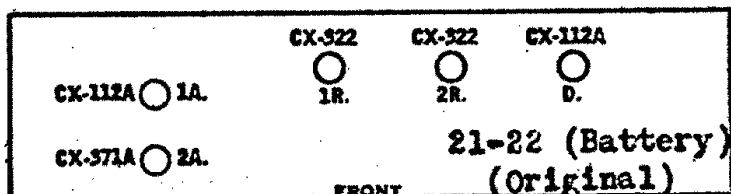


921, 923, 924, 839
(Radiola 21, 22)



Radiolas 21 and 22 are the tuned RF type, using two stages of radio frequency and one tuned antenna stage. The antenna coil has a high impedance primary and for this reason will give most satisfactory performance on an outside aerial of from forty to seventy-five feet long, including Lead-in. A forty foot aerial should be used in congested localities where there is serious interference. In the event it is impossible to install an aerial and lead-in of from forty to seventy-five feet, a longer aerial may be used and a .0005 or .0001 MFD fixed condenser connected in series with the antenna connection to the set.

The volume control consists of a 50,000 Ohm Potentiometer connected in the B+67 Volt lead and controls the screen voltage to the two RF tubes. The on and off switch is of a special type which automatically breaks the A & B connections when snapped in the off position.

Figure No. 1 gives the completed circuit for operation on 6 Volt A supply. Two type 222 tubes are used as radio frequency amplifiers. A 112A detector, a 112A tube in the first audio stage and a 112A or 171A tube in the second audio stage. The two 222's used in the RF stages receive their filament supply of 3.2 Volts through the $6\frac{1}{2}$ Ohm resistor connected in the A negative lead. The detector and first audio are operated at 5 Volts through the 1.95 Ohm filament resistor in the positive A lead. The filament of the power stage is supplied through the 1.55 Ohm filament resistor. A 171A power tube may be used in the power stage with the proper B supply of 180 Volts and $40\frac{1}{2}$ Volts C. A 112A tube using 135 Volts of B and 9 Volts of C is recommended however, for most economical operation.

