Your Career in RADIO

YOUR CAREER IN

RADIO

BY

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AND

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Illustrated

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This smiling young announcer is typical of the young men who find a place in this important radio broadcasting occupation.

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FOREWORD

It is the hope of the authors that in this book they have done more than answer the often heard question, "How can I get into radio?" Unfortunately, that is a question which is asked by many who should be asking instead, "Should I even *consider* radio?" There has been too much said about the glamour of radio, too little of the hard work. A barrage of publicity naturally has tended to cast a certain amount of glamour around the whole field of broadcasting. Talk of coming television only has added to the feeling that radio is a field where wonderful things happen, where, for brief appearances before microphones, announcers and stars are paid fabulous sums. These facts may be true, but they have nothing to do with the main stream of radio activity. For radio is not the networks, nor the super-power stations. Radio, as far as the major chances for employment go, is made up of the seven hundred or so stations which have less than ten thousand watts of power each. That the exceptional person in radio may reach the Olympian heights of a widely publicized network program is a fact which adds zest to radio employment. But it *is* the exception, rather than the rule. Accordingly, the authors have examined the employment possibilities of radio on a more

modest plane. It is hoped that in this way a more honest and helpful picture has been given.

Every effort has been made to include all the essential facts that will enable a young man to make a wise choice of his special radio broadcasting vocation. The authors have felt it advisable to give a fairly comprehensive picture of radio in action, to tell *what* and *how*, as a working method of presenting the requirements and opportunities of radio work.

An important, and often overlooked fact about radio employment has been clearly recognized. That fact is that, to a surprising degree in a surprising number of radio stations, there is an overlapping of work. That is, an announcer may be also a continuity writer. A continuity writer may be an actor. An actor in turn may be a music librarian. A young man beginning work in a small station may find himself a veritable jack of all trades, required to operate a control board, select music, write continuity, announce programs. It is by this hard route that many of tomorrow's big names in radio will travel. Even in larger stations there is a certain measure of "doubling." It is only as he moves up the ladder that the radio man finds himself becoming a specialist. For what it is worth, the authors have presented this unusual situation as honestly as possible. For this reason, certain types of radio work have been treated, even though they do not, in themselves, offer wide employment oppor-

tunity. It is not intended to discourage specialization, but rather to prepare one interested in radio for the process by which he earns the right to specialize.

The authors have not hesitated to draw upon their personal experiences derived from many years in numerous radio capacities. They wish to thank the many persons connected with the radio stations and networks who assisted in supplying some of the factual material for this book.

NORMAN V. CARLISLE
AND CONRAD C. RICE

YOUR CAREER IN RADIO

1

FIND OUT ABOUT RADIO

"I have good news for you fellows who are thinking about going into radio broadcasting," Mr. Crowley, the vocational director of Central High School announced. The group of boys gathered in his office waited attentively as he went on. "Station KNKN has invited three of you to come to the station. The head of each department at the station is going to explain to you about his department, and the jobs in it. How does that sound?"

A murmur of enthusiastic comment swept the room. "I know that more than three of you are interested in radio," Mr. Crowley went on to explain, "But we can select three of you who are interested in entirely different jobs in radio broadcasting. These three will find out everything they can, then come back and make a report, and answer the questions of the rest of the class."

A few hours later the three who had been chosen were seated in the spacious office of Mr. Arnold Blake, general manager of Station KNKN.

"Now that the introductions are out of the way, we can get down to business," he said briskly. "So you want to get into radio?"

Jim Hanlon, Fred Wilson, and Harry Ames nodded.

"That's rather a large order," the manager went on. "Suppose you give me a general idea of what each of you is interested in—what you think you'd like to be in radio."

"I'm thinking about announcing," Jim began.

"Might I ask why?"

"Well, partly because I've been interested in speech work at school . . . and partly because I think I'd like to be an announcer." He hesitated, then added, "And because there's a lot of money in it."

The manager nodded. "We'll see that you find out all about announcing—including that big money." He grinned as he said the last two words. "I'm going to turn you over to Tom Connel, our chief announcer. He'll be able to tell you a lot of things himself, and I'm sure he'll arrange to have you talk with some of the other announcers, too. Now how about you?" He turned to Harry.

"I'm interested in broadcasting from a different angle, I guess," Harry said briskly. "The business end of it."

The manager straightened in his chair. "That's fine! You're getting over into my territory now. I started out as a radio time salesman."

"I figure that with radio on the upgrade as it is, it should be a good field for a salesman," Harry added.

"You're certainly right about that," the manager agreed. "You'll find that out when you talk to Mr. Curtis. He's our commercial manager. Now, what's your idea of the right job for you?" he turned to face Fred.

"I'm interested in engineering. Always have fooled around with radio. I have an amateur's license."

"Then you have a good start already," the manager said approvingly. "I guess you'll know the right questions to ask Mr. Barton, our chief engineer. And now that takes care of all three of you, doesn't it? Of course that doesn't cover all the jobs in a radio station. Just on the chance that you may have missed out on a job that might be better for you than the ones you're most interested in now, I'm going to talk to you again after you've made the rounds. Then, of course, there are many radio jobs that don't have anything to do with the radio stations directly."

The three were surprised. "There are? What kinds of jobs?" Jim queried.

"I'll tell you all about them later," the manager promised. "You'll get the idea better after you've talked over the jobs that you'll find right here in the radio station. But right now maybe I'd better tell you something about radio that young people thinking about this field don't realize. Does radio sound like a hard job to you three?"

"It shouldn't be very hard for announcers," Jim said thoughtfully. "Just talking into a microphone can't be such hard work."

"And how about you, Fred—does engineering sound hard?"

"No, I can't say that it does. Not if it is like the kind of amateur work I've been doing."

"All right. Now you, Harry?"

"Selling radio time shouldn't be any harder than selling anything else. Ought to be easier, in a way, because radio seems to be so popular I should think sponsors would be easy to get."

"I'm glad you answered me honestly," Mr. Blake said thoughtfully. "Your answers tell me two things. First, something about yourselves. They tell me that the chances are you'd like being in radio. You each seem to like the jobs you've selected as possible fields. But these answers tell me something else, too." He paused.

"What's that?" Fred queried, after a brief silence.

"They tell me that you have the same idea that so many people have about radio broadcasting. They're apt to see the glamorous, easy side and forget that radio is a business, a business run just like any other. More than that, radio is hard work—you'll find out just *how* hard when you talk to some of the people who work here. That's the thing you have to be very careful about when you say you'd like to go into radio. The question is this:

are you picking radio because you think it's easy, glamorous, or pays a lot of money? Or are you choosing this field because it's one for which you're genuinely fitted, one which you'll like so well that you'll welcome hard work?"

The three nodded in agreement. "I hadn't thought of it that way," Harry admitted. "But of course you're right. That's something we'll have to report back to the others."

"I'm saying that because it's something we've learned by experience," the manager added. "Thousands of people are always trying to get into radio, people who don't have the qualifications, the training, or the willingness to take the punishment that goes with a radio job. I don't want to disillusion you, but I do want to give you an honest picture. And that's what I've asked the department heads to do. They will give you the good side, yes, but they won't conceal the facts about the hard side."

"That's certainly fair enough," Jim commented. "That's what we want—an honest picture of radio broadcasting."

"And that's what I believe you'll get," Mr. Blake said as he picked up the telephone to call the chief announcer.

2

THE VOICE OF RADIO

"The best way to find out what an announcer does is to come back to the announcer's booth and see what happens." That was the first comment of chief announcer, Tom Connel.

"I'd certainly like to do that," Jim Hanlon answered with a grin. "You say 'what an announcer does.' I thought he announced."

"He does. But that's only part of his job. Or maybe I'd better say there's more to the job of announcing than you'd think. Come on, let's have a look and a listen."

Jim followed the announcer down the corridor. In a moment they stood before the glassed in walls of Studio A. Jim saw that the big studio with its heavy curtains and sound proofed walls was dark, with no sign of a broadcast in progress.

"Don't the announcers work in the studios?" he asked.

"When there's a program in the studio they do. But right now we're carrying network. That means that the

man on duty is just giving stand-bys and some short plugs."

"Wait a minute," Jim laughed. "I'm afraid I don't quite know what you mean."

"Sorry," the chief announcer replied. "We use a lot of words in radio that are just like everyday language to us. A stand-by is the station break—oh, that's another one. Well, a station break is the announcement that comes between programs. It's the time when the announcer gives the call letters of the station. We use the word plug to mean any commercial announcement, that is, an announcement that advertises a product or service. There's usually room for a short announcement between each program."

By this time they had crossed the spacious studio and stood outside a glass enclosed booth. Jim was alert to everything he saw. Seated at a desk inside the small booth was a young man who looked to be hardly more than twenty years old. Later Jim learned that he actually was twenty-one; that radio announcing is one field where young men can quickly forge ahead to success. His lips were moving, though from outside the booth Jim and the chief announcer could hear nothing.

"He seems to be announcing," Jim commented. "I thought that a red light flashed on during a broadcast."

"He's not announcing now," the chief announcer explained. "Just working over the next announcement he's

going to read. That's one of those extra little jobs that go with announcing. A good announcer will carefully read over the announcements he is going to read. Ted Herrick is our youngest announcer. He'll get some place because he really takes his job seriously. Let me tell you right now, that announcing is a tough job—plenty tough. It takes more than a good voice to be a good announcer. You'll find out why before you get through talking to our sportscaster and our special events man, and some of the older straight announcers. I'm starting you out with Ted because he's still new to the game—sort of at the bottom of the ladder."

While he talked, he swung open the door on well-oiled hinges. "Hello, Ted. Got a minute?"

"Certainly." The young man turned away from the hanging microphone to face them. "Nothing coming up for seven minutes. Have a record program then."

"Ted, I want you to meet Jim Hanlon. He's one of the Central students who are thinking about going into radio. Thought maybe you could give him a few pointers on how an announcer gets started, and what he does."

The two young men shook hands heartily. Jim liked the other instantly. "Nice personality," he thought to himself. "Wonder if his job helped develop that?"

"Only too glad to tell you anything I can," Ted Herrick said brightly. "Of course I'm not what you'd call a veteran yet."

"That's why I wanted Jim to talk to you," the chief announcer explained. "You're still new enough to have a pretty fresh slant on the thing."

"All right, you ask the questions," the cub announcer invited. "Fire away."

"Do you mind if I start by asking you how you got into announcing?"

"That's a fair question. It started back in my senior year in high school. I was on an entertainment committee and we put on a mock broadcast—you know what I mean, with a hand microphone hooked up through a receiver we had on the stage. I was picked to play the part of announcer. Right there's where I started checking up on radio as a career. I found out that requirements for announcers are going up. It used to be that they didn't inquire much into your education. If your voice was good, and your diction all right, and your grammar passable, that was all. Now I guess just about all the big stations want college men, and so do a lot of the small ones. College is an absolute requirement of network announcers."

"Any special course in college?"

"A lot of public speaking and drama. Foreign languages, too, because you have a lot of foreign names on news broadcasts. I happened to go to a university that had a radio station, so it wasn't long before I had a chance to go on the air there. In my senior year I was part-time

announcer for the university station. Before that I acted in a lot of plays our drama class put on, and did different kinds of announcing in connection with the special course I took in radio."

The chief announcer nodded in agreement. "The smartest thing anyone who wants to be an announcer can do is to go to a university which has a radio station, or a complete course in radio. Usually the two go together. More and more of the big colleges and universities are offering such radio courses."

"It seems to me I've heard of 'radio schools' that specialize in teaching you to announce. Are they any good?"

The chief announcer frowned. "I don't want to say anything that will hurt the few good schools of this kind, but the truth is that most of them aren't worth anything at all. They make many promises, but actually they're only interested in getting your fee. Personally, I've never met an announcer who got his training in one of these schools. I'll tell you something about the way they operate. When they're trying to get you to take a course, they'll say 'Why, when you complete your course of training, we'll arrange for you to have an audition at station KYYY,' or something like that. That shows the school up for what it is."

"What do you mean? Isn't that something, to get an audition for you?"

Both the chief announcer and Ted laughed heartily.

"No. Not if the school claims it's doing you a big favor by so doing. You can always get an audition anyway at any good station, if you seem to have any possibilities. We audition prospective announcers at least once a month here at this station. Most stations have a regular evening, or day on which they hold auditions. Of course, if a man seems to have exceptional possibilities, I'll give him a personal audition. We're on the lookout for men who may make announcers for us, even if they're not ready yet."

"What do you mean—'if they're not ready?' "

"Well, a man may be good, but not quite up to our special standards. In that case, we may farm him out—something in the same way major league baseball teams farm promising men out to minor leagues. We have an arrangement with a number of small stations near here to take men whom we send them."

"Then radio stations really are looking for announcers?"

"We certainly are BUT——"

"Hold it a minute!" Ted, the cub announcer held up a warning hand. "Here comes the break."

Eagerly Jim watched what happened. The young announcer swung around in his chair and stood up. Quickly he opened the door to the control room where an engineer sat attentively at the big board. "All set on that theme?" Ted queried.

"Third cut-in's right, isn't it?" Jim heard the muffled voice of the control operator say. The cub announcer nodded and slid quickly back into his seat. Jim saw that the red second hand on the big clock above the microphone was sweeping swiftly around. It said thirty seconds to ten. Deftly the announcer reached up to a panel of buttons below the microphone. He punched one of them, and immediately the sound of music emerged from the big speaker in the booth. Then a network announcer's voice said, "This is the National Broadcasting Company."

A red light flashed on. A gong struck three times. Then Ted Herrick's smooth voice swung into action. "This is KNKN, the friendly station. The Midtown jewelry company brings you the correct time. . . ."

A few seconds later Ted was saying, "And now recorded Tunes and Topics, a fast-moving quarter hour of lively tunes to brighten up your morning, and news to save you time and money." The announcer's eyes flicked over to another sheet of paper he held in his hand. Jim saw that it was a list of tunes. "As a rousing starter, here's a hit tune that's sweeping the country. . . ."

Then music filled the booth again.

"Be right with you when I log this," Ted said over his shoulder.

"What does he mean, 'log'?" Jim queried.

"That's one of an announcer's jobs. We have a sheet

we call a log. On it goes the time each announcement or program goes on the air. In case any discussion comes up about it, with the advertisers, or the Federal Trades Commission or the Federal Communications Commission, we'll have a record of it. A copy of the log goes to our bookkeeping department, and they make up the billings to advertisers from the record of what actually went out on the air."

A white light flashed on and off insistently. Ted snatched the telephone off its hook. "Hello . . . yes . . . Fire at General Factory . . . 25 pieces . . . 4 alarm . . . 9:52 . . . yes . . . Thanks."

The telephone was slammed back. Ted raised his hand in a swift signal to the operator. The light flashed red. From the notes he had scratched down, Ted read quickly. "Ladies and gentlemen, we interrupt this program to bring you a KNKN news flash. Fire broke out a few minutes ago in the main plant of the General Manufacturing Company. Twenty-five pieces of fire fighting apparatus are now at the scene. Spectators are urged to remain away from the vicinity. . . ."

Ted turned to face them. "Now maybe we can talk. . . ."

The door opened suddenly behind them. A girl with a sheet of paper in her hand stood there. "Another change on the Central Furniture copy," she said wearily. "Just came in over the phone." Ted took the page she handed

him, thumbed ahead in the announcer's copy book, removed a page and substituted the new one.

By the time the door had closed behind her, Ted raised his hand warningly again. An instant later the music came to an end and Ted read a long announcement advertising a milk company, then introduced another musical number. Again he went through the process of logging.

"Whew!" Jim exclaimed. "Does it go like this all the time?"

Both the chief announcer and the cub laughed again. "Fellow, this is easy!" Ted chuckled. "You should see what you run into on small stations. In the first one I worked at I had to put on the records and do all this kind of announcing too—only there were two announcements in a lot of the breaks instead of one. The station didn't have network programs, so they ran a lot of recordings. That meant a lot more work for the announcer. Besides that, each announcer had to select all the records from the record library himself. Here that's done by the music librarian. But that's the way it usually is when you're getting started. Your first job is likely to be one of the toughest."

"That's something I'd like to ask about," Jim said. "What about that first job? How did you get yours?"

"The first thing I did after I graduated was to make the rounds of all the stations in town here. I got auditions

all right, but no jobs. I was told that if I'd had some small station experience, I might be considered. I wrote letters of application to all the smaller stations in the three nearest states. You know—I told them what experience I'd had at the university broadcasting station and all that. One of the stations wrote and asked me for a recording of my voice. I had one made at a music store, and sent it to them. That landed me my job. And what a job it was! I had to get up at five every morning because I got the early morning shift. Had to get the station on the air at six. I really learned radio—small station radio, anyway."

"That's the big advantage of working for a small station to start with," the chief announcer interposed. "You learn radio pretty thoroughly and you get experience at all types of announcing: news, straight commercial, program, and sometimes sportscasting. Of course, when you get a job at a bigger station you may feel that you're beginning all over again, for probably, you'll get the kind of a shift that Ted has—straight commercial announcing —and the early morning shift, or late night shift."

"I'm beginning to see that there *is* a lot to announcing that I didn't know about," Jim admitted.

"What you've seen here, and what we've told you about it is just a starter," the chief announcer went on. "Even announcers on big stations have a tough grind of it. Long hours. Irregular hours. A great amount of night

work. Of course, when you work for a big station, you stand a good chance of being in demand as a special announcer."

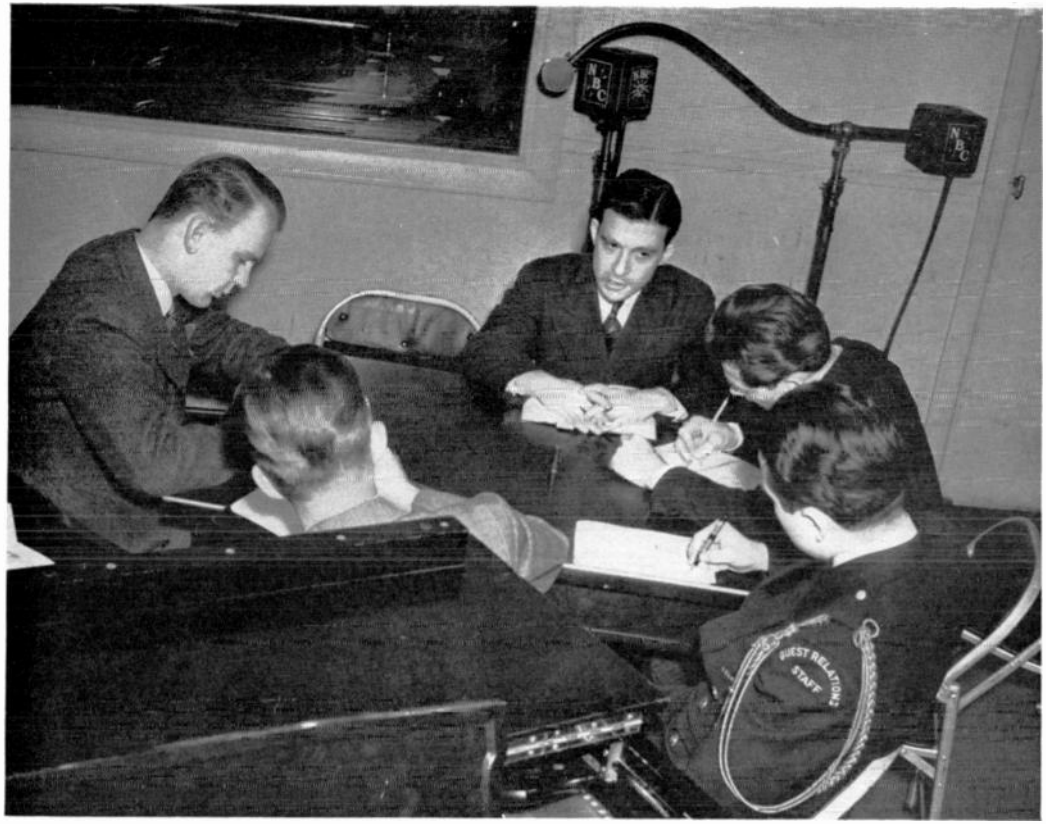
"Special announcer?"

"Meaning that the sponsors of certain programs will ask to have you do the announcing on their programs. When that happens, you're on your way up. Naturally, you'll make more money. Some stations pay announcers special 'talent fees' which are collected from the advertiser. Others have a bonus system, or a system of salary raises for announcers who are in demand by sponsors. Many announcers on the networks and the bigger stations work directly for the advertisers on their advertising agencies."

"Speaking of pay—just how much money do announcers make? I know it's quite a bit, but I've wondered just how much."

The chief announcer and the cub exchanged glances. The cub warned Jim, "You'd better prepare yourself for a shock if you think there's a great deal of money in announcing. Hold it!"

He read another announcement swiftly, logged it, and turned to listen as the chief announcer said: "Yes, there's big money at the top. But let's start at the beginning. Plenty of announcing jobs at small stations actually pay as little as $20 a week to start. Those jobs never do pay much more, because there are always cub



A chief announcer gives instructions to the younger men on the announcing staff. There's more to announcing than "just talking".

(Courtesy National Broadcasting Co.)

Editing news for radio is a specialized type of work which calls for an understanding of what makes a radio newscast different from a newspaper story.

(Courtesy National Broadcasting Co.)

Special events announcers "cover" everything in the way of news, as these broadcasters are doing in describing a flood.

(Courtesy National Broadcasting Co.)

announcers willing to take them. Then, when you move along the scale to a station like this one, the earnings go up. We start men here at $25 a week. After six months, if a man is working out all right, we up that to $30. By the end of the announcer's third year with us, he ought to be making $42.50 a week. And that's considered pretty good pay."

"And I thought all announcers made $100 a week," Jim commented.

"A lot of people think that. Of course, there are announcers who are making more than that. But out of the five thousand or so announcers in the country, the vast majority are making much less. Network announcers, who don't have any 'commercials' of importance make as little as $65. And their voices are heard by millions. For every announcer who manages to get up over $200 a week, there are a hundred who make $50 or less. I will say this, though. Pay scales for announcers are going up every year. In a few years they'll probably be $30 minimum for starting jobs in small stations, with perhaps $40 for larger stations as a starting minimum."

"Well, that's a lot better than plenty of professional jobs nowadays."

"That's right," the chief announcer agreed. "Well, how about it, Jim? You still think you want to be an announcer after hearing some of the hard things about the job?"

"I'm getting more interested than ever," Jim said enthusiastically.

"Then maybe you've got what it takes to get into radio, and stay there. Announcing gets into your blood. No matter how hard it may be, I guess we all get a kind of thrill from knowing that we're the voice of radio. Let's leave Ted to his troubles now, shall we? Come on back to my office, and I'll tell you some more about announcing—some of the things you ought to know before you decide that announcing is the job for you. Then we'll see what we can do about letting you meet our sportscaster and our special events announcer."

3

MORE ABOUT ANNOUNCING

Jim Hanlon followed the chief announcer down the long corridor that led to the main offices. Several men and women passed, all with a cheery greeting for Tom Connel. An air of friendly informality pervaded the station. Jim thought it would be pleasant to be associated with such a fine group of people. Tom opened a door marked 'News Room' and beckoned Jim to follow.

The steady rhythmic sound of a typewriter greeted them as the door opened, and Jim's eyes began to rove around the room. In the corner sat a man busily engaged in tearing paper . . . long rolls of it. Before Jim could ask any questions, the chief announcer stopped at the desk.

"Alan, I'd like you to meet Jim Hanlon. He's one of the boys from Central High. Interested in radio, so I thought I'd show him as much as I could. Jim, this is Alan White, our newscaster and news editor."

"Glad to know you."

"Alan, I thought you might take a few minutes and explain to Jim the job of a newscaster."

Alan finished sorting some of the sheets he had torn from the roll and placed them in the wire basket on his desk.

"Certainly, Tom. I'm always glad to show someone who's interested just what goes on behind a newscast."

"What goes on?" inquired Jim. "Why, I thought all an announcer had to do was to read what was in front of him."

Alan laughed. "That's what I thought, too, before I got into the game. Few people realize what goes on just before a news broadcast is presented."

Suddenly a bell on one of the machines rang five times. Alan hurried over to see what was coming in on the teletype. Tom looked at Jim as a look of perplexity crossed his face. He explained that five bells on the teletype meant a bulletin was coming in over the wire.

The steady tap, tap of the machine might mean that history was in the making. It might concern some one in this vicinity, or it might tell of an accident concerning important people in the nation. Alan bent over the machine, looking intently at the words being typed out. Suddenly he called Tom to his side.

"Look at this. This *is* important." Tom glanced at the clock and then told Alan to put it on as soon as possible.

He turned on the speaker in the Newsroom, and soon the announcer's voice was heard, "We interrupt this program to bring you an important bulletin from the news department of KNKN. The Naomi River has reached flood stage and bridges have been washed out on Highways 70 and 84. All motorists are urged to drive with extreme caution in that vicinity . . . We repeat, the Naomi River has. . . ."

Tom switched off the speaker. Just one minute had elapsed since the bulletin had come in and was placed on the air. The newscaster came in shortly, and both he and Tom seemed unperturbed at what had just happened. Anxiety showed on Jim's face. Both Alan and Tom laughed. To them it was just an every-day occurrence. To Jim, it was exciting.

"I never realized a bulletin could be put on the air in such a hurry," he said.

"That's only part of the work of a newscaster," Alan replied. He reached into the basket on his desk. There Jim saw items from France, Germany, England, Egypt, China, and South America.

"What about United States news?" Jim inquired.

"Most of us follow somewhat the same procedure there if it's not a bulletin," Alan replied. "First, the most important foreign items. We read foreign first, then national and local items of interest to the people in our

listening area. Of course, there are exceptions to the rule such as the bulletin we just read. There will be more on that in just a few minutes. We call it a 'follow-up' story."

Jim walked over to one of the machines, and watched it as it kept up the steady rhythm.

"How can you keep all the stories separated?"

"I figured you would ask that question. Most people do. Notice on this bulletin I just read. See that H127 on the top left hand corner? That is the cue number for this particular dispatch. Any more stories on the same subject will bear that cue number, but will have 'sub' written on it also. That tells us that they are sending more information on the story which came in previously."

"That certainly must keep you busy sorting the various items as they come in."

Alan laughed. "It is just part of my job as news editor and newscaster."

"Alan must use his own discretion as to what news to put on," Tom Connel cut in. "If he is in doubt about a certain item, then he comes to the office and inquires. We have to make sure that nothing is put on the air that might incriminate the station."

Jim looked at Tom as he said it. "Then you don't put everything on the air that comes over the wire?"

"I should say not," the chief announcer replied. "You see, the wire services newspapers, too. Sometimes some-

thing in print in a newspaper wouldn't sound the same over the air, and so we have to be careful. When you see how much responsibility falls on the shoulders of radio men, do you still think you'd like to enter the field?"

"That only makes it more interesting," Jim answered. "Responsibility teaches a person a lot, but I never realized so much had to be done."

Tom glanced at the clock. "I've got a program coming up. Would you mind telling Jim how you got into newscasting, Alan?"

"Of course not," Alan replied. "I have a half hour before the next regular news program, and I'll be glad to explain anything I can. Fire away, Jim."

Jim wanted to ask so many questions that he didn't know just where to begin.

Alan suggested that they take a look at one of the teletype machines. "See that roll? The news comes in on that roll, and as you will remember, you saw me tearing sheets when you first came in. . . ."

"Yes."

"I was separating items. Each basket on my desk, and there are three of them, contains the items I have already checked. One for international, one national, and one local. Some stations use market reports, and if such is the case, those reports are placed in a separate file. Farmers are very much interested in those reports, so if

you plan on going into a smaller station up state, then you will be putting these reports on the air."

Jim glanced at one of them, and a look of surprise appeared on his face.

Again Alan laughed as he continued. "Most of those look like Greek to you now, but they all come in abbreviated form. It saves a lot of time in sending, and a newscaster must know what those abbreviations mean in order to put them on the air. We have a cue sheet, explaining all symbols, so it isn't as much of a puzzle as you might think."

"How long have you been a newscaster, Alan?"

"Nearly six years now, but I've been in radio about ten years, all told. The first four years were spent in routine announcing. Then I decided that I'd like to enter some special field. As it happened, news appealed to me and . . . well, here I am."

"Then you were just a regular announcer before you entered the news department?"

"That's right," Alan replied. "I was doing just what Ted is doing now."

"But how did you happen to get interested in the news end of radio?" Jim inquired.

"I always had an ambition when I was a boy to become a reporter," answered Alan. "When I started in radio, I took a news broadcast every chance I got, and

I got plenty of them while I worked at the small station. Then during my spare time . . ."

"Spare time?" interrupted Jim. "Do you mean to tell me you had any spare time after all you had to do?"

The newscaster chuckled. "It may seem like a lot of work to do, but when you're interested in radio, you somehow want to learn all there possibly is to know, so that's just what I did. I didn't have the opportunity of going to college, so I spent quite a few evenings in the library. I picked up a good working knowledge of three foreign languages, and learned how to pronounce the foreign names that appeared in the news. In those days, the news services didn't send along key sheets as they do now. But the experience I gained then has proved invaluable to me many, many times."

"If a person wanted to go into that particular field, then what would you suggest?"

Alan thought a while before he replied. "Well, the first thing I would suggest is to get into some small station. Every station is willing to listen to anyone they think might have possibilities. If it's impossible for you to appear in person, then have a record made of your voice. Be as brief and concise as possible on the record. The people who listen to them are busy people, and if you come to the point, they'll appreciate your efforts a great deal more."

"Mr. Connel told me that a college education is a decided asset in radio nowadays," said Jim.

"Well, Mr. Connel was right. A great many stations will not consider your application unless you are a graduate of some higher institution of learning. Meeting people in school, developing a personality, and obtaining a thorough knowledge of world affairs will aid you a great deal if you decide on radio as a vocation. In fact, many of the universities throughout the country are offering special courses in radio. My suggestion is to take as many speech courses as are available. Dramatic art, extemporaneous speaking, oratory, short story writing. . . ."

"Writing?" queried Jim. "Why?"

"Because at some time or other you will have to write continuity, especially if you work in a small station. So you see, you have to be prepared when the time comes. If you can do more than the boss thinks you can, it's to your advantage."

"I imagine that most people think you take the news right off the wire and just read it," Jim remarked, his thoughts returning to the news.

Alan smiled. "Yes, that's about the size of it. Of course, when something important comes in over the wire, we have to be prepared to put it on the air at a moment's notice, and that requires deep concentration on our part, so that the message we convey is correct in every detail."

"Alan, did you ever run into a situation where inaccurate information was broadcast?"

Alan didn't hesitate in replying.

"I'll never forget one incident when I was employed at a small station up state. I edited all the news that came in, and due to the fact that we serviced a great rural area, news items concerning local characters were always in demand. We had reporters scattered throughout the territory, and they furnished us with an abundance of local items. One of them always was very careful in sending in his material . . . accurate in every detail, and so I learned to rely on his good judgment. That was my downfall. An accident occurred about twelve miles from the station. It happened to be in Bob's territory, and soon he was on the phone with a description of the accident, how many hurt, and who was to blame. I put it on the air, taking his word for it. And that was where I made the mistake of not double-checking his story. In my anxiety to get the news on the air, I put it on just as he had given it to me. In the dispatch, I had placed the blame on the wrong persons, and before we knew what had happened, the station had a suit on its hands."

"I never realized something like that might happen," said Jim.

"It can happen every day if you're not careful," Alan replied. "Of course, that's only in local coverage. Our news that comes over the wire is all double checked."

"This business of newscasting sounds mighty interesting. It gives you an insight into world affairs, doesn't it?"

"That's why I enjoy it," Alan agreed.

"Well, is there anything you can suggest that might enable me to, well, I can't just explain it, but . . ."

"Is there any way you can develop your ability along this line?" the newscaster finished for him.

"You took the words right out of my mouth," replied Jim.

Alan handed Jim a newspaper. "My best suggestion is read any and all newspapers you can get your hands on. Read every item carefully. Study it thoroughly so that you are familiar with all stories, and then read it aloud."

"Read it aloud?" asked Jim.

"Yes," replied Alan. "Reading aloud develops your voice control. It enables you to check your own mistakes, and it is a very good habit to get into whether you go into newscasting or just regular announcing."

"I noticed Ted reading over his commercials before he went on the air. Tom told me then that it was very important, and I'll remember it."

"A good thing to remember," continued the newscaster. "In fact, it is a good policy in almost every phase of announcing to do just that."

"The only instance I know of where it wouldn't do much good is in special events and sportscasting," cut in Jim.

Alan laughed. "Right you are. In a case like that, most of it is ad lib, that is, announcing without a script; and that, of course, couldn't possibly be treated in the same manner as a commercial announcing job."

"Speaking of commercial announcers," Jim interrupted, "is there any opportunity to earn extra money by announcing special programs?"

"Of course," replied Alan, "but here comes Tom. He can probably explain that to you more fully than I can. Tom, Jim would like to know what the chances are to earn extra money by announcing special programs."

"That depends upon your voice type," the chief announcer answered.

"What do you mean by that?"

"Suppose a certain client wants a smooth, low voice on a certain program. Well, some announcers have that particular voice quality, while others are better on punch copy. A person who has the latter type voice, of course, wouldn't do so well on a woman's beauty program."

"I see, and if your voice is suitable to a client's needs, you have a chance to earn some extra money."

"Right," answered Tom, "but that is something that comes with years of experience. Usually the amount you earn depends on where you are located, the types of programs you are on, and the advertiser himself."

"Sounds complicated to me," Jim remarked.

The chief announcer laughed. "Perhaps I should ex-

plain it more fully. First, announcers working chain shows in the bigger cities naturally earn more than announcers working the same types of shows on independent stations. Usually the amount of money involved for time and talent is greater. In other words, the advertising budget is so arranged as to allow more money for everyone on the show. Secondly," continued Tom, "an announcer may be just an announcer, and that's all."

"I don't quite understand," cut in Jim.

"A large number of programs on the air today employ an announcer as such, and he also acts as a stooge for the star of the show."

"In other words, versatility plays an important part in helping you get special jobs?"

"That's it," Tom answered. "If you can fill in as an actor occasionally, do a few dialects, change your voice to sound like someone else . . ."

"That's enough," Jim said, laughing. "I'm afraid if you mention many more things an announcer has to do, I'll just forget all about going into radio."

Tom chuckled. "It does sound like a lot of work to you right now, but one learns new things all the time, and soon they become routine work. Think that covers things? If it does, I'll arrange for you to meet Paul Sanders, our sportscaster. He'll have some more facts for you."

4

SPORTS AND SPECIALS

"Learning radio is a pleasure when you get the help I've been getting," Jim said.

"You'll find the same situation in most radio stations," the chief announcer replied as they walked down the corridor. "You see, the success of a radio station is really based on the special ability of announcers, actors, and writers, so we're always on the alert for new talent."

"Here we are," said Tom and held open a door for Jim. Jim noticed the activity in the rooms he passed.

"This is the program department, Jim, Paul's office is at the end of the hall."

Jim noticed the signs on the different doors. Continuity, Music, Program Director, and Traffic.

"This is the hub of a radio station," Tom explained. "If you want to, when you have finished with Paul, I'll tell you more about the different departments."

"Thank you, sir. I'll make it a point to have the time."

The chief announcer opened the door at the end of the big room and beckoned Jim to follow.

Jim noticed a comparatively young man seated at the desk in the corner of the room.

"Paul, this is Jim Hanlon, the young man I called you about."

"It's a pleasure to know you, Jim," said the sportscaster. "Sit down and I'll be with you in just a few minutes."

"I've got to leave you, Paul. I guess Jim can fire the questions at you all right."

"The more the merrier," Paul chuckled. "Always glad to tell anyone about sports. That's the one thing I like to talk about."

The door closed and Jim was alone with Paul. He noticed the sportscaster's keen eyes as he turned toward him. They seemed to take in everything at once.

"Shoot, Jim. What's on your mind?"

"This is a rather large order," Jim answered, "but I should like to know all there is to know about the sports announcing field."

Paul laughed. "We learn new things every day, Jim, but I'll be glad to help you all I can."

"Thanks. Do you mind telling me how long you've been in radio, and what prompted you to enter sports?"

"I should say not." The sportscaster thought a minute or so before he continued. "Let me see now . . . all told

about nine years, the last four being devoted to sports."

Jim was surprised to hear that. Paul looked so young.

Evidently Paul knew what was on his mind. "I started in radio when I was twenty, getting a job at station KBVU. I worked there for nearly three years, just doing regular announcing."

"Then the thing for me to do," Jim declared, "is to get an announcer's job first."

"Right," the sportscaster replied. "Lots of smaller stations hire sports men part-time, because of their knowledge of sports activities. Smaller stations usually lose out on the local sports because there seldom is anyone on the staff interested enough to tackle the job."

"Then that would be one way of breaking into it?"

"Absolutely," Paul replied. "Some of the bigger stations have more than one man to cover the various events, one for football, hockey, wrestling, and boxing, while the other handles baseball alone. It depends on the size of the station and number of events they carry. After you are working, you can make up your mind which department you'd like to specialize in, and then work, and work hard. I got interested in the sports angle, and I went to the library and studied everything in sports I could lay my hands on."

"How long ago did you take your first sportscast?" asked Jim.

"Four years ago. I'll never forget it, either. It was a

football game, and I had all the players mixed up, running in the wrong direction, doing all sorts of funny things. Why, I even had the referee making a touchdown one time."

Jim laughed.

"It wasn't so funny at the time, and I was just about ready to forget all about sports after that game. I was so nervous, thinking about what people listening in might think, that I went to pieces. Between halves when I had a short rest, I began to think that if I wanted to do sports, I had to get a grip on myself. The second half went better, but I made up my mind right then and there to learn more about the game."

"Learn more about it?" asked Jim, "Why I thought you said you had studied all about sports in the library?"

"I did," said the sportscaster, "but I should have gone to each and every practice session, in order to get accustomed to the players and their formations. From that time on, I practically lived at the stadium. And that is my first tip to you, Jim. If sports appeal to you, attend as many different events as you can. Watch everything. Remember what you see. A sportscaster gives a word's eye view to the listener. He has to be able to convey a running account to the radio audience, and paint a picture so accurate that it will leave no doubt in the listener's mind as to just what is happening."

"You certainly have to cover a lot of ground then, don't you?"

"Yes," said Paul. "Especially in the smaller stations. On the networks and some bigger stations, the sports announcer usually has an observer. He is the announcer's eyes, so to speak. He has a panel in front of him with a series of lights in different colors. This panel contains a list of the players and the respective positions they play. When the ball is snapped, the observer pushes certain buttons to indicate who gets the ball, where it goes, and on what yard line the ball is downed."

"I never knew that," Jim remarked.

"Few people do," continued the sportscaster. "I think you learn more though, if you have to depend on yourself. That builds a feeling of confidence."

"I can see where it would."

"Of course, football, to me, is harder to broadcast than baseball. In baseball, things don't happen quite as fast or as continuously as in football. In any sports broadcast, there can't be any groping for words. They've got to be on the tip of your tongue as fast as you think of them. Good eyes are a decided asset for a sportscaster. He must watch the players, the referee's signals, and the man working with him. Records must be carefully tabulated as the game progresses . . ."

"What do you mean by that?" Jim inquired.

"Suppose a player gets the ball from center. He crashes off tackle for five yards, fumbles, and the ball is recovered by one of his teammates. All of that is tabulated. In fact, the number of yards gained by rushing, passing, passes completed, passes incompleted, total yards punted, and so forth. Then, at the half and at the end of the game, a total summary may be given to show which team excelled in each particular phase of the game."

"Who keeps track of that?"

"Usually the spotter or observer," replied Paul.

"With all of that on your mind, isn't it easy to make mistakes?"

"I'll say it is," Paul admitted. "A fumble behind the mike may be just as bad as a fumble on the gridiron. It brings protests from thousands of fans. Sometimes it takes years for a sportscaster to live down a mistake he made. I know of one instance where a famous announcer made a couple of mistakes during an important game. One of the universities involved refused to allow him to broadcast any of their games for nearly three years. Cases like that are rare, though. After all, a sportscaster is only human and he's bound to make mistakes like anyone else. Next time you're disgusted with one, remember that."

"If everyone knew how much a sportscaster had to do during a football broadcast, I'm sure they would be more lenient when he did make a mistake."

"Unfortunately, they don't all think as you do, Jim. But having such a critical audience keeps us on our toes, so it has it's good points, too."

"And that's just one game you've been telling me about. How many types of games do you handle?"

"During the entire year, we cover all sports. Football in the fall, wrestling, boxing, hockey, and basketball during the winter, and, of course, baseball in the summer."

"Did you participate in every one of those events yourself?" inquired Jim.

Paul laughed. "No, not all of them. I played football and baseball, some hockey, and two years of basketball in college. Wrestling and boxing I missed out on, but I learned them by going to every match I possibly could. After two seasons I figured I knew enough of the fundamentals to give an accurate picture to the listener."

"You mentioned a while back that you'd rather broadcast baseball than football. Is it easier?"

"Not by any means," Paul answered. "Any sports event is hard to cover. It so happens that I like baseball better than football, consequently it is easier for me. Each announcer has his own particular favorite. In that he will excel, but he must do a commendable job in the other events as well, or he won't hold his job very long."

"I've often wondered just how a baseball broadcast is handled when the home team is out of town."

"We do what we call a telegraphic broadcast," replied

blessed with a photographic mind, and had all the information on players right on the tip of his tongue. He knew everything there was to know about them . . . and in every sport, too."

"It certainly doesn't sound easy to me," Jim said. "Ad libbing most of the time seems pretty hard."

"Yes, it is hard to get accustomed to after straight announcing. If you are at a station any length of time, you get a chance to work on some special events . . . street broadcasts and things like that. They get you acquainted with people and give you a background for ad libbing."

"Did you ever handle a street broadcast?"

"Of course," replied Paul. "That was really my first opportunity to do any ad libbing." The sportscaster laughed loudly before he continued. "I'll never forget the first time I took a broadcast. The program was sponsored by a fuel company. It may sound funny to you, but I had an alarm clock tied around my neck and a coal shovel in one hand and a thermometer in my pocket. In my other hand I held the mike. With that paraphernalia, I nervously approached the first person I saw, asking his name and his occupation. I guess he thought I was crazy with that get-up, and he laughed and kidded me during the time he was on the air."

"Why all the gadgets?" questioned Jim.

"Well, to make a long story short, I had the alarm clock set to go off during the broadcast. Whoever I

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Paul. "An operator from the telegraph company is right in the studio with us, and as the information comes over the wire, he hands it to the sportscaster to broadcast."

"You mean it is all written down for you to read?"

"I wish it were," Paul laughed. "No, it comes over the wire in very brief form. Players' positions are abbreviated such as 'lf' for left field, 'ss' for short stop, 'p' for pitcher, 'c' for catcher, and so on. We have to fill in the details such as, 'the pitcher winds up, looks at the runner on first. Here's the pitch . . . a fast ball cutting the corner for a called strike.' We ad lib that. If we were to read it just as it comes to us, I'm afraid it would be a pretty dull broadcast."

"How about weather and attendance figures?"

"Anything like that is given to us. Weather clear, official attendance, seven thousand. Usually they give us an estimated crowd at the beginning of the game, and then as it progresses, they wire us the actual attendance."

"Must keep you busy thinking of things to say," said Jim.

"It does, but then when a certain player is up, we can give his batting average, number of hits, home runs, stolen bases, strikeouts, and so forth. That helps to fill in the dead spots."

"I've wondered about those records you mentioned. Do you have to remember all those?"

Paul laughed again. "No, not all of them. We get to

know some of them through continued use, but at the end of each year all the records are compiled in the major and minor leagues. These are all in books which we refer to from time to time. Statistics used in each game are computed as we go along. We have a regular form that we fill out so that we know what each player is doing in each inning. At the end of the game we can give the number of runs, hits and errors, number of men left on base, number of strike-outs each pitcher is credited with, number of two-base hits, three baggers, and homers."

"Is that information given just at the end of the game?" Jim asked.

"No," replied the sportscaster. "We mention it during the game so that if someone should tune in late, he will know what has transpired before. That is necessary too, if we should take a game late."

"What do you mean by that?"

"Well, we may have previous commitments that prevent us from taking the game on schedule. Say we pick up the game at the end of the third inning. We must give an accurate and brief résumé of what has occurred before we started, and then continue the broadcast as we see it, or as we get it over the wire, whatever the case might be."

"That must take a lot of practice and study," Jim commented.

"Study and a good memory. I knew a man who was

blessed with a photographic mind, and had all the information on players right on the tip of his tongue. He knew everything there was to know about them . . . and in every sport, too."

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"Why all the gadgets?" questioned Jim.

"Well, to make a long story short, I had the alarm clock set to go off during the broadcast. Whoever I

happened to be interviewing at the time, received a thermometer or a coal shovel as a gift from the company sponsoring the program. At times the temperature would go up to nearly one hundred, and I would have to stop in the middle of the program and give a plug about buying your coal early. I got razzed plenty for that, but we sold coal, and plenty of it."

Jim laughed. "In other words, an announcer has to be a showman, too."

"Right," Paul continued. "Being able to rise to any emergency is an advantage in any occupation, but it is a necessity in radio. You have to be able to judge a person you're talking to. By his answers you can tell what subject to elaborate on. The trick is to keep from embarrassing a person you're interviewing. Find out what he is interested in, and then question him thoroughly about it."

"Suppose his hobby is something that's unfamiliar to you?"

"Then get him to ask the questions. Tell him right out you don't know much about it and you are willing to learn. That will put him at ease and before he realizes it, he is talking like a veteran."

"I've been wondering just what an announcer thinks about when something goes wrong with a broadcast."

"To tell you the truth, he hasn't time to think of anything but to get something on the air, and *fast*. That's why I said before that an announcer must always be on

his toes. I recall two or three instances that will show you what I mean. Not far from where I worked one year, a big speed boat classic was the major event. It was a yearly occurrence and the townspeople played it up. Racers came from all over the country, and the station, twelve miles distant, planned to broadcast the races for the first time. Wires were installed, and the big day was at hand.

"I went to watch them from a spectator's point of view. I happened to know the man covering the event. Bill Powers was his name. The first broadcast was scheduled to go on at one-thirty, five minutes before the first race. Boats were warming up, and the steady roar of the motors sounded good on the air. But Mr. Weatherman had different ideas. Right after the station took to the air, the wind started to blow. The waves were choppy, and the judges refused to start the race until the wind died down.

"I saw Bill frantically waving at me, and went up to the tower above the judges' stand. He asked me to get some of the drivers up there to interview them. He hated to return it to the studio because the races might get under way any moment, so he decided to fill in as best he could. Well, Bill talked for just *one hour and a half* about a race that didn't take place!"

"Do you mean to tell me that he kept talking for that length of time?"

"Yes, he did."

"What did he talk about?"

"Well," Paul continued, "after the first twenty minutes, he succeeded in getting a few racers up there. Then I would say for nearly one hour of the entire time, he talked about racing in general, records previously set, and what they expected to do that particular day, should the wind die down enough to race. That is one example of being prepared. Bill spent nearly two hours gathering data before he went on the air, to be used in just such an emergency. The races were finally postponed until the following Sunday, and were run on schedule."

"I hope that nothing ever happens to put me in a spot like that," Jim said. "Sports announcers certainly take it on the chin."

"Not only sports announcers, Jim. I recall a case in which an announcer was scheduled to broadcast an opera performance. The director failed to show up on time, due to an accident. For an hour this man ad libbed, and if you think it is easy to ad lib and make opera talk colorful, you just try it some time."

Paul glanced at the clock. "I didn't realize time was slipping by so fast. Almost time to go to the ball park. Anything else on your mind, Jim?"

Jim thought for a moment before he answered. "You've covered everything and more, sir. Thanks for giving me as much of your time as you have."

"Not at all," Paul replied. "I know you want to visit the other departments, but some day when you have time, I'd like to have you come to the park with me and watch things from the broadcast booth."

Jim's eyes sparkled with anticipation as he walked down the hall with the sportscaster. He'd accept that invitation at the earliest opportunity.

5

RADIO'S NOSE FOR NEWS

The outer door of the United Press News Bureau opened. The steady, rhythmic sound of many typewriters working at once, led Jim to believe he might be in an office overrun with stenographers.

"You must be Jim Hanlon from Central High," a man said as he approached him.

"Yes, sir."

"I'm Hal Cooke," said the manager. "Alan phoned you'd be over."

"Hope I'm not too much trouble, sir, but I'm anxious to find out every thing there is to know about radio."

Hal smiled. "In order to do that, you had to include our department. We pride ourselves on the important part we play in radio today. Jim, I'd like to have you meet Ralph Henderson. He's here with me."

"Glad to know you, sir," Jim said.

"Ralph is our teletype operator," Hal continued. "Of

course, I send, too, when we are busy or when Ralph is called out."

Hal motioned Jim to a chair. "Now tell me what's on your mind, Jim."

"I'd like to find out what goes on behind the scenes in a news bureau."

The newsman smiled. "We'll see what we can do about it. Here, as a starter, let me read something from the booklet we put out about ourselves. . . . 'The routine of peacetime news coverage vanishes when a continent goes to war,' " began Hal. " 'Normal communication routes are blocked, censorship delays the news and propaganda tries to color it. The press association is forced to deal with all three. We have dealt with them by assigning men fully competent to report what happens, when it happens. Experienced American reporters who have trod the world's news beats with American traditions of accuracy, impartiality, and speed are the best answers to the problems of reporting today. The veteran reporter on the spot is not easily victimized by propaganda.' "

"According to that," cut in Jim, "it looks like a long step from a cub reporter on a school paper to a man assigned to such duties in your organization."

"Right," agreed Hal, "but then you'll find that is true in any phase of business. You can't expect to get to the top overnight. The men we employ today have years

of experience behind them. They have gone through the first stages of the game and are seasoned reporters when they are assigned important beats. But don't let that discourage you. Many a fine story has been turned in by a youngster comparatively new in the game. With that as a start, it gives him the necessary shove he needs up the well-known success ladder."

"Sounds complicated, the way you say it."

Hal laughed. "Tell you what we'll do. Let's take an ordinary story right here. Then I'll explain it step by step to show you what happens."

"Fine," said Jim. "If you can give me an example, I can follow it much easier."

"O. K.," the bureau manager continued. "An important case is being tried in court. One of our men is detailed to cover it. As soon as it is over, he phones it in. We check and re-check back with him to make sure of the accuracy, and then send it out on our wires, provided, of course, they are open."

"What do you mean by that, sir?" Jim asked.

Hal motioned Jim to follow him over to one of the machines. "This one right here is set to send and receive at sixty words per minute. A dispatch is coming in right now."

Jim's eyes followed the words as they were printed on the machine.

"Do you mean that a man is sending news that fast?"

Hal laughed. "They all ask that question, Jim." He picked up a roll of tape. "This is the tape that does our talking for us."

Jim noticed a piece of paper about an inch wide. It was perforated in the center and contained a series of small holes, some above the center line, some below.

"The dots you see in the center keep the tape on this little cog," Hal said, pointing to it. He fitted it on to show Jim what he meant. "The little dots above and below the center line represent letters of the alphabet and figures."

"How do you make those?" Jim inquired.

"Like this." Hal moved the switch on the teletype to "send" and began typing out letters.

"It looks just like a typewriter," said Jim.

"In effect, that's just what it is. When we strike the keys, they punch little holes in the type to correspond with the letters we want."

Jim noticed that while the manager was sending, news was coming over the wire at the same time.

"Can you send and receive at the same time?" he asked.

"No. This actually isn't going over the wires. We are storing it up, so to speak. Then, when we get the 'go ahead' signal from the district manager, we flick a switch and shoot through the tape that we typed previously. That answers your question of a few minutes ago. The

A sportscaster must have a working knowledge of many sports both major and minor. This announcer is describing a track meet.

(Courtesy National Broadcasting Co.)

Street broadcasts provide first rate training for announcers on smaller stations. Here they learn to meet people, to "think on their feet".

(Station WMIN — Courtesy Bruce Sifford Studio)

From every corner of the world, by cable and short wave radio, the news pours into the news bureaus which edit it for radio.

(Courtesy R.C.A. Laboratories)

sending is automatic. We put the tape in here, and start it up."

A series of bells were heard and soon Jim saw a jumble of letters come over the wire.

"There's our signal. We use an abbreviated form to indicate various signals.'

Jim saw "Buos ga" come over the wire.

"That means 'bureaus go ahead'," Hal explained. He reached for the tape under machine two, and soon it was being fed through the machine, sending out news to newspapers and radio stations. "We couldn't send it out that fast if we didn't have a lot of it typed up ahead of time."

"Who checks the news that comes in over the wire?" Jim asked.

"Well, back of the correspondents are editors and traffic experts who clear the channels of communication for dispatches, and check those of even the most skilled correspondent for possibility of error."

Jim moved to another machine. He saw dispatches coming in from all over the world . . . China, Japan, Berlin, London, Rio de Janeiro, Cairo, and New York. "You must have a large number of correspondents to cover all news events."

"Yes, we have," Hal told him. "We maintain one hundred and one bureaus throughout the world. Sixty-seven are in the United States, and thirty-four in foreign

countries. We have two thousand, five hundred and eighty-nine full-time employees."

"I never realized that."

"That is what we do to maintain coverage, Jim, and there are other services besides ours. To mention a few: International News Service, Associated Press, Transradio Press, and the Press Radio Bureau."

"With that many supplying news, there should be plenty of opportunities for young people interested in news as a vocation."

"Yes, there are," Hal said, "but the qualifications are high. Now-a-days it is not easy to crash the ranks. A college education is essential, with a major in journalism. In college, you have to think of news in terms of radio, that is, you have to have all the standard journalism preparation, plus a special radio slant. I might mention that a man who has done news work on a small station might stand a better chance of getting a job with a news bureau of this type. Then, cub reporting on a small daily, next a larger one, and with resourcefulness, the cub turns in a story that comes to our attention. Anyone with anything on the ball is soon heard of, and we give him a hearing.

"What are the chances as far as salary is concerned?"

"Most of our men start at thirty-five, Jim. After they've been with us and have learned the routine of things, they can increase those earnings to as high as two hundred a week. Of course, many men earn less, depend-

ing on the bureau they head, and the work they have to do. If you can break into the ranks of the big foreign correspondents, then your earnings reach an extremely high level. That doesn't happen over night, though."

The machines kept up a steady tap-tap-tap as they continued to send and receive news.

"Would you know how many words are sent each day?"

"Off hand, I would say about three quarters of a million," Hal replied. "About five hundred thousand in the States, and two hundred thousand cabled and wirelessed."

"That must take a tremendous amount of wire."

"It does. As I recall, it's close to one hundred and seventy-five thousand miles. You see, we supply one thousand, four hundred and twenty-three newspapers and four hundred and fifteen radio stations with news."

"No wonder news plays such an important part in radio," exclaimed Jim.

"Not only in radio, Jim. People like to hear a dispatch on the air, and then read about it in the paper. Radio news is short and to the point. Newspapers go more into detail. They both serve a definite purpose in today's march of events."

"Do all the services operate in the same way you do?"

"We are all interested in the same thing, Jim. Getting the news and getting it first. Transradio uses a different

type of transmission than we do, however. They employ shortwave to send their dispatches in place of teletype."

"Shortwave?" queried Jim.

"Yes. The news is sent out in a series of dots and dashes and received on short wave receivers by radio operators. They send at an average speed of forty words per minute. An operator has to de-code it and type it out."

"Does Transradio supply newspapers also?" inquired Jim.

"Very few," the news man answered. "Transradio was formed primarily for the purpose of supplying news to radio stations. If you're interested in operating, that's a good way to break into the news game."

"What do you mean by that?"

"For example," explained Hal, "I recall a young man who took up radio while in the army. He started to learn code. The summer before he left the army, he was asked to fill in as an operator at one of the big golf events. He did such a fine job, relaying the news to the local bureau that the Transradio man recommended him to his boss. Shortly after he left the army he got a job at a small station as news operator at twenty-five dollars per week to start."

"Is that the usual pay, sir?"

"No. Some stations start as low as twenty in the smaller towns. Well, Larry worked there for nearly a year. He was transferred to a larger bureau and today, through

his efforts, has a fine job. Any operator taking news as they do in Transradio has an excellent chance to get a good position in other branches of radio. He learns news from the ground up."

"I can see where he would learn a lot," Jim replied. "Copying news every day would naturally acquaint him with the style used in news writing. Censorship made quite a change in news, though, didn't it?"

"I'll say it did," Hal replied. "When the war broke out in Europe in 1939, it involved transferring the nerve center of a long standing news distribution system across the Atlantic. We had offices in London, which served as the city desk of Europe. Central authority was shifted to New York. Official traffic jammed the cables, and a call from London to Paris was subjected to a delay of at least forty-five minutes at times. Even carefully considered plans needed flexibility. Norman Deuel, chief of the Moscow bureau, was stationed in Helsinki well in advance of the Soviet Union's invasion of Finland. His dispatches were filed through Copenhagen. Bombers appeared one day over Helsinki, and in one raid blew out six of the city's nine telephone trunk lines. That necessitated diversion of Finnish news from Copenhagen to Stockholm."

"How do the reporters get the news through with everything censored?"

"Resourcefulness," Hal answered. "One instance I

recall in particular was when the Netherlands were flooded by the opening of the dykes. The newsman had to get the news through, so he did this. . . . He told his colleague that it was calm and peaceful where he was, just like New Orleans in the spring. The man on the other end knew immediately what he meant. New Orleans, in the spring is flooded, and so putting two and two together, he sensed that the dykes had been opened, and the country flooded. He was right."

"With all this going on, what about the news at home? You'd think that would suffer."

"On the contrary. While wars go on in other parts of the world, domestic news must be covered as thoroughly as ever. In some instances it must be covered even more thoroughly, for war affects political, financial, labor, and even Hollywood and sports, news."

"You mentioned political news. Do you consider that so important?"

"Absolutely. The most important news center in the United States is Washington. We maintain experts in all the varied departments of government. Their work requires a balance that is less necessary in other reporting, for accuracy in political reporting needs impartiality. Our men are drawn from all sections of the country, and their years in Washington have been seasoned by years of experience in as many as a dozen other bureaus. They know not only the Capitol, but the nation at large."

"Did radio make any difference in the type of news sent?"

"Of course," replied the manager. "Speed in transmission took on a new meaning with the development of radio news broadcasting. News prepared for newspaper deadlines, written in a style most efficient for newspaper presentation cannot satisfy radio requirements. A news announcer must address his listeners as though he were in the living room with them. He cannot talk in long, involved sentences, set off by commas, and semi-colons. The announcer must develop his story as he progresses, in a simple straight-forward fashion. Complicated news must be digested and summarized in a related account, processed for ready understanding. You see, there are things which cannot be said on the air which are perfectly proper in a newspaper. Our men are trained in the technique of radio writing. They know how the average radio listener likes his news, and write it that way."

"When news was first used by radio stations, was it prepared the same way it is today?"

"On the contrary," the newsman replied. "When news was sent to radio stations years ago, it wasn't edited for air purposes. They received the same service the papers did, and the newsmen at the station had to go through it, edit it, and in a great many cases, had rewrite jobs on their hands. But that's all changed now.

Being in the news business, we realized that a different type of news editing was in the offing. We began to condense our material, making sure that we kept in the thought, but in shorter, clipped phrases . . . directly to the point."

"Do most stations use the news just as it comes over the wire?"

"Yes, they do, Jim. More and more bureaus are taking over the job of adapting news for radio so that all the newscaster has to do is tear it from the teletype and put it on the air."

"Do the services include any special features beside the news?"

"Yes, of course. We try to maintain a well-balanced program. We include women's news, farm news, movie chatter for the film fans, sports, business news, and humorous items to brighten up the programs."

"Must have taken a lot of time and energy to organize something like this," Jim observed.

"Don't put that in the past tense. It did take a lot of time and energy to get it started, and more to keep it going. This particular organization began in 1907, and has grown to a place of prominence through sheer work and determination to give the public a real service."

The telephone on Hal's desk rang. "Hello, United Press, Cooke speaking. Yes, right away. O. K."

He turned to Jim. "Guess we'll have to cut this short. Got to cover a story."

"Short?" Jim said, smiling. "You've given me more information than I had hoped to get."

"It's been a pleasure," the newsman replied. "Come up and visit us again. If I don't happen to be here, Ralph will be glad to give you any tips you may need."

"Thanks," said Jim.

"If you're going downtown again, I'll give you a lift." Hal reached on his desk. "Here, Jim. Maybe you'd like to take this booklet with you. It gives a few more details and some photos of our organization."

Jim thanked Hal again as they walked toward the elevator in the news building. He'd had an interview he would long remember.

6

RADIO'S HANDYMAN

"Now that you have announcing pretty well sized up," the chief announcer suggested, "how about meeting the man who gives the announcers something to say—the studio announcers, anyway?"

"You mean the continuity man?"

"That's right. Come on in here and we'll talk to Steve Manson, our continuity director."

Jim followed the chief announcer through a suite of offices where several young men and women were making typewriters hum busily.

"Steve—this is Jim Hanlon—the fellow from Central who's giving radio the once-over."

Jim shook hands with the tall young man who turned from his typewriter to greet them.

"I don't intend to be a continuity writer, but I thought——"

He stopped as he saw the grin on the continuity director's face. "Thought you might as well learn about

continuity? Not a bad idea, because the chances are, if you're an announcer you're pretty likely to be a continuity writer, too."

"That's right," the chief announcer said, nodding. "Well, I'll let Steve tell you all about that."

"Maybe we'd better start with that word, 'continuity'," Steve Manson suggested.

"I've always wondered just what it meant."

"If you'll picture the radio programs as a flow of traffic, one program flowing along right after the other, you'll get the correct idea. It's a *continuous* flow. In a way, you might call everything that goes on the air 'continuity.' But back in the early days of radio they got to calling the spoken word 'continuity'—the idea being that it's the spoken word that ties the programs together, and makes them continuous."

"I see. That makes continuity writing pretty important in radio, doesn't it?"

"Yes, I don't know what radio would do without us," the continuity director agreed, smiling. "I've figured out that there are over twenty million words a day broadcast in this country, on seventeen thousand different programs. Somebody has to write all those words. With more radio stations coming into existence all the time, and more advertisers entering radio, that number of words is going up steadily. You see, commercial programs take more words than sustainings."

"Why more words?" Jim queried.

"Because of the 'credits.' A 'credit' or 'commercial plug' is a term we use to indicate the advertising message. You know—'Use Pearly White tooth powder for pearly white teeth.' Writing commercial plugs is a big part of the job of any continuity writer who is employed directly by a radio station."

"Don't all continuity writers work for the stations?"

"I should say not. Far more of them work for advertising agencies, or for themselves as independent writers. There are over a thousand agencies in this country that have special radio copy departments, and lots of others that turn out some radio copy. But let's take a look at the work we do here, first. We have three in the department, besides myself."

"Three? But there are four people out there."

"I know. One of them is an announcer. Some stations don't have anyone who devotes his full time to continuity. Whatever copy there is to be written is turned over to various announcers and other staff members in the production department. That way each announcer devotes a certain portion of his time to writing."

"That's what you meant when you said that as an announcer I'd be likely to do some writing," Jim commented.

"That's right, particularly in the small stations where most announcers start. So it's a good idea to know some-

thing about continuity writing. Why, in some stations, members of the sales staff may also write commercial continuity."

"Then would you say that continuity writing offers much of an employment opportunity?"

"Yes, I'd say it offers some good possibilities. The tendency in many radio stations nowadays is to employ full time continuity people. Then, as I said before, there are so many chances for continuity writers in the advertising agencies."

"I've wondered just what qualifications a person would need to get into continuity writing? He'd have to be able to write, of course."

"Yes. But it calls for more than that. Writing for radio is something quite different from writing for a printed medium. How words *sound* and how they *look* are two different things. That's something that gives a young man a good chance in radio. Men with a lot of experience in writing for printed mediums may not get the idea at all when it comes to radio. We have a good many applicants for writing jobs, and the reason so many are turned down is that they don't think in terms of radio. That's a habit you can get into by just listening to the radio announcements—really listening. Of course, if you're in a position to go to a college with a course in radio, you'll probably have plenty of chances to develop that ability."

"Then you think it's a good idea to go to college?"

"I believe it isn't required by all radio stations, but it certainly helps, especially if the student keeps track of commercial radio. That's one thing you can't get away from, Jim. The sponsors are the ones who pay the bills. Continuity writers who work for radio stations, are really working for the sponsors. In my department, one of my jobs is to help the salesmen 'service' the accounts. Let's say we have a program sponsored by a furniture company. The salesman probably calls on this advertiser once a week or oftener. He picks up the copy, a newspaper advertisement, or just some scribbled notes, about the 'specials' the furniture company wants to feature that week. Then one of us puts this rough copy into the proper form for a radio announcement.

"About once a month I go along with the salesman to call on the advertiser. I go through the store, studying the merchandise and listening to the furniture man telling me about it. That's to get a better idea of what I'm writing about. Lots of times, the continuity man is able to do a lot toward keeping advertisers satisfied, and keeping them on the air."

"That's something I didn't know about," Jim admitted.

"You'll notice the continuity writer must be something of a handyman," the continuity director laughed. "Very often he has some direct contact with the public,

too. For instance, we have a program called the 'Club Calendar.' It's made up of announcements we receive from the various clubs and organizations. To keep those announcements coming in, in the form we want them, I've assigned one of the writers to the job of contacting the various clubs in this community.

"Then, there's another program called the 'Parade of Progress.' It contains dramatizations of our local history, and interviews with citizens who've lived here for years. I handle that myself, and it calls for a lot of discussions with the citizens, in order to get the interview all set. We arrange all the questions and answers in advance.

"Then I have still another job. I handle the publicity—that is, I write the releases for the newspapers, and all that. Of course, some stations have publicity departments. The point I'm making is that, when he works for a radio station, a continuity writer may be called on to do a variety of jobs."

"Then the ability to perform those extra jobs might be helpful in getting a position?" Jim queried.

"I should say so. That would be true on a big station, as well as a small one. On a big station, more of the programs are apt to be agency written, or come from a network, so they very often like to double up on jobs. A small station may have a lot of copy to write, but hands it out to the announcers. However, many of these small stations are finding that it works better to have some one

continuity man in charge, to keep track of the copy."

"That gives me a pretty good picture of a radio station continuity writer's work. But there's one other question," Jim said with a grin.

"What's that?"

"The matter of money. Could you give me an idea of what a radio station continuity writer is likely to earn?"

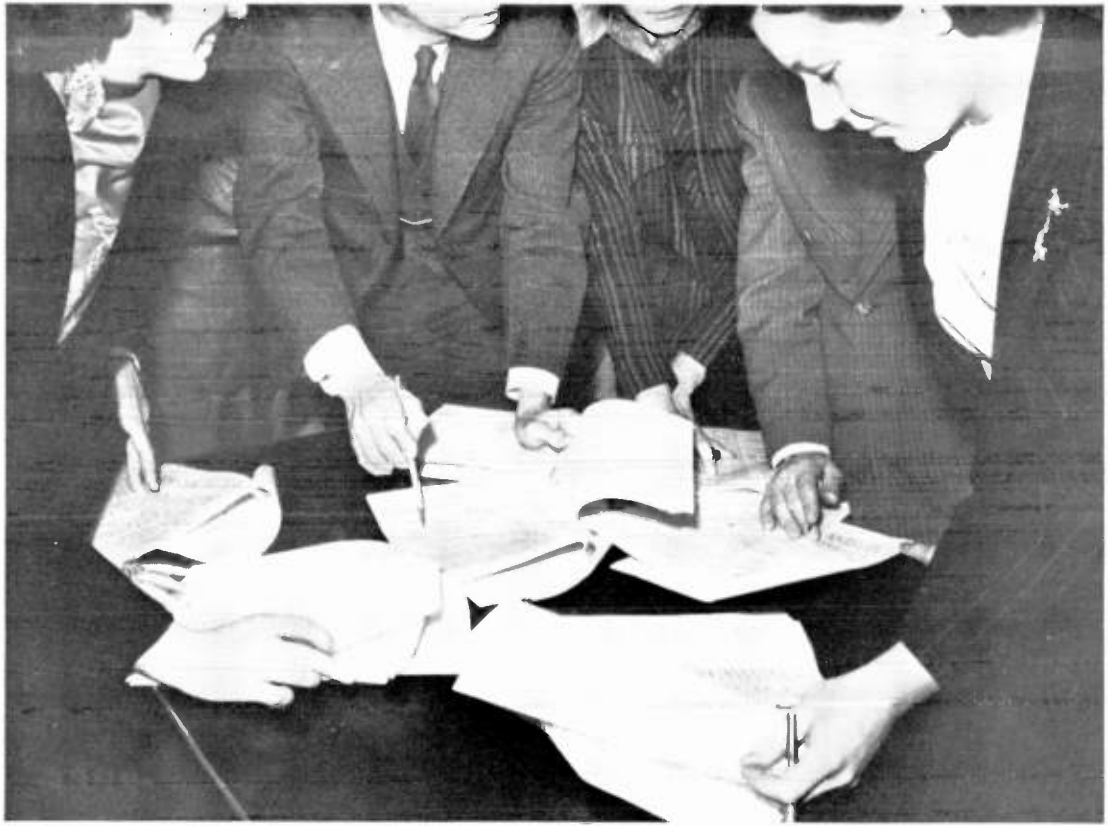
"That covers a big range. $20 to $80 a week, depending on the station, the work done, and the locality. Frankly, it isn't the best paying job in radio. That's why most men who've worked as continuity writers for radio stations are anxious to graduate to better jobs in the advertising agencies, or better yet, to develop a script show of their own."

"Script show?"

"I mean a serial program like 'The Goldbergs' or 'Betty and Bob.' The people who write these programs get the top money in radio, even more, in most cases, than the top notch announcers. There are even a few cases of several thousand dollars a week." He laughed as he saw the look on Jim's face. "Wait a minute! Don't let me give you any false impressions. For one thing, turning out a daily program in a serial is a mighty tough job. For another thing, there are comparatively few such jobs. For still another thing, you've got to have a pretty good idea these days."

A dramatics director has a wide variety of duties, from seeing that the microphones are placed properly to give the effects he wants, to telling the actors how to read their lines.

(Courtesy National Broadcasting Co.)



Before there can be radio drama, there have to be scripts like these. Writing them is one of the jobs of the continuity writer.

(Courtesy National Broadcasting Co.)

"The way it usually happens is that someone already active in continuity work gets an idea for a new set of characters. He prepares two or three sample scripts, and submits them to an advertising agency. If the agency likes the scripts, it may go to the trouble of producing a couple of sample programs, asking one of the advertisers to listen to them. If the advertiser likes the scripts, the writer is on his way. But there are plenty of 'ifs' there. Of course, there are other ways. For instance, a writer may have a program on a local station. It may be so good that it will 'go national.' But that doesn't happen much any more. Then again, he may have an idea which can be sold to a network that will produce it as a sustaining program, or in hopes of selling it."

"It all seems to come back to the idea, doesn't it?"

"Right! Here's a case that shows how important an idea can be. It's sort of a modern success story. A young fellow who ran an elevator in the building where a network has its studios, wanted to get into radio. He took night school courses, and learned everything he could about radio. Then he began sending in scripts. Nothing happened. There wasn't anything new about his *ideas.* His scripts were getting better and better. Probably he was a better writer than you'll find at most local stations, or the average advertising agency. Then he built a dramatic script around a clever *idea.* He got a job with the network, and advanced to become one of the highly

paid writers. Until he got that *idea*, he didn't get very far."

"Too bad there aren't any rules for getting ideas."

"I think the best way to get them is to try to get a job in radio—any kind of job. That's your best chance of finding out what makes radio tick, what makes a radio idea a good one. I guess that's one of the forms of compensation you get as a continuity writer, even an unimportant one. There's always the exciting prospect of getting a million dollar idea."

"But what if you don't get one?"

"Well, a continuity writer still has a chance to go places in radio. He may advance to become continuity director of a radio station. Some of those jobs are quite substantial. His knowledge of the inner workings of radio may give him a chance to get a responsible job in an agency. He may get a job as advertising manager of a firm that does a great deal of radio advertising, and wants somebody who knows radio to act as a contact man between the company and its advertising agency. He may go into some other branch of radio, that is, he may become program director, merchandising director, or something of that sort, depending on the direction in which his talents develop. Like announcing, continuity is a pretty good jumping off point for almost any destination in radio."

"That's a slant on it that hadn't occurred to me," Jim

said thoughtfully. "In radio, it seems as though anything may lead to anything."

The continuity director laughed. "That's a good way of putting it, Jim. Radio itself is moving along so fast, carrying us along with it. One thing most continuity writers have their eyes on right now is television. The smart ones are already studying the new technique, because there's going to be a big demand for television writers."

"That's something else to think about!" Jim said enthusiastically.

7

ALL THE AIR'S A STAGE

"I certainly appreciate the opportunity of visiting the various branches of your department," Jim said as he walked through the hall with the program director.

"We're always glad to give students as much time as we can in explaining radio. If we show them everything and do a thorough job, it helps them to form a good opinion of what really goes on behind the scenes."

Mr. Mulroy held open a door and motioned Jim to follow. Jim heard a murmur of voices as the door closed behind him.

"This is where we usually hold our auditions, Jim, but when it is not being used for that purpose, our radio players rehearse their shows here. There's Jerry now. Jerry, would you come here a minute?"

A blond young man walked toward them. "Yes, Mr. Mulroy?"

"Jerry, this is Jim Hanlon, one of the boys visiting us today. He's from Central High and would like a few

pointers on the dramatic end of radio. Mind if he sits in?"

"Of course not, Mr. Mulroy."

Jim felt at home immediately.

"I'll leave you in capable hands now, my boy. Call me when you want to inspect the other departments." With that, the program director left.

Jerry introduced Jim to the other people in the room. These were the people he had heard over the air many times. They were ordinary folks, laughing and talking, just like anyone else. To them, radio was a job, and they took it seriously.

"Find a seat, Jim. As soon as we're through rehearsing, I'll be with you."

Jerry turned to the cast. "All right now. Pick up the sequence on page three, just after line nineteen. Myrt, give Tim his cue. Milt, watch your cues on that approaching car. Better come in just a line ahead. I think it might pick up the action a little."

Jerry reached on the table near him and walked over to Jim. "Here's a copy of the script we are doing. It might help you in following us along."

Jim thanked him and glanced at the sheets of paper in front of him. He turned to page three and soon was following the dialogue.

"Better take that over," Jerry's voice cut in. "Myrt, put a little more punch in that last line, like this. . . ." and Jerry showed her what he meant.

Jim listened as they repeated the few lines again. He noticed the change in Myrt's voice as she came to the part.

"That's much better," said Jerry. "Now let's go through it again, starting on the bottom of page two, line twenty-two. Tim, put a little more pathos in your voice. After all, you're going away for two months. This isn't just a little jaunt down town."

The cast smiled. The way Jerry coached them, they couldn't help wanting to work, thought Jim. He certainly had a way with people.

"O.K., that's enough," Jerry said. "Tonight at seven for dress!"

"Are they going through it again tonight?" wondered Jim. He noticed the clock. He'd been there forty-five minutes.

"How do you like it?" asked Jerry, coming toward him.

"Fine," Jim replied, "but did I hear you say more rehearsals tonight?"

"You did," answered Jerry. "The skit we were rehearsing is for tonight's episode of 'Her Mother's Children'."

"But that's only a half hour program," Jim interrupted.

"A half hour on the air, yes, but that half hour represents approximately five hours of rehearsal."

"Five hours?"

"Yes, and tonight they'll add at least another hour to that when they go over it once more with the orchestra for music cues on interludes. You see, it must be letter perfect. Radio isn't like stage production. Of course, by that I don't mean that none of the procedure is similar, but in radio all action must be conveyed by voice and sound effects. On the stage, the actors tell a lot of the story by gestures. Until television is here on a practical basis, we have to resort to sound effects and voices. We must create a picture so vivid that the person sitting at home, listening to the play, will imagine himself taking one of the parts."

"Do the people I just saw take part in all of the plays broadcast over this station?" Jim inquired.

"Most of them," replied Jerry. "Once in a while we bring in an extra, but they are a very versatile group, capable of handling most any type of character. Tim can do anything from an old man to a Chinese merchant. He's mastered about seven different dialects so he appears in almost every production."

"He certainly didn't learn *that* in school, did he?"

"A good share of it. The dialects he learned by talking and listening to people of different nationalities. Tim is a good imitator. He thought so much of dialects that he chose that as a subject for his thesis at the university."

"Then Tim is a college man?"

"Of course. Practically all of the cast have college educations."

"Do you consider it essential?" asked Jim.

"I wouldn't say it was absolutely essential. There are exceptions to every rule, but I will say it is a decided advantage. Not so long ago, courses in radio dramatics were unknown in most schools and colleges. Now most schools include it in their curricular activities. Quite a few of the schools now have their own radio stations so experience can be acquired in college. By graduation time, the student is older and has had the opportunity of associating with other people. It gives him a fuller understanding of things."

"Would you say that anyone with the proper training would be capable of doing radio dramatics?" Jim asked.

"No," Jerry replied. "The first essential is a good voice. In announcing or dramatics, that is the first requisite. Many a student has a good voice, but it is undeveloped. My suggestion is to take every speech course available . . . oratory, extemporaneous speaking, voice . . ."

"Voice?" cut in Jim. "Why?"

"Proper breath control is important in radio work. Learn to breathe from the diaphragm. The mike is a sensitive piece of mechanism. It picks up every sound from a tiny whisper to a shout. By proper use of the voice, we can convey entirely different meanings to the same phrase in the script. Let me show you what I

mean." Jerry picked up the script on which they had been working. He read three or four lines. Then he changed the tone of his voice and read them again.

"Do you see what I mean?"

"Yes, I do," Jim replied, "but how do you know which is the proper inflection to use?"

"That comes with experience, Jim," Jerry said, smiling. "In this particular play, the same characters appear week after week. Our actors live those parts all during the play. They try to do it in such a way as to take the listeners out of this world, so to speak, and make them believe they are acting the parts themselves. We try to make it as nearly perfect as possible. Listeners nowdays are very critical. Years ago, they'd pay no attention to mistakes made by actors. It's entirely different now. Let one of us make a mistake and the morning mail is flooded with criticisms. That might explain why we spend hours rehearsing a play that actually takes only thirty minutes on the air. Of course we are human and do make mistakes at times, but we try not to."

"Do sound effects play an important part in radio?"

"They certainly do," Jerry answered. "A play without sound effects is like a stage without props. We have our own sound department here, and Gene takes care of it. We give him a script in advance and all his sound effects are cued. He looks it over and then it is up to him to produce the necessary sound. Lots of the various

sounds are recorded from life, and that, of course, simplifies matters for Gene. Let's go into the studio. I can tell you more about it."

Jim followed Jerry into the hall. Soon they were entering the same studio he had been in before. He could see Ted through the double-paned window. Ted nodded a greeting as he passed by. Jerry approached a door at one end of the large studio.

"This is our sound effects room," he explained.

Jim saw what looked to him like a jumble of toys, gadgets, and whatnot.

"Looks odd to the casual observer," Jerry said, "but out of these funny looking objects come the sounds heard on the air."

"What is that cylinder over in the corner?" Jim inquired.

"That is our wind machine. Listen!" said Jerry, turning the crank at one end of it.

Jim heard the sound of a soft breeze. Jerry increased the speed and the hollow roar of a tornado boomed through the room.

"This barrel-like cylinder produces the noise as it rubs against the cloth on the outside of it. You noticed that the velocity of the wind changes with the speed of operation. This," said Jerry, picking up a screen with buckshot inside, "is what we use to denote waves on the

seashore." He tipped it back and forth to show Jim what he meant.

A puzzled look passed over Jim's face.

"Doesn't sound much like it, does it?"

"Frankly, it doesn't," Jim admitted.

"Tell you what you do. I'll get Ray to open the mike for me and you go into the audition room."

In just a few minutes Jerry repeated the sound.

"I take it back," laughed Jim as he came back into the large studio.

"The mike picks up the sound of the buckshot as it passes over the tiny screen, and the result is the sound you just heard. Here's something else that sounds unbelievable," Jerry went on, picking up a piece of cellophane. "To you, it's just what you see, but to a radio audience, this same piece of cellophane can become a raging fire on the air when crumpled like this." Jerry showed Jim what he meant. "The tiny crackles are amplified and create a sound picture of a fire."

"When you give Gene a script for a show, is it up to him to figure out what to use for a sound effect?"

"As I said before, Jim, most of the standard sound effects used are on records, taken from life. They serve the purpose. In some instances, Gene has to beg or borrow a new effect to produce the desired sound. That's why we say that a sound effects man never throws any-

thing away. He may be able to use something you and I wouldn't take a second look at."

"I can see that," Jim agreed, as he glanced in one of the corners. He saw a cabinet with fifty or sixty objects . . . whistles of all types, roller skates, two or three short boards of various widths, and a small tub.

"What does he use the boards for?"

"To produce the sound of a shot," answered Jerry. "He slaps the board on this leather upholstered chair. To you, it may not sound anything like it, but over a microphone, it's the exact reproduction of a gun shot."

"Must keep him busy, handling the effects on a broadcast."

"It does, but the effects are usually cued far enough apart so as to give him plenty of time. Look at this script."

Jim's eyes followed Jerry's hand as he pointed to the line on top of the page.

"Right on the top of page four is a sound effect, but if you will notice on the bottom of page three, you will see the cue for it. The sound effect is cued in in plenty of time so as to coincide with the words being spoken. The effect must be right on the nose, or it can ruin a broadcast."

Jim laughed. "I was listening to Jack Benny one time, and one of the members of the cast came in before the door opened."

"Situations like that are bound to occur," Jerry re-

plied. "On a program like Jack's, though, it is easy to ad lib and cover up a spot with a humorous response, which Jack always does. However, on a serious type of broadcast, there is no room for levity, and it puts the cast in a spot when such a thing occurs."

"No wonder so much time is spent on rehearsing," said Jim.

"Covering up a mistake is easy on the legitimate stage, but once something is said over a mike, it is gone forever. We do our best to see that everything runs as smoothly as possible."

"Do most stations have sound effects departments?"

"The larger ones do," Jerry answered, "but it's another job for the announcer at the smaller stations. They don't have enough programs as a rule, to warrant a separate department. The few effects they do use are recorded, or can be handled by the regular announcer. Anything more you'd like to see in the sound department?" Jerry asked.

"No thanks," replied Jim. "You've covered it enough to give me an inside view of what happens. I'm afraid I'm getting so much information today that I won't be able to remember half of it."

"I imagine you have seen a lot today. Let's go back to the audition room. I'd like to arrange the scripts for tonight's show."

The two walked out of the studio, closing the big

sound-proofed door behind them. Certainly glad I was one of the boys chosen today, Jim thought as they walked along. This was one day he would remember for a long time, whether he entered radio or not. Soon they were going through the door to the audition room. Jerry motioned Jim to a chair.

"Anything further I can help you with, Jim?" he asked, as he picked up the papers on his desk.

"Why, yes, Jerry," Jim replied. "Do you think that stage experience is an asset for anyone planning on radio dramatics?"

"Certainly," Jerry answered. "I'd suggest that you get in as many plays at school as you can. That type of experience gives you a background for timing that is vital in radio. You'll find it extremely helpful in shows involving comedy situations. If the timing is off, then, of course, the joke falls through, and you do what we call, 'lay an egg'. Practically every one of our radio players has appeared in at least a half dozen big productions at school. Along with this training, you usually get the voice training and breath control that I mentioned before."

"Do you think there is a future in this particular field?"

Jerry laughed. "Of course I do, Jim. You see, this field is my job. I've been in it now for nearly six years and I like it immensely. As far as remuneration goes, you can make a very good living at it. Certain factors enter into

the picture, of course. You can't expect to earn as much on a smaller station as you do on the networks. Very often, an announcer doubles as an actor in dramatic shows, and is paid 'talent fee', or a certain amount for each program. This naturally varies with the station and type of program, and may range from two dollars per program up. In such cases, however, there isn't the detailed rehearsal. So, you see, even if you don't intend to be a radio actor, it's to your own advantage to be able to take a part occasionally. The real money is on the networks, and the biggest ambition of any radio dramatist is to get a 'five-a-week show'."

" 'Five-a-week show'?" Jim inquired, with a puzzled expression.

"That's our term for a script that runs five days a week, Monday through Friday. Those serials on the networks pay good money. The scale will average anywhere from fifty to one hundred twenty-five dollars per week, depending on the point of origin."

"Sounds like a lot of money to me."

"If you consider the time spent rehearsing off the air, and the many hard years of study back of every player, then you begin to realize that every dollar is well-earned. Don't get the impression, as many people do, that radio is just fun, Jim. It's work, and hard work. It's more exacting than most occupations because we work on specified time. Not just minutes, but seconds. Our shows must

be produced and timed to come out right on the second, or valuable time is lost which may involve thousands of dollars on a network show. Keep in mind, Jim, that the field is crowded. Television will no doubt increase the possibilities in radio dramatics, but there'll still be plenty of competition. Think that over."

"I will," Jim promised, as he thanked Jerry.

8

THERE ARE OTHER JOBS

"Mr. Mulroy will see you now, Mr. Hanlon," the girl at the reception desk said.

Jim thanked her and walked into the program director's office.

"You told me to drop in and see you when I'd finished talking to Jerry, and—well, here I am!"

"Do you feel that you could handle the dramatic end of radio now?" Mr. Mulroy asked, laughing.

"Well, hardly," Jim replied. "But I do have a better idea of what makes the wheels go round."

"That's exactly what radio is, Jim—a big wheel; and the dramatic department is one of the many spokes. We, in the program department, like to consider our branch of radio as the hub of the wheel. In that wheel, you'll find Continuity, Traffic, Music, Dramatics, and Production. The other departments such as Sales, Engineering, and Announcing, all revolve around our efforts. In other words, Jim, if one spoke is missing, the wheel is bound to be lop-sided."

"I understand," Jim said, nodding. "Every department is really dependent on the other."

"That's right," the program director agreed.

"You mentioned Traffic a moment ago, Mr. Mulroy. What's the work of that department?"

"Briefly," Mr. Mulroy answered, "it's the job of keeping a record, usually on charts, of the different announcements and programs, and of the times they're scheduled to go on the air. For example, suppose an advertiser wants three announcements a day, five days a week. His product appeals to men. He'd want one announcement, in the morning, between eight and eight-thirty, one in the evening around six-thirty, and another around ten o'clock. . . ."

"Why not around noon?" Jim interrupted.

"In a city of this size, where most men are not at home for their noon meal, that would not be practical."

"Oh, I understand."

The program director went to one of his files. "This is the 'master chart'," he explained, after he had returned to his desk.

Looking at the chart, Jim noticed that it was divided into seven columns, one for each day of the week.

"On the left-hand side," said Mr. Mulroy, pointing to the chart, "you'll notice that there is a separate line for each quarter hour of the day, from six o'clock in the morning till twelve at night. Of course, this varies in dif-

ferent stations. It depends on their operating schedule. Some stations are not on full time, therefore they make out their time sheets accordingly. Is that clear?"

"Yes, sir."

"Now to go back to our imaginary client," the program director continued. "He'd want an announcement between eight and eight-thirty. We look under 'Monday' and glance down the column to eight o'clock. We find that between eight and eight-thirty we have available space for a one-hundred-word announcement. Unless the advertiser insists on a fixed time, that gives us plenty of leeway."

"What do you mean by the expression 'fixed time'?" Jim asked.

"That's when a sponsor buys a specified time, such as 8:10 or 8:20. Spot announcements usually cost more when a fixed time is desired."

Jim nodded understandingly.

"After we have agreed on a time we think the sponsor might like, we give the information to the salesman and he contacts the advertiser again. If the time is satisfactory, the advertiser gives the salesman suggestions for the copy he wants to use, and it is brought to the continuity department."

"Then the job of the traffic department is to see what time is available?"

"That's only half of it, Jim. After the announcement

or program is on the air, it is their job to see that the programs and announcements are put on at the time scheduled."

"Does every station have a traffic department?"

"Yes, but in smaller stations it usually comes under the many duties of the program director. It is a job often handled by women, though some larger stations have traffic men. A traffic job probably would be an outgrowth of doing work in the program department. It calls for a methodical mind, and calm temperament. There's a great deal of detail and responsibility to work in the traffic department. And it can't be said that it is one of radio's better paid jobs."

The door to Mr. Mulroy's office opened.

"Pardon me, Mr. Mulroy, I didn't know you had someone in here."

"That's all right, George. Jim, this is George Brennan, our musical director. This is Jim Hanlon, one of the boys from Central High."

"Glad to know you, Jim," George said, shaking hands. "Here's the music for next week's Variety show, Mr. Mulroy. Let me know if it's the type you want."

"I'll look it over, George," the program director answered, placing the copies on his desk.

He turned to Jim again. "The music department is another important spoke in the wheel," explained Mr. Mulroy. "We have a staff of seven men here. George is

the leader of the orchestra and is in charge of the music used on our programs. This particular music that George mentioned, is to be used on our Variety program. No doubt you have heard it?"

Jim nodded.

"Then you know what it consists of. A short comedy skit, vocals, popular and semi-classical, and a dramatic play. The script is given to George and he selects music that he thinks will be appropriate. We give it our O.K., and then the orchestra and cast get together for rehearsal. We listen to the dress rehearsal and put our final stamp of approval on the show."

"Is there so much to do in the musical department?"

"Decidedly, Jim. One of the musicians checks all the new numbers which are to be placed in the library. Some of them are on the ASCAP list and cannot be played without special permission from the copyright owners. It is his duty to see that restricted numbers are not played without permission."

"What did you call that list?"

Mr. Mulroy laughed. "It's an abbreviation for American Society of Composers and Publishers, Jim. We call it ASCAP for short. The name is just what it implies, and it is composed of writers and publishers of music. It is their means of obtaining revenue for the work they do."

"I understand," Jim replied.

"He might get it as a logical outgrowth of a similar job in a radio station, though sometimes it works the other way. Many continuity writers at radio stations have started as copy writers in agencies. Copy writing positions open up with greater frequency. In general, other radio people employed by agencies are those with a lot of experience in radio stations. The fact that over one thousand advertising agencies in this country have radio departments makes this an important field of employment which anyone thinking about radio can't afford to ignore."

"I'm certainly glad to know about it," Jim said thoughtfully. "It adds a lot of possibilities. Is the radio branch of the advertising agencies growing?"

"Yes, definitely. The tendency is for many local advertisers, such as department and furniture stores, to place their accounts with advertising agencies. They perhaps feel that they will get more special attention from the agency than if their accounts were handled by the station directly. In some instances, there may be a little less employment in the radio stations because of this. That's why it's especially important to become familiar with the radio end of the advertising agency field."

"I'll make a note of that," Jim said, nodding. "I guess the information I have about the radio station really covers all the actual work done in the agencies, doesn't it?"

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"I understand," Jim replied.

"After the music has been checked for ASCAP, it is filed in its proper place in the music library. Lists are all alphabetical to make it more accessible. Another man in the group writes all the special arrangements that we use."

"Special arrangements?"

"Yes," the program director answered. "Most of the music we get is what we call standard or stock arrangements. Our arranger dresses it up, so to speak, and adds more color to it."

"What about music in the smaller stations, Mr. Mulroy?"

"Smaller stations depend mostly on records and transcriptions. The announcer in a great many cases picks out his own programs as far as selections are concerned. The type of music is designated by the program department. Whether it should be concert, swing, or semi-classical, depends largely upon the time of the day. In the morning, peppy music gives the listeners the right send-off before going to work. In the afternoon, classics are favored to a greater extent. Around dinner time salon music or sweet popular tunes. In rural districts, a great many people like polkas, schottisches, or mazurkas. It all depends on the community and your listeners. We try to give a varied program so as to please as many people as possible. The job of selecting this music when it's used in recorded form, falls to the musical librarian on

larger stations. Though this work is often performed by girls, many stations have male librarians, who may also have other duties. It often happens that the station's sound effects man is also the librarian. Or sometimes an announcer spends part of his time on the library work. You see, most stations have thousands of records in their files, so looking after them is a big job."

"So that's another job," Jim said thoughtfully. "Music librarian. What are some of the other jobs I don't know about yet?"

"I guess the most important classes of jobs that you haven't heard about aren't located in the radio stations at all, yet they're part of the radio broadcasting field. I mean the advertising agencies. They really duplicate the employment structure of a radio station."

"You mean they employ announcers?"

"Not only announcers. They have their own radio departments that are divided into continuity, production, announcing and sales. The agencies work directly for the advertisers and produce complete programs, just as does a radio station. Some agencies even have their own studios and employ radio engineers. Of course, that's more true of the big agencies in the larger cities. Then, there are some special agencies which do nothing but produce radio programs."

"How would a person get a job in the radio department of an advertising agency?"

"He might get it as a logical outgrowth of a similar job in a radio station, though sometimes it works the other way. Many continuity writers at radio stations have started as copy writers in agencies. Copy writing positions open up with greater frequency. In general, other radio people employed by agencies are those with a lot of experience in radio stations. The fact that over one thousand advertising agencies in this country have radio departments makes this an important field of employment which anyone thinking about radio can't afford to ignore."

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"I'll make a note of that," Jim said, nodding. "I guess the information I have about the radio station really covers all the actual work done in the agencies, doesn't it?"

"That's right. The agencies are just an extension of the work done in the studios."

"Are there any other jobs we've missed?"

"Yes, there are a number of jobs. They vary in importance from one station to another, and I can't honestly say that they offer an important employment opportunity. Sometimes they're combined with other jobs, which makes some knowledge of them worthwhile. For instance, there's the publicity department. It's pretty important in any larger radio station. The publicity department has the important task of building up radio programs in the newspapers in order to attract more listeners. As a rule, one person handles this work, even in the larger stations."

"Just what does he do?" Jim queried.

"He prepares releases about programs, and arranges to get them published in the local newspapers. Then, very often, he has the task of arranging 'special events'—remote broadcasts of celebrity arrivals, broadcasts describing parades, conventions, and things of that sort. You know—stunt broadcasts that bring publicity to the station. For instance, the publicity man for our station got us national attention by having a girl make a parachute jump with a pack set attached to her back. She broadcast a description of her sensations as she fell. The photographs we had taken went on the national wires, and were printed in newspapers all over the country."

"How would a person get into publicity?"

"We come back to the small station again," the program director answered, grinning. "For instance, suppose you're an announcer at a small station. Even though the station hasn't done much about publicity in the past, you offer to write stories for the local paper about station activities. You also work out some suggestions for special events with publicity value. If you have a natural sense of what makes good publicity, this will give you a splendid chance to put it into practice. Then, with your background at this small station, you'll be in a good position to try for such a job in a larger one. Of course, another way is to get a job with a newspaper, and get into publicity work that way. This is the starting point of many radio station publicity men. I guess the main thing is to have a flair for that type of work."

"I'm certainly adding to my list of jobs," Jim commented.

"Another one is merchandising. That might be of more interest to the young man who's interviewing the sales manager, but I'll tell you about it since you're here. The merchandising department of a radio station usually works with the commercial department. Its job is to work with the advertisers to help them make their radio programs sell more goods. You've seen store window displays built around radio programs? Well, they're planned by the radio station's merchandising department.

"Another task of this department is to keep in touch with dealers in a certain territory to make sure that they are using a manufacturer's radio program to full advantage. Let's say that the 'Goodies Breakfast Food Company' plans to broadcast a daily network program starting on a certain day. The merchandising man for each station which is going to carry that program, will send out letters to all of the grocers in the station's listening area to remind them that the program is going to be on the air. The merchandising man will also see to distributing signs to dealers. These signs are placed in store windows or counters to advertise the program."

"That sounds like a rather complicated job."

"It is. The best training for it is a college or university course in advertising. It is a field that seems to offer expanding possibilities as a source of radio employment. I might mention one other group of jobs that exists in any radio station. This group takes in the office jobs. After all, a radio station is a business organization, and it has to have accountants, bookkeepers and so on. But their work really isn't much different from that of other such workers in any line of business, so I wouldn't really class them as 'radio' jobs at all."

"I see," Jim nodded. "It *does* take many different people, and different jobs to make a radio station work, doesn't it?"

"It certainly does," Mr. Mulroy agreed. "That's what

radio really is—*people*. A radio station isn't just an electrical force. It's a group of people, working harmoniously together, each performing his job. And usually it's a job that takes more talent than is called for in other lines of work. Radio is no easy profession, in any of its branches!"

9

AIR FOR SALE

"Glad you came in," Mr. Curtis said cordially after the general manager had explained Harry's presence. It struck Harry at once that here was a man who was used to meeting people and making them feel at ease.

After Harry had found a seat across the big desk, Mr. Curtis began, "So you're interested in the business end of radio?"

"Yes," Harry answered. "I suppose selling is a pretty important part of that."

Mr. Curtis laughed. "Naturally everyone believes his job is the most important. Everyone who likes his job, that is, but I guess I'm not exaggerating when I say there wouldn't be any radio if it weren't for the salesmen."

"Is selling so important in radio?"

"I'll have to change that a little. There would be radio all right, but not the kind of radio we know. Not the radio of big names and expensive programs, that anyone with a set can listen to without paying a cent. Without

the salesmen, we'd have the kind of radio they do in foreign countries."

"You mean licensed radio, owned by the government?" Harry asked.

"Yes—here the sponsors pay the bills!"

"And the radio salesmen are the ones who get the sponsors?"

"That's it exactly. It was a lucky day for American radio listeners when somebody discovered that you could sell time."

"Sell time? I guess that will call for some explaining," Harry admitted. "I have the general idea, but—"

"Well, let's go back to the beginning of commercial radio in this country. In the early twenties when radio got its big start, the first radio stations were run mostly by firms like Westinghouse which started KDKA in Pittsburgh on an experimental basis. Their idea was to sell radio sets. But as people bought sets, the broadcasters discovered that the people wanted entertainment. Providing that entertainment cost money. Orchestras and singers would perform free at first, but pretty soon they began to demand money. Besides that, it cost a lot of money to buy new broadcasting equipment and keep it running. The broadcasters discovered that they had an expensive hobby on their hands. They had to find a way to make it pay."

"What did they do?"

"They found somebody who could and would pay—and pay handsomely—to keep entertainment on the air. That somebody was the sponsor. A sponsor was an advertiser who was willing to rent the station's facilities for a specified time in order to tell radio listeners about his products. The first advertisers went into it as a novelty. But pretty soon some of them began to find out that radio could do what we salesmen call 'a selling job' for them. Now radio collects over one hundred and fifty million dollars a year for its advertising services."

"Why is a salesman so important?" Harry wanted to know. "If radio sells goods so easily, I should think sponsors would come to the station."

Mr. Curtis laughed. "We wish they would!" he chuckled. "But things just don't work that way. Even today there are still many advertisers who never have used radio advertising. Radio may be a big success today, but it has had a hard, uphill fight to get a fair share of the advertiser's dollar. There's plenty of competition from magazines and newspapers, you know! But selling—just getting an advertiser on the air, is only part of a salesman's job."

"What else does he do?"

"He 'services' the account. That's a phrase we use to cover a great deal of hard work. Right there is where

the success or failure of a radio time salesman begins. I'll tell you—let's take a particular advertiser and follow his program right through."

The sales manager glanced at a schedule on his desk. "Here's a good one," he said after studying it for a moment, "the Home Furniture Company program.

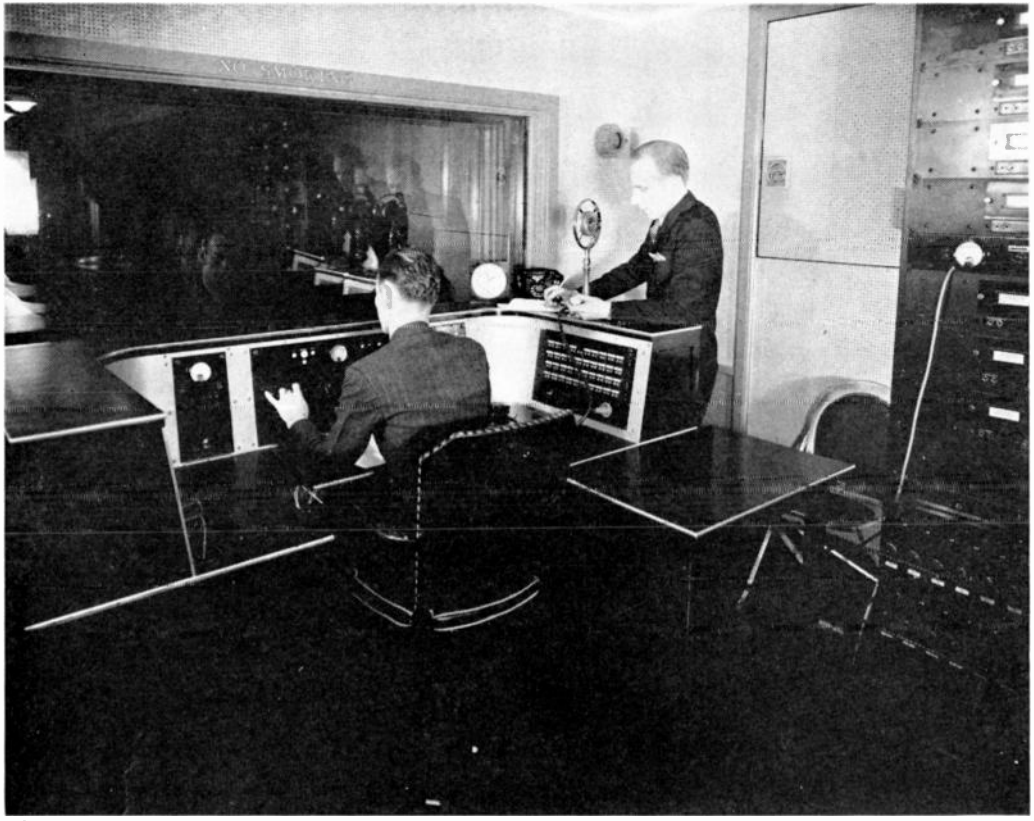
"Here's the story behind their program. In this file we have a card for every large concern in the city. Each salesman on our staff is assigned a certain number of these firms. One of our salesmen specializes in food accounts. Another one has the furniture stores, and so on. Of course, in some stations, accounts are assigned on a different basis. For instance, the sales manager may try to give each man an equal share of good prospects and those that aren't so promising, or some arrangement like that."

"I see. But each man has a certain number of advertisers and prospects that he's expected to call on?"

"That's right. His job is to call on them at regular intervals whether they're interested in radio or not. Eventually he may persuade the advertiser to go on the air. Let's get back to the Home Furniture Company. One of our salesmen, Fred Martinson, called on this advertiser for six months. Every time he talked to the advertising manager of the firm, he was told the same thing—they were satisfied with the newspaper advertis-

A sound effects man in action. His job calls for quick action during a dramatic presentation, for a mistake on his part could ruin a program.

(Courtesy Columbia Broadcasting System)



"Monitoring" programs is one of the exacting jobs of the studio control engineer. He is responsible for making the program sound right to the listeners.

(Courtesy National Broadcasting Co.)

ing they were using. They couldn't see any reason for going into radio.

"Fred kept telling them about the results our station got for other advertisers. After he had called on the Home Furniture Company a few times, he told me, 'I think they'd be interested in a program to cost about $100 a week. They're going to increase their advertising budget for next fall. What do you think we can get for them?' So Fred and I went into a huddle with the program director. Of course, with some advertisers we handle the thing differently."

"You mean the advertiser has an idea of his own?"

"Sometimes. But that isn't what I was thinking of. Very often the sale starts with the program department. The program director will come to me with the outline of a new program. He'll say something like this: 'Bill, I've got a program that ought to be good for a furniture account. Want to hear it?' I'll tell him yes, and then we'll have an audition of the program for the benefit of our sales department. All the salesmen will listen to it. One of them may think it's just the thing for a furniture account he has been calling on. So we'll have the continuity department prepare a 'presentation,' that is a description of the program. Using this and his sales ability, the salesman will try to persuade the advertiser to have an audition. You see, the radio salesman really has to have a

pretty broad picture of radio as a whole—he has to know more than just how to sell."

"There's more to this radio time selling business than I thought there was!" Harry exclaimed. "You have to go through a long process to get an advertiser on the air, don't you?"

"Wait a minute! We're just getting started!" the sales manager laughed. "The troubles just begin when you get to the audition."

"Troubles?"

"I'll tell you about them later. You know, salesmen are just about the highest paid men in radio—and that pay doesn't happen by accident. Selling is a man-sized job. But let's get on with that Home Furniture account. The program department got up a program called 'Tunes and Topics.' Fred persuaded the Home Furniture Company to audition it. We set a Wednesday, at ten in the morning, as the time. The production department swung into action, and rehearsed the program. At ten o'clock the two announcers who were going to take part in the program were ready in Studio A. When the manager of the furniture company arrived at the studios, Fred and I went with him to a special room. Come on, let's take a look at it."

Harry followed Mr. Curtis across the spacious lobby to a door marked "Client's Room." Harry whistled as

the door swung open and he stepped inside, and saw the rich red leather furnishings.

"Yes, we try to make it as pleasant as possible," Mr. Curtis explained. "Sales psychology, you know. The advertiser is more likely to be impressed with the program in quiet, well furnished surroundings."

"But I don't see—I mean how does the advertiser see the people on the program? I thought that this room would open onto the studio."

"No. The advertiser doesn't see the program he is auditioning at all. The program is heard through this speaker." Mr. Curtis indicated a concealed speaker built into the wall.

"What's the idea?"

"Well, we want him to hear the program just as it will be heard over a radio in the home of the listener. If he could see the performers and announcers his attention would be distracted. So this is where the manager of the Home Furniture Company listened to the first audition of 'Tunes and Topics.' "

"Then what happened?"

"Nothing. He decided he didn't like the program. Nothing Fred could say would convince him. However, Fred was prepared for that. He told the store manager about another program of a different type, a dramatic program called 'Party Line.' Another audition

date was set for Monday at ten. The fact that the advertiser agreed to come back for the audition showed that he was interested in radio, all right."

"How long does this go on?" Harry queried. "Do you just keep on giving one audition after another?"

"If we have to. That's the start of those troubles I was talking about awhile ago. I guess our record for auditions was twelve for one advertiser before he found a program he liked. A New York radio station broke all records by giving forty-two auditions for a department store that finally decided it wouldn't go into radio after all!"

"That looks like a lot of wasted work for everybody."

"In a way it is, but it's part of the job. A salesman has to be able to take a lot of disappointment. Just when he gets an advertiser to the point where he seems ready to sign up for a program, something is likely to happen that will call for more auditions, more delays.

"We have one case of an advertiser who now spends $15,000 a year on this station. One of our salesmen called on this advertiser at least once a month for three years before he could get the concern even to listen to an audition. It took four months of auditioning all sorts of programs before the advertiser was signed up. Of course, since then this advertiser has been on the air year in and year out and provides a comfortable income for the

salesman. But if the salesman hadn't believed in himself and the radio station, he never would have been able to keep on trying to land the account for that long period."

"I can see that selling radio time takes more patience than lots of other selling jobs," Harry said thoughtfully.

"Right you are, but here—we seem to have trouble sticking to our Home Furniture Company. To cut the story short, they listened to the audition of 'Party Line' and decided that it would be a good program for their store. Then came the signing of the contract. Advertisers usually sign up for 13 weeks, 26 weeks, or more. The longer the period they agree to stay on the air, of course, the less the time costs them per program."

"The salesman doesn't have much more to do, does he?"

"He has plenty. In the case of the Home Furniture Company, Fred had to make almost daily calls to get the advertising copy from them. That's what we call servicing the account. Then, after about three weeks, this advertiser felt that he wasn't getting any results from his program. Fred's a pretty diplomatic fellow. He has to be. If he weren't, he wouldn't be a radio salesman. So he managed to convince the manager of the furniture company that he couldn't possibly expect to judge the effectiveness of the program in the first few weeks. Advertisers are often unreasonable, particularly

the local retail type of concern. It calls for a lot of patience, much talking, and many calls on the part of the radio salesman to keep the account on the air after it has been sold."

"It sounds like a rather tough job to me," Harry admitted. "What are some of the advantages?"

"I've given you the harder side of it," Mr. Curtis explained. "There are plenty of advantages. One of them is the amount of money a radio salesman can make. In local radio stations, he is often the best paid member of the staff, other than the executives."

"How is he paid? by commissions, or salary, or what?"

"Different stations have different methods of paying their salesmen. Some small stations pay commissions only—usually 15% to 25% of the amount of the time costs. Other stations combine commission and salary, or some sort of guarantee. Salesmen paid this way are apt to make the most money. Some of the larger stations pay straight salaries, with perhaps a bonus arrangement for sales over a certain amount."

"Just how much money can a radio time salesman expect to make?"

"Of course that depends on what kind of salesman he is. If he is a good one, he may expect to start out at around $30 a week. Many local station salesmen are earn-

ing $150 a week and more. Seventy-five dollars a week is a very common earning. At this particular station the top salesman made an average of $165 a week, or about $8,000 last year. The top announcer here made less than $4,000. So you can see that radio salesmen are pretty well paid. It's safe to say that a good local radio salesman will be able to make a great deal more money than a good local announcer."

"What are some of the other advantages of the job?"

"One of them ties in with what we've just been discussing. A salesman with extra initiative and ability is quickly rewarded. Another advantage is the comparatively short hours a man can work. In some types of selling, a salesman has to work in the evening. But that's not true of the radio salesman. Then there's one big advantage that seems to me to be just about the most important of all—It's the one that means the most for an ambitious young salesman's *future*."

"The future *is* mighty important," Harry agreed.

"It certainly is. The thing I'm talking about is the chance the salesman has to establish valuable business contacts. He meets many business men and gets many business points of view. If he is a good salesman, he learns something about the operation of the various lines of business which compromise his accounts. That's why radio salesmen often step into executive jobs with adver-

tising agencies, and are advanced to managerial jobs in radio stations and even in other lines of business. A man in radio is looked upon as someone thoroughly in touch with modern trends."

"Then there is a good opportunity for advancement?"

"An excellent one. A radio salesman has a chance to learn radio from all angles. His valuable business training in dealing with people, and in handling business details of radio contracts, gives him just the qualities that managers' jobs in stations require. A great many of the leading stations in this country are managed by former salesmen. And that goes for many important network positions too."

"It sounds like a mighty good radio job," Harry said enthusiastically. "But how can a fellow get into it?"

"There are several ways. Nowadays, I think a salesman is better off with some sort of training in business administration. If he can go to a good college or university which offers such a course, so much the better. But if he can't go on to college, he still has a good chance in the field of radio selling."

"But just how do you get a radio selling job?"

"Usually by starting out in some other form of advertising sales. Often it is fairly easy to get a job selling classified advertising for a newspaper, or you may find the door to opportunity lies in selling direct mail ad-

vertising. Or a young man who has what it takes, stands a good chance of getting a job at a smaller radio station. He may not make much money there—many salesmen at such stations work on straight commission, and make a small amount to start with. But they are paid in experience—the kind of experience that may pay big dividends in a job with a larger station.

"It's safe to say that there are more sales jobs opening up in radio all the time. For instance, a new station is going on the air here next month, and I understand they're going to have a staff of ten salesmen. Even if the new station hires experienced men who have been working at other stations, that means there will be more vacancies at these stations.

"There are over eight hundred stations in the country now, compared with something over six hundred just three years ago. Then, too, a sales staff is flexible. A good man with a new approach may often be added to handle accounts that have been neglected by the regular staff."

"You've certainly given me a clear picture of what selling radio time is all about!" Harry exclaimed. "It's going to take me longer to get into radio than I thought, because the way I see it now I can use a college education."

"That's a smart decision!" Mr. Curtis commented. "Radio is changing. It needs better educated men in all

its branches. And that goes double for selling. You won't regret the college training. But don't be disappointed if you have a tough first year when you do get your radio job!"

"It sounds as if a radio sales job is worth working for," was Harry's parting comment.

10

THE MAN IN THE FISHBOWL

"I see Ray's in the fishbowl today," the chief engineer said, as they opened the door marked 'Control Room'."

"Fishbowl?" Fred Wilson asked, puzzled.

"That's one of our names for control room," replied Mr. Barton, smiling. "Ray, this is Fred Wilson."

Fred shook hands with a tall, blond young man seated at the controls.

"Fred is one of the boys from Central High, Ray. He wants a few tips on the Studio end of radio engineering."

"Glad to help him out, Mr. Barton."

"He has an amateur license, Ray, so he knows something about it."

Ray's eyes lit up at Mr. Barton's words. "A ham, eh?"

"Yes, sir," Fred replied.

"That's always a good way to get started," Ray told Fred.

"Speaking of getting started, that's just what I'll have to be doing," the chief engineer observed. "I'll leave him

with you, Ray. Fred, stop in when you're through, I'd like to talk to you."

Fred thanked Mr. Barton and turned to the control operator.

Ray glanced at the clock."Almost time for the break. Hold it a minute." The second hand on the clock approached the thirty mark. The network announcer's voice gave the cue, and Fred saw Ray turn down one of the dials on the panel in front of him. "This is KNKN, the entertainment center on your dial," came booming out of the loudspeaker on the wall. After reading a short commercial, the local announcer cut his switch, and Ray turned the dial back to its original position. Soon another program was heard on the loudspeaker.

"The voice of the announcer goes from the microphone into the mixing panel." Ray pointed to the console on the desk in front of him. "Here, in the mixing panel, the mikes are turned on and off. Some switches are operated remotely, so an announcer can turn his mike off from the studio, as Ted just did."

Fred nodded understandingly. "What's the purpose of the dials?" he inquired.

"The amount of volume is controlled by the faders or attenuators as we call them," the operator answered. "See these little figures on this meter?"

Fred saw a tiny needle bouncing back and forth. He

listened to the program on the air momentarily, and then noticed that the movements of the needle corresponded to the sounds coming through the loudspeaker mounted on the control room wall.

"That is what we call our decibel meter, Fred. The amount of volume is calculated in decibels, or in our jargon, 'D.B. s.' One db is equivalent to .006 watts. The out-put of a mike is a very small amount of electricity. Decibels are figures in plus and minus quantities. Figuring from zero level, your mike wattage is a minus 60 db. That is why we need pre-amplifiers and amplifiers to step up or increase the volume to an audible level, or one that can be heard. If we didn't do that, I'm afraid you wouldn't get very much on your loudspeaker when you tuned in on us."

Fred glanced at the switches on the panel. "What's this?" he asked, pointing to one of them.

"When we manipulate these keys and switches as I just did," Ray explained, "we either connect the amplifier to the telephone line which goes to the transmitter, or connect it to the amplifier which feeds the loudspeakers in the audition room. We have a special circuit for that purpose so that we can listen to any type of program without its going over the air."

"You mentioned telephone lines, Ray. Are they the same kind of lines we have in our phones at home?"

"Basically, yes, but they are sealed so that no operator can cut in and say "number please" in the middle of your pet program."

"Does that ever happen?"

"Once in a while," Ray answered. "When it does, then we report it to A.T. & T., and they find out what the trouble is in a hurry. Years ago, it was a common occurrence to hear some one asking the grocer to send a dozen eggs on the next delivery. Mixed in with the regular program, it certainly sounded odd, but cross talk on lines today happens so seldom that we consider it part of the past."

"Fred heard a short interruption in the music. A buzzer sounded and Ray picked up a phone. "Yes, I caught it. O.K. Ken, I'll check." He made a notation on a sheet in front of him. Fred saw him mark down the time.

"That was what we call a line hit," the operator explained. A storm somewhere along the line will cause it. We make a note of the time it occurred and this goes into the daily report we send to A.T. & T. They check it when we call them and try to find out what it was."

"Must keep them busy, making sure the lines are O.K."

"It does," Ray agreed. "You see, we lease all our lines from the telephone company."

"What about that call that just came in?"

"Oh, that was Ken at the transmitter. He heard the line hit and just called to verify if I caught it. We keep a double check on everything that goes on around here."

"Is that a regular telephone too?"

"No," Ray answered. "That line is direct to the transmitter. We just pick up the phone and ring twice and the engineer on the other end will answer. It doesn't go through a switchboard at all. We have the same type of line for conversation on our remote pick ups."

"Must cost a lot of money on some broadcasts," Fred spoke up.

"It does, but on long hauls, such as a football game or something of the sort, we use a different system. We find it more convenient and less costly to install a local telephone line at the remote point and then call this number long distance. You see, the local remote lines we lease for an indefinite period. Lines such as those I just mentioned, we lease for just the one broadcast."

The door to the control room opened, and the announcer walked in.

"Ted, this is Fred Wilson, from Central High," Ray said.

"Glad to know you Fred," the young man acknowledged. "Here's the transcribed show, Ray."

Ray thanked him and turned to Fred as the announcer went back in the studio. "This is a commercial program we carry just ahead of the ball game," he explained. He

took one of the platters in his hand. "Maybe you can get Mr. Barton to tell you about his trip through the World Plant where they make these."

"I'd like that," Fred replied. "Do you think he'd have time?"

"He'll take time to explain it to you Fred. That's one of his hobbies, cutting records. We have our own recording equipment here. No doubt he'll show you that, too. Just a second, call letters coming up again."

Fred heard the announcer give the station break and read the commercial opening. "The music on the program is transcribed," were the words coming through the speaker, and Fred saw Ray throw a switch on one of the turn tables.

Ray turned back to the desk in front of him and made a notation on the big sheet of paper. "This is our log," he explained. "A record must be kept of everything said or played on the air."

Fred looked at the sheet. There was a column for call letters, advertiser, type of program, when it began, when it ended, national accounts, local accounts. . . .

"Look complicated?" Ray interrupted.

"It does at the moment," Fred answered.

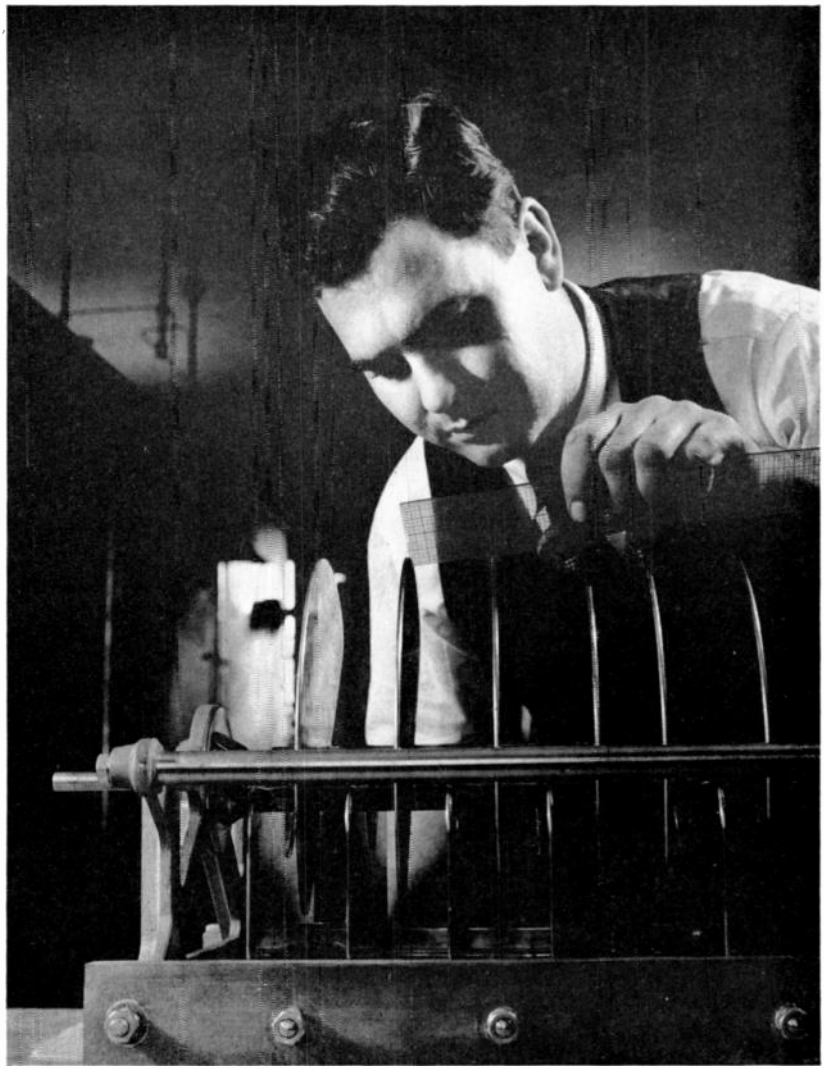
"It's not hard, once you get on to it. We keep a record such as this, for our accounting department and for the government. Then, if something comes up at a future

Some of the many controls which must be constantly watched by the alert transmitter engineer.

(Courtesy National Broadcasting Co.)

In transmitter plants like this one, the transmitter operators spend a rather lonely existence, usually many miles from the studio.

(Courtesy Kenneth M. Wright Studios, St. Paul, Minn.)



Transmitter engineers have other tasks besides watching control boards. They must constantly check equipment, and make repairs.

(Courtesy National Broadcasting Co.)

time, we can refer to our logs. They will show just what went on and at what time. Also the length of the announcement or program. We keep a log like this at the transmitter, too. That gives us a double check on everything."

"And I thought all you had to do was to flick a few switches on and off."

"Not so simple as that, Fred. There's a lot to learn in this end of the radio game. The man in the fishbowl is really the unknown man as far as the listener is concerned, but he keeps things humming."

"So I've noticed," Fred replied.

The phone on the control room desk rang, and Ray turned to answer it. "Control room. Yes Mr. Mulroy. We can run a check on the program as soon as the ball game gets under way. About ten more minutes," Ray said, glancing at the clock. "Yes, I'll have everything ready," he promised as he hung up the receiver. "That was the program director," the operator told Fred. "He wants to monitor a program."

"Monitor a program?"

"Yes. You'll see what I mean in a little while." The phone rang again. "That must be Frank out at the ball park," Ray said. "Everything O.K.? Yes. Time check? Yes, five minutes."

Ray turned to Fred again. "We always check time to

make sure the program gets on the air on schedule. Frankie handles most of our remote pick ups. He's learning radio the hard way."

"What do you mean by that?" Fred inquired.

"Well, Frankie originally was in the continuity department and got the idea he'd like to take up engineering. He got all the books he could round up and began to study in earnest. He attended night school for a long time, learning to apply what he read. Then he'd come into the control room and watch us work. Occasionally we would let him sit at the controls and run programs."

"Do you mean you'd let him run them alone?"

"Well, yes and no. He'd actually operate the controls, but we would have to be here to see that everything went all right. He still hasn't passed his government examination for his first class license, but he is allowed to handle remotes and operate the controls under our supervision."

"Would a person learning radio engineering have an opportunity to do what Frank is doing right now?"

"Off hand, I would say no to that," Ray replied. "You see, Frankie has been with us seven years now. Because of that fact, when he told the boss that he would like to get into the engineering end of it, the boss told him to go ahead . . . he'd help him all he could. Hold it a second."

Fred heard the studio announcer say, "We take you

now to the ball park where Paul Sanders is waiting to bring you a play by play description of today's baseball game." Ray rang the remote line once and soon the voice of the sportscaster was coming over the speaker.

"Where were we now? Oh yes . . ." the operator continued. "I would say no, Fred. Your chance of learning it Frank's way is just about zero."

The door to the control room opened again. "Did Mr. Mulroy call you?" a young man asked.

"Yes, Jerry. Are you taking the show?"

Jerry replied in the affirmative. "Give me a mike set up will you Ray?"

"No sooner said than done." Ray put on a pair of earphones, and then made a few switches on the auxiliary panel. Soon Fred heard a jumble of voices and the tuning of instruments, coming through the speaker.

"That's the studio you hear now, Fred. I'm listening to the ball game on my head set. In order to make sure the program has a perfect balance when it goes on the air, we have to monitor it prior to the regular broadcast."

"Do you use all those microphones in the studio?" asked Fred, glancing through the double paneled window.

"That depends on the size of the orchestra and the number of people appearing on the program," the operator replied.

"Does the announcer work off a separate mike?"

"That also depends on the number of people in the show. If the dramatic end of it can be handled by two or three people, then one mike will do the trick. Otherwise, the players work off one, the announcer off another, and the orchestra, two or three as the case may be."

Jerry opened the door again. "Everything all set, Ray?"

"O.K., Jerry. Give me a voice test."

"One two, three, four, testing, one two, three, four, testing. Coming through?"

Ray pressed another button and talked through a small microphone on his desk. "Yes Jerry. Have the orchestra run over a few bars of their opening, will you?"

Jerry nodded as Ray shut off his mike. "That's part of our talk back system Fred," the operator explained.

The leader raised his hand and sounds of music came through the loudspeaker. Ray opened his mike again. "Cut."

The orchestra stopped suddenly.

"Your saxes are too loud, George," Ray said to the orchestra leader.

The operator walked into the studio and moved one of the microphones a little to the left of the sax section. "That should work better," Fred heard Ray say over the speaker.

Again the orchestra started and Fred noticed the difference at once. It seemed more balanced then before.

"Now let's take a check on the dramatic skit, Jerry," Ray asked as the orchestra finished.

Jerry arranged the players and gave them the signal to start. After a few lines, Ray interrupted again. "Tim, on that last line, I think you should back up a little bit from the mike. You're punching that and I'm afraid you might blast it. Now try it again."

The play resumed and this time Ray nodded his approval.

"This is one part of the engineer's job I didn't know about."

"You're not alone on that, Fred. I didn't know about it either until after I got into the game."

Jerry's voice came through the speaker again. "That should take care of it, Ray."

Ray nodded and switched off the equipment. He took the phones from his head and after switching another control, the ball game was again heard.

"Must have taken you a long time to learn all this."

"I've been in radio nearly eight years now," the operator answered.

"Did you go to school?"

"Yes, I did. Then I went on the lakes as a radio operator. I've been here ever since I left the boat. Now, the radio industry is more specialized, and fellows who want

to go on ships, get the telegraph license. Those who want jobs on land in commercial radio broadcasting, or airways and police radio jobs, get both telegraph and telephone licenses. Years ago, the thought of a radio man was to get on a boat, first, and then branch out into different fields of engineering. Today, most operators who hold both licenses, are capable of stepping into a radio job without that previous experience which we thought could be obtained only through taking a trick on a boat."

"Then your advice is to go to a school first?"

"It's essential, Fred. And there are a lot of good schools in the country today. Most universities and colleges are realizing that radio is a growing industry and include it in their many courses of study."

"What do you think of the present possibilities in radio?"

"To begin with, it's a specialized field, Fred," the operator answered. "If you study hard and apply what you have learned in school, then anyone can get places in this game. As for getting a job when you are through school, your best bet is to contact the smaller stations first. You have to start at the bottom just as in any other job, and work up. The pay is small to start with, too."

"I was going to ask you about that," Fred interrupted.

"A lot of stations pay anywhere from $20.00 a week, up, to beginners. But the amount of value you can obtain in experience, can't be termed in dollars-and-cents

figures. After two years at a smaller station, you can begin looking for something better," Ray went on.

"That's after you get the job at the smaller station. But how do you make that first contact?"

"Get your degree from any accredited school. Then I would suggest you get in touch with the engineering department of the station or stations nearest your home. If they haven't any openings, they may know of one available. Ask the chief engineer for the year book. This will give you a complete list of all stations and their personnel."

"How will that help me?" Fred asked.

"By giving you a list of engineers to write to. State your qualifications in the letter. Your age, and a few personal references. If your letter sounds interesting to the engineer and he thinks you might qualify for a job, he will write and ask for a personal interview. Once in a while you can get on during the vacation schedule in the summer. It may not be steady, but at least it will be a start."

Fred noticed one characteristic of the operator, during his stay in the control room. Ray was alert to everything that was happening. With so many things on his mind, alertness certainly was necessary, he thought. Switching from one program to another, listening to the ball game on the earphones, while an audition was in progress, talking to Jerry about microphone placements, this took a

cool head. One never knew when emergencies would arise, and Fred knew there was more to operating than just a technical knowledge of engineering.

"That gives me a pretty good picture of a studio engineer's job and the qualifications," Fred said appreciatively. "The chief engineer has promised to take me out to the transmitter, so I guess I'll get the rest of the facts about radio engineering there."

11

RADIO'S KEY MAN

"This is really out in the country!" Fred exclaimed as the chief engineer finally swung his car off the main highway and turned into a driveway.

The engineer smiled. "That's one thing about a job as a transmitter engineer—you have to go a long way to get to work. Our transmitter is seven miles from our studio, and three miles outside the city limits."

"Why out so far?" Fred queried.

"You can tell the whole story in one word. Reception. This particular spot was picked because it's the place that provides better reception for the area our station serves than any other spot we could find. It took two engineers weeks to study all possible spots with special measuring equipment."

As he talked, he brought the car to a stop before a modernistic structure, with the letters of the radio station outlined in neon above the doorway. But Fred's eyes were on the giant tower which reached skyward.

"Man, but that antenna tower is high!" the youth exclaimed.

"Three hundred and eighty feet, to be exact," the engineer said proudly. "It's the new type that eliminates dead spots in our reception area. A big improvement over the old two-tower installation we used to have. Of course, maybe there'll be something better yet along pretty soon. We've had four different antenna towers in the past ten years."

"Things are always changing in radio, aren't they?"

"That's right. A fellow has to keep on his toes, and the men who get ahead in engineering are the ones who keep up with present trends. We had a young operator working out here at our transmitter. He'd made a special study of a new wiring circuit we use. We let him work on ours when we made the change-over. When a new station was licensed here, he got the job as chief engineer!"

"It looks as if the important thing is really to *like* radio engineering."

"Right. That's why *you* have a better chance because you're already a ham operator. That shows that you're genuinely interested in radio."

Inside the transmitter building Fred found himself surrounded by the complicated mechanism that made up the broadcasting equipment.

"Doesn't look much like my ham station!" he laughed, after he had been introduced to the operator on duty.

"In a way, it's not so different, though," the chief engineer commented. "Just bigger and more of it. For instance, we have not one, but two transmitters here."

"Two?"

"Yes, one is used regularly. The other is an auxiliary transmitter for use in case something happens to the other one. You see, that's one of our jobs—to keep the transmitter on the air. At small stations that's a tougher job, because they don't all have auxiliary transmitters. But here we just throw a switch and wait for the relays to warm up. That takes only about thirty seconds. A lot of the time, we just sit here watching the various guages and making sure everything is O.K. But sometimes we have to work fast. So it isn't exactly a lazy man's job."

"What about some of those times?" Fred asked with interest.

"This didn't happen to me, but it proves that an engineer needs courage once in awhile, too. We were carrying a presidential speech when something went wrong with a cable carrying the current, and the station went off the air. At that particular time, our auxiliary was undergoing repairs. Do you know what the operator on duty did to keep the station on the air during the speech? He put on rubber gloves and held two ends of a seven

thousand volt cable in an oil insulating tank during the entire speech. That kept the station on the air.

"Transmitter towers get struck by lightning sometimes. In one station, a bolt came in the door, played all sorts of wild pranks among the instruments, ruined every meter and tuning device, and threw the two transmitter men to the floor. Once our station went off the air because a bat flew in and caused a short circuit."

"It isn't just a matter of sitting, by any means," Fred agreed.

"No, we get plenty of work. You know, running a transmitter is a twenty-four-hour-a-day-job. Somebody is always on duty. There are tubes to be checked, and instruments to be taken apart. So somebody gets that midnight shift. It's a pretty lonely job. Well, for that matter, our jobs are lonely ones any time. We sometimes have two men on duty here at the same time, but many stations have only one. So I wouldn't advise anyone who feels he has to have a lot of people around all the time, to go into this end of radio. When I first started in radio, I got snowed in for three days at a transmitter up in Montana."

"An engineer really has to be able to think for himself, and act without orders then, doesn't he?" Fred thought aloud. "In a way he's his own boss."

"That's a good way of putting it. The chief engineer gets around once in awhile, and some stations have what

they term 'technical advisers' but most of the time a man has to be ready to meet any emergency and meet it fast. Of course, it isn't all a matter of emergencies. But the same thing goes for routine operation. The transmitter operator has a mighty important job—the key job, really. If he slips up, it's just too bad. Technically, his task is that of supervising the process which turns 'audio frequencies' into 'modulated radio frequencies.' As you probably know already, Fred, that amplifies the energy output of the microphones as much as thirty trillion times—that's thirty with twelve zeros after it. The mechanism that does this is so delicately adjusted that even a speck of dust could cause, and has caused a noise, or even broken transmission.

"I should think an operator would get sleepy just standing by, hour after hour, watching for things to go wrong."

"That's one of the problems on this job—keeping alert, in spite of those long, lonely hours."

"How do you get into this end of radio?" Fred asked.

"How'd you get started, Marty?" the chief engineer turned to query the transmitter operator.

"I always had sort of a flair for electrical stuff. Never had a ham station, but I knew fellows that did. When I got out of high school, I thought radio would be a good field, so I went to a technical school. It wasn't much of a school, as I found out afterward. Guess you have to

be pretty careful about picking them. But I learned enough to work in as a relief operator in the studios of a small station up state. After a couple of years, I got my first class operator's license, and just moved up from station to station until I got to this one."

"Thanks, Marty," the chief engineer said. "My own case wasn't so different from Marty's except that I went to a university which had a good radio course. After that I just worked up from one station to another, until I got to this one. I started here as chief engineer when the man who held that job went to a bigger station. That's about the way you advance in this field. There aren't too many opportunities for advancement in any one station. If you're an ordinary operator, of course you can move up to chief engineer. There are many cases, too, where former engineers are the owners or managers of radio stations."

"Mind if I ask about the earnings?"

"Not at all. They cover a pretty wide range. In small town stations you'll find situations where the operators run the transmitter, the studio board, and even announce programs, all for $20 a week. The average for transmitter operators will run higher than the pay of the studio operators. In medium sized cities $40 might be considered a fair average. Larger cities will show a scale of around $55. For exceptional men $100 is about the top range. A chief engineer's salary might be as low as $30,

as high as $150 a week, depending entirely on the city and the station. But don't be too impressed with that top figure, because it's mighty rare. Many people have the notion that radio engineers make a terrific amount of money. The fact is, they make very modest earnings."

"Are the educational demands going up?"

"Yes, because so many universities are now offering good courses in radio engineering that stations have a wider range of selection. Naturally, they pick the men who have the best training. That makes it hard for a man without training."

"You speak of universities. Are they better than technical schools?"

The chief engineer frowned. "There are some good technical schools. But there are some others that charge fancy prices and don't have much to back up their extravagant claims. A young man would do well to study schools pretty carefully. That's why I'm personally inclined to favor the universities."

"I'm glad to know that," Fred commented.

"Of course, the real thing is the foundation on which the education is built. A fellow who has run a ham station, and really learned something about the theory of radio before he ever goes to college, has the best chance of convincing the man who does the hiring that he has some practical backing for his theoretical knowledge. That's another advantage that college and university

radio courses offer you. Most universities now operate radio stations, so a man has a chance to get some first hand experience."

"From what you've told me, I ought to be able to give the fellows at Central a pretty good picture of what makes radio tick, and what's involved in an engineering job."

"I guess you won't tell them to go into radio because they'll make a fortune there?" the chief engineer queried with a laugh.

"Don't worry about that! I'll tell them that you should go into radio because you like it, and have ability at it—not because you think there's a lot of money in it!" Fred agreed.

12

MAGIC PLATTERS

"Every station uses platters," said the chief engineer, leaning back in his chair. "In fact, they depend on them for a pretty big percentage of programs on the air today. That's opening up an increasingly important field of radio employment."

Fred Wilson looked at the transcription Mr. Barton had handed to him. To him, it looked like an ordinary phonograph record, with the exception of its flexibility.

"That particular platter is made of acetate composition," Mr. Barton told Fred. "Notice the eight separate sections on it?" He indicated the bands where no grooves had been cut.

"Yes," Fred replied with puzzled interest.

"Those are eight separate spot announcements. They play from the inside out, and are all numbered. That gives the control operator on duty the information he needs in order to get the correct spot on at the correct time."

"Here's something I don't understand," said Fred, pointing to the words 'vertical cut' on the platter.

"Phonograph records are all laterally cut," the chief engineer replied. "That means the sound waves are cut on the *sides* of the groove. When they're played, the needle bounces from side to side, and as a result, after twenty or twenty-five playings, the sound waves begin to wear from the impact of the needle. Consequently, the record loses its original sharpness and purity of tone. In a vertical-cut, such as this, the sound waves lie at the *bottom* of the groove, and such a record may be played eighteen hundred to two thousand times before it begins to show a noticeable amount of wear."

"They really stand wear, don't they?"

"They have to!" the chief engineer answered. "One excellence of this system lies in the fact that a vertically cut groove permits a lightweight reproducer to be used, with a very small moving part that easily and accurately follows the extremely complex waves compressed on the record. This results in low record wear, which in turn, keeps mechanical noises at a minimum."

Fred looked at the transcription again. "What does 33 1/3 R.P.M. stand for?"

"That's the speed at which the platters are played on our turn tables," replied Mr. Barton. "R.P.M. stands for revolutions per minute. Ordinary phonograph records

are played at seventy-eight revolutions. Your transcriptions are played at thirty-three and one-third and seventy-eight. That information is also for the operator on duty. He knows which speed to set his tables for each particular platter."

"I've heard people say they'd rather listen to a live talent program than a transcription, Mr. Barton."

"Years ago you heard it more often," the engineer answered, grinning. "I can remember when people would turn their radios off if an announcer said, 'The following program is transcribed.' The electrical transcription makers have had to lick many hard problems in order to turn out their present product. Today, it's impossible to tell a transcription from an original broadcast."

"Why was it so hard for them to reproduce a program so it would sound natural?" Fred inquired.

"You've heard the saying 'An imitation is never as good as the original,' haven't you?"

Fred nodded.

"Well, the transcriptions of today prove an exception to the rule. The engineers had many obstacles to meet. First, the tonal range of the human ear had to be considered and every step taken to fulfil its exactions. The normal ear has a range of from twenty to sixteen thousand cycles per second. At the lower end are the slow vibrations, such as cannon fire. At the upper end, the

jingle of keys or the higher notes of an oboe. These will reach sixteen thousand cycles per second. Do you follow me?"

"Yes, sir."

"Good," said Mr. Barton, continuing, "Your telephone will transmit with a forty to three thousand, five hundred cycle range. Lateral cut transcriptions reproduce from forty to six thousand, five hundred cycle range, and vertical extend the limit to eight thousand five hundred cycles. The vertical cuts are equal in trueness to network programs put on the air at the point of origin. Is that clear?"

"Yes, it is, Mr. Barton, but what puzzles me is why the need for making transcriptions when you can hear the original broadcast by simply turning on your loudspeaker?"

"A good question, Fred." Mr. Barton reached in his drawer and handed Fred an ordinary map of the United States. "You're familiar with time zones, of course. Suppose an advertiser wanted to put on a program at the same time of the day throughout the country. In order to do that with a regular broadcast, it would mean four different broadcasts per day, and the cost involved would be prohibitive. What is the answer?"

"Transcriptions," cut in Fred.

"That's right. Transcriptions solved the problem. The introduction of transcriptions allowed this same adver-

tiser to have his program on the air at the same time, no matter from what part of the country the program was aired. This was one big factor in proving to the public at large and the radio industry as a whole the importance of transcriptions."

"You mentioned that as one big factor. What would you say was another?"

"There are a great many more," said the chief engineer, smiling. "Most progressive radio stations have their own recording equipment today. Let us say that the Al Pearce show is ordinarily on at 8:30 Central Standard Time. Due to the fact that we are carrying baseball at that time, it would be impossible for us to carry both shows at once."

"Naturally," said Fred, laughing. "That would sound like a Chinese tea party."

"Again, transcriptions come to the rescue," Mr. Barton told Fred. "The first show is broadcast at five thirty. Our engineers make cuts of the show, and we play them on the air at eight o'clock."

"I thought you said a moment ago that the program was scheduled for eight-thirty."

"I did, but they broadcast two shows an evening. One for the east, and middle west, and the other for the west coast. Without the use of transcriptions, we couldn't take either show and the station would be out that revenue."

"How about the quality of the records cut?" inquired Fred.

"It's hard to tell them from the original broadcast," answered Mr. Barton.

"Then why couldn't you just put it on and say nothing about its being a transcription?"

"That's against the law. The Federal Communications Commission insists that we make a recorded or transcribed announcement just previous to the show and at its completion."

"I didn't know that," said Fred. He thought a minute or so before he continued. "Do radio stations make all of their own transcriptions?"

"No—most transcriptions are made by companies which correspond to the producers in the moving picture field. They have large staffs and complete equipment. I visited one of these companies recently. It's a mighty interesting experience." He waited a moment before continuing. "The platter you have in your hand is cut for announcements. The show I saw was a quarter of an hour cutting. Do you know just how much time was required for that fifteen minute show?"

"Why, to tell you the truth, I haven't any idea," Fred answered.

"Approximately eighteen hours."

Fred's face showed his surprise. "*Eighteen hours?*"

"That's right. Eighteen hours spent in writing, re-

hearsing, casting, producing, and cutting. In the studio, the action is taking place. The orchestra is set up, the cast is waiting for the 'go-ahead' signal. The engineer is seated at a mixing panel, watching the activity in the studio through a glass window. He opens his talk-back system and asks the cast for a 'voice check'. As he listens, he manipulates the knobs on his panel so he can get the proper volume and intensity of sound.

"In the adjoining room, is the recording apparatus. In just a short time, the orchestra leader raises his baton, and the program is under way. At a sign from the engineer, the recording unit is started. A small stylus, or cutting needle, is cutting a circular path around a blank record, the sounds having been passed on to that room by way of wire from the control room. The announcer on the program watches the clock in the studio, and at the proper time, gives his closing commercial, and shortly after, the signal is given to cut. The program is completed."

"It sounds simple," said Fred. "I thought there was more to it than that."

"Wait a minute," Mr. Barton interrupted. "That was just the beginning. The program is finished, but not the record. Did you know that the transcriptions are actually gold plated?"

"No."

"Yes, that's part of the exacting process of making

them. The gold surface keeps them from being scratchy and preserves the purity of sound. By experimental research, engineers found that gold was far superior to graphite, which was once accepted as the proper finish to use. Since I visited the plant, a great many changes have taken place. Their vertical wide range transcription is accepted by the industry as the finest example of transcription manufacture. It's the most life-like mirror of sound that science knows today."

"What are the employment possibilities in the transcription business?" Fred asked the chief engineer.

"Thousands of people earn a very substantial income in that field. The transcription industry has grown by leaps and bounds during the past few years, and from all indications, it has just started to touch the surface of actual possibilities. The qualifications are high, Fred. First, a thorough knowledge of radio engineering, from a technical point of view. Of course, there are a lot of openings for actors and musicians in the actual production end of it. The work is similar to that at any radio station, but it's more exacting, in my opinion."

"Do schools give you any training in this type of work?"

"Most of your radio schools and universities give you a very good background," replied Mr. Barton. "I would suggest that your first step toward a position of this kind would be to get into a broadcasting station. Learn

engineering first. Then if you care to, branch out into the transcription field. It takes years of study and hard work. As I said before, the qualifications are high."

"Would you say that a great variety of programs is now being transcribed?"

"I'm glad you asked that question, Fred." The chief engineer hesitated a moment before replying. "Off hand, I can't think of any type of program that isn't on platters today. Musical, dramatic, humorous, political, educational . . . I could name many more, but that will give you an idea. Various governmental agencies have been making transcriptions to keep people informed of their activities. No doubt you have heard many WPA orchestras and choruses, National Youth Administration programs, and many others."

Fred nodded.

"This opens up still more possibilities in transcription business."

"I notice that quite a few home recorders are on the market today. Would that help me any if I were to use one?"

"You might get the first fundamentals from its use," answered Mr. Barton, "but home recordings and the kind of transcriptions we use on the air, are two distinct types. The first recorders were somewhat of a novelty and were very crude in comparison to the methods used today. Semi-professional recording is nothing more than

intelligent application of certain fundamental rules of sound and motion. Yes, I should say you would derive some help from a home recorder, but prices range from $75 to $185 for machines of this type; and most young people can't afford to spend that much money. Get your university or college training first, then try to get into a radio station. It will take longer, but you'll learn more, and in the long run, spend less money."

"You mention the radio station as the first step. Why?"

"Jobs in a transcription company are more or less duplications of those in a radio station, Fred. They call for announcers, writers, musicians, actors, production men, sound effects, and salesmen. But, of course, that's out of your line, since you're interested in engineering."

"I am interested in engineering, Mr. Barton, but I'd like to learn as much about the rest of it as I can."

"Most of the people employed as actors, musicians, and announcers, are on the payroll of radio stations and do this work as a side line. The engineers, continuity men, and salesmen, have steady jobs with the transcription companies. The smaller stations not affiliated with any network depend largely on transcribed programs for their talent. This, of course, means that as the number of small stations increases, so does the demand for transcriptions. You know, there has been a big jump in the number of low-power stations. Nowadays, many

radio stations and some independent news agencies are transcribing special events programs in the field. This opens up another door for engineers who specialize in recording."

"How about the possibilities in a company that makes regular phonograph records?"

"Your first training is acquired in a radio station, Fred, but I would say that is the next step toward a job with a transcription company. Records are in greater demand today than ever before. They have been reduced in price, and I can see lots of opportunities that might lead into the more profitable field of radio transcription."

"Does the average transcription company employ many engineers?"

"Yes. With so many hours of rehearsal required on programs, the staff usually consists of five or six men, qualified to do this type of work."

The telephone interrupted their conversation. The chief engineer talked for a moment and then turned to Fred. "Sorry to cut this short, but the man I'm expecting is in the front office."

"I'm sorry too, Mr. Barton," Fred replied regretfully. "I'd like to come back again sometime."

"You're welcome any time," the chief engineer invited. "Just give me a ring."

13

WHAT ABOUT TELEVISION?

"Talk about lucky! This chance to see television in action is something I wouldn't have missed for a million dollars!" Jim said enthusiastically.

"I guess that goes for me too," Fred agreed, as they followed the guide into the television studio.

When the boys had finished their tour of the radio station in their home city, the manager had suggested, "Now you have a pretty good picture of radio as it is today. But that picture isn't complete without television. If you were in New York, I could arrange for you to visit the network television headquarters."

Fred's and Jim's parents talked the thing over and decided that since the two had been fortunate enough to see the inner workings of radio, they should have the opportunity to see radio's great future development, television. So the boys got their chance to go to New York, and now, excitedly, they were ready to see television in action.

They blinked as they stepped into a blinding glare of light. "Bright, isn't it?" the guide laughed. "You'll get used to it."

Gradually their eyes became accustomed to the brilliance. They saw that they were in a studio about fifty feet long and thirty feet wide. Its walls were painted in shining aluminum paint. The batteries of lights were fastened from a network of pipes near the ceiling of the big room. Three compact cameras that looked like those used in motion pictures, were located at different points. There were several microphones. At the far end of the studio was the familiar glassed in control room, apparently not much different from that in any radio studio.

That was the studio. The boys found themselves more interested in the people who gave life to the scene before them. The cameramen had their cameras trained on a hospital scene, with a nurse and doctor holding consultation at the bedside of a patient.

"This is just a rehearsal, not an actual broadcast," the guide explained. "I'm going to get the director over here as soon as they finish this scene. He'll tell you about everything you want to know about television."

At that moment the lights blinked out. The brisk young man who had been standing near one of the cameramen came toward them.

"Mr. Carney, these are the young men you were expecting."

"Glad to see you," he said heartily. "I'll try to tell you some of the important things about television, and what it means to radio employment. But there are many things I can't tell you, because nobody knows the answers yet. The television art and science have advanced a long way, but they still have a long way to go. Let's begin right here with this studio."

"It looks like a movie set, doesn't it?" Jim ventured.

"In some ways it is like one," Mr. Carney agreed. "And in other ways, of course, it's like radio. Take a look at the equipment. There are microphones, as you'll see. The way they're handled doesn't differ greatly from the way they'd be handled on any radio broadcast. There's an engineer back there in the control booth who monitors them, just as he would if there were no cameras. Now look at the cameras. They have the job of turning images into electrical impulses."

"They do that with an iconoscope, don't they?" Fred commented. "I've been reading up on television."

"You're right. We call the iconoscope just plain 'Ike.' That makes a team—'Ike and Mike.' It would be a pretty big order to tell you just how it works, but stating it simply, it's a big tube which is affected by the brightness and dimness of what is placed before it just as a microphone is affected by the variation in sounds it picks up. 'Ike' changes what he sees into electrical impulses,

and they go out over those heavy cables to the control room. There they are monitored, that is, the engineer uses his controls to see that the correct degree of brightness and shading is present in the image, as he sees it."

"That all sounds pretty simple. Just what makes a telecast different from a radio broadcast?"

Mr. Carney smiled. "Plenty," he exclaimed. "In the first place, look at the number of people required. In the technical end, we have three men in the control room, one to monitor sound, another man to control the cameras, and still another the shading of the pictures. Then, there are the three cameramen. Also, there's a technical director who has charge of all aspects of the telecast."

"That looks like a lot of employment in the technical end of television," Fred commented.

"It certainly does. And, of course, this is just the studio phase of television. There are the transmitter technicians, just as there are in radio, except that television will probably require more men for corresponding work."

"What about the program end?"

"That means more employment, too, no argument about that. You see, the play we're preparing has already been rehearsed for sixteen hours."

"Sixteen hours! How long is the play?"

"One hour. In radio a full hour network program would rarely be rehearsed more than eight hours. In television that number may run up to thirty or more hours. That's not to mention the time the actors have to spend memorizing their lines instead of just reading them from scrips. You can see what effect that has on employment. It will be virtually a full time job for one group of people to prepare and telecast a one hour dramatic program a week. Then, back of this particular dramatic presentation, there was a great deal of extra time on the part of the costumers, set painters, script writers, and script adaptors. Television scrips are quite complicated, since they call for instructions for cutting in the cameras, angle shots, and all that, as well as the usual microphone instructions."

"What about telecasts other than dramatic ones?" Jim asked.

"Some of them are fairly simple. For instance, our news commentator simply works from his rough notes, and really goes through no period of preparation at all for his telecast. But in general, it's pretty safe to say that most types of a telecast call for more people than a corresponding radio broadcast."

"Just where will the chances for employment in television come?"

"You've already seen some of them. But a good many

A transcription engineer adjusts the cutting device which makes a transcription out of a "blank", the ungrooved wax disc.

(Courtesy National Broadcasting Co.)

Radio stations and networks now maintain complete transcription departments, where they can record news programs, dramas, and special events.

(Courtesy National Broadcasting Co.)

A camera on wheels is necessary for certain "shots" in a television drama.

(Courtesy National Broadcasting Co.)

of them won't come in the studios at all. It looks as though many broadcasts will be picked up outside by special crews corresponding to newsreel men. Our network already has two 'Telemobiles' each manned by a staff of ten. We've covered such news events as fires and boat races. These telemobiles give some idea of what's ahead for television. Of course, there probably will be newsreel companies which will also make regulation films for telecasting, because there undoubtedly will be many situations where direct telecasts at the time won't be feasible. That brings us to what probably will be one of the biggest television fields."

"You mean the moving pictures?"

"That's right. The high cost of studio programs will mean that a fairly substantial percentage of the entertainment will be 'canned.' Film will be the equivalent of transcriptions in radio. You can figure it out for yourself—a television station, devoting even four hours a day to filmed features, would call for an enormous amount of material. Any way you look at it, the movie industry will increase its production enormously when television really gets under way. Just how all this film is going to be paid for, and just how the theaters are going to feel about the competition, are among the things we don't yet know. But somehow or other, motion pictures are going to play a big part in television's future.

"It's plain that local stations will have to present a fair percentage of their programs in the form of film. Of course, to a person viewing the image on the screen of his television receiver, the result will be the same as if he were seeing an actual studio broadcast. In fact, to take care of parts of our studio dramas, we use film. For instance, we have to show our hero riding down Broadway in a taxicab. We do that by having motion pictures of this scene taken, and at the right time during the telecast, they are inserted. I think that the 'commercials,' that is, the advertising portions of many programs will be handled in this way, too. For instance, an automobile company sponsoring a telecast will want to show its product in action on the highway. Film will be the best way to do this."

"I can see that the movies are going to be important in television, all right," Fred said thoughtfully.

"Many communities have smaller motion picture concerns now engaged in making advertising trailers for advertising in motion picture theaters. They should work very logically into television, just as will the Hollywood set-up in regular productions."

"The thing we're wondering about," Jim explained, "is just what a person can do to get ready for television."

Mr. Carney laughed. "I wish I could answer that fully, but honestly, I can't. All I can say is: get into

radio, and keep your eyes open, keep up to date on just what's happening in television, and just how it's going to affect your particular job."

"Then there aren't any real employment opportunities in television yet?"

"Not for the average young person. The people in television now are those who have been with it through its experimental period. The tendency for quite some time will be to draw people in from radio, motion pictures, the stage. I certainly think anyone considering going into radio should think about television. If you can, go to a university or college which is doing something in the way of teaching television. A good many schools are now. But be careful about exaggerated claims made by certain technical schools. They give the impression that you can walk right out and get a television job. At present that's a long way from the truth. It may change, but I don't expect it to for several years, at the very least. Television has a good start, but that's all."

Fred was a little disappointed. "Then a person really can't go into television now?"

"I'm afraid not. For all its tremendous promise for the future, it's beyond the reach of the average beginner in radio. But, as I said before, don't forget television. Make it your aim—but be prepared to wait—and work!"

The boys saw more of television. They visited the

transmitter high atop one of New York's tallest skyscrapers. They talked to engineers and technicians, actors, television script writers, and news commentators. But from them all they heard the same thing.

"'It's important to know about television, to aim for a place in it. But get your start in radio. Success there will be one of your best hopes of getting a desirable place in television."

14

TOMORROW'S RADIO

Again the three boys were gathered in the office of Mr. Blake, the general manager.

"Now you've seen radio in action," he said slowly. "Were you disappointed? Did it turn out the way you expected?"

Jim grinned. "Frankly, there's much more hard work to radio than I guess any of us expected. Not that we'd mind hard work. What I mean is that a lot of people have the idea that radio is something in which you make a lot of money for not doing much."

The general manager laughed. "That's right," he agreed. "Far too many young people think of radio in terms of glamour or excitement. Actually, it calls for harder work than is expected in most fields, yes, and for more real ability, too."

Jim nodded in agreement. "That's certainly true. The thing I noticed about the radio jobs which I observed was that they call for so many kinds of ability.

You have to be able to do more than one thing, and do them well."

"You know, that puzzles me a little bit," Fred admitted. "In other fields, the tendency is all toward specialization. Radio doesn't seem to be so much that way. I notice that the men who work at the transmitter, sometimes work as studio engineers, and sometimes on remote control broadcasts."

"That's even more true in the departments I studied," Jim agreed. "An announcer doesn't seem to be just an announcer. Lots of them write continuity, or handle publicity, or do special kinds of announcing, too."

"That's a sound observation," the general manager continued. "In the small stations of this country—and there are more and more of them each year—the tendency is toward doubling up on jobs. But in the big stations, the tendency is the other way—toward specialization. Now maybe that sounds a little confusing. How can a person pick a definite career in radio, when he has to start in a smaller station, perhaps spending much of his time doing something that seems like a sidetrack? The truth is, that in radio you just can't pick a certain job and start right out at it. In general, you have to go through others to reach the job for which you are best fitted. That's what makes radio somewhat different from other fields of employment."

"And I guess that makes a good all around radio education more important," Fred commented.

"Right! A good university course in radio takes the situation into consideration, and prepares you to do a variety of radio work. If you do go into radio, I hope you'll all be prepared not only to do a lot of work, but to do it for comparatively small pay. That's the way it works in radio—you start out doing more things for less money, and eventually end up doing fewer things for more money!"

The boys laughed at Mr. Blake's humorous way of describing the prospects in the radio field.

"There's something I've been wondering about," Harry said. "That is—just what *is* the future in radio. In the whole field, I mean. Is it really growing?"

Mr. Blake smiled. "It's growing all right! Too fast maybe! Three years ago there were just three stations here in town, now there are five. Of course that means more competition for us, but looking at it from the employment standpoint, it certainly means more possibilities for radio jobs. If you take a look at the figures, you'll see how the number of stations has jumped. There were six hundred and eighty-five on January 1st, 1937. Three years later that number had increased to eight hundred and fourteen. Successive years will undoubtedly see a continued increase.

"Why the big increase in the number of stations?"

"The jump is due partly to the changed policy of the Federal Communications Commission, and partly to technical improvements in transmitters which enable more stations to operate on one wave length without interfering with each other. Many communities which didn't have radio stations at all a few years ago, now have them to serve their local interests.

"In larger communities, new small stations are able to serve specialized purposes. For instance, here the three network stations were having a good deal of difficulty in carrying local baseball programs, because of conflicts with network commercial programs which had to be carried. So, when one of the two new stations was licensed, it became the local sports station. That is, because it didn't have any programs it had to carry, it could specialize in sports. That trend toward a 'radio station for every community,' and a 'radio station for every purpose' means that there's a lot of room for expansion. Then, of course, there's frequency modulation. Just plain FM we call it now."

"Frequency modulation?" Harry's voice expressed puzzlement.

"I know about that—something about it anyway," Fred said. "It's the new system of 'staticless' radio."

"That's right," Mr. Blake agreed. "But it's more than that. Up to now all the regular broadcasting stations

have used amplitude modulation as a broadcasting method. Simply stated, that means they've used more and more power to push out static. Frequency modulation uses a 'wobble' wave, in the same short wave bands that are being used for television. When you hear an FM broadcast coming in you can hardly believe that the speaker or the musician isn't right in the room with you. But of course, the fact that there isn't any static on FM is only one of the things that makes it important."

"What are the others?"

"For one thing, the number of FM stations that are possible. You see, they don't conflict with each other the way stations on regular broadcast bands do. Why, right here in our city we could have fifty FM stations, and another city one hundred and fifty miles away could have another fifty operating on the same wave lengths."

Seeing the surprise on the faces of the boys, Mr. Blake added, "There are obstacles. FM is apparently going to mean a big upset all down the line. The forty million or so radio receivers now in existence will be obsolete, because FM calls for FM receivers as well as transmitters. Then, of course, those of us in regular broadcasting are a little worried about the new competition. Eventually we may switch to FM ourselves, but in the meantime, new FM stations will come into being. Will the competition cut our revenue so that we have to decrease our employment? That's something we don't know. I should

mention that Frequency Modulation ties in with television."

"Might I ask how?" Fred queried.

"There's a possibility that FM will solve the problem of television networks. Instead of using the coaxil cable which costs $5,000 a mile, the modulated beam transmitters of FM could be used to form a relay network which could cover the country. But no matter what happens, frequency modulation is under way. Many stations are being licensed. Some predict that there will be a thousand frequency modulation stations in this country in a very few years."

"A thousand! Why, that's more than all the regular broadcasting stations on the air now!" Jim exclaimed.

"That's what the prediction is. I'm not saying that there will be that many. But it's certain that there are going to be many FM stations, and each one means employment opportunities."

"Add those opportunities to what's coming in television, and the prospects of radio employment look good, don't they?" Harry said thoughtfully.

"Yes, they do." Mr. Blake frowned slightly. "Of course, the very fact that a good many changes lie ahead makes it a little hard to predict just where the greatest opportunities lie. Just now we don't honestly know what effect television is going to have on auditory radio.

Presumably, it won't put it out of business. As we see it now, auditory radio will be a necessary supplement to television. There is another development we shouldn't forget which may have a profound effect on not only the radio, but the newspaper field as well. It's facsimile."

"That's the process of sending printed material by radio, isn't it?" Fred commented.

"That's a simple way of stating it," Mr. Blake agreed. "It's an exciting prospect that may have some surprising applications. It's not hard to picture coming downstairs in the morning to find your morning paper all neatly printed beneath your radio set."

"Wait a minute, you're getting ahead of me," Jim laughed. "I'm afraid I don't understand what it's all about."

"It doesn't have to be very complicated," the general manager laughed. "In ordinary radio the sound waves in the studio are turned into electrical impulses, which are sent into space, and picked up by your receiving set, where they're turned back into sound again. In facsimile, the general process is about the same, except that a device in the studio picks up light waves from a printed page or a drawing, and turns the light waves into electrical impulses. They're reassembled by a special receiving set in your home. A pencil-like device puts them on paper—and there's your picture, or print, or what have you."

"It sounds simple enough," Harry admitted. "What do you think will be the effect of such a device?"

"As things now stand, it looks as though it will be another addition to radio. For instance, with facsimile, coupons, printed advertisements, recipes, schedules, cartoons, illustrations—anything that can be printed—can be sent along with an auditory program. As I see it, television, regular radio and facsimile could all work side by side. Without sound, television would be like the old silent movies, so you must have some auditory radio. Then there will be many times when people won't want to sit by the television set watching a telecast. Then they'll use regular broadcast radio just as it's used today. Facsimile will enter the picture in supplying information, news and the like which can be read at leisure, or used to supplement the broadcasts, or telecasts. It's a pretty safe guess that this important trio will work together. Of course, nobody knows just what effect facsimile will have on the newspaper field. It may be that most of our newspapers of the future will be sent through the air."

"What does facsimile mean to employment in the radio broadcasting field?"

"Briefly, it means more of it. It takes special facsimile engineers to work on the sending of facsimile images. It takes copy writers, newsmen, cartoonists, and editors

to provide the material that goes into such a 'radio newspaper.' Whether it will mean *extra* people at work, I don't know. Maybe they will be just drawn from the regular newspaper field. But anyone going into radio should certainly know about facsimile, and consider its possible effects on employment. Those in it first, should certainly have a great advantage, just as did those who got into radio first."

"I wonder how it would affect the commercial end of radio?" Harry pondered aloud.

"It should expand that department," Mr. Blake said instantly. "It will give the radio salesman a good deal more to offer the advertiser. It looks to me as though the commercial departments of radio stations will expand, no matter what happens technically. Television and facsimile will make it necessary for a radio salesman to *know* a great deal more about advertising, but they will give him a more valuable advertising medium to sell. So I'd certainly say that anyone contemplating going into the business end of radio would be likely to profit, rather than lose, by the changing radio picture."

"Any way you look at it, then," Jim said thoughtfully. "Radio seems to offer a splendid future."

"It does, for those who approach it in the right attitude," Mr. Blake replied quickly. "It's no quick road to riches. Because it is a changing field, it offers more

opportunity. Those who succeed in radio will be those who are ready to work hard, and then work harder; those who are willing to meet the increasingly high educational requirements, and those who are constantly alert to the great changes which are taking place."

THE RADIO PRESS

Editing and Preparation: NEW YORK Herald Tribune | *Text Composition:* VARI-TYPER | *Transmission:* RCA

VOL. 1, NO. 93 WORLD'S FAIR EDITION EXTRA

World's Fair Happenings

From the Herald Tribune World's Fair Bureau

RADIO FACSIMILE NEWSPAPER IS PUBLISHED DAILY AT RCA WORLD'S FAIR EXHIBIT

In the Radio Corporation of America exhibit at the New York World's Fair the New York Herald Tribune and the RCA are publishing a "newspaper of the air."

The paper, called "The Radio Press," is being printed and distributed by RCA radio facsimile, a method of communication that delivers by wireless the printed newspaper into the home of the reader.

Four editions are printed each day using up to the minute news supplied by the Associated Press and the Herald Tribune World's Fair Bureau.

Composition of the text, sub-headings and picture captions is done on the Vari-Typer, product of the Ralph C. Coxhead Corp., of New York City.

Here is a description of the techniques involved:

EDITING

An editor of the New York Herald Tribune staff edits the news and passes the copy to the Vari-typist. He also selects pictures rushed by messenger from New York.

COMPOSITION

The Vari-Typer sets the copy with both margins even. Each line is set once to fall within a predetermined letter count and then reset, the machine automatically stretching the letters and spaces to the desired column width. Through the use of interchangeable type faces, sub-headings and captions are set.

MAKE-UP

The set copy is returned to the editor who arranges it, with the pictures, on sheets of light cardboard, page-size, with column rules pre-printed. Then the Herald Tribune make-up man pastes the material to the form.

TRANSMISSION

The make-up man passes the sheets to the engineer assigned to the RCA scanner, which plays the same part in facsimile operations that the microphone plays in voice broadcasting.

RECEPTION

The RCA home facsimile receiver, matching from the ether the power impulses sent by the scanner, reconverts them into their black and white values on sheets of white paper the same size as the original copy.

EDITORIAL DEPARTMENT: The desk from which the managing editor of "The Radio Press," otherwise a Herald Tribune staff editor, directs publication of the Fair's only real-news newspaper. (Herald Tribune-RCA)

RCA WORLD'S FAIR FACSIMILE: The printing of "The Radio Press" draws a large crowd each day. (Herald Tribune-RCA)

WCCO—COLUMBIA BROADCASTING SYSTEM, INC

DAILY OPERATIONS SHEET

PAGE NO. ____ DATE [illegible]

TIME REHEARSAL AND AIR	PROGRAM	PROD	ENGINEER	ANNOUNCER	TYPE	FROM		TO
						SUB	HEAD POINT	
5:30-6:00	RPH THE SUNRISERS					2		
6:00-7:00	THE SUNRISERS		N.C.	CAMP	LS	2		
6:00	SIGN ON				LS			
6:00:30	ALIEN REGISTRATION ANNCT				LS			
6:10	NATIONAL DEFENSE ANNCT				LS			
6:15	CAMPBELL SOUP CTSY ANNCT		ETS3		LS			
6:30	COMMUNITY FUND ANNCT	ETS3			LS			
6:45	OSHKOSH ANNCT				LC			
7:00	HAIR CTSY ANNCT ETS				LS			
7:00-7:15	NORTHRUP KING ALMANAC OF THE AIR			CAMP CARD	LC	1		
7:15-7:30	FIRST NEWS JACK SPRAT FOOD STORES			CAMP BYRD	LC	6		
7:30	CEDRIC ADAMS CTSY ANNCT			CAMP	LS	5		
8:30-8:30	DAYTON'S MUSICAL CHIMES			HARDING	LC			
8:00-8:15	RPH SATURDAY OPEN HOUSE					AUD		
8:30	KORNACH ANNCT				LC			
8:30-9:00	INTERLUDE				MS			
9:00	MUSTEROLE ANNCT #1				LC			

"Telemobile" units like these, manned by a crew of cameramen and technicians, are taking television to the news.

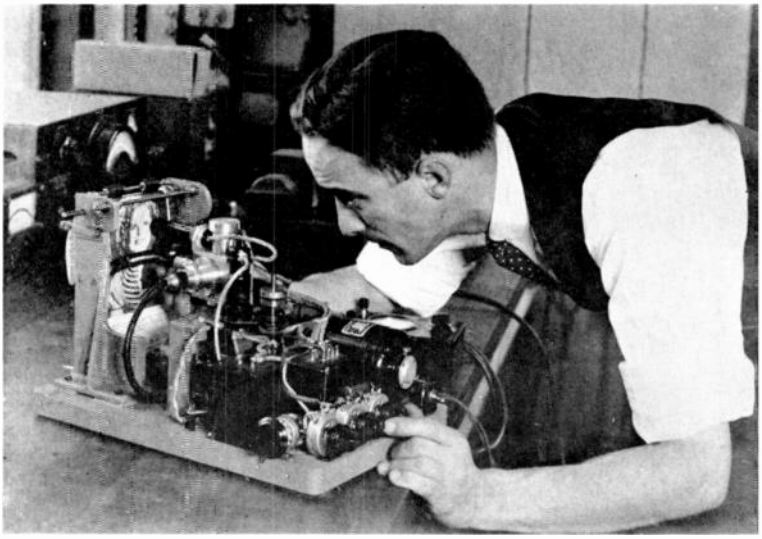
(Courtesy National Broadcasting Co.)

It takes many cameramen and sound technicians to "telecast" a dramatic presentation.

(Courtesy National Broadcasting Co.)

Major E. H. Armstrong, Inventor of Frequency Modulation, demonstrating radio set to Dr. W. R. G. Baker, in charge of G-E Radio and Television.

(Courtesy General Electric Publicity Dept.)



Radio has "learned to write" with the coming of facsimile. Here an engineer studies the scanning device.

(Courtesy National Broadcasting Co.)

APPENDIX

Colleges and Universities Offering Radio Courses

The following is by no means a complete list of the educational institutions offering courses in various phases of radio broadcasting. Such courses are now offered by some high schools, many junior colleges, and hundreds of regular colleges and universities. It is suggested that for further information you write to educational institutions near your home. Be very careful in accepting the advertising claims of various local "schools" and those offering home correspondence courses. A courteous request for advice from a local radio station will usually result in worthwhile suggestions in this respect.

Alabama

Alabama Polytechnic Institute, Auburn, Ala.
Alabama, University of, University, Ala.
Birmingham Southern College, Birmingham, Ala.

Arizona

Arizona, University of, Tucson, Ariz.
Phoenix Junior College, Phoenix, Ariz.

Arkansas

Arkansas, University of, Fayetteville, Ark.
John Brown University, Siloam Springs, Ark.

California

California, Institute of Technology, Pasadena, Calif.
California Polytechnic Junior College, San Luis Obispo, Calif.
Loyola University, Los Angeles, Calif.
Pacific, College of the, Stockton, Calif.
Southern California, University of, Los Angeles, Calif.

Colorado

Colorado College, Colorado Springs, Colo.
Colorado School of Mines, Golden, Colo.
Colorado State College, Fort Collins, Colo.
Denver, University of (School of Commerce), Denver, Colo.

Connecticut

Connecticut State College, Storrs, Conn.
Trinity College, Hartford, Conn.
Wesleyan University, Middletown, Conn.

Washington, D. C.

George Washington University, Washington, D. C.
Georgetown University, Washington, D. C.
National University, Washington, D. C.

Florida

Florida Agricultural and Mechanical, Tallahassee, Fla.
Florida, University of, Gainesville, Fla.
Rollins College, Winter Park, Fla.

Georgia

Georgia, University of, Athens, Ga.
Georgia School of Technology, Atlanta, Ga.
Oglethorpe University, Oglethorpe, Ga.

Idaho

Idaho, University of, Moscow, Idaho.

Illinois

Chicago, University of, Chicago, Ill.
Chicago Teachers College, Chicago, Ill.
Illinois, University of, Urbana, Ill.
Mundelein College, Chicago, Ill.
Northwestern University, Evanston, Ill.

Indiana

Butler University, Indianapolis, Ind.
Indiana State Teachers College, Terre Haute, Ind.
Indiana University, Bloomington, Ind.
Notre Dame, University of, Notre Dame, Ind.
Purdue University, Lafayette, Ind.
Tri-State College, Angola, Ind.

Iowa

Drake University, Des Moines, Iowa.
Iowa, State University of, Iowa City, Ia.
Iowa State College, Ames, Ia.

Kansas

Emporia, College of, Emporia, Kans.
Kansas, University of, Lawrence, Kans.
Kansas State College, Manhattan, Kans.
Wichita, University of, Wichita, Kans.

Kentucky

Kentucky, University of, Lexington, Ky.

Louisiana

Louisiana Polytechnic Institute, Ruston, La.
Louisiana State University, University, La.

Maine

Maine, University of, Orono, Me.

Massachusetts

Boston University, College of Business Administration, Boston, Mass.
Harvard University, Cambridge, Mass.
Massachusetts Institute of Technology, Cambridge, Mass.
Tufts College of Engineering, Medford, Mass.

Maryland

Washington College, Chestertown, Md.

Michigan

Michigan, University of, Ann Arbor, Mich.
Michigan State College, East Lansing, Mich.
Wayne University, Detroit, Mich.

Minnesota

Macalester College, St. Paul, Minn.
Minnesota, University of, Minneapolis, Minn.

Mississippi

Mississippi College, Clinton, Miss.
Mississippi State College, State College, Miss.

Missouri

Lincoln University, Jefferson City, Mo.
Missouri, University of, Columbia, Mo.

Montana

Montana State College, Bozeman, Mont.

Nebraska

Nebraska, University of, Lincoln, Nebr.
Nebraska State Teachers College, Wayne, Nebr.

Nevada

Nevada, University of, Reno, Nev.

New Jersey

Paterson, The College of, Paterson, N. J.
Rutgers University, New Brunswick, N. J.

New Mexico

New Mexico, University of, Albuquerque, N. Mex.

New York

C.C.N.Y. School of Technology, New York, N. Y.
Colgate University, Hamilton, N. Y.
Columbia University, New York, N. Y.
Cornell University, Ithaca, N. Y.
Manhattan College, New York, N. Y.
New York University, New York, N. Y.
Rensselaer Polytechnic Institute, Troy, N. Y.
Rochester, University of, Rochester, N. Y.
Syracuse University, Syracuse, N. Y.

North Carolina

Duke University, Durham, N. C.

North Dakota

North Dakota State School of Science, Wahpeton, N. D.

Ohio

Akron, University of, Akron, Ohio.
Antioch College, Yellow Springs, Ohio.

Case School of Applied Science, Cleveland, Ohio.
Cincinnati, University of, Cincinnati, Ohio.
Miami University, Oxford, Ohio.
Ohio, University of, Athens, Ohio.
Ohio State University, Columbus, Ohio.
Toledo, University of, Toledo, Ohio.

Oklahoma

Oklahoma, University of, Norman, Okla.
Tulsa, University of, Tulsa, Okla.

Oregon

Oregon, University of, Eugene, Oreg.
Oregon Inst. of Technology, Portland, Oreg.
Oregon State Agricultural College, Corvallis, Oreg.

Pennsylvania

Carnegie Institute of Technology, Pittsburgh, Pa.
Duquesne University, Duquesne, Pa.
Lehigh University, Bethlehem, Pa.
Pittsburgh, University of, Pittsburgh, Pa.
Scranton, University of, Scranton, Pa.
Villanova College, Villanova, Pa.

Rhode Island

Rhode Island State College, Kingston, R. I.

South Carolina

South Carolina, University of, Columbia, S. C.

South Dakota

South Dakota School of Mines, Rapid City, S. D.

Tennessee

Madison College, Madison College, Tenn.
Southern Junior College, Collegedale, Tenn.

Texas

Texas, University of, Austin, Tex.
Texas Christian University, Fort Worth, Tex.
Texas Technological College, Lubbock, Tex.

Utah

Brigham Young University, Provo, Utah.
Utah, University of, Salt Lake City, Utah.

Vermont

Vermont, University of, Burlington, Vt.

Virginia

Virginia Polytechnic Institute, Blacksburg, Va.
William and Mary College, Williamsburg, Va.

Washington

State College of Washington, Pullman, Wash.
Washington, University of, Seattle, Wash.

West Virginia

West Virginia State College, Institute, W. Va.
West Virginia University, Morgantown, W. Va.

Wisconsin

Marquette University, Milwaukee, Wis.
Wisconsin, University of, Madison, Wis.

Wyoming

Wyoming, University of, Laramie, Wyo.

NETWORK OPPORTUNITIES

The usual path to better positions in the radio field is by the one described in the main body of this book, that is, from a small station to a larger one, etc. In general, that applies to radio positions with the networks. Their personnel is drawn largely from the ranks of experienced employees of the radio stations. However, recently, the National Broadcasting Company and the Columbia Broadcasting System have instituted a system of apprenticeship which is worthy of attention. Reproduced below is a statement from the National Broadcasting Company describing the qualifications of network "cadets." While there are some differences in the plans of the two networks, this statement may be taken as applicable to both.

Standards equally as high as those demanded of West Point cadets must be met by the forty to fifty young men selected by the National Broadcasting Company each year for admission to the staff of uniformed guides and pages each of whom, over a twelve month period, welcomes 20,000 visitors to Radio City. The plebes are

selected from among the 8,000 men who annually apply for positions with the NBC, hoping to make their mark in radio.

Preliminary winnowing among the younger men, preferably between the ages of eighteen and twenty-two, is done in the personnel department. The most promising candidates are sent to the Guest Relations Department and there they must meet the following tests:

They must give evidences of good breeding, whether their home background is modest or one of wealth. They must be neat in their appearance. They must have poise and, among the social graces, they must know how to meet crowds of strangers from all parts of the world with a manner which is neither too forward nor too backward. They must have a good education, as a rule they are college graduates. Naturally they must be intelligent, for no group of tourists is like another, each visitor asks a different question, and the guides have the task of making each tourist feel at home and well informed when he leaves the RCA Building.

The radio cadet's first job is among the pages. There he is carefully schooled in the general policy of the National Broadcasting Company. He must soak up information about radio for no school could possibly supply him with specific, set answers for one-millionth of the questions asked by the surging thousands who con-

verge on Radio City from all quarters of the globe each day.

As soon as their preliminary training is completed they are put under the supervision of one of the older men in the service, one of whom directs the pages on each floor occupied by the NBC. They are shifted from one floor to another to acquaint them with all phases of broadcasting, even to the personal whims of the various artists heard over the air.

From among the pages the guides who conduct the tours are picked. There is no set rule for promotion, and seniority is ruled out in the case of especially promising young men. Pages being trained for service as guides are given a thorough schooling in all the technical details of the studios, sound control, wiring, air conditioning, the mysteries of the master control room, and in the theory of radio.

If a promising page fails at his first attempt to pass through the guides' school, he is put through it again and even a third time if it appears he has what it takes. Once he has been approved he accompanies tours conducted by veterans of the staff until, he too, is qualified to strike out on his own and represent the National Broadcasting Company to visitors while he explains radio to the public.

Although they are smartly uniformed and as trim in their appearance as West Point cadets, they do not

undergo any disciplinary training other than that dictated to them by their own sense of good taste. They have no set formula for conducting tours and each man is strictly on his own when he leaves with the customary party of twenty-five to thirty-five persons for a tour of Radio City.

Men admitted to the guide staff are chosen as a rule with an eye to their future usefulness to NBC. Efforts to win promotion to other departments are encouraged, and throughout the company upwards of two hundred men today hold posts in responsible positions. Their qualifications are indicated by the fact that, of the thousands who apply, not more than one in fifty is accepted.

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