

**NEW CHUM (Hastings):** I have a well-known midget set. Is it possible to get the American stations on this receiver?

**A.:** That is rather a difficult question to answer. American stations have been received on three-valve sets, and yet owners of 10 valve super-sports receivers cannot hear a whisper of them. So much depends upon your locality. It is impossible to lay down any definite rules in respect of their reception.

**2.** My aerial is about 80 feet long and about 50 feet high one end and 40 feet the other. Is it any good?—Yes, excellent.

**3.** Is my set a good make for reception?  
**A.:** We do not know anything about it.

**J.P.U. (Auckland):** I intend making shortwave coils for my set, but the middle of the primary of the existing broadcast coil is tapped. Will this be necessary in the shortwave coils?

**A.:** It sounds as though the set is one of the h.f. det. audio types neutralised by the split primary method illustrated herewith. This type of set does not lend itself to shortwave.

(Note: We regret we cannot give you the specifications you ask for. Very many specifications for shortwave coils are published in the "Record," and we cannot continually be designing coils for individual requirements. Already our Questions and Answers section is out of proportion to the size of the paper.)

**MOA (Taihape):** I intend to construct the Outspan Five. Can I use a metal panel and connect "A—" of the last tuning condenser to it, biasing the detector valve with the leak return to "A+—"?

**A.:** Yes, this method is quite in order and is preferable under those circumstances.

**2.** Would h.f. chokes be advantageous in the screen-grid leads to the h.t.?

**A.:** They would be of use if the set

were likely to be unstable. We found them unnecessary.

**3.** I have a set of 1in. diameter coils to match a .00035 variable condenser. What would be the correct number of turns for the primary to match these for the Outspan Five?

**A.:** "Cathode" went into this point about matching a week or so back. Roughly about a third of the number of turns on the secondary will be sufficient, but if you experiment you would find out the most suitable number.

**SPARKS (Midhurst):** A continual hiss is heard through the phones, and it stops if I cut down the volume by the rheostat or touch the grid terminal on the transformer.

**A.:** Try reversing the turns to the primaries of one of the transformers. Failing this, place a low value condenser about .0001 across the primary of the transformer.

**2.** Sometimes when the set is working full strength it cuts itself out, and it does not come on again until the rheostat is turned back and then on again.

**A.:** This seems to be one of the valves, probably the detector. Have them tested and at the same time examine your rheostat very carefully for any defects

**F.H.S. (Lower Hutt):** How many square centimetres in an inch?

**A.:** Centimetres are a linear measure, in other words they correspond with inches, not with square inches. Square centimetres correspond with square inch. There are roughly  $2\frac{1}{2}$  centimetres in every inch and  $6\frac{1}{4}$  square centimetres in a square inch.

**2.** About what is the size of my condenser with seven moving plates and eight fixed?—**A.:** Probably .00015.

**3.** Is the short-wave power-pack in the "Radio Guide" suitable for my set, and what will be the cost?

**A.:** It would provide more power than necessary for your set, but it would

be a good investment. If you made everything yourself it would cost you about £5.

**T.N.G. (Waipukurau):** Can you give me the name and address of a dealer from whom I could obtain spare parts for the Cossor Melody Maker?

**A.:** As these components are fairly readily obtained we would advise you to write to any of the city dealers who specialise in country orders. Quite a number of them do these days, and you should not have any trouble in getting what you require.

**D.K.W. (Gisborne):** Would the valves PM4DX and PM3 or Radiotron 230 be suitable for the Ranger Two using dry cells? If not, please suggest a combination.

**A.:** Both combinations are quite suitable, the new 230 Radiotron valves being 2 volts.

**2.** I would like to add a stage of r.f. Can you supply a circuit diagram of such using an ordinary r.f. valve?

**A.:** Yes. We will shortly publish a circuit that should suit you.

**3.** Would the Ranger Two give loud-speaker reception on the Australian and New Zealand stations using the combination of valves specified, or would a detector and two a.f. be better?

**A.:** If you want really satisfactory results from Australian and New Zealand stations you should use a three-valve set with a radio stage, such as that which we will describe in the near future. Such a combination is better than the det. two audio.

**WINDSWEEP (Hataitai):** A plopping sound has developed in my commercial eight-valve set. It was first noticed when the aerial was on, but now it can be heard still faintly with the aerial removed. All valves have been renewed recently with the exception of the 280, which is only about four months old.

**A.:** It sounds to be a condenser puncturing, although it may be your rectifier. It is a case where the serviceman should be called in. But first check up on a neighbour's reception to see if he notices it, for quite possibly it is outside interference.

**A.P. (Otahuhu):** I have built the Outspan Five, which is working well.  
(Concluded on page 30.)

**CORRESPONDENTS** must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Limit three questions, unless letter is accompanied by 1/- fee.

Name of set .....

Number of valves .....

Name .....

Address .....

.....

.....

Nom de plume .....

To be kept in subsequent inquiries.

Date .....

Please Note:—

- (1) Be specific and brief, tabulating, if possible.
- (2) Write legibly, and on one side of the paper.
- (3) We do not design circuits, but accept suggestions for feature articles.

Solving trouble, as different from advice, is difficult by correspondence and while letters are given every consideration, answers are not necessarily correct—they are only our opinion based on the matter supplied, which may be quite inadequate. Intricate and involved specifications cannot be supplied without a specialist's fee.

# IF TRANSFORMERS WERE SOLD IN GLASS CASES!

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