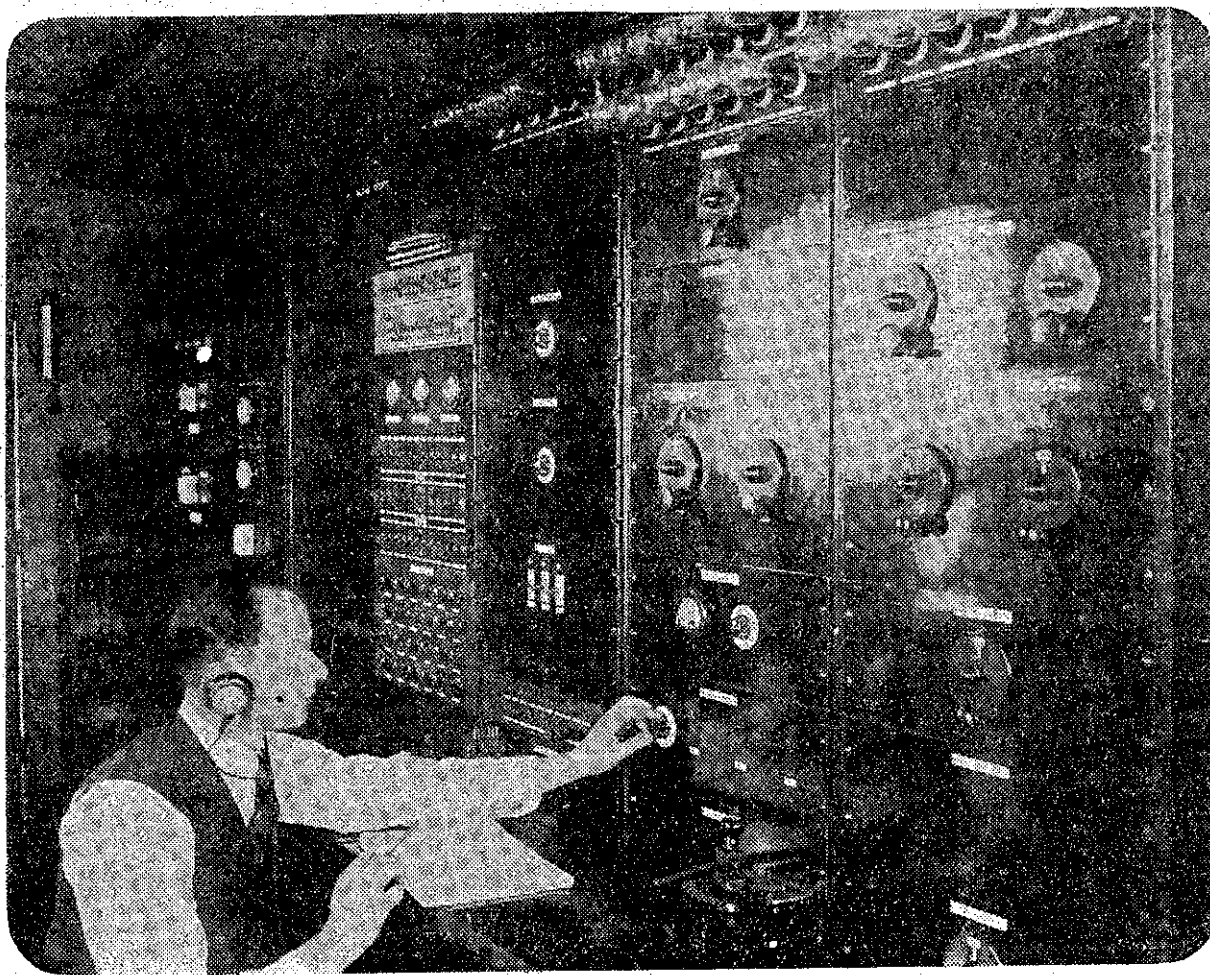




How the Empire Broadcasts Are Received

THE new Empire Station, GSD, which was officially inaugurated, on Monday evening, December 19, is now on a regular schedule, and the past week's transmissions have shown that on the technical side, at least, the service will be a success. The relays by 2YA of these transmissions have throughout been of high quality, and are, in fact, almost indistinguishable from direct reception. Signals are strong, with very little fading or gushing, and the noise level is low.

For the success of these relays, thanks are due largely to the P. and T. Department, who have loaned their commercial telephony receiver for the reception of the broadcasts. A brief description of this huge set, which employs no less than twenty-four valves, might be of interest.

It is located in a hut on the summit of Mount Crawford, Wellington. The site is almost an ideal one for reception as, although it is quite handy to the city, there are no tramway or electric light power lines nearby to cause interference. In the vicinity of the hut is an elaborate aerial system running roughly north and south, and suspended on three pairs of poles.

The greater portion of the hut's interior is taken up by the gigantic receiver shown in the photograph. A portion of the bank of batteries

A description of the P. & T. Department's receiving station, with its giant 24 valve receiving set, pictured above.

employed for operating the set may be seen on shelves against the rear wall. Batteries have been employed for power supply rather than the electric mains, chiefly because, should the mains supply fail, the receiver would be put out of action

and the service disrupted. This would be serious at any time, but especially so in the case of national emergency.

The use of so many valves has resulted in a certain amount of valve noise which, though scarcely noticeable, is still there. In an effort to reduce this to an absolute minimum, and to incorporate several more modern features, another set, using indirectly heated a.c. valves operated from the same power supply, is at present being built.

The system of "floating" batteries is used, or, in other words, while the set is in operation, the batteries are being charged from the mains. The charging rate can be adjusted to equal the drain taken by the valves, and so there is no load on the batteries. That this system is necessary can easily be seen when it is known that the filament current is just under 3 amps, while the plate current is about 70 milliamps. Should the charger be put out of action with the failure of the mains, however, there would be sufficient electricity stored in the batteries to keep the set operating for some hours.

The "B" supply is taken from 72 two-volt accumulators connected in series, giving when fully charged a total (Continued on page 24.)