

the East—letters from Montreal, the Mississippi valley, Georgia, Florida, New Orleans, and many points nearer Washington. Yet all the little station had to offer were these simple silhouette pictures showing a little girl bouncing a big ball, a darky chasing a synthetic chicken, or a juggler in action.

Later Dr. Jenkins' efforts were made the basis of a large television corporation. Much stock was sold. Capable engineers were put to work. Most of the efforts were aimed at demonstrations to interest stock salesmen and brokers and ultimate investors, primarily. Tens of thousands of dollars were spent for a single demonstration. A whole room was packed with costly and intricate pickup, amplifier and allied equipment so that a screen-sized picture could be reproduced for a stock-minded audience. Nevertheless . . .

This organization did go on the air with the first television station in the New York metropolitan area, W2XCR in Jersey City. Unfortunately, its several kilowatts of transmitting energy never got much beyond the immediate vicinity. The peculiarities of television transmission were still a mystery.

Later, through an affiliated company, a second station was established at Passaic, N. J., W2XCD. For a time I had charge of the programs for that station. My assistants and I scoured the Gay White Way in search of hungry actors—hungry for publicity and often for a meal. Our "lizzie" made regular round trips between New York and Passaic, bringing talent back and forth. The station was on the air six evenings a week, with scheduled programs featured in the radio sections of newspapers. We subscribed to a non-theatrical film exchange for a steady flow of film subjects. Later came a more convenient setup on Fifth Avenue, New York City, with a sound tieup through a regular broadcasting station, WGBS.

With many kilowatts of power, plus a good deal of advanced engineering, the later stations reached out an amazing distance. Our video signals were around 100 meters, rather than the very short waves used today, which made for a pretty broad coverage. Fan mail came in from Canada, the Middle West, the South. Hundreds of letters were received each week. A sound channel immediately below the sound broadcast band, or around 192 meters, made it possible for any standard broadcast set to be used in tuning in the sound counterpart of our visual programs, for the sight-and-sound entertainment. Later came the WGBS standard broadcast combination.

Thousands of amateurs and experimenters went to the trouble and expense of building their own television receivers. They had little synchronizing difficulty when operating with synchronous AC motors on the same power supply as our transmitter. Later, our engineers developed a neat
(Further growth on page 48)

The VIDEO Reporter

by W. C. DORF

THE lid comes off television with the opening of the World's Fair April 30th, and the announced plans of NBC to start a regular telecasting schedule. Is this to be the real McCoy or just a splash, a series of ripples and then all's quiet on the television front for several more months? It is the opinion of this column that it will be the beginning of a new era in radio. True, its expansion will be slow, which will in itself be a healthy sign. The general radio fan may turn out to be somewhat of a cynic, hesitant to extend due allowances to the art for finding the proper answers to the many difficult problems that still face television. Radio fans (not all, but a great many of them), have become so accustomed to accepting the numerous advances in radio over the last 15 years, that they may look for a finished article. It is a finished product as far as transmission and reception is concerned, but what about program set-up, who pays the bill, coverage, etc.?

The pessimists will have to admit that television has never before made such worthwhile progress, such impressive strides as it has in the last five years. To recount only a few, review the advancements in cathode-ray tubes, the iconoscope or television camera, transmission equipment and technique, television receivers, the new u.h.f. tubes for the receivers, special antennas both for transmission and reception, and so on. Just over the last year there has been a notable improvement in the definition and detail of the images as received on a modern telereceiver. What does the future hold in store for television? Jules Verne or his brother might answer this question.

However the public will not have to wait.

Philco Joins Up

PHILCO RADIO AND TELEVISION CORP. recently demonstrated in New York City, a portable television transmitter weighing only 450 pounds. It is designed to be rolled in or outdoors by a couple of men and can be used to televise spot news, athletic events or a studio program. At this demonstration the new Philco tele-receivers using a 5 inch screen were also shown. The sets are to be ready and on the market about May 1st. This column will have the complete data on the new line in the next issue.

New Producer for NBC Tele Staff

ANTICIPATING the beginning of a regular television service for the New York City area in April, the National Broadcasting Company today added Thomas L. Riley, one of radio's well known producers of dramatic shows, to the NBC television program staff at Radio City. Riley brings to television a wide experience in sound broadcasting, a brief newspaper record and experience in the theater.

The latest addition to the Radio City television staff follows the announcement that Max

Gordon, noted Broadway producer, will advise and assist NBC in the production of television programs. A statement issued at the time said that Mr. Gordon had agreed to accept the appointment because "he feels that television offers the entire field of the theatre's vast possibilities."

"I hope to prove to theatrical people," said Mr. Gordon, "that television is the greatest supplementary medium for their abilities. It cannot hurt the theatre. In fact it will help and I am anxious to complete plans for our first television program so that I can invite the leading personalities of the theatres to see it. I am sure that it will convince everybody that my enthusiasm for television is justified."

Thomas H. Hutchinson, NBC director of television programs, plans to put several of his more ambitious program items into rehearsal at an early date so as to familiarize the production staff with the numerous physical changes in studio set-up now being completed at Radio City.

Announces

Television Antenna

THE Andrea Radio Corp. introduces a new television antenna kit. It is called the *Teleceptor* and is featured as lightweight, easily assembled and mounted. Supported on 3½ ft. arms, the *Teleceptor* rods are mounted on a coupler unit of "Climate Sealed" design which protects the terminals from rain and carbon smoke deposits. The mast is of two 4-ft. jointed sections. Additional sections are available if extra height is required. 75 ft. of special television lead-in cable are supplied, together with insulators and accessories. The range of the little transmitter is a bit over 175 feet, but the definition of the picture is excellent.



Philco demonstrates its new, wholly portable television transmitter.

5 Inch Tele-Tube for Small Cabinets

A NEW "Stubby" 5-inch cathode-ray television tube incorporating several new features has been announced by the National Union Radio Corporation. The latest addition to the Videotron family, type number 1805-P4, is a streamlined, compact affair measuring 13-inches in length—3½ inches less than earlier designed units with the same size screen.

The 5-inch *Stubby* offers especial advantages for adaptation to small cabinets. Electrostatic deflection is utilized and images are reproduced in black and white.

Amos 'n' Andy's Big Experience

AMOS 'N' ANDY, in blackface makeup, were the subjects of an experimental television pickup at the grounds of the New York World's Fair 1939 on February 27, the day the famous NBC entertainers broadcast their half-hour description of the big show's wonders.

The experiment marks two more "firsts" for Amos 'n' Andy—the first television experiment with a commercial program to come from the World's Fair grounds and the first time for the
(More video developments on page 49)

Video Reporter
(Continued from page 10)

team ever to face a television camera. Grover A. Whalen, president of the New York World's Fair 1939, took part in the television experiment as well as the broadcast from the fair grounds, when he pointed out the sights to the visitors from a mythical Harlem.

Tele-Casts

THE Farnsworth Radio & Television Corp. plans to take over the factories of the Caphart company at Fort Wayne, Ind., and the U. S. Radio & Television Company at Marion, Ind., as well as the laboratories of the former Farnsworth organization at Philadelphia.

E. A. Nicholas, former head of the RCA license division, will head the new company as president, and Philo Farnsworth will be vice-president in charge of research. Ray Cummings, for years in charge of transmitter engineering and design for General Electric and RCA, will be assistant vice-president. The new Farnsworth corporation plans to manufacture television receivers and transmitters under the Farnsworth patents.

Allen D. DuMont Labs, has an elaborate lithographed two-color 2½x3½ foot wall chart showing a large cross-section view of a cathode ray tube with lettered components and corresponding explanatory notes. A dozen typical screen patterns with brief explanations, cover the various broad applications of the tube. The chart is particularly applicable for use in classrooms, and servicemen's gatherings. There is a charge of 50 cents for the chart and for additional information write to the above company, Passaic, N. J. This same company have just printed a new 1939 catalog on cathode ray tubes for oscillograph and television purposes, that can be had for the asking.

Television reproduction was not very flattering to Gov. Lehman, Mayor LaGuardia, and District Attorney Dewey at the annual dinner of the Inner Circle, New York's political writers association, recently held at the Waldorf Astoria. Probably the lighting or some technical detail was out of step. This is certainly excusable considering the fine tele demonstrations which have taken place in the last month.

The radio parts industry looks forward with a great deal of optimism to television's official bow at the end of this month. A television receiver consists of a great many parts, i.e. ten or more controls, numerous resistors and condensers and other parts, all of which is good news to the industry and likewise to the radio parts jobber.

Prof. H. H. Sheldon of New York University has just started a fifteen week lecture course in television.

Andrea Receiver
(Continued from page 24)

because, once adjusted, they need no further attention.

The front panel carries the loud-speaker. This can be separated from the chassis by pulling out a plug which fits into a small socket on the chassis.

From the video and sound carriers included in a 6-mc. television channel, a 6J5 oscillator tube produces the separate video and i.f. frequencies. The video i.f. is fed through two wide-band amplifiers using 1852 tubes, into a 6H6 second detector and synchronizing clipper. Next comes the 6V6G amplifier which controls the brightness of the spot in the picture tube. The clipper portion of the 6H6 feeds one 1852 sync. separator, the output of which goes to two 6N7 deflection oscillators (vertical and horizontal). Each of these feeds a 6F8G push-pull deflection amplifier, connected in turn to the picture tube.

The 1852 sound i.f. amplifier goes

into a 6SQ7 second detector on AVC, then from a 6V6G amplifier in to the loudspeaker. Voltages for the vacuum tubes and the picture tubes are supplied by a 5V4G and 879 rectifier tube.

The Teleceptor television antenna is constructed of a two-piece mast, 8 ft. high, carrying at the top a wooden block which supports two lateral wooden arms, and serves as a mounting for the Telecoupler. Brass rods, constituting the di-pole, are fastened to the Telecoupler, and are braced by insulators on the wooden arms. These arms have been found essential not to brace the brass rods, but to keep them from whipping around in the wind. This arrangement may not be as pretty as the unsupported rods, but it does eliminate any tendency for the wind to cause a modulation of the received images.

The Telecoupler of porcelain, is sealed against the weather and the accumulation of carbon soot deposits. From this unit, a special twisted pair lead is brought down to the receiving set.

It is easy to mount this antenna, for the complete Teleceptor is so light that it can be held at arm's length. Several mounting devices are supplied, to take care of all contingencies.

Generally, the Teleceptor should be mounted as high as possible, for the gain in signal strength more than offsets the loss due to increasing the length of the lead-in. Best reception is generally obtained with the rods at right angles to the line of reception. If reflections are received, they can be eliminated usually by swinging the rods until the reflections disappear.

-30-

Andrea

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