

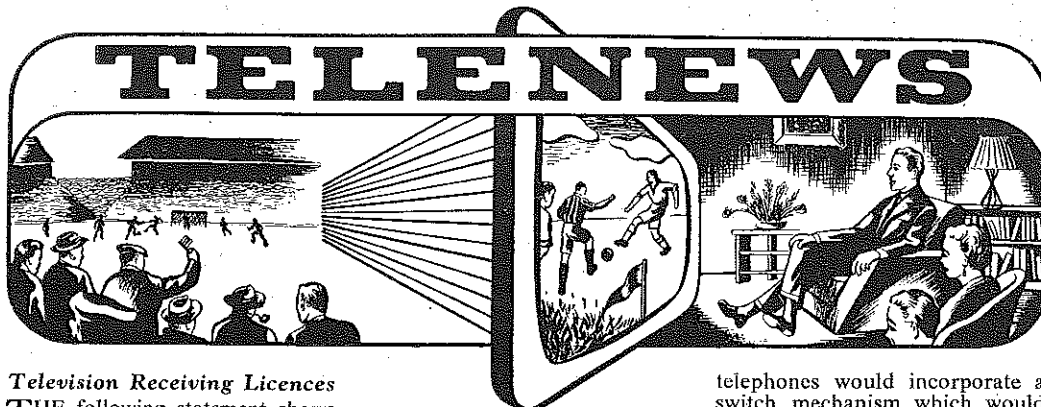
mode rises to 4kV, which pulse rating (5.5kV) of 6CD6G. Methods of driving the grid but this one allows the control during fly-back, may have a tendency to mod, and to make the as shown by the appearance of the picture. may be provided by the coatings of the cathode about 1,000pF. It is in with the EHT capacitor ment of the EHT diode

auto-transformer arrangement of nearly 3kV appears the heater of the booster large heater current is 6.3 volt line. Although cathodes insulated to excess of this, a cathode is likely if a break- here, and this, of course, current before the tele- heats the small wired-in diode filament should be when the picture is of brightness. When the glow can be observed obtained when a similar 6.3 volt line supplying a small beam current, after voltage is permissible (nt.), but if grossly under- soon lose its emission.

currents at low voltages, e a better performance reverse resistance is much ctifiers are therefore more at high voltages. There mA pencil rectifiers (the be used in some circuits rectifiers, although their Pencil rectifiers of the ble for picture tube sup- rectifier of this type has under a reverse potential A at 1.6kV, so the back arable when it is used (as 7 pulses. Metal rectifiers citance, and are unsuited

n adding a regulator to a supply without affecting e. One method has been value in a variable loss il EHT resistors are also ising EHT voltages. These at the working voltage e obtainable for voltages

(continued)



Television Receiving Licences

THE following statement shows the approximate number of Television Receiving Licences in force at the end of September, 1959, in respect of television receiving stations situated within the various Postal Regions of England, Wales, Scotland and Northern Ireland.

Region	Total
London Postal	1,738,816
Home Counties	1,271,422
Midland	1,497,050
North Eastern	1,590,012
North Western	1,320,231
South Western	798,916
Wales and Border Counties	578,890
Total England and Wales	8,795,337
Scotland	803,321
Northern Ireland	119,814
Grand Total	9,718,472

Developments in Electronics

IN his lecture at the 1959 Convention of the Brit.I.R.E. on "Television Engineering in Science, Industry and Broadcasting" earlier this year, Dr. Vladimir K. Zworykin looked ahead to ways in which electronics would play a part in three important, widely separated fields—Medicine, Transport and Public Affairs.

Electronics in Medicine.—The developments in electronics for medical research include the so-called radio pill for transmitting pressure variations from within the gastro-intestinal tract of a patient to an external radio receiver, and the use of "pace-maker pulses" to stimulate the muscles of the heart. The ultra-violet colour translating television microscope will find increasing use in the examination of tissue in biological research.

Electronics in Transport.—Road accidents are becoming increasingly serious in many countries and a system is being

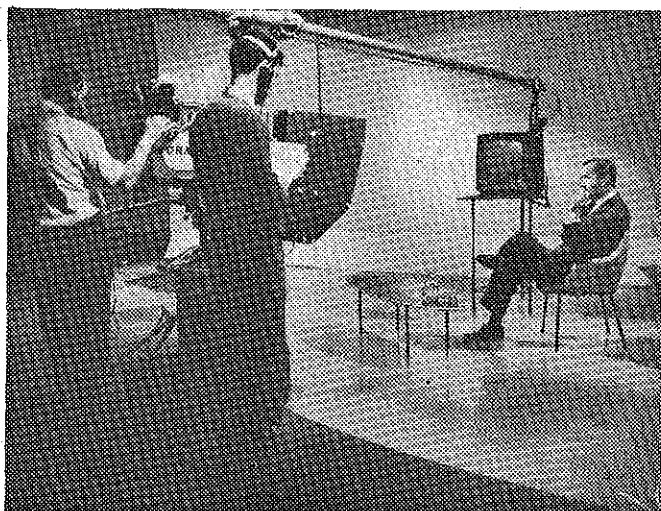
developed for the elimination of the human element in the control of traffic. A series of wire loops would be embedded in the highway, so that the movement of a vehicle over the loops produces electric signals. The signals can be used to actuate warning lights at the side of the road if there is traffic dangerously near in the same lane.

Electronics in Public Affairs.—Finally the use of the existing telephone system in conjunction with data handling equipment to record the opinion of all voters on issues of national importance. Individual

telephones would incorporate a switch mechanism which would be operated by the voter. At the end of the specified voting period interrogating pulses from the local telephone exchange would record his decision and the results of the counts of all exchanges would then be similarly transmitted to a central station.

Sweden's Radar Defence System

SWEDEN is to have an air defence system embodying new and secret automatic electronic techniques which, it is claimed, will make it far more effective than any other in existence today. It provides for



The American TV and radio commentator Edward R. Murrow gave the second of the Granada Lectures series on ITV recently. Murrow's subject was "Television and Politics." He said: "The eye of the camera should pursue the politician to the very limits of privacy and decency. When the politicians complain, as they have in several countries, that television turns their proceedings into a circus, it should be made clear that the circus was already there. "Television has merely demonstrated that not all the performers are well trained."

instantaneous action against enemy attack.

Although security forbids a detailed description, it can be said that the heart of the system is a very high speed computer which solves a large number of interception problems simultaneously and enables the defence weapons — fighters, guided missiles, and other anti-aircraft devices to be brought into action at precisely the right instant. Black-and-white and colour television and automatic information-dissemination techniques also play an important part in the system.

The Swedish Air Defence System has been evolved by scientists and engineers of Marconi's Wireless Telegraph Co. of England and their opposite numbers in the Swedish Air Force, working in the closest collaboration. The initial contracts for the design and supply of the electronic equipment, which are to the approximate value of £1,500,000, have been awarded to Marconi's via their Swedish associates Svenska Radioaktiebolaget.

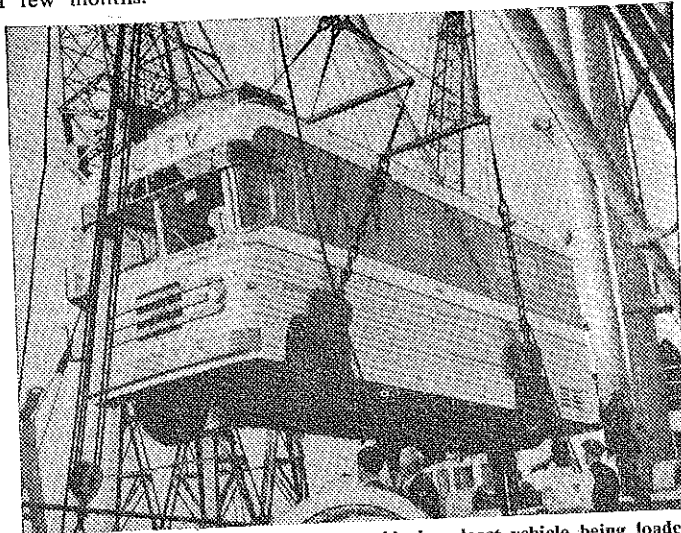
BBC's New Peterborough TV Station

WHEN the BBC's new television station near Peterborough was brought into service on Monday October 5th, viewers in the Peterborough area found that, as a result of the very much stronger signal which the new station was providing, Channel 5 as compared with the signal from Sutton Coldfield on Channel 4, receivers in some cases would not continue to function satisfactorily on Channel 4. This was not the fault of the receiver or of the transmission, but is due entirely to the strong local signal from the new station. The BBC recommend, therefore, that viewers should take advantage of the greatly improved reception from the new station by having receivers and aerials suitably adjusted by their radio dealer for reception on Channel 5.

Television in Nigeria

THE Western Nigerian House of Assembly has passed a bill establishing television and broadcasting services in the Western Region. Western Nigerian television will not only be the first television network in

Nigeria, but the first and only television network in Africa originating entire programme schedules. The first commercial radio network in Nigeria which will cover the entire Western Region will be inaugurated in a few months.



A Marconi three-camera television outside broadcast vehicle being loaded aboard M.V. "Port Montreal" at King George V Dock, London, en route for Hobart. The vehicle is for use at the Australian National Broadcasting station there, for which Marconi's have also supplied the transmitters and much of the studio equipment.

Presenting the bill, the Minister of Home and Mid-west Affairs, Chief Anthony Enahoro, told the House that although the television and broadcasting services were primarily intended to develop and expand the educational system of the Region, commercial advertising will be welcomed and the services will be run impartially. He also stated that the 1,000 television sets purchased by the Government were being installed in schools and hospitals throughout the two television areas centred on Ibadan and Abafon.

I.T.A. in South West England

THE I.T.A. has invited applications from groups wishing to become the programme contractor for the South West of England. The company appointed will be responsible for providing the programmes transmitted from the two new stations one of which will be near Axminster in Devon and the other at the edge of Bodmin Moor, near Liskeard in Cornwall. These stations are

expected to cover the whole of Somerset, Devon and Cornwall west of a line from Weymouth to Bridgwater with the exception of a narrow belt some ten miles in width along the north coast from Barnstaple to Bridgwater. The number of people

who will be within the service areas of the two stations is estimated to exceed a million.

TAM Surveys Ulster

FOR every 100 households receiving television in the Ulster ITV area, there are 83 with Band III (potential BBC and ITV) sets, reveals Television Audience Measurements Limited. During a recent survey TAM field workers visited 1,532 households chosen by random sample from the electoral register. Television sets in these homes were examined to determine their type and to assess the quality of reception on both channels. According to TAM there are 308,000 homes in the provisional reception area, and 109,000 of these are equipped for reception from the Black Mountain I.T.A. transmitter. An analysis of the size of households shows that whereas 65 per cent. of all households had three or more people living in them, no fewer than 79 per cent. of households with Band III are of this size.