

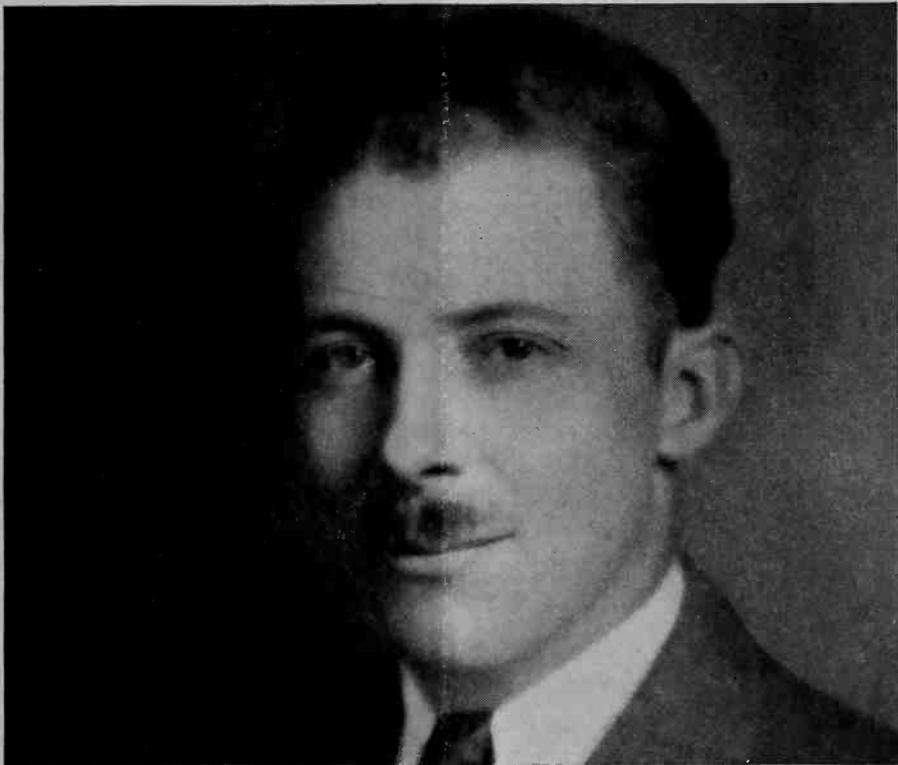
NATIONAL RADIO NEWS



VOL. 4—NO. 12

WASHINGTON, D. C.

JULY, 1932



P. J. MURRAY

Manager, Employment and Graduate Service

PHILIP J. MURRAY

MR. MURRAY was born in Baltimore, Maryland, in 1901. He received his education in the same city.

Though only thirty-one years old, he prides himself on having eighteen years' business experience, having started to work in his spare time while still attending grammar school.

We doubt if there is a man in the N. R. I. organization who has held down as many jobs or had as varied experience as Murray. From news-boy to sailor; from bank clerk to insurance salesman—with many other lines in between. We asked Mr. Murray once just how many different lines of work he'd been associated with and he replied that he had stopped counting at twenty-five.

And this long and varied experience is the reason Mr. Murray is Manager of the Employment and Graduate Service Departments at the Institute. It is easy to understand that graduates who seek his help and advice, come from every walk of life. Only a man with a wide range of experience is capable of passing an opinion on these cases and rendering a helpful service.

Among his business experiences Mr. Murray lists wholesale, retail, manufacturing, ammunition, department store, banking, Radio, mail order, electrical goods, machinery, and insurance and has been connected with such prominent concerns as Montgomery Ward, The Singer Sewing Machine Company, Commercial Credit Company, and Bartlett-Hayward. He has been with the National Radio Institute since 1927.

Mr. Murray is on the editorial staff of National Radio News, for which he has been a consistent writer for years. He is the author of "Cashing in on Your Radio Training" and associate editor of "Choosing a Career in Radio." He is now devoting his spare moments to a new book—the title of which could not be learned at this writing. He is a charter member and Corresponding Secretary of the N. R. I. Alumni Association.

We truly believe that Mr. Murray's knowledge of Radio employers and their needs is unsurpassed..

N. R. I.'s SERVICE « « « TO YOU

FOR nearly seventeen years the National Radio Institute has been teaching Radio. The keynote of the organization has been "Service."

Constantly it has endeavored to improve its systems—keep its Course up to date, speed up replies to its students' lessons and communications. One would almost be led to believe that in this length of time a perfect system would have been reached. But the Institute, long ago, decided that there is no perfect system—and the system which is nearest perfection is the one that allows for improvement and ready change to improved methods when they are discovered.

Expensive equipment and systems have been installed, but the Institute has no hesitancy whatsoever in replacing old ideas with new—obsolete equipment for the modern. It is all done to serve you.

It may be interesting to readers of National Radio News to know some of the details

which are involved in a school the size of N. R. I.—where hundreds of thousands of pieces of mail are received and answered each year.

For instance, let's consider the Technical and Instruction Departments pictured below.

Here are grouped the technical men of our Staff who in addition to seeing that your lessons are graded promptly are charged with the responsibility of keeping the N. R. I. Course up to date. They write, edit, and re-write text books. They continually study the new phases of Radio to be able to answer the thousands of Consultation Service letters. They maintain technical files and a very complete library on Radio and allied subjects for the use of the N. R. I. Instruction Staff, and sundry other duties too numerous to mention.

It is interesting to know that in connection with the letters sent out from N. R. I. one entire Department, employing as high as forty

(Page 10. please)



A section of the N. R. I. Technical and Instruction Department

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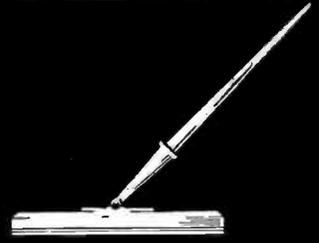
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(Page 10. please)



A section of the N. R. I. Technical and Instruction Department

My Own page



THE HOTEL RADIO FIELD



WHEN TO QUIT

JUST as the movies were "made over" to the "talkies" by the Radio principle, so is Radio making over the hotels of the land.

A hotel to be considered "first class" must give its patrons comforts equal to the home—and Radio certainly comes under the classification of a homefurnishing.

In the United States there are 70,240 hotels. This means 1,793,224 rooms which must eventually, and in the near future, be equipped for Radio.

The receiving equipment for the more than seventy thousand hostelries will be expensive—no doubt—as will be the equipping of the one and three-quarter million rooms with loud speakers, but hotel managers have seen the "handwriting on the wall," and the expense must be borne.

Receiver manufacturers, parts manufacturers, and especially concerns making magnetic speakers will profit greatly. Dynamic speaker manufacturers will also get some of the business when they find a way to reduce the size of their units.

And the Radio man—the fellow who is behind the manufacture, sale, service, and installation, will profit by the increased production necessitated by the public demand for Radio in the hotel.

THERE are times when everything is wrong; the rough, winding road you travel is a long hill—the top too far. Your funds are low; your debts high. Life holds nothing but worry. You are tired. What's the use? Why not quit?

Every man who has made a success was confronted with that same question. You know his answer. If he had quit—he would not be known as a successful man.

Difficulties train you. What better experience could one have for the business problems of the future than the obstacles of today? There's a valley at the end of every hill. There's a fresh view from the top of every peak. Around the corner just ahead—success.

Stick! Others have! Rest occasionally if you must, then carry on!

Quit when you are ready to say: "I am licked." Quit when you can agree that you haven't got the stuff that men are made of—that you are a traitor to yourself and those who do or may later depend upon you; when you can admit you're a rank failure. Quit when you would be willing to let another man call you yellow and not fight about it.

And I know you'll never quit.

J. E. Smith

President.

RADIO-TRICIAN SERVICE SHEET

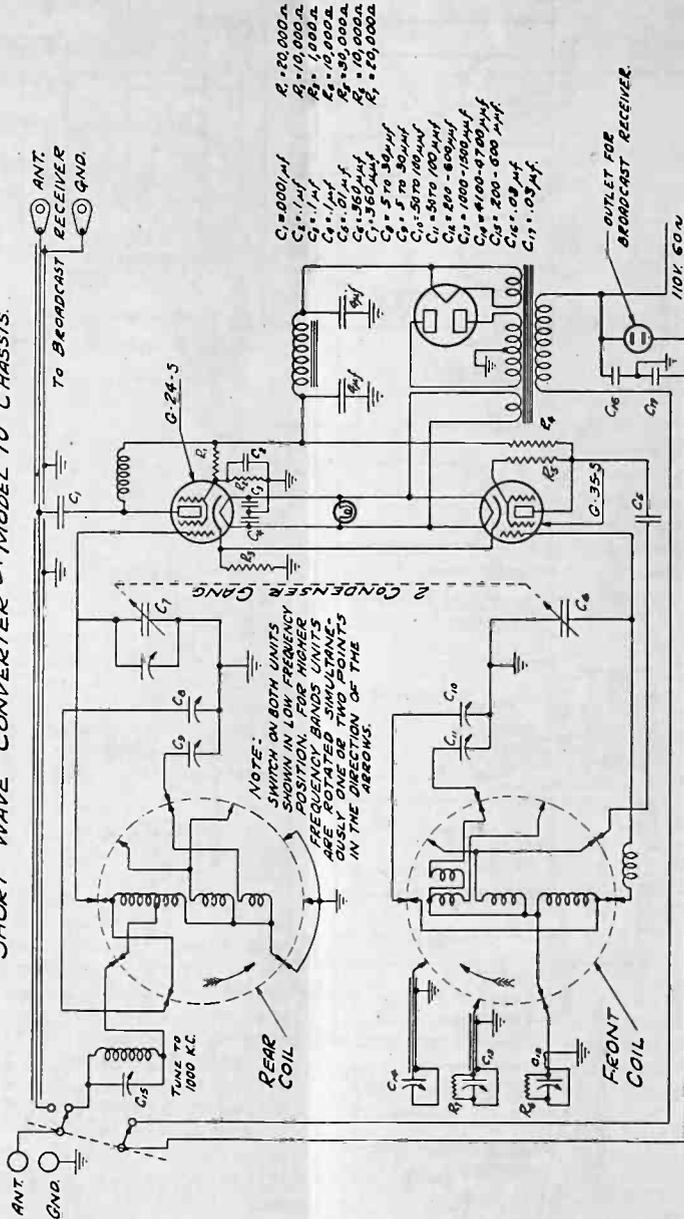
REQ. U. S. PAT. OFF.

COMPILED SOLELY FOR STUDENTS & GRADUATES



MAJESTIC SHORT WAVE CONVERTER MODEL 10

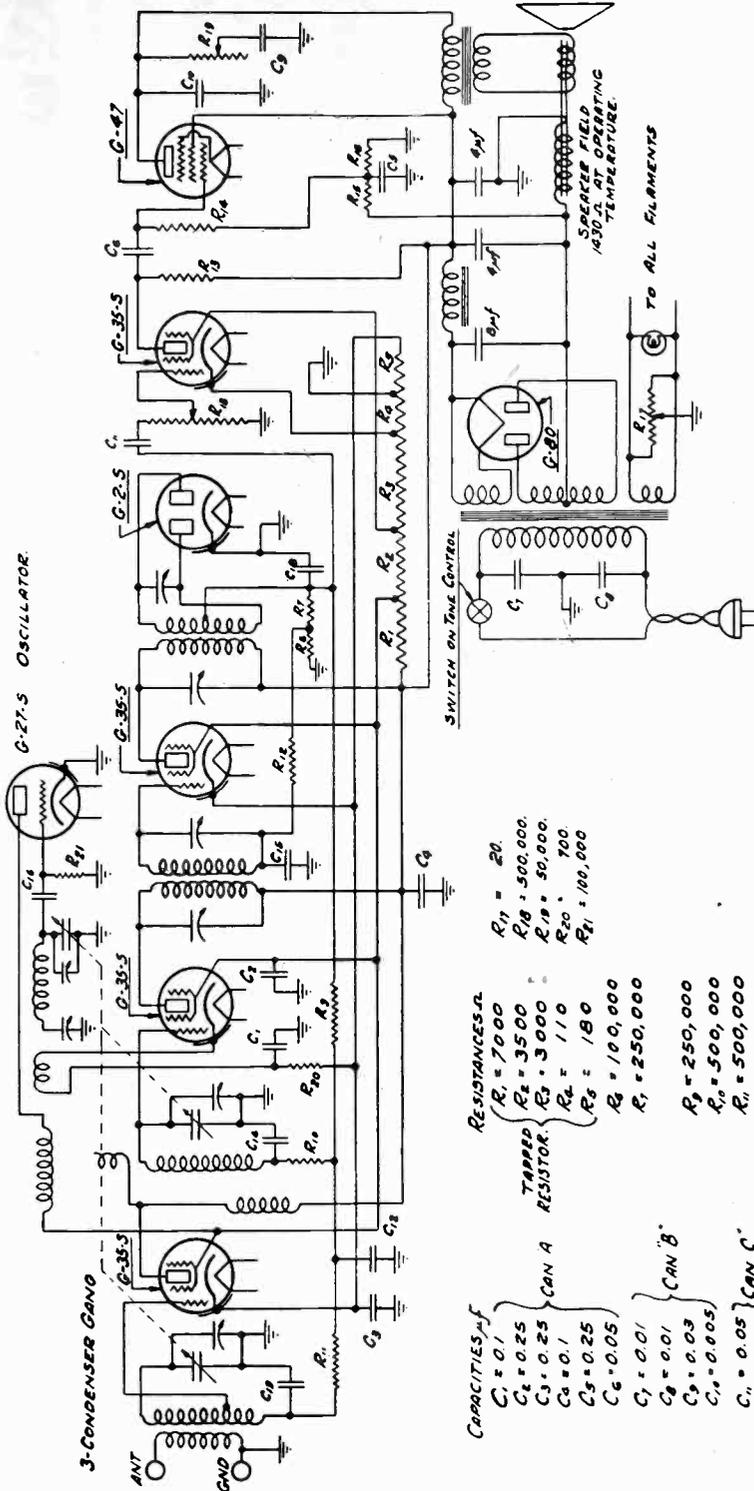
SCHEMATIC DIAGRAM OF MAJESTIC SELF POWERED UNIVERSAL SHORT WAVE CONVERTER - MODEL 10 CHASSIS.



Readers who file Service Data in separate binders remove page carefully; trim on dotted line for same size as Data published heretofore.

MAJESTIC SCREEN GRID SUPERHETERODYNE MODEL 200

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE AUTOMATIC VOLUME CONTROL RECEIVER - MODEL 200 CHASSIS.



- CAPACITIES - μ f**
- $C_1 = 0.1$
 - $C_2 = 0.25$
 - $C_3 = 0.25$
 - $C_4 = 0.1$
 - $C_5 = 0.25$
 - $C_6 = 0.05$
 - $C_7 = 0.01$
 - $C_8 = 0.01$
 - $C_9 = 0.03$
 - $C_{10} = 0.005$
 - $C_{11} = 0.05$
 - $C_{12} = 0.01$
 - $C_{14} = 0.01$
 - $C_{15} = 0.01$
 - $C_{16} = 0.00005$
 - $C_{17} = 0.0008$
- RESISTANCES - Ω**
- $R_1 = 7000$
 - $R_2 = 3500$
 - $R_3 = 3000$
 - $R_4 = 110$
 - $R_5 = 180$
 - $R_6 = 100,000$
 - $R_7 = 250,000$
 - $R_9 = 250,000$
 - $R_{10} = 500,000$
 - $R_{11} = 500,000$
 - $R_{12} = 500,000$
 - $R_{13} = 100,000$
 - $R_{14} = 300,000$
 - $R_{15} = 1,000,000$
 - $R_{16} = 200,000$
- TAPPED RESISTOR.**
- $R_{17} = 20$
 - $R_{18} = 500,000$
 - $R_{19} = 50,000$
 - $R_{20} = 700$
 - $R_{21} = 100,000$

118 VOLTS - 60 CYCLES - 65 WATTS

A CHAT WITH THE N.R.I. DIRECTOR

THE TUBELESS RADIO

QUITE a bit of publicity has been given to the new Radio set designed by Ernest Patrick, formerly of Kentucky and now a resident of Indiana.

According to reports, this tubeless Radio will operate on less than one-half the power now needed for the average Radio set. The cost of manufacture will also be a great deal less.

As may be expected, the owner and the backers of this tubeless Radio project are keeping the technical details a close secret. Therefore, no data on its construction will be available for some time.

Of course, the tubeless Radio idea is by no means new. Many times in the past tubeless Radios have been announced, but so far as we know they never passed beyond the experimental stage—never became commercially possible or generally distributed. However, from the statements made by prominent people who have investigated this set, its future seems more promising.

If this Radio can be worked out to a point where it can be placed on a commercial basis, there is no doubt but that it will have a far-reaching effect on the Radio Industry. It will be possible to place Radios on the market much cheaper than at present, which will result in the sale of sets to many homes not now so equipped and, naturally, the opportunities for the trained service man and the Radio salesman will increase. It is clear that this new machine, like anything of its type, will involve many technical features which can only be understood by the properly trained man.

Just as soon as data is available on this tubeless Radio, your National Radio News will bring you the information.



E. R. HAAS
Vice President
and Director

AND THE TREE DIED

A MAN planted a valuable, imported tree. He cared for it—nursed it. It blossomed and bore fruit. He was very proud of his accomplishment. Then came very hot weather—a drought. The tree was neglected—it died.

A young man starts studying. He shows great promise. He has ability, ambition, personality. His friends notice the change. He starts working at his new profession. He makes good. His customers increase; he is doing a good job. He makes money.

Then he gets the idea that he knows enough. He has been successful—why not take it easy. Let the other fellow study.

This fellow has reached the drought of his career. He will not cultivate and irrigate his knowledge. His business withers and dies. Insofar as success is concerned the man is also dead.

Don't take my word for it—look around you. How many dead businesses do you see because the owners "knew enough" and let other wiser, more modern business men take their business. Summer is here. Hot weather gives fine excuses to quit on the job—put it off till cooler weather. How will you face the drought? Will your business be blooming when the fine rains of the busy Radio season, which are not far away, arrive?

THIS is the story of a successful man—a graduate of the National Radio Institute.

Moreover it is about a man who followed a definite plan to his success—never once deviating from the path he had set to his goal.

All too frequently we see men accept jobs because the pay is fairly good—then stick in the rut. It would be far better—in lots of cases—had they given more thought to the future and accepted a lower pay job which either offered opportunity for advancement or valuable experience. The story concerns Robin D. Compton, Manhattan, Kansas.

Robin D. Compton graduated from the National Radio Institute August 10, 1925.

Shortly after his graduation he took the government operator's license examination, passed it and made connections with Radio Station KMMJ, Clay Center, Nebraska.

Desiring to round out his Radio operating experience his next step was to obtain a berth on the S. S. Dorchester, a sea-going ship of the Merchants and Miners Line. This, of course, necessitated coming to the Atlantic Seaboard. Needless to say, the experience and travel made it worthwhile.

Even as far back as his early ship-operating days Compton realized the advantages of good Radio training. His work as a "brass-pounder" threw him in contact with other operators who were the product of the old school of "hard knocks and experience" but lacked the systematic Radio training which later carried Compton ahead of them in the Radio profession. When his operator's license expired in 1927 he had further proof of this point. Out of six men taking the new examination only two, Compton and one other man, passed the code speed test. But to get on with our story.

WORKING A FOR S

"I decided that Radio would give me far more money. I have visited ports in foreign countries to 100,000 miles. It is now hard for me to get on with my health and happiness—Robin D. Compton.



Five views of Radio Station KSAC where Compton is operator.

The next time we hear from friend Compton his letter is postmarked "Texas" and he is the Radio Operator of the S. S. Chester Sun of the Sun Oil Company. The reason for the change was soon apparent—25% increase in pay.

DEFINITE PLAN

SUCCESS

ing work—besides the chance to make and travelled, by water, from 75,000 at what Radio has meant to me in

tion WREN at Lawrence, Kansas. This job gave him the opportunity to attend the University of Kansas—and in addition—valuable experience.

In September, 1930, another chance presented itself to Compton—a chance which worked in well with his carefully laid plans. He received an offer from Station KSAC of the Kansas State College of Agriculture and Applied Science, Manhattan, Kansas, where he had charge of the installation and is now operator. This gives him a chance to attend college almost full time.

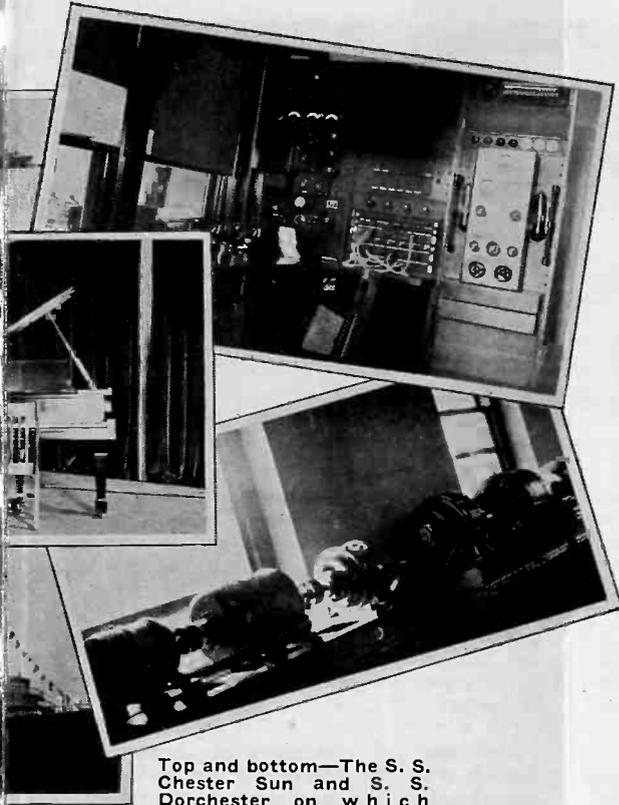
A big point in a man's success is in planning a definite goal and making each step in his career a step toward that goal. It has taken Compton six years to progress to the job he now holds. But his plan is working—each move has been an advancement, carefully thought out before taken.

Not once did he lose courage. He didn't expect his success to come overnight. We don't know what plans he has for the future because even to his best friends he seldom opens his thoughts of the future. They are his secrets, only to be revealed after they are accomplished. Above all—he was willing to work and study to achieve success.

Robin Compton, since he started his Radio career, has travelled close to 100,000 miles. He has operated two ship stations and three broadcast stations. He has made many friends—met many worthwhile persons. He claims that Radio has meant as much to him in health and happiness as in the financial returns.

Now Compton had a secret ambition all this time and that ambition was to go to college. So he made his plans quietly and engineered them well. By the early part of 1929 he had made connections as operator at Radio Sta-

N. R. I. is proud to have done its part in starting him on the road to success. Who will be the next N. R. I. student to have his success story printed on this page?



Top and bottom—The S. S. Chester Sun and S. S. Dorchester on which Compton operated.

N. R. I.'s SERVICE TO YOU

(Continued from Page 3)

persons, is maintained solely for stenographic and typing work.

Another large Department which is operated here at the Institute for your service is known as the Student Service Department. The function of this Department is to render service to N. R. I. students, on all matters not of a technical nature. It is here the student's progress is carefully watched and checked. It is here that every grade made by a student is recorded and such records are constantly under the eyes of men and women of long experience in handling students. You are guided,

tered mail, thereby eliminating the possibility of lost payments—lost by sending cash unprotected through the mails.

In order to render the best service to its students and graduates N. R. I. needs their heartiest cooperation. It is particularly important that you place your full name and address on each and every communication sent to the Institute as well as your correct student number. Many letters, strange as it may seem, are received here at N. R. I. without a name—without an address—without a student number—some of them lacking all three.



Part of the Student Service Department of the National Radio Institute

encouraged and, in some cases, where necessity arises, you may be criticized by this Department. They have your future at heart and it is their plan to do everything in their power to carry you forward to your goal—ultimate success in Radio.

Then there is a Department, of which you hear very little, but which is constantly operating for your service. It is our Accounting and Statistical Department.

This division is responsible for handling accurately the payments of our thousands of students, answering replies regarding the credit value of students who have requested credit from other firms and compiling statistical data on the Radio Trade and allied industries, which may be of value to N. R. I. students and graduates. You can help this Department to help you by making your regular payments by check, money order or regis-

When a communication is received which falls in this latter class—there is nothing that can be done about it because we, of course, don't know who sent it. Of course, if either the name or the student number is given, it can be traced through our files, but this just imposes another hardship upon the Student Service Department and delays their reply—keeps their service from being as good as they want it to be.

See that all envelopes are sealed carefully before they are placed in the mail. You'd be surprised at the number of letters which are received—open, they were either not sealed at all or improperly sealed.

We know you want to do everything possible to cooperate—to help us give you good service. Because, after all, our service to you is an important item. It helps you go forward rapidly. It helps you gain your goal.

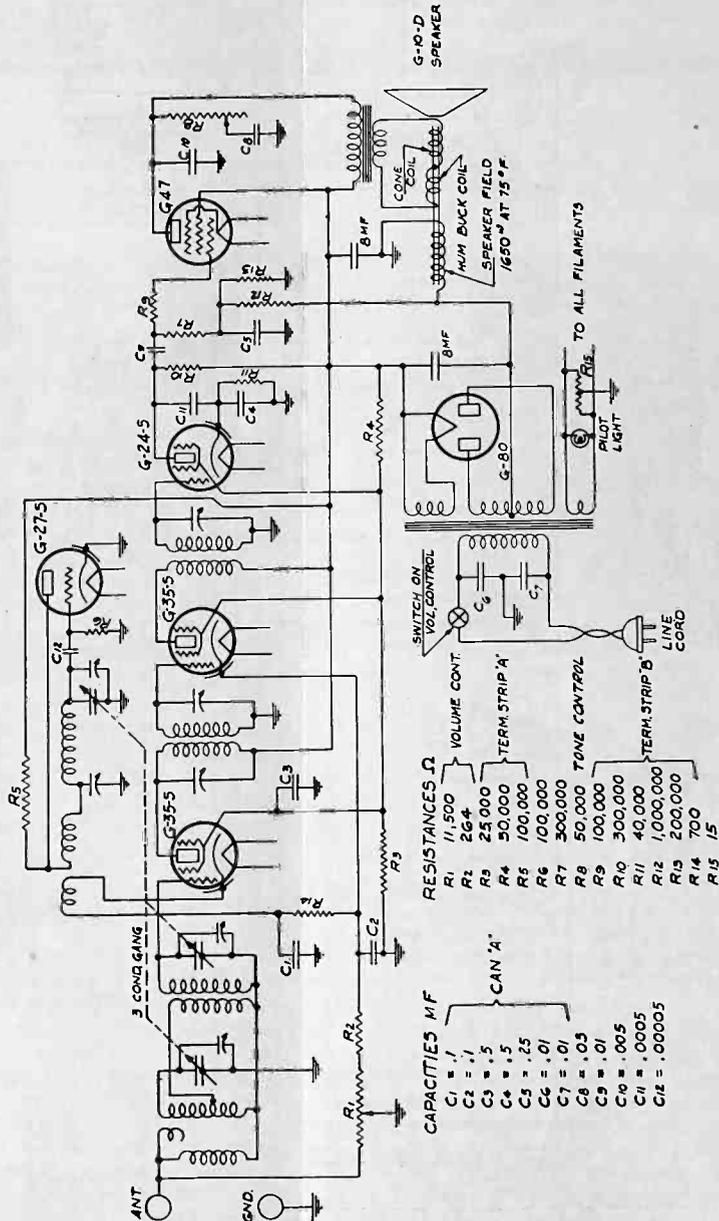
RADIO-TRICIAN SERVICE SHEET

REG. U.S. PAT. OFF.

COMPILED SOLELY FOR STUDENTS & GRADUATES

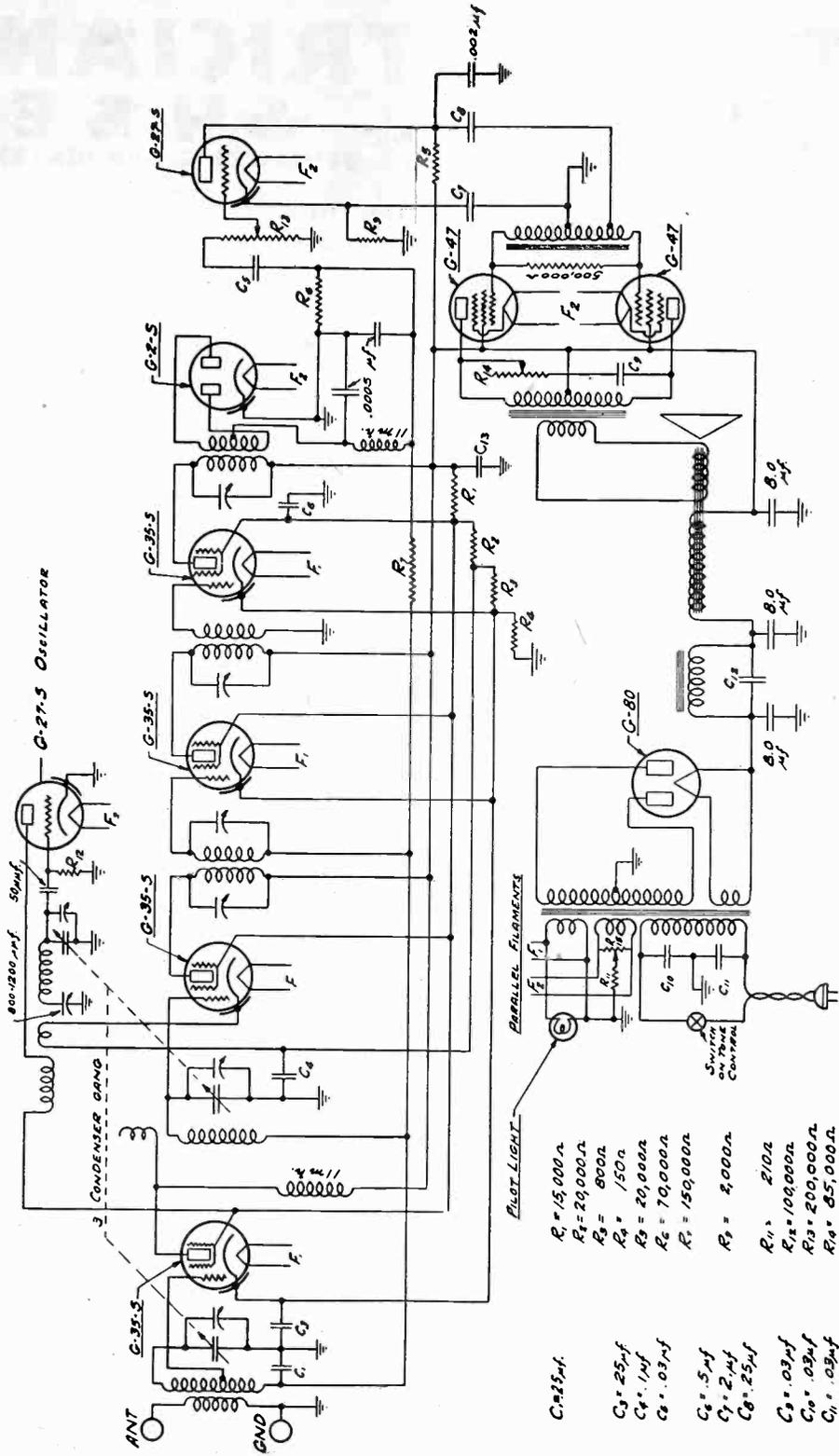
MAJESTIC SCREEN GRID SUPERHETERODYNE MODELS 55 and 210

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE RECEIVER
MODEL 55 CHASSIS — 115 VOLTS 50-60 CYCLES 70 WATTS



Readers who file Service Data in separate binders remove page carefully; trim on dotted line for same size as Data published heretofore.

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE AUTOMATIC VOLUME CONTROL RECEIVER. MODEL 210 CHASSIS.



- $R_1 = 15,000 \Omega$
- $R_2 = 20,000 \Omega$
- $R_3 = 800 \Omega$
- $R_4 = 150 \Omega$
- $R_5 = 20,000 \Omega$
- $R_6 = 70,000 \Omega$
- $R_7 = 150,000 \Omega$
- $R_8 = 4,000 \Omega$
- $R_{11} = 210 \Omega$
- $R_{12} = 100,000 \Omega$
- $R_{13} = 200,000 \Omega$
- $R_{14} = 85,000 \Omega$
- $R_{15} = 20 \Omega$
- $C_1 = 5 \mu f$
- $C_2 = 2 \mu f$
- $C_3 = 25 \mu f$
- $C_4 = .1 \mu f$
- $C_5 = .03 \mu f$
- $C_6 = .5 \mu f$
- $C_7 = 2 \mu f$
- $C_8 = .25 \mu f$
- $C_9 = .03 \mu f$
- $C_{10} = .03 \mu f$
- $C_{11} = .03 \mu f$
- $C_{12} = .1 \mu f$
- $C_{13} = 2 \mu f$ on 60 cycle MODEL



N.R.I. ALUMNI News

BEWARE OF THE TIN ROOF

By ANDREW NEY, Weston, W. Va.
Member N. R. I. Alumni Association

I BELIEVE many Radio service men would be more successful if they would give attention to the little things which may be wrong.

Most service men—I mean by this those Radio mechanics who have not been properly trained—seem to feel that a Radio repair job must constitute burned-out tubes, difficulties in the power pack—or other major troubles inside the receiver itself. To show the fallacy of this theory I am going to relate a little incident which occurred not so long ago.

One evening I was called in to service a receiver. The owner told me that this set had previously been in the hands of eight different service men, none of whom could do it any good. He was about to give it up in despair.

Upon my arrival I found that the set was apparently in bad condition. It had very poor volume and the sensitivity was terrible.

I checked the set over carefully and found that everything was Okay. Then I went to the lightning arrestor. This checked perfectly and I then decided to give the aerial and the ground the "once over." However, it was getting dark and I decided to wait until morning.

Coming to the house the next morning I started on the outside, with the aerial. And that's just where the trouble was.

The antenna looked perfect—but it wasn't. The house in which the set was located had a

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A STORY WITH A MORAL

By J. B. STRAUGHN
N. R. I. Technical Staff

THE other night I decided to purchase a police dog, so Mr. Bradford, N. R. I.'s Short Wave Consultant, and I drove out to one of Washington's leading dog kennels (which, by the way, is in Maryland).

In our conversation I casually mentioned, as is my usual practice in such cases, that I am in the Radio service business. It then developed that there was a Radio on the premises which had been moved from Washington and which had failed to function in its new location. I asked if the set had been operated on D. C. current (his new location being outside of Washington was supplied with alternating current). The answer was "Yes, we were supplied with D. C. current at our old place." I immediately stated that it would be necessary to junk the set or use a motor generator to convert the 110 volt A. C. to 110 volt D. C.

Then imagine my surprise upon going into the house to find that he had an ordinary A. C. receiver. It is quite evident that this gentleman, totally unfamiliar with electricity and Radio, thought my reference to D. C. meant the type of current supplied in the District of Columbia.

The set used '26 type tubes in the R. F. and first A. F. stages, a '27 type detector and two '71A's in push-pull. On close examination I found that someone had gotten a '71A and a '26 type tube reversed and had placed one of the '71A's in the R. F. and a '26 in one of the push-pull sockets. The '26 was, of course,

(Page 16, please)

STEERING FOR THE ROCKS

By
J. G. HOLLINGSWORTH
N. R. I. Publicity
Department



WITH so much good information being published continually on the subject of making a success in business it's hard to understand why some people will go directly contrary to the ideas given them by men of experience—successful men. Why is it that persons, whose ostensible purpose is to succeed, will get out of the cleared channel and steer for the rocks? I want to tell a little story to illustrate my point.

In constructing my home, the builder equipped it with "in-opening" casement windows. It wasn't long before my wife complained that these windows when open took up a lot of room in the house—they interfered with the window draperies and with the furniture; she called them a nuisance, so I decided to have the condition remedied. A friend recommended a carpenter who was out of work.

He did a good job, but continually complained about the depressed condition of business and the fact that he was out of work the greater portion of the time. When I paid his bill, which, by the way, was thirty dollars, I suggested that he get in touch with several of my neighbors, whom I felt might be interested in having similar work done. I even offered to allow him to show his prospects my job to help him get more business. You see, I was really pleased with the work he had done.

"Well," he said, "if you hear of any people who want such a job done, here is my phone number; tell them to call me up."

Does a fellow like that deserve to succeed? Wouldn't you, in his place, have canvassed every house in that locality in an effort to get additional work, particularly when you had a satisfied customer, who was willing and ready to give you a boost? Of course you would and so would anyone else with good common sense who really wanted to work, but this fellow with his lack of everyday horse sense is just—well, you know what I mean by "Steering for the Rocks."

Trade Notices

Trade Notices in this column are not accepted as advertising and National Radio News assumes no responsibility. Please handle any correspondence with the firms direct. In writing them please mention National Radio News.—Editor.

S. O. S.

The S. O. S. Corporation (Sales On Sound), 1600 Broadway, New York City, handles all manner of acoustical material, sound equipment, motion picture theatre and amusement supplies.

They have one department, known as their salvage division, which specializes in the reconditioning of sound apparatus, which may then be purchased at a very reasonable price.

It is stated that many Radio men, particularly in small towns, earn very good money by selling such apparatus locally.

S. O. S. will be glad to give information upon request.

AEROVOX

"The Aerovox 1932 Condenser and Resistor Manual and Catalog," containing specification of condensers and resistors manufactured by Aerovox Wireless Corporation, has just been announced by the Aerovox Wireless Corporation, 70 Washington Street, Brooklyn, New York. It contains much technical data, of value to engineers, servicemen and experimenters. Copies can be obtained free of charge by writing to the Aerovox Wireless Corporation and mentioning this publication.

BEWARE OF THE TIN ROOF

(Continued from Page 13)

tin roof. The house next door was roofed with the same material. The antenna was directly between these two roofs and I figured this metal was causing a big loss. I raised the aerial about fifteen feet above the roof of the house and now the owner has all the volume and all the sensitivity that he could desire of this set.

Don't overlook the little things. Don't overlook the apparently correct thing. Make sure—that is what will make you stand out from the rank and file of imperfectly trained Radio men in your community.

THE MAILBAG



G. L. CHANDLER, STUARTS DRAFT, VA.

I was called to service a Majestic model 180 that cut off every time anyone walked across the floor. After a thorough examination and test I reached the decision that the trouble was not in the set.

I went into the cellar and found that a gas pipe was rubbing a steam pipe every time anyone walked across the floor. The radio was grounded to the steam pipe, which was not a good ground, and the gas pipe being well grounded caused the interruptions every time the two pipes touched. Every service man in town had been called, but failed to locate the trouble. The result of my find was a pleased customer and a smile from my boss.

C. C. COOPER, IRETON, IOWA

I have been busy with service work. The depression in this part of the country has helped out the service business a lot. People are having their sets repaired instead of buying new ones.

LESLIE M. KILMORE, ORLANDO, FLA.

I was called to service a Radio recently where the trouble was a severe crackling whenever a light switch was snapped on.

The trouble was worse at night than in the afternoon. Examination of various electrical connections revealed a steady arc in the meter switch box caused by a defective iron binding screw. The trouble was worse at night because a heavier load was on the line. Thanks for helping me on this job.

Economizing for the purpose of being independent is one of the soundest indications of manly character.
—Samuel Smiles.

Graduate Mark H. Hill of Claremore, Oklahoma, is now working as Radio sales and service man for Montgomery Ward & Company in that city.

The Radio business in this city is doing better than any other line.—R. E. DAVIS, Stillwater, Okla.

M. C. CLEMENS, GRAND RAPIDS, MICH.

I have made \$1600 in Radio since starting soliciting work. This covers a period of about 18 months or an average of \$90 per month.

This money could not have been added to my income without the training I received from N. R. I.

I haven't failed on any work brought to me. Some of the jobs have been pretty tough, but my N. R. I. books helped every time.

WILLIAM F. STEFFEN, MILWAUKEE, WIS.

Here is an idea and experiment of mine, which will entirely eliminate corrosion of connections at "A" battery posts on battery sets.

If using grip-tight clips which clamp over battery posts, remove clips from posts and ends of wires. Secure two double-connection Fahnestock clips, with hole in center of strip between the two connections. These clips are made of brass and have a sort of nickel-plated finish. Now clean and smooth down tops of "A" battery posts with file or emery cloth. Then put some soldering paste on the cleaned tops of "A" battery posts. Next, "tin" top and bottom side of Fahnestock clips around the hole and place one double-connection clip on each battery post, and solder on tight. You may experience a little trouble at first in making the solder stick so as to hold the clip down firmly, but if the tops of the battery posts are well cleaned and have plenty of good soldering paste on same, and the Fahnestock clips are well tinned around the holes and one has a good hot iron you will have very little trouble in soldering the clips to the battery posts. This job must be done quickly so as to not heat the plates of the battery. It is better to remove vent caps from battery when soldering, and do not use blow-torch in place of soldering iron. I have used an "A" battery with these clips for over a year and there isn't any trace of corrosion to be found.

The reason I used and suggested double-clip Fahnestock clips is that they are easier to solder and if one uses his own charger, it can be left connected to one end of clips and wires going to set connected to other ends of clips.

HERBERT J. STADLER, Lawrence, Mass.

I came across a Sparton 410 that was hooked up in a peculiar manner. A SINGLE VOLUME CONTROL was used instead of a dual and one side was connected to the ground and the other between the 2400 ohm and 1800 ohm resistors. This did not control the volume. I replaced the control with a dual control and hooked it up. Whoever had that set before I did ought to take an N. R. I. training.

MIDGET MICROPHONE

The Radio Television Industries Corporation of Reading, Massachusetts, have announced their Midget Microphones, which measure less than $1\frac{1}{4}$ inches in diameter and only $\frac{1}{4}$ inch thick.

This microphone was designed to meet the demand of speakers and singers for complete freedom of action and natural performance on the stage or in the open. It is of particular value to the lecturer who desires to illustrate his talk by sketching on a blackboard, or otherwise. With the use of this microphone, attached to his clothing, it is possible to turn his back upon the audience while referring to sketches on the blackboard—with the assurance that his remarks will be carried to the audience at all times regardless of his position on the platform.

This is a carbon granule microphone with stretched gold plated duralumin diaphragm incorporating unique constructional features, making for maximum sensitivity and fidelity. A special method of stretching the diaphragm permits the vibration of the full area for maximum response. By reason of special treatment to the carbon granules the microphone is exceptionally free from hiss and crackling.

It has been designed to replace any standard two-button microphone without additional equipment or circuit changes of any kind. Supplied with an attachment cord and handy connector it may be jacked in or connected with the usual speech amplifier input.



SPEAKER MAKING USE OF MIDGET MICROPHONE ATTACHED TO THE LAPEL OF HIS COAT

It is easy to understand the freedom of action permitted the performer by use of this system.

The ladder of life is full of splinters, but they always prick the hardest when we're sliding down.—William L. Brownell.

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A STORY WITH A MORAL

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burned out as it is a $1\frac{1}{2}$ volt filament tube. When the '71A was put in its proper socket it lit up. On placing a wire on the floor to act as an antenna and touching one end of it to the plate terminal of the first R. F. tube socket, with the burned out tube removed, very fair signals were obtained. Evidently the set only needed a new '26 type tube and an antenna to give satisfactory results. The owner was very well pleased. He had been informed by several sources (over the phone) that if his set was formerly operated from D. C. current it would not work in the new location.

For erecting a new antenna and inserting a new '26 type tube I got my dog free and everyone was happy.

The moral is to believe only what you see for yourself in Radio service work and at all times to inform new acquaintances of your ability to fix Radios. You will be surprised at the number who either have a sick Radio of their own or know someone who has and to whom they will recommend you.