

DESIGN FOR THE FUTURE

INSTRUMENTS for science and industry, for research and production; electronics applied to almost every sphere of human activity; automation devices which herald the age of the push-button factory—they all add up to the Instruments, Electronics and Automation Exhibition being held at Olympia from 16 to 25 April. This year Marconi Instruments are partnering English Electric and the English Electric Valve Company in the largest stand in the show.

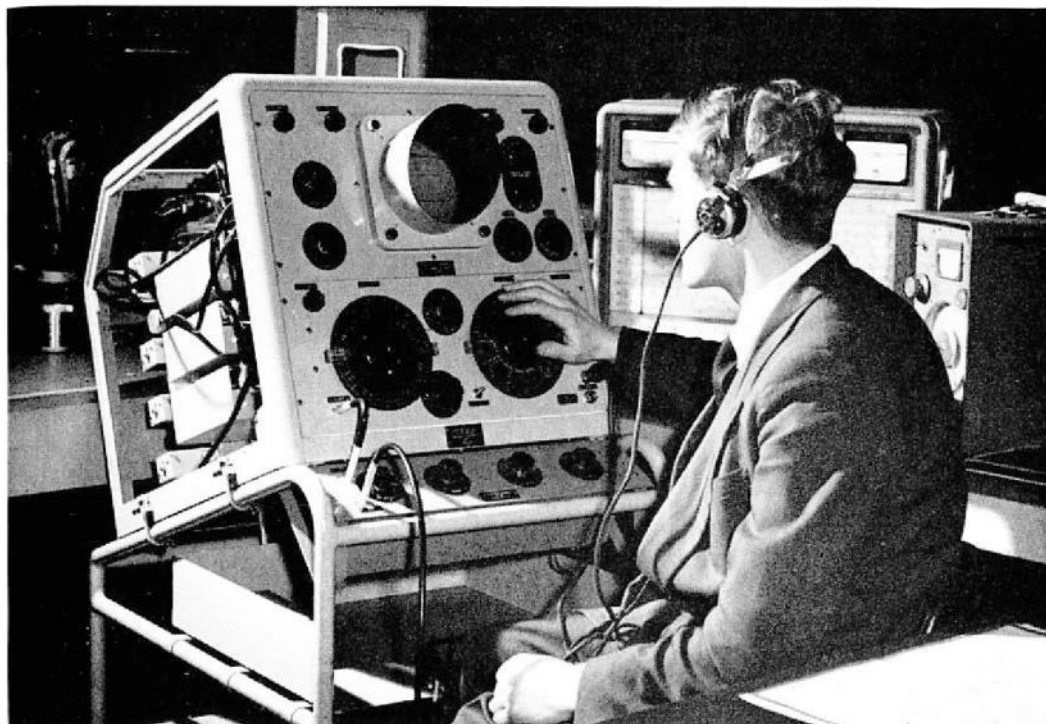
Here is a wonderful opportunity for industry to show Britain's technological

achievements to buyers from many countries. At the 1957 exhibition, eighty-one countries in all were represented; 53,000 visitors attended and even more are expected this year.

M.I. will be demonstrating sweeping advances in telecommunications measurement equipment and in industrial X-ray apparatus. The TF 1205 R.F. Power Meter, for example, is the first of its kind to be produced commercially in Britain. This equipment, which enables direct measurement of powers to be made at any frequency from D.C. to

Marconi Instruments' new engineering extension covers an area of 22,000 square feet. Here in the foreground of the picture is Mechanical Design Section





500 Mc/s, meets the needs of the ever-increasing number of transmitter operators who are working on higher powers and frequencies in the VHF and UHF bands.

Another British 'first' will also be in the M.I. display: a vacuum tube voltmeter incorporating a new type of valve which extends the frequency response to 1000 Mc/s on A.C. measurements. It is also probable that interest will be shown in the Television Transmitter Sideband Analyser OA 1241 which, in a matter of minutes, checks television transmitter performance to a standard not previously obtainable by any but laborious methods. Incidentally, this equipment has already been ordered by many of the world's television broadcasting organisations, and seems likely to become a standard maintenance unit.

These few examples of what world buyers will see on the M.I. stand are all in the range of standard test equipment. Equally interesting is the display of

ABOVE: The new L.F. Extension Unit for the OA 1094 H.F. Spectrum Analyser being tested by Roger Williams, Engineering Group A. The OA 1094, a G.P.O. design, is used on communications networks all over the world, including Canada, the U.S.A. and Australia

BELOW: The Print Room, an annexe to the Drawing Office, takes a detailed set of drawings or tracings and reproduces any quantity by a photographic method. The picture shows Bill Briginshaw working the Photocopier, assisted by Dick Barrington





new Systems Instrumentation—specialised equipments for H.F. point-to-point communications, for multichannel links, and for television. These have been designed in collaboration with M.W.T. engineers to meet the needs of the increasingly complex telecommunications industry.

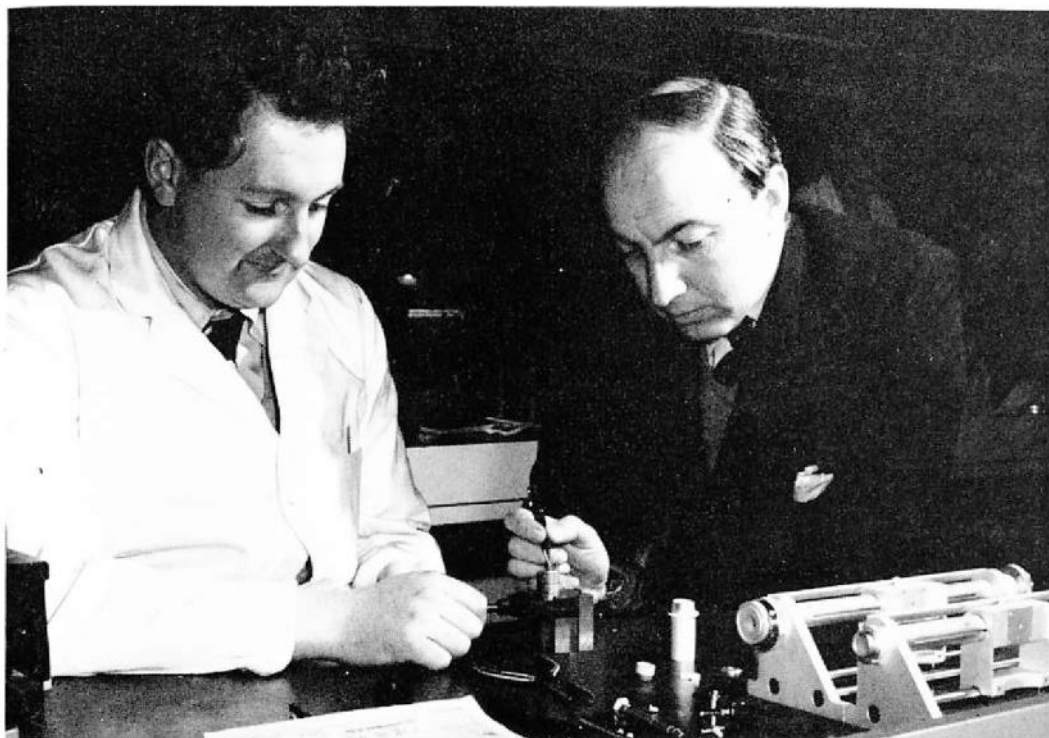
In the last few years, M.I.'s X-ray Division has made considerable progress in industrial X-ray equipment. Examples of the latest advances in this market will also be seen on the stand, including a Fluoroscopic and Radiographic Cabinet, which allows both visual and radiographic inspection of materials. This equipment has applications in many different industries, from testing electrical components to detecting foreign bodies in packaged and canned foods. A manufacturer of electric blankets in Salford, Manchester, is using it to check that elements and cables are correctly positioned in the finished article.

The M.I. stand shows that the Engineering Division at St. Albans is very much on its toes, keeping one step ahead in the race for world markets. Recently the Company opened a new engineering extension which provides greatly improved facilities for the design and development of its instruments and X-ray apparatus. The pictures on these

LEFT (from top to bottom): All sections of Engineering work together to ensure that the product matches up to the specification. Ken Porter and Jack Copeland, Model Shop, here work out a tricky point on a probe assembly for a co-axial oscillator with draughtsman Bill Rushton

The Model Shop, which provides attractive working conditions, has been equipped with a number of new machines, including centre lathes, vertical and horizontal mills, and bench drills. The Shop handles all the requirements of Engineering Division

The Library provides books and journals covering many fields of technology. Adjacent is a conference room



pages give some idea of the many and varied activities being carried out in the laboratories, the Drawing Office, and in the Model Shop, where the results of the engineers' calculations are brought to fruition.

Fine facilities, however, are of little purpose without qualified design teams backed by skilled craftsmen, and this emphasis on forward thinking and precision engineering is bringing its reward: sales of our products are increasing: last year was a record, and it is with the co-operation of commercial and production departments that M.I.'s engineers are maintaining, indeed, improving, the reputation of the Company throughout the world.

K. A. MCKENNA

RIGHT: Barrie Dey, Engineering Group A, checking the output of a Power Oscillator operating at 200 Mc/s, by means of the new TF 1205 R.F. Power Meter. Features of the TF 1205, which can handle up to 500 watts, are the oil cooling, and the small, portable meter, which caters for remote observation

ABOVE: M.I. have recently introduced a range of specialised test instruments for multichannel links. The equipment, which is the result of close collaboration between M.I.'s design engineers and M.W.T., includes the Field Slotted Line TF 1264, here being discussed by Peter Davis, M.I. Model Shop, and Norman White, Engineering Group C

