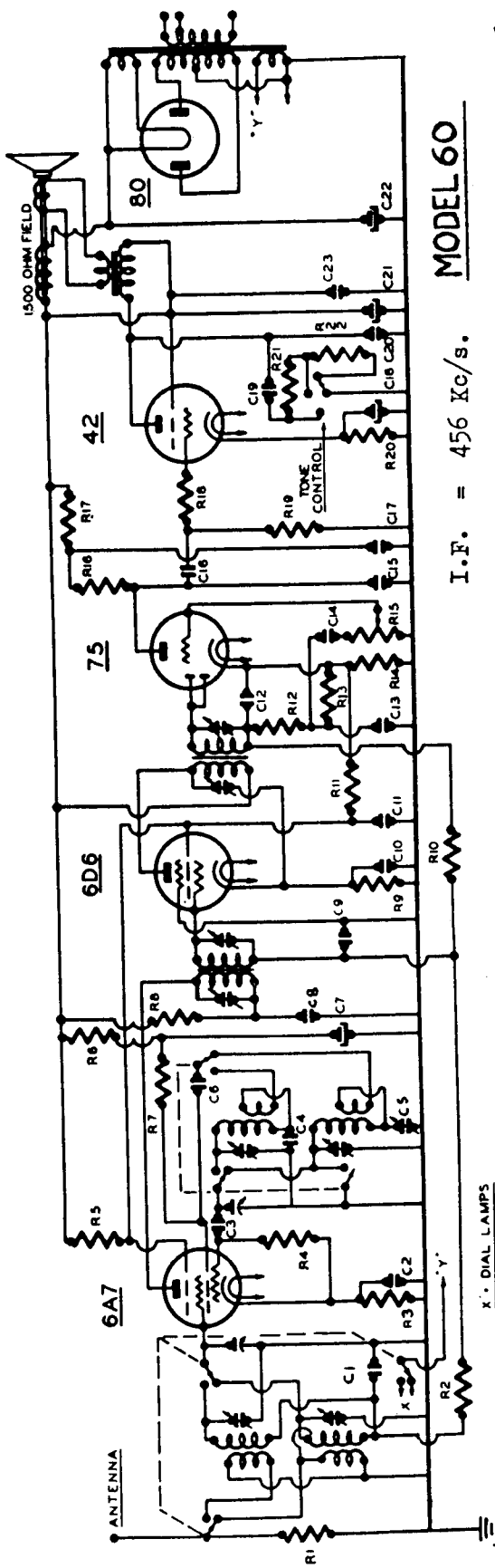


"Mullard" A.C. Operated Dual-wave Model 60



MODEL 60

I.F. = 456 Kc/s.

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|-----|---------------------|-----|--------|-----|-----|-----|-----|
| C1 | .05 µf 400V. Paper | R1 | 10 K.Ω | R12 | 50 | 50 | K.Ω |
| C2 | .02 µf 400V. Paper | R2 | 1 M.Ω | R13 | .25 | .25 | M.Ω |
| C3 | 50 µpf mica | R3 | 400 Ω | R14 | 200 | 200 | M.Ω |
| C4 | 3100 µpf 1% | R4 | 50 K.Ω | R15 | .5 | .5 | M.Ω |
| C5 | Adj. padder 5 Plate | R5 | 10 K.Ω | R16 | .25 | .25 | M.Ω |
| C6 | 500 µpf mica | R6 | 5 K.Ω | R17 | 50 | 50 | K.Ω |
| C7 | 8 pf elect. 450V.W. | R7 | 10 K.Ω | R18 | 50 | 50 | K.Ω |
| C8 | .1 µf 400V. Paper | R8 | 5 K.Ω | R19 | 5 | 5 | M.Ω |
| C9 | .05 µf 400V. Paper | R9 | 400 Ω | R20 | 460 | 460 | K.Ω |
| C10 | .2 µf 400V. Paper | R10 | 1 M.Ω | R21 | 5 | 5 | K.Ω |
| C11 | .1 µf 400V. Paper | R11 | 20 K.Ω | R22 | 15 | 15 | K.Ω |
| C12 | 100 µpf mica | | | | | | |
| C13 | .02 µf 400V. Paper | | | | | | |
| C14 | .250 µpf mica | | | | | | |
| C15 | .02 µf 400V. Paper | | | | | | |
| C16 | .5 pf 400V. Paper | | | | | | |
| C17 | 10 pf elect. 25V.W. | | | | | | |
| C18 | .05 pf 400V. Paper | | | | | | |
| C19 | 5000 µpf mica | | | | | | |
| C20 | 8 pf elect. 440V.W. | | | | | | |
| C21 | 8 pf elect. 450V.W. | | | | | | |
| C22 | .1 µf 400V. Paper | | | | | | |
| C23 | 100 µpf mica | | | | | | |

Mullard model "60" is a five-valve receiver designed for dual-wave coverage and operation from 200-250 volts A.C. mains. This receiver is housed in a moulded cabinet of the mantel type, and is fitted with four controls—volume, tuning, wave-change (with wave-band indication by dial-scale illumination), and tone (3 positions). The loudspeaker fitted to this receiver is a 6½ inch unit with a field coil resistance of 1,500 ohms.

The design of this receiver is quite conventional and circuit analysis should present no particular difficulty. Points to watch are the shunt-fed oscillator feed-back system; the section of the wave-change switch which short-circuits the broadcast oscillator grid coil when the receiver is adjusted for S.W. operation; and the bleed bias system for the type 75 triode section.

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. The receiver was operated on an A.C. supply of 240 volts, corresponding to a connection to the red tapping on the power transformer primary. The yellow tapping should be used if the supply voltage is between 200 and 230 volts.

6A7, Frequency Converter: Plate, 185 v.; screen, 90 v.; cathode, 4 v.; osc. anode grid, 110 v. Plate current, 3.5 mA.

6D6, 456 KC. I.F. Amplifier: Plate, 205 v.; screen, 90 v.; cathode, 3 v. Plate current, 6.5 mA.

75, Detector, A.V.C. Rectifier, and A.F. Amplifier: Plate, 70 v.; cathode, 1 v. Plate current, 0.35 mA.

42, Output Pentode: Plate, 195 v.; screen, 205 v.; cathode, 13 v. Plate current, 24 mA.

80, Rectifier: Each plate, 300 v. r.m.s., A.C. Total D.C. output voltage, 300 v.

Voltage Drop across Loudspeaker Field: 95 volts.