

Short-wave Jottings

MR. A. P. MORRISON, of Brooklyn, writes:—

Another new German station heard this week occurred Friday, February 1. Call sign, DHC; location, Nauen, Germany; wavelength, 26.20 metres; power, 20 kilowatts.

From information received from Philips Lamps, Ltd. (N.Z.), the station I reported hearing in my last week's notes, operating on 16.88 metres, their call-sign is PHI, situated at Huisen, Holland.

The following item of interest to S.W. listeners is from a late edition of "Science and Invention" magazine: Rebroadcasting a radio "echo."

In an experiment carried on by the General Electric Company, phonograph music was sent across the Atlantic, back again, and rebroadcast. The signal was first sent out from Schenectady over short-wave station W2XAD on 21.96 metres. This was picked up at Chelmsford, England, on a short-wave receiver and fed into the short-wave transmitter 5SW, which sent its signal back to Schenectady on 24 metres. Here it was picked up by another short-wave receiver and retransmitted by station WGY on the 319 metres wavelength.

It was a decided novelty for broadcast listeners to listen in on the radio "echo" after it had twice crossed the Atlantic Ocean. The experiment was carried on between the hours of 11.30 and 1 p.m., E.S.T. The signal, when rebroadcast, was noticeably free from static and interference, due to the fact that it had been transmitted on the shortened wavelengths. The engineers in charge have succeeded in sending over WGY's wavelength the English rebroadcast of their own short-wave station output successfully a number of times. My log for the week is as follows:—

Friday, February 1.

6.45: 7LO, South Africa, could just be heard at R5.

7 a.m.: 5SW a lecture was in progress, the signals coming through about R6.

7.30 p.m.: DHC, Nauen, Germany, duplex telephony test with PK2ME, Sydney. This test was one of the best duplex tests I have heard so far. The test began thus: "Hello, Hello. Nauen calling. Hello, Hello. 1 2 3 4 5 6 7 8 9. Hello, Hello, Sydney. We will play music. 2ME come on," etc. And a little while afterwards, "2ME calling. Hello, Hello, Nauen. Here is Sydney. Hello, Hello." "Hello, Hello, Sydney. Yes, this is Nauen; what is your time now?" 2ME replied, "It is now 6 p.m., Sydney time." DHC replied, "It is now 9 a.m. here in Germany, and it is very cold, about 26 deg." Some comments were made about snow. DHC said, "Do you hear me a little better than yesterday? Your signals are very low. Could you give me a little more power?" 2ME increased power. Nauen replied, "That is a little better. Could you talk a little in the German language?" He said, "I cannot understand you; your power is very low" (2

little more strength from 2ME). Nauen replied that that was much better, and asked how great was 2ME's power in kilowatts and how great was your sender.

2ME replied, "12 kilowatts." Nauen replied, "Thank you," and "We are sending to you with 20 kilowatts. Can you tell me how great in kilocycles is your wavelength. Hello. Will you speak a little louder? Hello. Yes. I cannot understand you. Please will you speak a little louder? Hello, Sydney. I do not hear you."

"Yes, Sydney," 2ME replied, "10520 kilocycles," "one moment," said Nauen. "Hullo Sydney, our wave is 26.20 metres, please will you tell me, will we continue next week? What do you say to telephony in the morning, Hullo, Hullo, Sydney."

"Yes, that is great, our conversation is good. Hullo, Hullo, Sydney, yes, Nauen speaking" (at this part of the transmission another announcer spoke and I think probably this speech was coming from Berlin per telephone line to D.H.C. studio).

"Hullo, Hullo, here is Berlin, Hullo Sydney, are you English or Australian born, are you a European or born in Australia" (I did not hear the reply to this; very amusing for all that.) "Hullo, Sydney, I cannot understand you, one moment, please. Hullo, your voice is very bad now, I think we will finish now and continue to-morrow, Monday, at 7 a.m., G.M.T. Hullo, Hullo, I will read for you, yes, yes, Nauen speaking, we will continue in the morning at 7 a.m. G.M.T., I cannot understand you, will you speak a little louder."

Nauen asked 2ME if they would send through a cablegram to their receiving station at Nauen.

"Hullo, Hullo, Sydney; yes, thank you, good-bye," and here the transmission concluded.

Both stations were at good strength; 2ME, R8, and DHC, R7 to R8. The German station spoke very plainly, of course, sometimes not in the best of English, and while DHC was not speaking to Sydney you could hear them talking about the studio and talking to one another.

9 p.m.: W2XG on word test, R8.

10.15 p.m.: ANE, Java, was on the air, but was silent when I picked them up.

Saturday, February 2.

4 p.m.: PCJ, Holland, was heard, the best I have heard him for some time; strength was from R6 to R8, and some very enjoyable music was heard.

6.15 p.m.: On 31 metres a foreigner was heard with one or two items of music and speech was in the French language, but I failed to get his call letters; he was only heard for 15 minutes; strength at R7 to R8.

7 p.m.: RSR, Germany, was heard with a great deal of talk, but not music; signed off at 7.20 p.m.

8 p.m.: DOR, Germany, 41 metres, talking much, at R8.

12 midnight: ANE, Java, playing records, R7.

Amateurs heard: ZL2AW, Wellington, and ZL3AF, Christchurch.

Sunday, February 3.

3.15 p.m.: W2XAF was at R4. I listened to them again at 4 p.m. and they were on with their usual dance programme; strength increased from R7 to R8 before closing down. KOKA was very weak in the afternoon, so did not trouble them much.

6.15 p.m.: KDKA, Pittsburg, was heard with their special programme to Commander Byrd and comrades, sending messages, also musical and vocal items. One good item was by a scout, Mr. McDougal, a song, "On the Bonnie Banks of Clyde." He also told some Scotch stories and afterwards sung one of Harry Lauder's songs. KDKA mentioned that their signals were being well received by the City of New York, a radio being sent from them, and also stated if any of the Byrd expedition wished to send a message per radio they would be only too pleased to rebroadcast it for them. The messages sent to the expedition are many like this one:—"Dear John,—Many thanks for your letter. Best of luck. Hoping you are well. Love." This transmission concluded at 8.20 p.m. New Zealand time.

Monday, February 4.

6.45 a.m.: Foreign station heard on 37 metres, but was not strong enough to get call. R5 to R6.

7 a.m.: 3LO, Melbourne, 31.6 metres; usual programme; strength K8.

9.30 p.m.: RFM, Russia. This station has fallen back in strength again and was only R6 this night.

11 p.m.: PCLL, Holland, was heard playing records, R7 to R8.

Tuesday, February 5.

6.30 a.m.: 7LO, South Africa, was too weak to listen to; R4 and with 5s.w. I did not trouble.

8.20 p.m.: DHC, Nauen, Germany, was conducting another test with 2ME, Sydney. Strength was good from both stations; R8.

9.15 p.m.: RFM, Russia; very weak, R6.

Wednesday, February 6.

Did not listen in this morning.

7.30 p.m.: DHC, Nauen, Germany. Another test with 2ME. I listened in to the whole of this test and it was even better than the other tests I have heard from them. They concluded at 8.55 p.m.; both stations at R8 to R9. 2ME was subject to a little fading.

10.45 p.m.: 2ME conducted a duplex test with ANE, Java. ANE, who was R7, and 2ME, R8 to R9. ANE conducted another duplex test with PCLL, but I did not listen for this.

WHEN a counterpoise earth is used, it must be insulated just as carefully as an aerial.

AN old curtain rod, hammered to a point at one end and drilled at the other end to take terminals, will make an extremely good earth.

Two Telephone Tips

QUITE a large proportion of the unpleasant body capacity effects of which so many shortwave enthusiasts complain are brought about by the connection of the head telephones directly into the plate circuit of the note-magnifying valve. There is always a certain leakage of high frequencies through the rectifier, and its effects are particularly marked upon the short waves. These stray high frequencies make their way through the note-magnifying valve or valves and so into the telephones. When the head wearing them approaches the tuning controls weird effects are sometimes produced. It may also be found that either the set will bowl or an incoming transmission will disappear if the telephone receivers or their cords are touched.

When the telephones are connected between the plate of the output valve and high tension positive they are, so to speak, up in the air. In other words, they are not earthed directly. Now, it is quite easy by means of a filter circuit to alter this state of affairs, and it is a very great advantage to do so, particularly on wavelengths below 20 metres. Here is the way in which it is done. Connect the plate of the output valve to high tension positive through a low-frequency choke. Connect the plate also to one contact of a fixed condenser with a capacity of from 1 to 4 microfarads and take a wire from the second contact of this condenser to one of the telephone terminals.

The second telephone terminal is connected to earth. Besides materially reducing capacity effects the system has two other important advantages. In the first place the telephones are relieved of the totally unnecessary strain of carrying the direct current that flows in the plate circuit. And this brings us to the second advantage, that it no longer matters which telephone lead is connected to which terminal.

The second point about telephones concerns sets in which the high tension current is derived from the mains. Generally speaking, it is not advisable in such cases to use head telephones unless a properly designed filter circuit or output transformer is incorporated. Without these there is always a liability to a severe shock if certain parts of the battery eliminating apparatus are touched whilst the telephones are being worn.

ANTI-SULPHURIC paste, which is obtainable quite cheaply, is an excellent preservative of a wooden accumulator-carrying case and is very useful for floors and cabinets, etc., where the accumulator is standing.

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