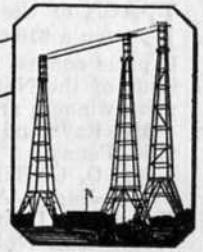
NATIONAL RADIO NEWS



FROM N.R.I. TRAINING HEADQUARTERS

Vol. 2—No. 1 WASHINGTON, D. C. JULY, 1929

"Radio *in* Aviation"

NUMBER

Read

in this issue—

A. ATWATER KENT

WALTER C. HINTON

and other writers on interesting Radio subjects

Contest Winners!

EACH of the following N. R. I. men won a $10.00 cash prize in the N. R. I. prize contest announced in the March issue of the National Radio News. The prize winners are:

Mr. Raymond D. Myers, Box 15, Idaville, Penna.;

Mr. O. G. Baker, Lincoln, New York;

Mr. Edgar A. Mathias, 1422 North Haugh St., Indianapolis, Ind.;

Mr. E. G. Wolfe, 1327 Kenzie St., Elkhardt, Indiana.

There were a considerable number of entries—a great many of them were very good, and it was a difficult task for the prize committee to select the winners.

The prize committee wants to thank each and every one of you N. R. I. men who submitted your ideas in this contest. You have shown some mighty fine interest and a good spirit, and we only wish that we could give every man a first prize.

"Letting well enough alone" is a foolish motto in the life of a man who wants to get ahead. In the first place, nothing is "well enough," if you can do better. No matter how well you are doing, do better. There is an old Spanish proverb which says, "Enjoy the little you have while the fool is hunting for more."

The energetic American ought to turn this proverb upside down and make it read, "While the fool is enjoying the little he has, I will hunt for more."

—Arthur Brisbane.

National Radio News Now in Libraries

N. R. I. students may be interested in knowing that the National Radio News has been placed in a number of the leading libraries throughout the country. That means that the News is being read by a larger number of people than ever before—the N. R. I. name is being advertised everywhere and that N. R. I. Radio-Tricians are getting a lot of valuable publicity. The comments of some of the librarians follow:

We are interested in receiving the current issues of the National Radio News—also we would like to have a complete file to bind for preservation in our reference collection.
—New York City Public Library.

Our Electrical Engineering Department and a great many others of the students and faculty here will be interested in the National Radio News.
—University of Missouri, School of Mines and Metallurgy Library.

We are very glad to add the National Radio News to our reading room periodical shelf.
—Hartford, Conn., Public Library.

The National Radio News will be of real help in our library. Thank you very much for it.
—Hancock, New Hampshire, Library.

We hope it will be possible for you to send us all the numbers of the National Radio News as we want to make them available to our readers.
—Birmingham, Alabama, Public Library.

Can You Answer These?

National Radio News

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NATIONAL RADIO INSTITUTE

Washington, D. C. July, 1929

Speaking of Radio progress—just 32 years ago this month, Marconi had developed his Radio apparatus so that communication was made between the shore and a ship 10 miles away! Comparisons between that and present day Radio are useless. We would just like to know what Radio will be like 32 years from now!!—Editor.

Radio Sweeps Onward in Big Expansion

I LIKE to look back about this time each year over the splendid progress Radio has made.

I look back and recall how crude—how small and insignificant Radio was just a few short years ago. In making this comparison I can get some idea of how truly great and magnificent the Radio field of tomorrow will be.

When I first started in Radio, my friends tried to discourage me. They told me I could never get anywhere with that apparatus—apparatus that amounted to nothing more than a couple of old Ford spark coils and a bundle of wires. Thousands talked about my "foolish ideas" to my back, but I am mighty glad today that I stuck it out.

In fact, Radio has developed so rapidly and has made such a wonderful record and has been of such great influence that even some of us pioneers in Radio hardly dreamed 18 or 20 years ago that it would be like this.

Over 350,000 people are employed in Radio today. The annual turnover is approximately $1,000,000,000.

But the Radio technique is not confined to the narrower field in which some people regard Radio today. It extends into a number of fields—solving problems in many lines of industry.

For instance, Radio is largely responsible for the development of the talking picture. It has practically made the "movie business" over.

Then, it has given the phonograph industry a new and improved means of recording and reproducing—completely reviving the industry.

Then, there is wired wireless or the transmission of Radio signals over telephone, telegraph, electric light, and even trolley lines. It has opened up a new era in communication and remote control. This is also expected to do a lot in solving some of television's problems.

Also in medicine and surgery, Radio technique is playing an important role.

In prospecting for minerals and ore deposits, radio waves are being used to a good advantage. In fact—approximately one-half of the new oil wells discovered last year were brought in by the use of Radio prospecting.

Perhaps, one of the biggest "outside fields" in which Radio is being applied today is that of Aviation. The debt that Aviation owes to Radio is great. Without Radio, Aviation would be greatly hampered and progress would be slow, but Radio has provided Aviation with eyes and ears. Radio is a big factor in its present development, and will be a still bigger factor in the future.

With the aid of Radio beacons, directional finders, high-powered aircraft transmitters and receivers, and aircraft altimeters that tell the pilot exactly how far he is above the ground when he is making dangerous landings in foggy weather—these and many other big developments in Aviation are due to Radio.

The opportunities for the Radio man are not to be overlooked in this new field. Radio operators will be needed for big cabin planes. Some big planes are being made right now with specially equipped cabins for Radio operators. Then, there will be a need for Radio men to handle the beam stations and do the airport Radio work. All in all, it seems that Radio technique has just scratched the surface of the many possibilities ahead and in the near future Radio principles will be put to work in a number of new fields. The man with thorough Radio training will find an ever widening field of opportunity ahead of him.

N. R. I. men can well be proud of the fact that they are playing a part in this fascinating drama of Radio's progress. Let's carry on—let's tackle our work with a new courage for there are even bigger things ahead of us in Radio.

J. E. SMITH.

Radio Essential in Aviation

By LIEUT. WALTER C. HINTON
(Pilot of First Plane to Cross Atlantic.—Ed.)

LIKE other military airplane pilots, I was put through an extensive course in the fundamentals of radio-telegraphy. I learned to send and receive code with sufficient speed and accuracy to qualify me for an aviator.

From that time on radio proved to be of ever increasing importance to me in my flying operations. Radio was an essential part of every important flight I ever made and it is going to be just as essential to every flight as time goes on.

After completing my training as a Naval Aviator I was assigned to duty as pilot and instructor of twin-motored planes. These planes were large enough to carry a full crew—in addition to an assistant-pilot and mechanic, there was a radio operator aboard.

In May, 1919, the U. S. Navy Seaplane NC-4 made the first successful crossing of the Atlantic Ocean. Ensign H. C. Rodd, U. S. N., was our radio man and Lieut. Elmer F. Stone of the Coast Guard my associate and co-pilot.

All during the flight from Rockaway Beach, New York, to Plymouth, England, we were in constant radio communication with the Navy Department in Washington, Naval vessels, ships at sea, and radio compass stations. This radio communication was of great value to us during this flight, and was a good check on our navigation. You must remember that this work was done ten years ago when the vacuum tube was still a new, experimental device, and the present day circuits and methods of shielding were unknown. The marvelous thing to me about the radio reception aboard the NC-4 was that the signals came through in good shape in spite of the high tension interference that was present. The NC-4 had four engines of 400 h.p. each—a total of 1600 horsepower. Each engine had twelve cylinders and each cylinder had two spark plugs. That means 96 high tension spark leads—eight induction coils, with their breakers and distributors, four low-voltage generators and a high-voltage generator for the radio. Each of these things was a healthy source of interference—and NOT ONE OF THEM was shielded.

When you stop to compare the equipment we used then with the equipment used today, you would no doubt wonder how any signals at all could have been received through this interference. Today each spark plug lead, the magnetos, the spark plugs themselves, and all other equipment aboard a plane is shielded so that interference is reduced to a minimum.

The plane I used on my trip from New York to Rio de Janeiro in August, 1922, was equipped with radio equipment that was a great improvement over what I had used previously.

I never really appreciated the value of radio communications until I went down to Brazil again in 1924 and 1925 as pilot for the Dr. A. Hamilton Rice Exploration Expedition. Here we proved by long tests in the field the value of short-wave radio transmission and reception over long wave. The short waves crashed through the continual equatorial static and kept us in daily radio communication with all parts of the United States and Canada. We transmitted scientific reports to Europe, and sent to and received from New Zealand and Australia. All this, mind you, was done with a little 100-watt transmitter weighing only 6½ pounds.

Thomas S. McCaleb, our radio man, built this set right there in the Amazon Jungle and operated it successfully and consistently every day, down there on the equator, where radio communications are extremely hard to effect.

"Mac knew his stuff." When a man makes a real success of a thing, as he did with our radio communication, and as he did later when he designed and installed the radio communication equipment for the Liberian Government in Africa, there are many who will say that the man was a genius.

Mac is no genius—he just loves his work and puts his mind on it.

After struggling up the Amazon River all day in a canoe, on the stern of which

(Continued on page 8)

"I am now connected with the Varney Airlines, and I am contemplating accepting a job as co-pilot and Radio operator for a salary around $1000 a month. So I want to brush up on short-wave operating." William Pons, c/o Varney Airlines Airport, Salt Lake City, Utah.

"I have been up to my neck in servicing jobs for the past two weeks—mostly receivers. The electric sets seem to give the most trouble because of line voltage fluctuations thereby blowing tubes. In these two weeks I have increased my weekly salary about twenty dollars. My jobs have all been very successful." Clarence William Schohl, 37 Victoria Avenue, Buffalo, New York.

"I made about $65 or $70 in the last ten days here—not so bad for a small town." J. W. McColl, 607 Grant Street, Dennison, Ohio.

"I am doing all the Radio repair work for the Yale Battery and Electric Co. They wanted a man that could put out the work, so I showed the Manager my Radio-Trician card that you sent me and got the job. I am doing the repair work on a commission basis and clear about $250 a month." N. A. Collins, 107 South D St., Yale, Oklahoma.

"Although I've finished only 7 lessons, I have made $75.00 in my spare time doing Radio servicing." J. L. Rochon, Box 53, L'Orignal, Ont., Canada.

"I was a brakeman on the P.R.R. for nine years. I decided my future was slim as a railroader. Since enrolling I have made over $400 and although I have not yet finished my course, I would not take $10,000 for the knowledge I have gained. I secured a position as radio-trician for a local firm here after I was only half through my course. I have since been put in full charge of our Radio department with a nice increase in salary." Robert R. Myers, Altoona, Pa.

"In the last four months I have made $500 in spare-time work here in my shop and I give all the credit to the N.R.I." C. L. Ravoira, Box 101, Weirton, W. Va.

"I would not take the price of your Course for the Work Sheets that I have already received from you. I don't see how you do it." G. E. Black, 321 East Oklahoma Ave., Knoxville, Tenn.

"I have averaged better than $275 per month for the last eight months." M. Eckenbeck, Skamokawa, Wash.

"The practical six units you sent me are the very foundation of set building and I don't believe can be equalled anywhere, because I searched papers, magazines and all sorts of advertisements before I took your course." Ernest Gray, 548 Orchard Street, Baltimore, Md.

"I am going to change Radio jobs this July for a better one with quite a raise in pay. I will be in charge of the Radio Department of the Alva Electric Supply Company. I give all the credit to N.R.I." G. B. Chick, Alva, Okla.

"To say that your course is fascinating would be to 'tag' it mildly. It is positively gripping. It is so interesting that one should experience no temptation to put aside the text for less profitable endeavors." Leon T. Clute, 800 Cogswell Ave., Solway, N. Y.

"I am now owner and operator of Station W9CNK on 40-meter band. Before I started this course I received $1.00 a day for farm work. Now I am in Radio 'for keeps'." Paul Hampton, Jamesport, Mo.

"Gee, Mr. Smith, you take care of me just like a father and let me tell you, it sure makes me feel good to know that there is someone I can depend on for advice. Now about my work. I have on an average of 5 to 15 calls a day for service. I have charged $2.00 for local calls. I have about $500 worth of testing and repairing apparatus, a new Ford truck which cost $795 and many other things which the course has paid for." Louis A. Defenari, Post Ave., Westbury, L. I., N. Y.

"In the past 6 months I have repaired nearly 1500 sets—both A.C. and D.C., netting me nearly $5100." Glenn C. Sabin, 44 Maple Street, Northampton, Mass.

"I am working as a wireless operator on S. S. Jalavihar, getting a nice salary, besides having all my expenses paid, and rated as an officer." Major Dadi Sorabji, c/o The Scindia Steam Navigation Co., Central Bank Building, Calcutta, India.

"I have been very busy reaping profits. To date I have made $184. This is spare time only and does not count the position I received through my Radio-Trician card." Wayne L. Perry, Jr., 1638 W. Lowden Street, Philadelphia, Pa.

"I have earned money enough to pay all our living expenses, also payments on a $7,000 home besides paying for the course and now have more money in the bank than we had two years ago when I started the course. Have not found a radio service job that I could not fix." Geo. A. Weston, 715 Gettysburg Ave., Jackson, Michigan.

So many fine letters have come in from students in the past few weeks that it has been difficult to pick out representative ones for the mail bag this month. From every part of the country we are getting letters from students telling of the easiest kind of extra money they are picking up right on up through the summer months. What these men are doing—every N.R.I. man can do. Get your share of the Radio profits this summer and fall.
—Editor.