

COMPLETING THE SCOTTISH REGIONAL

In this special article our Northern Correspondent gives the latest news about the progress of the Scottish Regional Transmitter, and deals with the wave-lengths to be employed.

THE other day I met Mr. Tudsberry, the B.B.C. Civil Engineer, and as he had just come from Westerglen, near Falkirk, he was able to give me an account of progress in the construction of the new Scottish Regional station there.

Excellent progress was being made, he said. The erection of Scotland's Regional was proving an easier job than the building of North Regional, where the "nightmarish" climate of Moorside Edge had caused serious delays.

Choice of Wave-lengths.

At Westerglen work was going ahead speedily and the building was practically roofed in. They would start to install machinery in November. One mast was finished, and the other partly erected.

The date of the inauguration of transmissions is uncertain, but the B.B.C. states that it will be early next summer. The wave-lengths will be 288.5 metres for the Scottish National transmitter and 376.4 metres for the Scottish Regional.

The choice of wave-lengths is interesting for several reasons. I understand that 288.5 metres will remain the National common wave-length (used by such stations as Newcastle and Bournemouth).

Tuning-fork control apparatus to keep the Scottish National transmitter accurately on 288.5 metres will be installed, and because this is a common wave-length the range of the transmission (for all its 70 kilowatts of power) will be limited.

Station Separation.

The Scottish Regional transmitter will also be rated at 70 kilowatts. Its 376.4 metres wave-length is at present used by Glasgow. It is anticipated that when Scottish Regional is in full swing the Glasgow, Edinburgh, and Dundee stations will be scrapped, but Aberdeen will probably be retained.

The wave-length separation between the two Scottish high-power transmissions will be smaller than that at any other B.B.C. twin-programme station, and listeners in the Falkirk neighbourhood had better look to the selectivity of their sets.

How Many Kilocycles?

It is interesting to compare the separation in kilocycles:

Between London Regional and London National—306 kes.

Between North Regional and North National—369 kes.

Between Scottish Regional and Scottish National—243 kes.

Good progress has been made by the Marconi Company in the construction of the transmitters for the Scottish Regional station. One transmitter, in fact, was exhibited at the recent Faraday Exhibition in London as an example of the latest radio achievement.

Scottish Regional will truly be Britain's most up-to-date station, for although the design is similar to London Regional and North Regional it incorporates improvements, the result of experience in working the other regional stations.

The Falkirk Improvements.

At Brookmans Park and Moorside Edge, for instance, it has been found that the large windows in the walls of the transmitter hall cause a dazzle, which makes it difficult for the engineers to read the metres on the transmitters; so at Falkirk the walls

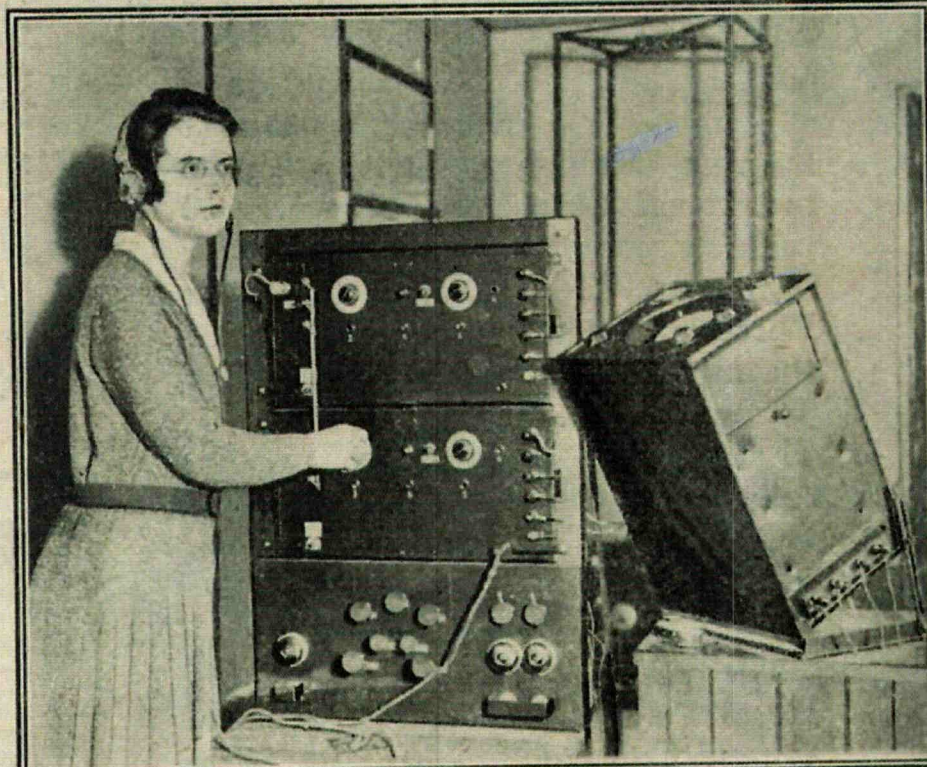
CONDENSER CONSIDERATIONS

Leakage and Simple Tests.

MOST of us have, at one time or another had a leaky-grid condenser in which the leak was not confined to the grid leak, but was partly provided by the condenser itself. At first you might think that this was rather a good idea, but it isn't.

The better way is to use a condense

LISTENING FOR RADIO ECHOES FROM SPACE



This is a scene at the Slough Radio Research Station, and shows Dr. Mary Taylor, who is seeking a mathematical formula which will explain Prof. Appleton's recently discovered echoes from space.

are being bricked-in and the transmitter hall will be lighted by a big skylight in the roof.

Another difference is that Falkirk will have only two masts. At Brookmans Park four masts support the two aerials; at Moorside Edge three masts do the same duty; but for Scotland the engineers have still further economised, by contriving a method of suspending the aerials on two masts.

Programme Arrangements.

Each will be 500 feet high and will weigh 40 tons. One is already finished and is a landmark for many miles around.

The chief purpose of this new high-power station, of course, is to give alternative pro-

above reproach and to employ a precise and constant amount of leak; then you know exactly what you are doing, whereas there is a leak in the condenser itself you may never be out of trouble.

You are often recommended to test condensers by means of a pair of 'phones—getting the click on discharging the condenser after it has been charged for varying lengths of time. But this method, although simple and convenient, is not always reliable. A better method is by means of a megger.

In these days, however, really reliable small fixed condensers of British make are so cheap that there is no excuse for using a foreign-made condenser giving the trouble mentioned above. J.H.T.R.