

## Ultra Short-wave Reception

(Concluded from page 28.)

as at these short wave-lengths the inductance of the plates themselves becomes important; moreover, the field surrounding the condenser will be smaller and less liable to create losses in the solid dielectric supporting the plates. Similar condensers may also be used for the reaction control, and for the aerial and counterpoise coupling condensers.

The grid condenser should be fairly large. A fixed condenser of 001 microfarads capacity will be about right, and its reliability and high quality must be above question. The most suitable resistance for the grid leak depends to a great extent on the valve employed, but it will almost certainly be between 0.5 and 2 megohms. For reception on wave-lengths less than about 5 metres, a detector valve of the "Short-path" variety is desirable, as otherwise the time taken by an electron leaving the filament to reach the plate will be comparable with the period of the wave being received.

**WIRING** must be carried out with great care. Every connection must be stiff enough to resist the tendency to vibrate. It is thus necessary to use wire of about 16's w.g., or thicker, and this has the additional advantage of avoiding reactance in the leads as the result of the appreciable inductance possessed by thinner wire.

The tuning coils are best constructed of 1-8 inch or 1/4 inch copper tubing. For the 10-metres band a 4-turn coil of 1 1/2 inch diameter and 2 inch winding length will be required. For the 5-metre band a similar coil, but with the diameter reduced to 1 inch, will be most suitable. If the coils are wound with 1/4-inch tubing, they should be very stiff in themselves. If they are found to vibrate, they must be wound on an ebonite former. In any case, they must be mounted with extreme rigidity, preferably on a block of ebonite.

The circuit shown avoids the somewhat difficult problem of finding suitable high-frequency chokes. For the benefit of those who intend using a different circuit, and one necessitating a choke, it may be mentioned that the most effective type of choke at these frequencies seems to be a simple single layer winding of 46 or 48 s.w.g., insulated wire, on an ebonite former of 3/4 inch diameter. About 50 or 60 turns may be used for a 5-metre choke, the number being increased to perhaps 150 or 160 for reception of 10 metres.

There is one thing which may militate against the popularity of the 5-10-metre receiver, and that is the dearth of 'phone stations on this band. The experimenter who can read code will be quite at home, however, and, after all, it is only a matter of a little time before modulated transmission, perhaps even broadcast stations, become quite common on the ultra-short waves.

# Our Mail Bag

### Candid Comment.

**A BACKBLOCKS** correspondent from Westland writes to the effect that the Radio Broadcasting Company of New Zealand is a very parasite on the Australian stations, and anyone who contends to the contrary is "either a stranger to the truth or must have shares in the broadcasting company."

### Contented!

**BEING** a satisfied listener for the last three years, and being interested also in radio, I wish to put on paper my

### MR. F. G. E. BROAD,

who is well and favourably known in Auckland and North Auckland districts as a singer, has been appointed travelling representative of the "Radio Record" for this territory, both in a business and literary capacity. Mr. Broad's address is Port Albert Central, North Auckland.

congratulations for the all-round programme for all people. Truly a very hard job at the best. Listeners should always realise there are others with different taste from their own, and one must live and let live. I would like to hear more sacred music on Sunday afternoons; also in my business I meet a big number of radio friends, especially elder folk, and they also feel the same way. The old plantation melodies give the old much pleasure, and there are a good number of them scattered around New Zealand. I would like to let you know that in this district the listeners are contented in every way.—"Contented" (Oamaru).

### Oh! the Inconsistency.

**WE** have not heard much of late of the controversy that once raged concerning the announcement of the station's call sign in the middle of a record in the dinner music section. We were told that this was necessary to cope with the requirements of the P. and T. Department. The station's call had to be given out every fifteen minutes or something ridiculous like that. What happens to this regulation when the station is relaying? It is probably tied up in red tape. When other stations are relayed we hear their call sign, if we are lucky, not that of the immediate station, but during the

dinner music session when we don't wish to be interrupted with announcements, the regulation comes to light again. The time for foolish regulations is well past. Why should listeners be inflicted with this kind of tosh, for the announcement certainly mars the enjoyment of the music.—"Sealing-wax" (Wellington).

### Power Interference.

**MY** set is situated close to a power line, and up to about the end of March the only New Zealand station that came satisfactorily was 2YA, the other stations being drowned by the frying noise. 3YA was steady enough in the daytime, but began to surge badly and become mushy as soon as night set in. Since about the beginning of April the same thing has taken place with 2YA, which is now not worth listening to. It is best during the dinner music, but the trouble increased towards 8 p.m. The fault does not seem to be in the set, nor, I think, in the station. Do you think the trouble is due to increased power being put on the power line (the main line from Coleridge to the south)? 2FC is at present my best station, and it is not much.—"Power Interference" (Temuka).

[Increased power on the line would create a bigger field, and might give rise to the symptoms.—Tec. Ed.]

### "B" Class Stations.

**IN** this week's "Record" I read with mixed feelings an article dealing with the acknowledgment of reports by certain southern "B" class stations under the heading "Static from the South." My sympathies go out to that "B" station, and I can quite understand how they feel about letters of the type to which they took exception. They provide an excellent service during the off hours of the R.B.C. stations and naturally this takes money and time, and they must earn that money, so cannot spend all their "silent" hours acknowledging hundreds of reports. Aussie "B" stations earning incomes by advertising do not all ways reply, or may delay. It took 2H.D. three months and five days to acknowledge my card, so apparently the New Zealand stations are not the only offenders. From some southern stations I receive cards almost by return of mail. Best of luck to all "B."—Q.S.L.

[We think the real point is that reports are frequently asked for by the stations concerned, and it has become a matter of practice for cards of acknowledgment to be sent. In the particular case the letter of request was simple and courteous, and the reply received such as to occasion surprise and disappointment. Most people in contact with the general public may be allowed to have their "human" moments and feelings, but it is the part of unwisdom to indulge them.—Ed.]

### Carry On, 2YA.

**ON** picking up my "Radio Record" to-night I was more than pleased to see that you consider that there is nothing to be gained by publishing the letters of those correspondents who have written complaining of 2YA's transmission. I for one feel sure that the technical staff of 2YA can do more with their knowledge toward eliminating any trouble that may arise than a lot of these correspondents can with guesswork.

But, Sir, from what I can see, these correspondents are not satisfied with continually hauling 2YA "over the coals" alone, but now they have got the announcer of that station "on the mat." "Kelburn" to my mind, absolutely puts the finishing touches to a series of the most petty, fault-finding letters I have ever read.

First of all he starts off about the cheery "Good morning," and then suggests a more cheery "Good night." Then he goes on to say how 2YA's "Good night" is painful and jarring. Well, Sir, the Wellington announcer has never failed yet to bring a smile or laugh to anyone who has heard him at my place—in fact, they look forward to it. He goes on to say that the Australians consider it silly. Well, if the Australians and "Kelburn" don't like it, who is making them listen to it?

No, Mr. Announcer, carry on; you are doing good work, and if "Kelburn" can do better, well, I'll take my hat off to him.—"Static" (Wanganui).

# I.C.S.

CHRYSLER is one of many world-famous Engineers who are I.C.S. STUDENTS.

EDISON says: "May the world soon come to know the value of an I.C.S. TRAINED MAN."

The I.C.S. Illustration method makes home study practical.

## International Correspondence Schools

(N.Z. ALAND) LIMITED  
1822 Wakefield St., Wellington.

Sirs.—Please send me a free prospectus giving full particulars of all branches of the profession or occupation before which I have marked X (if your subject is not on this list, write it here).....

- Architect, - General Bookkeeper,
- Mech. Draughtsman, - Station Bookkeeper,
- Concrete Contractor, - Salesman (any branch)
- Building Contractor, - Show Card Writer,
- Carpenter, - Advertiser (any branch)
- Plan Drawer, - Com. Illustrator,
- Ship Engineer, - Journalist (any branch)
- Ship Overseer, - General Education,
- Motor Engineer, - Language (G'phone)
- Mechanical Engineer, - Special Examinations
- Elec. Mech. Exams, - Accountant (Inst. Ex)
- Mechanical Engineer, - Matriculation,
- Mine Electrician, - Intermed. etc.,
- Telephone Mech., - Hereford House,
- Aeroplane Engineer, - Public Service,
- Aeroplane Rigger, - Dressmaking,
- Textile Expert, - Millinery,
- Plumber, - Shorthand Typing,
- Mathematician, - Bus Correspondence

(There are over 4,200,000 I.C.S. Students, over 19,000 of these being in New Zealand).

ENQUIRIES COST NOTHING—POST NOW

Name.....

Age..... Occupation.....

Address..... "R"

FOR BEST RESULTS USE

# DIAMOND

ROYDS-HOWARD CO.  
553 COLOMBO ST

## RADIO TUBES AND BATTERIES

AND UNIT CELLS