



## FL-414, FL-415, FL-416, FL-417, FL-418 and FL-419

R1	20,000 ohm $\frac{1}{4}$ watt carbon resistor.....
R2	10 megohm $\frac{1}{4}$ watt carbon resistor.....
R3	140 ohm $\frac{1}{2}$ watt wire-wound resistor...
R4	3 megohm $\frac{1}{4}$ watt carbon resistor.....
R5	Volume control .5 megohm
R6	15 megohm $\frac{1}{4}$ watt carbon resistor.
R7, R8	500,000 ohm $\frac{1}{4}$ watt carbon resistor
R9	50,000 ohm $\frac{1}{4}$ watt carbon resistor
R10	10,000 ohm $\frac{1}{4}$ watt carbon resistor.....
R11	25,000 ohm $\frac{1}{4}$ watt carbon resistor.....
R12	1 megohm $\frac{1}{4}$ watt carbon resistor.....
C1, C2	Two-gang variable condenser.....
C3, C16	0.002 mf, 600 volt tubular condenser..
C4	0.0002 mf, 600 volt tubular condenser.
C5, C13	0.05 mf, 200 volt tubular condenser.....
C6, C7, C8	Trimmers, part of i-f transformers.
C9	Trimmer and fixed condenser
C10, C11	Trimmers, part of variable condenser.
C12	0.00022 mica condenser.....
C14	0.05 mf, 400 volt tubular condenser....
C15, C19	0.00011 mica condenser.....
C17	0.02 mf, 400 volt tubular condenser....
C18	0.03 mf, 400 volt tubular condenser....
C20, C21	Dual 20 mf, 150 volt dry electrolytic

## Location of Coils and Trimmer Adjustments

The first i-f transformer is mounted on top of the chassis deck to the left of the variable condenser. The trimmers are accessible through holes in the top of the can.

The second i-f transformer is mounted on top of the chassis between the 7B7 tube and the speaker. The trimmers are accessible through holes in the top of the can.

The 455 kc wave-trap is located below the chassis deck.

The trimmers for the antenna and oscillator coils are located on the variable condenser. The trimmer on the front section is for the oscillator coil.

The oscillator coil is located underneath the chassis. The loop antenna acts as the antenna coil.

## VOLTAGE ANALYSIS

Tube	Plate	Screen	Cathode
7B7 (r-f)	18	88	0
12SA7	88	88	0
7B7	88	85	0
12SQ7	30	—	0
50L6GT	82	88	5.6

Voltage at 35Z5GT cathode—120 volts.

Voltage across speaker field—32 volts.

Voltage across pilot light—4.5 volts.