# SIGHT & SOUND NEWS

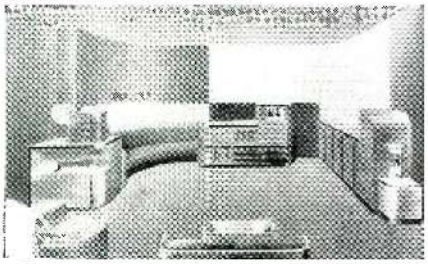
## FACSIMILE DEMONSTRATED TO PHILLY POLICE

PHILADELPHIA, Pa., (Special to RADIO NEWS): During Radio Open House Week, a daily demonstration of facsimile broadcasting was given for visitors at Station WCAU. Programs emanated from the RCA Station at Camden, New Jersey.

Facsimile transmission was made in conjunction with the Philadelphia Police Department to demonstrate possible police usage, especially for criminal identification.

## NEW YORK WORLD'S FAIR FACSIMILE DISPLAY

NEW YORK, N. Y., (Special to RADIO NEWS): Facsimile's possibilities as a news dispensing medium were emphasized in an elaborate RCA display at the New York World's Fair. The display includes a model newspaper office designed to receive, edit and transmit news and pictures by the radio printer method.



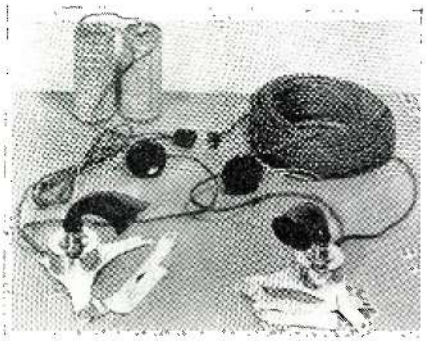
News is brought to the Editor's desk by teletype. After copyreading, the pages are typed in page form on a varityper machine and placed in the scanner for transmitting. Provision is made to make still photographs from a near-by television receiver screen and these are transmitted via facsimile process.

## AP MEMBERS WITNESS SPECIAL TELECAST

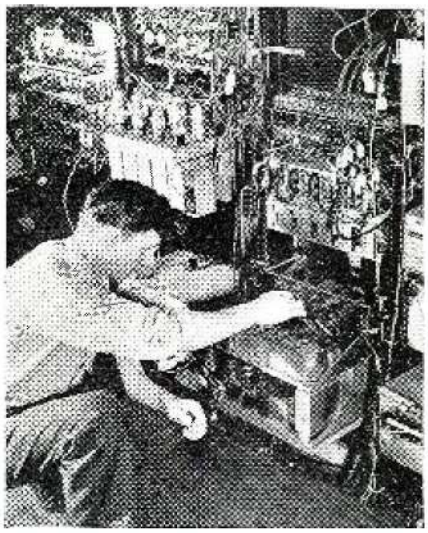
NEW YORK, N. Y. (Special to RADIO NEWS): At the Annual Meeting of the Associated Press, members witnessed a special telecast over NBCs W2XBS. More than 300 editors and publishers viewed the combination film and live talent show received on a battery of RCA receivers in the Grand Ballroom of the Waldorf Astoria. Part of the program was picked up by the mobile television unit located in the AP news room in Rockefeller Center.

## STROMBERG-CARLSON DEVELOPS PORTABLE TELEPHONE SYSTEM

ROCHESTER, N. Y.: Stromberg-Carlson has designed a new portable telephone system primarily designed as an aid in installing television receivers. With this system, installation



men can communicate with each other, at the same time leaving their hands free for work.



Testing the rack of amplifiers for television in the RCA research labs.

This system is particularly applicable for the installation of antennae.

The system includes two breast plate transmitters, two headset receivers, and 200 feet of rubber covered cord. The kit weighs 8 lbs.

## CROSLEY RADIO CORPORATION STANDING BY FOR TELEVISION

CINCINNATI, Ohio: Officials of the Crosley Radio Corporation today stated: "It is the opinion of the company that television is an unknown factor and in order to be prepared for any eventuality it is our intention to keep abreast of all phases of the new science by research and development in transmitting and receiving equipment and training personnel both in the engineering and programming branches of the new art. As yet no plans have been formulated for broadcasting television programs.

"While our factory has already constructed a number of television receivers in its laboratory, no schedules have been made for their production. Neither have approximate retail costs been determined, nor have any plans for marketing the receivers been decided upon.

"If it develops that television is moving into public acceptance, The Crosley Corporation has prepared itself to help lead the way, both in the building and transmission of suitable television programs by a trained staff and in engineering, design and production of television receiving equipment in quantity numbers at popular prices."

## BAIRD TELEVISION TO MAKE BROADWAY, NEW YORK BOW

NEW YORK, N. Y.: The Baird Television Corporation of London, England, is considering the installation of several television projectors in various Broadway theaters. Arthur A. Lee, Vice-president of Gaumont-British in this country, predicts that by May 15 Broadway will have had its first television theater. In England, Gaumont will have completed the equipment in 150 theaters by May 1st. Broadway theaters will be equipped with screens 12' x 15' in size.

## A. N. P. A. CONVENTION ATTENDS FACSIMILE DEMONSTRATION

NEW YORK, N. Y. (Special to RADIO NEWS): The Convention of the American Newspaper Publishers Association, held at the Waldorf Astoria, witnessed a special demonstration of radio facsimile during which actual pages of the paper issued by the "St. Louis Post Dispatch" were transmitted. Harold C. Vance, manager of RCA Victor facsimile sales, supervised the display.

## NEW VICTORIA THEATER EQUIPPED WITH BAIRD TELEVISION

LONDON, England: The big Gaumont-British New Victoria Theater in London has been equipped with the world's largest television screen, which measures 20' x 15'. This is larger by 8 feet than previous screens.

Engineers working day and night made many other installations in London theaters before the telecast of the Derby at Epsom Downs on May 24th. Twelve theaters were so equipped.

## TELEGLAMOUR GIRLS NEED PERSONALITY—NOT HAIR

NEW YORK, N. Y.: Thomas H. Hutchinson, NBC's Director of Television Programs says that he will welcome all girls—blondes, red-heads and brunettes—providing that they have personality. Dead-pan "Miss Americas" won't have a ghost of a chance in competition with a lovely vivacious, but far less beautiful, girl. In picking out suitable feminine television talent, Mr. Hutchinson has at once a pleasant but difficult job.

## EXPERIMENTAL TESTS ON COAX CABLE GOING ON BETWEEN N. Y. AND PHILLY

WASHINGTON, D. C.: The Federal Communications Commission reports that tests are in progress on the experimental coaxial cable installation between New York and Philadelphia and that they have demonstrated the feasibility of transmitting 480 simultaneous telephone conversations through this single small cable.

The cable is especially adaptable for the line transmission of television programs and any one of the 480 telephone channels may be used for facsimile or wirephoto as well.

Five thousand telegrams simultaneously may be transmitted over this same coaxial cable, it was pointed out. The connection is 94.5 miles long and was completed late in 1938. The system is operated under authorization granted to the American Telephone & Telegraph Company and the extensive program of field tests and experiments has been carried out by the Bell Labs.

A similar system is being considered for installation between Stevens Point, Wisconsin, and Minneapolis, Minnesota,—a distance of 195 miles.

## TELEVISION MAKES DEBUT AT SAN FRANCISCO FAIR

SAN FRANCISCO, California: Visitors to the Golden Gate Exposition will not only see practicable home television demonstrated, but will themselves have an opportunity to be televised, according to RCA.

RCA has erected a large building, with over 5000 square feet of space, on the Exposition grounds to house the television studio and viewing room. Radio facsimile, which will print news bulletins, pictures and other text in the home, will also be shown in addition to displays representative of every phase of the radio art.

## TELEVISION SERVICE ABROAD REVEALED

NEW YORK, N. Y.: The International Telephone and Telegraph Corporation has released figures on television service, for the year 1938, abroad.

Great Britain, France and Germany all adopted positive modulation and uniformity of synchronizing signals. The number of lines used, however, differs: 405 in Great Britain; 455 in France; and 441 in Germany. Italy is believed to be following the German practice.

In France, the Eiffel Tower vision transmitter, ordered by the French P.T.T. from Le Ma-

teriel Telephonique, associated company in France of the International Telephone and Telegraph Corporation, was inaugurated by the P.T.T. Minister in April. Thereafter, regular broadcasting has taken place about two hours daily, five days a week, of studio and film transmissions.

A four hour daily service is being furnished by the British Broadcasting Corporation, and Great Britain is at present (January, 1939) the only country in the world with regular commercial television service.

The output power was raised to 30 kw. and a new antenna placed in service at the end of 1938. Good reception has been reported all around Paris and also on the south coast of England. The quality of the pictures compares favorably with those from other transmitters in operation.

## TELEVISION USES 648 TUBES

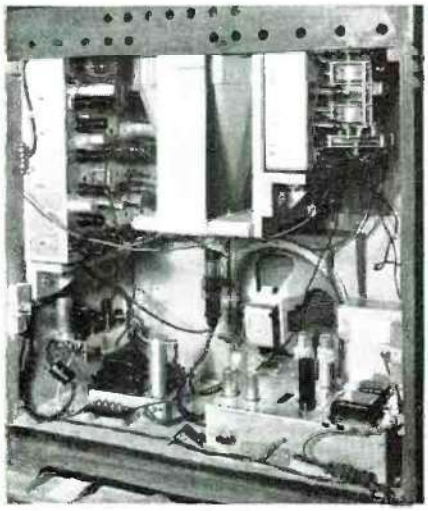
SCHENECTADY, New York: According to C. A. Priest, General Electric radio engineer, his company's television station scheduled to go into operation this year will have a total of 648 vacuum tubes. "Failure of any one of about 400 of the 648 tubes will stop the broadcast of the television program," Mr. Priest said.

This number of tubes is almost seven times the number used in the average radio broadcasting station of today. Station WGY, for instance, uses only 94 tubes to bring you your programs.

The Helderberg Hills station, concerning which Mr. Priest spoke, will serve the area comprising Schenectady, Albany, Troy, Amsterdam, and Saratoga, with a combined population of more than 500,000.

## TELEVISION RECEIVERS SHOWN AT ANNUAL SALES CONFAB

ROCHESTER, N. Y.: Stromberg-Carlson distributors got their first glimpse of the company's new television receivers at the Annual Sales Convention held during May. Lee McCanne, Radio Sales Manager, said: "It has always been our policy to thoroughly test every Stromberg-Carlson product under actual service conditions before placing it on the market. These tests have demonstrated that the company's receivers will function perfectly on the standard television channels."



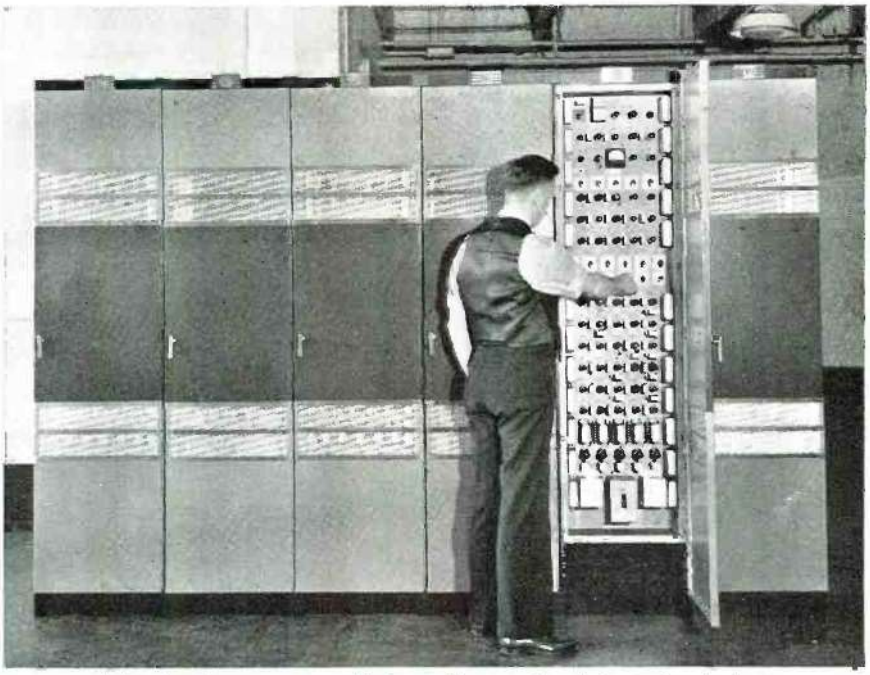
Rear view of an RCA-Victor home television receiver. C-R tube is vertical.

## BELMONT RADIO DEVELOPS TELEVISION RECEIVER

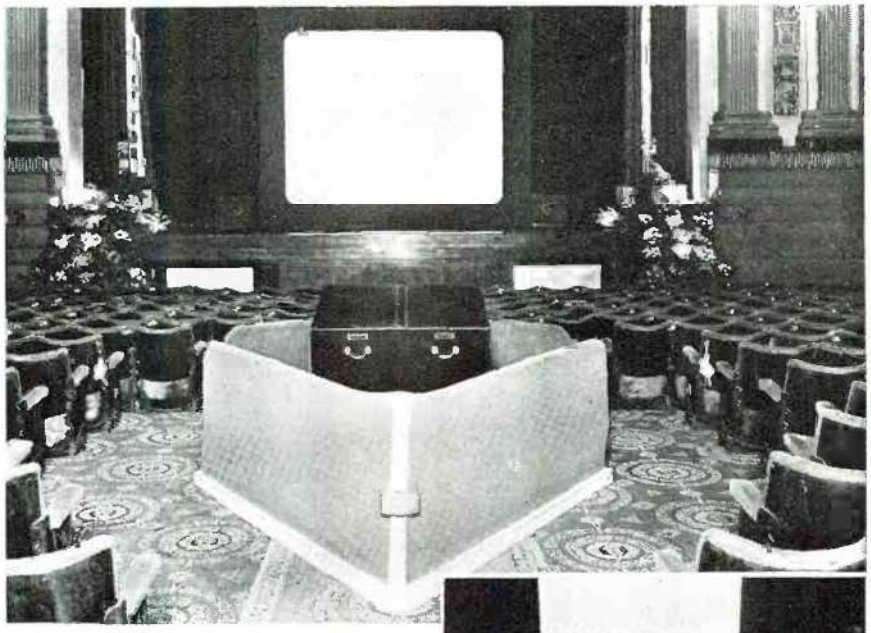
CHICAGO, Illinois: A television receiver will be offered to the public just as soon as conditions warrant, P. S. Billings, president of Belmont Radio Corporation, announced today.

## GRADUATES RECEIVE DIPLOMAS BY TELEVISION

BOSTON, Mass.: Unique graduation exercises, in which the graduates received their diplomas by television, were held at the Massachusetts Television Institute on April 15th, when the Institute graduated its first class of television engineers. The "image" was 9" x 12", sharp and clear. President Porter H. Evans presented the diplomas to ten young men, while Prof. William H. Timbie, Professor of Electrical Engineering at the Massachusetts Institute of Technology delivered the graduation address.



Adjusting the generator which provides synchronizing pulses to keep RCA television transmitters in perfect "step" with the receivers.



Baird Television installation in the Marble Arch Pavilion in London, where 15' x 20' tele-pictures are viewed.

## RCA DEALER SERVICE MEN TRAINED FOR TELEVISION

CAMDEN, New Jersey: RCA-Victor plans a special course of instructions to train members of their distributor and dealer service organizations in the New York area to install and adjust television receivers and to instruct the purchaser in their operation. Approximately 125 servicemen have completed the first course according to Edward C. Cahill, RCA Service Manager.

The courses have been conducted by television service experts, from within the famed RCA-Victor service organization at Camden, who have been studying and solving the problems of television receiver installation and servicing dur-

*(Please turn the page)*

ing the three years RCA-Victor television instruments have been field tested in New York.

"Our distributor and key dealer service men now have a good working knowledge of the receivers and are qualified to set up, install, adjust and demonstrate them after having satisfactorily completed an intensive practical course of study," Mr. Cahill said.

## TELEVISION COURSE TO BE CONDUCTED BY W1XAL

BOSTON, Mass.: Short Wave Station W1XAL is conducting a course in "Television" which begins May 15, with rebroadcasts on Fridays. Each lecture lasts a full hour on the air and covers a complete subject, and the entire weekly series enables radio listeners to gain a working knowledge of television.

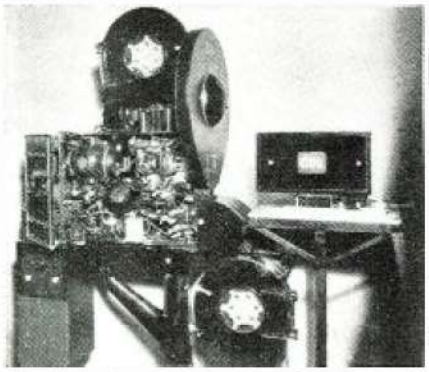
"While the course is simplified for the layman, it will contain many helpful hints for the servicemen and dealers who may shortly be called upon to install Television sets," said Walter S. Lemmon, Founder and President of the World Wide Broadcasting Foundation of Boston,

owner of Station W1XAL. The Foundation is a non-profit educational institution and has prepared a complete printed text with diagrams and illustrations to help the listeners follow the instructor at Boston. Dr. C. Davis Belcher, a well-known Radio Engineer, conducts the course.

The Practical Television series is broadcast each Monday evening at 8 p.m., EST, on wavelengths of 6.04 and 11.73 megacycles. The lectures are repeated by electrical transcription at 11:30 p.m., EST, and again each Friday at 4 p.m., EST, over wavelengths of 11.79 and 15.13 megacycles.

## CBS ADOPTS REVOLUTIONARY TYPE TELEVISION FILM SCANNER

NEW YORK, N. Y.: Dr. Peter Goldmark, chief television engineer for the Columbia Broadcasting System, has developed a new type of film scanner which will be placed in operation as



soon as the CBS station atop the Chrysler Building is completed.

The principle upon which the revolutionary new scanner works is, of course, a great deal different from that of the standard motion picture projector. In the latter a strip of film is made to pass between a light source and a lens in a continuous series of rapid jerks so that 24 separate photographs or frames can be scanned per second while they are at rest. This is necessary because the eye would see only a shifting melange of light and shade if the celluloid were kept in continuous motion.

It is not desirable to do this in scanning pictures for television, first because for such purposes the film must be scanned at the rate of 60 frames per second to eliminate flicker, and second because stop-motion scanning requires a great deal of light, causes much wear on the film and necessitates a great number of expensive moving optical parts.

Dr. Goldmark and his staff of engineers solved the difficult problem by making the film pass

(*More S & S News on page 49*)

# The VIDEO Reporter

by SAMUEL KAUFMAN

*WELL, folks, the lid's off! Television is here at long last!*

True, the initial program service is limited to the New York area, but the important thing is that the video ball is rolling at last and, like a snowball, is growing larger and larger as it speeds along. A new industry has been born and it is off to a grand start.

It was anticipated for a considerable time that television would be launched at the time of the opening of the New York World's Fair. But few persons could have guessed that the commercial beginning of the video art would be on as big a scale as it turned out to be.

Most important news of all was to find the bigger manufacturers ready to offer lines. Several smaller set makers did valuable pioneering in kits of parts as well as assembled receivers but the immediate entrance of the "big fellows" gave television a powerful promotional push that impressed the public with the obvious fact that the video art is no mere novelty and is actually a great entertainment medium *that is here to stay.*

Starting the regular television programs, with David Sarnoff, RCA's Pres.

OUTSTANDING feature of the new television lines is the acceptance by manufacturers of the thought that all-wave sound equipment should be included in the same instrument as the video apparatus. This is a natural combination and the decision to do this right at the outset of the commercial start of television was a smart thing.

Another trend that several manufacturers are grasping is the inclusion of an "add-on" unit, a small video attachment that converts any a.c. sound receiver into a television set. *RCA, General Electric* and other makers are merchandising such attachments which make possible the conversion of a radio set into a sight-and-sound receiver at a cost of less than $200.

*RCA* launched its television receiver line on the day it dedicated its building at the New York World's Fair. A battery of fifteen television consoles was lined up in the *RCA* Building and members of the press witnessed the proceedings at the Fair Grounds in seated comfort. The program, lasting nearly an hour, served the double purpose of introducing the *RCA* line and giving lookand-listeners an idea of what kind of programs they might expect after the commercial launching of the new industry, which has since taken place.

Images of 5, 9 and 12-inch diameter size are available on *RCA* models and, of course, the prices increase along with the picture dimensions.

TELEVISION at the Fair is featured by *RCA* and *General Electric*. The *G. E.* line, incidentally, is similar to the *RCA* offerings, including direct-viewing as well as mirror-lid image screens in an "add-on" attachment and complete console models. Undoubtedly, a lot of other radio manufacturers will be represented with television displays at the Fair—notably *Crosley*.

THE first "official" television broadcast took place from the Fair grounds on the opening day. My impression was that I was more comfortable in the armchair and privacy of a room than I would have been in the midst of the great throngs I saw on the receiver screen.

This brings to mind an old problem that was once raised by radio: Will television hurt the box-office?

My guess is that it won't. Television will develop its own form of entertainment quite apart from the types offered by the stage and screen. It's a human trait to witness things in person. But, if you can't, television is certainly the next best thing.

THINGS are coming along fast at *CBS*, and it is certain that they won't be caught napping on video progress. Gilbert Seldes, television program director, recently made a speedy trip to and from London to observe how the Alexander Palace transmissions were coming along. *Columbia* also announced the appointment of Leonard H. Hole, former director of the program service department, as manager of television operations.

Mr. Seldes had the following to say of British television: "England is far advanced in the matter of television production technique. But each country must develop its own methods, material and style of production. It is only background technique which remains universal. I have already laid out considerable American program material to which this technique will be applied."

TELEVISION kits have been enjoying a brisk sale in the New York area. It seems that the old-timers who are repeating the home assembly and wiring jobs they learned in their youth when radio, too, was young, were quick to take up the idea of putting their own video sets together. And this group was supplemented by a new crop of youngsters who were fascinated by the thought of putting the receiver together with their own hands. The kit-makers have devised ingenious instruction sheets which enable even the least technical of person to

(*More Video Reporter on page 44*)

## U. H. F. Transmitter

(*Continued from page 15*)

cuit is out of tune. A resistance is cut in on the primary side of the plate transformer to reduce the plate voltage on these tubes when tuning up. Further protection of these tubes is provided by placing fuses in the buffer and final plate leads.

Transmitters which function well on the lower frequencies cannot be expected to be efficient on these frequencies by simply changing coils. Losses which are insignificant on the lower frequencies multiply themselves manyfold on these frequencies.

A small auxiliary r.f. unit such as the one described operated from the available power supply and modulator would be a more desirable setup. —30—

## Sight & Sound News

(*Continued from page 36*)

continuously downward before a scanning aperture and lens system and then causing an electronic scanning beam to move upward at exactly the same speed so that a stationary electronic image results. A slotted rotating disc is placed between the film and a number of lens segments. This acts as a shutter and gives light to only one of the segments at a time. The result is that sixty separate stationary frames per second can be produced from film which was originally photographed at 24 frames per second, although the speed of action on the receiving screen is not changed in the least. —30—

## As I See It

(*Continued from page 16*)

to superheterodynes and who no doubt will advance to the frequency-modulated systems when they come in and who will install facsimile receivers when they are available for general sale.

It is true that we have a certain type of specialization present in the radio service industry, viz. the auto-radio shop in contrast to the home broadcast receiver shop. And why this specialization? Primarily because of the automobile and not the radio receiver. Auto-radio servicing naturally gravitated to that man who had proper parking facilities for the automobile during the time that the receiver was being installed or being removed. Also the type of man who decided upon auto-radio installation and service was that individual who had made contacts with auto dealers and who possessed the proper equipment required for the installation. As a matter of fact the service came as a consequence of the installation. It is of further interest to learn that in many places the majority of service men, because of lack of parking, drilling and other installation facilities, suggested that their customers go to "so and so" who specialized in auto-radio installation and service. The specialization in this field is found more in *installation* than in *service*.

Summarizing, we can come to but one conclusion concerning television receiver servicing. Gather whatever data you can. Acquire the maximum