

Looking-in on AMERICAN TELEVISION

by

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an

Enthusiastic

Television

Amateur

THE steady development of television during the last five years owes much to its pioneers on both sides of the Atlantic. In this comparatively short time, Baird in Great Britain, and Jenkins in the United States, have accomplished much. The former first demonstrated television on January 27, 1926, and on March 31, 1930, regular television broadcasts were commenced from the London station.

In the United States Jenkins, as early as 1925, had broadcast and received silhouette movies, but the first official demonstration of television in the United States did not occur until April 7, 1927, when the Bell Laboratories in New York City saw and heard a programme from their station W3XN, situated at Whippany, New Jersey. Following this, W2XI—WGY broadcast, early in 1928, studio scenes which were picked up successfully on a number of home television receivers in Schenectady, while in May of that year WGY began broadcasting television signals as a part of its daily programme. This was, however, later discontinued.

The pioneer American television station W3XK is located at the Jenkins' Laboratories in Washington, and has been working on a regular schedule since July 2, 1928. On that date it commenced to broadcast radio movies on 46.7 metres every Monday, Wednesday and Friday night from 8 to 9 p.m.

During the latter part of 1928, in addition to the two stations previously mentioned, others in Pittsburg, New York, Boston and Chicago began experimenting. Almost at the same time WGY broadcast the first tele-

vision drama from its studio, and since the pioneer broadcasts of that year steady progress has been made in American television. To-day there are at least seven such stations on regular schedule, all operating between 100 and 150 metres. They are assigned to four definite bands; and each station may transmit over a band 100 k.c. wide.

Silhouette and half-tone movies and studio scenes are regularly broadcast from the majority. Frequently these transmissions are synchronised with sound broadcast from near-by stations.

Among the leaders in the American television world are the Bell Laboratories of New York City under Dr. Ives, and the General Electric Laboratories at Schenectady under Dr. Alexander Son. The latter company on May 22, 1930, gave a successful public demonstration of television on a screen six feet square at one of the Schenectady theatres.

A TYPICAL evening's broadcast from the Jenkins' station, W3XK, consists of about a dozen short silhouette movies of various types, some of which are very amusing. To enable lookers-in to tune in their receivers properly the first fifteen minutes of each evening's transmission consists of a little girl bouncing a ball.

There are as yet few commercial televisors on the market. One company sells two models, one at about 17 dols. (£3/10/-) and another at about 82 dols. (£16/10/-). A special short-wave set with resistance coupled audio-amplification is sold for about 36 dollars (£7/5/-) to be used in connection with the televisor. Home experimenters, however, can obtain from the Jenkins' Laboratories, at a cost of about 1½ dollars, a kit on which good results may be obtained. It is estimated that there are at least 10,000 lookers-in in the United States at the present time.

The home-built equipment used by the writer comprises a short-wave detector with three stages of resistance coupled audio-amplification. The last valve, in the plate of circuit of which is incorporated a neon lamp, has 300 volts on the plate. A Jenkins' kit is used for the televisor.

IN front of the neon lamp is a 12-inch scanning disc of 48 holes, which scan from left to right and from top to bottom.

This disc is connected by a friction drive to a motor running at a speed of 900 r.p.m. Synchronisation is controlled entirely by the operator, but after a little practice one is able to keep the pictures properly framed and synchronised.

One soon learns to tune. When a station is tuned in and one looks in little black figures are seen, often with surprising detail, on a pinkish background, about one-inch square. Static, together with various other types of interference are easily recognised by their occasional characteristic distortion of the image. The research laboratories have devised a reception system far ahead of this, but it is as yet too expensive and complicated for the home experimenter.

In a field so new as television there is much to be done. Some goals which have yet to be attained are: Larger pictures, automatic synchronisation, better detail, high amplification without distortion, and a television set of reasonable price that can be used conveniently in the home. But television is still in its early stages of development, and experimenters in Great Britain, the United States, and other parts of the world are not discouraged by the obstacles which must be overcome. They are progressing steadily, and are confident of making important advances in the years that lie ahead. Five years ago television was a dream; to-day it is a reality; in ten years it will be found in millions of homes.

The bottle-like object shown in the photo. on page 1 is a cathode ray tube which forms the receiver of the new type (*Contd. on p 2.*)

