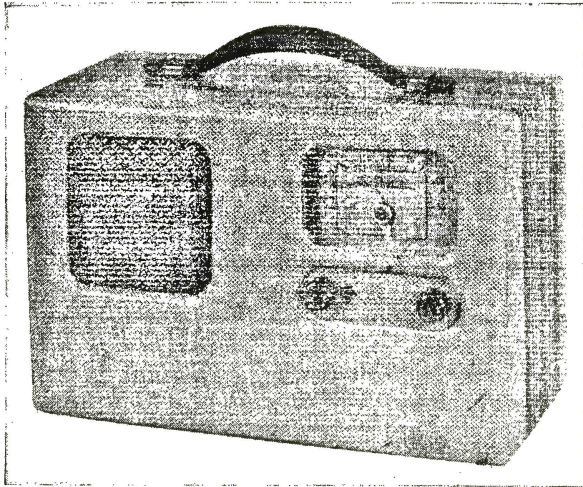


How to Build the

# Meissner A.C.-D.C. Battery

## 3-Way Portable

Henry Townsend



**This portable works on 110 volts A.C.-D.C. and also on batteries when desired. It uses 6 tubes, has a "built-in" loop antenna and works a loudspeaker. It packs a good wallop and has an R.F. amplifier to boost weak signals.**

This portable receiver is well designed and will appeal to the average set-builder, as it is available in kit form, complete with speaker and cabinet.

AS the summer season approaches, portable radio receivers are in great demand. The one here illustrated is a very efficient one, sufficient amplification of the signals being provided, so that even the weaker stations can be picked up on the loop antenna provided in the set. The trouble with a great many portable receivers is that

there is insufficient amplification of the signal picked up in the loop aerial; the consequence is that the average station is barely audible on the loudspeaker, an R.F. amplifying stage to boost these weak signals, before they are passed into the mixer stage, is here provided.

A 1N5GT tube is used in the R.F. booster

stage, and an optional antenna coupling circuit is provided, so that where it is desirable and convenient, an antenna wire (simply a 20 ft. piece of wire laid on the ground) will bring in excellent results, whether the wire is bare or insulated. The mixer tube is a 1A7GT followed by an I.F. amplifier, an 1N5GT. The second detector and AVC tube, is a 1H5GT, and the final audio amplifier stage utilizes a 3Q5GT. For 110 volt A.C. or D.C. operation a rectifier tube, a 117Z6GT tube is employed, with a suitable filtering circuit, comprising an iron core choke and good size condensers.

All of the parts for building the set are available in kit form. Many readers will probably prefer this method whereby to build up this portable superhet receiver.

The loudspeaker used is a 5-inch diameter permanent-magnet dynamic type, with a suitable output transformer to feed into it.

Diagram of the all-around 3-way portable, showing the loop antenna and rectifier tube for 110 volt operation.

