

THE POSTWAR RADIOS

Telechron Musalarm

THE new Telechron Musalarm combines the best features of a compact radio and a self-starting electric alarm clock. These features make the set equally useful in the kitchen or in the bedroom. When the alarm is set for a particular time and the receiver is tuned to a favorite radio station, the user may be aroused from deep slumber by the crooning voice of the announcer on the Early Bird program. The Little Woman may want to set the alarm for her favorite soap opera. In this way, she can go about her housework without having to turn on the radio in time for the program.

alarm set to go off in seven to ten minutes after the set has been automatically turned on. This alarm continues to sound until the ALARM SET knob is pressed.

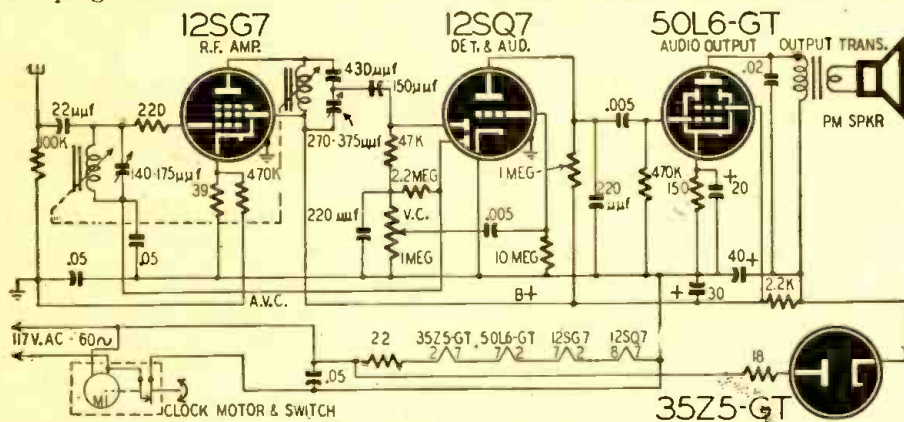
The clock begins to run when the line cord is plugged into a 110 to 120-volt, 60 cycle, a.c. line. If it is desired to have the set turned on in time for a favorite program, the ALARM-OFF-ON switch is turned to the ALARM position and the ALARM SET knob is turned to the program time. The receiver is tuned to the desired station. When the time arrives, the clock movement actuates a switch that turns on the radio. After a

The alarm may be used by merely setting the ALARM SET knob to the desired time. When the time arrives, the alarm will sound with sufficient volume to be heard above the sound of the radio.

A t.r.f. circuit is used in the receiver. A 12SG7 r.f. amplifier is followed by a 12SQ7 diode detector, a.v.c and first a.f. stage. A 50L6-GT power amplifier and a 35Z5-GT rectifier complete the tube line-up.

Permeability tuning is used in the grid and plate circuits of the 12SG7. The set is tuned by sliding the ganged powdered iron cores in or out of the coils. The tuning mechanism is shown in the photos. The grid circuit uses a 140 to 170- μ f trimmer condenser connected across the coil. The plate coil uses a 270 to 275- μ f trimmer connected in series with a 430- μ f fixed condenser. The lead to the detector diode plate is connected at the junction of these two condensers. This type of coupling minimizes the loading effect of the diode, thus improving the selectivity of the circuit. The detector diode load consists of a 47,000-ohm resistor connected in series with a 1-megohm volume control. The a.v.c. diode is connected through a 2.2-megohm resistor to the junction of the volume control and the 47,000-ohm resistor. A.v.c. voltage is applied to the grid circuit of the r.f. amplifier.

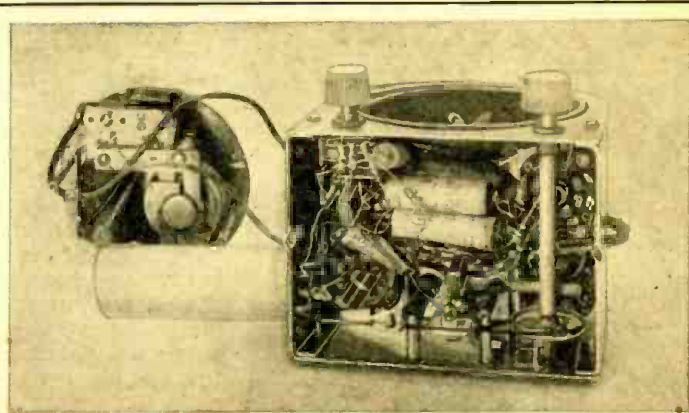
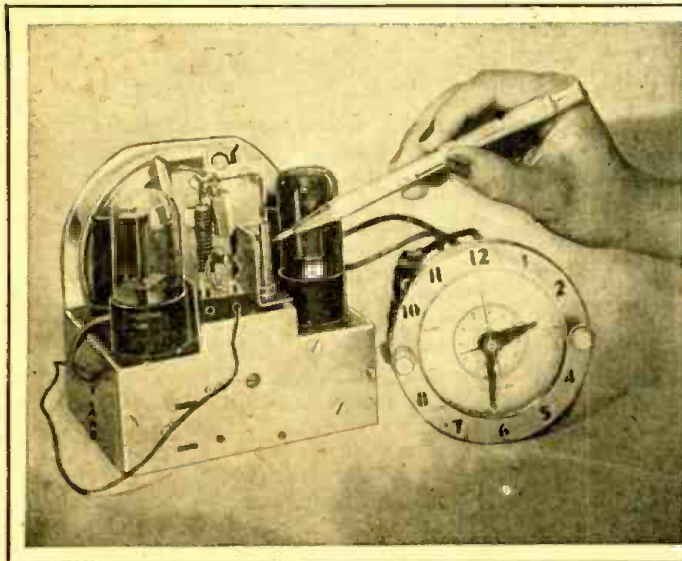
The triode section of the 12SQ7 is a contact-biased first a.f. amplifier resistance-capacity coupled to the 50L6-
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This radio is enclosed in an attractive brown bakelite cabinet, 10 $\frac{1}{4}$ inches wide by 4 $\frac{1}{4}$ inches deep by 5 $\frac{1}{4}$ inches high. A 3 $\frac{1}{2}$ -inch clock, with a Telechron movement, is included in the cabinet. It is equipped with an auxiliary buzzer

short time, the auxiliary alarm sounds, unless the ALARM SET knob is depressed at the time that the adjustment is made.

To operate the radio manually, the ALARM-OFF-ON switch is turned to ON.



Left—Back-chassis view of radio and face view of clock. Bucket-in-the-well permeability tuning device is well shown in this and in under-chassis view above where the tuning shaft and pulley can be seen.

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GT power amplifier stage, which drives a 4-inch PM speaker.

The rectifier is a 35Z5-GT connected in a conventional half wave circuit working into an R-C filter consisting of a 2200-ohm resistor and the 70- μ f capacitor.

The tuning knob, $\frac{3}{4}$ -inch in diameter, is too small for tuning in any but local stations. These cannot be selected with a great degree of accuracy on the tuning dial calibrated at 55, 65, 80, 100, 130, 150 and 160. In each case, the last zero has been omitted so that 130 on the dial indicates the correct setting for receiving a station on 1300 kc.