

discrepancies. In the theoretical diagram the extra resistance of 100,000 ohms is not shown in series with the resistor-choke. In practice the extra resistance may be reduced to 50,000. Alteration of the position of the 500 ohm resistor in the r.f. cathode has resulted in this resistor being shown in two places—a fairly obvious error. You say that the .01 condenser is earthed through the 500 ohm resistor, but examination of the diagrams will show that it is earthed to the solder-tag bolted to the chassis. The 1 mfd. by-pass condenser to r.f. screen is best earthed direct as shown in the lay-out diagram. The lay-outs

may be taken as correct, because they have been drawn from the laboratory model. New specifications for broadcast coils are given in the second edition of the "Guide" and will be reproduced next week. The r.f. coil has now 166 turns of 23 enamelled, close wound, topped from the bottom at 28 and 78 turns, with three sockets in the ebonite top. A thin flex with plug connects to the F-1 pin of base. The detector coil is 218 turns of 36 enamelled, tapped from the top at 80 and 145 turns, with three sockets at top. The highest tapping on each brings in all stations from 72L to 2BL inclusive.

2. Using a 224 in the r.f. stage is not the bias resistance 4000 ohms?

A.: Yes, we take this opportunity to point out that in the first edition of the "Guide" the bias resistor for the 224 valve was erroneously stated at 400 ohms instead of 4000.

3. Are the 100,000 ohms resistances satisfactory for the screens of the r.f. and detector valves of the 224 type?—Yes.

4. Does the 6 mega. grid leak need changing for a 224 valve?—No.

TYRO (Kaitieke): I have built the Daniell Cell charger, and it appears

to be working satisfactorily. How often should the sulphuric acid solution require renewing?

A.: Providing the cells operate satisfactorily it is only necessary to add a little sulphuric acid every month or so when the solution begins to look a little thin. Epsom salts we have found to work quite satisfactorily.

2. Does the sediment on the zinc affect the working?

A.: Not to any extent, though it is well to keep the zincs fairly clean.

3. A coating of bluestone has crystallised on the inside of the porous pot above the sulphuric acid solution. If the zinc touches it copper is formed. Should this be cleaned?

A.: Yes, it would be as well to keep deposit of this nature cleaned off. Keep the copper as it is of marketable value. To prevent this forming above the solution cover the affected parts with wax.

G. B. BOY (—): Should a graph of stations be a straight line or a curve?

A.: Generally a curve, although if S.L.F. condensers are used and dial reading plotted against frequency, a straight line will result.

2. Is the Sparrow Hawk One an all-wave set?—Yes.

3. Have particulars of the two-valve shortwave sets been published in the "R.R." or "Guide"?

A.: Yes, the Night Hawk Two is an all-wave set which can be used for short-wave only by the use of .0001 condensers for tuning and a special shortwave choke.

ANCHOR (Matamata): It seems that you are paying quite a fair price for the receiver you mention. However, if it is in good order it should be a safe

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enough buy. Your set and speaker should be worth more than £20 to £25.

2. It is possible to add a pentode valve to the B.D., but it should be employed immediately following the detector valve without any further audio amplification. The B.D. usually employs at least two stages of audio so that a pentode may not be advisable.

3. What is a fair log for a seven-valve Radiola?

A.: We cannot state, as ever so much depends upon your locality and your aerial and earth equipment.

STATIC (Invercargill).—Is it necessary to shield the panel of the "Night Hawk Two" with aluminium?

A.: It should not be necessary to do this though if you are troubled with hand capacity it might be as well to do so.

2. The transformer you mention is suitable for the set.

W. F. (Wellington).—Would you give date for construction of a one-henry choke to pass a small current?

A.: It should be built upon 1/4 in. core with the window of about an inch x 1/2. Wind on 2000 turns of 40 or similar fine-gauge wire, and take tapings out at every 250 turns, and try each one for best results.

2. I have tried several wavetraps in connection with my set, but cannot eliminate 2YA in favour of 4YA. Where could I get particulars of a filter for my set?

A.: Our wavetraps have been used quite close to 2YA, and has been effective in separating it from 4YA. However, for

Monday, February 23, 1931

THE DAILY MIRROR

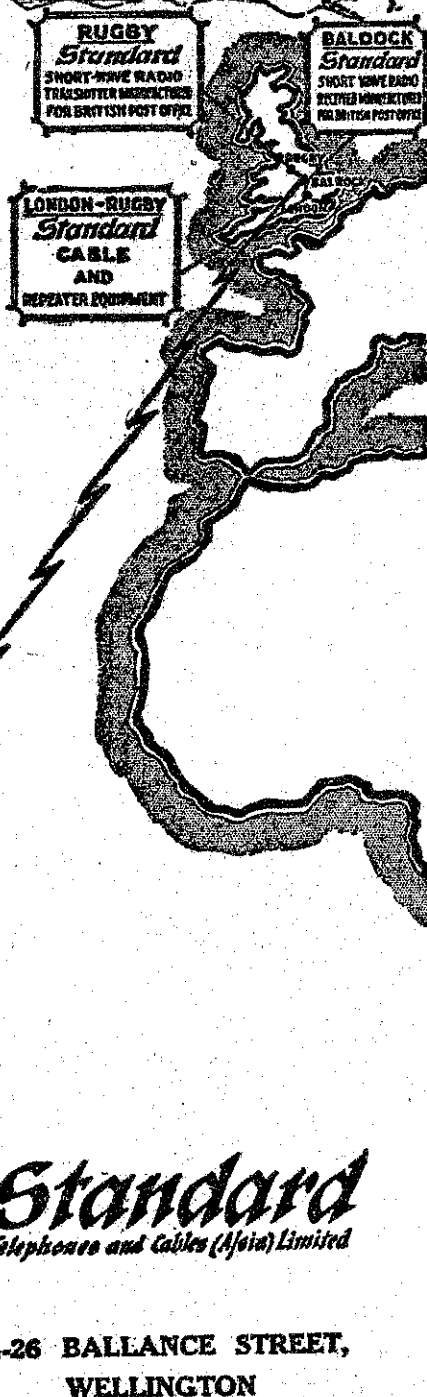
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