The Copper Compartments.

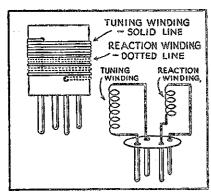
THE first compartment of the copper box houses the intermediate transformer and its associated semi-variable condenser; the first intermediate valve and its rheostat are also located here, as well as a couple of by-pass condensers. The second compartment of the box contains similar apparatus, except that the transformer is replaced by the 1000-turn coil L5.

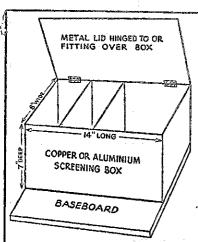
The larger compartment of the box, in addition to the coils L6, L7, and the swinging holder, contains the audio transformer and the audio valve. The handle of the swinging coil-holder serves, of course, as the reaction control for the second detector, enabling a beat note to be obtained for Morse reception. This control is therefore arranged to project through the box, where it falls conveniently to the right hand of the operator. Alongside it is the knob of the intermediate tuning condenser C6, which the operator may wish to adjust occasionally.

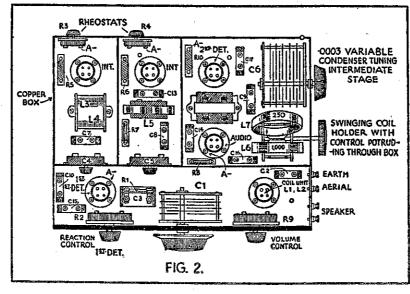
The Wiring.

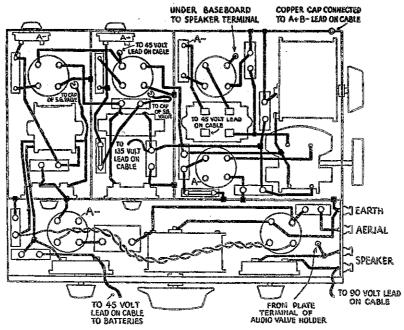
IN wiring it will probably be found most convenient to take the bulk of the low-potential wiring under the baseboard, which can be raised slightly for this purpose by a couple of strips of ebonite or three-ply screwed to its underside.

Wiring is not a critical matter, and it will be found that, apart from that portion of the circuit preceding the first detector, much greater liberties can be taken than is usually the case with even a much less sensitive set, Wiring can be most rapidly done with American "push-back" wire, or with No. 22 tinned copper run in insulating sleeving.









5 POINTS MARKED A- CONNECTED TOGETHER UNDER BASEBOARD AND THENCE TO A-LEAD ON CABLE.

Operating Hints.

TO put the receiver in operation, after inserting the valves and connecting up the batteries, the first adjustment is to set the first detector so that it oscillates over the entire tuning range. The second detector is adjusted to a point just below oscillation. The main tuning dial (first detector) is then turned until a good strong signal with plenty of modulation is tuned in. Then the three condensers tuning the intermediate stages are adjusted. A convenient method is to set the second and third tuning condensers at about half their capacity, and then adjust the input transformer condenser for maximum signal. When the optimum setting has been found, transfer attention to the last tuning condenser C6 and adjust this for best results. Some slight readjustment of the other condensers may then be called for.

It is worth while trying the effect of reversing the connections to the input transformer, as signals are at a maximum when this is properly poled.

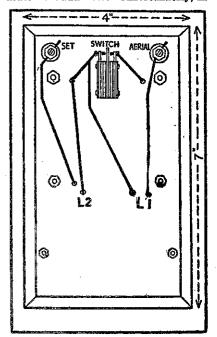
After these adjustments have once

been made, they are left alone, and the set is operated by the single tuning control on the front panel. For Morse reception the second detector is set oscillating by adjustments of the swinging tickler. For 'phone reception, this control should be set to give maximum regeneration without actual oscillation. This condition is quite easy to maintain. The value given for the by-pass condenser C17 (.001 mfd.) may sometimes be found too small, this condition being indicated by a thin, highpitched squeal heard as a signal is tuned in. The obvious remedy is to increase the size of this condenser to .002 mfd., or, if necessary, .003 mfd.

It should be emphasised that this super is intended for short-wave recep-It will work on the broadcast band, but owing to the considerable detuning of the first detector necessary, results are almost certain to be a disappointment to the constructor. In its own sphere, however, it is a first-class little set, while its construction would be a really excellent exercise preparatory to the construction of the ambitious mains-operated superhet shortly to be described in these columns.

Dual Wavetrap

N our issue of September 4 was described a wavetrap designed to separate 2YA and 2ZW. Unfortunately, in



one of the diagrams a wire was omitted, and of course a trap made from this diagram would not work. Accompanying is a corrected sketch. Had those who made the trap failed to get it to work followed the theoretical sketch they would have seen wherein the trouble lay.

The wire connecting L1 and L2 was omitted from the sub-baseboard wiring.

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