

30/2
 "RADIOLYMPIA"

THE sixteenth national radio exhibition at Olympia, London, now generally known as "Radiolympia", was opened on September 28 by Mr. Herbert Morrison, Lord President of the Council. The exhibition, which remained open until October 8, was organised by the Radio Industry Council, and served primarily to show the present state of development and manufacture of broadcasting sets and television receivers. The range and variety of receivers now available reflects the advanced and stable position of the television service of the B.B.C., and shows that the industry is ready to meet the demand that will be created in the Midlands when the Sutton Coldfield transmitting station is opened next December. Direct-viewing receivers with cathode-ray tubes ranging in size from nine to fifteen inches in diameter are the most popular type, but several firms displayed models of the projection type giving a larger picture on a flat screen. While, as has been announced officially, the present standards for transmitting black-and-white pictures will remain in Great Britain for several years, an interesting demonstration of transmitting and receiving pictures in colour was given by one firm. The method comprises the use of synchronized, rotating colour filters in both camera and receiver giving fifty pictures per second in the three primary colours successively. Although it may be many years before colour television broadcasting becomes a feasible proposition, it is possible that such a system as that shown would have some application on a closed-circuit network for educational, medical or industrial purposes. A feature of particular interest to the visitor interested in television was the installation in Olympia of a complete television theatre. This structure included a stage 90 ft. by 45 ft., probably the largest television stage in the world; and the theatre was used daily during the exhibition for the provision of the normal B.B.C. television service programme.

Apart from completed sets, many of the stands displayed the multifarious types of components that are necessary in modern radio receivers, and including particularly the various designs of aerial system that are suitable for television reception. One firm has also introduced an extension unit, in the form of a remote viewing screen which may be connected to a television receiver. A large variety of testing and measuring instruments were shown, and some of these, such as Geiger counters, had applications in the general electronics rather than in the radio field.

But beyond all this excellent display of radio equipment, several government departments and the defence Services provided exhibits and demonstrations. The Services showed the types of signals and radar equipment, in both fixed and mobile forms, used for their special military applications; while the Ministry of Supply had an extensive display of some of the recent developments in radio and radar techniques. One of the most popular exhibits was that of the Ministry of Civil Aviation, which comprised a working model of the main runway at London Airport, in which visitors could see and hear a miniature aeroplane being guided into position for landing by the airport controller, who was constantly observing the position of the craft on his radar instruments and instructing the pilot by radio-telephony.

An innovation at the exhibition this year was the stand of the Department of Scientific and Industrial

Research, illustrating two examples of its work in the field of fundamental radio research. The first was devoted to equipment developed in the Radio Division of the National Physical Laboratory for measuring and recording by photography the characteristics of the main regions of the ionosphere by which long-distance radio transmission is effected. These photographic records are made automatically every hour at the Radio Research Station, Slough, and at the sub-stations of the Department at Frasersburgh in Scotland, and in the Falkland Islands and Singapore. Nearly fifty similar stations are in operation in other countries, and the results of the observations are exchanged. From these results, predictions of the best frequencies to use for broadcasting and communication are prepared six months in advance and issued to the General Post Office, Cable and Wireless, Ltd., the B.B.C. and other authorities in Britain and overseas. The second exhibit on this stand was a joint effort of the Department of Scientific and Industrial Research and the Meteorological Office, illustrating the manner in which the location of the sources of atmospheric is used as an aid to weather forecasting. There again, the equipment shown—a cathode-ray direction finder—was developed in the National Physical Laboratory, and a network of four direction-finding stations in Great Britain and Northern Ireland is used by the Meteorological Office for making hourly visual observations of the storm conditions prevailing over an area of a radius of some 2,000 km. For the demonstrations at Olympia, the stand was connected to the central controlling station at Dunstable during operational runs, so that the visitors could hear the observations being taken, and then in an adjoining section could see them being plotted on a chart, on which the positions of the actual storm centres prevailing at the time were displayed.

As the responsible authority controlling all forms of telecommunication in Great Britain, the General Post Office had a large and representative stand, giving in many cases working demonstrations of some of its activities. A model of the latest cable-laying and repair ship, and a section of a long-distance telephone cable were shown. In another section a radio coast station was reproduced, and visitors could see how communication with ships is established and distress calls handled. Of more direct interest to most people was a demonstration of the consequences of starting a '999' call on the telephone system. The part played by the Post Office in the extension of the television service from London to Birmingham was illustrated, including a demonstration of relaying a television picture over a short centimetre-wave radio link. Finally, and by no means least important, a section was devoted to demonstrations of the various causes of 'noise' interference with radio and television reception and the manner in which these may be avoided by the fitting of appropriate suppressor units in the electrical circuits at the source.

Altogether, "Radiolympia" provided an excellent demonstration of the enterprise and liveliness of the radio industry in Great Britain, and of the advances which are taking place in the science and practice of radio technique. It is gratifying to observe that many overseas visitors went to the exhibition; some of these no doubt were attracted by the very interesting and well-produced booklet entitled "British Radio for the World" which was produced by the Radio Industry Council and distributed to all parts of the world last July.