-date. It gives you knowledge that you can turn into cash. It slights nothing, yet it does not waste your time.



My course will fit you for all branches of Radio. No further training will be necessary to enter the Radio field after you graduate. You won't be a "one job" man.



I will give you all of my Special Lessons designed to help you specialize in different branches of Radio and thereby increase your chances of success.



While the average student completes this course in six months to one year, I will give you three years from the date of your enrollment in which to do it.



The one low tuition fee quoted on my enrollment blank covers all of the material and services of my course. I shall not ask you, ever, to pay one cent more for tuition.



Upon graduation you will receive an Engraved Diploma as Certified Radio-Trician if you take my course without code, or as Certified Master Radio-Trician if you include code. You will also receive a card for convenience in carrying, certifying to your graduation.



A chance to get one of the many fine jobs paying \$50, \$65, \$75 and \$100 a week and up that are opening in Radio every year.



A chance to get in on the ground floor of a new fast-growing business where you can carve out a niche for yourself that can mean quick financial independence.



A chance to be a Radio operator in a broadcasting station. Many fine jobs are opening in this branch of Radio every year.



A chance to tie up with a Radio dealer or jobber. There are over 35,000 of them in the U. S. Buyers, store managers, service men, salesmen and other jobs are opening regularly here.



A chance to get a job with a Radio factory. They employ thousands of men. Many positions with factories pay as high as \$100 a week and more.



A chance to make up to \$25 a week and more in your neighborhood in your spare time while learning, beginning almost at once.



A chance to have a Radio business of your own. Be independent of regular working hours, to be your own boss and make money on your own work as well as the work of others.



A chance to start a Radio business of your own with practically no capital, using the money I will show you how to make on the side while learning.



A chance to share in the many rich rewards that are being paid inventors and for experimental and research work. The opportunities are particularly bright here.



A chance to share in the thrills and good pay being offered in Aviation for men who know Radio. This field is growing very fast, offering more opportunities every year.



A chance to cash in on the many fine jobs that the perfection of Television is sure to make. The whole Radio industry will probably be made over again once it is put to practical use in homes.



A chance to get one of the many fine jobs the use of Radio in connection with making and showing of Talking Pictures is making.



A chance to make money installing and operating Public Address Systems in schools, churches, auditoriums.



Wired wireless, locating ore and oil, Radio's use by railroads offer you a splendid opportunity.



Almost every large newspaper carries a Radio section. Trained Radio men are needed continually to write and edit these sections and are paid well.



A chance to connect with a commercial land station. Probably 1000 trained men will be needed for this one field alone in the next few years.



A chance to travel all over the world as a Radio operator, without expense and make a good salary besides—the opportunity to taste romance and adventure in many foreign lands.



The chance in Radio that has made many rich in such businesses as Motion Pictures, the Automobile industry and others.

*Good Jobs
like these go
to the Trained
Man*



Operator, broadcasting station



Television Expert



Operator on board ship



Operator of commercial land station



A business of your own



Operating in airplanes or airports



Expert in Radio factory



Radio executive



I am ready

*I will do as much and more for you
as I have done for hundreds of others ~*

In this book I have pictured and described many of the good jobs that Radio offers you. However, one book, no matter how large, could not possibly tell you of all of them. There are too many. The field is too large—too broad, to be covered completely in one book. But I have shown you that hundreds of fine jobs are opening every year for men and young men with the right training.

I have also shown you how well, how thoroughly and how efficiently I am organized and prepared to give you the training you need. My course is not new. It is not untried. National Radio Institute training has been thoroughly tested. The results in dollars and cents that it makes for N. R. I. men are clearly shown by the many letters from graduates in this book.

I chose to tell you what can be and is being done, rather than what I might think can be done. I have given you positive proof.

When hundreds of men and young men—just average fellows, too—with no special education, no special ability or talent, can step into Radio and immediately make much more money than they could make in other fields where they worked for years, it surely proves that the money making opportunities are greater here.

The one purpose of this course is to train you to make more money—to give you specialized knowledge that you can turn into increased earnings. The training I offer you today is better than the training which enabled the men whose letters you've read in this book, to accomplish what they have. It is more thorough.

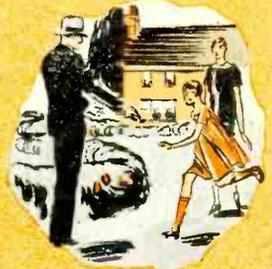
*Good Jobs
bring the good
things of life
You want*

It is more complete. It has since been revised, new subjects have been added, and the latest developments have been included.

By giving you practical experience while learning, more experience than the average man in the field gets from two to four years, I fit you for a job that requires training and experience. When you graduate, you are not simply start-

ing out with a theoretical knowledge looking for a place where you can get practical experience. You are ready to take your place alongside men who entered long before you—make as much and perhaps more money.

The Radio field is right, and my training is right. I know of but one reason that can prevent you from winning bigger success. That would be your failure to act—to enroll.



A home of your own



A good car



Time for golf and other pleasures



Shows and dances

DECIDE *Now*-ACT-ENROLL

Many a man throws away his chance of ever getting somewhere—of ever earning a worth while salary—because he never gets started. He waits—puts off from day to day. I want you to realize that every act of yours today, what you do or fail to do, is deciding what you are going to be and what you are going to make in the future. Only by thinking about and planning for the years ahead can you hope to win success.

You, like every man, want to make more money—enough to enjoy most of the good things of life and have some left over. There isn't a better day to begin training for bigger success and more money than today. If you wait until tomorrow you will have lost today. If you wait until next week you will have lost this week. If you wait until next month you will have lost this month. You will have lost more than time—you will have lost money. You will have lost the money which increased earnings in Radio should put in your pocket.

Your investment in my course is absolutely safe. You risk nothing. I have agreed to refund every penny of your tuition if you are not satisfied with the Lessons and Instruction Service upon completing my Course.

Training men and young men to make more money is my business, my vocation. My greatest satisfaction and pleasure in life is to make life easier for others by showing them how to increase their earnings.

To make it easy for you to start, I have enclosed an enrollment blank. This same blank has started hundreds of fellows on the road to bigger pay. It can mean the same for you—use it now.

It is up to you. I am ready. My organization is ready. I have your first assignment of lessons prepared, ready to send to you at once so that you will be off to a flying start.

Fill out the enclosed enrollment blank today—this minute—and mail it to me. I shall be looking for it. It will be a genuine pleasure for me to have you as my partner in what I regard the most important undertaking of any man—that of helping him get ahead. **ACT NOW.**

J. E. Smith

President



Time and money for travel



Money invested



Vacations at the sea shore



Money in the bank



This is Radio's Biggest Year.