

Models C800, C800A, C801, C801A

Radio Receivers

Specifications

Frequency Range:

Low Frequency—Purple: 190 to 410 K.C.
Broadcast—Buff: 540 to 1700 K.C.
Shortwave—Green: 1.7 to 5.5 megacycles.
Shortwave—Red: 5.5 to 22 megacycles.

I.F.:

465 K.C.

Tubes:

Type	Function
6K7	R.F. Amplifier
6A8	1st Detector and Oscillator
6K7	I.F. Amplifier
6H6	2nd Detector
6F5	1st A.F. Amplifier
6F6	Output
6F6	Output
80	Rectifier

Power Supply:

Models C800, C801—105 to 125 volts A.C.,
60 cycles.
Models C800A, C801A—105 to 125 volts A.C.,
25 cycles.

A.V.C.:

Applied on tubes type 6K7, R.F.; 6A8, 1st
Detector; 6K7, I.F. Amplifier.

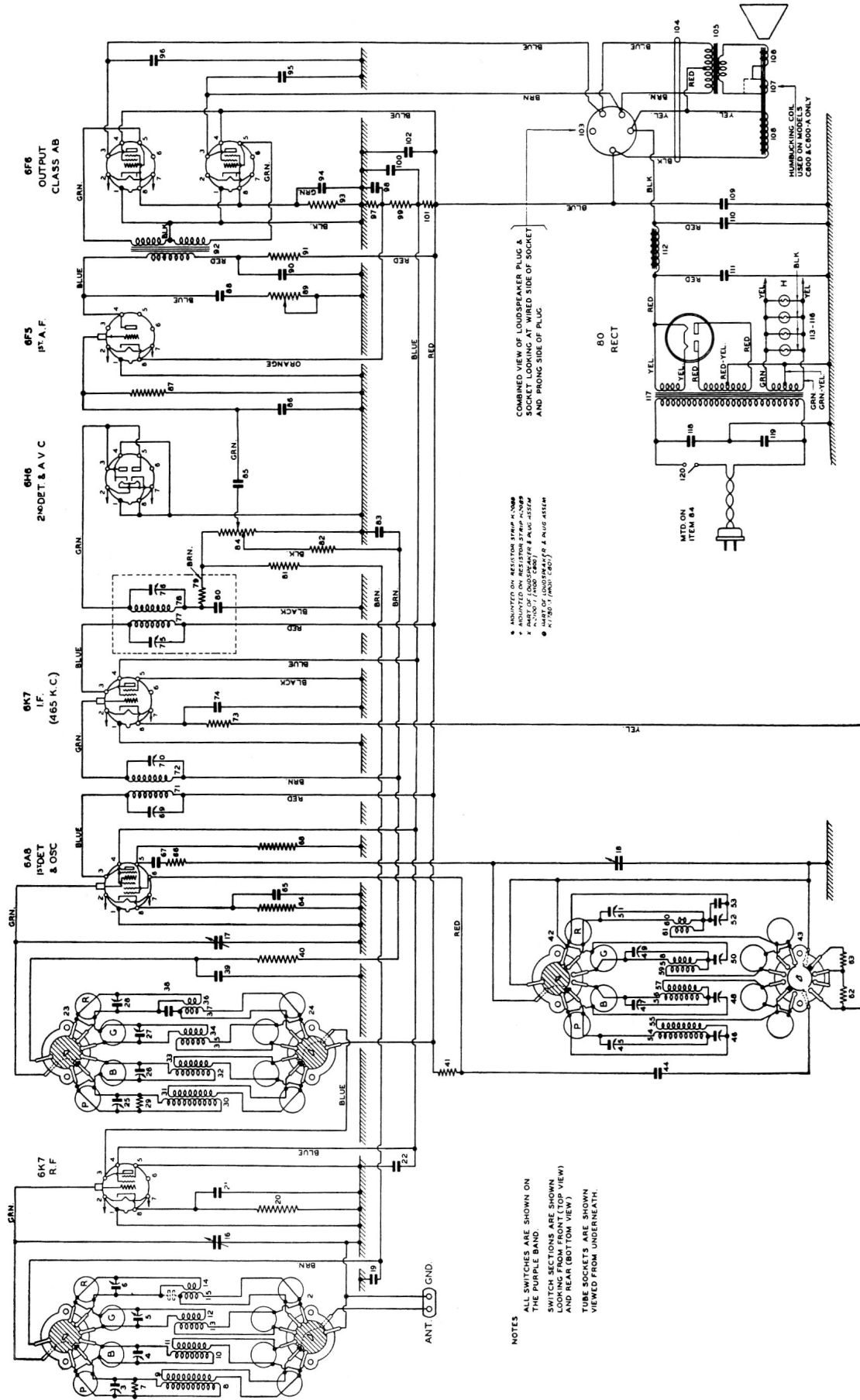
Controls:

Left to Right—Volume control; wave change
switch; tuning control; tone control and
A.C. switch.

Cabinets:

Models C800, C800A: Table models.
Models C801, C801A: Console models.

MODELS C-800 AND C-801 RADIO RECEIVERS



NOTES

ALL SWITCHES ARE SHOWN ON THE PURPLE BAND.

SWITCH SECTIONS ARE SHOWN ON THE FRONT (TOP VIEW) AND REAR (BOTTOM VIEW).

TUBE SOCKETS ARE SHOWN VIEWED FROM UNDERNEATH.

1. MOUNTED ON REVISION TRIP IN SHOP

2. MOUNTED ON REVISION TRIP IN SHOP

3. PART OF L.O. SOCKET & PLUG ASSEMBLY

4. PART OF L.O. SOCKET & PLUG ASSEMBLY

5. PART OF L.O. SOCKET & PLUG ASSEMBLY

COMBINED VIEW OF LOUSPEAKER PLUG & SOCKET LOOKING AT WIRED SIDE OF SOCKET AND PHONO SIDE OF PLUG.

HUMBUCKING COIL USED ON MODELS C-800 & C-801 ONLY

Schematic Diagram Model C-800 and C-801 Receivers.

REPLACEMENT PARTS LIST

Schematic Designation	Value and Description	Part Number	Schematic Designation	Value and Description	Part Number
1	Antenna switch, grid section.	K-1826	38	Capacitor, fixed, 6 mmf.	
2	Antenna switch, primary section		39	Capacitor, .05 mf, 175 volts..	K-1831-8
3	Capacitor, variable, 3-25 mmf.	K-1458-6	40	Resistor, 5000 ohms, 1/2 watt.	K-2226-12
4	Capacitor, variable, 3-25 mmf.	K-1458-6	41	Resistor, 5000 ohms, 1 watt..	K-2363-1
5	Capacitor, variable, 3-25 mmf.	K-1458-6	42	Oscillator switch, grid section	
6	Capacitor, variable, 3-25 mmf.	K-1458-6	43	Oscillator switch, plate section	
7	Resistor, 1/10 meg., 1/8 watt..	K-1836-5	44	Capacitor, .05 mf, 175 volts..	K-1831-8
8	Antenna R.F. trans., secondary.....	Purple band } RC-9580-A	45	Capacitor, dual } 10-35 mmf }	K-1835-1
9	Antenna R.F. trans., primary.....		46	Capacitor, dual } 6-150 mmf }	
10	Antenna R.F. trans., secondary.....	Buff band } RC-9577-A	47	Capacitor, dual } 300-600 mmf }	K-1835-2
11	Antenna R.F. trans., primary.....		48	Capacitor, dual } 5-25 mmf }	
12	Antenna R.F. trans., secondary.....	Green band } RC-9574-A	49	Capacitor, dual } 3-15 mmf }	K-1835-4
13	Antenna R.F. trans., primary.....		50	Capacitor, dual } 800-1600 mmf }	
14	Antenna R.F. trans., secondary.....	Red band } RC-9571-A	51	Capacitor, dual } 3-15 mmf }	K-1835-4
15	Antenna R.F. trans., primary.....		52	Capacitor, dual } 800-1600 mmf }	
16	Three gang capacitor, 448 mmf, max.....	K-1824	53	Capacitor, mica, 2000 mmf...	K-1952-7
17			54	Oscillator grid coil } Purple band }	RC-9582-A
18	Capacitor, .05 mf, 175 volts..	K-1831-8	55	Oscillator plate coil } Buff band }	
19	Resistor, 300 ohms, 1/2 watt..	K-2226-20	56	Oscillator grid coil } Buff band }	RC-9579-A
20	Capacitor, .05 mf, 175 volts..	K-2227-8	57	Oscillator plate coil } Green band }	
21	Capacitor, .05 mf, 175 volts..	K-2227-8	58	Oscillator grid coil } Red band }	RC-9576-A
22	Capacitor, .05 mf, 175 volts..	K-2227-8	59	Oscillator plate coil } Red band }	
23	R.F. amplifier switch, grid section.....		60	Oscillator grid coil } Red band }	RC-95109-A
24	R.F. amplifier switch, plate section.....		61	Oscillator plate coil } Red band }	
25	Capacitor, variable, 1.5-10 mmf.....	K-1458-5	62	Resistor, 1000 ohms, 1/2 watt.	K-2226-16
26	Capacitor, variable, 1.5-10 mmf.....	K-1458-5	63	Resistor, 5000 ohms, 1/2 watt.	K-2226-12
27	Capacitor, variable, 1.5-10 mmf.....	K-1458-5	64	Resistor, 300 ohms, 1/2 watt..	K-2226-20
28	Capacitor, variable, 3-25 mmf.	K-1458-6	65	Capacitor, .05 mf, 175 volts..	K-2227-8
29	Resistor, 1/10 meg., 1/8 watt..	K-1836-5	66	Resistor, 50 ohms, 1/2 watt...	K-2226-25
30	R.F. transformer, secondary.....	Purple band } RC-9581-A	67	Capacitor, 100 mmf, mica....	K-1611-2
31	R.F. transformer, primary.....		68	Resistor, 50,000 ohms, 1/2 watt	K-2226-6
32	T.F. transformer, secondary.....	Buff band } RC-9578-A	69	Capacitor, var. dual (30-100 mmf).....	K-1600-1
33	R.F. transformer, primary.....		70	Capacitor, var. dual (30-100 mmf).....	
34	R.F. transformer, secondary.....	Green band } RC-9575-A	71	1st I.F. transformer, primary	K-1668-1
35	R.F. transformer, primary.....		72	1st I.F. transformer, secondary	
36	R.F. transformer, secondary.....	Red band } RC-9572-A	73	Resistor, 400 ohms, 1/2 watt..	K-2226-19
37	R.F. transformer, primary.....		74	Capacitor, .05 mf, 175 volts..	K-2227-8
			75	Capacitor, var. 25-100 mmf..	K-2073-1
			76	Capacitor, var. 25-100 mmf..	
			77	2nd I.F. transformer, primary	K-1669-1
			78	2nd I.F. transformer, secondary.....	
			79	Resistor, 50,000 ohms, 1/2 watt	K-2226-6
			80	Capacitor, mica, 50 mmf.....	K-1611-1
			81	Resistor, 1 meg, 1/2 watt	K-2226-2
			82	Resistor, 1/2 meg, 1/2 watt....	K-2226-3
			83	Capacitor, .05 mf, 175 volts..	K-2227-8
			84	Volume Control, 1/2 meg, var.	K-2097
			85	Capacitor, .05 mmf, 175 volts	K-2227-8
			86	Capacitor, 100 mmf, mica....	K-1611-2
			87	Resistor, 1 meg, 1/2 watt....	K-2226-2
			88	Capacitor, .02 mf, 350 volts..	K-2228-7
			89	Tone control, 1/4 meg., var...	K-1923-1
			90	Capacitor, .25 mf, 350 volts..	K-2228-10

REPLACEMENT PARTS LIST—Continued

Schematic Designation	Value and Description	Part Number	Value and Description	Part Number
91	Resistor, 25,000 ohms, ½ watt	K-2226-7	MISCELLANEOUS:	
92	A.F. transformer	K-2087	(Not included in schematic designations.)	
93	Resistor, 400 ohms, 1 watt	K-2363-26	Coil and switch assembly—Oscillator section	K-1818-4
94	Capacitor, 10 mf, 35 volt dry electrolytic	Part of K-2099	Coil and switch assembly—Ant. R.F. transformer	K-1818-1
95	Capacitor, .002 mf, 350 volts	K-2228-2	Coil and switch assembly—R.F. amplifier	K-1818-2
96	Capacitor, .002 mf, 350 volts	K-2228-2	Shield cans for coil switch sections	CV-9586
97	Resistor, 500 ohms, ½ watt	K-2226-18	Antenna terminal strip	K-1916-1
98	Capacitor, .05 mf, 175 volts	K-2227-8	Dial lamp sockets	K-1428-7
99	Resistor, 30,000 ohms, 1 watt	K-2363-3	Dial assembly complete (including K-2074 and K-2071)	K-1844-1
100	Capacitor, .25 mf, 175 volts	K-2227-1	Dial and mask assembly	K-2074
101	Resistor, 15,000 ohms, 1 watt	K-2363-20	Dial housing	K-2071
102	Capacitor, .05 mf, 350 volts	K-2228-8	Dial indicator disc	SI-9524
103	Loudspeaker plug	K-2101-2	Band shutter	DC-953-A
104	Loudspeaker cable		Washer (.01") (between dial indicator and shutter disc)	K-1945
105	Output transformer (Models C-800-C800A only)	K-2102	Wave change switch shaft only	SH-9520
105A	Output transformer (Models C801-C801A only)	K-1858-3	Bronze cable (21¾" long) (cut to length) (for shutter)	K-1926
106	Voice coil and diaphragm (Models C800-C800A only)	K-2063-1	Bronze cable (for main drive spring)	K-1694-6
106A	Voice coil and diaphragm (Models C-801-C801A only)	SA-102283	Cable locking plate	K-2082
107	Hum-bucking coil (Models C800-C800A only)		Spring retainers	FL-952
108	Field coil (1875 ohms) (Models C800-C800A only)	K-2095	Spring	SP-9514
108A	Field coil (1875 ohms) (Models C801-C801A only)	K-1860-1	Spring (main drive cable)	K-2109
109	Capacitor, filter, 12 mf, 290 volts (regulating)	K-2080	Spring (indicator disc)	SP-9525
110	Capacitor, 8 mf, 450 volts, dry electrolytic	Part of K-2099	Main Drive Disc	K-2105
111	Capacitor, 8 mf, 450 volts, dry electrolytic	Part of K-2099	Set Screw for drive disc (10/32 x 5/16")	K-1849-5
112	Filter choke	K-2117	Pulley assembly (eccentric)	PU-958-A
113	Dial lamps—6.3 volts	K-1024-4	Reduction drive assembly (including shaft) (not with pulley)	K-1914
114			Knob for tuning control (base portion)	K-1278-1
115			Knob for tuning control (vernier)	K-1278-3
116			Knob for wave change switch	K-1278-6
117	Power transformer—60 cycle	K-1652-5	Retaining spring cover for K-1815 reduction drive	K-1988
117A	Power transformer—25 cycle	K-1652-6	Set screw for K-1278-1 (per dozen)	K-1521-5
118	Capacitor, .025 mf, 1100 volts, A.C.	K-1750	Grid clips for metal tubes	K-1821
119	Capacitor, .025 mf, 1100 volts, A.C.		Tube socket (octal base)	K-1924-1
120	Switch (On-off)	Part of K-1923-1	Tube socket, four contact (rectifier)	K-1194-2
			Screw for chassis mounting	K-1122-12
			Insulator for octal base socket	K-1944
			Tuning Wrench	K-836
			Replacement tube for K-836	K-836-A
			Weston model 692 signal generator	
			Washer (dial)	K-1206-11

REALIGNING INSTRUCTIONS

I.F. ALIGNMENT:—

- Set the signal generator at 465 k.c., and connect its output through a 0.1 mf. capacitor to the grid cap of the first detector (type 6A8 tube).
- Adjust trimmers, items 76, 75, 70, 69, for maximum output, with the wave-change switch in the broadcast position and the gang closed.
- Reduce the output from the signal generator to as low a value as will give an output reading and check the adjustments. All trimmers should peak properly.

NOTE:—Due to change in bias on the I.F. amplifier tube, which was mentioned previously, the I.F. sensitivity will vary on the different bands.

PURPLE BAND:—

- Connect the signal generator to the antenna terminal through a 200 mmf. (0.0002 mf.) mica capacitor. Connect ground terminal to ground.
- Set the signal generator and receiver to 350 K.C. and adjust trimmers, items 45, 25 and 3, for maximum output.

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- (c) Set the signal generator and set at 140 K.C. and adjust the lag capacitor, item 46, at the same time rocking the tuning gang back and forth until the point of maximum sensitivity is found.
- (d) Go back to 350 K.C., and check alignment.
- (e) Return to 140 K.C. and check.

BUFF OR BROADCAST BAND:

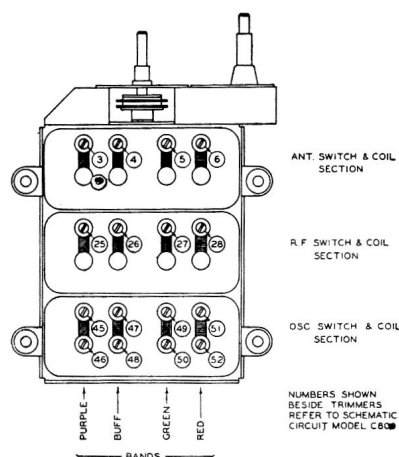
- (a) With the signal generator output connected as above, set it and the receiver at 1600 K.C. with the wave change switch in the broadcast position.
- (b) Adjust trimmers items 47, 26 and 4 for maximum output.
- (c) Set generator and receiver at 600 K.C. and adjust the lag capacitor, item 48, while varying the gang setting slightly back and forth until the point of maximum sensitivity is found.
- (d) Go back to 1600 K.C. and check alignment.

GREEN BAND:

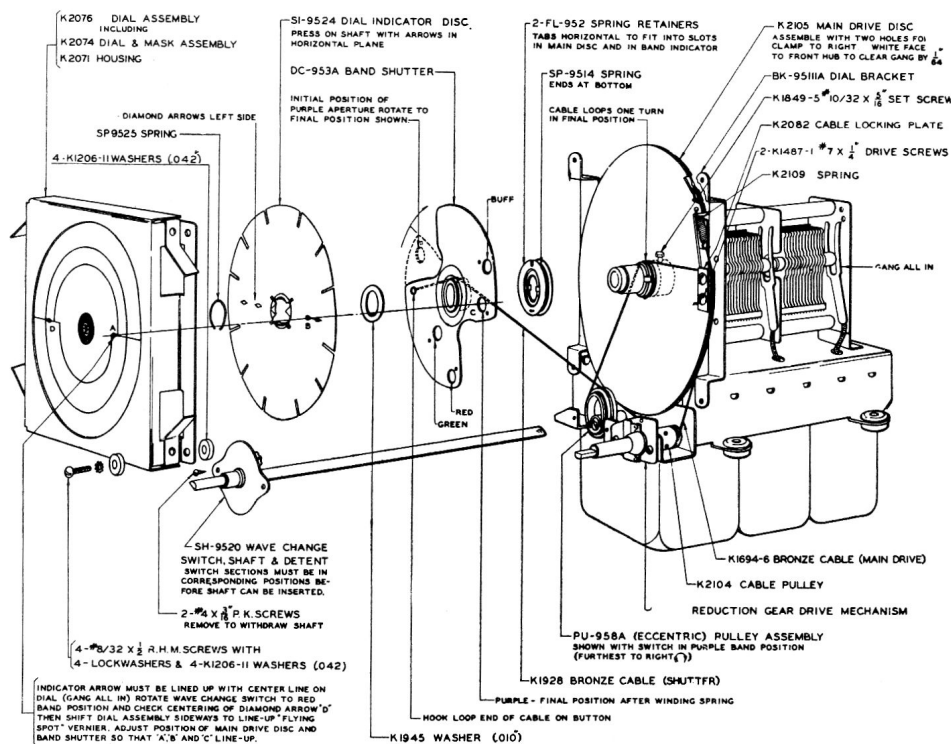
- (a) Connect the signal generator output to the antenna terminal of the receiver through a 400 ohm (carbon type) resistor. Connect receiver ground terminal to ground. Put the wave-change switch in the green band position.
- (b) Set the generator and receiver at 5000 K.C., and adjust the trimmers items 49, 27, and 5 for maximum output.
- (c) Set the generator and receiver at 2000 K.C., and adjust the lag capacitor, item 50, while rocking the gang as before, until the point of maximum sensitivity is found.
- (d) Go back to 5000 K.C. and check the alignment.

RED BAND:

- (a) With the signal generator still connected as for the green band, set the wave-change switch at the red band.
- (b) Set the signal generator and receiver at 18,000 K.C. and adjust the oscillator trimmer, item 51, to bring in maximum signal. Adjust trimmers, items 28 and 6, in turn, while rocking the tuning gang back and forth to locate the point of maximum sensitivity.
- (c) Set the generator and receiver at 6500 K.C., and adjust the lag capacitor, item 52, while rocking the main tuning control as before, until the point of maximum sensitivity is found.
- (d) Go back to 18,000 K.C. and check the alignment.



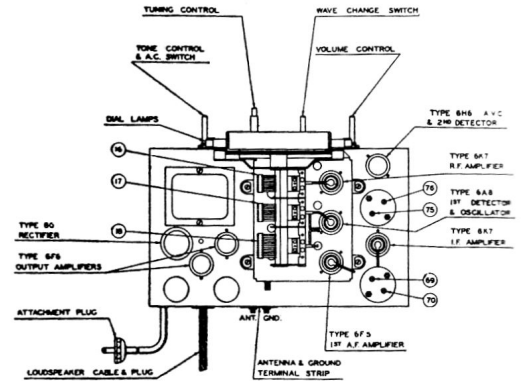
Centromatic Unit showing lower Realigning Positions.



Exploded View of Dial Assembly Parts.

SOCKET VOLTAGE AND CURRENT READINGS

TUBE	Heater Volts A.C.	Plate Volts (25 cycles)	Screen Volts (25 cycles)	Volts Cathode to Ground	Screen Current M. A.	PLATE CURENT	
						Normal Bias	Bias red. 4.5 volts
Type 6K7 R.F. Amplifier	6.35	245 (230)	110 (110)	3.5	1.8	8.5	11
Type 6A8 First Detector and Oscillator	6.35	245 (230) **215 (200) (**Anode Grid)	110 (100)	4.5	2.8	8.5 **4.3 (**Anode Grid)	11.5
Type 6K7 I.F. Amplifier	6.35	245 (230)	110 (100)	(On Green Band) 8.4* (On Purple Band) 14 (On Red Band) 3.6	1.2	5.2	7.
Type 6H6 2nd Detector	6.35	—	—	—	—	—	—
Type 6F5 1st A.F. Amplifier	6.35	210 (190)	—	2.3	—	.65	2.2
Type 6F6 Output	6.35	340 (300)	245 (230)	20 (17)	2.8	22 (20)	28.
Type 6F6 Output	6.35	340 (300)	245 (230)	20 (17)	2.8	22 (20)	28.
Type 80 Rectifier	5.0	—	—	430 (410)	—	—	—



Chassis Layout showing Top Aligning Positions.