

" THE OTHER FELLOW'S STATION "

saw a great deal of service during the war. Although the owner makes no claim to originality for any of its components, he admits that it represents the fruition of a great deal of patient experimentation.

The major part of the apparatus—including the 7 ft. by 4 ft. cabinet which houses it—was bought directly or indirectly from the Disposals Board, although some of the units have been made by the North Eastern Instrument Company, to suit the somewhat exacting requirements of the owner.

The backboard on which the apparatus is mounted is of polished mahogany; and all the connections, which are of single 16 hard-drawn copper, are taken through ebonite collets to the back and are carefully arranged so as to avoid undesirable capacity effects.

There are two tuners, one for short waves and the other for general service. The former is a Mark III with a tuned reaction circuit ingeniously fitted into the recess.

The long-wave tuner is of the honeycomb coil type, with "plug in" coils, as advertised in this magazine. Here again the tuned reaction circuit is used, the two variable condensers being clearly visible in the photograph.

The detector panel is a separate unit, and can be diverted from one tuner to the other by means of the change-over switches seen at the top of the back-board.

For all ordinary purposes, a single valve is used as detector-amplifier, with shunted grid condenser; but provision is made for amplification both before and after detection. The high frequency amplifier is of the resistance-capacity type, with three stages. The low frequency amplifier is a captured German two-valve type 89 D Telefunken, for which the owner has nothing but praise. It has absolutely no adjustments. The filament resistance is of the so-called "barretter" type,* consisting of an iron wire in a gas-filled tube. Any tendency towards an increase in the filament current is counteracted by an automatic increase in the ohmic resistance of the wire, due to its higher temperature; conversely, when the accumulator voltage falls and causes a decrease in filament current, the resistance falls and thus tends to keep things even. A double pole two-way switch (with an auxiliary contact) connects the receiver either to the telephones or to the input side of the amplifier, and, in the latter case, switches on the valve filament at the same time. The great advantage of this is that the amplifier can be introduced or cut out during reception, without the loss of a single word, by simply pressing down a small switch lever. From the point of view of sheer noise, this amplifier may not be able to compete with most of the two-valve low frequency amplifiers at present on the market; but in the eyes (and ears) of its owner—who is not out to impress his friends and neighbours—it has compensating advantages in the direction of accumulator and high tension economy, and complete absence of microphonic noises.

The wiring diagram shows the relation between

the component parts, and the functions of the change-over switches at the top of back-board may be followed easily from Table I, below.

TABLE I.

		A	B	C	D
Mark III	reception				
direct	Left	Open	Right	Right
Long Wave	reception				
direct	Right	Right	Open	Left
H.F. and Long Wave	..	Right	Left	Left	Left

Some idea of the efficiency of the installation as a whole may be gained from the following list of stations, which can be read with a single valve:—

SUH	Spk.	Alexandria	600m.
PCGG	C.W.	The Hague (telephony)	1,100m.
ICII	C.W.	New Brunswick	13,400m.
WW	C.W.	Asmara (Red Sea)	
BYW	Spk.	Gibraltar	600m.
NAA	C.W.	Arlington	5,950m.

The Transatlantic Tests

AS the date fixed for sending in Reception Logs by competitors in the Transatlantic Tests does not expire until December 24th, a large number of these have not yet been received at the time of writing. It is therefore impossible to publish an analysis of the logs in this issue, nor can we yet state who is the most successful among the entrants, although, as already announced, a number have been successful in picking up the Test Signals with varying degrees of accuracy. Mr. Paul F. Godley has been good enough to give us the full story of his visit over here, for publication in *The Wireless World*, and readers may look forward to the first instalment of a very fascinating description of his experiences in our next issue. Photographs of Mr. Godley's station as set up at Ardrossan (Scotland) will be published, together with a diagram of his apparatus. If space permits Mr. Godley's complete log will be published as it is considered that this should be of general interest, since it covers the whole period of the Tests.

A preliminary investigation of the logs of Mr. Godley and those of the successful British amateurs who have already sent in their logs, indicates that the American stations were heard only on two or three particular nights, and it seems highly probable that this result may be intimately connected with the cyclonic disturbances which occurred in the Atlantic about this date, and to which reference has been made in the daily press.

The Meteorological Office has kindly promised to supply information regarding the weather conditions during the period of the Tests, and it is anticipated that some very valuable information may accrue from a comparison of the reception of the transatlantic signals with the record of the prevailing weather conditions.

H.S.P.

* The term "barretter" was first used by Fessenden in 1902 in connection with his thermal detector, and is now frequently misused in the manner indicated above. Actually it is a "Thermal Regulator," and is quite common in electrical engineering.