TELEVISION ANTENNAS
The transmitting station of the Farnsworth system, showing the two steel antenna towers.

SCENE DURING REHEARSAL IN MAIN TELEVISION STUDIO
This is a view that greeted your reporter's eyes on the recent demonstration of experimental television at Wyndmoor.

New Studios And A New Transmitter
FARNSWORTH

By The Radio News

UPON my return from Wyndmoor, Pennsylvania, I am still more convinced that the television era is closer than many persons in the radio industrial and legislative circles of the nation care to admit. Maybe you never heard of Wyndmoor. But you're going to hear about it and may even see a part of it in the very near future. This small town, a suburb of Philadelphia, already holds, within its limited bounds, one of the most complete and technically advanced television stations in the world. Designed and erected by Farnsworth Television, Inc., of Philadelphia, the sight-and-sound unit should be on the air experimentally by the time this article reaches print.

More than a year had passed since my earlier visit to the Farnsworth laboratories and the strides noticeable in that period were gigantic. The number of image lines is now 441, as are also the new Philco and RCA-VSB standards. This is the recommended standard of the Radio Manufacturers Association. A sharper image is now available and the apparatus has been considerably refined, one of the most notable improvements being in the design of a shorter receiving tube which, by a new

TAPS AND GYRATIONS
The tap dancer is bound to be a favorite in television audiences in the future. Scene shows rehearsal of such a feature.

A New Kind of Program

WITH the inception of television broadcasting will come a totally new kind of radio program over the air. To show how close this era is, the pictures on this page indicate the pains an outstanding television authority and his staff are taking to be ready with studio sets and trained personnel for the very special art of television presentations.

MINIATURE BACKGROUNDS
It is predicted that "close-up" setups may be used for backdrops in future television productions. Picture shows a BBC model of the Coronation Procession.

STUDIOS JUST COMPLETED
An early photograph of the new Farnsworth studios before the surrounding grounds were landscaped.
Employing 441 Lines Announced By

TELEVISION

Television Reporter

means of deflection, yields as large a picture as the older and very long type of valve.

Television demonstrations to the press are now a commonplace. There are bracketed periods every year when all commercial contenders for American and world television leadership get up a show and invite radio and science editors to look at a laboratory test, usually with makeshift, improvised studios. Oftimes the demonstrations reveal the progress made technically with little thought to the program and production end. But, at Wyndmoor, where I visited the Farnsworth plant for a special demonstration, I discovered an elaborate Hollywood-like studio. Programs were in rehearsal. Scenic paraphernalia, lighting equipment and the television cameras arranged in the large studio revealed that polished, well-rounded programs can go on the air on short notice.

Although Wyndmoor is just past the Philadelphia (Turn to page 679)

TELEVISION SCHEMATIC

Below is the fundamental circuit employed in the latest receiver types developed by Farnsworth.

MAKE-UP IMPORTANT

As Radio News has pointed out before, new technique must be developed for television make-up. Photoflash and produce expert actually testing the effects of different styles of make-up in determining one most successful for this new art.

Everyone Wants Television

There is no doubt in people's minds as to whether or not they would like to have an efficient television receiver in their homes.

FOR YOUR HOME?

Every American may soon be enjoying a television receiver such as that pictured below, which is one of the models developed by Farnsworth. It contains a vision screen at eye level.
is a collection of case histories of over 1500 receiver troubles. An interesting and useful as this information is, to our mind the greater value of the book lies in the various successful cases of cell and practical radio information made readily available to the serviceman being presented in a single book. Here's included are complete circuit diagrams of practically all automobile electrical systems (and make believe that information won't help the intended serviceman track down many a case of ignition interference), grid-bias resistor charts, resistance-current-voltage-power rating resistance chart, tube charts, rectifier characteristics, drill and tap sizes, and the RMA standard color—codes for fixed resistors, condensers, dynamic batteries, battery cables, power transformer leads, i.e. transformer leads and audio transformer leads. We venture to predict that all books in the service library, this will be one of those to which reference will most frequently be made.

The 468 pages that comprise this book are in an attractive loose-leaf binding—with plenty of room for room to come—at the rate of two supplements per year.

What About Television?

Mr. E. H. Rietzke writes in the CREI News what he thinks about present television and the types of men it will give employment. There seems to be a prevailing idea that television is something new, but it is just a branch of radio. Therefore, it is absolutely essential that the prospective television technician be thoroughly familiar with the principles of radio engineering and electrical engineering. Let us quote Mr. Rietzke: "We feel that there is no question about the fact that television will be with us, and in a serious equivalent to present-day broadcasting. It will not open up the better-than-average man ready to operate.

We feel that these opportunities will open up to the better-than-average man who is in radio. The problems of television engineering are simply specialized problems of radio engineering. The fact that the program may be by photo-electric device instead of a microphone, and reproduced by means of a cathode-ray tube instead of a dynamic reproducer, does not alter the fact that everything depends on these two extremities of amplifier, selector circuits, and radio transmitted and received.

The good television engineer must be a highly competent radio engineer. All his basic training will be that of the radio engineer, just as radio engineering is the truest and broadest branch of electrical engineering. The man who gets in on the ground floor of television will not be the inexperienced young man who takes a course in "Television," neglecting the most necessary part of all, basic electrical and electronic engineering. It will be just the opposite. The television engineer will be one who is already in radio, a qualified serviceman who is already in the field of broadcasting and manufacturing, and who is up to date in his own work and who can take the trouble to learn from every available source what there is to know about the principles of electron movement. This is the field that is specialized in television—photocells, cathode-ray tubes, scanning devices, optical systems, etc.

Farnsworth Television

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Farnsworth Television

(Continued from page 69)

ried tricks in giving long-distance and depth effects. Lieutenant W. A. Eddy, designer of the toy-sized acts, did not want to use a variety of tricks in his real-life-sized facsimile in the studio. But the large showings of the entire castle are from a picture of a model the illusion is effective over the air.

Lieutenant Eddy (U. S. N., retired) is a radio engineer and as well as scenic designer and producer. The combination of talent in the studio director resulted in a highly-developed performer staff at Wynnwood before test transmissions had begun. Eddy has recruited talent from Philadelphia and New York on the basis of school performances, in the new set so that they could be on hand when the starting television gun in the U. S. A. is fired. There are actors, musicians, dancers and other specialty performers on his talent roster. Also there are "cosmetics" and make-up experts. There are even composers writing special scores for the visual programs.

Wynnwood is twenty minutes from the Philadelphia business section by rail and arrangements will be made for trains to and from the control and terminal station by the new set in the studio in the near future.

Although the studio director, writer, producer and other personnel have been involved with television since the beginning, the firm has developed a pre-program type, whereby every tape is capable of giving sharp pictures on a large-screen television.

The Farnsworth firm intends to license manufacturers and not produce the equipment itself. (Farnsworth Television, Inc., has authorized Radio News to publish the copyrighted photographs and story diagram accompanying this article.)

QRD? QRDP?

(Continued from page 68)

for the good of radio technicians and radiohams, we have reprinted a few here and here are a few more which will be played up in accordance with the amount of comment we receive on them. Suggestion number one is to the effect that due to the advent of television sometime in the near future it wouldn't be a bad idea for radio technicians to acquire such equipment for their own use.

No estimate would be given at its approximate cost. The Farnsworth firm intends to license manufacturers and not produce the equipment itself. (Farnsworth Television, Inc., has authorized Radio News to publish the copyrighted photographs and story diagram accompanying this article.)