Radiola Models 161B and 161V

ELECTRICAL SPECIFICATIONS.

Battery Complement (161B)

Accumulator "A" Battery	2 volts (.78 amps)
"B" battery	135 volts
"C" battery	4½ volts bias.

Battery Complement (161V)

Accumulator "A" Battery	6 volts (1.2 amps)
"C" battery	4½ volts bias.
Tuning Range	1500-550 K.C.
Intermediate Frequency	460 K.C.

VALVES AND CIRCUITS.

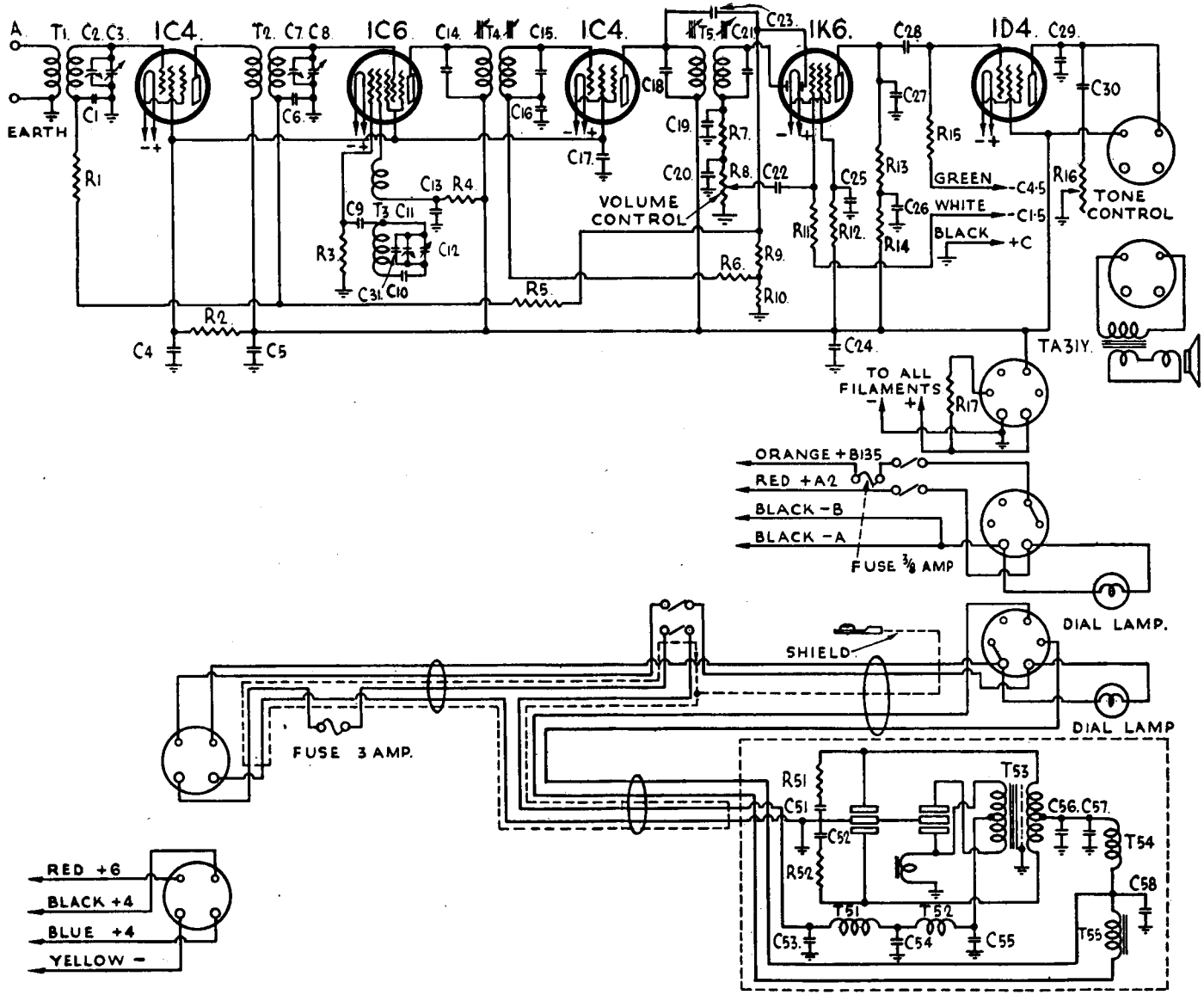
1C4	R.F. Amplifier
1C6	Detector-Oscillator.
1C4	I.F. Amplifier.
1K6	Detector, A.V.C. and Audio Amplifier.
1D4	Output Pentode.

SOCKET VOLTAGES.

VALVE	Chassis to Control Grid Volts	Chassis to Screen Grid Volts	Chassis to Plate Volts	Plate Current M.A.	Filament Volts
1C4 R.F. Amplifier	0	45	135	1.3	2.0
1C6 Detector	0	45	135	1.0	2.0
Oscillator	—	—	65	1.5	—
1C4 I.F. Amplifier	0	45	135	1.3	2.0
1K6 Detector	*1.5	*35	*50	.25	2.0
1D4 Output Pentode	*4.5	135	130	6.0	2.0

Measured with controls in maximum clockwise position. No signal input

* Cannot be measured with ordinary voltmeter.


A.
T1. C2. C3.
1C4.
T2. C7. C8
1C6.
C14.
T4.
C15.
1C4.
T5.
C21.
C23.
1K6.
C28.
1D4.
C29.
EARTH
C1.
C6.
C16.
C18.
C19.
R7.
C20.
R8.
C22.
C25.
R13.
C27.
R15.
C30.
R16.
TONE CONTROL
GREEN
C4·5
WHITE
C1·5
BLACK
+C
C26.
R11.
R12.
R14.
R1.
C13. R4.
C9. T3. C11.
R3.
C12.
C31. C10.
VOLUME CONTROL
R9.
R6.
R10.
R5.
R2.
C4.
C5.
C24.
TA31Y.
TO ALL FILAMENTS
R17.
ORANGE +B135
RED +A2
BLACK -B
BLACK -A
FUSE 3/8 AMP
DIAL LAMP.
SHIELD
DIAL LAMP
FUSE 3 AMP.
R51
C51
T53
C56. C57.
T54
C52
R52
C58
T51
T52
T55
C53.
C54
C55
RED +6
BLACK +4
BLUE +4
YELLOW -

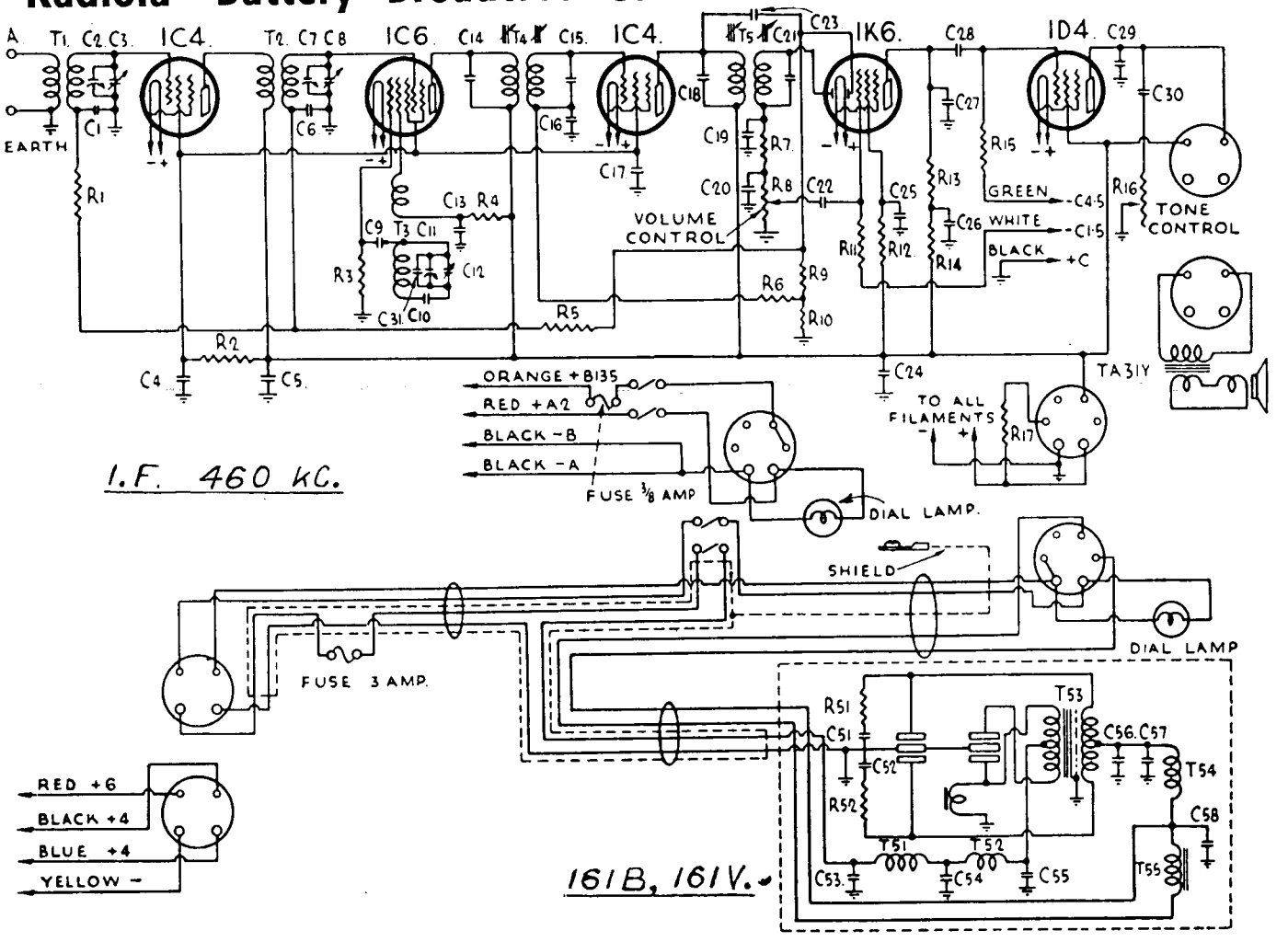
Code	Part No.	COILS — RECEIVER UNIT
T1	3245	Aerial Coil
T2	3247	R.F. Coil
T3	3246	Osc. Coil
T4	3243	1st I.F. Transformer
T5	3244	2nd I.F. Transformer
		COILS — POWER UNIT
T51	3149	R.F. Choke
T52	3294	R.F. Choke
T53	3290	Vibrator Transformer 4V
T54	3303	R.F. Choke
T55	3292	Smoothing Choke
		RESISTORS — RECEIVER UNIT
R1		100,000 ohms, ⅓ watt
R2		100,000 ohms, ⅓ watt
R3		60,000 ohms, ⅓ watt
R4		50,000 ohms, ⅓ watt
R5		1¼ Megohms, ⅓ watt
R6		1¼ Megohms, ⅓ watt
R7		100,000 ohms, ⅓ watt
R8	1507	500,000 ohms, Vol. Control
R9		1 Megohm, ⅓ watt
R10		250,000 ohms, ⅓ watt
R11		1¼ Megohms, ⅓ watt
R12		1 Megohm, ⅓ watt

Code	Part No.	RESISTORS — RECEIVER UNIT
R13		200,000 ohms, ⅓ watt
R14		50,000 ohms, ⅓ watt
R15		500,000 ohms, ⅓ watt
R16	2762	100,000 ohms, Tone Control
R17	3270	5.4 ohms, wire wound
		RESISTORS — POWER UNIT
R51	2762	50 ohms, ⅓ watt
R52	3270	50 ohms, ⅓ watt
		CONDENSERS — RECEIVER UNIT
C1		.05 mfd. Paper
C2		10-50 mmfd. Mica Trimmer
C3	3274	Variable Condenser
C4		.1 mfd. Paper
C5		.5 mfd. Paper
C6		.05 mfd. Paper
C7		10-50 mmfd. Mica Trimmer
C8	3274	Variable Condenser
C9		50 mmfd. Mica (D)
C10		380 mmfd. Mica Padding
C11		10-50 mmfd. Mica Trimmer
C12	3274	Variable Condenser
C13		.1 mfd. Paper
C14		115 mmfd. Mica (A)

Code	Part No.	CONDENSERS — RECEIVER UNIT
C15		115 mmfd. Mica (A)
C16		.05 mfd. Paper
C17		.1 mfd. Paper
C18		115 mmfd. Mica (A)
C19		100 mmfd. Mica (G)
C20		100 mmfd. Mica (G)
C21		115 mmfd. Mica (A)
C22		.05 mfd. Paper
C23		700 mmfd. Mica
C24		8 mfd. 500V Electrolytic
C25		.1 mfd. Paper
C26		.5 mfd. Paper
C27		200 mmfd. Mica (J)
C28		.05 mfd. Paper
C29		2300 mmfd. Mica
C30		.035 mfd. Paper
C31		15 mmfd. Mica (C)
		CONDENSERS — POWER UNIT
C51		.02 mfd. Paper
C52		.02 mfd. Paper
C53		.1 mfd. Paper
C54		.25 mfd. Paper
C55		.25 mfd. Paper
C56		8 mfd. 500V Electrolytic
C57		.02 mfd. Paper
C58		.5 mfd. Paper

RADIOLAS 161B AND 161V CIRCUIT DATA

"Radiola" Battery Broadcast Console Models 161B and 161V



RADIOLA "161B"

1937 BATTERY-OPERATED CONSOLE

RADIOLA "161B"

1937 VIBRATOR-POWERED CONSOLE

Both use 8-inch permag. loudspeaker. These models employ the same basic chassis and are readily interchangeable by use of appropriate power supply cable. Note use of tapped 6-volt battery for "vibrator" operation and retention of tapped bias battery.

COMPONENT VALUES.

The numbers in parenthesis following component indices are manufacturer's part numbers.

RESISTORS.

R1, R2, R7—100,000 ohms, ½ W.; **R3**—60,000 ohms, ½ W.; **R4, R14**—50,000 ohms, ½ W.; **R5, R6, R11**—1.75 megohms, ½ W.; **R8** (1507)—500,000 ohms, volume control; **R9, R12**—1 megohm, ½ W.; **R10**—250,000 ohms, ½ W.; **R13**—200,000 ohms, ½ W.; **R15**—500,000 ohms, ½ W.; **R16** (2762)—100,000 ohms, variable, tone control; **R17** (3270)—5.4 ohms, w.w.; **R51, R52**—50 ohms, ½ W.

CONDENSERS.

C1, C6, C16, C22, C28—0.05 mfd., paper; **C2, C7, C11**—10/50 mmfd., mica, coil trimmers; **C3, C8, C12** (3274)—sections of 3-gang variable; **C4, C13, C17, C25, C53**—0.1 mfd., paper; **C5, C26, C58**—0.5 mfd., paper; **C9**—50 mmfd. (D) mica; **C10**—380 mmfd., mica, padder; **C14, C15, C18, C21**—115 mmfd. (A), mica, I.F.T. fixed trimmers; **C19, C20**—100 mmfd. (G), mica; **C23**—700 mmfd., mica; **C24, C56**—8 mfd., high voltage, electro.; **C27**—200 mmfd. (J), mica; **C29**—2,300 mmfd., mica; **C30**—0.035 mfd., paper; **C31**—15 mmfd. (C), mica, osc. coil trimmer shunt; **C51, C52, C57**—0.02 mfd., paper; **C54, C55**—0.25 mfd., paper.

COILS, ETC.

T1 (3245)—aer. coil; **T2** (3247)—R.F. coil; **T3** (3246)—osc. coil; **T4** (3243)—1st I.F. transformer, 460 kC.; **T5** (3244)—2nd I.F. transformer, 460 kC.; **T51** (3149)—low-tension R.F. choke; **T52** (3294)—low-tension R.F. choke; **T53** (3290)—vibrator transformer; **T54** (3303)—high-tension R.F. choke; **T55** (3292)—high-tension filter choke.

OPERATING VOLTAGES.

The following measurements were made with a "1,000 ohms per volt" meter, and voltages are those existing between the socket contact indicated and chassis, except where otherwise stated. The receiver was operating under "no signal" conditions with all controls in their maximum clockwise position. Grid voltages were measured at their source, and not at the socket contacts.

1C4, R-F. Amplifier: Plate, 135 v.; screen, 45 v.; grid, zero (A.V.C. applied). Plate current, 1.5 mA.

1C6, Frequency Converter: Plate, 135 v.; screen, 45 v.; grid, zero (A.V.C. applied); osc. anode grid, 65 v. Plate current, 1 mA.

1C4, 460 kC., I.F. Amplifier: Plate, 135 v.; screen, 45 v.; grid, zero (A.V.C. applied). Plate current, 1.5 mA.

1K6, Detector, A.V.C. Rectifier and A.F. Voltage Amplifier: Plate, 50 v.; screen, 35 v.; grid, —1.5 v. Plate current, 0.3 mA.

1D4, Output Pentode: Plate, 130 v.; screen, 135 v.; grid, —4.5 v. Plate current, 6 mA.

"A" battery drain, 0.8 amperes at 2 v. (model 161B), 1.2 amperes at 6 v. (model 161V.); "B" battery drain, 15 mA. at 135 v. (model 161B).