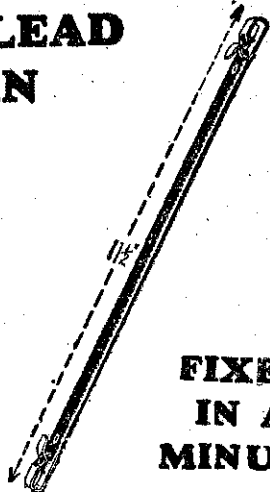


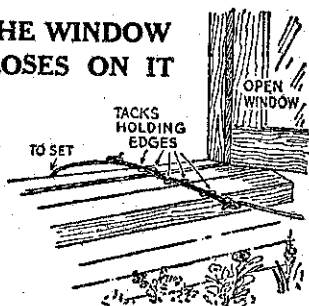
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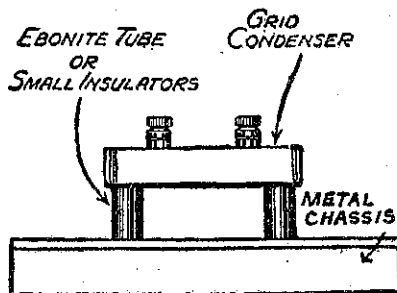
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HINTS FOR BEGINNERS

A Selection of Useful Practical
Hints for the Home Set-
Builder.

"Warming Up" Howl: Many receivers using transformer coupled audio stages howl badly while warming up. Changing valves does not affect a cure, nor does reversing the leads to the transformer. A simple remedy for this fault is to shunt the secondary of the first audio frequency transformer with a suitable resistor. Try a high value first, e.g., about 200,000 ohms, decreasing this until the howl is eliminated. Remember, however, that if too low a resistance is employed, the higher frequencies will suffer.

Unwanted Capacity: In a short-wave set employing a metal chassis, it is sometimes advisable to lift some of the detector circuit components a little way above the metal base. This applies especially to the grid condenser if it is of the flat type, as quite a large



extra capacity from grid to earth may be produced if it is screwed down flat on the chassis. Two small insulators of the reel type (once popular for indoor aërials) or two half-inch pieces of ebomite tubing, are suitable for this purpose. As an alternative, one of the small condensers which can be soldered directly from the grid terminal of the detector valve to the grid connection on the preceding coil might be employed.

Using a Milliammeter: Every home constructor will find that a milliammeter is invaluable in keeping his set right "on form." It may be mounted on the front panel and permanently wired into the receiver, or used from time to time to make adjustments. When the set is new and working properly the current taken by each valve should be noted down by placing the milliammeter in the B+ lead to each valve. The total B current should also be taken by placing the meter in the B— lead from the battery. The set should then be tested regularly about every month, and the readings obtained compared with those taken formerly. If the plate current of the power valve suddenly begins to rise, you will know that in all probability the bias battery is out of order. Should the reading fall, the "A" or "B" battery is running down, or one or more

of the valves is losing its efficiency and may need replacing. If, when the meter is placed in the B— lead, the needle flickers substantially, it is an indication that the power valve is either being over-loaded or that the bias voltage applied to it is incorrect. Do and fro flickers over three or four degrees mean that overloading is occurring, while upward or downward kicks indicate too much or too little bias respectively.

Short Waves for Beginners

THERE is a wonderful variety of entertainment to be had from short wave, but experience is necessary before the best results can be obtained. Do not expect to tune in stations just as you do on the broadcast band—tuning on short-wave is a much more delicate operation. There are two golden rules for short-wave listening, and these are, firstly, to tune slowly, and secondly, to listen to everything. All short-wave signals are weak till they have been carefully tuned in, but it is surprising to find that excellent clear speech and music may be coaxed out of what appeared at first to be a faint little chirp.

Don't be disappointed if, on first trying out your short-wave set, all the stations you can hear are transmitting morse. There are quite a number of very powerful C.W. stations using morse all day and all night—in fact, they occupy the greatest part of the short-wave spectrum—but once you find the broadcast and amateur bands you will hear plenty to interest you.

When listening on the broadcast band, the receiver should never be permitted to oscillate, but on short-waves, however, it is advisable to search with the set just on the verge of oscillation. For this reason smooth control of reaction is most important. Keep the reaction control set so that the receiver is just at oscillating point, and as you find a carrier wave reduce reaction so that you are just below the point of oscillation. By tuning with the set oscillating, you not only annoy neighbouring listeners, but you defeat your own purpose, for the receiver is then not nearly as sensitive as it is when it is just on the threshold of oscillation.

If you are worried by "hand capacity" troubles—those annoying effects that cause the disappearance of a signal as soon as you remove your hands from the dial—try leaving off the earth lead or alternatively tuning it with a .0005 mfd. series condenser.

THE announcement "Glaodhach radio Corcaighe e seo" means "Cork Calling."

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