

coil is needed when a 55 is connected as a full-wave detector. The main advantage of this type of detection is that less distortion is present than when using the half-wave type, but as the usual output circuit is not above reproach in this respect, the advantage is largely lost.

2. Is the tone given by a single 2A5 in an output stage good, or would a pair of 45's in class "A" give greater fidelity?

A.: A 2A5 operating under correct conditions and correctly matched to a good quality speaker is capable of excellent tone, but not quite up to the standard of 45's in class "A."

3. To what extent does audio power make up for r.f., i.e., by providing an output of 10 watts max. in place of 3, would this increase the distance-getting abilities of the set?

A.: Very little, because the noise level would be very high.

"LEE" (Claudlands): I am enclosing a sketch of an amplifier and a Hartley transmitter. Could I connect the former to the latter for telegraphy and telephony work?

A.: Yes, but generally modulated oscillators are not satisfactory.

2. Where should I connect the amplifier?

A.: Directly in the B+ lead.

F. D. (Cambridge): Could I receive 12H, which is 14 miles from here, on the crystal, circuit I enclose?

A.: No, or at least we would be very surprised if you could.

"RAIMO" (Huntly): When my volume control is turned about three-quarters of the way on, a loud hum is heard, which vanishes when the control is turned on fully. Reception is good until the hum appears, when a crackle and hiss becomes very evident behind the tuning.

A.: Evidently your set requires a new volume control.

D. J. B. (Dunedin): My set cannot pick up stations under 620 k.c. or above 1380 k.c. I have tried adjusting the trimmers on my set, which by the way is a commercial model.

A.: This is evidently the trouble. You have upset the alignment of the condenser gang, with the result you mention. Call in a serviceman and have the set realigned.

"DRAZZEL" (Christchurch): Which is the better set for DX work, the "Skyline Five" or the "Diode Five"?

A.: The "Skyline Five."

2. Is a 247 as efficient as 245's in push-pull?

A.: No, and you would find the quality of the latter combination is better. An excellent article on the merits and the demerits of various output valves, including the latest types, will appear in the August "Radio Times."

"PUZZLED" (Mosgiel): When my a.c. set has been working several minutes a crackling noise is heard, and volume drops. Also, if the set is tapped near the dial, the volume varies.

A.: Evidently there is a partial or complete breakdown in a small resistance or condenser, or there is an intermittent short to the chassis.

"SPARROWHAWK" (Carterton): I have just finished building a "Sparrowhawk" set with one audio stage. Oscillation is very floppy. I have tried a new r.f. choke and varying the number of turns on the reaction winding—in fact, on the 80-metre band I have tried from 1 to 12 turns, but the set still goes into oscillation with a sharp pop.

A.: Possibly the grid leak is faulty. Try different values, ranging from three to ten megohms. Also try the addition of a by-pass condenser, of value of about .0005 mfd., connected from the side of the r.f. choke going to the primary of the transformer to earth. Turning down the rheostat a trifle will also assist to give smooth reaction.

THE WORLD ON SHORTWAVE

By F. W. Sellens

W8XX, Pittsburgh.

THE pioneer short-wave station, W8XX, Pittsburgh, U.S.A., is at present transmitting daily programmes on four wavelengths from about 6 a.m. their time till after midnight. Their schedule, as heard "over the air" a few days ago, is 13.93 metres, 10.30 p.m. to 7.30 a.m.; 19.72 metres, 2.30 a.m. to 8.45 a.m.; 25.27 metres, 9 a.m. to 2.30 p.m.; 48.86 metres, 2.30 p.m. to 4.30 p.m., all N.Z. M.T.

Bolivia on Short-Waves.

MR. VIC. SHANN (Christchurch) reports hearing a Bolivian station transmitting dance music between 2.50 p.m. and 3.15 p.m. last Sunday on 49.5 metres. Announcements were made in English as well as their own language.

Reception was too noisy to decipher a call, if one was given. Particulars of a new station in Bolivia were given in the July 14 issue, the wavelength being 49.3 metres at night time, and 19.61 metres during the day (in Bolivia), so this is probably the station Mr. Shann heard.

The address for reports is: "The Comité Ejecutivo pro Radio, La Paz, Bolivia." A call-sign had not been allotted when our information was sent from Chicago.

"Radio Nations," Geneva.

EVERY Sunday evening the League of Nations stations at Geneva go on the air to broadcast talks on the work of the League. Three wavelengths are available, which are as follow: HBQ, 40.3 metres; HBP, 38.47 metres; and HBI, 31.27 metres. Wavelengths suitable for the season are used when their talks are given.

The Sunday transmissions commence at about 8.30 a.m. our time, according to reports. On Monday last at 9.17 a.m., "Hullo, this is Radio Nations, the League of Nations' station at Geneva, Switzerland." Also an announcement that a certain gentleman, name not clear, would speak in about ten minutes' time on the Labour Conference at Geneva. This announcement and call was heard several times, also some foreign talk, probably the same announcement in other languages.

The wavelengths used were given as 31.3 metres and 38.47 metres. The former station was received at R8 with very slight gushiness, being 100 per cent. readable. The higher wavelength station was just audible, loud enough to identify, but nothing more.

W1XAZ, Springfield.

WHAT has happened to W1XAZ? This station has suddenly vanished, there being no sign of it during the afternoon or evening for several days. It can hardly be conditions, as W2XAF is still coming in as usual.

Log for Week Ending July 20

RV15, as well as W1XAZ, has been missing during the past few days. Most of the "regulars" have been heard as usual, as follows:—

RV59, Moscow, 50 metres, has varied greatly during the week, being weaker than usual most days. On Wednesday

volume was R8 at 7.45 a.m., but faded out before 8.30 a.m.

49.6 metres (about): A station is often on the air at about 11 p.m., but spoiled by a local commercial station (ZLW). Judging by the voice it is an American, but so far the interference has been far stronger than the stranger.

W8XAL, Cincinnati, 49.5 metres: Becomes audible about 3.30 p.m., increasing to about R7 by 4.30 p.m. The noise level by this time is usually fairly high, so that W8XAL is seldom worth listening to after 4.30 p.m.

W8XF, Chicago, 49.18 metres: The remarks for the previous station also apply here on the average.

W8XX, Pittsburgh, 48.86 metres: Is audible soon after coming on the air at 2.30 p.m., increasing to R7-8 by closing time at 4.30 p.m. Except for slight gushiness, is well received now.

W3XL, Boundbrook, 40.69 metres: Back on the air in place of W8XAL; heard on Sunday till closing at 4.30 p.m., when they were very good at R8.

HBP (Radio Nations), Geneva, 38.47 metres: Just audible on Monday morning between 9.15 and 9.30 a.m.

GSB, Daventry, 31.55 metres: Only heard during the African and Canadian zone transmissions, and varying quite a lot. 8 a.m. appears to be the best time, when reception is at its maximum, some days up to R7-8, others only R4. Sometimes when signals are weak at 8 a.m., they are audible for a longer period, as late as 11 a.m.

W2XAF, Schenectady, 31.48 metres: Audible, but very weak, soon after noon. Volume increases very slowly till about 2 p.m., and then more rapidly till closing time at 2.30 p.m., when they usually reach about R7.

DJA, Zeesen, 31.38 metres: Gone off again in volume, only heard very weak on two days.

VK2ME, Sydney, 31.28 metres: Was very good on Sunday evening from 9 till 10 p.m., but could not find during the earlier session.

HBL (Radio Nations), Geneva, 31.27 metres: R8 on Monday morning with their regular weekly talk from 9.17 a.m., being 100 per cent. readable.

XETE, Mexico, 31.25 metres: Best about 4 p.m., when they are often R5, but mostly gushy. Have not been heard since Wednesday. The lady who announces in English asked for reports from "our friends throughout the world."

JIAA, Tokio, 30.5 metres: Good each evening except Wednesday and Thursday, when they were far weaker than usual.

EAQ, Madrid, 30.4 metres: Have dropped in volume, being only R4 when tried for this week from 10 a.m.

Radio Coloniale, Paris, 25.63 metres: Good every day, especially during the late morning and early afternoon. At 3 p.m. on Monday they were coming in as good as a local station, plenty of volume, and very steady.

GSD, Daventry, 25.53 metres: Slowly improving when they commence for this zone at 4 p.m., but still below entertainment level. They are weak most mornings for Africa, but were up to R7 at 9 a.m. on Friday.

DJD, Zeesen, 25.51 metres: Weak every morning except Friday, when, like GSD, they were up to R7 at 9 a.m.

2R0, Rome, 25.4 metres: A little improvement shown, best between 8 a.m. and 9 a.m., when they sometimes reach R7.

W8XX, Pittsburgh, 25.27 metres: Still are good during their last half-hour, 2 p.m. till 2.30 p.m., usually R7-8.