

Short-wave Jottings

Mr. Sellens, our short-wave correspondent, writes:—

A correspondent asks the call of the Java station re-broadcasting PH1, Holland, on Thursday, May 30. This was, according to an Australian radio paper, ANE, on 37.5 metres, changing over to about 67 metres later. The same station re-broadcasts PH1 every Thursday from 11.30 p.m. till 1.30 a.m. on 37.5 metres. The high-powered short-wave Dutch station works on 18.4 metres between 10.30 p.m. and 4.30 a.m., and on 38.8 metres from 2.30 a.m. till 12.30 p.m. daily. 3AN, Sourabaya, Java, on 38.5 metres, is on the air as follows:—

Sundays, 12.15 a.m. till 3.15 a.m.
Tuesdays and Sundays—11.15 p.m. till 1.15 a.m.

Thursday—11.15 p.m. till 3.15 a.m.

All New Zealand times.

Mr. Morrison, Brooklyn, advised me that he had heard W8XAL, the short-wave transmitter of WLW, Cincinnati, Ohio, working on about 50 metres, several evenings during the past week from about 10.45 p.m., transmitting music, market reports, etc.

I tried for them on receipt of this information, and found them a fair strength, but badly jammed by one, and at times two more stations.

CJRX, Winnipeg, are going to broadcast each Sunday, at 4.30 p.m. (New Zealand time) a special programme on 25.53 metres.

My log for the week does not show many stations, but several interesting items were recorded.

Saturday, June 8.

AS usual, 5SW opened just before 5.30 a.m. with their "tuning note," a high-pitched whistle. After Big Ben had struck the hour of 7 (5.30 a.m. here), a "dramatic criticism" was heard. This was R8, and 100 per cent. readable. A piano recital and further talk followed.

PCJ started at 5.30 a.m. at fine strength, R8-9, the usual fine selection of records being heard.

KGO.—A lady was talking when first tuned in, strength R2-3, readability poor, but strength increased to R5 by 7.30 a.m.

PCJ was listened at intervals from 1.30 p.m. (R7) till 5.30 p.m. (R8). Maximum volume being from 3.30 till 4 p.m.—R9. The early part of the programme was for Central America, while Australia and New Zealand were called during the last hour and a half.

2XAD, also, was received at good speaker strength. Senator Metcalf was heard during "Half-hours with the Senate." From 2.30 p.m. a "National Grange" programme was broadcast from Washington, D.C. This "National Grange" appears to be a form of farmers' union. Political talks and music were heard.

KDKA were not quite as strong as the above, being about R8 at their best. They concluded with the latest baseball scores, signing off at 3.37 p.m.

3ZC, Christchurch, was testing on short wave, being received very well.

RFM, with what seemed lessons in Morse, a few words spoken, then a few letters on the key, came in at R9.

Sunday, June 9.

AT 10.15 a.m., 2XAD was first tuned in, when an hotel orchestra from Albany was received at R5, quite good volume for an hour so early. This increased to R7-8 at 1 p.m. Soon after this they were R9, and remained at that till 3.31 p.m., when they signed off.

The "Lucky Strike" Orchestra, from 1.30 till 2.30 p.m., followed by dance music from the Rainbow Room of the New Kenmore Hotel, Albany, N.Y., till closing time, was broadcast.

2XAF was transmitting the same programme, but were not so well received.

KDKA put on another special programme for the Byrd Expedition. In reply to a query from the station as to what class of music they would like, a request had been made for some Harvard College songs, as several members of the expedition had attended that well-known college. Some of these songs were heard. Messages, as usual, were sent from friends.

An attempt was made to rebroadcast Morse signals from the South, but as the signals were very weak, this was not a great success.

A surprise was promised. This proved to be a rebroadcast of the Canadian shortwave station at Winnipeg, CJRX.

The band of Princess Pat's Light Infantry, at the Crystal Ballroom, Royal Alexandra Hotel, Winnipeg, Manitoba, was heard at full speaker strength through KDKA, and at a little less volume direct from CJRX. The announcements re broadcasts every Saturday evening (Sunday afternoon here) mentioned earlier in these notes, was made by the Canadian. KDKA stated that they would be glad to co-operate with them again.

WLW was heard, but were too weak and noisy to listen to for more than a few moments. RFM, at R8, was spoilt, as usual, by static. ZL2AX, Palmerston North, and ZL2GH, Wanganui, were the only amateurs heard.

Monday, June 10.

THIS morning 3LO was not on the air. RFM was the only station heard this day. Plenty of talk by man and woman. R8-9.

Tuesday, June 11.

ON about 22.3 metres at 5.15 a.m., some music was heard, but too weak to get any call. This station closed down or faded out soon after.

5SW was R8-9, with a rapid fade. The opening announcement was 100 per cent. readable, but the talks following were not so clear. At 6.15 a.m. the musical programme commenced with an item by the B.B.C. dance orchestra.

Wednesday, June 12.

AT 5.15 a.m., 5SW was very poor, volume being weak and rapid fading. Conditions improved by 6 a.m.

W6XN (KGO) was tuned in at 5.45

p.m., when a play was in progress. At 6 p.m. the "Spotlight Revue" commenced. One of their items was a play called "Sailors' Travels." From 6.30 till 7.30 p.m. the Trocadarians' dance programme was heard. Volume was R9 at first, going off in strength later.

Thursday, June 13.

THIS morning 5SW was extra bad. Strength fair at R7, but rapid fading was very severe, spoiling speech and music. KGO at 5.45 a.m., was R3, increasing to R5 by 7 a.m. RFM was very good, except for static. On about 17 metres some talk was just audible, but not readable.

Friday, June 14.

AGAIN 5SW was very poor, clearing up a little by 6.30 a.m. PCJ also was below their usual standard. Strength was even at R8 all through, but very unsteady, with slight slow fading.

W2XO was just audible at 5.25 a.m.

RFM: An orchestra came through in fine style at R9. Static, though bad, was less troublesome than usual. They were received at R5 on their first harmonic.

W8XAL (WLW), were tuned in at 10.45 p.m. on about 49 metres. Some music was heard, but was spoilt by Morse, QRM.

Radio for Aviation

The Latest Invention

ANNOUNCEMENT has just been made of the development of a new method, employing a simple radio receiving apparatus utilising a radio broadcast beacon, for detecting speed and location of a 'plane in its relation to the earth with absolute accuracy irrespective of atmospheric conditions. The present aeroplane speed indicators give the speed of the ship through the air and not in relation to the earth.

The method, it is claimed, will overcome the greatest difficulties with which aviation has had to contend to date—that is, dangers of misdirection in storm, fog, and night flying. In addition to giving a pilot his actual ground speed at all times, the employment of the system will enable him to determine his location at all times and the direction and speed of the wind.

Requires Two Stations.

FOR operation the system requires the employment of two or more radio transmitting stations, each operating on the identical frequency of wave-length. For illustration, it is assumed that a 'plane is travelling on a straight line between two broadcasting stations called A and B, and both of which are operating on a frequency of 100,000 cycles. As the 'plane approaches station A the radio receiving set installed in the plane will record the fixed broadcasting frequency, plus the additional frequencies caused by acceleration as the 'plane intercepts more waves in the course of its flight toward the broadcasting transmitter.

On the other hand, as the 'plane gets further away from station B the frequencies are less and therefore sub-

tracted. It is therefore pointed out that the variations in the frequencies thus indicated on the 'plane's receiving apparatus will give rise to a beat note; this beat note will thus vary in proportion to the speed of flight, and its indication recorded visually on a dial on the instrument board.

Where Direction Varies.

WHERE the direction of flight is not in a straight line between the stations the location of the desired stations is indicated by means of an ordinary radio loop-aerial or loop-aerial means, and the station is identified by a modulator frequency, which is subsequently filtered out. The angle of flight with respect to both stations being determined, a speed correction can easily be made by the pilot to eliminate error due to deviation of flight direction. Thus the pilot can always locate his position in relation to two known broadcasting stations, his direction of flight and speed of flight.

Another advantage which the new system will bring to aviation, it is pointed out, is that the pilot can always utilise the modulator frequencies for receiving messages, in addition to having them serve as a means of identifying a broadcasting station.

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