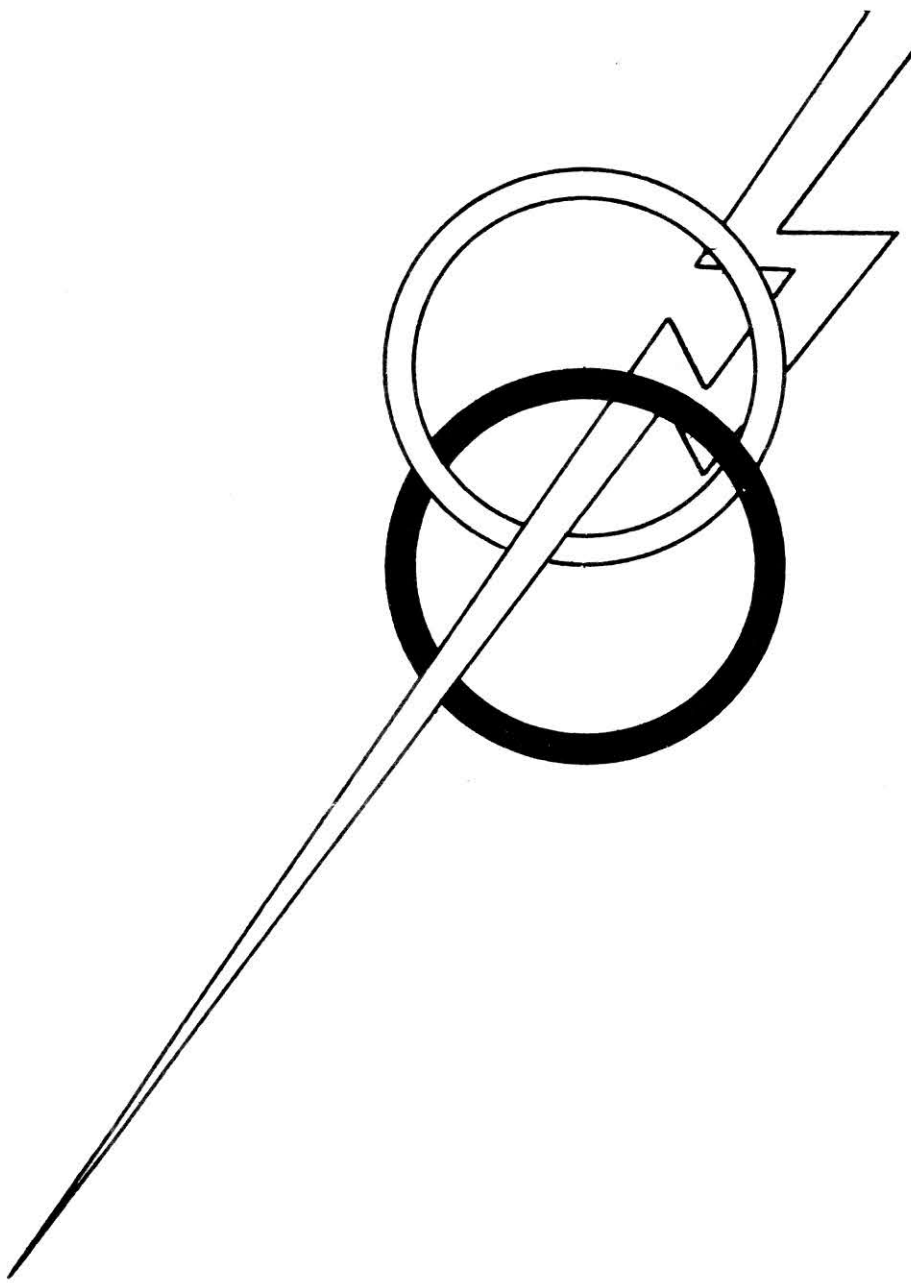
Recent Publicity

concerning



TELEVISION

A GREAT STORE IN A GREAT CITY

THE FAIR

STATE, ADAMS and DEARBORN STREETS

See Over the Telephone

An exhibit of the American Television Institute

You've Talked About It!
You've Wanted to Try It!
Now Come in and See for Yourself!

Free

Television has been the dream of many a scientist for many a long year. Here you see the dream realized! You can SEE and TRY this miraculous machine your very self! And best of all The Fair offers you this marvelous opportunity to be among the first to try it—at absolutely no charge!

Here's the way the 2-way television telephone operates: two booths are set up at opposite sides of our 7th floor. You sit in one, your friend sits in another many feet away. Then the fun begins . . . you hear the soft purring of mechanism . . . see the lights go on . . . you speak into the mouthpiece . . . then the delightful surprise . . . you actually SEE the person to whom you are speaking! He materializes right before your amazed eyes! It's fun! It's thrilling! Come in and try it without cost to you!

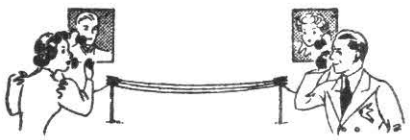
THE FAIR—Seventh Floor - State Street Store Only

This ticket is redeemable for one FREE Television-Telephone demonstration on the Seventh Floor of THE FAIR

No 102 C

Read Reverse Side Carefully for Instructions.

See and Hear over TELEVISION TELEPHONES



Today you may preview in every astonishing detail, a necessity of future life—Television Telephones—where you not only hear the voice of your friends, BUT actually see them as well.

Presented for Your ENTERTAINMENT AND INSTRUCTION By

A Great Store in a Great City

THE FAIR

STATE, ADAMS and DEARBORN STREETS

Oak Park—Lake at Marion St. • Milwaukee Ave. at Wood St.

and

AMERICAN TELEVISION INSTITUTE of Chicago

The purpose of these Television Telephones is to enable people to talk to, and see, each other at the same time.

Television Telephone booths are numbered so that person in Booth "A" will see person in other "A" Booth, etc. Only booths with identical numbers are connected. With switchboards any two phones could be connected, but for exhibition and educational purposes, switchboards are not necessary.

INSTRUCTIONS

1. Go to a booth which corresponds to the color of this ticket, making sure your friend goes to the opposite corresponding booth.

2. Enter booth, seat yourself, and grasp telephone with left hand in same manner you use ordinary telephone. Do not attempt to pull phone to you. Phone is stationary, and by bringing your head to earphone, you automatically move into Television focus.

3. Speak to your friend in other booth through telephone mouthpiece, making sure he is ready.

4. Deposit dime provided by The Fair in coin slot, push lever all the way in, signalling to your friend to do likewise.

5. When you know your friend is ready, instruct him by phone to pull lever out at same time with you.

6. You will see your friend as he talks with you. Speak naturally, relax, enjoy this newest of sensations—TELEVISION.

7. Mechanism operates for one minute. Remain seated until image disappears. Attendant will open booth for you.

TELEVISION TELEPHONE

A 400

Please present this ticket to operator of Booth A

STIX, BAER & FULLER
& AMERICAN TELEVISION INSTITUTE

TELEVISION TELEPHONE

B 400

Please present this ticket to operator of Booth B

STIX, BAER & FULLER
& AMERICAN TELEVISION INSTITUTE

CHEAPER TELEVISION

VISION AND SOUND IN YOUR HOME FOR £1 PER WEEK

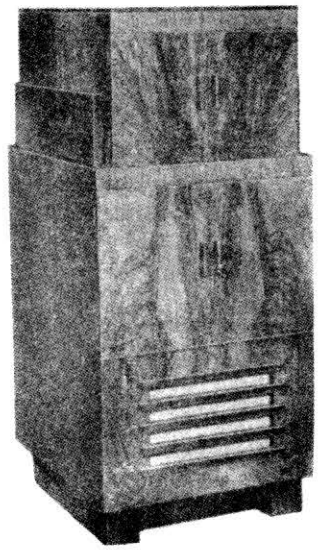
BIG REDUCTIONS IN PRICE OF RECEIVERS

Sweeping price reductions of television receivers are announced by Baird, Cossor, G.E.C., H.M.V. and Marconiphone. These reductions amount in some cases to nearly 40 per cent. and they bring television appreciably nearer to general home use. In addition to price reductions, receivers have been made available on hire purchase terms of a small deposit and £1 per week with free aerial equipment, free maintenance and one year's guarantee.

Two classes of receiver have been produced in the past by Cossor, Ferranti, G.E.C., H.M.V., Marconiphone and Pye—one incorporating vision and the accompanying sound and in addition either all-wave or normal broadcast, and the other television and the accompanying sound only. The Baird Company concentrated on the latter type only.

The original price of the combined instruments was 120 guineas and this figure has now been brought down to 80 guineas. A corresponding reduction has been made in the case of the one-purpose instruments which sold formerly at 95 guineas, or in the case of the Baird instrument, 85 guineas. The prices now are 60 guineas and 55 guineas respectively. As will be realised these reductions mean a saving of 40 guineas and 30 guineas according to the type purchased. Prices of the Pye receivers will be announced later. We give below photographs of some of these receivers with brief specifications. Very complete details were given in our December, 1936, issue.

THE Baird receiver is a one-purpose instrument designed for reception of the Alexandra Palace sight and sound transmissions. It provides an exceptionally

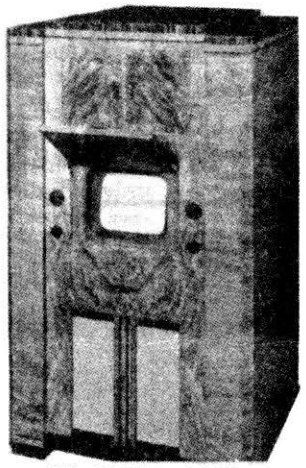


The Cossor, model 137T

large picture, actually 12 ins. by 9 ins. It is a vertical console 23 ins. wide; 43 ins. high; 19 ins. deep, with the picture produced on a mirror inclined at an angle of 45 degrees. The cathode-ray tube is mounted vertically beneath the safety-glass window. The price is 55 guineas and represents extraordinary value.

Two Cossor receivers are available. The model 137T is suitable for reception of the television transmissions and normal broadcasting. Picture size is 10 ins. by $7\frac{3}{4}$ ins., viewed directly on the end of the cathode-ray tube, which is horizontal. The picture is pure black and white. The price of this is 70 guineas. The model 237T includes an additional section with automatic record changer and gramophone pick-up. The price is 90 guineas. On both models 7-metre reception is possible without vision.

Two models are also available from the General Electric Co.; model BT3702 is a very high-class de-luxe receiver in which provision has been made for reception of short, medium and long wavelengths, in addition to television sound and vision transmissions. The picture is viewed directly on the end of a 12-in. cathode-ray tube which is mounted nearly horizontally. This is a massive instrument with a total height of 53 ins. and width of $30\frac{1}{2}$ ins. The price is 80



The G.E.C. model BT3702

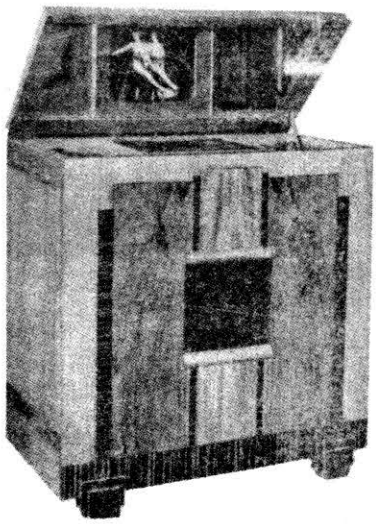
guineas. The G.E.C. model BT3701 is similar to the former but intended for reception of sound and television only. The cabinet is $39\frac{1}{2}$ ins. high, and 24 ins. wide. The price of this is 60 guineas.

The H.M.V. model 900, another de-luxe instrument, is designed for reception of television and the accompanying sound, and in addition is suitable for reception of short, medium and long-wave stations. The picture size is 10 ins. by 8 ins., viewed from a mirror mounted at an angle of 45 degrees from a vertically mounted tube. The price is 80 guineas. The other H.M.V. model —model 901—is intended for television and sound only. The picture size is 10 ins. by 8 ins., which is also viewed in a mirror.

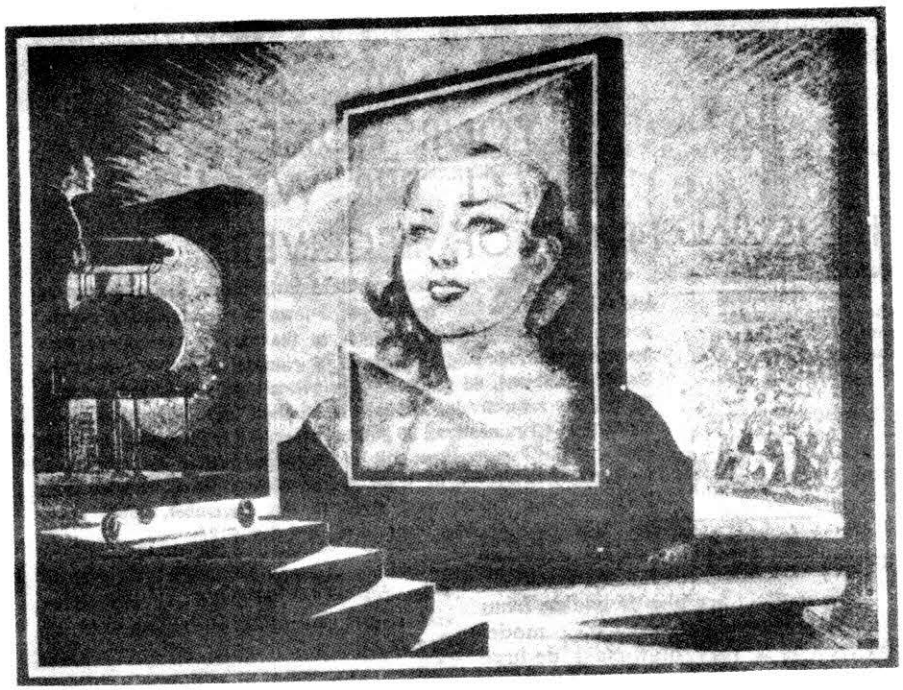
Still another combined de-luxe instrument is the Marconiphone which, in addition to receiving television sight and sound, is also capable of all-wave reception. The picture size is 10 ins. by 8 ins., viewed via a large lens from a mirror mounted inside the cabinet at an angle of 45 degrees to the end of the tube, which is mounted vertically. The height of the cabinet is $46\frac{1}{4}$ ins. and the width $37\frac{1}{2}$ ins. Price is 80 guineas.

Marconiphone also make a receiver intended for television and sound only. The picture size of this is $9\frac{1}{2}$ ins. by 8 ins. viewed in a 45-degree mirror in the cabinet lid. The height of the cabinet is $37\frac{3}{4}$ ins. and the width $24\frac{1}{4}$ ins. The price is 60 guineas.

As we go to press we learn that Messrs. Ferranti have also reduced the price of their receivers to 60 and 80 guineas.



The H.M.V. Model 900



TELEVISION in the *THEATRE* A REALITY!

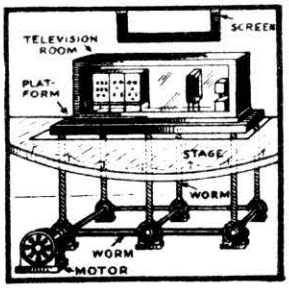
Sanabria's 10x10 ft. images shown to the audience as part of the regular show in the Broadway Theatre, New York City.

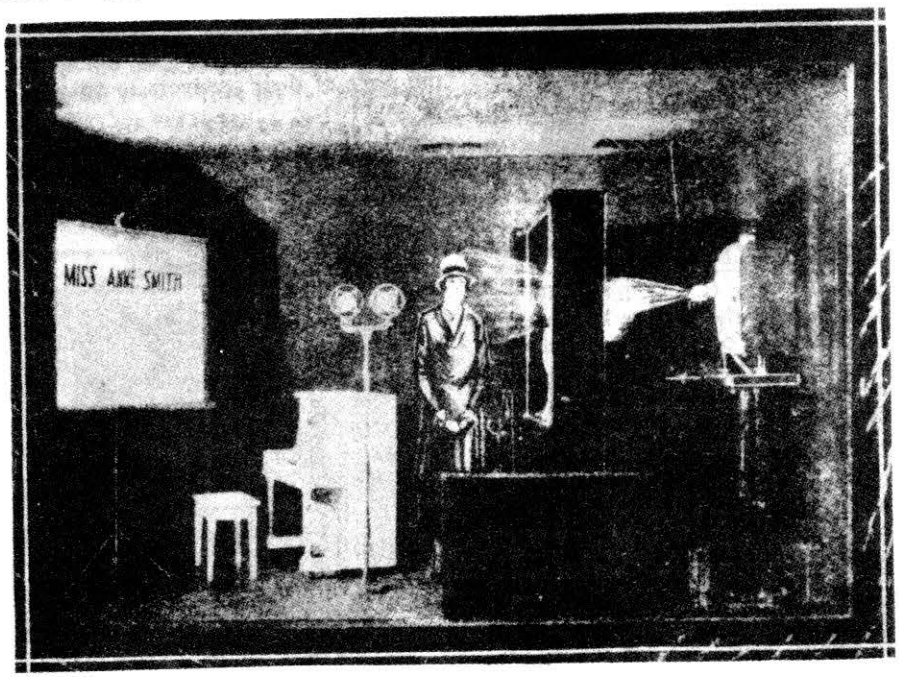
THE first regular presentation of television as a part of a regular theatre show, was given in New York City from Oct. 24 to Nov. 6th, at the Broadway Theatre. Mr. B. S. Moss, proprietor and manager, of the theatre, is to be congratulated on his foresight in billing television as one of the regular acts at his theatre. The public showed its interest in this very latest of scientific advances, by filling the theatre to capacity at every performance. The system of amplification and the form of the special, high-power projecting tube used, was described and illustrated at length in the Sept.-Oct. issue of TELEVISION NEWS.

As the photographs herewith show, the television image pick-up studio was built in the form of a room with a glass front, this studio being placed on a rising and falling platform. At first the platform elevated the television studio to the stage level and after the audience had had a good look at it for a few minutes, the studio was lowered about half-way. The actor then took his place before the photo-cell

(*Continued on page* 454)

Television on the stage will be "regular and usual" tomorrow. The giant image screen is seen at top of photo, at right, while below it is the studio with glass front. The "studio" was raised and lowered on a platform as shown below.





Another view of the television pick-up apparatus in the theatre stage studio.

Left to right—George Truskin, Pres. of Sanabria Television Corp., Carveth Wells, noted explorer, and Ulysses Sanabria.

Television Makes Its Bow

HELEN MEAKER.
Speaking and seeing in a television booth.

2-Way Telephone Television Apparatus on Display Here

Last month the first class of operators graduated from the American Television institute. And today Ivy Ryan Hanson, I W. Marek and R. H. Horn, three members of that class, came to San Francisco to educate the public to television.

Their teacher, they explained, is V. A. Sanabria, Spanish-Canadian genius, recognized by electrical engineers as one of the leaders in the field of television.

The television machine is rather simple, but they now cost $1000 each; mass production methods would cut the price to $100.

A first glance at their machine reminds you of an overgrown phone booth with green venetian blinds on the sides to shut off outside light. The panel board inside the booth, which is located in back of a standard type french phone, resembles the dash board of an air liner.

Here's how they explained it:

Light from a photo electric eye scans the face of the person talking in the booth. Other photo electric cells pick up light intensities reflected from the face of the speaker. These in turn are converted into electric impulses and amplified and carried through cables to the receiving booth where they are reproduced from a glow lamp. Persons on both ends of the line can speak and see each other at the same time on a curved lens which carries a three-inch picture of the speaker.

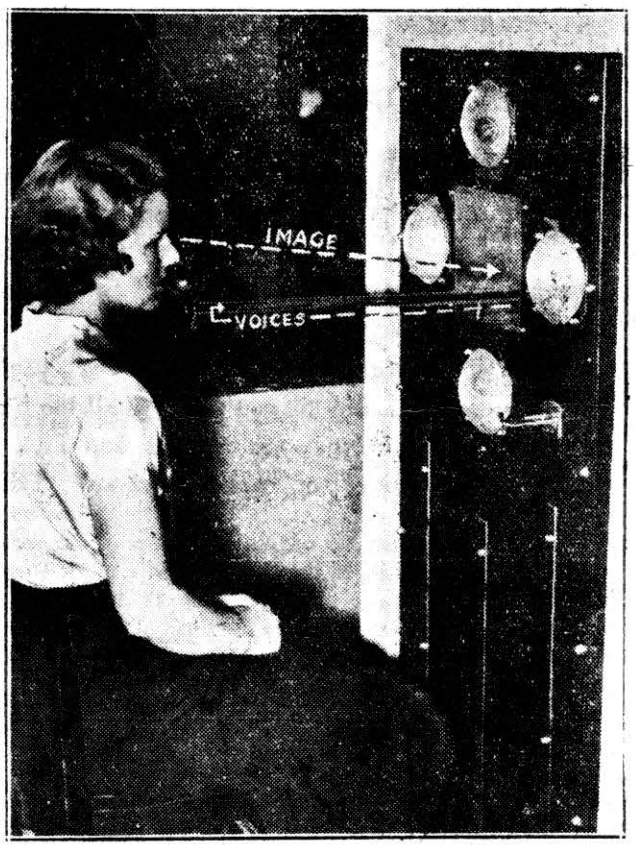
Television in the form of a fully perfected two-way telephone system was placed on display before San Francisco for the first time today at the Emporium.

Bowman & Co. Sponsor Television-Display

Television, newest of radio marvels, which permits the listener to see as well as hear what is going on at a distant point, will be demonstrated today, and all this week, at the showrooms of Bowman & Co., western Michigan distributors of Hudson and Terraplane, 105 Sheldon ave., SE.

Bowman & Co. is presenting the demonstration free of charge to all who visit the showrooms.

Television Is Tested In City First Time



Here is Martha Lubbe, 127 Lake street, Bellevue, Ky., using the television outfit. The demonstration will be open to the public Wednesday.

Post Reporter and Photographer Hold "Face to Face" Chat by Means of Air Waves in Demonstration

BY WALTER RADTKE

I just witnessed the first actual television demonstration in Cincinnati. It worked.

I sat in an improvised booth, adjusted a telephone receiver to my ear, peered into a small lens and clearly saw the face of Arthur Lapp, Post photographer, as he talked in a similar booth 75 feet away. I heard him, too.

Mr. Lapp told me later that he could see and hear me distinctly.

The outfit consists of two booths, one on each side of the mezzanine floor of Rollman's store. A person enters either booth and seats himself at a hand phone.

A bright ray is focussed on the person at the phone. Beneath this ray is a four-inch circular lens.

On this lens the image of a person in the other booth is seen. The two persons talk to each other exactly as if they were using a telephone, and, while the conversation is going on, each is enabled to see the other.

As you gaze into the lens a light strikes you in the face. It is this beam of light, according to Harry Pruden, local manager of the American Television Institute of Chicago, that carries the image to the other booth.

Mr. Pruden said the same equipment that carries the image about 75 feet in Rollman's store could carry it any distance.

Highly significant is the fact that the San Francisco press comments favorably on the first graduating class of American Television Institute. The realization of the need for adequately trained television engineers to build the industry is penetrating into all parts of the country.

The Golden Rule

a feature of our Golden Jubilee Celebration

First Store in America to present

2-WAY TELEVISION

miraculous wonder of the modern age

You've wondered about it . . . you've dreamed about it . . . you've heard all too little about its wonders. Now, you can SEE and TRY for yourself this wonder of wonders, 2-way TELEVISION.

Two booths are set up on opposite sides of our second floor. You sit in one . . . a friend sits in the other almost a block away. Mechanism begins to purr . . . lights go up . . . you speak into the phone mouthpiece: "are you ready?" . . . and you have the thrill of your life when you not only hear the voice from the other Television Booth, but see, right before your eyes, the person to whom you are speaking.

The Golden Rule thanks the American Television Institute for this opportunity of bringing two-way TELEVISION for public inspection. It is indeed an honor to be the first store in America to be accorded the privilege, and we know that you will be grateful for this chance to SEE and actually USE this very advanced method of communication.

As a feature of the Golden Jubilee, beginning 50 more years of leadership, it is indeed fitting to sponsor TELEVISION, destined to play a big part in our lives throughout the coming decades.

TELEVISION

My first experience with Television was at THE MILWAUKEE FOOD SHOW in October, 1936.
I saw and talked with

John Doe

Through the courtesy of

Mrs. Karl's Bakeries INC

A bakery secured unusual advertising from one of our phone exhibitions by using a souvenir card.

Television Put on Show

Two-Way Projection of Images Via Wire on Exhibition Here

Twoway television telephone service as a practical reality was demonstrated yesterday in Los Angeles in its most advanced form.

Amazingly lifelike in its image projection the television equipment, developed in the Chicago laboratories of the American Television Institute, demonstrates the strides in apparatus of its kind.

MOVING IMAGE

Booths the size of ordinary public telephone stalls and similar in appearance, except that they are completely inclosed to shut out extraneous light, are used for the television service.

Conversation is carried on the same as over any telephone. But in addition to hearing the voice of the person spoken to a moving image of the party is clearly seen on a recessed screen.

WIRE OPERATION

As demonstrated in Los Angeles the equipment is operated with wires strung between the two booths. The service may be used equally well by sending the electrical impulses over the air as in radio broadcasts.

While the equipment still is too costly for installation in every home serviced by telephone it can be made available to the public at approximately $1000 a booth, according to institute engineers who are demonstrating the service at a downtown department store.

PRESENT SCOPE

Images projected on the machines are approximately an inch and a half square. It is possible to enlarge the image to as much as ten feet square but the cost of such equipment, it was pointed out, is prohibitive.

With adequate electrical apparatus the system will work at any distance. The machines now on demonstration will send images clearly and distinctly approximately four miles over wires.

From the mechanical standpoint the system operates by means of a scanning disk and photo-electric cells which pick up the image and transform it into electrical impulses. On the receiving machine the electrical impulses are resolved into the image

The press is Los Angeles write the above story about the developments in our laboratory.

THE DALLAS MORNING NEWS,

DALLAS, TEXAS, WEDNESDAY JANUARY 6, 1937

EDUCATION BOARD APPROVES PLAN OF TELEVISION STUDY

Electrification of Dallas high schools continued its steady march Tuesday night, when the board of education approved the request of Technical High that arrangements be made with the American Television Institute to add television equipment and instruction to the electrical shop work of the school, and the installation of a two-way public address system in W. H. Adamson High also was approved.

The board does not plan to add a separate course in television to the Tech High curriculum, but will try to make arrangements for instruction in connection with the shop work and advanced mathematics classes.

Adamson's address system will have radio connections, so that broadcasts, inter-class addresses and private conversations between any two points of the system will be possible.

Purchase of musical instruments to the extent of $799.80, for use in junior high schools, also was approved.

Seek Equipment For Television Studies at Tech

Board Approves Plan to Get Equipment for Use In Electrical Shops

Introduction of television into the Dallas public school curriculum was forecast Tuesday night when a request for such a course was presented to the Dallas Board of Education by E. B. Cauthorn, assistant superintendent, acting for Principal Walter J. E. Schiebel at Technical High School.

Addition of television equipment and instruction as provided by the American Television Institute was approved by the board members, provided suitable arrangements can be made with the institute. According to tentative plans by the board, a separate television course will not be given but the equipment will be used in connection with electrical shop work and advanced mathematics.

THE FLORIDA TIMES-UNION,

JACKSONVILLE, FLORIDA

Interest Keen In Television Demonstration

Television Telephone in Operation at Brooks-Gillespie Motors, Inc.

A television telephone, which enables you to sit at your telephone and see the person with whom you are speaking, is creating a mild sensation in the showrooms of the Brooks-Gillespie Motors Inc., Laura and State Streets. It is believed to be the first exhibition of television in Florida.

The public will be allowed to participate in the demonstration with one of the new television phones by making a donation to one of Jacksonville's most worthy Christmas charities. Arrangements for this exhibition of one of the most startling of scientific developments were made with the American Television Institute.

The equipment on display includes two two-way television telephones. You will sit in a darkened booth with a friend in another booth, and as you talk both persons will be able to see each other clearly.

R. B. Fullerton, president of the American Television Institute, in commenting on the television telephone said:

"A photo-electric eye casts a beam of light upon the person in the booth, and this light, reflected to a sensitive receiving medium, is tranmitted into electric impulses which are amplified and carried into the booth across the way.

"There a receiving device transmits the electrical impulses again into a pattern of light or the image of the person at the other end."

It is believed that the television telephone will be put into practical use at some future date. It probably will be many years, however, and those desiring to get an idea how it will work are urged to secure a demonstration in the showrooms of the Brooks-Gillespie Motors Inc., Chrysler and Plymouth dealers.

Greatest Television Experiment

● THE illustration above shows complete schematic diagram of the television arrangements as carried out at the recent German Olympics. This was undoubtedly one of the greatest, if not the most ambitious television experiment carried out anywhere up to the present time. At the left—the Olympic Stadium situated near Berlin, with long-distance television camera in action. Directly below this camera is the room with the central switchboard and pre-amplifiers. A coaxial cable connects the switchboard with the ultra-short-wave transmitter, which is located in front of the transmitter building (the Berlin Radio Tower) with USW antennas on top of this building. At the right side, is one of the public television stations, equipped with large-size television projection reproducers, which were installed at the "Deutschland" Exhibition, etc. We see on the screen a scene from the Olympic contest.

DAYTONA BEACH, FLORIDA,

Daytonans Show Interest In Exhibit of Television

Widespread interest was manifested yesterday following the announcement that Charlie's Grill, in cooperation with the SUN RECORD, would sponsor a demonstration of the world's latest scientific product—telephone television.

Final details for the demonstration, which will open at 10 A. M. Monday and continue through Saturday, were worked out in a conference between Charlie Reese, owner of the grill, and H. W. Scheneman and W. H. Stafford, the two technicians in charge of the exhibit.

The operation of the telephone television outfit is no more complicated than lifting an ordinary telephone receiver and calling someone else, the technicians explained to Mr. Reese. There will be two telephone booths installed in the grill. A person wishing to use the equipment enters one of the booths and a companion enters another. An operator on duty will give full instructions, after which the blinds are drawn, making the cabinet totally dark.

In simple, lay language—the persons in the booths look through a pair of copper wires with the help of modern science.

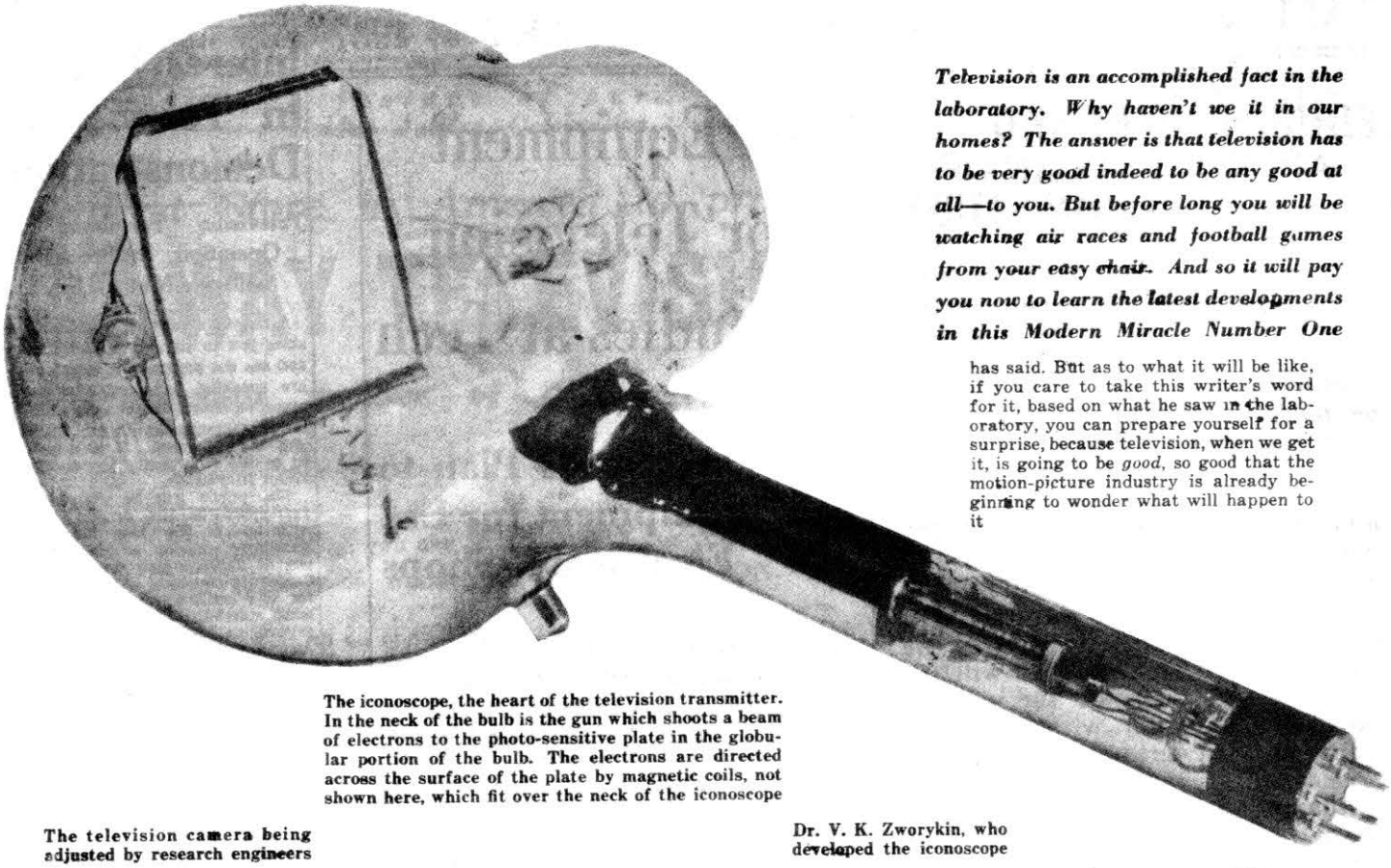
"The whole thing sounds so fantastic," Mr. Reese said last night. "What one finds it hard to believe but those technicians are so serious—so concerned with their work that there is no doubt but what they know what it is all about."

This picture must be one of the best known scenes to television experimenters, having been used for testing purposes by the Baird Company for nearly two years. The picture is from a loop of film and the artist slowly turns her head, faces the looker-in and then with great rapidity turns her face left. The subject gives photographers a chance to know what is coming, and though the subject is never quite still a one sec. exposure with a F/2.9 lens S.S. pan. Kodak film recorded the picture. In the original the scanning lines can be seen. The four faint horizontal lines are produced by the scanning disc at the transmitter, which rotates four times per picture.

Collier's

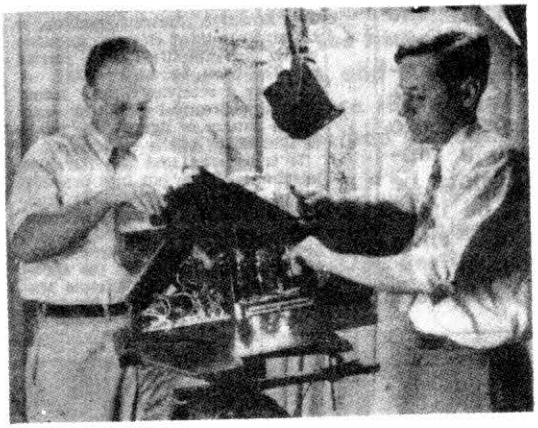
Television is an accomplished fact in the laboratory. Why haven't we it in our homes? The answer is that television has to be very good indeed to be any good at all—to you. But before long you will be watching air races and football games from your easy chair. And so it will pay you now to learn the latest developments in this Modern Miracle Number One

has said. But as to what it will be like, if you care to take this writer's word for it, based on what he saw in the laboratory, you can prepare yourself for a surprise, because television, when we get it, is going to be *good*, so good that the motion-picture industry is already beginning to wonder what will happen to it



The iconoscope, the heart of the television transmitter. In the neck of the bulb is the gun which shoots a beam of electrons to the photo-sensitive plate in the globular portion of the bulb. The electrons are directed across the surface of the plate by magnetic coils, not shown here, which fit over the neck of the iconoscope

The television camera being adjusted by research engineers



Dr. V. K. Zworykin, who developed the iconoscope

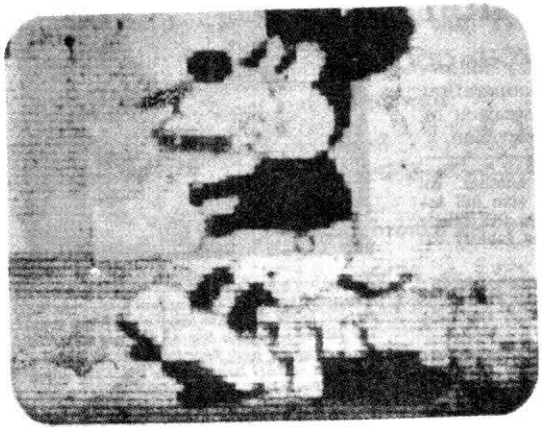
The biggest project to get television out of the laboratory and into the home is said to be under way now in New York. Working in secrecy RCA and NBC engineers are reported installing new television transmitting equipment atop the Empire State building. After getting preliminary testing out of the way during the winter the New York metropolitan area is to be used as an outdoor laboratory probably early in the spring.

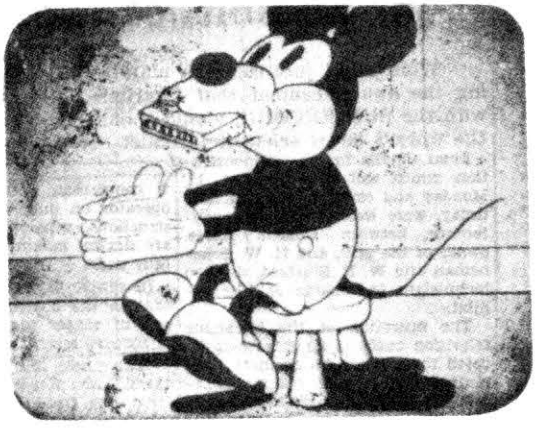
Five hundred television receivers of four different designs, it is reported, are to be distributed at research outposts and in homes of picked observers with the view of checking performance. After several months it is hoped that a choice of the most satisfactory receiver may be made and then wrinkles ironed out preparatory to turning it out for the public.

The RCA images are described as "very clear," particularly since a new fluorescent material has been introduced into the kinescope, as the receiver is known. The pictures are cream colored but engineers expect eventually to be able to produce them in black and white.

Thus manufacturers must be sure they are pretty close to right before they go ahead. At best it is expected that television sets will require much more servicing by experts than radios do.

TRIBUNE:





Left: The picture at the left was transmitted with 60 scanning lines; that at the right with 343 lines

CONTRACT SIGNED

International News Picture by Georgian Staff.

Left to right, C. B. Chambers and R. B. Fullerton, both of the American Television Institute; W. S. Kirkpatrick, managing editor of The Georgian, and Joel T. Daves and Harry Sommers, both of the Harry Sommers Motor Company, where television by telephone will be demonstrated on behalf of The Georgian's Empty Stocking Fund. Group was snapped at the signing of the contract for the demonstration.

Television by Phone to Be Shown Here

Television, the modern miracle of science, in a form simple, practical and easily demonstrable to the layman, is being brought to Atlanta next Monday by an Atlanta business establishment as a contribution to The Georgian's Empty Stocking Fund.

Four two-way television telephones, the first ever demonstrated in the South, the latest practical television devices to be created in the laboratories of the American Television Institute, will be set up in the show rooms of the Harry Sommers Motor Company, so that all Atlanta may see and use these newest creations of science.

Although there will be no compulsory charge, all those using the machines will be requested to make a small contribution, every penny of which will go to swell the Empty Stocking Fund for the children of the poor.

The machines themselves are simple to operate. They are inclosed in booths much like an oversized telephone booth. The visitor takes his place before an ordinary telephone, of the French type, while a companion enters a similar booth some distance away. Shades are drawn to shut out light so that the image may be seen, for the picture of the person in the other booth appears much like a picture on the screen at a movie.

R. B. Fullerton and C. B. Chambers, American Television Institute heads who are here planning the installation of the machines, explained the general principles on which they operate.

"A photo-electric eye casts a beam of light upon the person in the booth," said Mr. Fullerton. "This light, reflected to a sensitive receiving medium, is transmitted into electrical impulses, which, amplified, carry to the booth opposite, where a receiving device transmits the electrical impulses again into a pattern of light, the image of the person.

"The images are clearly defined."

The show rooms of the Harry Sommers Motor Company, where the four machines are to be set up, are located at 446 Spring Street.

The machines will remain on demonstration throughout the week preceding Christmas.

BETWEEN I and YOU

—By Winston Norman—

Well, I seen in the papers where Television will be with us purty quick if we don't watch out. Television is a thing where you push a button & stay home from the Movies to see the Movies. My Uncle Hugh says television is the Family Album with the Fidgits, and my brother-in-law Jake says it will be the end of American Love.

"American Love is bad enuff already," says Jake. "You go around to the Stage Door after a movie, and when the leadin' lady comes out, she's a can of film."

"What will she be when Television begins?" I says.

"She will be sort of a gadgit with vacume tubes," says Jake, "and when she kicks her leg, you won't know if she's got Sex Appeal or Static. You will know her Wave Length, but you won't never get her Telefone Number."

Between I and you, Jake don't know the ½ of it. Us married men can't look in a Television thing and get young ideas while our Wife is setting there beside us.

What is even worst, we will have them dang Comercials, where you got to look at the Face that goes on the Voice which everybody hates. You got to suffer while the Announcer smiles at you & says, "Ladys and gents, this chorus girl's leg is comeing to you thru the curtesy of Sizzel-Fizz Headacke Powders. Like you can see, I am now droppin a Sizzel-Fizz in this glass of water, and purty soon my head will feel like nothing at all."

We will have to watch television actors zupping soup on the air, and without we get "Feelovision and Tasto-vision, so they can broad-cast you a dinner, you will still be just as hungry when they Smile Off.

Worst of all, our children will be under foot al the time watchin' the Television Sot in their own home, instead of being at the Mavies where they belong.

In fack, I only got one good word for Television. It will be another of them Electric things where Science can yell & grin at us 24 hours per day, and even if we don't like it, we will be saved from ever haveing 5 minnits to ourself, when there isn't nothing to do but just Set and Think.

Vision Phones Will Be Shown

Latest Marvels Science on View here During Next Week

Telephone television, one of the latest marvels of science, is to be demonstrated in Gainesville for the first time by Shaw & Keeter, local Ford and Gulf gasoline dealers, on Friday and Sat., Feb. 26 and 27.

Booths will be set up in the show rooms by W. H. Stafford and H. W. Schenerman, graduate television engineers from the American Television Mfg. Co. of Chicago, pioneers in public education for television.

Explaining how it works, Mr. Stafford said:

"One person enters a 'phone booth, a companion enters another one nearby, blinds are drawn to make the booths perfectly dark and as the telephone receiver is lifted the voices are transmitted over the wire and the images of the persons speaking are reproduced on a small screen in each booth. It is like talking nto a mirror and having your image talk back to you, though instead of your own image it is the person's in the other booth to whom you are talking that you see.

"A photo-electric cell casts a beam of light on the persons in the booths, and this light reflects to a sentive receiving medium, is transmitted into electrical impulses which are carried into the two booth. There, receiving devices again transmit the electrial implses into a pattern of light and the image of persons are shown on two-inch squares.

Television To-day

TELEVISION AND SHORT-WAVE WORLD

WIRELESS

The veriest novice can secure excellent pictures with the G.E.C. receiver.

A PARIS TRANSMISSION

Mlle. Germaine Roger singing during a transmission from the Paris television broadcasting station.

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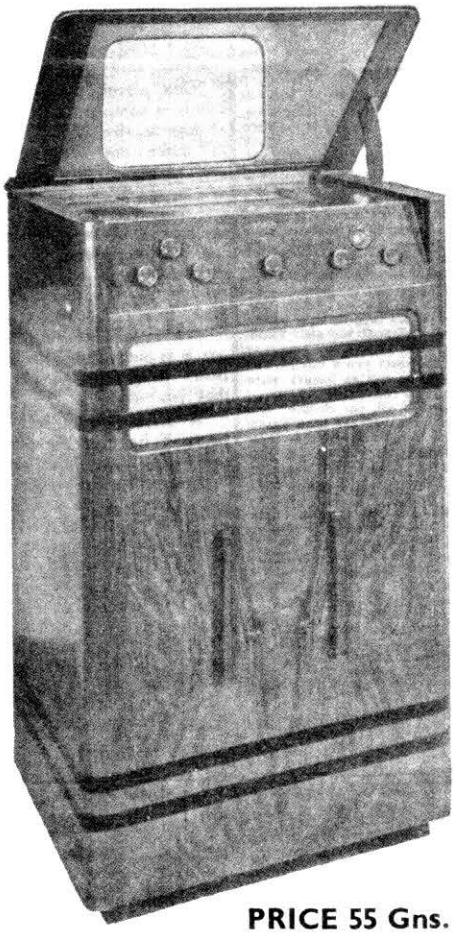

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Baird Television Ltd. have pleasure in announcing that the price of "Televisor" receiving set Model T.5 is reduced to 55 gns.

This Set provides a brilliant black and white picture which is reproduced on the "Cathovisor" Cathode Ray Tube, itself a Baird product of unique design, the picture being the largest obtainable in any make of receiver now available to the public.

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RCA Describes Television System

Behind the New York field test of RCA's television facilities lies an intricate system of experimental units, including the studio, monitoring groups, cables, transmitter, radiator and receivers. A report of R. R. Beal's paper before the New York I.R.E.

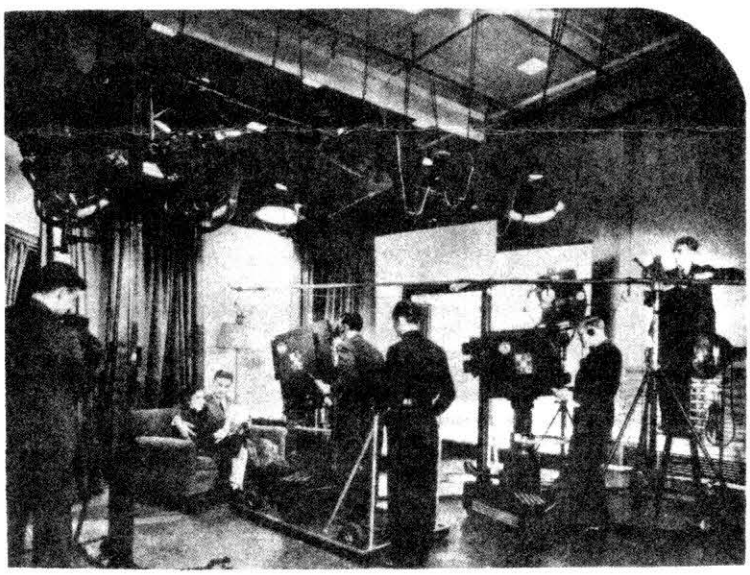
THE decision of the RCA and its service companies to bring their television developments out of the laboratory and to subject them to a comprehensive field test was greeted generally, when it was announced some eighteen months ago, as an excellent contribution to the art. Later, on June 29, 1936, the field test was actually inaugurated with the official opening of the Empire State building transmitter. At the time, the general purpose of the tests and the fundamental dimensions of the system were announced, but the details of the experimental equipment used were not available, because they were not fully worked out until several months after the experimenting got under way. Now, after six months of experience, the system has more or less "shaken down" into a coordinated group of units. While insufficient data have been accumulated and interpreted, as yet, for any worthwhile report of results, the system itself is in complete enough form to warrant a complete description. This description, long awaited by radio and electronic engineers, was given early last month by Mr. Ralph R. Beal, Research Supervisor of RCA who presented before a large audience at the New York Section of the I.R.E. a paper entitled "The RCA Television Field Test System". The paper made no attempt to present or to interpret the information thus far revealed by the tests, but concentrated on describing the experimental units through which the information is being collected. Many questions asked by members of the audience were answered by several RCA engineers in whose province the requested information lay.

The various equipment units in the system may best be described by following a typical program through from studio or film projector to the viewing screen at one of the receivers. Briefly, the video units involved in the RCA building are: A completely equipped television studio for live talent, a projection room for transmitting film, monitoring facilities, a central synchronizing generator for generating synchronizing impulses, and video line amplifier and terminal equipment. This terminal equipment feeds either of two connecting links between the RCA building and the Empire State Transmitter. One link is an experimental coaxial cable; the other is a u-h-f transmitter operating on 177 Mc, which sends a more or less directional beam toward the 85th floor of the Empire State building. At the Empire State building are input equipment (including a receiver for the radio link and terminal amplifiers for the coaxial cable), further monitoring equipment, the transmitter itself, and finally the transmitting antenna. Paralleling all this video equipment is audio equipment of more or less conventional design, including a high fidelity telephone circuit between the studios and the transmitter.

Thus it will be seen that the experimental system is a complete broadcasting plant, and it has been installed, to quote Mr. Beal, "substantially as it would be employed in a radio broadcasting service." The equipment itself, as shown in the illustrations, has a highly professional appearance and has been constructed with a degree of care not often found in an experimental system.

Standards of Transmission

Of basic importance in the tests are the standards used for scanning and for picture repetitions. At present the pictures are scanned in 343 lines per frame, and are completely covered 30 times per second. Odd-line interlacing is used, in a 2-to-1 ratio, giving 60 field scannings per second. The aspect ratio (width-to-height) is 4-to-3. The maximum



THE DELAND SUN NEWS

DELAND, FLORIDA,

TELEVISION IS STARTLING TO LOCAL PEOPLE

Many Of Them Completely Astounded As They Conduct Experiment At Dreka's Store Today

IMAGE APPARENTLY SUSPENDED IN AIR

By LEROY NORTHRUP

Fascinating thing, this television which is being demonstrated at Dreka's today, tomorrow, and Wednesday by two young Chicago engineers of the American Television Institute.

Scores of people crowded the department store this noon to have the never-to-be forgotten experience of conversing with a talking picture of a companion in a little booth on the opposite side of the room.

The apparatus being demonstrated by W. H. Stafford and H. W. Scheneman is composed chiefly of two large cabinets in which are telephones of the French variety, for the talking part of the television demonstration is a regular telephone circuit.

"Eyes of Television"

Clustered about the four sides of a square concavity in the panel of the booth are four flat electric light globes similar to the dome lights of a sedan. Mr. Stafford explained that these are the eyes of television, which pick up the features of your face and speed them to the opposite booth.

You enter the booth and sit down before the panel. As you reach for the telephone, the curtains drop to darken the booth, and the scanning light begins jiggling through a little window in the depth of the concavity in the panel.

Suddenly—the face of the companion to whom you are about to talk appears suspended in mid air a foot or more before your eyes!

Suspended In Mid Air

The projected face has emerged from the box-like concavity and as there is no screen for the vision to be thrown against, it is suspended there in copper colors, seemingly floating.

IT'S HERE AT LAST!

London Television Test Successful

Clear Image Sent 15 Miles Over Airwaves

The promise of practical television for 1937 by engineering and commercial interests, has been carried out by successful transmissions that have been accomplished in England. This week, an official of the Baird Television Company of London, brought to this country the first transmission copies of pictures sent through the air for a distance of 15 miles.

The picture was received on a Baird receiver using a system of magnetic focusing and a deflection method on the oscillight, perfected by Philo Farnsworth, San Francisco television inventor. The picture transmitted from the Baird headquarters in the Crystal Palace was received in an old Inglish inn, 15 miles from the palace.

FIRST FILM

The received picture was 12 by 9 inches in size. So clearly was the image received that it was copied on a photographic film. A print from that film, the first to be shown on the Pacific Coast, is shown with this article.

The picture was transmitted on a tentative British standard of 240 lines. The United States standard, tentatively set, is from 440 to 450 lines. It is understood that the British company plans a standardization at 405 lines, or more than double the number of lines used in the present picture. This will mean even clearer detail and sharper outlines.

SHARPER IMAGE SEEN

The picture illustrated was chosen for the purpose of showing gradations of light and shadow in the face, and the checked coat. On the higher line standard, an even sharper image would have resulted.

The broadcasting of television programs in England will start about the first of the year, from Alexandra Palace, the headquarters of the British Broadcasting Company, using Baird-Farnsworth equipment. The programs will be received on television receivers designed for home use.

It's not who she is but how it was done that makes interesting this photograph of a received image on the Baird television receiver after having been transmitted 15 miles from cinematograph film in London. The received size was 12 inches by 9.

Will Bring Scientific Exhibit Here

A. L. Cuesta (center), president of the Tampa Cigar Manufacturers' Association, is shown signing a contract with W. H. Stafford (left), and H. W. Scheneman (right), representative of the American Television Manufacturing Co., Chicago, to bring a display of the television-telephone here for the Florida State Fair next week. The exhibit will be locatd in the Cigar Industry building and will give Tampans and other visitors to the fair an opportunity to see the new scientific apparatus.

—Staff photo by Gerald B. Smith.

THE TAMPA DAILY TIMES,

PLAN DISPLAY OF TELEVISION

Florida Fair Visitors to See New Wonder of Science World

Tampans and other visitors to the Florida State Fair opening Tuesday will be given an opportunity to see a new wonder of the world of science, as a television-telephone display will be on exhibit in the Cigar Industry Building.

A. L. Cuesta, chairman of the Fair Exhibit Committee of the Tampa Cigar Manufacturers Association, yesterday completed negotiations with the American Television Manufacturing Co. of Chicago to bring the unusual display to Tampa. It will be the first form of television ever seen in this city. The machines have been on exhibit at Jacksonville, Miami and St. Petersburg in recent weeks.

Equipment on display will include two television telephones.

The interested person may go into one of the booths, which is then darkened by a Venetian blind. His wife or best girl may go to the other booths, and as they talk to each other over the television-telephone, it will be like talking into a mirror and having the other person talking back. The telephones will be the French type.

Here is the way one of the factory representatives here explains the technical operation of the apparatus:

"A photo-electric eye casts a beam of light upon the person in the booth, and this light, reflected to a sensitive receiving medium, is transmitted into electrical impulses which are amplified and carried into the booth across the way.

"There, a receiving device transmits the electrical impulses again into a pattern of light—the image of the person at the other end."

W. H. Stafford and H. W. Scheneman are company technicians who have arrived in the city to set up the exhibit and remain here to explain its operation to the Fair visitors. C. P. Chambers, representative of the American Television Institute, Chicago, made arrangements for the display here.

THE ST. AUGUSTINE

Vision Phones Will Be Used Here 2 Days

Fort Marion Chevrolet Invites Public to Use Equipment

Vision phones may be seen and used at the Fort Marion Chevrolet plant on St. Marco Avenue tomorrow and Saturday, and the public is invited to visit the plant and enjoy the novel sensation of talking over the telephone to someone in a nearby booth, and seeing the person to whom one talks.

That sounds like a miracle, and it really is one of those scientific miracles that people are becoming accustomed to in this wonderful age.

BRING TELEVISION HERE

The picture shows Charlie Reese, seated, signing a contract for a television exhibition which will be staged at Charlie's Grill next week. C. P. Chambers, manager of the demonstration, is standing. (Photo by Coursen.)

DAYTONA BEACH, FLORIDA,

Booths to Be Installed for 'See-Speak' Conversations Beginning Monday

The newest development of modern science—telephonic television—will be demonstrated here next week when Charlie's Grill, Ocean Blvd., is transformed into a studio where the public will see television equipment—and use it for "see-speak" conversations. The SUN RECORD is cooperating in the demonstration and assisted in the negotiations.

C. P. Chambers of the American Television Manufacturing Co., yesterday completed negotiations to stage the exhibition which will open next Monday and continue through Saturday night at hours to be announced later.

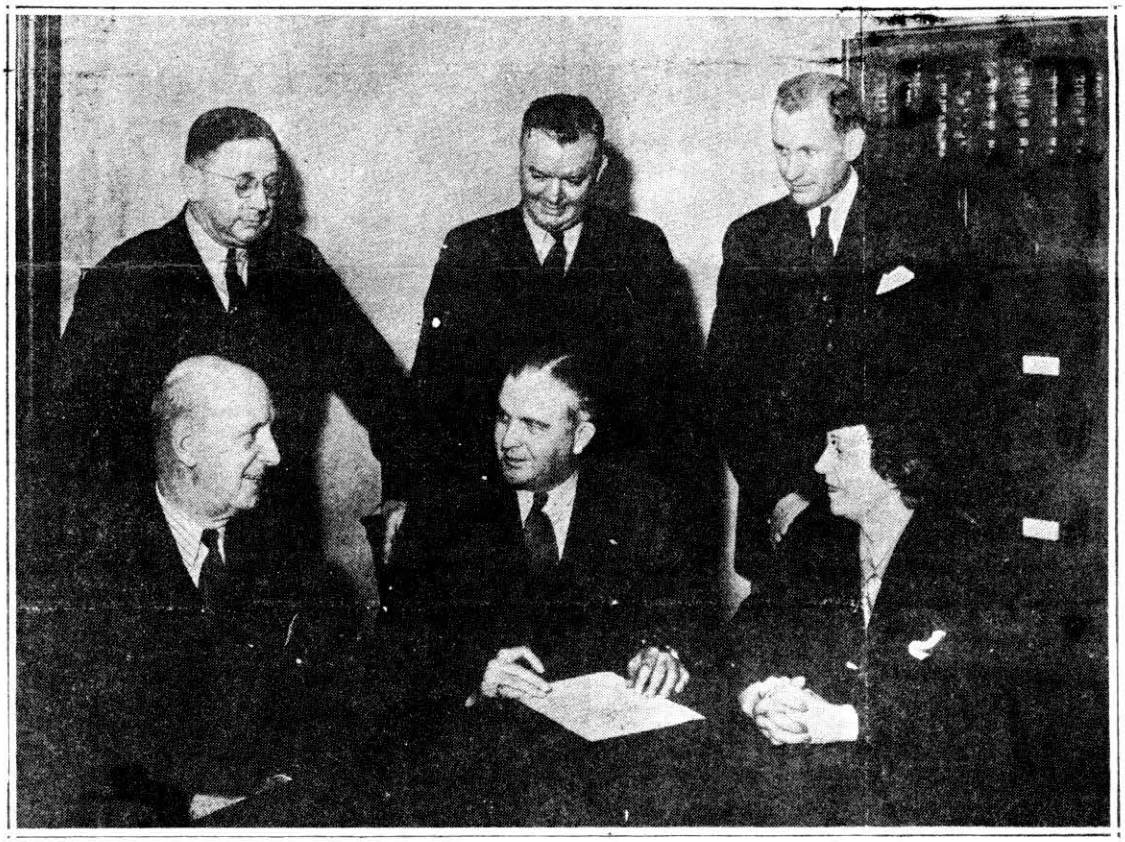
The booths—two of them—will be set up at either end of the beautiful grill and be placed in operation. One person enters a 'phone booth, a companion enters the other, blinds are drawn to make the booths perfectly dark, and as the telephone transmitter is lifted, the voices are transmitted over the wires and the faces of the persons speaking are seen on a small screen in each booth

Mr. Reese explained last night that he felt the demonstration would do much to dispel doubts as to the future of television and would graphically explain the mysteries of voice and image going over the wire at the time time.

Jacksonville Journal

Television Telephones Will Be Here Tuesday

Brooks-Gillespie at Laura and State to Bring Scientific Demonstration Here and While No Charge Will Be Made to See It Work, Everyone Will Be Asked to Make a Contribution To Happy Hearts Club.



—Photo by Spottswood

In a book that everybody knows, it is written that a little child shall lead them.

Next week, a little child will take a new science by the hand, and lead it into Jacksonville.

Television! You've heard of telephone television, science's latest marvel. Well, next week, under auspices of Happy Hearts, telephone television will be introduced to Jacksonville.

That's where the little child comes in. His name is legion. He is poor. But he believes in Santa Claus.

And so do grown-ups who are arranging for the demonstration of television telephones at Brooks-Gillespie Motors.

And so do you!

Which is why you'll be glad to co-operate, and help with Happy Hearts, when you go see how television works.

A contribution to Happy Hearts is all that will be asked.

Next Tuesday, the four over-sized telephone booths will be all ready in the showrooms at Brooks-Gillespie's, at State and Laura streets.

In the picture above, you see arrangements being made with officials of the American Television Institute.

In the center, seated, is Erwin Brooks, vice-president of Brooks-Gillespie. To his right is Mrs. Guy Kenimer, representing Happy Hearts. Mayor Alsop is to the left.

G. B. Gillespie, president of Brooks-Gillespie, is shown to the left, standing. To his right is C. P. Chambers, public relations man for the Television Institute. The third man is R. B. Fullerton, Institute president.

Equipment on display will include two 2-way television telephones.

You will sit in one darkness booth, with your wife or best girl in the other, and as you talk to each other over the tele-telephone, it'll be like talking into a mirror and having the other person talking back to you.

But of course each of you will make your own expressions!

Here's the way Mr. Fullerton explains it:

"A photo-electric eye casts a beam of light upon the person in the booth, and this light, reflected to a sensitive receiving medium, is transmitted into a electrical impulses which are amplified and carried into the booth across the way.

"There, a receiving device transmits the electrical impulses again into a pattern of light—the image of the person at the other end."

Television telephones are as simple to use as ordinary telephones.

But seeing, of course, is believing.

So plan next week to add to the Happy Hearts fund, and to the fund of your own information about this miraculous world! This will be Florida's first television demonstration.

ALACHUA COUNTY NEWS

Vision Phones Will Be Shown

Latest Marvels Science on View here During Next Week

Telephone television, one of the latest marvels of science, is to be demonstrated in Gainesville for the first time by Shaw & Keeter, local Ford and Gulf gasoline dealers, on Friday and Sat., Feb. 26 and 27.

Booths will be set up in the show rooms by W. H. Stafford and H. W. Schenerman, graduate television engineers from the American Television Mfg. Co. of Chicago, pioneers in public education for television.

Television Phones Shown at Butt's Packard Offices

Simplicity of Apparatus Astonishes Orlando Leaders

What is probably the first practical demonstration of television telephones ever to be seen by Central Floridians is now on display at the Nixon Butt Packard Company on North Orange Avenue.

By special arrangement with the American Television Manufacturing Company, Mr. Butt has made it possible for this educational and interesting exhibit to be shown in Orlando.

The four combination transmitters and receivers that are on exhibition here are the only commercial television outfits in the country outside of electrical laboratories, according to W. H. Stafford who is in charge of the machines.

Stafford, who with his assistant, H. W. Sheneman, are representatives of the American Television Company, briefly and in non-technical terms describes the operation of the instruments as follows:

"One person enters one booth, a companion enters another booth near by. Blinds are drawn to make the booths perfectly dark and as the two people begin to talk to each other, the images are reproduced on a small screen in each booth. It is like talking into a mirror and having your image talk back to you, tho instead of your own reflection, it is the person in the other booth with whom you are talking whose image you see.

"A scanning light casts a beam upon the persons in the booths. This light is reflected to a sensitive receiving medium and is transformed into electrical impulses which are carried into the two booths. The receiving devices again transform the electrical impulses into a pattern of light and the images of the persons are shown on two inch squares.

"The television telephones are said to be as simple to use as ordinary telephones, the difference being you actually see the image of the party with whom you are talking."

These television telephones will be on display at the Central Florida Exposition thru arrangements made by Mr. Butt. He emphasizes the fact that this is not a midway attraction or a fake of any kind, but a scientific, educational exhibit that someday, in a more compact and improved form, will be in nearly every home in the country.

These devices are not to be confused with radio television, Stafford said yesterday. "In fact, I expect that radio television will be put within the reach of the average citizen before television telephones."

The first television telephone exhibition in the United States was held in Chicago in October, 1936, while the first actual demonstration of television itself was given 10 years ago by U. A. Sanabria of Chicago, chief engineer of the Television Institute of Chicago.

Orlando Leaders See Each Other Over Phones

Mayor V. W. Estes (left) and H. N. Dickson, president of the Greater Orlando Chamber of Commerce, talking to and looking at each other thru the television telephones now on display at the Nixon Butt Packard Company. The Mayor and Mr. Dickson were the first Orlandoans to use the new devices.

THE ST. AUGUSTINE RECORD

Inspect New Scientific Marvel

M. H. Westberry, president of the St. Augustine and St. Johns County Chamber of Commerce (left) and Mayor Walter B. Fraser (right), as they congratulated Charles S. Isaacs, Jr., president of the Fort Marion Chevrolet Company upon securing a two-day local demonstration of the new vision phone, one of the miracles of modern science. This photo was taken shortly after Mayor Fraser and Mr. Westberry had inspected the equipment. The general public is cordially invited to visit the Fort Marion Chevrolet Company today and tomorrow where free demonstrations will be given.

GREEN BAY PRESS

TELEVISION WILL BE SHOW FEATURE

Visitors to See "Modern Miracle" at Auto Display.

A demonstration of the latest miracle of modern science—television—will be an outstanding attraction at the Auto Show to be presented in Columbus Community club auditorium Saturday, Sunday, and Monday, and will vie for the attention of patrons at the show with the scores of new models to be shown by 13 Green Bay automobile dealers.

The television demonstration will be accomplished through the use of two booths, fitted with telephones and with television screens. Friends who wish to test the device will be seated, one in each of the booths, and when they begin their telephone conversations images of their faces will be transmitted to the television screens.

There will be no special charge for the demonstration, and all who attend the show will be privileged to "try it out," and see for themselves how the invention, now being further developed for use in home receiving sets, operates.

The Green Bay show is the first in this section of the state, if not in the state as a whole, and those who follow the style and mechanical trends of cars from year to year will be treated to their first glimpse of the new models offered by the various manufacturing firms.

Doors of the auditorium will open at 10 o'clock each morning during the three days of the exposition, and close at 10 o'clock each evening. As an added attraction on Sunday and Monday evenings, a style show will be presented by Baum's department store. Orchestra music will be furnished both evenings, before, during and after the style show.

THE TELE-THEATRE

By HUGO GERNSBACK

IT IS pretty well conceded, by most authorities on the subject, that the "legitimate" theatre is doomed to extinction in the not-too-distant future.

The great inroads which the motion picture has made on the legitimate stage, are becoming more serious right along and, if something is not done soon, we may have nothing but motion pictures left; because, from year to year, it becomes more unprofitable for producers to put on legitimate performances. The reason for this is, of course, that it is impossible to give a "legitimate" performance for 50c.—which would then be competing with the motion-picture houses. The prices for the drama in New York, for a good orchestra seat, are from $3.50 up; and for musical comedy shows from $6.60 up. Plainly, these prices are too high. Hence, the decline of the legitimate theatre.

What, then, is the solution? I propose the following remedy, which I believe is sound; and I am certain that it will have come to pass in the not too distant future. *Television is the key to the situation.*

Audience and Distant Stage Joined by Television

Recently, when the Sanabria Giant Television Screen was about to be exhibited at the Broadway Theatre in New York City, I was asked by the management to supply some new ideas, to attract the public at large and secure favorable publicity for television.

I suggested, at the time, that an attempt be made to connect the stage of another theatre to the one at the Broadway Theatre, and televise a distant performance on the Broadway screen. This suggestion was adopted, and the Broadway Theatre, by means of a television transmitter, picked up the images of the actors on the stage of the Theatre Guild, and showed this performance on the television screen of the Broadway Theatre. *This, then, was the first time in the history that two theatres were connected together by means of television.* The results were quite satisfactory. What has been done on a small scale here, will be done on a tremendous scale in the very near future by the instrumentality, which I now term the "Tele-Theatre".

Imagine a special building, erected in the City of New York, for the sole purpose of supplying the entire country with its daily theatre program—not, mind you, motion pictures, which are a "canned" product, but an *actual* theatrical performance just as it is being produced at the exact time on the New York stage.

A Great Central Television Stage

In order to do so, I visualize a building which will have a series of stages, grouped around a central shaft or pit. There will be stage 1, stage 2, and as many stages as required. The idea of the multiplicity of stages is that I propose to move the actors rather than move the scenery. At the present time it is necessary for the actors to go behind or before the curtain, when scenes are shifted; which is awkward and always takes up an amount of time for which the public in the future will not stand.

In the central pit we have the stage director at the top of a skeleton steel structure with his assistant technical directors. Stage No. 1 is lit up and the orchestra located immediately beneath the director starts to play. Below the orchestra are a "battery" of television transmitters. Microphones are located in the wings in strategic positions. Television transmitters are connected to a wire network radiating to all parts of the country, just as the wire network transmits radio broadcast programs to the different radio stations in the country now.

Television Will Present "Follies" to Millions

In Boston, Chicago, Atlanta, San Francisco, and hundreds of other points, we will have local theatres where, for 50c, audiences are assembled nightly to see the latest Broadway production. Instead of 1,500 or 1,600 people seeing the "Follies," five or ten million people will view them nightly, for one week, or for as long a time as the show is put on by the producers. Immediately the undertaking becomes tremendously lucrative, because millions now support a production; whereas before only hundreds did so, at prices which only the rich can afford.

In the Tele-Theatre, we will, of course, have *both sight and sound*, and the audience will actually see and hear their favorite actors at the exact time when the production is being performed in New York. And, of course, it will even be possible to have the actors enjoy the applause, because microphones in the Tele-Theatre will pick up the sounds of the applauding audiences and convey the sounds back to New York; so the actors will have the satisfaction of the applause which is now missing, so much to their detriment, in motion pictures.

Diversity of Television Programs to Be Available

Naturally, there will be a number of Tele-Theatres in the larger cities, all supplied by the central theatre in New York; so that, if you wish to go out in the evening, you need not see a musical show if you do not wish to do so. You may, instead, see a "comedy" or "straight drama" in another Tele-Theatre in your own town, because New York City will telecast a multiplicity of productions for the same evening.

I need not mention that the productions of the future will be on an unparalleled and prodigious scale, never approached before; for the simple reason that, when millions are to view the same performance, naturally it can be ever so much more elaborate.

And, to satisfy remote points such as the West Coast, duplicate performances must be put on later in New York, on account of the difference of time. Thus, for instance, a man in San Francisco will be seated at 8 o'clock (his time), which is 11 P.M. in New York, when the second performance for Western points starts.

THE OCALA (FLORIDA) EVENING STAR

Television-Telephone Will Be Demonstrated To Ocalans

Newest Marvel To Be Shown Free On Tuesday and Wednesday At Ocala Motor Company

Television telephones, over which users may be seen as well as heard, will be on exhibition in the showrooms of the Ocala Motor company, Ford dealers, on North Main street, Tuesday and Wednesday.

Although this marvel of the scientific world has been used for praticals demonstrations less than a year now, Ocalans and Marion countians will be afforded the opportunity of becoming some of the first to see and use it, through the courtesy of the local automobile dealers.

Wisdom and Bill O'Neal have just completed arrangements with C. W. Chambers, public relations manager, and W. H. Stafford and H. W. Scheneman of the American Television Manufacturing company of Chicago and they are establishing headquarters for their demonstration here.

How It Operates

Four telephone booths are included in the equipment. Inside each is a telephone handset of the French type and directly in front of the user's face is what is known as a scanning disk, upon which the image of the person to whom the user is talking is projected. Surrounding the disk are several large lights, which closely resemble auto dome lights, and these in turn pick up the image of the user and after carrying it through the various electrical processes send it in impulses to the other television-phone.

Upon entering the booth the blinds are drawn to assure darkness. The user speaks into the telephone mouthpiece and the other party, usually some friend, answers back from another booth. Instantly the image of the other person's features are thrown on the disk before the user's eyes. Quite naturally the user is so startled by the demonstration that he can scarcely think of anything to say but "Hello—are you there?" and "Goodbye."

History Making

It is expected that the demand here for a trial of the devices will necessarily limit conversations and demonstrations to brief periods for each individual, but those who see and use the device will have the distinction of telling their grandchildren "I used one of the first television telephones."

Television-phones are entirely new, although inventors and scientists have worked on them for years. This is the only known publicly demonstrated apparatus of its kind in the United States.

The first similar public demonstration was made in Germany last year, and those in America have been limited since that time. The advent of the television telephone is said to be "just around the corner" and will be made available to the public before many years if the dreams of inventors and researchers are realized.

THE OCALA (FLORIDA) EVENING STAR

Television-Phones Amazing To Those Who Use Them

Devices Will Be On Display In Ocala Thru Wednesday Night

(By Wilton Bartin)

Well, I had my first view of television-telephone today . . . those devices resembling 'phone booths where you go in, sit down, start talking to see a projected likeness of the party at the other end of the line.

They're on exhibition down at the showrooms of the Ocala Motor company, on North Main street, and will be there up to and including tomorow evening.

Here's one who must admit that he, with considerable experience as a "ham" (amateur) radio operator, and with a lot of association with things electrical, was nevertheless startled and amazed at the first squint of television.

At the other end of the line sat "Mac" MacDowell of the Star advertising department, on one occasion . . . at another time the conversation was with Photographer Gleason . . . the face of each was easily recognizable in spite of the shimmering appearance of the projected likeless on the scanning disc.

Like Early Movies

If someone asked for an honest opinion on these devices, yours truly would compare them with early attempts at moving pictures . . . they have just about the same amount of "shimmy" and otherwise remind one of the old fashioned silents.

Don't mistake me, however . . . they are marvels, and their importance to the future of television for practical use are of inestimable value . . . we must remember that nothing walked before it first crawled . . . television is no exception.

But, anyway, those persons who have gone to the Ocala Motor company to see the television-telephones and have used them have had something of a taste of what may be expected every day in the week some few years from now.

Will Be Improved

Television telephones will doubtlessly be in practical use throughout America within the decade. Of course they will be considerably improved before they are placed in every day service.

But the exhibition of the television-telephones in Ocala is not to be overlooked. Especially by those interested in advancement of science, radio and television. Wisdom and Bill O'Neal of the Ocala Motor company are to be congratulated and thanked for bringing this exhibition here. It cost them plenty, but the good will created by the exhibition will materialize for them in long range dividends.

To give an explanation of the workings of the television-telephones would be to resort to the involvement of numerous technical terms, and a personal trial, which costs the public nothing, will serve to be more convincing . . . and certainly more surprising and interesting.

Television by Phone Will Be Shown Here for Legion

Telephone television, one of the latest marvels of science, is to be demonstrated in St. Petersburg beginning Wednesday and continuing for six days, at the American Legion home, Central avenue and Beach drive, for the benefit of the Legion's welfare fund.

Booths will be set up at the Legion home under the direction of W. H. Stafford and H. W. Schenerman of Chicago, engineers in charge, representing the Television Institute of Chicago and the equipment will include two-way television telephones. Explaining how it works, Stafford said:

"One person enters a phone booth. A companion enters another booth near by. Blinds are drawn to make the booths perfectly dark and as the telephone receiver is lifted the voices are transmitted over the wire and the images of the persons speaking are reproduced on a small screen in each booth. It is like talking into a mirror and having your image talk back to you, though instead of your own image it is the person in the other booth with whom you are talking and whose image you see.

"A photo-electric eye casts a beam of light upon the persons in the booths, and this light, reflected to a sensitive receiving medium, is transmitted into electrical impulses which are carried into the two booths. There, receiving devices again transmit the electrical impulses into a pattern of light and the images of the persons are shown on two-inch squares."

The television telephones are said to be as simple to use as ordinary telephones. The difference being you actually see the image of the party with whom you are talking.

Earle M. Darby, chairman of the welfare fund committee of Legion post No. 14, in announcing the demonstration here, said the cost is being paid by the Southern Brewing company. The demonstrations will begin at 10 o'clock this morning with a talk by Mayor Smith, and will continue until 10 o'clock tonight. The same hours will prevail during the remaining five days. There will be a small admission charge and the proceeds will be used in financing the welfare work of the Legion post.

The first telephone television exhibition in the United States was held in Chicago in October, 1936, while the first actual demonstration of television itself was given 10 years ago by U. A. Sanabria of Chicago, chief engineer of the Television Institute of Chicago.

DELAND, FLORIDA,

TELEVISION IS STARTLING TO LOCAL PEOPLE

Many Of Them Completely Astounded As They Conduct Experiment At Dreka's Store Today

IMAGE APPARENTLY SUSPENDED IN AIR

By LEROY NORTHRUP

Fascinating thing, this television which is being demonstrated at Dreka's today, tomorrow, and Wednesday by two young Chicago engineers of the American Television Institute.

Scores of people crowded the department store this noon to have the never-to-be forgotten experience of conversing with a talking picture of a companion in a little booth on the opposite side of the room.

The apparatus being demonstrated by W. H. Stafford and H. W. Scheneman is composed chiefly of two large cabinets in which are telephones of the French variety, for the talking part of the television demonstration is a regular telephone circuit.

"Eyes of Television"

Clustered about the four sides of a square concavity in the panel of the booth are four flat electric light globes similar to the dome lights of a sedan. Mr. Stafford explained that these are the eyes of television, which pick up the features of your face and speed them to the opposite booth.

You enter the booth and sit down before the panel. As you reach for the telephone, the curtains drop to darken the booth, and the scanning light begins jiggling through a little window in the depth of the concavity in the panel.

Suddenly—the face of the companion to whom you are about to talk appears suspended in mid air a foot or more before your eyes.

Suspended In Mid Air

The projected face has emerged from the box-like concavity and as there is no screen for the vision to be thrown against, it is suspended there in copper colors, seemingly floating.

(Continued on Page Two)

CHICAGO HERALD

BROADCASTING OF TELEVISION TO START IN '37

Four Stations Expected to Be Ready; Receiving Sets Will Be Cheap as $200

BY G. B. LAL,
Universal Service Science Writer.

NEW YORK, Nov. 5.—(U.S.)—Some time in 1937 public television service is expected to be inaugurated in the United States, starting a new electrical transmission age—the television era.

This answer to the curiosity of the American public, as to how soon television will be available as a commercial service, was given today by Philo T. Farnsworth, television expert and inventor.

OBSTACLES MASTERED.

"I have no doubt television broadcasting will begin in 1937, although I cannot say just what date. After all, the important thing from the scientific viewpoint is that the main obstacles have been sufficiently mastered."

The Radio Corporation of America with the National Broadcasting company, of course, have been experimenting in the field during 1936. That is, certain regular studio programs have been sent out and received by a select group of persons within a radius of many miles around New York City.

So far this television transmission has been done using a definition of 343 lines for each picture. The greater the lines constituting each picture, the clearer and better is the picture. American television service to the public will mean pictures of 441 lines.

SIXTY PER SECOND.

In one second sixty such pictures will be delivered by television, so that the observer's eye will perceive no discontinuity or "flickering" effect. That, of course, has been the objective of the American inventors, Dr. V. K. Zworykin of the R. C. A. laboratories and Philo T. Farnsworth, both creators of the new electronic television.

Nowhere in the world will better televised images be produced and received.

Four television sending stations are expected to be ready for functioning next year. Two of these probably will be in New York, one in Philadelphia and one in Hollywood.

The average dependable distance to which satisfactory television is expected to be delivered is forty miles from the sending station. Devices have been developed, however, which will automatically relay beyond the forty-mile limit.

SETS FOR $200.

As has been made public recently, the frequencies or radio waves to be employed will lie between 42 and 86 megacycles. That does not concern the layman so much as Farnsworth's expectation that a working receiving set need not cost, at the lowest, more than between $200 to $250.

The radio broadcasting of today will in no way be affected by television. They are two utterly different things. Television, of course, will be accompanied by its own synchronized sound broadcasts.

THE ATLANTA GEORGIAN

Students View Television Phone

To Atlanta's laymen, the television telephone is just another marvel of science, to be accepted as the radio is accepted, without too deep a probing into the whys and wherefores of its working.

Not so the young engineers of Georgia Tech, who this week in dozens have visited the show-room of Harry Sommers, Inc., where the television phones have been on display as Mr. Sommers' contribution to The Georgian Empty Stocking Fund.

They want to KNOW why, and how, the image of a person talking can be transmitted to a screen in another telephone booth simultaneously with the voice of the person talking.

BUSY WEEK

Thus the engineers of the American Television Institute, brought here from Chicago to demonstrate the machines in their first showing south of the Mason and Dixon line, have had a busy week answering the questions of young men who know a little about television in theory, and realizing its future importance in the field of communication, have an avid desire to know more about its actual working in practice.

They have examined the photo-electric eye which transmits the image. They have probed the complicated machinery which changes the original image into electrical impulses, shoots it along a wire as such, reproduces it again as lights and shadows on a screen.

NUMBERS AUGMENTED

Their numbers have been augmented by hundreds of laymen, attracted by the new marvel of science just as, around the turn of the century, the automobile brought hundreds to peer and gasp as it choked and spluttered, actually moving.

Their interest has paid dividends. First, to their own curiosity, in being able to say, in future years, when television is standard equipment on every radio, every telephone where it is desirable, "I saw one of the first television machines that actually worked."

Second, it pays dividends to the Empty Stocking Fund, for, though there is no charge to the users of the television 'phones, each person is requested to make a small contribution to the boxes near the booths, every penny of which goes into the fund to buy a Christmas Stocking for some poor youngster who would be forgotten.

Telephonic Television Will Be Shown Here First Time This Week

Telephonic television, believed to be the greatest achievement of science since development of the radio, will be brought to Gainesville Friday in an exhibition open to the public.

Four telephonic television booths, created by the American Television Institute of Chicago, pioneer in the field, are being brought here by the Shaw and Keeler Motor Company and will be seen at their showrooms Friday and Saturday, Feb. 26 and 27.

The machines to be shown here were first displayed in Germany in March last year, and in this country last October.

The visitors will not only see but use, the machines, according to an official of the Television Institute, in charge of the showing here.

"The television telephones will be placed in four booths, widely separated on the floor of the show room," explained the official. "The visitor, upon entering, will be given a number. His or her companion will be given a card bearing the same number.

"When their time comes, they will enter different booths and take their places before what seems to be an ordinary telephone of the French type, attached to a board like the panel of an airplane.

"Blinds around the sides of the booth will be drawn, for the booth must be in complete darkness, in order that the image may be seen.

"The rest is simple. The phone is used just as any other phone telephone.

"But, as the voice of the person in the other booth comes over the wire, the image of the speaker also appears on the panel in front of the telephone.

"It is clear and easily recognized, taking the head and part of the shoulders of the speaker.

"The process by which the image is transmitted is of amazing engineering complexity.

"Leaving out all technical details, it is simply this: the face of the speaker is placed on the light of the photo-electric eye, the reflection falls upon a sensitized plate which transmits light and shadows into electrical impulses, the electrical impulses surge over the wire to strike a receiving unit which transforms them back into light and shadows."

The television telephones have been shown recently in other cities in the North and East, but the showing here will be the first demonstration ever held in this county.

Talk To Lady Friend On Telephone and See Her Too At Dreka's Store

Television in the home may be years away, but West Volusia County citizens will have the unique opportunity to actually be televized Monday, Tuesday, and Wednesday at Dreka's Department Store by the only television telephones operating in the United States.

Recognized as the greatest achievement of science since the development of radio, the apparatus to be installed here Monday morning will permit companions in little booths on opposite sides of the room to converse with talking pictures of one another.

A wife can see her husband while talking to him over an ordinary telephone, and a girl can see her boy friend. Boys can turn up their noses at another fellow and let him make a face back.

Images Copper-Colored

The images will be copper-colored, but will be clear and easily recognizable, taking in the head and part of the shoulders of the speaker.

Leaving out the technical details, the process is simply this:

The visitor and his friend will enter opposite booths and take their places before a telephone attached to a panel surrounded with light globes.

As the telephone is used, the image of the opposite person automatically appears on the panel of the darkened booth.

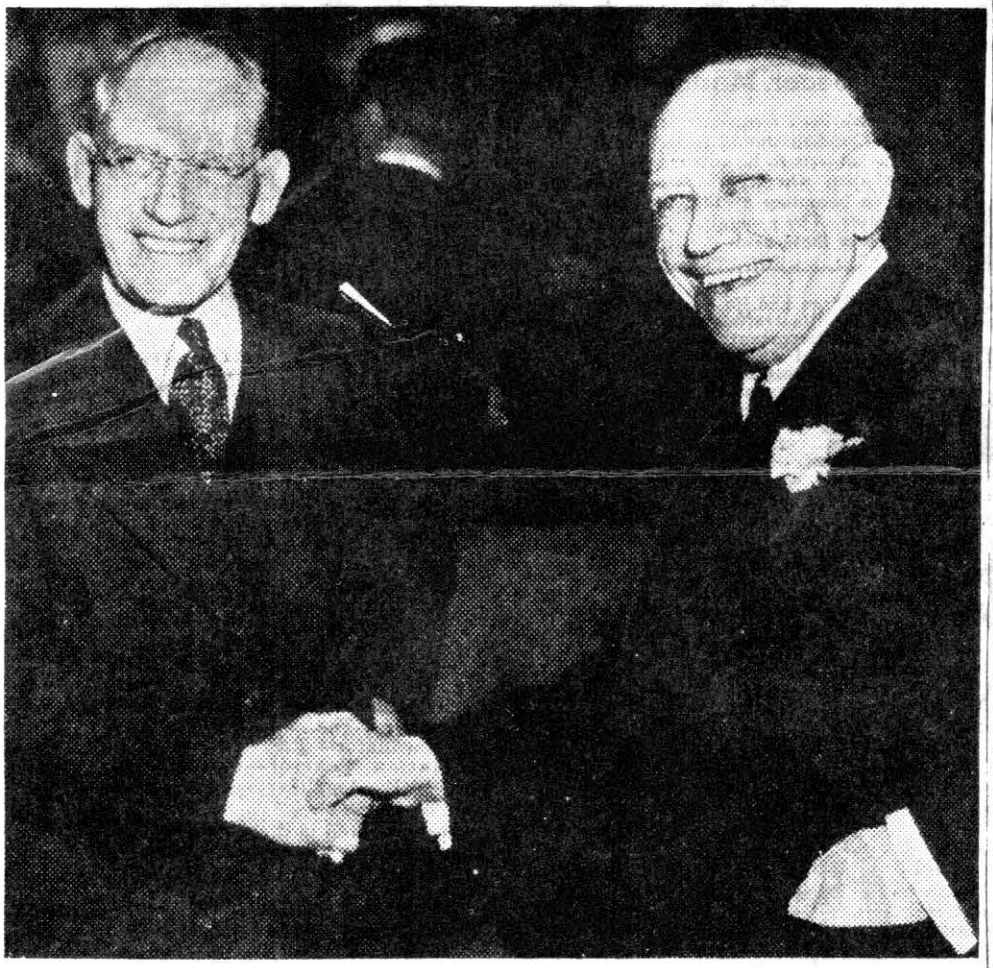
By Means of Electricity

Beams of light cast through a rapidly revolving perforated disk strike the face of the speaker and are picked up by a photo-electric eye, which transmits the lights and shadows of the features into electrical impulses.

These impulses surge over the wires to strike a receiving unit in the opposite booth, where they then are transformed back into lights and shadows on a small screen.

Engineers of the American Television Institute of Chicago, pioneers in television, will operate the machines. The cost of bringing the exhibit to DeLand has been paid by Dreka's, and a small fee will be charged persons desiring to use the apparatus.

Former Studio Chief Congratulated



LOUIS LAEMMLE, left, younger brother of "UNCLE" CARL LAEMMLE, SR., retired president of Universal Pictures Corp., congratulates his kinsman during his 71st birthday anniversary party, held last night at his Benedict Canyon hilltop home in Beverly Hills. The former film producer said opportunities in television are just as great now for young men as those that motion pictures offered him as a young man.

(See article in adjoining column)

Carl Laemmle Bares Youth's Opportunities

Success Chances Just as Good as 31 Years Ago, Film Vet States

By ROGER C. JOHNSON

Opportunities in television today are just as good for young men as the motion picture business was for "Uncle" Carl Laemmle, Sr., when he entered the film field in Chicago 31 years ago, the retired president of Universal Pictures Corp. is certain.

Laemmle made the declaration last night during the only interview he granted at his 71st birthday anniversary party, held in his hilltop home in Benedict Canyon, Beverly Hills, for more than 100 old film associates and poker playing cronies. "Uncle" Carl decided suddenly after the group had posed for pictures that the interview should be held, crowd or no crowd, so he sat down in a huge chair and invited questions.

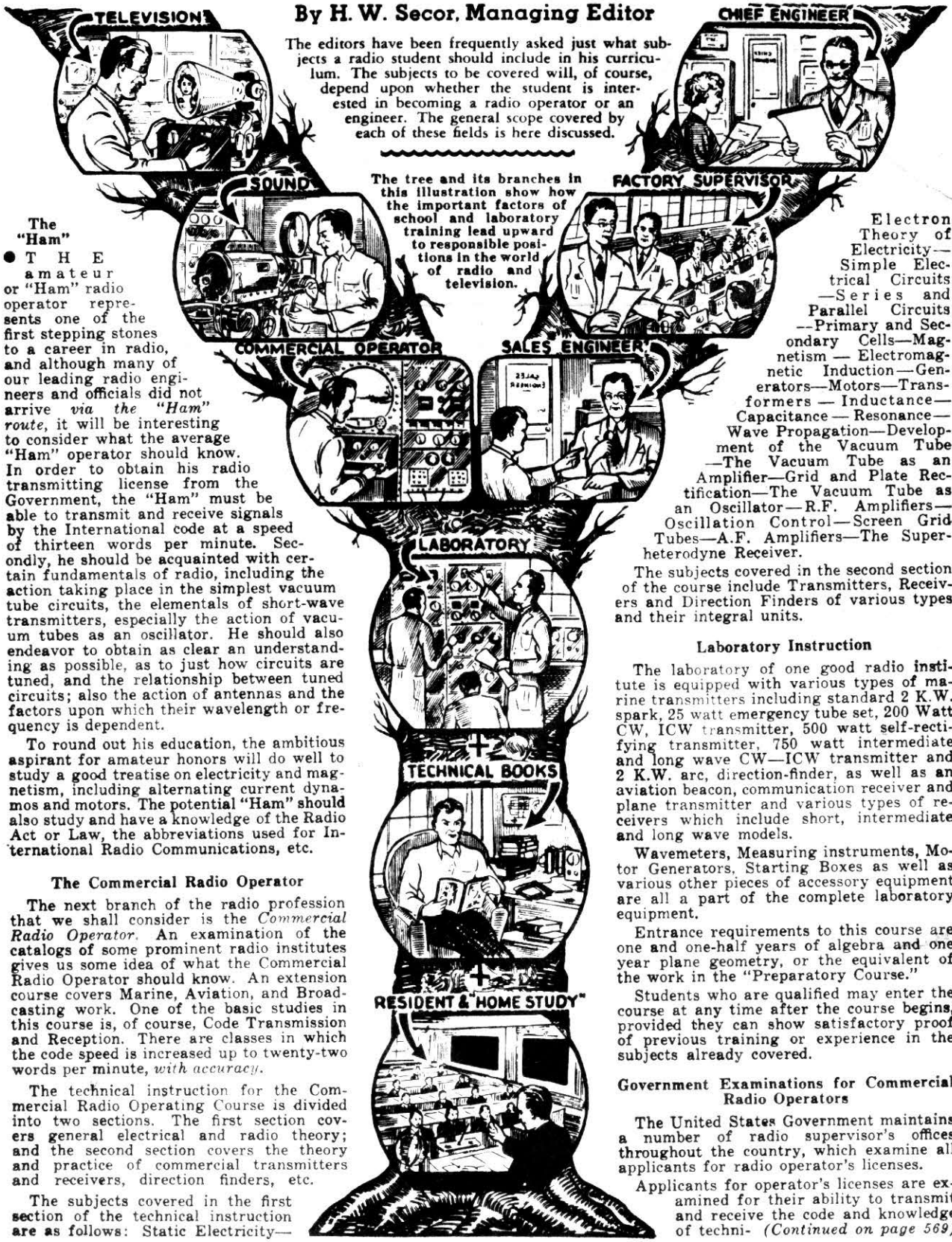
"As far as actually taking part in television is concerned, I am not interested," he said. "Neither am I any more interested in radio from a participating standpoint. But both fields are good for younger men.

This above picture and article about one of the most successful men in motion pictures and what he thinks of our opportunities in Radio and television should certainly mean everything to our ambitions to be prosperous in these new industries.

WHAT SUBJECTS SHOULD I STUDY FOR A SUCCESSFUL RADIO CAREER?

By H. W. Secor, Managing Editor

The editors have been frequently asked just what subjects a radio student should include in his curriculum. The subjects to be covered will, of course, depend upon whether the student is interested in becoming a radio operator or an engineer. The general scope covered by each of these fields is here discussed.



The tree and its branches in this illustration show how the important factors of school and laboratory training lead upward to responsible positions in the world of radio and television.

The "Ham"

● THE amateur or "Ham" radio operator represents one of the first stepping stones to a career in radio, and although many of our leading radio engineers and officials did not arrive *via the "Ham" route*, it will be interesting to consider what the average "Ham" operator should know. In order to obtain his radio transmitting license from the Government, the "Ham" must be able to transmit and receive signals by the International code at a speed of thirteen words per minute. Secondly, he should be acquainted with certain fundamentals of radio, including the action taking place in the simplest vacuum tube circuits, the elementals of short-wave transmitters, especially the action of vacuum tubes as an oscillator. He should also endeavor to obtain as clear an understanding as possible, as to just how circuits are tuned, and the relationship between tuned circuits; also the action of antennas and the factors upon which their wavelength or frequency is dependent.

To round out his education, the ambitious aspirant for amateur honors will do well to study a good treatise on electricity and magnetism, including alternating current dynamos and motors. The potential "Ham" should also study and have a knowledge of the Radio Act or Law, the abbreviations used for International Radio Communications, etc.

The Commercial Radio Operator

The next branch of the radio profession that we shall consider is the *Commercial Radio Operator*. An examination of the catalogs of some prominent radio institutes gives us some idea of what the Commercial Radio Operator should know. An extension course covers Marine, Aviation, and Broadcasting work. One of the basic studies in this course is, of course, Code Transmission and Reception. There are classes in which the code speed is increased up to twenty-two words per minute, *with accuracy*.

The technical instruction for the Commercial Radio Operating Course is divided into two sections. The first section covers general electrical and radio theory; and the second section covers the theory and practice of commercial transmitters and receivers, direction finders, etc.

The subjects covered in the first section of the technical instruction are as follows: Static Electricity—Electron Theory of Electricity—Simple Electrical Circuits—Series and Parallel Circuits—Primary and Secondary Cells—Magnetism — Electromagnetic Induction—Generators—Motors—Transformers — Inductance—Capacitance — Resonance—Wave Propagation—Development of the Vacuum Tube—The Vacuum Tube as an Amplifier—Grid and Plate Rectification—The Vacuum Tube as an Oscillator—R.F. Amplifiers—Oscillation Control—Screen Grid Tubes—A.F. Amplifiers—The Superheterodyne Receiver.

The subjects covered in the second section of the course include Transmitters, Receivers and Direction Finders of various types and their integral units.

Laboratory Instruction

The laboratory of one good radio institute is equipped with various types of marine transmitters including standard 2 K.W. spark, 25 watt emergency tube set, 200 Watt CW, ICW transmitter, 500 watt self-rectifying transmitter, 750 watt intermediate and long wave CW—ICW transmitter and 2 K.W. arc, direction-finder, as well as an aviation beacon, communication receiver and plane transmitter and various types of receivers which include short, intermediate and long wave models.

Wavemeters, Measuring instruments, Motor Generators, Starting Boxes as well as various other pieces of accessory equipment are all a part of the complete laboratory equipment.

Entrance requirements to this course are one and one-half years of algebra and one year plane geometry, or the equivalent of the work in the "Preparatory Course."

Students who are qualified may enter the course at any time after the course begins, provided they can show satisfactory proof of previous training or experience in the subjects already covered.

Government Examinations for Commercial Radio Operators

The United States Government maintains a number of radio supervisor's offices throughout the country, which examine all applicants for radio operator's licenses.

Applicants for operator's licenses are examined for their ability to transmit and receive the code and knowledge of techni- *(Continued on page 569)*