

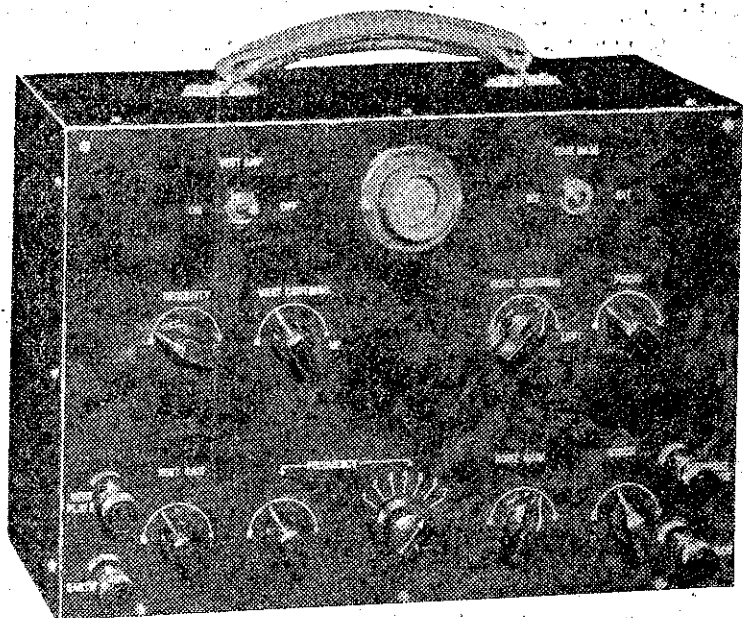
RADIO DESIGN IMPROVES

Iron-Cored Cores Win Their Spurs

Smaller Sets

Prove Most Popular

During 1937-38



DURING the past year iron-cored coils have definitely proved their worth, so much so that they have practically displaced the air-core types—especially in the I.F. amplifier stages. These iron-cores have been developed to give better selectivity and gain in otherwise standard circuits, and in I.F. amplifier transformers, where the frequency of operation is fixed, their properties can be used to best advantage.

Of the home-constructed sets, or kit-sets, four and five-valve receivers have taken the lead and this has been responsible for the fact that the majority of sets described in the "N.Z. Radio Times" during the past year have not been above six valves. Expense and the desire to get the best possible results from the smallest possible number of valves seem to have been mainly responsible for this.

Both the above factors played a big part in compiling this year's "Radio Constructors' Guide," but though most of the receivers described in it are not of more than five valves, they cover all types, portables, super portables, super regenerative, reflexed, broadcast, dual-wave, allwave and pretuned—both A.C. and battery operated.

However, all the sets described in the 1938 "Radio Guide" are not small ones. Twenty-one actual receivers are included in this issue, as against thirteen described last year. They range from one to eight valves and cover all types.

For the first time, a pretuned receiver is described as a kit-set. On test, this receiver gave excellent results and, although only a four-

valve set, when pretuned to Australian stations it brought them in with a remarkable degree of accuracy in tuning. Instructions are also given for converting this receiver into a dualwave set.

The usual selection of instruments is in evidence, foremost among them being a cathode ray oscillograph and a wide-range multimeter. An enlarged section of charts, tables and valve data is included, the valve data portion listing American and European type valves (both metal and glass), as well as selected equipment types.

The "Royal" Cathode Ray Oscillograph, which proved so popular when described in the "N.Z. Radio Times" last year, has been included in the "Guide" and should prove a great help to experimenters and servicemen in tracking faults and interference. This oscillograph uses a 913 cathode ray tube, with a diameter of one inch and, although the screen is small, the tracings are particularly clear. (See above.)

This year the book has not been split up into sections as formerly, but has been divided into two portions—one containing receivers, instruments, and general technical articles, and the other containing the charts, tables and valve data. This method has been adopted because, nowadays, the demarcation between different types of sets or between receivers and instruments is not as pronounced as was formerly the case. The charts, etc., however, have been separated from the main body of the book to form a reference section on all phases of radio calculation.

The grouping of the advertise-

ments into a "Buyer's Guide," in the 1937 issue, proved so popular that this practice has been adopted in this year's issue also. For quick reference to any particular type of radio component or receiver, the indexing of the components, etc., by types, has proved invaluable. The "Buyer's Guide" is printed on coloured paper and stapled in the centre of the book—and order forms are included in it!

Some subjects which have been included each year have been excluded from this issue to avoid over-duplicating and to make room for new material. Nevertheless, readers can rest assured that the best possible use has been made of the space available. The 1938 "Radio Constructors' Guide" is well up to the standard of previous issues, and from the point of view of the receivers described, it is the best effort yet!

General Electric's enlarged short-wave broadcast schedule, to include use of the two new frequencies recently granted W2XAD by the Federal Communications Commission, has now gone into effect. Four frequencies are used by stations W2XAD and W2XAF in transmitting programmes to international listeners. The broadcasting schedule is increased by two and one-half hours with the use of the new frequencies. W2XAD, on 21,500 kilocycles or 13.95 metres, is in operation from 1 a.m. to 5 p.m.; on 15,330 kilocycles or 19.56 metres from 5.30 a.m. to 12 noon; and on 9550 kilocycles or 31.41 metres from 12.30 p.m. to 5 p.m. Station W2XAF, operating on a frequency of 9530 kilocycles or 31.46 metres is in service from 9 a.m. to 5 p.m.