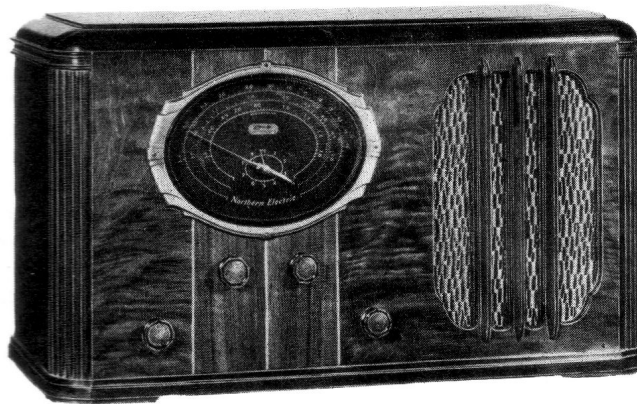


Models 810, 811

Radio Receivers



Specifications

Frequency Range:

Broadcast—Silver Gray: 540 to 1700 K.C.

Police-Aviation—Green: 1.7 to 5.5 megacycles.

Shortwave—Red: 5.5 to 22 megacycles.

I.F.:

463 K.C.

Tubes:

Type	Function
6K7	R.F. Amplifier
6C5	Oscillator
6A8	1st Detector
6K7	I.F. Amplifier
6H6	2nd Detector, A.V.C., automatic noise suppression

6F5

1st A.F. Amplifier

6F6

Output

5Y4G

Rectifier

Power Supply:

Model 810—105 to 125 volts A.C., 60 cycles.

Model 811—105 to 125 volts A.C., 25 cycles.

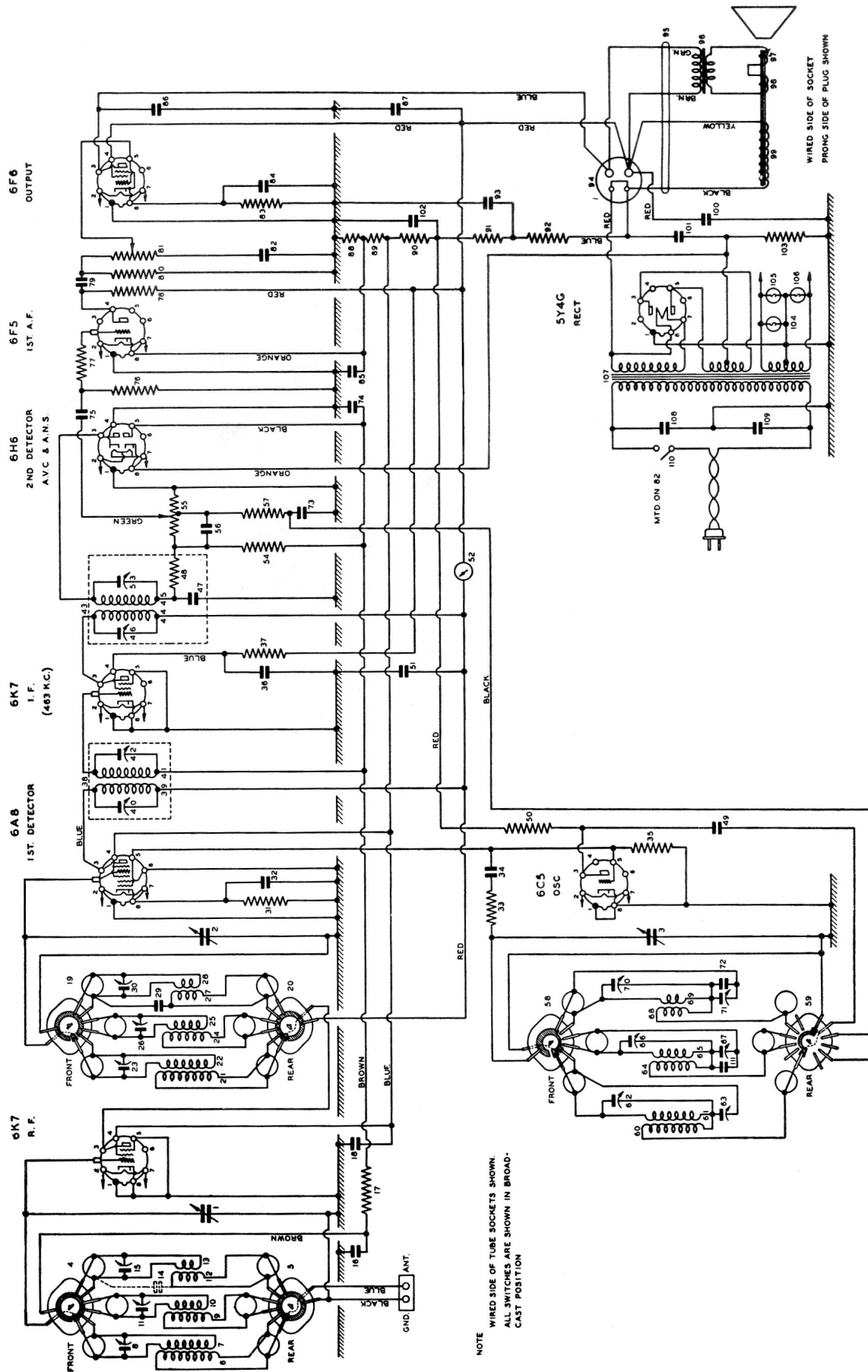
A.V.C.:

Applied on tubes type 6K7, R.F. and 6K7 I.F. Amplifier.

Controls:

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

MODEL 810-811 RADIO RECEIVER



Schematic Diagram—Models 810-811 Receivers.

REPLACEMENT PARTS LIST

Schematic Designation	Value and Description	Part Number
1 Ant. Sect.	Capacitor Gang max. cap. 451.7 mmf.	K-2552
2 R.F. Sect.		
3 Osc. Sect.		
4 W.C. Switch (Ant. Sec.)	Section	K-2532-1
5 W.C. Switch (Ant. Pri.)	Section	K-2532-4
6 Ant. Trans. Pri. (bdct.)	RC-95177	RC-95177
7 Ant. Trans. Sec. (bdct.)		
8 4-30 mmf. Var. Trim. cap.	CS-9554	CS-9554
9 Ant. Trans. Pri. (pol.)	RC-95174-A	RC-95174-A
10 Ant. Trans. Sec. (pol.)		
11 4-30 mmf. Var. Trim. cap.	CS-9554	CS-9554
12 Ant. Trans. Pri. (S.W.)	RC-95171-A	RC-95171-A
13 Ant. Trans. Sec. (S.W.)		
14 Coupling Capacitor		
15 4-30 mmf. Var. Trim. cap.	CS-9554	CS-9554
16 Capacitor, .05 mf, 175 volts	K-1831-8	K-1831-8
17 Resistor, $\frac{1}{4}$ meg, $\frac{1}{2}$ watt	K-2226-4	K-2226-4
18 Capacitor, .1 mf, 175 volts	K-2227-9	K-2227-9
19 W.C. Switch (R.F. Sec.)	Section	K-2532-1
20 W.C. Switch (R.F. Pri.)	Section	K-2532-4
21 R.F. Trans. Pri. (bdct.)	RC-95178-A	RC-95178-A
22 R.F. Trans. Sec. (bdct.)		
23 4-30 mmf. Var. Trim. cap.	CS-9554	CS-9554
24 R.F. Trans. Pri. (Pol.)	RC-95175-A	RC-95175-A
25 R.F. Trans. Sec. (Pol.)		
26 1.5-10 mmf. Var. Trim. cap.	CS-9553	CS-9553
27 R.F. Trans. Pri. (S.W.)	RC-95172-A	RC-95172-A
28 R.F. Trans. Sec. (S.W.)		
29 Capacitor, coupling, 6 mmf.	K-1838	K-1838
30 4-30 mmf. Var. Trim. cap.	CS-9554	CS-9554
31 Resistor, 300 ohms; $\frac{1}{2}$ watt	K-2226-20	K-2226-20
32 Capacitor, .05 mf, 175 volts	K-2227-8	K-2227-8
33 Resistor, 50 ohms, $\frac{1}{2}$ watt	K-2226-25	K-2226-25
34 Capacitor, mica, 65 mmf.	K-1611-8	K-1611-8
35 Resistor, 50,000 ohms, $\frac{1}{2}$ watt	K-2226-6	K-2226-6
36 Capacitor, .05 mf, 350 volts	K-2228-8	K-2228-8
37 Resistor, 75,000 ohms, $\frac{1}{2}$ watt	K-2226-27	K-2226-27
38 1st I.F. Trans. Assem. (includes items 39-42)	K-2533	K-2533
39 I.F. Trans. Pri.	K-2535-1	K-2535-1
40 50-200 mmf. Var. Trim. cap.	K-2599-1	K-2599-1
41 I.F. Trans. Sec.	Part of item 39	
42 50-200 mmf. Var. Trim. cap.	Part of item 40	
43 2nd I.F. Trans. Assem. (includes items 44, 48, 53)	K-2536	K-2536
44 2nd I.F. Trans. Pri.	K-2535-2	K-2535-2
45 2nd I.F. Trans. Sec.		
46 50-200 mmf. Var. Trim. cap.	K-2599-1	K-2599-1
47 Capacitor, mica, 100 mmf.	K-1611-2	K-1611-2
48 Resistor, 50,000 ohms, $\frac{1}{2}$ watt	K-2226-6	K-2226-6
49 Capacitor, .05 mf, 175 volts	K-1831-8	K-1831-8
50 Resistor, 5,000 ohms, 1 watt	K-1870-1	K-1870-1
51 Capacitor, .05 mf, 350 volts	K-2228-8	K-2228-8
52 Tuning Meter (D.C. Res. 590 ohms)	K-2551	K-2551
53 50-200 mmf. Var. Trim. cap.	Part of item 46	
54 Resistor, 2 meg, $\frac{1}{2}$ watt	K-2226-1	K-2226-1
55 Volume Control, Var., $\frac{1}{2}$ meg.	K-2548	K-2548

Schematic Designation	Value and Description	Part Number
56 Capacitor, mica, 500 mmf.		K-1952-3
57 Resistor, 5,000 ohms, $\frac{1}{4}$ watt		K-2226-12
58 W.C. Switch (Osc. Grid) Section		K-2532-3
59 W.C. Switch (Osc. Plate) Section		K-2532-2
60 Osc. Plate Coil (bdct.)	RC-95179-A	RC-95179-A
61 Osc. Grid Coil (bdct.)		
62 5-25 mmf. Var. Trim. cap.	CS-9540	CS-9540
63 300-600 mmf. Lag. cap.	RC-95176-A	RC-95176-A
64 Osc. Plate Coil (Pol.)		
65 Osc. Grid Coil (Pol.)	CS-9520	CS-9520
66 3-15 mmf. Var. Trim. cap.		
67 800-1600 mmf. Lag. cap.	RC-95173-A	RC-95173-A
68 Osc. Plate Coil (S.W.)		
69 Osc. Grid Coil (S.W.)	CS-9520	CS-9520
70 3-15 mmf. Var. Trim. cap.		
71 800-1600 mmf. Lag. cap.		
72 Capacitor, mica, 2,000 mmf.	K-1952-6	K-1952-6
73 Capacitor, .05 mf, 175 volts	K-2227-8	K-2227-8
74 Capacitor, .05 mf, 175 volts	K-2227-8	K-2227-8
75 Capacitor, .02 mf, 175 volts	K-2227-7	K-2227-7
76 Resistor, 1 meg., $\frac{1}{2}$ watt	K-2226-2	K-2226-2
77 Resistor, $\frac{1}{10}$ meg., $\frac{1}{2}$ watt	K-2226-5	K-2226-5
78 Resistor, $\frac{1}{4}$ meg., $\frac{1}{2}$ watt	K-2226-4	K-2226-4
79 Capacitor, .02 mf, 350 volts	K-2228-7	K-2228-7
80 Resistor, $\frac{1}{4}$ meg., $\frac{1}{2}$ watt	K-2226-4	K-2226-4
81 Tone Control, Var., $\frac{1}{2}$ meg.	K-2549	K-2549
82 Capacitor, .001 mf, 350 volts	K-2228-1	K-2228-1
83 Resistor, 500 ohms, 1 watt	K-2363-25	K-2363-25
84 Capacitor, elect., 12 mf, 25 volts	K-2553	K-2553
85 Capacitor, elect., 12 mf, 25 volts		
86 Capacitor, .005 mf, 350 volts	K-2228-5	K-2228-5
87 Capacitor, .1 mf, 350 volts	K-2228-9	K-2228-9
88 Resistor, 300 ohms, $\frac{1}{2}$ watt	K-2226-8	K-2226-8
89 Resistor, 30,000 ohms, $\frac{1}{2}$ watt	K-2226-8	K-2226-8
90 Resistor, 15,000 ohms, 1 watt	K-2363-20	K-2363-20
91 Resistor, 5,000 ohms, 1 watt	K-2363-1	K-2363-1
92 Resistor, 10,000 ohms, 2 watts	K-1095-5	K-1095-5
93 Capacitor, .1 mf, 350 volts	K-2228-9	K-2228-9
94 L.S. Plug	K-2007	K-2007
95 L.S. Cable		
96 Output Trans. (model 810)	K-2540-1	K-2540-1
96-A Output Trans. (model 811)	K-2540-2	K-2540-2
97 Voice Coil & Diaph. (imp. 1.8 ohm) (Mod. 810)	K-2544	K-2544
98 Voice Coil & Diaph. (imp. 1.8 ohm) (Mod. 811)	K-2547	K-2547
98-A Hum Bucking Coil		
99 Field Coil (1900 ohms) (model 810)	K-2543	K-2543
99-A Field Coil (1900 ohms) (model 811)	K-2546	K-2546
100 Capacitor, reg. elect., 18 mf, 300 volt	K-2554	K-2554
101 Capacitor, reg. elect., 12 mf, 410 volt	K-2555	K-2555
102 Capacitor, reg. elect., 8 mf, 450 volt	K-2556	K-2556
103 Resistor, 37 ohms, $\frac{1}{2}$ watt	K-2226-41	K-2226-41

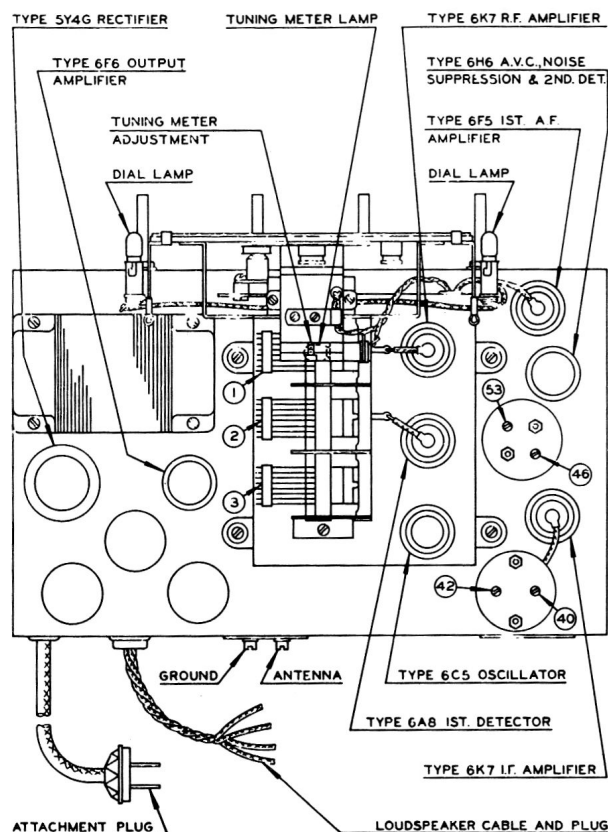
REPLACEMENT PARTS LIST—continued

Schematic Designation	Value and Description	Part Number
104	Lamp (Tuning Meter), 3.5 volts.....	K-2589-2
105	Dial Lamp, 3.5 volts.....	
106	Dial Lamp, 3.5 volts.....	
107	Power Transformer (60 cycles).....	K-2619-1
107a	Power Transformer (25 cycles).....	K-2619-2
108	Capacitor, .025 mf, 1100 volts.....	K-1750
109	Capacitor, .025 mf, 1100 volts.....	
110	A.C. Switch (mtd. on item 81).....	
111	Capacitor, mica, 500 mmf.	K-1952-3

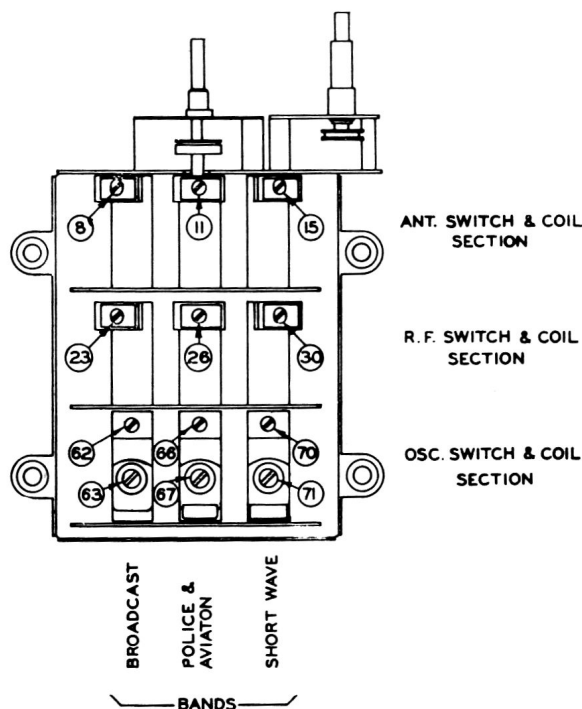
MISCELLANEOUS:(Not included in item designations)

Sockets, octal base.....	K-1924-1
Antenna terminal strip.....	K-2595
Loudspeaker socket.....	K-2006
Glass dial scale.....	K-2524
Dial Mask.....	K-2396-3
Clips (for dial).....	K-2436
Dial indicator (large pointer).....	K-2597
Dial indicator (small pointer).....	K-2610
Reduction drive.....	K-2525
Belt drive pulley.....	K-2590

Value and Description	Part Number
Belt idler pulley.....	PU-9524
Idler pulley spring.....	SP-9541
Drive belt.....	K-2526
Idler pulley for W-C indicator cord.....	K-2614
Pulley for W-C switch shaft.....	K-2605
Gear Assembly (dial) (intermediate).....	GE-9514-A
Gear Assembly (dial) (large; shaft).....	GE-9516-A
Spring lock.....	FP-65772
Celluloid indicator.....	K-2612
Lamp sockets.....	K-2598
Cord (20').....	K-1929
Switch section (front).....	K-2532-1
Switch section (rear).....	K-2532-4
Switch section (front) (osc.).....	K-2532-3
Switch section (rear) (osc.).....	K-2532-2
Wave change switch shaft.....	K-2550
Glass cover for dial (with escutcheon)....	K-2366
Knobs.....	K-2231-1
Chassis mounting bolts.....	K-2566-9
Washers for chassis mounting.....	K-1725-1
Tuning wrenches (all models).....	K-836



Chassis showing Aligning Positions.



Underside of Centromatic Unit Showing Aligning Positions.

REALIGNING INSTRUCTIONS

To secure full advantage of the performance characteristics of these receivers, any re-alignment necessary should be carried out carefully. A reliable test oscillator or signal generator should be used and an output meter. Oscillators utilizing harmonics should not be employed. The i-f transformers may be aligned readily, but it is recommended that the antenna, r-f and oscillator trimmers should not be re-adjusted unless trouble has been traced definitely to these points.

I.F. ALIGNMENT:

- (a) Set the signal generator at 463 K.C., and connect its output through a 0.1 mf. capacitor to the grid cap of the first detector (type 6A8) tube.
- (b) Adjust trimmers, items numbers 53, 46, 42 and 40, for maximum output, with the wave-change switch in the broadcast position and the gang closed.
- (c) 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.

R.F. ALIGNMENT—BROADCAST (SILVER-GRAY) BAND:

- (a) Connect the output of the signal generator to the antenna terminal through a 200 mmf. mica capacitor. Connect the ground terminal to ground.
- (b) Check that the main indicator pointer lines up with the lower ends of the amateur and 49 metre band markings on the dial scale when the gang is turned all in.
- (c) Set the signal generator and the receiver at 1600 kilocycles. Adjust trimmer, item 62, to

bring in the signal. Then adjust trimmers, items 23 and 8, for maximum sensitivity.

- (d) Set the generator at 600 K.C., and tune the receiver to it. Adjust trimmer, item 63, for maximum sensitivity while rocking the gang.
- (e) Recheck at 1600 K.C.

R.F. ALIGNMENT—POLICE AND AVIATION (GREEN) BAND:

- (a) Substitute a 400 ohm. resistor in place of the capacitor in the lead from the signal generator.
- (b) Set the generator and the receiver at 5.0 megacycles. Adjust trimmer, item 66, to bring the signal in. (Make sure that the set is not tuned to the image frequency, which should come in with the generator frequency reduced to approximately 4.37 mc.)
- (c) Adjust trimmers, items 26 and 11, for maximum sensitivity while rocking the gang.
- (d) Set the generator at 1.9 mc. and tune the set to the signal. Adjust trimmer, item 67, for maximum response while rocking the gang.
- (e) Recheck at 5.0 mc.

R.F. ALIGNMENT—SHORT-WAVE (RED) BAND:

- (a) With the signal generator still connected as for the police-aviation band, set the wave-change switch for the short-wave band.
- (b) Set the signal generator and receiver at 16 megacycles and adjust the trimmer, item 70, to bring in the signal. (Make sure that the set is not tuned to the image frequency.)
- (c) Adjust trimmers, items 30 and 15, for maximum sensitivity while rocking the gang.
- (d) Set the generator at 6 mc. and tune the set to the signal. Adjust trimmer, item 71, for maximum output while rocking the gang.
- (e) Recheck at 16 mc.

SOCKET VOLTAGE READINGS

TUBE	VOLTAGES				CURRENTS—M.A.		
	Heater (A-C)	Plate	Screen	Cathode	Screen	Plate	
						Normal Bias	Bias Red. 4½ Volts
Type 6K7 (R-F)	6.34	250	82	0	1.35	5.7	8.5
Type 6A8	6.34	250	82	1.7	3.0	4.0	5.5
Type 6C5	6.34	150	—	0	—	8.0	9.5
Type 6K7 (I-F)	6.34	250	95	0	2.0	7.7	9.0
Type 6H6	6.34	—	—	(Pin No. 4) (0) (Pin No. 8) (2.4)	—	—	—
Type 6F5	6.34	90	—	.95	—	.55	.70
Type 6F6	6.34	225	250	16.5	4.9	29	31
Type 5Y4G	5.0	—	—	370	(Plate) 33	33	—