

TABLE I — METAL RECEIVING TUBES

Characteristics given in this table apply to all tubes having type numbers shown, including metal tubes, glass tubes with "G" suffix, and bantam tubes with "GT" suffix. For "G" and "GT" tubes not listed (not having metal counterparts), see Tables II, VII, VIII and IX.

Type	Name	Socket Connections	Cathode	Fil. or Heater		Use	Plate Supply Volts	Grid Bias	Screen Volts	Screen Current Ma.	Plate Current Ma.	Plate Resistance, Ohms	Transconductance Micromhos	Amp. Factor	Load Resistance Ohms	Power Output Watts	Type	
				Volts	Amps.													
6A8	Pentagrid Converter	8A	Htr.	6.3	0.3	Osc.-Mixer	250	-3.0	100	3.2	3.3	Anode-grid (No. 2) 950 volts max. thru 20,000-ohms	3500	—	—	6A8		
6AB7	Television Amp. Pentode	8N	Htr.	6.3	0.45	Class-A Amplifier	300	-3.0	200 <sup>2</sup>	3.2	12.5	700000	5000	—	—	6AB7		
1853	Television Amp. Pentode	8N	Htr.	6.3	0.45	Class-A Amplifier	300	-2.0 <sup>7</sup>	150 <sup>2</sup>	2.5	10	750000	9000	—	—	1853		
6AC7	Duplex-Diode Pentode	8E	Htr.	6.3	0.3	Pentode R.F. Amplifier Pentode A.F. Amplifier	250	-3.0	125	2.3	9.0	650000	1125	—	—	688		
1852	Triode Detector, Amplifier	6Q	Htr.	6.3	0.3	Class-A Amplifier	250	-4.5	50	—	0.65	—	—	—	—	688		
6C5	High- $\mu$ Triode	5M	Htr.	6.3	0.3	Class-A Amplifier	250	-8.0	—	—	8.0	10000	2000	—	—	6C5		
6F5	Pentode Power Amplifier	7S	Htr.	6.3	0.7	Class-A Amplifier Class-A Pentode Class-A Triode <sup>3</sup> Push-Pull Class-AB Amp. Pentode Connection <sup>1</sup> Triode Connection <sup>1</sup>	375 350	-96 -38	250	2.5 <sup>4</sup>	17 <sup>4</sup> 22.5 <sup>4</sup>	—	—	—	—	—	6F5	
6H6	Twin Diode	7Q	Htr.	6.3	0.3	Rectifier	250	-8	—	—	9	7700	2600	—	—	—	6H6	
6J5	Detector Amplifier Triode	6Q	Htr.	6.3	0.3	Class-A Amplifier	250	-3.0	100	0.5	2.0	exceeds 1.5 meg.	1225	—	—	—	6J5	
6I7	Triple-Grid Detector, Amplifier	7R	Htr.	6.3	0.3	R.F. Amplifier	250	-4.3	100	2.6	10.5	600000	1650	—	—	—	6I7	
6K7	Triple-Grid Variable- $\mu$ Amplifier	7R	Htr.	6.3	0.3	Bias Detector R.F. Amplifier	250	-3.0	125	2.6	10.5	600000	1650	—	—	—	6K7	
6K8	Triode Hexode Converter	8K	Htr.	6.3	0.3	Mixer Osc.-Mixer Single-Tube Class-A <sup>1,5</sup> Amp. Fixed Bias Single-Tube Class-A <sup>1,5</sup> Amp. Self Bias	250 250 375 375 300 300 375	-10 -3 -14.0 -9.0 -17.5 -13.5 -11.8 -9.0	100 100 250 250 250 200 125	6 5.0 <sup>4</sup> 0.7 <sup>4</sup> 2.5 <sup>4</sup> 5.4 <sup>4</sup> 3.0 <sup>4</sup> 0.7 <sup>4</sup>	9.5 7.4 <sup>4</sup> 24 <sup>4</sup> 57 <sup>4</sup> 75 <sup>4</sup> 51 <sup>4</sup> 24 <sup>4</sup>	—	—	—	—	—	6K8	
6L6	Beam Power Amplifier	7AC	Htr.	6.3	0.9	Mixer Push-Pull A <sup>1,5</sup> Fixed Bias Self Bias Push-Pull AB <sup>1,5</sup> Fixed Bias Push-Pull AB <sup>1,5</sup> Self-Bias Push-Pull AB <sup>2,5</sup> Fixed Bias	250 250 400 400 400 400 400	-16 -16 -25 -20 -93.5 -19.0 -95 -20	250 250 300 250 250 300 250	10 <sup>6</sup> 10 <sup>6</sup> 6 <sup>6</sup> 4 <sup>6</sup> 7.0 <sup>6</sup> 4.6 <sup>6</sup> 6 <sup>6</sup> 8 <sup>6</sup>	190 <sup>6</sup> 120 <sup>6</sup> 102 <sup>6</sup> 88 <sup>6</sup> 112 <sup>6</sup> 96 <sup>6</sup> 102 <sup>6</sup> 88 <sup>6</sup>	—	—	—	—	—	—	6L6
6L7	Pentagrid Mixer Amplifier	7T	Htr.	6.3	0.3	R.F. Amplifier Mixer	250	-3.0	150	8.3	3.3	800000	1100	—	—	—	6L7	

Oscillator peak volts = 7.0  
Triode Plate (No. 2) 100 volts, 3.8 ma.  
Power Output for 2 tubes.  
Load plate-to-plate

Max. a.c. voltage per plate = 100 r.m.s. Max. output current 4.0 ma. d.c.  
exceeds 1500  
0.5 meg.  
990

Power output for 2 tubes at stated load, plate-to-plate  
10000  
6000  
18

over 1 meg. Oscillator-grid (No. 3) voltage = -15.0

TABLE I—METAL RECEIVING TUBES—Continued

Type	Name	Socket Connections <sup>1</sup>	Cathode	Fill. or Heater Volts	Amps.	Use	Plate Supply Volts	Grid Bias	Screen Volts	Screen Current Ma.	Plate Current Ma.	Plate Resistance, Ohms	Transconductance Micromhos	Amp. Factor	Load Resistance Ohms	Power Output Watts	Type
6N7	Twin Triode Amplifier	8B	Htr.	6.3	0.8	Class-B Amplifier	250 300	0	—	—	—	8000 10000	—	—	—	8.0 10.0	6N7
6Q7	Duplex-Diode Triode	7V	Htr.	6.3	0.3	Triode Amplifier	250	-3	—	—	—	—	1900	70	—	—	6Q7
6R7	Duplex-Diode Triode	7V	Htr.	6.3	0.3	Triode Amplifier	250	-9	—	—	—	8500	1900	16	10000	0.28	6R7
6S7	Triple-Grid Variable- $\mu$	7R	Htr.	6.3	0.15	Class-A Amplifier	250	-3	100	2.0	8.5	1000000	1750	1750	—	—	6S7
6SA7	Pentagrid Converter	8R	Htr.	6.3	0.3	Osc.-Mixer	250	0 <sup>8</sup>	100	8.0	3.4	800000	Grid No. 1 Resistor 20000 ohms	—	—	—	6SA7
6SC7	Twin Triode Amplifier	8S	Htr.	6.3	0.3	Class-A Amplifier	250	-2	—	—	—	53000	1325	70	—	—	6SC7
6SF5	High- $\mu$ Triode	6AB	Htr.	6.3	0.3	Class-A Amplifier	250	-2	—	—	—	66000	1500	100	—	—	6SF5
6SJ7	Triple-Grid Amplifier	8N	Htr.	6.3	0.3	Class-A Amplifier	250	-3	100	0.8	3	1500000	1650	2500	—	—	6SJ7
6SK7	Triple-Grid Variable- $\mu$	8N	Htr.	6.3	0.3	Class-A Amplifier	250	-3	100	2.4	9.2	800000	2000	1600	—	—	6SK7
6SQ7	Duplex-Diode Triode	8Q	Htr.	6.3	0.3	Class-A Amplifier	250	-2	—	—	—	91000	1100	100	—	—	6SQ7
6T7	Duplex-Diode Triode	7V	Htr.	6.3	0.15	Class-A Amplifier	250	-3	—	—	—	62000	1050	65	—	—	6T7
6V6	Beam Power Amplifier	7AC	Htr.	6.3	0.45	Class-A Amplifier	250	-12.5	250	4.5/6.5	46	52000	4100	218	5000	4.25	6V6
1612	Beam Power Amplifier	7AC	Htr.	6.3	0.45	Class-AB Amplifier 2 Tubes	250	-15	250	5/12	75	—	—	—	10000	8.5	6V6
1620	Pentagrid Amplifier	7T	Htr.	6.3	0.3	Class-A Amplifier	300	-20	300	5/13.5	85	—	—	—	8000	13.0	1612 1620
1621	Power Amplifier Pentode	7S	Htr.	6.3	0.7	Class-A, Triode P. P.	300	-30	300	6.5 <sup>4</sup> /13	38 <sup>7</sup> /69	—	—	—	4000	5.0	1621
1622	Beam Power Amplifier	7AC	Htr.	6.3	0.9	Class-A, Triode P. P.	327.5	-27.5 <sup>5</sup>	—	—	55 <sup>7</sup> /59	—	—	—	5000	2.0	1622
1851	Television Amp. Pentode	7R	Htr.	6.3	0.45	Class-A Amplifier	300	-20	250	4 <sup>7</sup> /10.5	86 <sup>7</sup> /125	—	—	—	4000	10	1851

<sup>1</sup> See Receiving Tube Diagrams.  
<sup>2</sup> From fixed screen supply. If series resistor from plate supply is used, tube for 6AB7/1853 is 30,000 ohms, for 6AC7/1852 and 1851, 60,000 ohms. Series resistor gives variable- $\mu$  characteristic, fixed screen supply gives sharp cut-off.  
<sup>3</sup> Screen tied to plate.  
<sup>4</sup> Zero signal currents per tube.  
<sup>5</sup> Subscript indicates no grid-current flow.  
<sup>6</sup> Subscript 2 indicates grid-current flow over part of input cycle.  
<sup>7</sup> Cathode bias resistor should be adjusted for plate current of 10 ma.; minimum value 160 ohms.  
<sup>8</sup> Grid bias —2 volts if separate oscillator excitation is used.  
<sup>9</sup> Cathode resistor 300 ohms.

TABLE II—6.3-VOLT GLASS TUBES WITH OCTAL BASES

Type	Name	Socket Connections <sup>1</sup>	Cathode	Fill. or Heater Volts	Amps.	Use	Plate Supply Volts	Grid Bias	Screen Volts	Screen Current Ma.	Plate Current Ma.	Plate Resistance, Ohms	Transconductance Micromhos	Amp. Factor	Load Resistance Ohms	Power Output Watts	Type
6A5G	Triode Power Amplifier	6T	Htr.	6.3	1.0	Class-A Amplifier	250	-45	—	—	60	800	5250	4.2	2500	3.75	6A5G
6A6G	Direct-Coupled Amplifier	7W	Htr.	6.3	0.5	Push-Pull Class AB	325	-68	—	—	80 <sup>2</sup>	—	—	—	3000	15	6A5G
6AC5G	High- $\mu$ Power Amplifier Triode	6Q	Htr.	6.3	0.4	Push-Pull Class AB	325	850 Ohm Cathode Resistor	—	—	80 <sup>1</sup>	—	—	—	5000	10	6A5G
6AC6G	Direct-Coupled Amplifier	7W	Htr.	6.3	1.1	Class-A Amplifier	250	0	—	—	5	—	1800	72	8000	3.5	6A6G
						Class-A Amplifier	250	0	—	—	3.4	—	—	—	10000	8	6AC5G
						Push-Pull Class-B	250	0	—	—	5 <sup>2</sup>	36700	3400	125	7000	3.7	6AC5G
						Dynamic-Coupled Amp.	250	—	—	—	32	—	—	—	4000	3.8	6AC6G
						Class-A Amplifier	180	0	—	—	7	—	—	—	—	—	6AC6G

(For "G" and "GT" -Type Tubes Not Listed Here, See Equivalent Type in Table I; Characteristics and Connections Will Be Identical)