

MODELS 141 & 144

CANADIAN MARCONI COMPANY

SERVICE DATA FOR MODELS 141-144

CIRCUIT

Eight tube A.C. operated multi-wave superheterodyne incorporating the following features. Six button automatic tuning, full A.V.C., automatic tone compensation and permeability tuned I.F. transformers.

FREQUENCY RANGE

Broadcast Band.....530-1725 K.C.
Medium Wave Band.....5.5-13.5 M.C.
Short Wave Band.....13.4-22.4 M.C.

POWER OUTPUT

Undistorted.....4.5 watts
Maximum.....8 watts

A.C. POWER CONSUMPTION

115 Volts 60 Cycle Model.....80 watts
115 Volts 25 Cycle Model.....81 watts

LOUDSPEAKER DATA

Cone.....12" Dynamic
Field Current.....92 M.A.
Field Resistance.....650 Ohms
Voice Coil Impedance.....5.19 Ohms

D.C. RESISTANCE OF INDUCTORS

Primary of 1st I.F. Transformer #67647.....7 Ohms
Secondary of 1st I.F. Transformer #67647.....10 Ohms
Primary of 2nd I.F. Transformer #67648.....10 ohms
Secondary of 2nd I.F. Transformer #67648.....7 Ohms
Primary of Output Transformer.....165 Ohms

VOLTAGE READINGS SOCKET PIN TO CHASSIS

TUBE	CAP	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8
6A8	+	0	0	250	105	-8	215	6.3 AC	0
6K7	+	0	0	250	105	0	-	6.3 AC	0
6H6	-	0	0	0	0	0	++250	6.3 AC	0
6F5	+	0	0	-	125	-	-	6.3 AC	0
6F6	-	0	0	245	250	-16	-	6.3 AC	0
6F6	-	0	0	245	250	-16	-	6.3 AC	0
5Y4G	-	-	-	310 AC	-	310 AC	-	300	300

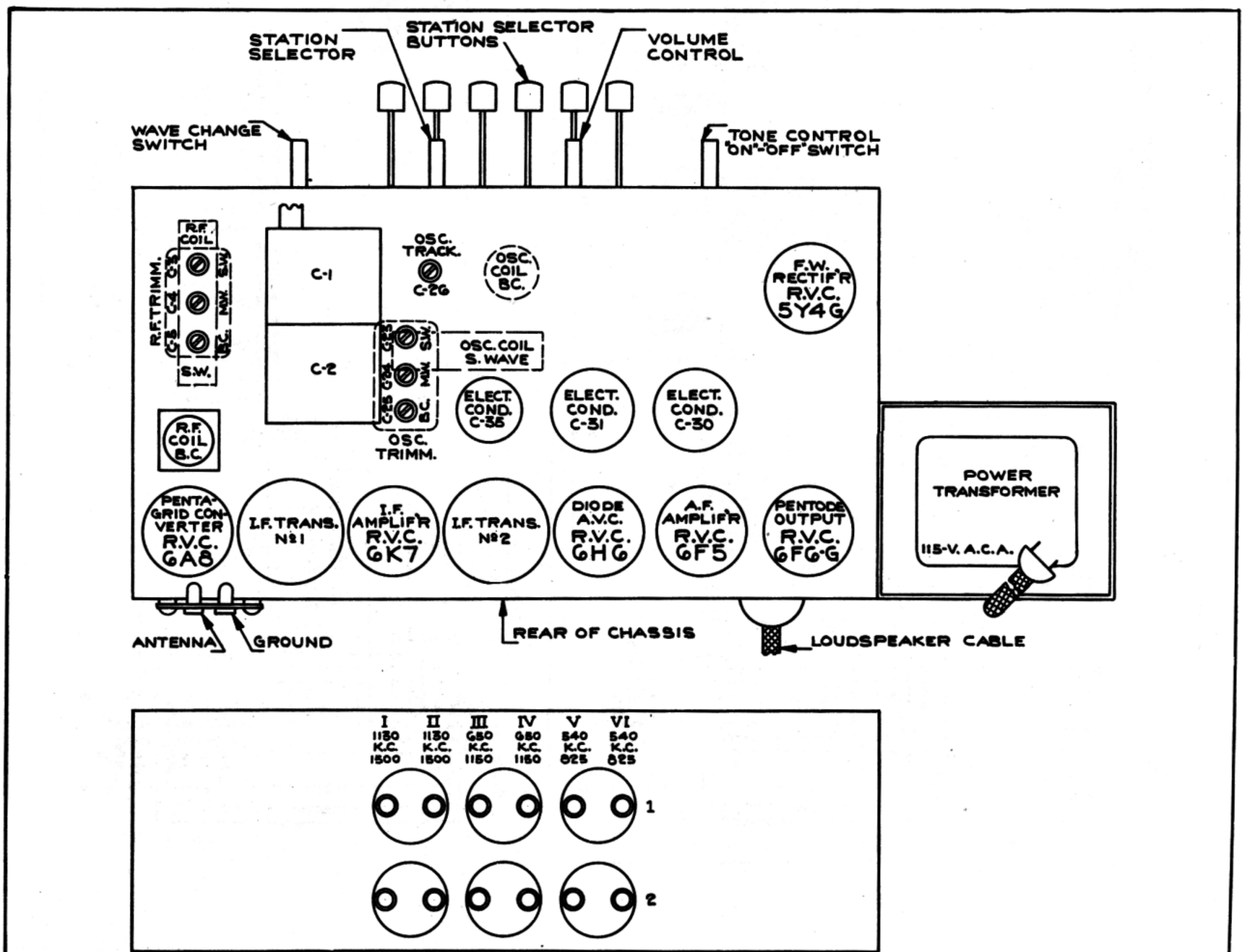
+ Bias Cell

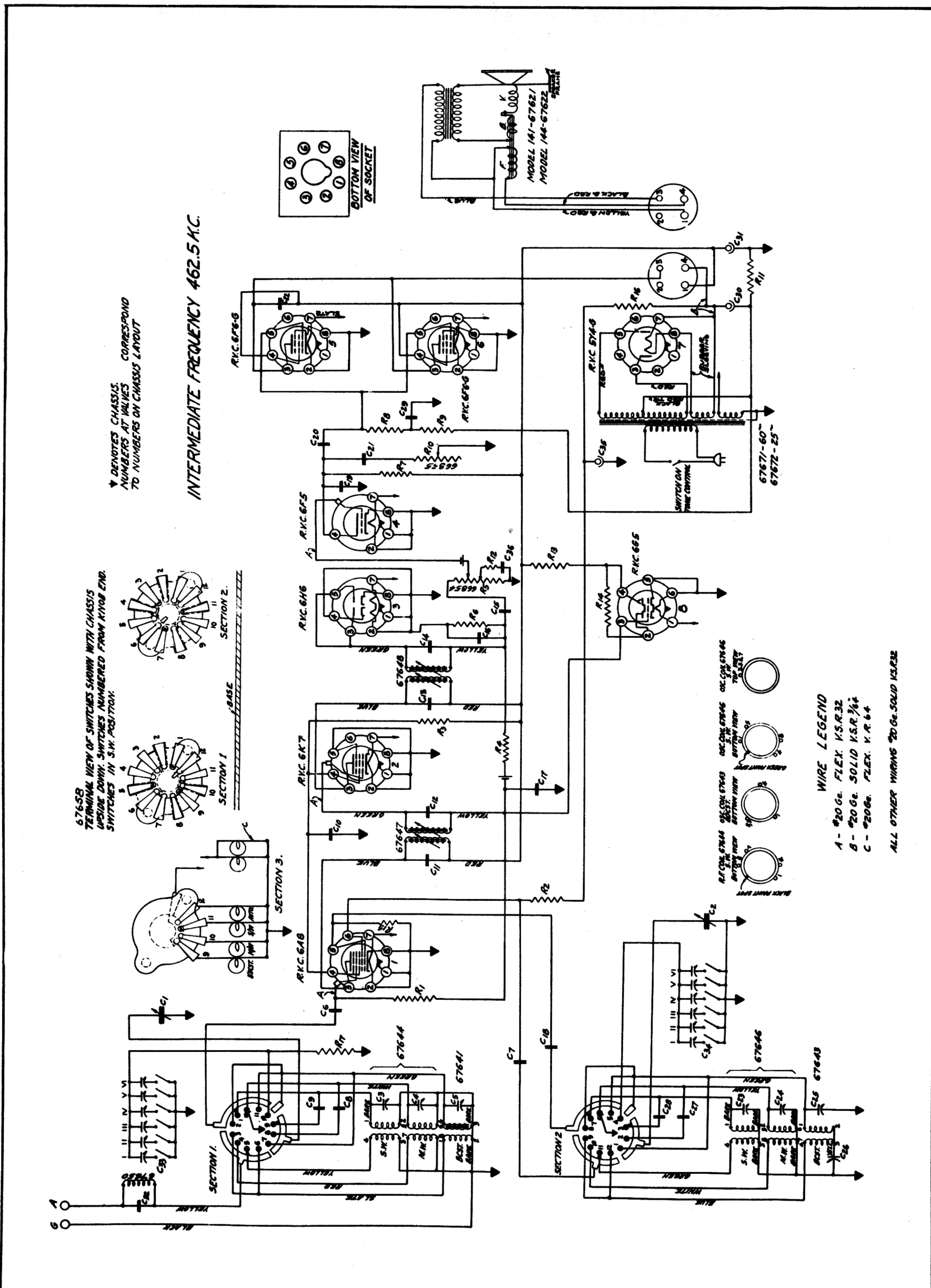
++ Anchoring Lug.

RADIOTRON

FUNCTION

R.V.C. 6A8.....Mixer Oscillator
R.V.C. 6K7.....I.F. Amplifier
R.V.C. 6H6.....Diode Det. & A.V.C.
R.V.C. 6F5.....A.F. Amplifier
R.V.C. 6F6G.....Pentode Output
R.V.C. 6F6G.....Pentode Output
R.V.C. 5Y4G.....Full Wave Rectifier
R.V.C. 6G5.....Tuning Indicator





ALIGNMENT PROCEDURE FOR MODELS 141-144

BAND SW. SETTING	CONNECT S.G. TO	INPUT FREQ.	DIAL SETTING	ADJUST TRIMMER	TRIMMER FUNCTION	ADJUSTMENT REMARKS
* BC BAND	CAP OF 6A8	462.5 KC		BOTTOM & TOP ALIGNERS ON NO. 2 & NO. 1 IF's IN ORDER		MAXIMUM OUTPUT
** BC BAND	A & G TERM.	1600 KC	1600 KC	C25	OSC.	ADJUST TO TUNE SIGNAL
BC BAND	A & G TERM.	1600 KC	1600 KC	C5	R.F.	ADJUST FOR MAX. OUTPUT
BC BAND	A & G TERM.	580 KC	580 KC	C26	OSC.PADDER	ADJUST & ROCK GANG
MED.WAVE	A & G TERM.	12 MC	12 MC	C24	OSC.	ADJUST TO TUNE SIGNAL
MED.WAVE	A & G TERM.	12 MC	12 MC	C4	R.F.	ADJUST FOR MAX. OUTPUT
SHORT WAVE	A & G TERM.	21 MC	21 MC	C23	OSC.	ADJUST TO TUNE SIGNAL
SHORT WAVE	A & G TERM.	21 MC	21 MC	C3	R.F.	ADJUST FOR MAX. OUTPUT

* I.F.ALIGNMENT - Short oscillator section of gang capacitor through a 0.1 mfd capacitor. For VISUAL ALIGNMENT the oscillograph should connect between the bus-wire lead protruding through the chassis base alongside the 6H6 tube and chassis. Adjust for overlapping double image of maximum amplitude.

** R.F.ALIGNMENT - Check setting of dial indicator before proceeding with R.F. alignment. With gang at maximum, edge of pointer should be set at last mark at extreme left of dial.

PARTS LIST

PART NO.	DESCRIPTION
67632	Automatic Tuning Unit (Complete).....
66834	Base Plate.....
66835	Base Plate Insulation.....
67604	Cabinet Model 141.....
67605	Cabinet Model 144.....
1½	Volt Cell (Grid Bias).....
67630	Chassis Assy.....
67621A	Coil (Speaker Field Model 141).....
67622A	Coil (Speaker Field Model 144).....
67641	Coil Assy. (B.C.-R.F.).....
67644	Coil Assy. (S.W.-R.F.).....
67643	Coil Assy. (B.C.-Osc.).....
67646	Coil Assy. (S.W.-Osc.).....
67650	Coil Assy. (Wave Trap).....
67621B	Cone & Voice Coil Assy. Mk. 141.....
67622B	Cone & Voice Coil Assy. Mk. 144.....
66854	Control (Volume).....
66855	Control (Tone & on-off Switch).....
66860	Dial & Drive Assy. (See separate list of parts).....
66815	Escutcheon (Auto.-Tuning).....
66616	Escutcheon (For Dial).....
67308	Holder for Bias Cell.....
66690	Indicator (Automatic).....
66824	Knob (Tone Control).....
66825	Knob (used on station selector & Vol. control).....
66826	Knob (Wave-Band Switch).....

PARTS LIST-Cont'd.

PART NO.	DESCRIPTION
67621	Loudspeaker Model 141.....
67622	Loudspeaker Model 144.....
6-8	V. Pilot Lamp (Bayonet Base).....
67656	Receptacle Assy. (6G5).....
67658	Switch (Wave Band).....
66864	Switch (Manual-Auto.).....
65816	Tabs (Crystal to Cover Station Tabs)
65817	Tabs (Canadian Station List).....
65818	Tabs (American Station List).....
67621C	Transformer Output (Model 141).....
67622C	Transformer Output (Model 144).....
67647	Transformer I.F. No.1.....
67648	Transformer I.F. No.2.....
67671	Transformer Power 60 Cycle.....
67672	Transformer Power 25 Cycle.....
67135	Terminal A & G.....

PARTS FOR DIAL & DRIVE ASSEMBLY

66870	Dial.....
#2	Drive Cord (5'2" Required)....
66907	Indicator (Wave Band).....
66863	Plate Assy. (Dial Mtg.).....
66678	Pointer.....
66502	Pulley (Idler) 2 required.....
66466	Pulley Assy. (4½" diameter).....
66866	Shaft (Station Selector).....
65165	Spring Assy. (Dial Mtg.).....
65179	Spring (Drive Cord Tension).....

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CAPACITORS

REF.	DESCRIPTION	TYPE NO.
C1	10-490 MMF } 2 Gang Variable	66862
C2	10-490 MMF }	
C3	3-30 MMF }	
C4	3-30 MMF } R.F. Trimmer Assy.	66086
C5	3-30 MMF }	
C6	350 MMF ± 10% Moulded Mica	
C7	250 MMF ± 10% Moulded Mica	
C8	635 MMF ± 2½% Low Loss Type	
C9	110 MMF ± 2½% Low Loss Type	
C10	0.1 MFD 400 V. Rolled Paper Type	
C11	220 MMF ± 2½% Low Loss Type	
C12	130 MMF ± 2½% Low Loss Type	
C13	120 MMF ± 2½% Low Loss Type	
C14	230 MMF ± 2½% Low Loss Type	
C15	0.02 MFD 600 V. Rolled Paper Type	
C16	100 MMF ± 10% Moulded Mica	
C17	0.05 MFD 200 V. Rolled Paper Type	
C18	250 MMF ± 10% Moulded Mica	
C19	250 MMF ± 10% Moulded Mica	
C20	0.02 MFD 600 V. Rolled Paper Type	
C21	0.02 MFD 600 V. Rolled Paper Type	
C22	0.01 MFD 600 V. Rolled Paper Type	
C23	3-30 MMF }	
C24	3-30 MMF } Osc. Trimmer Assy.	66086
C25	3-30 MMF }	
C26	300-650 MMF Osc. Padder	66874
C27	487 MMF ± 2½% Moulded Mica	
C28	102 MMF ± 2½% Moulded Mica	
C29	0.05 MFD 200 V. Rolled Paper Type	
C30	26 MFD 400 WV.) 450 PV.) Wet Electrolytic	
C31	26 MFD 250 WV.) 310 RV.) Wet Electrolytic	

CAPACITORS-Cont'd.

REF.	DESCRIPTION	TYPE NO.
C32	500 MMF ± 2½% Moulded Mica	
C33-34	I 7-50 MMF } II 7-50 MMF } Adjustable	66274
C33-34	III 40-200 MMF } IV 40-200 MMF } Adjustable	66276
C33-34	V 180-500 MMF } VI 180-500 MMF } Adjustable	66277
C35	8 MFD 400 WV.) 450 PV.) Wet Electrolytic	
C36	0.005 MFD 200 V. Rolled Paper Type	

RESISTORS

REF.	RESISTANCE	RATING	PART NO.
R1	1 Meg ohm	½ Watt	
R2	10,000 ohm	½ Watt	
R3	25,000 ohm	1 Watt	
R4	1 Meg ohm	½ Watt	
R5	1 Meg ohm	Volume control	66854
R6	300,000 ohm	½ Watt	
R7	250,000 ohm	½ Watt	
R8	250,000 ohm	½ Watt	
R9	100,000 ohm	½ Watt	
R10	1 Meg ohm	Tone Control	66855
R11	230 ohm	2 Watt	
R12	15,000 ohm	½ Watt	
R13	50,000 ohm	½ Watt	
R14	500,000 ohm	½ Watt	
R15	25,000 ohm	½ Watt	
R16	10,000 ohm	½ Watt	
R17	50,000 ohm	½ Watt	

World famous Marconi performance
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