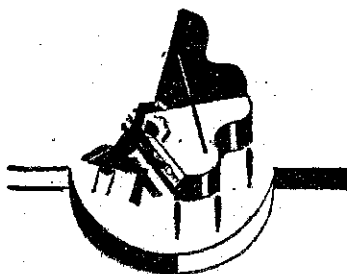


# Between Australia and Italy



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## POWERFUL STATION FOR NORWAY

### Trondhjem To Have New Radio Service

As a first step in the reorganisation of the Norwegian broadcasting system, which came under Government control on July 1, a new high-power broadcasting station is to be erected at Trondhjem to replace the existing low-powered station.

The order for the new station has been entrusted to Marconi's Wireless Telegraph Company, Ltd., and the equipment will be manufactured at the company's works at Chelmsford, Essex. The power of the transmitter is 20 kilowatts unmodulated aerial energy and modulation up to 100 per cent. is arranged. The transmitter will be adjustable to any wavelength between 200 and 545 metres; the working wavelength will be decided upon in accordance with the deliberations of the Lucerne Broadcasting Conference.

The design of the new transmitter will incorporate the latest developments in broadcasting technique, one of the most important of which is the "series modulation" system, developed with conspicuous success in the Marconi research laboratories. The application of this new method of modulation, which will also be incorporated in the new 100 kilowatt high-power broadcasting transmitter which the Marconi Company is building for the B.B.C. station at Droitwich, not only ensures a considerable simplification in transmitter design, but also provides lifelike and pure reproduction, due largely to the absence of iron-cored chokes or transformers which tend to introduce distortion. "Series modulation" ensures a high degree of linearity and a wide range of frequency response. Only one stage of modulated amplification is required, with a consequent reduction in harmonic distortion.

The Trondhjem transmitter is built in the form of a switchboard on which are mounted all the controls. Behind the board are the transmitting valves with their attendant circuits. A valve drive which ensures a high degree of constancy, to conform with the most stringent requirements of the international regulations relating to the stabilisation of transmission frequencies, is incorporated.

The masts of the existing station will be used, but the aerial, instead of leading straight into the transmitting house, will be connected to the output stage of the transmitter by means of a two-wire high frequency feeder to convey the energy from the transmitter to the aerial. The transfer of the modulated high frequency energy will take place by means of suitable coupling circuits, located in a small feeder house situated underneath the aerial.

AN attempt is to be made in Chile to introduce national broadcasting along the lines followed in other countries.