Recent Publicity concerning TELEVISION
This ticket is redeemable for one FREE Television Telephone demonstration on the Seventh Floor of THE FAIR.

NO. 102 C

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

THE FAIR

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.
CHEAPER TELEVISION

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 85 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 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 65 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 7½ 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 304 ins. 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 46½ ins. and the width 37½ ins. Price is 80 guineas.

Marconiphone also make a receiver intended for television and sound only. The picture size is 9½ ins. by 8 ins. viewed in a 45-degree mirror in the cabinet lid. The height of the cabinet is 37½ ins. and the width 24½ 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.

guineas. The G.E.C. model BT3701 is similar to the former but intended for reception of sound and television only. The cabinet is 39½ 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.

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

2-Way Telephone Television Apparatus on Display Here

Last month the first class of operators graduated from the American Television Institute. And today Ascan station W. W. Marek and J. H. Horn, three members of that class, came to San Francisco to educate the public on 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 the 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 of phone toll board, resembles the shell of an aeroplane.

Here's how they explained it:

Light from a photovoltaic 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 sides of the line can speak and see each other at the same time on a curved picture of the speaker.

Television in the form of a fully perfected two-way telephone system was put 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, was demonstrated today, and all this week, at the showrooms of Bowman & Co., western Michigan distributors for Hudson and Terraplane, 165 Sheldon Ave., San Francisco.

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

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

BY WALTER RADKE

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 focused on the person at the phone. Beneath that 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

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.
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

Two-way 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 machine shown 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. The receiving machine converts electrical impulses are resolved into the image.

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

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 monitor with the central switchboard and preamplifiers. A coaxial cable connects this switchboard with the ultrashort wave transmitter, which is located in front of the transmitter building (the Berlin Radio Tower) with UBV antennas on top of this building. At the right side, is the public television stations, equipped with large- type television picture reproductions, which were installed in the "Deutsches" Exhibition, etc. We see on the screen a scene from the Olympic contest.

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 9 A.M. Monday and continue through Saturday, were worked out in a conference between Charlie Reese, owner of the grill, and H. W. Sches- nemann and W. H. Stafford, the two technicians in charge of the ex-
hibit.

The operation of the telephone television outfit is so complicated that it requires an ordinarly telephone receiver and calling someone else, the technicians explained to Mr. Reese. There will be two tele-
phone booths installed in the grill. A person wishing to use the service enters one booth 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 person in the booths look through a pair of copper tubes with the help of modern science.

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

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 both persons will be able to see each other clearly.

B. 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 transmitted into electrical impulses which are amplified and carried into the booth across the way.

"There is a receiving device which converts the electrical impulses into a pattern of light in the mirror 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 show-
rooms of the Brooks-Gillespie Motors Inc., Chrysler and Plymouth dealers.

This picture must be one of the best known scenes to television experimentors, having been used for testing purposes by the Radio Corp. of America for nearly two years. The picture is from a loop of film and the artist evenly turns the head, faces the Likewise and then with great regularity and slightly lifting the subject gives photographs a chance to know what is coming, and though the subject never quite still a slow scene exposure with a F12 from 5 to 15 days. Kodak film recorded the pictures. In the original, the scanning lines can be seen. The four large horizontal lines are produced by the scanning lines at the transmitter, which makes four lines per picture.

DAYTONA BEACH, FLORIDA
Television is an accomplished fact in the laboratory. Why haven't we seen 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.

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 photosensitive 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 WEBC 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 outlets 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 iconoscope, 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 their sets are pretty close to right before they can appear. At best, it is expected that television sets will require much more servicing by experts than the set does.

Tribune:

Left: The picture at the left was transmitted with 60 scanning lines; that at the right with 343 lines.
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 in 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 installed in booths much like an ordinary telephone booth. The visitor takes a 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 of 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 of 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

Land YOU

By Winston Norman

Well, I see in the papers where television will be worth it all. Just think if we don’t get it! Television is a thing where you push a button & stay home from the movies 2 see the movies. My Uncle Hugo says television is the Family Album with the Pictures, & my brother-law Jake says he’ll be the end of American Love. "American Love is at end now already," says Jake. "You go round in the Blare room after a movie, & when the ladies come out, she’s a bag of film."

"What will she be when Tele-vision begins?" I say.

"She will be sort of a gazelle with vacuum tube," says Jake, "& when she kicks her leg, you can’t hear if she’s got Sex Appeal or Status. You will know her Wave Length, but you won’t never get her Telephone Number.

Between me & Jake, don’t know the 4 of it. We married men can’t look in a Television thing & get young ideas while our Wife is setting there beside us.

What is it ever worst, we will have darn Congressmen where you go to look at the Place that goes on the Voice which everybody hates. You go to the bathroom, while the House is being discussed at you & say, ‘Ladys & gentis, this chance of a lifetime is coming to you thru the courtesy of Sinnel Film Hendrickson Powders. You can see, I am now dropping a Sinnel-Pills into this glass of water, and party soon my hand feels like nothing at all.’

We will have to watch tele-vision actors snatching soup on the air, and without us we get pictures & talk, & there is no broadcast. So a good picture will still be just as handled when they smile off.

Worst of all, our children will be under feet all the time, watching the Television Set in their room, instead of being in the Movies where they belong.

In fact, I only got one word for Tele-vision. It will be another of them Electric things where Science can’t get an eye on, 24 hours a day, & even if we don’t like it, we can’t see the way from ever having 5 minutes to ourselves, when they don’t have nothing to do but sit on that Set & Throb.

ALACHUA COUNTY NEWS

Vision Phones Will Be Shown

Latest Marvels Science on View Here During Next Week

Telephony, 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 Saturday, Feb. 26 and 27.

Booths will be set up in the show rooms of Shaw & Keeter and H. W. Schenberg, graduate television engineer 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 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’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 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 image of persons are shown on two-inch squares.
BAIRD TELEVISION LTD.

WORLD PIONEERS & MANUFACTURERS OF ALL TYPES OF TELEVISION EQUIPMENT

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 “Catho-visor” 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.

In detail, colour and brilliance of picture, and in the quality of sound reproduction, the “Televisor” Receiving Set Type T.5 is outstanding in performance.

Authorised dealers who have qualified for a Baird Certificate of Proficiency, have been appointed within the service area of the B.B.C. television station.

Send now for illustrated literature

“TELEVISOR” RECEIVERS MIRROR THE WORLD

Head Office:
GREENER HOUSE, 66, HAYMARKET, LONDON, S.W.1.
*Phone: Whitehall 5454

Laboratories:
CRYSTAL PALACE, ANERLEY ROAD, LONDON, S.E.19.
*Phone: Sydenham 6030
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 has 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 receiving locations. 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 348 lines per frame, and are completely covered 50 times per second. Odd-line interlacing is used, in a 2-to-1 ratio, giving 50 field scramblings per second. The aspect ratio (width-to-height) is 4-to-3. The maximum

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TELEVISION IS STARTLING TO LOCAL PEOPLE

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

IMAGE APPARENTLY SUSPENDED IN AIR

By Leroy Northrup

Fascinating thing, this television which is being demonstrated at Drekka'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 W. 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 tiny electric light globes similar to the dome lights of a sedan. Mr. Stafford explained that these are the eyes of the television, which pick up the features of your face and speed them to the opposite booth.

You enter the booth, sit down before the panel. As you reach for the telephone, the curtains drop to darken the booth, and the scanning light beginss zigzagging 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 oscillates, perfected by Philo Farnsworth, San Francisco television inventor. The picture transmitted from the Baird headquarters in the Crystal Palace was received in an old English 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, incidentally, is 480 lines. It is understood that the British company plans a standardization at 480 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 gradation in 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

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 COURSENS.)

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.
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.

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

Next week, a little child will take 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, at State and Laura streets.

You will sit in one darkroom booth, with your own phone and the other phone at the other end. You will talk to each other over the telephone, and the electrical impulses will be transmitted into a television picture which will be visible on the screen.

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

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

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

The 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.

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

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

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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 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. Shoneman, are representatives of the American Television Company, briefly and in non-technical terms describe 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, the instead of your own reflection, it is the person in the other booth with whom you are talking whose image you see.

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

"The telephones of television are said to be as simple to use as ordinary telephones, the difference being you actually see the image of the person 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 mid-way attraction or a fad 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, 1928, while the first public demonstration of television itself was given 10 years ago by U. S. L. S. of Chicago, chief engineer of the Telco Television Institute of Chicago.

Mayor V. W. Estes (left) and H. N. Dickson, president of the Greater Orange Chamber of Commerce, talking to and looking at each other thru the television telephones now on display at the Nixon Butt Packard Company.

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 R. Fraser (right), as they congratulated Charles S. Issacs, 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 formally 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 by Ciligines 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 85 Green Bay automobile dealers.

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

There will be no special charge for the demonstration, and all who will attend the show will be privileged "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 9 o'clock each evening. As an added attraction, an orchestra will furnish both evenings, before, during and after the style show.
THE TELE-THEATRE

By HUGO GERNABCK

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 away. And once done, we may have nothing but motion pictures left; because, from year to year, it is becoming more expensive 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 $1.60 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 be welcome to all in the not-too-distant future. Television is the key to the situation.

Audience and Distant Stage Joined by Television

Recently, when the San Francisco Giant Television Screen was installed in 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, 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 stage. This suggestion was adopted, and the Broadway Theatre, by means of a television transmitter, picked up the image of the actors on the stage of the Theatre on the Square, and showed this performance on the television screen of the Broadway Theatre. This, then, was the first attempt to televise two theatres connected together by means of television. The results were, quite satisfactory.

What has been done on a small scale here, will be possible on a tremendous scale in the very near future by the instrumentality, which I now term the "Tele-Theatre".

Installed in the City of New York, for the sole purpose of supplying the entire country with its daily theatre program—not mindless, one motion picture of a "canned" product, but a real 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. These will be stage 1, stage 2, and as many stages as required. The idea of the multiplicity of stages is that I propose to make the scenes differ one from another more than the ordinary.

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 installed 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 "Pellies" 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 plays. Instead of 1,500 or 1,600 people seeing the "Pellies," 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 actor 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 being actually seen and heard, 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 see the various musical numbers, you can do so. And, instead of seeing a "comedy" or "straight" drama in another Tele-Theatre in your own town, you can see a musical play in New York that same night, and be able to 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 performance cannot be put on later in New York; and, on account of the difference of time. Thus, for instance, a musical number that will be given at 8 o'clock (local time) in San Francisco, at 11 P.M. in New York. A musical number that will be given at 8 o'clock (local time) in San Francisco, at 11 P.M. in New York, and then telecast on the country wide television network.

THE OACAL (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 news may be seen as well as heard, will be demonstrated in the showrooms of the Ocala Motor company, Ford dealers, at North Main street, Tuesday and Wednesday.

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

William and Ben O'Neal have just completed arrangements with C. W. Carney, public relations manager, and H. W. Stafford and H. W. Sheneman of the American Telephone and Telegraph company of Chicago and they are establishing themselves as directors for their demonstration here.

How It Operates

Four telephone booths are included in the equipment. Inside each of these booths is a camera of the French type and directly in front of the camera's face is a mirror which is known as a scanning disk, upon which is painted the image of the person to whom the user is talking to is projected. Surrounding the disk are several large lights, which closely resemble automobile 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 discus are drawn to assure darkness. The user speaks into the telephone mouthpiece and the other party, usually some friend, answers from another booth. Instantly the image of the other person's face is thrown on the disk before the user's eyes. Quite naturally the user is 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 communication 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 widely demonstrated apparatus of its kind in the United States. The first city to have a public demonstration was held in New York last year, and those in America have been limited since that time.

In the television telephone the voice is said to be "just around the corner," and will be made available to the public before many years if the demand of inventors and researchers are realized.
Television-Phones Amazing To Those Who Use Them

Devices Will Be On Display In Ocala Tonight-Wednesday Night

By Wilton Bartin

Well, I had my first view of television-telephone today. Those devices resembling 'phone booths' were set up in the city hall and I took some time to start talking to see a projected likeness of the party on the opposite end of the telephone set.

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 tomorrow evening.

Here's a look at the latest marvels of science, 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 H. W. Starch and H. W. Schencken of Chicago, engineers in charge, representing the Television Institute of Chicago and the equipment will include two-way telephone televisions. 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 looking into a mirror and having your image talk back to you through the telephone. The person in the other booth can hear you and see you, and vice versa.

"A photo-electric eye casts a beam of light over the booth, and this light, reflected to a sensitive receiving device, is transmitted through electrical impulses which are carried over the telephone lines. A second picture is transmitted back with the light image, and the images of the persons are shown on two screens.

The television telephones are said to be as simple to use as ordinary telephones. The difference being actually seen by the person with whom you are speaking.

Earle D. Darby, chairman of the board of directors of the American Legion post No. 14, in announcing the demonstration here, said it is being made by the Southern Telephone Company.

The demonstrations begin at 8 o'clock this morning with a talk by Mayor Smith, and will continue until 10 o'clock tonight.

The first hour will be reserved for demonstration of the two-way television booths, and the remaining five hours will be open to the public. There will be a small admission charge and the proceeds will be used in financing the welfare work of the Legion post.

DELAND, FLORIDA

Television Is Starting To Local People

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

IMAGE APPARENTLY SUSPENDED IN AIR

By LEBOY 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 in town 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 H. W. Starch and H. W. Schencken of Chicago, engineers of the American Television Institute.

The television telephones are said to be as simple to use as ordinary telephones. The difference being actually seen by the person with whom you are speaking.

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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.

(Copyright, 1936, by Universal Service.)

NEW YORK, Nov. 19 (AP) - Sometime in 1937 public television service is expected to be inaugurated in the United States, starting a new electrical transmission age that will alter the face of the nation.

This answer to the curiosity of the American public, as to how soon television service may be expected as a commercial service, was given today by Philo F. T. Farnsworth, American inventor, who has overcome the greatest television technical difficulty. He has made television a reality.

"There is no question but that television broadcasting will begin in 1937, although I cannot say just what time it will begin," he declared.

The important thing from the scientific viewpoint is that the main obstacle has been overcome, according to Farnsworth.

The Radio Corporation of America, which has the National Broadcasting Company, has been experimenting in the field during recent years.

Some of the important telegraph programs have been sent out and received by a select group of persons within a few miles around New York City.

So far this television transmission has been done over a distance of 343 lines for each picture. The greater the lines constituting each picture, the clearer and better is the picture. American television sets, when manufactured, will mean pictures of 441 lines.

SIXTY PER SECOND

In one second, such pictures will be delivered by televisions as against 36,000 per second by the best of the commercial television programs. The latter will have a quality, however, which will automatically delay the forty-mile limit.

SIXTY PER SECOND

As has been made public recently, the frequencies or radio waves to be employed will be between 40 and 50 megacycles. That does not mean that the radio waves will be "noisy" or "fuzzy" as has been made known.

Farnsworth's expectation that a working receiving set need not be worth more than $200 to $300. The radio broadcasting of television will be in no way different from radio television. They are ten utterly different things. Television, of course, will be accompanied by its own synchronized sound broadcasts.

(Continued on Page Two)
Students View Television Phone

To Atlanta's laymen, the television telephone is just another marvel of science, to be accepted as other marvels of science have been, but without the deep probing into the whys and wherefores of its working.

So, a group of young engineers of Georgia Tech, who this week in dozens have visited the show-room of Harry man, Inc., where the television phones have been on display, are by Mr. Smelser's contribution to The Georgian Empties 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.

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, pioneers in the field, are being brought here by the Shaw and Meeker Motor Company and will be shown at their showroom 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 the officials of the Television Institute, in charge of the showing here.

The telephonic television booths 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, sign or her companion will be given a card bearing the same number. When their time comes, they back into light and shadows, and into different booths and take their places before what appears to be an ordinary telephone of the French type, attached to the wall like the panel of an airplane.

Talking To Lady Friend On Telephone and See Her Too At Drekka's Store

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

Recognized as the greatest achievement of science since 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 on an ordinary telephone, and a girl can see her boy friend. Boys can see up their noses at another fellow and let him make a face back.

Images Copper-Colored

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

Television on a Table

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 are transformed back into light and shadows on a small screen.

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

We Do Not Miss

Don't miss this modern miracle. Enjoy the sensation of talking over the telephone to someone in a nearby booth and seeing the person to whom you are talking.

It's FREE

You're Invited To

See and Use Television

Today and Saturday

Through the Courtesy of

Fort Marion Chevrolet Company

And

American Television Mfg. Co.

123 San Marco Ave.
Former Studio Chief Congratulated

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 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)

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" 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 a 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 elements 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 how circuits are tuned, and the relationship between tuned circuits and 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 dynamics 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 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—


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, 50 watt emergency, subaud. 200 Watt CW, ICW transmitter, 500 watt self-rectifying transmitter, 750 watt intermediate and mixing wave, ICW and 2 K.W. and 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 supervision'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 568)