

GOOD NEWS

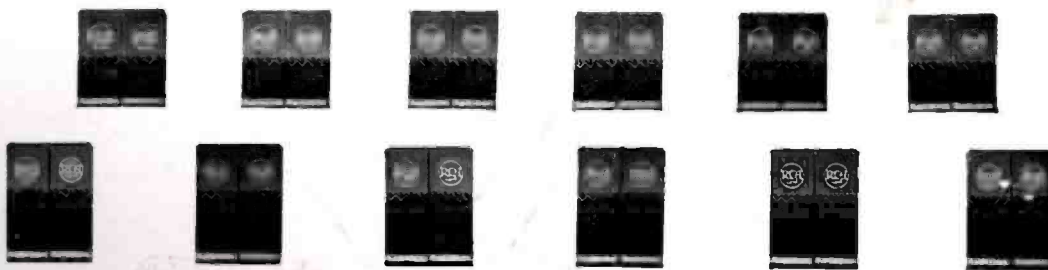
ABOUT RCA RADIOTRONS



NUMBER 8

OCTOBER

VOLUME I



Human Interest—

FOR YOUR WINDOW!

ONE function of a window display is to get attention. Unless it does, you have little chance to tell the passerby what you have to sell.

The first of a series of new RCA Radiotron Displays does just that. Its appeal is to the human heart. But it doesn't stop there. It gets across a definite sales message—"RCA Radiotrons—for better radio reception."

With this display come special display cartons for your window: 12—224; 12—227; and two special pyramid displays as illustrated. Just what you have needed to put added punch in your window.

Important Notice

This display will be sent to you only upon request. Address your request to the RCA Radiotron Company, Inc., Harrison, N. J.

RCA Radiotrons

THE HEART OF YOUR RADIO SET

GOOD NEWS

About RCA Radiotrons

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NUMBER 8

25 Cents a Copy — \$2.00 a Year

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Selling Fool Takes Country By Storm!

THAT RCA Radiotron dealers are on their toes and quick to recognize a real display idea when they see it, is shown by the overwhelming demand for the Selling Fool. Since they were announced more than 20,000 have been ordered.

To be perfectly frank, it wasn't expected that such a deluge of orders would follow the announcement of the Selling Fool. The result is, we are late on deliveries. We ask you to be as patient as you can. Every effort is being exerted to catch up.



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A magazine of radio merchandising counsel to help distributors and dealers of RCA Radiotrons make more profit.

Published Monthly by RCA Radiotron Company, Inc., Harrison, New Jersey

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Racing Sloops

*Give a Little More Value for
the Money and Do Your Job
Just a Bit Better Than Your
Neighbor and Success is Yours*



I'M not beaten yet and will shortly issue a new challenge! I know that I will take the "old mug" back to England so that Londoners can get a glimpse of it, if only for a year or so. My formula for success? I wonder how many times I've been asked that since my first trip to this country with the original *Shamrock*. Well, here it is—hard work, plenty of advertising, and keeping my salesmen keyed up to the highest selling enthusiasm at all times. They must keep up this enthusiasm if they are going to do a better job than our competitors, and the only way to succeed is by doing a wee bit better than the other fellow. That's my formula for selling tea and I imagine that selling radio tubes is somewhat the same as selling radio tubes. If I were selling radio tubes I think that I would use the same methods that I do with tea—although, of course, when I first started selling tea in America there was no such thing as a radio tube, you young fellows hadn't been born, and the automobile and telephone were as yet unthought of.

Young fellows selling radio tubes don't know what it is to work hard introducing a new product. You can call Chicago by telephone or even

London. In fact last year, I was in mid-ocean on the *Leviathan* and Mr. William Rankin, my advertising agent, called me up by radio telephone to talk to me about a business matter—just think of that. Not so many years ago I had to wait three weeks before I could get in touch with my office while on an ocean voyage.

I should think, however, that my rule of trying just a little harder and performing your task a wee bit better than anyone else would prove as watertight in the radio tube business as it has in selling tea.

Most of Us Are Very Much Alike

Most of us, and it makes little difference whether we are French, English, Scotch, or American, are very much alike. We do about the same things, we talk about and discuss the same things—why, we even think about the same sort of things. Here and there amongst us there is a genius, a person whose abilities and talents so far exceed those of his neighbors that he is "in a class by himself." For a genius, success is assured. He has little competition to oppose or prevent his steps forward. Genius does not have to heed the words and experience of others; by sheer natural ability alone

he may make his way to the top of the ladder. But genius is the exception, not the rule. Life for most of us is not laid out for us at birth but is what we make it, and, if we are to win the game, we must abide by the rules.

If what I have said is true, and my more than 60 years of merchandising and business experience tells me that it is, to succeed in business we do not have to be persons of exceptional ability or genius. To be successful it is not necessary that we stand out head and shoulders above the rest of our associates and competitors. We have only to be a wee bit better than they, if we are to succeed where they fail.

All of us are aware of this. We have been told it many times, but only a few of us profit by it. Perhaps that is because we have labelled it as a truism because the truth of the statement is so apparent. If so, we are making a grave mistake—we are barring to ourselves the road that leads to success. We complain that business is bad, that we are suffering from a depression. This is very true, but what are we, as individuals, doing about it? Most of us, I am afraid, are doing very little but wait for better times. Competition today is stronger than ever before, and yet, some of us are content to wait for



nd Radio Tubes



By Sir Thomas Lipton
As told to H. G. Ommerle



business to come to us. We cannot do that and expect to survive. Darwin's law of the survival of the fittest applies with as great force to business as it does to evolution. The man who meets only the bare requirements of his position will stay in that position; he will never progress. The man who gives more, in time, effort, and ingenuity, to his position than it actually demands is the man who goes ahead.

Profit by the Experience of Others

This should be as true for the radio tube business as it is for any other. The dealer who complains that he has not the best location in his particular town, the dealer who puts only as much effort into his business as his competitors force him to put into it, may earn a "living," but the future holds no promises for him. You ask me what a dealer should do? There are so many things that every retailer should and must do if he is to be successful that your question becomes difficult. I will try, however, to tell you a few things a radio retailer should do to make his business a little bit better than the business of his competitors.

He must study the methods of others whose success has already been

achieved, and for this he could find no better model than the present day chain store. Where they have succeeded he can succeed, and where they have failed he can escape failure. He can, in short, use the experience of the world's greatest merchandising experts as a guide to his operations. With their experience as a guide, the alert radio retailer could plan for the future as well as for the present. That is the first way in which he could do a little bit better than his competitors, and it would launch him on a successful voyage.

An incident from my early business experience in Glasgow may serve to more clearly illustrate what I mean by doing better than your competitors. In the early days of the Lipton Company, several of my competitors had staged occasional parades as advertisements for their stores. These parades, although only a few people took part in them, had proved very effective. I decided that I would stage a parade that would far surpass the efforts

of my competitors and that would make quite a splash in my home town.

An Army of Black Savages

Secretly, I organized an army of about 200 men and equipped them with Cingalese costumes that were

complete to the most minute detail. These men were clothed by competent dressers, and they so closely resembled Ceylon natives that I honestly believe that they could have passed muster on the streets of Colombo.

Every man carried two sandwich boards, one carrying the Lipton name and the other the statement, "Direct from the Tea Gardens to the Tea Pot." A squadron of the biggest and best looking of the "Cingalese" were mounted on prancing chargers, to give the procession an even more imposing appearance.

The procession took Glasgow by storm. News of the savage black army marching through the city had spread like wildfire! Many of the awe-struck spectators who lined the streets actually believed that I had imported the natives from my estates in Ceylon—a wonderful testimony to the efficiency with which my dressers had worked. This parade had brought "Lipton" to the front. Those who saw this parade never forgot it



Sir Thomas Lipton, the world's most beloved sportsman and also one of its greatest merchants

—including my many competitors.

I have given you but a general idea of what the man who succeeds will do. The man who succeeds tomorrow will have to do a better job than the man who succeeds today—but all of us should try to do just a wee bit better.



Anyone Can

The Construction of Present Day Receivers Makes it Easy and Safe for Customers to Renew Tubes

By Henry Baukat



PHOTO BY GAYNOR

MODERN radio set designing and production methods have not only made possible better sets, both from an electrical and mechanical standpoint, at lower prices, but they have also given rise to a new era of tube merchandising. Tubes are now reminder merchandise of the type that is readily sold over the counter. The alert dealer will see this and change his selling methods accordingly.

A glance at the chart on the opposite page shows at once that the tube business has been one that has grown steadily since 1922. But the most interesting factor is the way in which the volume of tubes sold over the counter or by the service man has increased from approximately 300,000 tubes in 1922 to 37,500,000 in 1929.

Before discussing the most profitable way to sell tubes today, let us think back a bit and see just how and why changing set design has influenced tube merchandising to the extent that it has and for that matter still is.

Customers Told Not to Touch Set

For the past five or six years, radio set owners have been told by the radio dealer to leave the set entirely alone; if it stopped operating, call the service man but never dare look inside to see where the trouble might possibly be. Customers have had this message pounded home until the set and all its associated apparatus—tubes included—have come to be looked upon as objects of deep mystery. Only the most

foolhardy dared to investigate the interior of a radio set.

So it was, and is, that the radio dealer had to chase out on many service calls which for the most part consisted of re-connecting wires and replacing broken or burnt out tubes.

In the beginning, the advice to leave the set alone was very necessary. The entire nation was all enthused at experimenting with the most interesting and marvelous thing of the age—radio. Radio receiving sets were not then built to withstand the radio explorer with a screw driver. It has been estimated by reputable and experienced service men that back in 1927, but three years ago, at least 60 per cent of all the service calls were unnecessary ones, and ones which were made at a loss to the radio dealer.

Why? Because the dealer, in his endeavor to impress upon the customer the fact that if the set was subject to the investigating hands of the whole family and particularly to the ten year old radio expert next door, no one on earth—and the radio dealer in particular—could be held responsible for the accurate and continued satisfactory performance of the set,

After a while, the lesson began to take hold—so much so that people wouldn't think of connecting up even a loose wire. They would call the dealer at once and have him send the service man around.

As time went on, this condition was somewhat relieved—first by the introduction of the a-c. set with compact assembly of parts, and second, because set manufacturers strengthened and improved the construction of their wares so that there was little possibility of the set developing structural defects through ordinary usage.



PHOTO BY DAVIS

Show your customers how easy it is to renew tubes and why they should keep a spare set on hand

Then, there came another complaint from the still mystified radio set owner. He would call the radio dealer and say that, although his tubes lighted and everything seemed to be O.K., still the set didn't work. Then the service man would dash around to the complaining customer and usually find that one or more of the tubes had "gone west."

Renew Tubes

"How can that be?" the customer would sigh. "They all light." Then would follow a long explanation of the fact that because a tube lights, it's no sign that it is a good tube or a bad tube. This was usually beyond the comprehension of the customer, who still thought he was having something put over on him. So the tubes became just as much a mystery to the average radio user as the set itself. Keep an extra set of tubes on hand? Ridiculous. No one but an expert can tell if it is the tubes or what it is that is giving trouble. That was the thought of the average set owner, and the sad part of it is, that in general is his thought today.

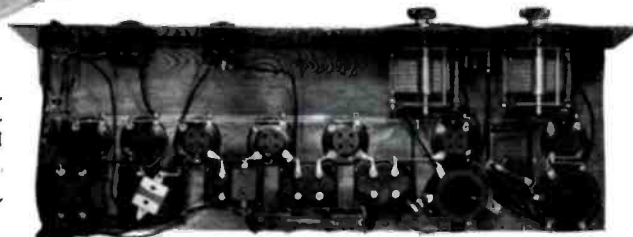
Profits in Tube Replacements

However, as we said in the beginning, the modern receiver is so well built that it is perfectly simple and

them the proper method of replacing the tubes and how easily it is done. Let them try it under your instruction.



Above—modern Silver-Marshall chassis exemplifying simplicity and shielding



Right—a 1926 construction; a maze of open wiring

Explain the things that to them seem mysterious and show them that in reality the operation and maintenance of a radio receiver is very simple.

When the set has been in operation for eight months or a year and the tone seems faulty or distance reception impossible, it is a safe bet that one or more of the tubes is gone. If there is a spare set at hand, or at least one spare of each type, it is an easy matter to apply the following fundamental and conclusive test. Take out the tubes

one at a time, turning off the set each time, and replace them with new tubes until the poor ones are found.

It is always best to start with the rectifying tubes; then try the power and audio frequency tubes; and then work forward through the detector to the radio frequency stages. Poor tubes from the detector on will cause distortion and bad tone. The rectifying tube will do the same, in addition to causing weak signals. The radio frequency tubes that are no longer functioning properly will cause lack of signal strength and loss of distance reception.

Remember these things. Tell them to your customers. Show them how safe and simple it is to replace tubes in a modern set. Then, and only then, will your tube renewal business give you the profit it should. The day is coming when every customer will keep spare tubes on hand, but, before that day comes, customers must be taught to replace their worn out tubes without the aid of the service man.

It will take time, but it can and will be done.

Over-the-counter Sales Result in Greater Profit

Approximately 50 per cent of the tube renewal sales are today made by the service man. The other 50 per cent is done over the counter. If we can educate customers to renew worn out tubes themselves, profits are going to be greater, for it costs less to sell over the counter than through the service man.

The ordinary set owner can and should renew tubes. It is for the radio dealer to promote this thought and explain how easily it can be done. There is no need for the set owner to have complicated tube testers that show the various characteristics of the tube. His test is the test of tone and operation.



PHOTO BY GAYNOR

No need to lose but a moment's program—if spares are kept on hand

safe for anyone to replace tubes. With the complete shielding of sets, very few, if any, parts are exposed to view or damage.

Point these facts out to your customers when they buy a set. Show

Year	1922	1923	1924	1925	1926	1927	1928	1929
Number Sets Sold	100,000*	250,000*	1,500,000*	2,000,000*	1,750,000*	1,350,000*	3,200,000*	4,200,000*
Number Tubes Sold with Sets	100,000	1,000,000	7,500,000	12,000,000	10,500,000	8,775,000	24,000,000	31,500,000
Number Tubes Sold over Counter or by Service Men	300,000	3,500,000	4,500,000	8,000,000	19,500,000	32,425,000	26,200,000	37,500,000

The above chart shows the way in which tube sales over the counter and by the service man have progressed. *Radio Retailing



Polly Walker, recently on the RCA Radiotron hour

Why the Piper Must be Paid

A Study of Broadcasting Conditions Shows That Our Present Commercial Set-up Gives Best Service to Listener

By Frederick C. Kendall, Editor, Advertising and Selling

ALTHOUGH the Government has made no serious move in that direction, it is not rare that some idealistic—but scarcely farseeing—person raises the question of Government operation of broadcasting in place of the present system of sponsored programs.

If, by some chance, this did come to pass, it is true that there would be no more necessity to keep turning the dial in order to avert undesired advertising, for the simple reason that this powerful medium would be automatically closed to advertisers. Also, there would be more leeway as to length of programs, for there would be no more sandwiching of advertising matter between musical or other selections.

These are two of the principal benefits to be derived from Government broadcasting. Looking at the other side of the picture, it must be admitted that, while there would be no more paid advertising, there would probably be considerable free advertising—political and otherwise, which amounts to the same thing as far as the listener is concerned.

License Plan Not Feasible

Licenses, paid for by set owners, would scarcely defray the expenses of

programs such as are now sent over the air. Only the other day Commissioner Harold A. Lafount stated, "a tax on radio receiving sets would be likely to have a detrimental effect on the quality of radio programs broadcast in the United States." Under the present system advertisers are forced by keen competition to put on programs which will meet the approval of the greatest number of listeners. With the present careful check on the

long. Under Government operation this competitive spirit would be lacking—and it is consequently probable that your advertisement-less program would tend to become a rather boring affair.

Equally important is the question as to whether or not there would be less variety of programs given over the air at the same time under Government operation. If, by some chance, WJZ should arouse the ire of Mrs. New Yorker, she can turn to WOR or WEAJ or any one of a number of other stations. Would this be the case under Government control?

Anyone discussing this question inevitably refers sooner or later to BBC, which is the British Broadcasting Company. Here you have radio a la Government as the accepted, irrefutable, irremediable form of broadcasting. Here the air is undeniably



The Goldbergs at home. This popular feature is heard every Friday night over an NBC network

reception given programs it is hardly likely that, at the present cost that broadcasting entails, any undesired programs would be continued for very

free of the taint of advertising—but even so, it will develop upon close inspection that all is not well.

The English set owner is content, per

force, to pay his annual license fee for the privilege of listening in. In return he receives a year's entertainment—but is it entertainment that he really likes?

Being purged of all commercialism, BBC can, and often does, go in extensively for cultural subjects which too frequently have a tendency to become tiresome to the less cultured of Britain's masses. To make the matter worse is the fact that the bored Britisher has far less opportunity to switch stations than we have on this side of the Atlantic. He can turn the dial, but the chances are that he will bump into the same program or one just

as boring. One cheerful alternative occurs at certain hours on Sunday when BBC is silent. Then listeners have the privilege of tuning in on continental stations—and listening to programs which, as here, are interspersed with advertising.

Newspaper Cooperation Important

An interesting sidelight is the seriocomic situation which exists between English newspapers and BBC. Lacking, here, is the fairly smoothly functioning cooperation which exists between American broadcasting companies and the papers which publish their programs. The reason lies in the fact that the British government publishes its own radio magazine, reserving for it the really important news of its broadcasting activities and leaving to the daily press the questionable satisfaction of carrying its programs and making timely corrections. The press, however, takes full advantage of its opportunity to retaliate by pointing out editorially various actual or

alleged shortcomings in BBC's methods.

Financial statistics relating to the broadcasting industry are significant. It is interesting to note, for instance, that



Ruth Etting who welcomed Rudy Vallee back to the NBC studios from his summer tour

last year British listeners paid something more than five million dollars in license fees to support their 21 broadcasting stations, or about a quarter of a million dollars per station. In the United States there are about 700 radiostations which, if they were to be financed on the British license basis and at the same expenditure per station, would cost approximately \$192,000,000 in radio taxes. This, of course, could

be vastly reduced by reducing the number of stations and, at the same time, curtailing the variety of programs offered.

Stations Contribute Their Share

The average listener unfamiliar with the methods of our broadcasting chains is apt to assume that all programs sent over the air are of the sponsored variety. These probably have never heard of the "sustaining program" which the chains furnish to associated stations on their networks. These programs, as distinguished from those sponsored by advertisers, are not paid for by commercial clients, but are presented in the name of the broadcasting chain and its associated stations. Indicating the wide use made of these sustaining programs, one large broadcasting company recently reported that less than ten per cent of the programs furnished by its four main outlets are of the sponsored variety. While the associated stations pay \$45 for each hour of these "sustaining programs," the cost of obtaining talent

and wire lines necessary for the delivery of this service is said to exceed the revenue received from the stations.

Competition Increases Efficiency

Operating on a commercial basis, broadcasting companies and advertisers alike are on the alert for any deficiency which may occur in a program. Careful check is kept over mail received from listeners (as well as on sales reports) and those programs will be short lived indeed which do not seem to "go over." At the same time, increasing pressure is brought to bear upon advertisers to make their sales messages as short and as acceptable as possible.

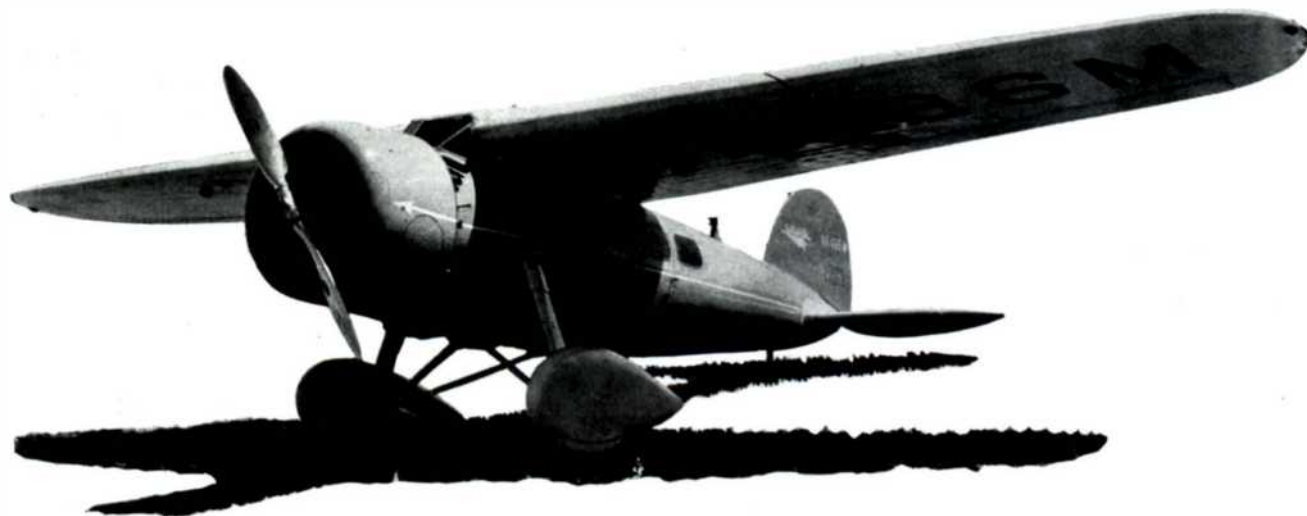
Much justifiable fault has been found with present broadcasting methods. Broadcasting companies themselves are alive to these deficiencies and are making every effort to overcome them.

It is perfectly evident that although there is room for improvement in our broadcasting system, it is operated on a sound and lasting basis. Take the commercial sponsor out of the picture and you also take out features like Amos 'n' Andy, Will Rogers, Floyd Gibbons, Rudy Vallee and Phil Cook. No other medium except commercial sponsorship could or would afford to put these programs on the air.

America has the best broadcasting in the world and it is upon this that our large radio industry is based. There is no doubt in my mind that if we continue along the lines on which we are now operating the future of broadcasting in this country is assured.



Phil Cook, the NBC's one-man show, heard twice daily as the Quaker Man



A Flying Broadcast Station

*Actual Progress of a Great Air Race Broadcast
From One of the Racing Planes for First Time*

MILLIONS of radio listeners experienced a new thrill when for the first time they heard a broadcast directly from a racing plane as it zoomed across the American Continent at the rate of 190 miles an hour.

That is what actually took place in the recent non-stop air race from Los Angeles to Chicago. The plane from which this feat was accomplished is the *New Cincinnati*. By means of a short-wave transmitter in the plane signals were sent to ground stations where they were re-transmitted on regular broadcast frequencies over a nation-wide network of stations.

This is said to be the fastest type plane ever used as a flying broadcast station. It was recently purchased by Powel Crosley, Jr., pioneer radio manufacturer of Cincinnati, Ohio. Powel Crosley, Jr., and Captain William S. Brock, internationally famous aviator, formerly of the team of Schlee and Brock, have joined forces in a venture which promises many interesting things in aviation and radio.

Plane is Famous Racer

The *New Cincinnati* is Brock's famous Lockheed-Vega plane, with which he recently established a new round trip transcontinental record

from Jacksonville, Fla. to San Diego, Calif. The time for the trip was 31 hours and 58 minutes, breaking the record of Captain Frank M. Hawkes by more than 12 hours.

The ship was designed and built especially for Captain Brock and was finished in May of this year. It is powered with a Wasp engine, and is probably the fastest passenger carrying commercial airplane in the world.

Ship Has 150-Watt Transmitter

The plane's top speed is approximately 190 miles per hour, with a comfortable cruising speed of 150 miles an hour. The wing spread of the plane is 40 feet and its length is 32 feet. On a recent trip Mr. Crosley and Captain Brock flew from the former's airport in Cincinnati to the Indianapolis T.A.T. field—a distance of 105 miles—in 43 minutes, and returned in 38 minutes.

This record-breaking airplane is now equipped with a 550-gallon gasoline tank for long distance hops, which may be forthcoming, as well as a 150-watt radio transmitter and a receiving set. The radio equipment is indispensable for weather reports on long flights. When in the air, the ship is in constant communication with land stations by radio telephone. In recent tests, Captain

Brock and an announcer put on a half-hour's radio program through WLW, Cincinnati, while flying more than a mile in the air above the city, thus proving the practicability of the outfit.

Crosley's interest in aviation, as well as radio, is well known. He states the plane will be used as a flying laboratory to develop radio equipment for use in aviation. However, it will serve other purposes, in that it will be used occasionally for broadcasting descriptions of various sporting and aeronautical events over the company's two stations, WLW and WSAI, in Cincinnati, Ohio. The flying transmitter, with its call letters KHILO, will be used for broadcasting features not readily reached by telephone lines.

Specially Designed Equipment

The *New Cincinnati* is equipped with a radio phone transmitter especially designed for this plane and also with an air-craft receiver capable of receiving medium power airport messages for approximately 1000 miles. Under ordinary weather conditions, the pilot is able to talk to listeners about 300 miles away, although reception at this distance is not sufficiently good for re-broadcasting.

The transmitter is very compact and of special design to reduce its weight as much as possible. It is built in an aluminum case which is suspended in the back of the passenger compartment by shock absorbing rubber cords, which prevent plane vibration and landing shocks from damaging the transmitter.

The tube filaments are lighted by a storage battery connected to a charging generator which is driven by the engine of the plane. The plate voltage is supplied from another engine-driven generator. In addition, there is a dynamotor which can be driven by the storage battery and will deliver the necessary plate voltage in case of failure of the engine-driven generator, and can be used for transmission when the plane's engine is not running.

Two Sets of Radio Controls

Controls are provided both in the pilot's cockpit and in the radio compartment, and the transmitter can be put on the air from either position. This enables the pilot to take part in any communication and to broadcast.

The transmitter antenna consists of a 175-foot trailing wire. This wire is normally carried on a reel in the fuselage and, for transmitting, the wire is unreel and allowed to trail below and behind the plane. A small weight is attached to the end of the wire. Contact with the antenna from the transmitter is made to the bushing through which the antenna goes through the bottom of the fuselage.

The receiving antenna consists of a short wire running along the top of the fuselage. Head sets are provided

both in the pilot's cockpit and the radio cabin. These head sets are on the output of the receiver so that both men will be able to listen to various stations to which the receiver is tuned when the transmitter is cut off. When the transmitter is turned on, they will be able to hear their own transmission only—to carry on a two-way communication, they turn the transmitter off while receiving.

Untold Possibilities Ahead

The broadcasting accomplishment of the *New Cincinnati* in the recent National Air Races is but the beginning of what may be one of the most important uses of modern radio. To the fertile mind its uses are endless; first hand reports from the air of a great catastrophe such as the overflowing of the Mississippi River. Then again it might be the reporting of the progress of a battle in the next war. Imagine getting a second-by-second description of a battle from the air by a Floyd

Gibbons or a Graham McNamee.

But for the immediate future it will certainly have far-reaching influence in creating a greater interest and appreciation on the part of the public for radio. Its use in broadcasting descriptions of sporting, aeronautical and other events will cause a greater demand for radio sets and tubes. And that is what we are particularly interested in at the moment. This development is another link in the endless chain associated with radio, proving once again that we are a part of the most interesting industry in the world. Not only is it the most interesting but it is one that offers opportunity after opportunity for profits to wide-awake dealers who use these advances in radio's use to instill in the minds of their customers a fresh desire for the best there is in receiving apparatus.

The *New Cincinnati* is a fine example of the practical application of radio. It clearly indicates the unlimited possibilities for development and expansion that lie in the radio business.

The dealer who is keeping abreast with the industry in order to increase his business, must find every accomplishment, such as this aeronautical feat, a decided stimulant. It should bring home very forcibly the vastness of the great industry in which he is engaged. Every new use for radio such as this creates a greater interest on the part of the listening public which means new avenues for profit to those who are

engaged in selling radio merchandise. Progressive radio merchants watch and use these advances to increase their business.



Above—L. to R., Robert Brown announcer for WLW, Capt. Wm. S. Brock and Powel Crosley, Jr. beside the "New Cincinnati"



Left—Robert Brown at the microphone of KH-ILO in the Crosley-Brock plane which holds the round-trip transcontinental record



I Pay Half

That is Why I Feature Reminder Merchandise Such as RCA Radiotrons in My Windows—They Bring Customers Into My Store



MY windows are my most valuable salesmen. They are the eyes of the store and occupy its most valuable space. Being located in the center of New Brunswick, N. J., a city which has a population of approximately 33,000, I have hundreds of people passing my store every day. Unless I attract them through my windows and create a desire to buy some product on display, I am losing money. I say "losing money" because almost exactly fifty per cent of my rent is for my window space; therefore, I must make my windows responsible for at least fifty per cent of my total sales volume.

What a Window Display Should Do

A window display, in order to be a success, should accomplish the following four things:

1. Attract attention.
2. Create interest.
3. Transform that interest into desire.
4. Make the desire strong enough to induce the observer to enter the store.

Along with this, the windows should carry a class of merchandise whose price is within the reach of the majority of people. That is why you will always find RCA Radiotrons on display somewhere in my windows. More people are in the market for them than for any other type of radio equipment. Tubes are the fastest selling line that any radio dealer can handle. RCA Radiotrons are something that everybody who has a radio set needs and whose

unit price is low enough so that everyone can afford them.

Feature Merchandise People Know

There is also a great demand for them. People know the name through the national advertising being done and because of their past reputation. When customers come into the store, they demand this brand and will accept no other. Therefore, it is up to me to constantly remind them that my store is the place to buy RCA Radiotrons and to do this by keeping them on display in my window all the time.

Demand for a product is created by the retailer in three ways: either through personal salesmanship, advertising, or display. While I find all three necessary, I am particularly partial to display because it sells from the merchandise itself at less cost than either of the other two mediums.

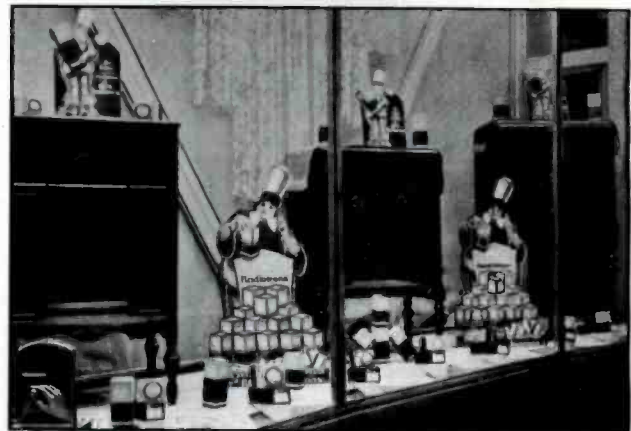
People are always attracted by a well arranged and properly lighted window. If you can, by reminding them to buy a product such as an RCA Radiotron, cause them to come into the store to make the purchase, nine times out of ten, while they are in the store, they are again reminded either through good salesmanship or by a

well arranged store of some other product they want or need. Thus, your windows have been directly responsible for two or more sales to the same customer.

Many times I have had customers come and ask about some product that was on display a week or two past. They have seen it in the window, it has created a desire with them to purchase it, and then some time later, either when they have time or money, the sale results.

Keep Windows Clean and Change Them Frequently

A very important phase of my plan of window displays is to change them frequently. I make it a point to change mine at least once a week, if not oftener. Sometimes I put entirely new merchandise in; other times I simply rearrange the window. I also make it a point to go window shopping quite frequently



This window is a constant reminder to buy RCA Radiotrons

My Rent For My Windows

By Richard T. French, Manager

Montalvo's Radio Store, New Brunswick, N. J.

with Mrs. French. We observe the methods of the other merchants and compare the sales points of other windows with those of my store. Another very important thing is to keep not only the merchandise and the window trim, clean, but to keep the plate glass free from dirt. My experience has been that it is not extravagance to have it washed on the outside every day.

Put Personality in Windows

A sloppy, badly lighted window usually means that the service and merchandise of the store are similar. The customers know this and are not apt to trade with such a dealer, if his next door neighbor, who handles similar merchandise, has an attractive, clean, and well lighted display. So I make my windows carry a message of good merchandise, prompt service, and right prices. I try to make them so inviting that the passer-by can't resist coming into the store. Then, once he is over the threshold, I back up my windows with a pleasant smile and courteous attention.

Windows Must Have Class Appeal

Windows must also appeal to two classes of prospects. The first are looking for just the type of article you have on display. They know what they want, having made up their minds through past experience with that article or by being influenced through national advertising.

The second type are merely passing. They may be casual window shoppers. For this class, it is very necessary that they be attracted to the merchandise in the window by the attention-com-

PELLING characteristics of the display.

Due to the shape of my windows, which are rather narrow in front but run quite deeply into the entrance of the store, I am very careful about the way in which I arrange the merchandise. I do not put it all in one corner of the window or all the interesting things in the front, but try to spread them along so that the customer will grad-

As I said before, windows must be changed frequently if they are to continue in their effectiveness. The majority who pass my store do so daily, so that, unless I give them new merchandise to look at or a rearrangement of the merchandise, my windows very soon lose their pulling power and sales drop accordingly. People like to see and have new things.

I find that such things as football games, baseball games, and other sporting events can be used to great advantage in attracting the passer-by. National holidays, such as Thanksgiving, Christmas, the Fourth of July, can always be capitalized upon in some way in the windows.

Tube Sales Most Important

I have found tube sales most important in radio business. Not only do I make a nice profit from them, but it always enables me to find out things

I want to know about the customer's radio set which often leads to set sales. RCA Radiotrons are indeed the very heart of my business, and that is why you will always find them on display in my windows.



This beautiful store interior of Montalvo's stands back of the inviting windows

ually wander further and further toward the entrance of the store, as he observes the merchandise in the windows and reads the sales messages. The nearer the door a customer gets the more chance of his coming in.

Of course, the value of a window is dependent upon the location of the store and the number and type of people who pass by. This means a close analysis of your particular location. Buyers of radio sets and accessories are numbered among the comparatively poor and the very rich. I, therefore, always have merchandise on display which is attractive to all sizes of pocket-books. Here, again, RCA Radiotrons prove very effective, they appeal to all classes of prospects.

No More Number Three Displays

The stock of number three displays, large cut-out of RCA Radiotron boy and cartons, is gone. New displays are on the way. See inside front cover of this issue for the first one.

Is Your Best Salesman ASLEEP On the Job?



As Editor of the foremost magazine in the lighting field, Mr. Milford has come into contact with thousands of retail merchants. His observations should be found valuable by every radio dealer.

LESS than ten years ago, when the radio industry as we know it today was in its infancy, radio retailing was anybody's business. Anyone who knew anything about radio sets, and knew how to make and service them, found a ready market for his wares. Loudspeakers, stationed in doorways of radio shops, blared out raucous though effective invitations to passers-by.

Everyone in the radio business prospered. It was the old law of supply and demand manifesting itself, with the demand far exceeding the supply. Set manufacturers could not turn out their products quickly enough and most people built their own. There was "music in the air," and any device that could catch it and bring it to the ears of the radio fan, no matter how, fulfilled all reasonable requirements of the purchaser.

Times Have Changed

The passing years have changed the complexion of radio merchandising. The radio market has become more stabilized, the supply now exceeds the demand. The field has narrowed down to the point where demand is smaller, —the supply larger. The turnover in

Good Lighting is All Important in Present Day Merchandising. It Brings Out Beauty of Merchandise and Speeds Up Sales

By J. W. Milford

Editor, The Magazine of Light

the radio business has not been exceeded by any other line of business. Radio today is being retailed by more kinds of retail stores than probably any other commodity used in the homes of the country. It seems that everyone is selling radios. Add to this the fact that a large percentage of radio business today is being done on a trade-in basis, which further cuts down the profit of the dealer, and you have a situation that is hardly calculated to in-

to his profit. He must take fuller advantage of manufacturers' sales aids, must capitalize his points of contact, and seize every opportunity to facilitate the operation of his business. And in the forefront of these sales aids, perhaps one that the average radio merchant has neglected most, is good lighting.

The wise radio retailer realizes that customers today are more critical than ever before, and that, moreover, they have less time to spend in his store than they formerly had.

He knows that whereas formerly the blare of a loudspeaker in the doorway served as an attention-attractor, he now must place more reliance on his display windows. The interior of his store must be neat and attractive. His merchandise, to sell quickly and in volume, must look inviting to the shopper. And it is here that light so ably proves



This well lighted store is that of the Enterprise Electric Co., Cleveland, O.

spire the envy of other lines of business.

The radio merchant who expects to be in business five or ten years from now must make a keener study of merchandising. He must give more thought to the buying habits of his customers, and learn how to turn them

its case in the modern retail store.

Light Dominant in Merchandising

Light has always played a dominant role in the drama of merchandising. Repeated tests show that good lighting speeds up sales and saves the time of

customer and salesperson alike; that it inspires the confidence of the customer, raises turnover rate, increases sales per customer, and reduces the returning of merchandise.

When radio first became a merchandising proposition, few women bought radio sets or parts. But today, they dominate this market, as they do practically all markets. Statistics show that approximately 56 per cent of radio sets today are bought by women alone, and 30 per cent by men and women jointly. Only 14 per cent are bought by men alone.

What does this mean to the radio dealer? It means that he, like all others who cater to feminine tastes, must make his store more attractive, more inviting. He dare not maintain an establishment that resembles a junk heap of miscellaneous parts and apparatus. He must strive for an atmosphere of good taste and refinement, an atmosphere conducive to the sale of entertainment. This he cannot possibly do without the help of good lighting.

Achieve Home-like Atmosphere

That is why today, the well-appointed radio store strives to achieve a comfortable home-like atmosphere, so that when customers witness a demonstration, they will be able to visualize the set in their homes. Home demonstrations are expensive. A properly lighted store makes them less frequently necessary. Attractive floor lamps, which illuminate the cabinets and lend a touch of decoration, grace the well-ordered radio display room. Atop the sets, neat light ornaments are often used to supply an additional note of charm. Soft chairs invite the prospect to linger and enjoy the demonstration. The prospect does not need to speculate as to how the set will sound in the home. To all essential purposes, this is home.

Bring Out Beauty of Sets

Radio set manufacturers have for years devoted painstaking effort and

much time and money in making their sets masterpieces of furniture design, as well as good radio reproducers.

Free Lighting Service for Your Store

Have you ever checked your store lighting? Why not do so? You'll undoubtedly find that your local lighting company has experts who will be glad to advise you on this all important problem. They do not charge for this service.

Good lighting is good business.

People who buy them are buying furniture as well as entertainment. Most radio sets are dark in color, and much of the beauty which has been built into them is lost under poor light. Good lighting, on the other hand, enhances their appearance, and brings out all of their tonal and physical beauty.

In many good radio stores, we find, supplementing the general lighting, one



The Cedar-Lea Radio Shop, Cleveland, O., uses light to full advantage in its window. Notice how the set is spot-lighted

Back of the above window is an attractive, adequately lighted store which at once makes the prospect feel at home



or two spotlights, unobtrusive in appearance, and often cleverly concealed in wall niches, which are used to direct a beam of plain or colored light on a set which a prospect wishes to inspect more closely. These spotlights often prove their value in clinching the sale.

If ever a business has taught the lesson of change, it is the radio business. Yet on every side we see radio stores that are using the same lighting systems that they have employed for the past five years. But notice the newer stores. Observe their lighting systems. See the difference.

Using all classes of stores as a criterion, the radio stores which are doing the best business are those that are the best lighted. The up-to-date radio merchant maintains his lighting system on the same basis as he operates his business. It is part and parcel of his policy of store operation. He knows it is his best salesman, and would no more employ an outworn lighting system than he would retain a salesman who slept on the job, or who came to work attired like a ragpicker.

Good Light Costs Little

In general, there is a tendency to give too much weight to the cost of store lighting, and not enough to its sales value. It is true that economy must be practiced if the merchant is to be successful. However, statistics prove that good lighting is an investment, not an expense, because it more than pays for itself in increased sales and actually reduces store operation cost.

TUNING IN

With J. W. McIver

Manager, Sales Promotion Department

SOME trade paper editors, some hurried dealers, some hurried jobbers, some manufacturers and most advertising writers have for years preached sermons on the text, "Manufacturers' dealer helps nearly always fail to help sell the goods."

The point may be well taken in some cases. Generally it is not. The type of material that is designed to please the General Manager, and which bears as its only commercial taint the love and kisses of a hurried Art Director in an Advertising Agency, probably will fail.

But, there are tons of excellent booklets, display pieces, and merchandising devices which become a sad commercial waste because it is difficult to get anything done about it in the store.



AS TO the matter of design, the RCA Radiotron Company believes in designing its material in the stores. Today, we have a number of experienced and observing young men behind the counters with the sole responsibility, and job, of finding out how best to sell radio tubes, especially RCA Radiotrons.

These young men try out all the apparently clever ideas; the original suggestions, as well as our own. No matter how much a lithographer or printer may have to say about an idea that is for sale, we must know it will work before we use it. It is our responsibility and opportunity to plan and buy our material so that we will

get the most out of every promotional dollar.

We are gradually building the most extensive and most effective program of sales stimulators in the industry. In addition to the things we gladly supply on request, without charge, there will be certain things on which we ask a part of the cost.

It will not surprise me if certain of our good friends question, at first, the fairness or wisdom of the policy of charging a part of the cost for these particular dealer helps.

Our plan is designed to get from the money we spend, the most powerful force possible at work to help all of our good dealers make more money. This best way to do it has been carefully worked out. If our contemporaries decide to load up dealers with unasked for material, for nothing, that doesn't prove a thing to us, except that that is their decision.



THOSE who haven't given this plan much thought will come to the hasty conclusion that we are asking the dealer to share part of the burden of our advertising. This conception is entirely wrong.

Our advertising appropriation this year is greatly increased over that of last year. Furthermore, every penny returned to us is expended in doing a great deal more to promote the sale of Radiotrons. None compares with the RCA Radiotron Company in the extensiveness, in the effectiveness and the

power of its advertising and promotional expenditures.



THE reasons for putting a price on certain items are sound and, in most of our experiences, the alert, progressive merchants immediately agree that it is the smart way to promote the sale of the product. For the smart, alert dealer knows that he can expect the greatest amount of money working for him, if waste and ineffectiveness are eliminated.

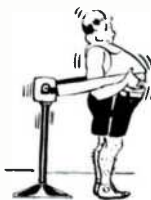
That's the secret of the whole idea. If a dealer has to make a slight investment in material, he orders only enough to meet his needs.

If we attach some value to what we offer, the dealer will realize that sales builders cost money. He will appreciate them more. If a dealer puts a little money into some promotional idea, the only way he has to get his money back is for him to use it. So he becomes immediately interested.

Then too, we can control our activities more accurately. We can prevent waste on things which are susceptible to great waste, and which are often least effective and most often misused. We can be generous on the most effective things.

We can supply better and more lasting material. And the dealer gets the greatest experience as an advertiser for the least investment.

All of this is part of a wise plan to do the most in making it easiest for our dealers to sell our product, which means making it easiest for customers to buy.



Keep Your Eye on Your Customer—

By MILT GROSS



POST CARDS AND

More Sales Aids To Help You Increase



HERE'S something new in direct mail! Personalized post cards—each card bearing the name of the customer to whom it goes! There's nothing more interesting than seeing your own name in print, and when the Mr. Wanselows, Mul-

vaneys, and Jeters to whom you send these cards see that this post card is talking to *them*, you can bet that they're going to read it! And they will come to your store for merchandise. The price is low—\$10.50 for 300 stamped cards—100 each of three designs—filled and addressed. Send the names of 100 customers, enclose check or money order for \$10.50, and you'll receive three sets of 100 cards (300 cards total) all ready to drop in the mail! Put this marvelous direct mail material to work for you. Be the first in your territory to capitalize on it.



SIX full color lantern slides, featuring the paintings used for GOOD NEWS covers. Sent free, with your name and address in the space below the advertising message. Theater advertising pays. Send for yours today!

LANTERN SLIDES

Your Profitable RCA Radiotron Business

Is your static HOME MADE?

PERHAPS all those crackles and noises you are hearing are not due to static, but are being produced in your own set. Inferior and faulty tubes frequently cause all sorts of distortion. Equip your radio with a complete set of new RCA RADIOTRONS and eliminate home-made static.

Call us on the 'phone and let us send one of our service men to inspect your set.

Dealer's Name



WE TEST TUBES FREE

T-1

Make your good set BETTER!

To give perfect reception, even the most expensive radio set must be equipped with perfect tubes. Equip your radio with a complete set of new RCA RADIOTRONS and enjoy perfect tone quality and faultless reception.

Call us on the 'phone and we will gladly inspect and test your set for you.

Dealer's Name



T-6

LONG SHOTS seldom win



RCA RADIOTRONS have proved themselves the leading radio tubes of the entire industry. You are taking no chances with your radio enjoyment when you use the tubes which more than 17 leading set manufacturers recommend.

Call us on the 'phone right away and one of our service men will gladly deliver and install a set of new RCA RADIOTRONS for you.

Dealer's Name



T-2

Do your TUBES pull together?



DON'T let inferior tubes hamper the performance of your radio. For perfect radio reception equip your set with RCA RADIOTRONS, the tubes recommended by leading set manufacturers.

A 'phone call to us will bring a set of new RCA RADIOTRONS to your home.

Dealer's Name

T-3

NOW is the time



Don't wait until old and inferior tubes cause you to lose interest in the magic of radio. Equip your set with new RCA RADIOTRONS, the tubes that are recommended by leading set manufacturers, and enjoy perfect radio reception now.

A 'phone call to us will bring a new set of RCA RADIOTRONS to your home immediately.

Dealer's Name

T-5

SIX new, tested for pulling power, postal cards. Each one short, snappy and to the point. Just what you need to put some pep in your tube renewal business. Send one a week to a selected list of customers.

Price—without imprint free, except if government stamped cards are specified, then price is one cent each. Imprinted, 40 cents per 100, minimum order 300 (not less than 100 of any design). Imprinted, government stamped, \$1.40 per 100, minimum order 300 (not less than 100 of any design). Attach check or money order with your request.

Be sure of TONIGHT'S PROGRAM!



Don't let anything mar perfect radio reception just when you want to listen to your favorite broadcast program. For the utmost in radio enjoyment install a complete set of new RCA RADIOTRONS in your radio.

Telephone us right away and we will be glad to deliver and install a set of new RCA RADIOTRONS.

Dealer's Name



T-4

Novelty Advertising Pays

Everybody Likes to Get Something for Nothing. Good Will and Sales Built Up Through the Use of Novelties

WHEN a customer has a dealer present him with some sort of novelty it at once creates much good will. Customers appreciate the fact that a merchant places sufficient value on their trade to endeavor to cultivate pleasantness by some small gift. That is why specialty advertising in the form of some useful novelty can be successfully employed.

Novelties can often be used to carry advertising messages which will get in where other forms of advertising cannot. The use of novelties takes full advantage of personal appeal. It always brings to the customer's mind the dealer who presented it to him and the service which it is advertising.

People Buy on Impulse

The large majority of people like to do things on impulse. They make their purchases this way. In your own home are probably many little used purchases which were bought for no good reason at all except that they were bought on impulse. It is just as easy to appeal to the average man or woman through their feelings as it is to appeal to them through any mental process. That is another very sound argument in favor of the use of novelties. A practical little advertising souvenir from a radio dealer will appeal to his customers as much by sentiment as by utility. They will appreciate it and will show their appreciation by patronizing the dealer that thought enough of them to present it.

Distribution of Novelties Very Important

Specialty advertising cannot be successful unless particular attention is paid to the distribution. It is very easy to give things away. Anyone can do that. The trick is to give things away in such a manner that they bring re-



The woman shopper will appreciate a pencil and notebook

PHOTO BY DAVIN

least once a year with RCA Radiotrons, if they are to secure the best reception.

Inclose a card with this letter stating the right of the recipient to some certain specialty upon presentation of the card at your store. Such a method has the effect not only of securing a greater appreciation of the article to be distributed but brings you into actual personal contact with the prospect.

In some cases it may be impossible or impracticable to get the prospect to call at the store. Here the offer may be made to apply if the prospect will fill out and return an inclosed card which will give you information which may lead to a sale at some later date.

Many Ways to Use Novelties

These are only a couple of the many ways radio dealers may make use of novelties. They can be passed out to prospects who happen to come into the store of their own free will attracted by your window displays. They may be given out at radio shows or expositions. Rightly and tactfully used they will create good will which will aid you in the collection of bad accounts. They will also overcome the indifference of old customers and help to dispel any misunderstandings which have been holding trade back.

In another part of this issue of Good News will be found a list and description of the novelties which have been designed for your use. These are available now. Send in your order at once and set them to work for you.

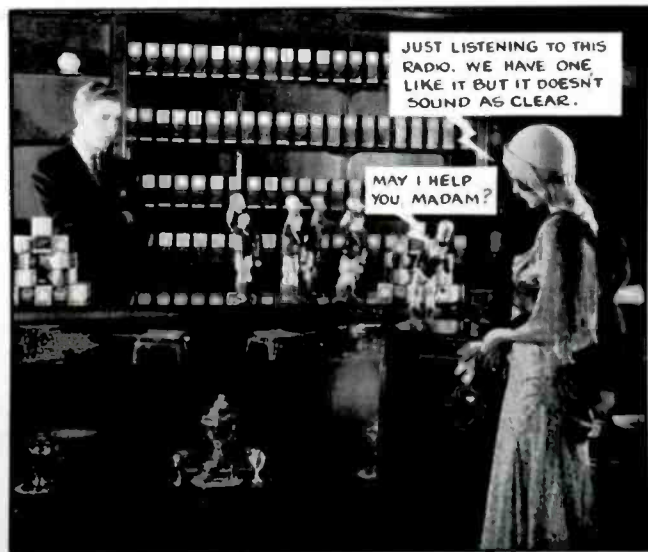
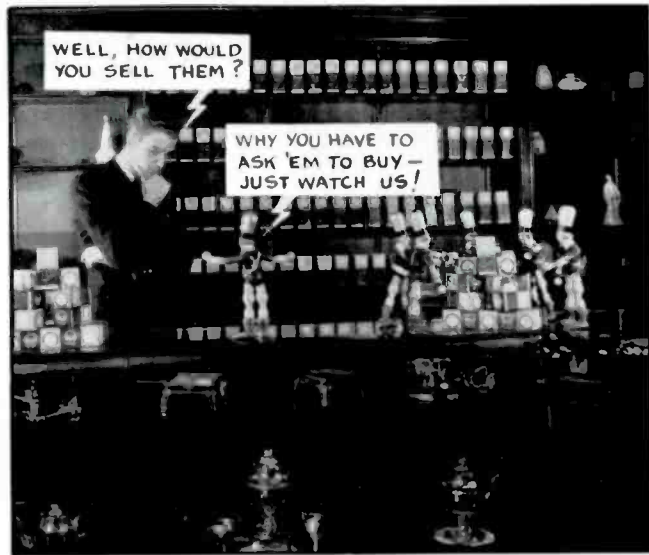
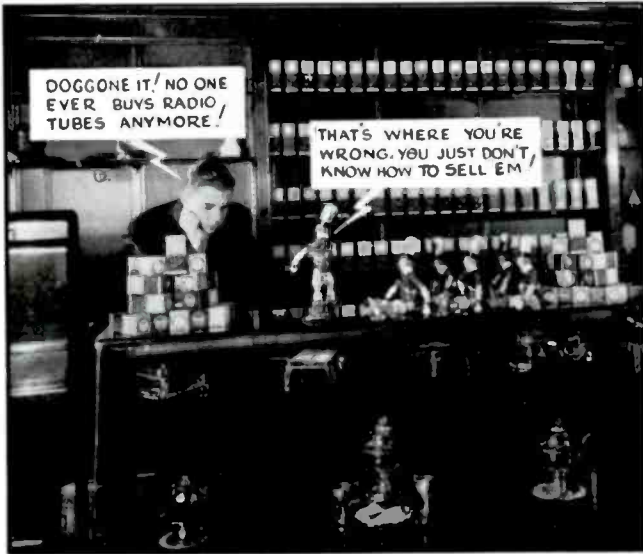
turns, in the form of sales of your merchandise, that more than pay for the cost of the novelties.

In the first place novelties should only be given to live prospects. These should be carefully selected from your mailing list. But don't mail them the novelty. One of the great advantages of specialty advertising is to get people to come into your store for the novelty.

Send Offer in Sales Letter

Use your selected mailing list to send a sales letter to prospects. Tell of the types of radio sets you handle and why it is to the prospects' advantage to secure a demonstration of one. Remind them, if they already have a radio set, that their tubes need renewing at

They ARE "Selling Fools"!



What Is Electricity?

No One Knows. But We Do Know Certain Physical Laws That Govern Its Action. These Are Explained in This Article*

By L. G. Lessig

Commercial Engineering Dept., RCA Radiotron Company, Inc.

TO understand what happens in the process of sending and receiving radio impulses we ought to know something about the physical laws of electricity that determine its behavior as we understand it today.

Almost everyone has rubbed a cat's fur and noticed the little sparks in it that can be seen in the dark. Electricity is present. Sometimes lightning flashes take place between two clouds or between clouds and earth. This is another example of the presence of electrical force.

We are sure that electricity is not like any material substance we know of. It cannot be seen, felt, tasted, smelled, or heard. Its presence can be detected only by its effect—that is, by what happens when it gives up some of its power—as, for example, turning a motor, lighting a lamp, or vibrating a telephone diaphragm.

The electron theory was formulated by scientists to account for the manifestations of electricity found everywhere. It enables us to better understand the process whereby light, heat, and electric energy are produced. What happens when electricity flows through a wire? How does it pass from one coil of wire to another coil of wire? To answer these and similar questions, we must first explain the modern conception of the electrical nature of all matter.

We must remember that electricity cannot be seen nor can the existence of

an electron actually be demonstrated, but scientists in various ways have confirmed their belief in the electron

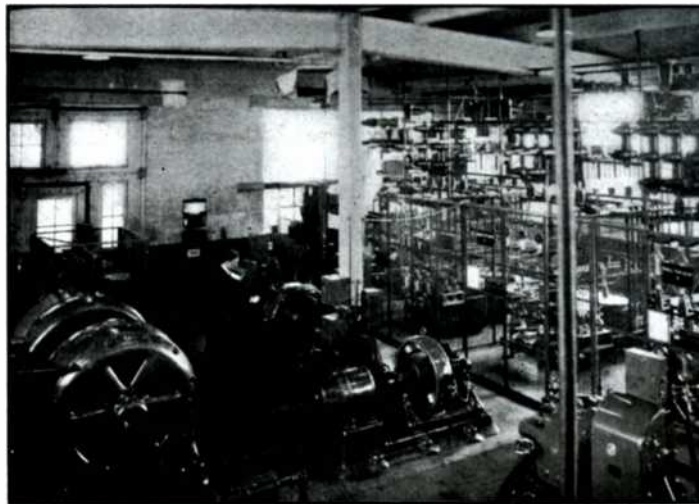
state. It has been known that all this matter consists of smaller divisions called by the chemists, molecules. They represent the smallest particles of matter into which a substance can be divided and still be recognized as part of the original substance, thus retaining all of its physical and chemical properties.

Molecules are assumed to be divided into other constituent parts called atoms. According to the present accepted theory, atoms have a nucleus (center) known as "positive" electricity to which are attracted minute charges of "nega-

tive" electricity known as electrons. It is difficult for our minds to comprehend just how infinitely small an electron is, since it is $1/1845$ the size of an atom. Scientists compute the electron is $1/13$ millionth of an inch in diameter and $1/46$ billion billion billionth of an ounce in weight.

While the positive nucleus of an atom attracts electrons, these electrons in turn repel each other, hence we find Nature's laws of attraction for unlike electrical quantities and the repulsion of like electrical quantities practiced at the very basis of our conception of matter.

If electrons can be made to move from atom to atom in a material such as copper, or if they can be expelled or thrown off into space from a hot metal (a white hot filament, for instance) it means that a certain quantity of energy has been released because certain



Power plant of the new 200-kw. transmitter of WGY, Schenectady, N. Y.

theory, and we are called upon to accept their views as realities. In fact, the reader is urged to accept this view at the start, because the electron theory is especially important in relation to the use of the vacuum tube. If one can form a mental picture of an electron, or electrons, in motion and think of them

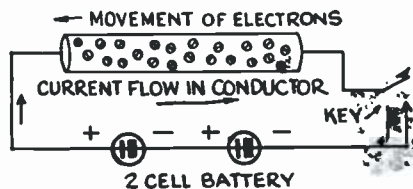


Fig. 1. Illustrating flow of current

as realities, this visualization will reveal many of the hidden secrets connected with the subject of electricity.

Matter Exists in Three Forms

All matter exists in three forms: in the solid, the liquid, or the gaseous

* This is the second of a series of articles covering radio in a non-technical way.

forces had to be overcome in order to detach these electrons from their parent atoms. Hence, any movement of electrons means a transfer of electric energy, and it is for this reason that electrons are called carriers of electricity.

Electrons Always in Motion

Electrons are in perpetual motion. Heat provides the energy in accelerating, or stirring them up. When a filament wire is heated and the temperature is gradually raised, then, with each increase of temperature, the electrons gain in velocity, and finally (when the filament begins to glow), the electrons will have acquired sufficient speed to carry them beyond the positive force of the atom to which they normally belong. They are then

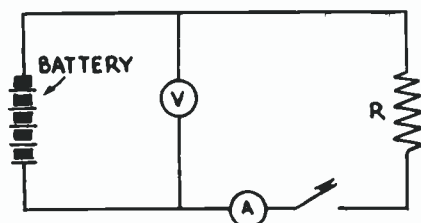


Fig. 2. Schematic circuit diagram

projected into the space surrounding the wire, and the action called the "emission" of the electrons.

Electric current is electricity in motion. The source of most of our electric current supply is in the ordinary electric cell and the electric generator. In the cell the supply is due to chemical action; in the generator, which is mechanically driven, wires moving through a magnetic field generate this electric current supply. On both the cell and the generator, there are two terminals or poles. One is termed positive (+) and the other negative (-); the latter is the one upon which the electrons collect. When the two terminals are connected by a wire or conductor a free flow of electrons moves from one terminal to the other. This flow is the cause of an electric current.

Current Flows from Positive to Negative

In the circuit "external" to a battery or generator, the current is said to flow from positive to negative. The electrons



Four of the 100-kw. Radiotrons used in WGT's new Transmitter

on the other hand are said to flow from negative to positive, making a bridge as it were for the current to cross. Thus we must always think of the flow of negatively charged particles as an "electron flow" toward the positive terminal of the battery or generator, while the electric current is a "current flow" away from the positive terminal. Fig. 1 shows what is intended. It is because the electron theory had not been advanced when the conventional definitions of positive and negative were made that we need make this distinction.

When the key in Fig. 1 is closed, we call the conditions "closed circuit" conditions. When the key or any part

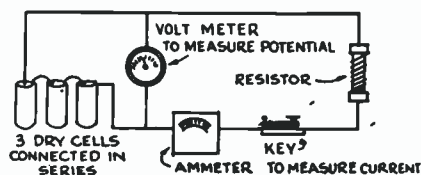


Fig. 3. Picture diagram of Fig. 1

of the circuit is open or broken we speak of the conditions as "open circuit conditions."

When the electrons in a body flow readily, we say the body is a "conductor." If they do not flow readily, we say that the substance offers "resistance" to the electric current. If the current hardly flows at all, we say the body is an "insulator." The "resistance" of most substances varies somewhat with temperature. Sometimes the variation is so great that a body ordinarily considered an insulator becomes a conductor at high temperature. The "resistance" of metals usually increases with temperature. The resistance of liquids and carbon is decreased with increasing temperature.

Copper, silver, and most metals are relatively good conductors of electricity, while dry glass, mica, rubber, dry wood, porcelain, shellac, and gutta-percha are good insulators.

Analogy Simplifies Explanation

A good analogy can be made by considering for a moment some fluid acting in a mechanical circuit. In Fig. 4 the pump has a similar function to that of the battery shown in Figs. 2 and 3. A shut-off valve controls the current flow similarly to that of a key in the electric circuit. The walls of the pipe offer "resistance" to the flow of liquid just as the atomic structure of the connecting wires and resistor hold back the flow of electric current in the electric circuit. A water pressure meter and a "rate-of-flow" meter have the same uses in such a circuit that a voltmeter and ammeter have in measuring the electrical pressure and rate of current flow in the electrical circuit.

The higher the "pressure" the more fluid will flow around the pipe. The smaller the pipe, the greater its "resistance" and the less current will be permitted to flow.

When a water pump keeps up a steady pressure, the water in the pipe line flows steadily and continuously in the same direction. Just so, electric batteries and certain mechanically driven generators cause an electric current which flows always in the same direction around the circuit. This kind of electric current is called direct current. Certain other kinds of generators produce current which alternates in direction at some definite

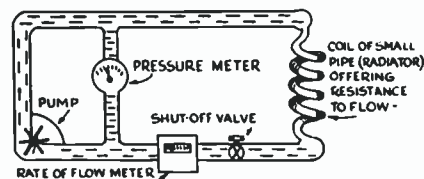


Fig. 4. Mechanical analogy of Figs. 2 and 3

frequency; this is called alternating current. The usual frequency of lighting current is 60 per second; that is, the current flows first in one direction and then the other, repeating this 60 times each second. Radio makes use of currents alternating at millions of times a second.

RADIO TONICS

By G. Gerard Clark and T. A. Jolloff

THE foremost problem we have to confront in formulating acceptable ideas for window displays is getting something original. Unless we can get ideas that will be sufficiently impressive at first glance to stop the customer while he is passing your window and new enough to hold his interest after he has been stopped, our display is a failure and a loss.

In this month's Radio Tonics we present three ideas that have been constructed at a very nominal cost and have been found practical. The windows while attractive and unusual, tie-in with a direct merchandising message that is hard to evade.

The 30th is Halloween

The first window takes you into the realms of witchery. Be careful lest

they are easily cut from orange crepe paper, using black crepe paper for eyes and mouth. Electric lights inserted inside or in back of these pumpkins at night add considerably to their effectiveness. Like a spell of magic this window will weave its charm over every passerby and hold him—interested in the products on display.

unwrap it one turn. Then cut through the folded side, as illustrated in photograph A, to within about two inches of the top of the section which has been unwrapped. Take each individual strand and twist it as illustrated in photograph B. After this is done and the fold unwrapped a very effective background may readily be formed.



An effective Halloween window which carries a direct merchandising appeal



A—Cutting the crepe paper in strips for the Halloween window. Note that a small portion of the paper is unfolded

To form a solid background for the cave it is advisable to use a large piece of beaver-board and paste or tack the crepe paper over it.

To convey the impression of an opening and at the same time carry a definite merchandising appeal, a radio set should

be placed directly in front of the cave. RCA Radiotron cartons and tubes arranged as illustrated in the accompanying photograph, complete a timely and interesting window.

In back of the cave are alternating sections of orange and black crepe paper. The sections may be made either a whole fold or a half fold wide according to the size of the window. To form the narrow wrinkled strips from which the broader sections are made, take a fold of crepe paper and

ought to attract attention when used as a window display. The window is composed of two Selling Fools busily engaged in putting a couple of wax golf balls over and around a course of RCA Radiotron carton obstacles. The course naturally takes the entire window and its size depends upon that of the window. The golf course may be laid out to suit the builder's imagination, using green crepe paper (Dennison's No. 42) to cover the floor. Brown crepe paper

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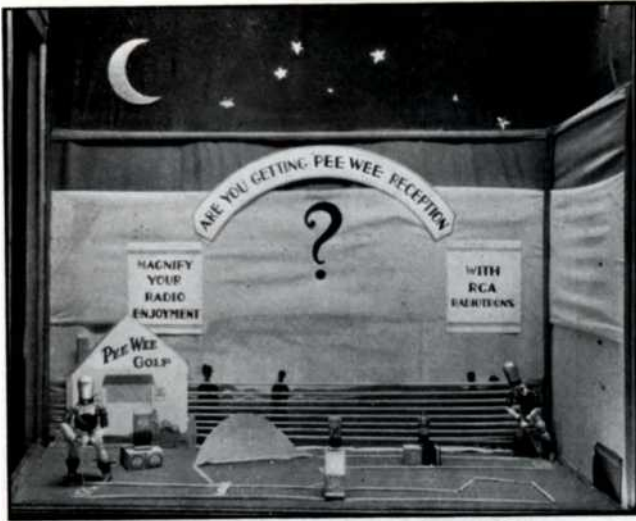
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Feature Miniature Golf

The second window features miniature golf, that vest-pocket game that took the nation by storm and grew into a large business in the midst of one of the worst business depressions in the history of the United States. If a mere vacant lot full of green hills and little cups can take the fancy of the American public it most certainly



B—Twisting the paper for the background. Be careful not to tear the paper in unfolding it



** A window that capitalizes the nation's newest fancy—Miniature Golf*

(Dennison's No. 71) may be used to indicate the outline of the course and the holes.

The golf clubs held by the Selling Fools should be five inches in length while the club house, shown at the left of the accompanying photograph, is 14 inches high and 12 inches wide.

To increase the effectiveness of the window, slightly bent tops of cans may be attached to slender sticks to resemble spot lights. A large semi-circular sign across the center of the background reads, "Are You Getting Pee Wee Reception" and then two side cards bear out a complete merchandising message with "Magnify Your Radio Enjoyment" and "With RCA Radiotrons." Have a local artist do your signs. They will prove inexpensive and you will prevent any possibility of creating an unfavorable attitude in the minds of your customers. This is a good rule to follow with all work that requires painting or printing. A slipshod job will very easily kill the good in a display.

The background consists of French blue crepe paper (Dennison's No. 54). This is stretched flat against the background. Then amber crepe paper (Dennison's No. 61) is stretched over it to represent the light thrown out by the golf course. There are several silver stars, easily cut from crepe paper, (Dennison's No. S502), a five rung fence made of brown crepe paper (Dennison's No. 71). Behind this fence are several cut-outs representing spectators. If desired the fence may be put out from

Next in line is a window that will arouse the keenest interest of every red-blooded sport fan. Football, which many contend has actually replaced baseball as the national sport, has an unlimited possibility for window displays. We have prepared one that will unquestionably put across an exceptional selling point, and, at the same time, prove attractive to people passing your store.

The color combination used on the background of this window is an exceptionally clever one. The colors are green (Dennison's No. 44) and brown (Dennison's No. 71). When these two are blended they present an extraordinarily appealing background.

A football player about four feet high should be tacked to the background about a foot above the window floor. The player is approximately three and one-half feet tall. Any local artist will be able to prepare an attractive cut-out. Don't risk the effectiveness of the window on your own artistic ability.

In the foreground a set of Selling Fools are engaged in a game. RCA Radiotron cartons are built in units resembling

the background a few inches and Selling Fools used in place of the black crepe paper figures.

This window is a sure-fire method of attracting the interest of all the golfers who frequent the courts where over-size marbles are being played.

Football Season Here

goal posts, and one of the Selling Fools is facing the post with his foot in the air as if he had just kicked a goal. To add to the already effective scene, RCA Radiotrons are placed on top of each goal post.

The construction of the window is simple. Brown crepe paper (Dennison's No. 71) is stretched down the background. Then emerald green crepe (Dennison's No. 43) is pulled down each side. The floor of the window should be covered with brown crepe. White lines running parallel to each other complete the outlay. These lines represent the five-yard lines on a football field. The goal posts are four cartons high and two cartons wide.

The sidecards carry a sure-fire selling message. They are—"Attend the season's big games" and "With RCA Radiotrons."

All three of these windows have a definite purpose. The Halloween window is unusually timely. It ties in with a special occasion. The football window, too, bears directly on a current sport season. The golf window, like the other two, commercializes something that has taken the fancy of the entire American public. The wise dealer will use the ideas presented. They carry a definite merchandising message and an almost irresistible appeal.

These displays are not only most interesting but they are timely. One of the secrets of attracting attention to your windows is to capitalize on current events.



An attractive sport window featured by a cut-out of a football player and the Selling Fools

Oscillator Facilitates Service

*This Instrument, Properly Used, is a Time Saver Which Will Increase the Earnings of the Service Department**

By K. T. Vedder and E. C. Hughes, Jr.

THE details of the construction of this oscillator were described in the September issue of *GOOD NEWS*. To increase the flexibility of the test equipment, it has been so designed that it may be operated from either the alternating-current house supply lines or from batteries. Any of the usual three-element types of RCA Radiotrons may be used as the frequency generator.

This oscillator can be utilized to make many tests which will greatly speed the location and repair of troubles encountered in the servicing of radio receiving sets.

Adjusting Filament Voltages

When the oscillator is to be operated from the 110-volt alternating-current house supply, the selector switch on the right-hand side is turned to the "AC. on Filament" position. Before placing the RCA Radiotron in the socket the "AC. Filament Voltage" switch is turned to the proper position to give the correct filament voltage for the type of RCA Radiotron that is to be used.

To use a direct-current filament supply the selector switch is turned to the other position, marked "External Filament Supply." Batteries, or other suitable source of direct current, are then connected to the binding posts marked "External Filament Supply."

Care must be taken that the correct voltage for the type of RCA Radiotron being used is applied to the filament, as excessive voltage will either burn out the filament or heater,

versa, as well as either direct or alternating current on both the filament and the plate. Both the filament and the plate selector switches are so arranged that it is impossible to put both alternating and direct current on the same circuit at the same time.



PHOTO BY DAVIS

On AC. operation the filament voltage must be adjusted before the RCA Radiotron is placed in the socket

or seriously impair the sensitivity of the tube. This is very important.

Either AC. or DC. for Plate Supply

Either alternating or direct current may be used on the plate of the oscillator tube by turning the selector switch on the left to the proper position. In the "AC. on Plate" position, 110 volts alternating current are applied to the plate, and in the other position, "DC. on Plate," the supply is from the two small 22½-volt batteries enclosed in the carrying case.

It is of course possible to use alternating current on the filament and direct current on the plate, or vice

Coupling to Make Test

In coupling the oscillator to a set for test, a lead is taken from the binding post marked "Coupling" to the antenna binding post on the receiver. In some cases it will be found that the oscillator gives too strong a signal when directly coupled to the set.

Sufficient signal strength may then be obtained by merely placing the oscillator near the set. The strength of the signal can be varied by varying the distance between the set and the oscillator.

It will be noted that on complete alternating current operation the oscillator gives a much stronger signal than on direct-current operation, due to the radio frequency coupling through the 110-volt power supply lines.

Pitch of Modulated Note

With the arrangement of grid leak and condenser shown in the circuit diagram in the preceding issue of *GOOD NEWS*, satisfactory modulation can be obtained without the use of a buzzer. By changing the resistance of the grid leak and the capacity of the

*How to make this oscillator was described in September *GOOD NEWS*.

condenser, the pitch of the modulated signal can be adjusted.

Increasing the resistance of the grid leak or the capacity of the condenser will lower the pitch of the modulated note very readily.

Milliammeter Indicates Plate Current

The milliammeter indicates the plate current drawn by the oscillator tube. Thus the test set indicates whether the plate and filament connections of a tube are in an operating condition.

When the oscillator is coupled to a set the milliammeter will show an increased reading when the oscillator is brought into resonance with the set under test. This is due to the fact that the oscillator oscillates less strongly, causing the plate current to rise.

Using Oscillator as Wavemeter

To use the oscillator as a wavemeter, it will first be necessary to calibrate the condenser scale of the oscillator. This can be done by tuning a receiving set to various stations in the broadcast band whose frequencies are accurately known. Then tune the oscillator until maximum signal strength is heard in the receiver at the same point at which maximum signal strength was obtained from a broadcasting station, care being taken that the receiving set is carefully adjusted to the peak of the

broadcasting station's wave. The dial setting of the oscillator is then noted together with the frequency of that particular broadcasting station.



PHOTO BY DAVIS

Calibrating the oscillator as a wavemeter by checking with dial on set

By taking several points in this manner a curve of frequency (or wavelength) against dial setting on the oscillator can be plotted. It is essential that the same RCA Radiotron be used at all times for this purpose as different tubes will cause a change in the calibration.

If so desired, the frequencies can be lettered directly on the dial or a newly

calibrated dial substituted for the old one on the oscillator.

In the absence of broadcasting stations the oscillator will supply a signal suitable for testing at any desired frequency in the broadcast band. This band extends from 500 to 1500 kilocycles.

It will be found that the steady signal of the oscillator, used in conjunction with the service notes of the set manufacturer, is of great assistance in adjusting compensating condensers to obtain maximum signal strength. In addition, the oscillator can be tuned to any frequency giving a check on the receiver's adjustment at any point on the scale.

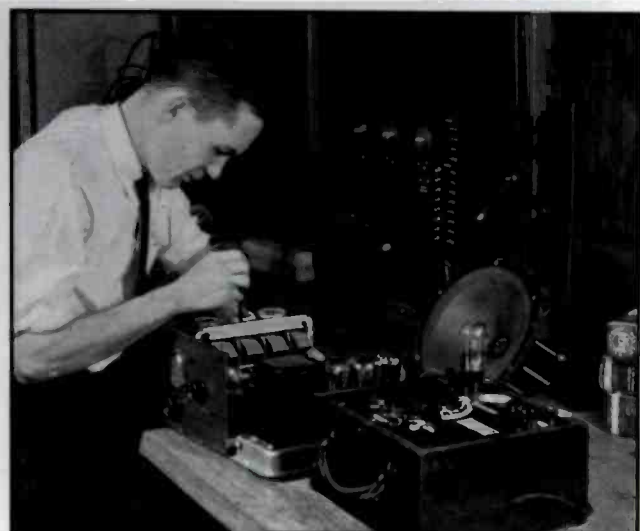
The selectivity of a set can be checked comparatively by making a small change in the condenser setting on the oscillator and noting the decrease in signal strength. When comparing the selectivity of two sets in this manner it is essential that the

test be made at the same frequency with both sets, as the selectivity usually varies with the frequency. This also gives a ready method of checking the selectivity of a set under different operating conditions.

With the oscillator calibrated as a wavemeter, dials on receiving sets which have changed their setting can be reset easily and accurately. All in all, it is a valuable addition to any service department.



The oscillator can be used as a wavemeter once it is calibrated



PHOTOS BY DAVIS

The steady signal of the oscillator is useful in adjusting compensating condensers

Novelties Now Available



Key container. A real honest-to-goodness key container with a sheepskin cover. Six ring swivel type, spring steel key clips. Exceptional value. Price, \$10 per 100 imprinted



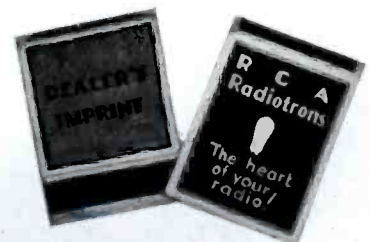
Notebook. With red leatherette cover. Very strong and good looking. Refills can be bought at most stationery stores. Price, \$10 per 100 imprinted with your name and address



Shopping memo. Offers exceptional value in that you can get wide distribution at a nominal cost. Price, \$5.50 per 1000 imprinted with your name and address



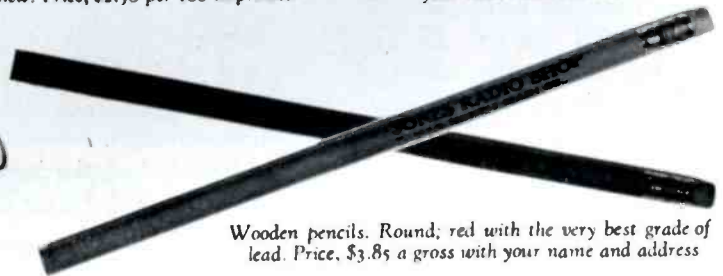
Erasers. In the shape of our carton, with a carton design printed on one side and your name and address on the other. Novel and new. Price, \$2.50 per 100 imprinted



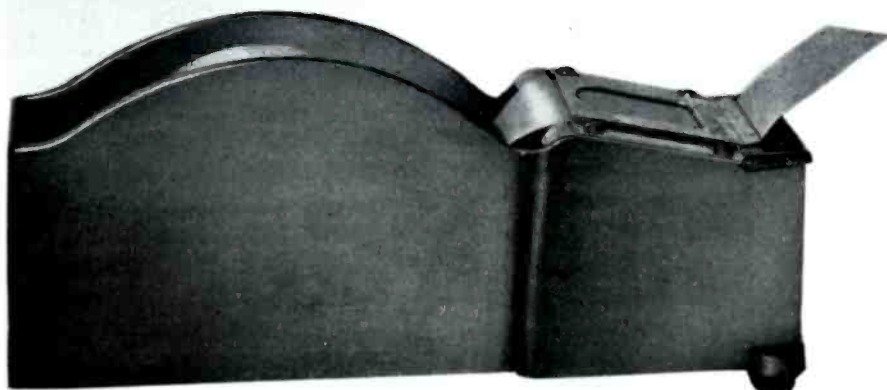
Matches. \$3.50 per 1000 with your name and address



Tape measures. Red celluloid cover. A message on RCA Radiotrons on one side and your name and address on the other. The enclosing band is in black, thus giving the contrasting RCA Radiotron colors—red and black. Price, \$10 per 100 imprinted



Wooden pencils. Round; red with the very best grade of lead. Price, \$3.85 a gross with your name and address



Tape machine and tape. Price of machine, \$2.25. Ten rolls of tape for \$2, printed in two colors with message, "RCA Radiotrons — the Heart of your Radio"



Set price sign. Printed in two colors on polished celluloid. Provides space where you can put the price of the set. Price, 10 for \$1

Obsolete Radiotrons

IN the August issue of Good News was published the first group of obsolete types of Radiotrons and Rectrons. These included the UV-200, UX-112, UX-200, UV-201, UX-171, UV-201-A and the Rectrons UX-216-B, UV-202 and UX-213. On this and

the next page we have the second group. None of these Radiotrons has been available to the trade for some time. If any of them are in users' hands it is safe to say that they have given far more than normal operating service by this time.

Customers who bring in any of these types are excellent prospects for new RCA Radiotrons. And remember that none of the Radiotrons shown here or in the August issue will be replaced at any of the RCA Radiotron Service Stations. Keep these pages for reference.



Long shell composition base



Short shell brass base



Short shell composition base



Long shell brass base



Short shell composition base

Above are obsolete models of UV-199 Radiotrons



The large letters in base branding identify this obsolete model UX-226



Short base

Brass pins



Long base

Brass pins

The branding UX-213 and the brass pins identify this obsolete type



Short base

Large letter branding



Long base

No mica spacer

Large letter branding



The above obsolete UX-201-A types have large letter branding, brass pins and no mica spacer

Above—Obsolete model UY-227 is identified by the glass bead support, absence of mica spacer, and large letter branding



Tip

Obsolete WD-11 with brass pins and WD-11 moulded on composition base bottom



Tip

Obsolete WD-11 with brass base and pins. Marking is on paper label

No tip

This obsolete WD-11 has brass pins. WD-11 is moulded on bottom of composition base instead of side



No tip

Moulded composition base with WD-12 moulded on bottom



Tip

Brass base and marking on paper label identify this WD-12

The above are both obsolete types of WD-12 Radiotrons



Long base

Brass pins

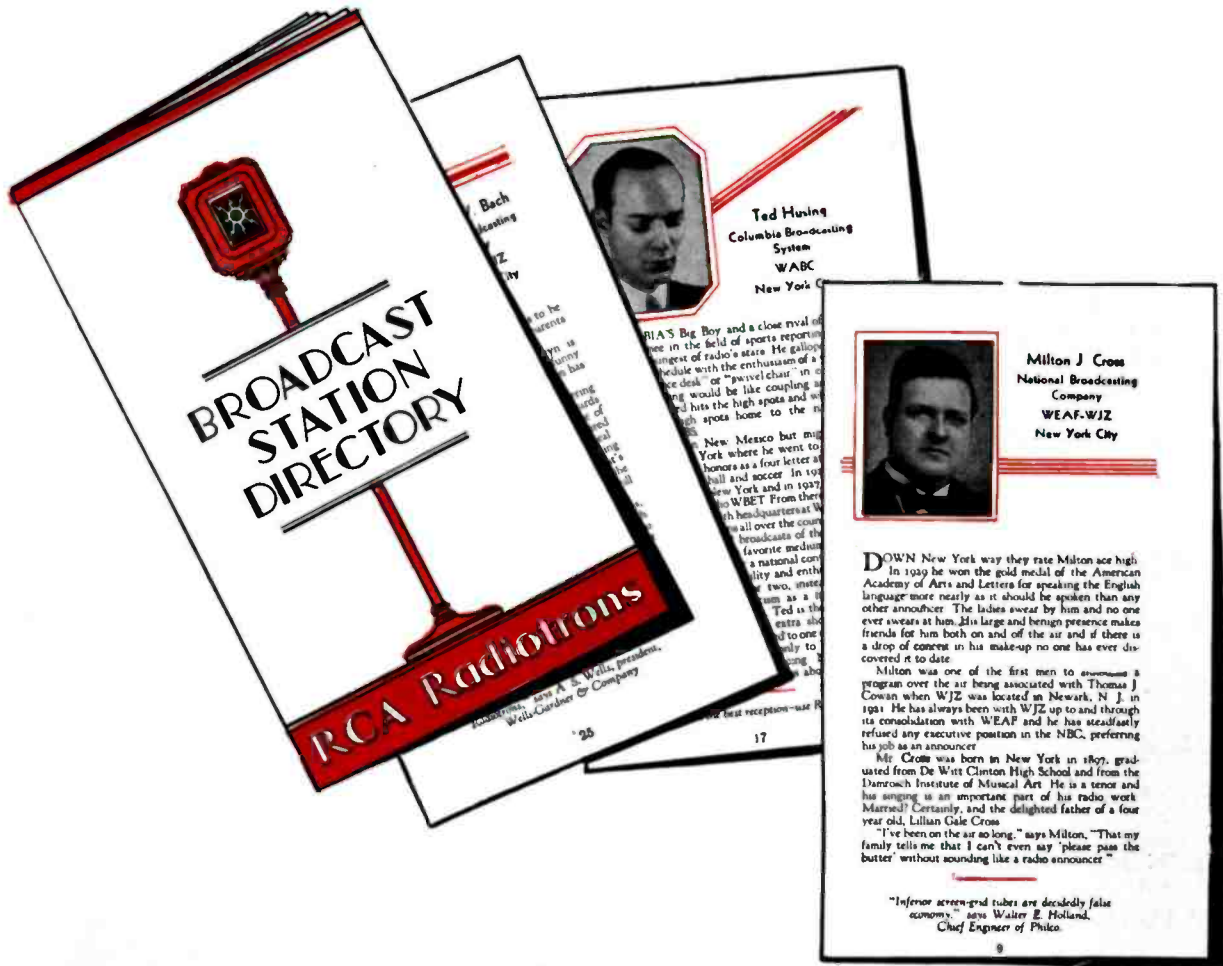


Short base

Brass pins

The branding UX-216-B and brass pins identify this obsolete type

They're Going Fast!



THE first run of the new Broadcast Station Directory is fast being depleted. Never has a radio log met with such wide response and success. It is carrying the RCA Radiotron message to thousands.

The reason is simple. It contains the biographies and pictures of 22 of the nation's leading announcers. It is just the type of Station Directory your customers have been waiting for.

Have you sent in your order? If not, do so now. They are inexpensive but most effective for promoting your sales. Send your check or money order today. Take advantage of this unusual opportunity.

Price \$2.50 Per Hundred, Imprinted

RCA RADIOTRON COMPANY, INC. . . . HARRISON, N. J.

RCA Radiotrons

THE HEART OF YOUR RADIO SET



"RCA Radiotrons always in every socket"

says

COLIN B. KENNEDY

President

COLIN B. KENNEDY CORPORATION

"MANY unnecessary radio troubles are caused by inferior tubes. The finest receiver is handicapped by poorly designed and constructed tubes. RCA Radiotrons are the unquestioned standard of scientific achievement in this field. To insure clear Kennedy tone, and maximum Kennedy performance, we strongly advise 'RCA Radiotrons always in every socket.' We unhesitatingly recommend them to Kennedy owners."

RADIO ENGINEERS ADVISE:

Replace all the vacuum tubes in your radio set with RCA Radiotrons at least once a year. This is the only sure way to maintain good performance and minimize disagreeable noises and other troubles caused by inferior tubes. RCA Radiotrons will give you the maximum in selectivity, sensitivity and *tone quality*.

Old tubes may impair the performance of the new.



This is the 24th in a series of endorsements of RCA Radiotrons by the leading radio set manufacturers.

RCA RADIOTRON CO., INC., HARRISON, N. J.

RCA Radiotrons

THE HEART OF YOUR RADIO

This advertisement will appear in Saturday Evening Post, Nov. 1st; Literary Digest, Nov. 29th; Collier's, Nov. 8th; Liberty, Nov. 22nd; Popular Science Monthly, Nov.; Country Gentleman, Nov.; Cappers Farmer and General Farm Papers, November

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