

Circuits of portable receivers:  
 (1) RCA BP-10; (2) Admiral 29-G5;  
 (3) Emerson FF; and (4) Zenith  
 4K600. Additional circuits on pages  
 8 and 9.

100 and the gain is equal to that of standard large i-f transformers. Designed to conserve space, the transformers fit right on top of the miniature sockets or between two sockets, while the trimmers are separately located at some point convenient for adjusting. Some transformers use permeability tuning which requires a small fixed condenser, eliminating the need for trimmers. R-f coils are of similar size and performance.

### Condensers

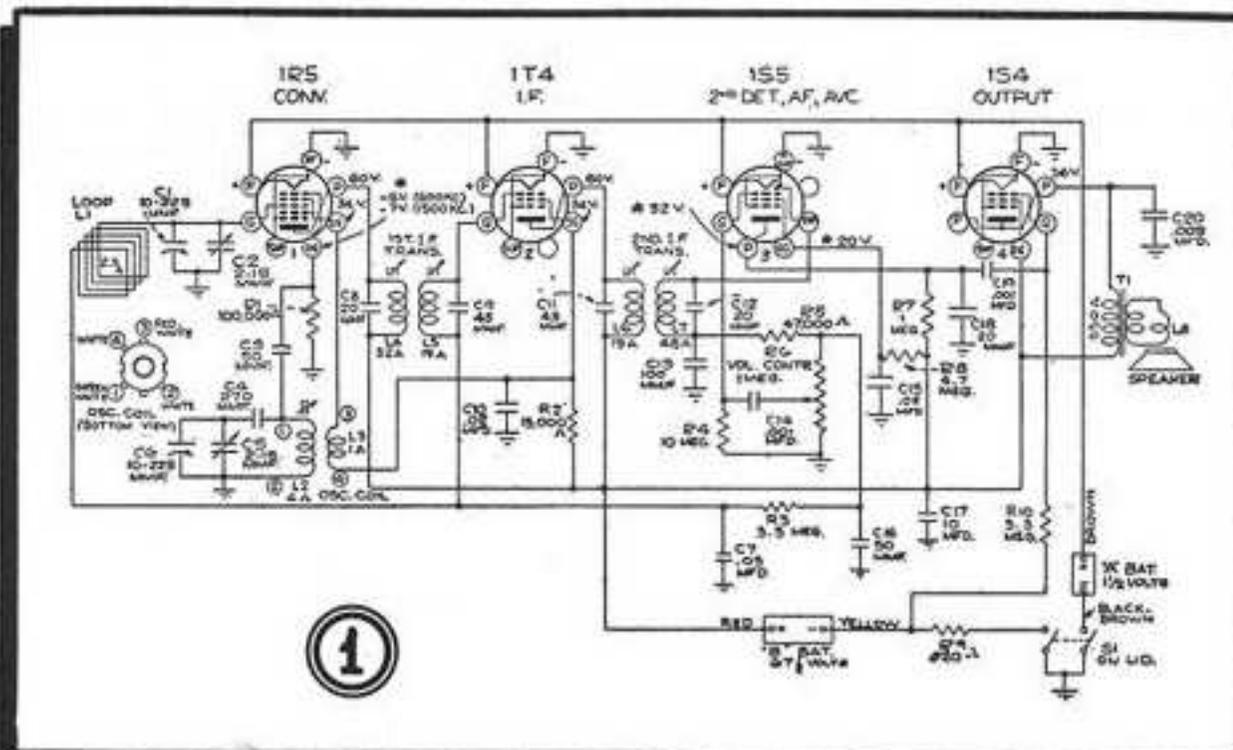
The new two-gang variable condensers are about the same size as a single section of condenser two years ago. Aluminum plates are used (if they can still get it) and very accurate flat stock—it has to be for the spacing is only .008 inch, which is mighty close for a tuning condenser. Both direct drive and an 8:1 reduction drive are used, the reduction being a planetary arrangement of a shaft within a shaft, the balls of the bearing doing the friction driving. This is probably the most difficult commercial condenser ever put out in quantity production.

A brand new line of midget tubular paper condensers was developed expressly for the pocket receivers. These condensers are rated at 120 volts and are smaller in both length and diameter than standard tubulars. Built with two sheets of .0003 paper and foil proportionally thin, a very high grade of workmanship is required for soldering the foil and for other assembly operations.

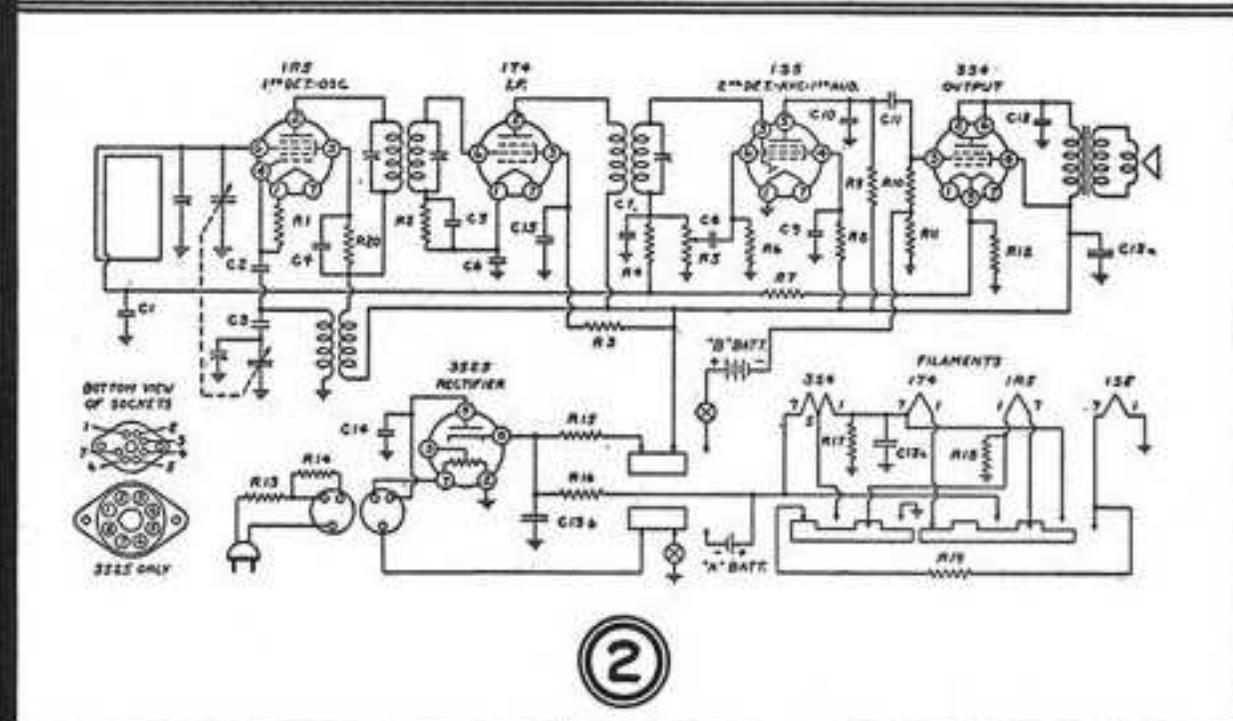
Electrolytics, too, have been shrunk commensurately with other components. A 3-section filter is used in all a-c/d-c battery models consisting of two high-voltage sections of 20-60 mfd, and a low-voltage section of 100-200 mfd for filament bypassing. Etched or fabricated plate types are used having physical dimensions for 3 sections approximating the size of the old type 8-mfd, 450-volt tubular dry electrolytics.

### Batteries

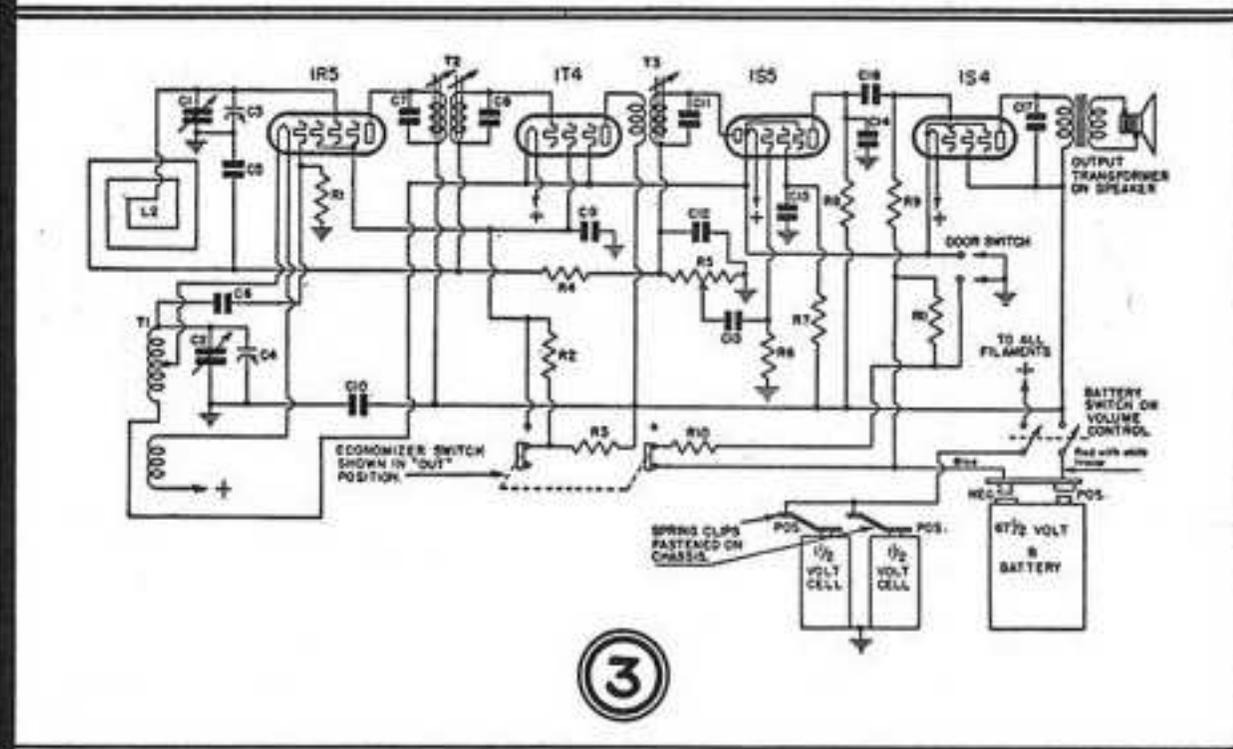
The developments of the Eveready type 467 "B" battery, a midget 67½ volt long life unit known as Mini-Max has been a boon to the industry. The few models not using this battery make use of a standard midget 45-volt battery produced by many manufacturers. The Mini-Max was specifically developed for the 8 to 11 milliamper load and will give from 40 to 60 hours of service under average conditions. From 1 to 5 standard flashlight cells serve as



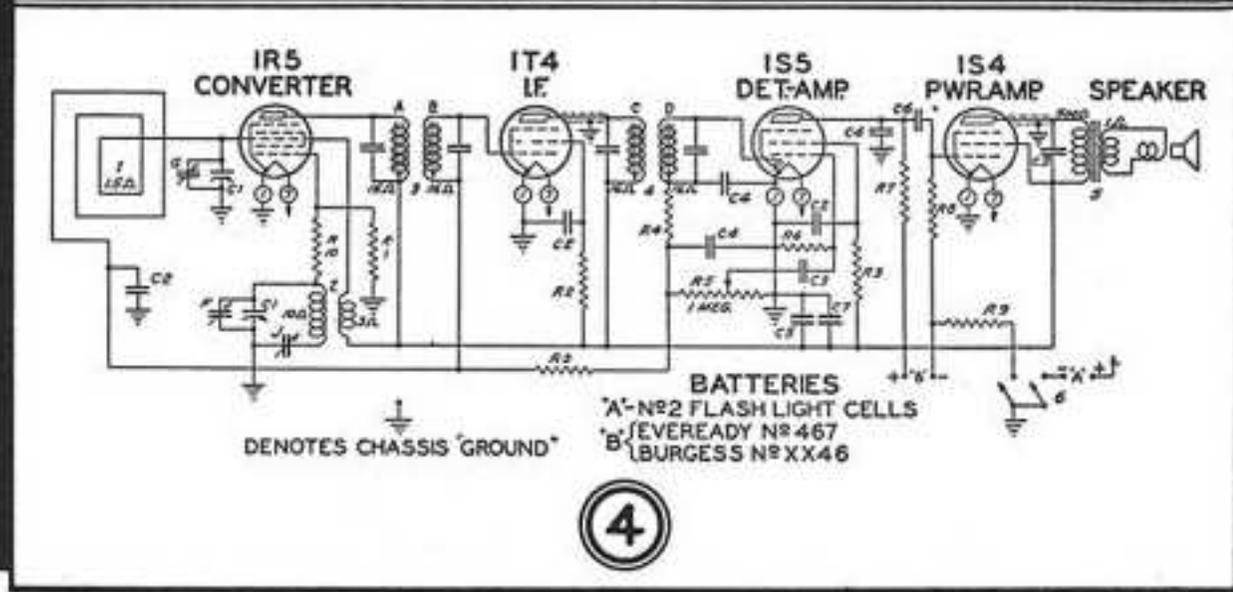
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