

MR. R. T. STANTON (Christchurch) reports hearing UOR2, Vienna, on 49.4 metres after 11.30 p.m., average strength R5, very clear and steady. This is probably the station heard by Mr. Morrison.

The station that Mr. R. J. Eatwell (Greymouth) refers to on about 35 metres, calling WOO, will be the s.s. Olympic using the call-sign G2GN. English is spoken, but I have found them very difficult to understand.

The following particulars of Germany's international short-wave transmitter will be of interest, as this station is the best heard here at present during the early morning, and will improve as the days become shorter.

"World Broadcasting" From Germany.

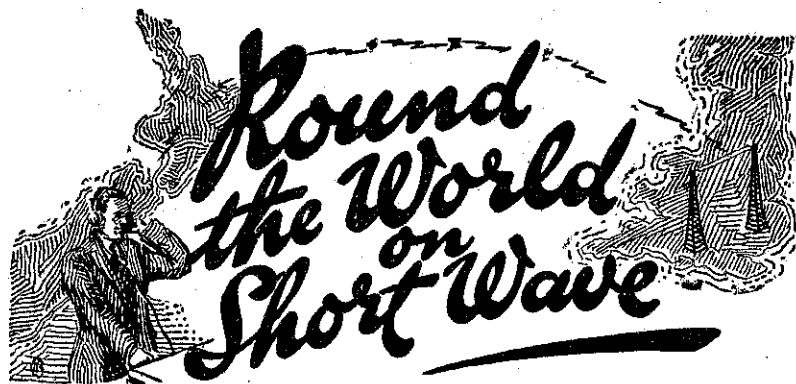
Germany's short-wave "world" broadcasting station at Königswusterhausen (Zeeseen) has now begun testing. In external design the short-wave plant strongly resembles the Telefunken Company's standard long-wave transmitters for wireless telegraphy, while in technical construction it is similar to that of the two high-power short-wave transmitters used on the Nauen-Buenos Aires service.

The new transmitter has a single wire aerial about 180ft. long, which is suspended from one of the masts of the long-wave plant. The mean aerial energy, i.e., carrier wave without modulation, is 8 k.w., and the wavelength is 31.38 metres.

The transmitter consists of seven units, with crystal modulation on the first. The short-wave is obtained by making use of the harmonics of a comparatively low frequency in the crystal-controlled oscillator. Suitable filters and amplifiers in the ensuing stages produce the desired reduction of wavelength and power when the final stage is reached.

The valves in the individual stages are accordingly arranged to give a successive increase in power. The first stage functions with one valve of the power-amplification type, while the second stage embodies a small transmitting valve of the 0.75 watt class. Two similar valves in parallel make up the third stage, and three in parallel comprise the fourth stage. The fifth stage contains a single transmitting valve of average power (about 1500 watts), and the succeeding stage contains two valves of the same type in parallel. The seventh and final functions with two 20 k.w. water-cooled valves in push pull. Modulation on the well-known grid principle takes place in the sixth stage with the aid of three modulating valves connected in parallel.

This arrangement of valves, of course, necessitates separate supplies of power. A high-tension D.C. dynamo of 50 k.w. 10,000 volts is used for feeding the anodes in the last stage; the valves in the fifth and sixth stages are fed by means of a 4000-volt D.C. machine of 5 k.w. In the second, third and fourth stages the anode current is supplied from a common source, viz., a 2000-volt D.C. dynamo of 2 k.w., whilst the crystal stage is fed by a 220-volt machine. For filament heating in all except the last stage a 20 v. 2 k.w. D.C. generator is used. A 40 v. 5 k.w.



THIS page is conducted in the interests of shortwave enthusiasts. A weekly log comprising notes of reception and interesting topical events is contributed by Mr. F. W. Sellens, Northland, Wellington, but all listeners are invited to send in paragraphs of general interest.

generator heats the water-cooled valves in the final stage.

The filaments of the modulating valves are heated by an alternator of high periodicity. Grid bias for the water-cooled valves in the last stage needs to be of a high value, taking into consideration the size of the valves and the high anode current, and is supplied by a special converter of 750 v. 2 k.w.

All machines are started by means of push-buttons on the switchboard, which is built into the lower portions of the transmitting panels. The supply current for the converter is derived from the transformer already in use at the station connected with an overhead electrical distribution system.

Besides the actual transmitter there is also a low-frequency amplifier dealing with the speech currents arriving from the land-line, and the anode circuit of this amplifier is fed by an additional small converter.

The entire installation is equipped with measuring apparatus enabling the performance of every portion of the transmitter to be checked.

Reception during Week ending February 8, 1930.

RA97, Siberia, 70 metres, is still received at good volume, but with a very great proportion of talk.

W9XF, Chicago, 49.83 metres, can be relied upon for a good programme till 8 p.m., when they sign off with a cheery "Good morning, everybody, lots of luck. We hope to hear from you—we mean it, yes we do." Special programmes are to be given each Thursday, featuring the various States. California is to head the list.

W2XAF, Schenectady, 31.4 metres.—On Sunday R7-8 was the best volume which was reached by 5 p.m. Strength was only R5 at the loudest on Saturday.

PCJ, Eindhoven, Holland, 31.4 metres.

A high-frequency hum spoilt reception on Friday morning. Volume from 6 a.m. till 7 a.m. was R8, decreasing to R6 by 7.30 a.m. Reception on Saturday morning was about the same, with a little less hum. Until 5 p.m. on Saturday afternoon volume was too weak to be readable. At 5 p.m. strength was R3, increasing to R7 by 6 p.m. The last half-hour was devoted to dance music for the ladies of the Antipodes. Mr. E. Startz, the announcer, stated that he would be absent from PCJ till the end of March, as he was going for a trip to Spain.

Zeeseen, Germany, 31.38 metres.—This is the best station received here at the present time. Tuesday from 6 a.m., orchestral selections at R9; Wednesday, R8-9 from 6 a.m., with a very fine choir; Thursday, R9, orchestra, commencing at 6.15 a.m.; Friday, R8-9 choir from 6 till 6.30 a.m.; Saturday, no sign till 6.30 a.m., when their programme commenced with a piano solo, received at R8-9. Not only is the volume good, but reception is near perfect in all ways.

7LO, Nairobi, 31 metres.—This station appears to be approaching the season when it will not be audible. Early in the week signals were very weak, while

on Friday and Saturday they were not audible.

VK2ME, Sydney, 28.5 metres, is to be heard testing with GBX nearly every morning and evening at good strength. On Friday morning records were transmitted which GBX rebroadcast, being received back again in Australia quite clearly, so 2ME reported. "Hullo, Discovery" was called between items. After signing off with GBX, Sydney said they were going to play two more records for the "Discovery."

GBX, England, 27.5 metres (about) testing with 2ME, Sydney.

KZRM, Manila, 24.4 and 48.8 metres.—This station has gone off with the change of frequency.

5SW, Chelmsford, England, 25.53 metres.—Volume is increasing now when 5SW opens at 7 a.m., but gushiness as a rule spoils readability. Saturday morning, the best of the week, volume at 7 a.m. was R7. After Big Ben, it was announced that the third talk on careers for boys and girls would be on aviation by Major —? The talk was 100 per cent. readable.

KDKA, Pittsburgh, 25.4 metres, was reached. Volume was R8 by 5 p.m. No sign of them was heard on Saturday afternoon.

W6XN, Oakland, California, 23.35 metres.—Sunday afternoon very weak. Tuesday at 7.45 p.m. R4 with noisy background. Friday R8 at 7.30 p.m. with plenty of noise, signing off at 8.2 p.m. after giving the weather forecast.

WOO, America, 23.1 metres (about).—This new station has been heard each evening during the past week between 7.30 and 8 p.m., reading for GZGN (Olympic) and carrying out word tests, viz., "Write down." Volume is as a rule about R7-8, but signals are seldom clear enough to hear all that is said.

G2AA, England, 23.4 metres (about).—This is another station heard calling the Olympic and conducting word tests. I heard G2AA on Tuesday at 7.45 p.m., R7, and again on Friday morning at 5.30 a.m. Readability was poor each time. The latest Call Book gives G2AA as Radio Communication Co., Ltd., Slough, Buckinghamshire. WOO could not be found in the same book.

W2XAD, Schenectady, 19.5 metres.—R2-3 on Sunday and Saturday afternoons was the best I could manage.

PLE, Java, 15.74 metres, were heard with records on Friday and Saturday evenings. Volume and quality was excellent.

DGW, Germany, 14.83 metres, were R7 with reading at 6 a.m. on Monday morning.

Unidentified Stations.

THE list of stations under this heading is steadily growing.

35.5 metres (about) on Sunday at 7.35 p.m., R5, word test, and on Saturday 11.30 p.m., R3, with music.

46 metres (about).—First heard at 7 p.m. on Saturday with records at R7. Closed just after 7 p.m. for one hour. Started promptly again at 8 p.m. with more records. A call was given several

times in a good English voice. The last letter appeared to be O and I think he said Canada. At 8.10 p.m. I heard "Closing down till—Eastern Standard Time." Volume was about R7 all through, but talk was mushy.

34.5 metres (about).—Wednesday, 3 p.m., an American voice, but not readable.

33.4 metres (about).—Saturday, 7.25 p.m., foreign talk at R5. Closed down at 7.30 p.m.

31.5 metres (about).—Nearly every morning at 6 a.m. a foreigner has been heard talking at R7-8. Volume and clarity has been very good. The language, I think, is German.

31.4 metres (about).—An American was tuned in about midnight, Saturday, at R4-5. Records were being transmitted. "Constantinople" was heard about 12.15 a.m. The call was not heard, a morse station spoiling reception.

24.4 metres (about).—Thursday, 6 a.m., foreign talk at R8, with rapid fade, and again at 10 p.m. the same day.

Interesting Correspondence

Mr. Rodgers, of Newtown, writes:—The following are copies of letters received from 7LO, Nairobi, and VOR2, Austria: "We beg to acknowledge receipt of your letter dated October 28 last, containing a report on reception of our short-wave station 7LO, for which we thank you. We transmit on a wavelength of 31.1 metres with a power of approximately half a kilowatt, and our times of transmission are from 1600 to 1900 G.M.T. daily, including Sundays. Yours faithfully, M. Wenn (from Shannon, Manawatu). Kia Ora. How's Day's Bay?"

The manager apparently is a New Zealander and knows Wellington.

The Austrian station VOR2 transmits on the following days, Tuesdays, Wednesdays, Thursdays, and Saturdays, using a carrier power of 20 watts only. The experimental tests from VOR2 are carried out on 49.4 and 24.7 metres.

Letters from D.H.C. and Radio Königswusterhausen have been received, but unfortunately are written in German. I have also received one from FSGC, Radio L.L., Paris, but cannot gain any information regarding the station, as the letter is typed in French.

[Send them along and we shall do our best.—Ed.]

Can you solve a difficult problem?

See

"TRIALS IN TACT"

(on page 27 of this issue).

FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 1/6 cash for 20 words, and twopence for every other word thereafter.

CHENILLE FRINGE, just arrived, newest colourings, from 2/3 per yard. Wire Frames and Gold Braid. MacQuarries, 120 Willis Street.

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1 1/2 VOLT Number 6 Cells, guaranteed, 1/11 each posted; 45 Volt from 9/6. Speakers 32/6. Royds-Howard Co., 553 Colombo Street, Christchurch.

5-VALVE Neutrodyne Set, complete, as new. "Sonora" Loudspeaker, three wet batteries, "B" each 50 volts, 6-volt "A" battery and battery charger. Cost £55. Price £25. "Neutrodyne," Box 422, Wellington.

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