

Wanted: Young Men to Earn BIG MONEY in Television

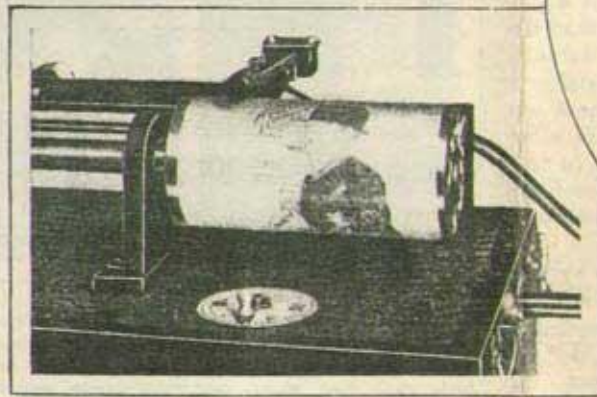
by

ROBERT FRANCIS

The growing industry of television is sounding its call for young men. Here is an article which tells how you can earn \$5,000 to \$20,000 a year in this new field.



Transmission of radio pictures requires services of trained men. Photo shows wireless photo received.



A close-up view of the reproducing cylinder, with picture just received. Electrical impulses coming over radio operate pen, which "draws" picture in less than four minutes.



C. Francis Jenkins, inventor, who has devoted most of his energies to making television available to the public.

HORACE GREELEY was a wise and sanguine man. Long before the golden West was anything but a riot of natural beauty and a buried treasure of national wealth, he said, "Young man, go west and grow up with the country." Those young men who heeded his words lived to learn the value of his advice.

If Greeley were alive today he would undoubtedly be saying: "Young man, get into television and grow up with this new science." Although the writer is by no means impudent or conceited enough to compare himself with so great a figure as Greeley,

he is giving the same advice.

When radio first engaged the attentions of the writer, code coming over it sounded like a match being struck on the cellar wall—it was raw and crude. Yet a great industry grew out of these raucous sounds.

In 1920 another industry was founded on the old one; broadcasting came into its own and the pioneers of the "wireless" days, many of them old friends and associates of the writer's, just naturally fell into the big jobs. They were prepared and they are still working today at salaries ranging anywhere from \$5,000 to \$25,000 a year. They were yesterday's opportunity seekers, and today they are reaping the profits.

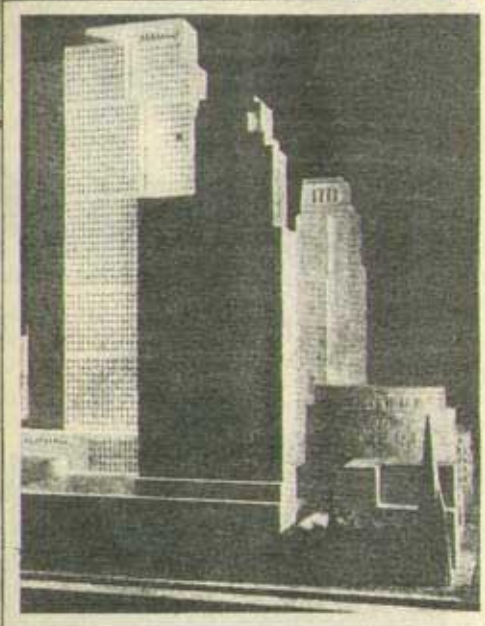
Now the third child of radio has been born: television. It is a more robust, more



Thorough training is to be recommended for young men aspiring to a career in television. The photo above shows students learning to adjust and operate a television camera and scanning unit.

promising infant than the other two. It is making bigger promises, it foreshadows still greater things because it appeals to a more important human sense, the sense of sight. We depend upon our eyes far more than we depend upon our ears and the writer dares to predict that this fact will make television a billion dollar industry within the next ten years. Indeed he is glad that he is alive and in a position to urge young men to cast their lot with an industry that has such an almost indescribably beautiful, romantic and fascinating future.

It is strange that so many people believe that television is coming and so few KNOW THAT IT IS HERE. Already young men are receiving as high as \$10,000 a year designing and perfecting television equipment. As young as the science is, we already have no less than eight television stations supplying regular programs. The \$250,000,000 Radio City which is being built in New York City will alone have seven television studios that will be in operation in a little over two years. Strange that so many people only think that television is on the way. Young men who think the same way will wake up one day to find that many of the really big opportuni-



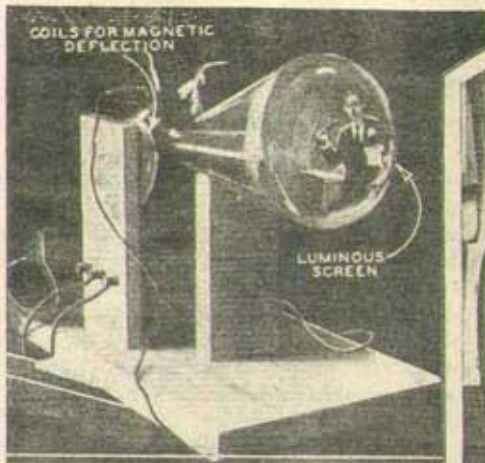
A model of the \$250,000,000 radio city which is being built in New York. It will house seven television stations that will be in operation in a little over two years, requiring many experts.

ties have slipped through their fingers.

One might think that a device capable of transmitting living images over the ether would of necessity be a most complicated and inextricable piece of mechanism. Indeed, the writer has talked to several young men who have thought that television was utterly beyond their intelligence. They insisted upon believing that such a wondrous result

Modern Mechanics and

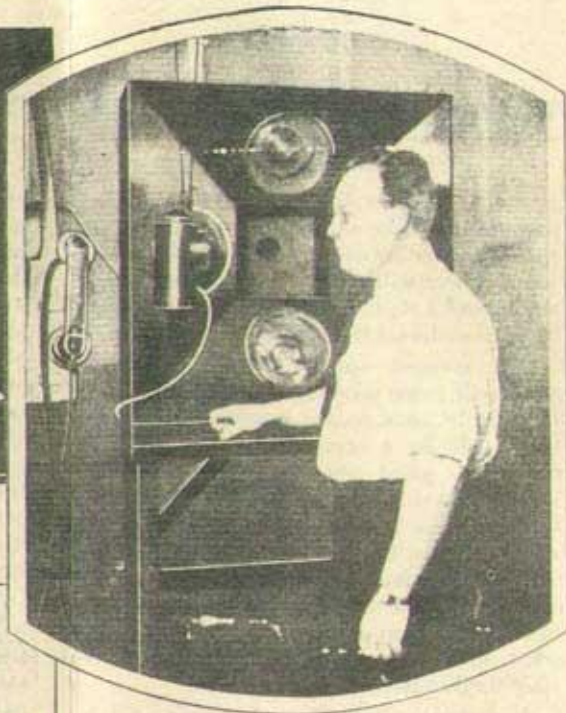
First National Television, Inc., are owners of Television Station W9XAL, which operates on a federally assigned frequency of 2250 kilocycles with 500 watts power. The activities of "First National" are divided into three operating divisions. 1) Broadcasting; 2) Research and Development; 3) Training.



Having no moving parts, this cathode ray tube will play important part in future home television receivers.



Television entertainment is brought into the home with new kit set, shown above, which has specially designed phonic motor for synchronization.



Television engineers will require many trained assistants. Above photo shows Merrill Trainer, assistant to Dr. E. F. W. Alexanderson in research and development, before television camera.

could be brought about only by a mechanism so intricate and delicate as to defy the average intelligence. Nothing could be farther from the truth. Television equipment, contrary to current popular opinion, is amazingly simple and its principles are just as easy to learn as are the principles of radio or mechanical engineering.

Television will need practically the same complement of men as does broadcasting. It will have to have first its technicians, who will be, by far and wide, the most important part of the personnel. It will be these men who will not only design the necessary equipment, but who will supervise its operation as well.

Naturally the full-fledged designing engineer will be a high salaried man capable of

earning from \$5,000 to \$20,000 a year depending upon the corporation he is working for and his responsibilities. He shall have to have a firm foundation in radio engineering, he shall have to know photo-electricity and have a rather sound knowledge of optics as well. Not only this, but he shall have to have expert knowledge of sound broadcasting, too, for our television images of the immediate future will talk to us. This is quite a large order indeed but not so large when one thinks of the size of the reward in store for the men who can successfully meet the requirements. Such men will sit upon the thrones of the new industry.

Next in importance, we come to the operating engineers—the men who will keep the television wheels turning free from the proverbial monkey-wrenches. Salaries in this work will range from \$2,500 to \$8,000 a year, depending largely upon the size and importance of the stations being attended. Of course, there will be a chief operating en-

(Continued on page 192)

Students of the Training Division are extended full facilities of the other two divisions. Students gain actual experience in the operation of the Broadcasting Station and the Research and Development laboratories are used for technical instruction purposes.

Wanted: Young Men in Television

(Continued from page 102)

gineer as well as several assistants in each transmitter. The salaries for assistants may run anywhere between \$2,000 and \$5,000 per year. There will also be the usual staff in the studio and a studio director whose job it will be to co-ordinate the various departments.

The greatest opportunities in this new work will come no doubt in the manufacturing of television receiving equipment. Here there will be a crying need for designing engineers, plant engineers, inspectors, research physicists, assistant engineers and foremen. As a matter of fact, it must be admitted that the field of transmission, although lucrative, will be more or less limited, and that the larger opportunities will lie in the actual production of receiving equipment, for America will eventually need over 15,000,000 pieces of receivers.

A designing television engineer will be worth \$10,000 yearly and his assistant will be worth half of that sum. A production engineer will be worth anywhere from \$5,000 to \$8,000 a year while inspectors can demand at least \$3,500 to \$5,000 a year. These salaries compare with the salaries that are today being received by men holding similar positions in the radio broadcasting industry. There is no reason to believe why they should not hold or even be improved upon in television.

A few days before the writer prepared this manuscript for *MODERN MECHANICS AND INVENTIONS*, he talked to a very successful young radio service man who was quite thrilled over the fact that he had just made his first call to service a television receiver owned by a prominent banker in town. Although he got five dollars for the call, this did not impress him half as much as the fact that it was his first experience, and, incidentally, an experience that he had prepared for by actual study. "Someday," he said, "I'll be making nothing but television calls."

He was right and he was sensible enough to be preparing himself now. Although he is now making on the average of \$4,000 a year, he will be able to double that amount within the next few years, for the radio television service man is going to be very much in demand. When a radio receiver goes "hay-wire" today, people are very anxious to get their "radio hearing" back, but wait until they lose their "radio seeing!"

Wanted: Young Men in Television

Already there is an urgent need for specialization in television. It has three very important associated sciences upon which it largely depends. As a matter of fact, take these sciences away and there is nothing but pure radio left. We refer to the science of photo-electricity, the science of the discharge of electricity through gases and the science of optics. Images are caused to modulate a radio wave through the medium of some sort of photo-electric device, usually a vacuum type photo-electric cell. Better cells are needed and television must turn to the experts and specialists in this science for them. It is the photo-electric cell that takes on the function of "light microphone."

The "loudspeaker" in a television receiver will take the form of a tube, the light from which can be modulated by the impulses making up the picture. This tube or lamp will depend for its operation upon the discharge of electricity through certain gases like neon or better yet, argon. An ordinary electric light cannot be used because it is far too sluggish in its action and too much current is necessary. Then, too, we must look forward to the day when television receivers will be operated by cathode ray tubes and the successful development of such an instrument lies entirely in the hands of men who understand the discharge of electricity through gases. Even today there is a million dollars waiting for anybody who can turn this trick.

The optical expert is very badly needed in television today. The engineers who are struggling with the new problems of this infant science, lean heavily upon men who have mastered the science of optics. The services of men who have specialized in this work will be in great demand for many years to come.

Within a few years time, television cameras will be used to cover national events just as today such events are covered by sound microphones and announcers. That will mean plenty of travel for the men whose job it will be to take care of the portable equipment. It will not only mean travel but big pay as well for these men will be extremely important, inasmuch as program success or failure shall lie largely in their hands.

And so runs the story of television so full of promise and reward for those who will prepare for its fascinating opportunities now.