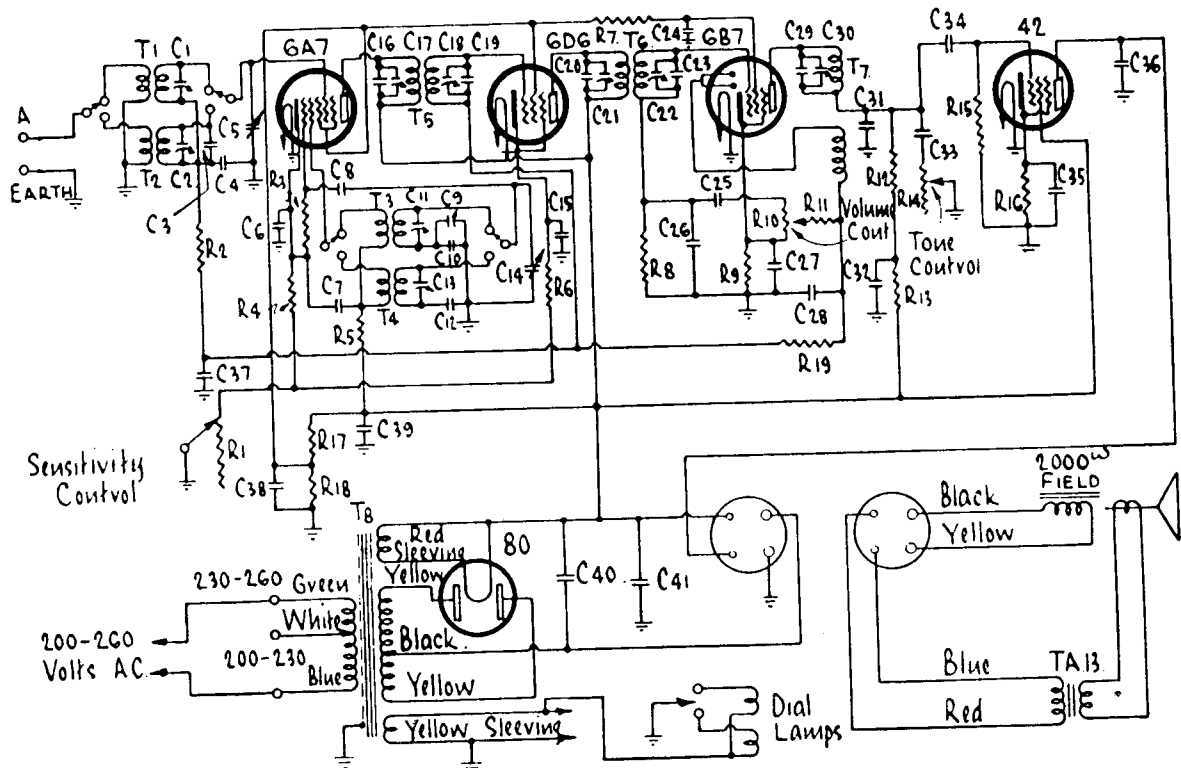


"Radiola" A.C.-Operated Dual-Wave Model 248



COMPONENT VALUES.

Descriptive matter and operating voltages for this model will be found on Page 319.

COILS:

T1, T2 (P.N. 2018)—aerial coil assembly; T3, T4 (P.N. 2019)—osc. coil assembly; T5 (P.N. 1538)—1st I.F. trans., 460 KC.; T6 (P.N. 1539)—2nd I.F. trans., 460 KC.; T7 (P.N. 1540)—3rd I.F. trans., 460 KC.; T8 (P.N.'s 1520, 1521, and 1522)—power transformers for 50 cycles, 40 cycles, or 110 v. operation, respectively.

RESISTORS:

R1 (P.N. 1578)—3,000 ohms variable, noise suppression control; R2, R12—100,000 ohms, 1/3 W.; R3—60,000 ohms, 1/3 W.; R4—800 ohms, 1/3 W.; R5—20,000 ohms, 1/3 W.; R6—900 ohms, 1/3 W.; R7, R13—50,000 ohms, 1/3 W.; R8—500,000 ohms, 1/3 W.; R9—2,000 ohms, 1/3 W.; R10 (P.N. 1668)—300,000 ohms, volume control; R11, R15—300,000 ohms, 1/3 W.; R14 (P.N. 1668)—300,000 ohms, 1/3 W.; R16—400 ohms, 1W.; R17—40,000 ohms, 1W.; R18—20,000 ohms, 1 W.; R19—13 megohms, 1/3 W.

CONDENSERS:

C1, C2, C11, C13—5/20 mmfd. mica trimmers; C3—10 mmfd. mica; C4, C7, C25, C34,

C37—0.05 mfd. paper; C5, C14 (P.N. 1516)—sections of 2-gang variable; C6, C15, C24—0.1 mfd. paper; C8—50 mmfd., mica; C9, C10 (P.N. 1153)—B.C. padder assembly, comprising 10/50 mmfd. mica trimmer and 390 mmfd. mica shunt; C12—2800 mmfd., mica, S.W. padder; C16, C19, C20, C23—120 mmfd., mica; C17, C18, C21, C22, C30—10/50 mmfd. mica trimmers; C26, C28—200 mmfd., mica; C27—5 mfd., 25 v. electro.; C29—130 mmfd., mica; C31—700 mmfd., mica; C32, C39—0.5 mfd., paper; C33—0.01 mfd., paper; C35—25 mfd., 25 v., electro.; C36—0.005 mfd., paper; C38—three tubular paper units (two 0.1 mfd., and one 0.25 mfd.) placed at various points on the screen supply line; C40, C41 (P.N. 1571)—8 mfd., 500 v., electros, housed in one case.

"Radiola" Model 248

Circuit diagram and component values for this model will be found on page 316.

Radiola model "248" is a five-valve receiver designed for dual-wave coverage and operation from 200-260 volts A.C. mains. This receiver is of the console type and is fitted with five controls, these being for sensitivity (continuous), volume, tuning (with automatic reverse-type vernier), wave-change, and tone (continuous). The loudspeaker employed is an 8-inch unit with a field coil resistance of 2,000 ohms.

The circuit arrangement of this receiver is basically the same as that of Radiolette model "33" (see page 312) but several refinements are incorporated, such as a continuously-operating sensitivity control (R1) and a tone control. In addition, more extensive interstage decoupling is incorporated and a power transformer with a larger H.T. secondary is employed; the extra voltage from the latter is used to provide additional loudspeaker field energisation.

OPERATING VOLTAGES.

The following measurements were made, under "no signal" conditions, with a "1,000 ohms per volt" meter between chassis and the socket contact indicated. Care should be taken to see that the sensitivity control is adjusted to its

maximum position when these voltages are being checked.

6A7, Frequency Converter: Plate, 245 v.; screen, 50 v.; cathode, 3 v.; osc. anode grid, 175 v. Plate current, 1.5 mA.; osc. anode current, 3 mA.

6D6, 460 KC. 1st I.F. Amplifier: Plate, 245 v.; screen, 50 v.; cathode, 3 v. Plate current, 3 mA.

6B7, 2nd I.F. Amplifier, Detector, A.V.C. Rectifier and A.F. Amplifier: Plate, 60 v.; screen, 30 v.; cathode, 1.5 v. Plate current, 1 mA.

42, Output Pentode: Plate, 230 v.; screen, 245 v.; cathode, 14.5 v. Plate current, 30 mA.

80, Rectifier: Each plate, 315 v. r.m.s. A.C. Total output current, 50 mA.

Voltage Drop across L.S. field, 100 volts.