

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	250	-3.0	125	2.3	9.0	650000	1125	—	—	6AC7	
1852	Triode Detector, Amplifier	6Q	Htr.	6.3	0.3	Pentode A.F. Amplifier	250	-4.5	50	—	0.65	—	—	—	—	1852	
688	High- $\mu$ Triode	5M	Htr.	6.3	0.3	Class-A Amplifier	250	-8.0	—	—	8.0	10000	2000	—	—	688	
6C5	Triode Detector, Amplifier	7S	Htr.	6.3	0.7	Class-A Amplifier	250	-17.0	—	—	—	—	—	—	—	6C5	
6F5	Pentode Power Amplifier	7Q	Htr.	6.3	0.3	Class-A Amplifier	250	-1.3	—	—	0.2	66000	1500	—	—	6F5	
6F6	Twin Diode	6Q	Htr.	6.3	0.3	Class-A Amplifier	250	-16.5	250	6.5	34	80000	9500	7000	3.0	6F6	
6H6	Detector Amplifier Triode	7R	Htr.	6.3	0.3	Class-A Pentode	315	-22.0	315	8.0	42	75000	2650	7000	5.0	6H6	
6J5	Triple-Grid Detector, Amplifier	7R	Htr.	6.3	0.3	Class-A Triode <sup>3</sup>	250	-20	—	—	31	9600	2700	4000	0.85	6J5	
6K7	Triple-Grid Variable- $\mu$ Amplifier	7T	Htr.	6.3	0.3	Push-Pull Class-AB Amp. Pentode Connection <sup>1</sup> Triode Connection <sup>2</sup>	375	-96	250	2.5 <sup>4</sup>	17 <sup>4</sup>	Power output for 2 tubes at stated load, plate-to-plate	—	10000	19	6K7	
6L6	Beam Power Amplifier	7AC	Htr.	6.3	0.9	Rectifier	350	-38	—	—	22.5 <sup>4</sup>	—	—	6000	18	6L6	
6L7	Pentagrid Mixer Amplifier	7T	Htr.	6.3	0.3	Class-A Amplifier	250	-8	—	—	9	7700	2600	—	—	6L7	
						R.F. Amplifier	250	-3.0	100	0.5	2.0	exceeds 1.5 meg.	1225	—	—	6J7	
						Bias Detector	250	-4.3	100	Cathode current 0.43 ma.		—	—	0.5 meg.	—	6K7	
						R.F. Amplifier	250	-3.0	125	2.6	10.5	600000	1650	—	—	6K7	
						Mixer	250	-10	100	—	—	—	—	—	—	6K7	
						Osc.-Mixer	250	-3	100	6	9.5	—	—	—	—	6K8	
						Single-Tube Class-A <sup>1,5</sup> Amp. Fixed Bias	250	-14.0	250	5.0 <sup>4</sup>	7.4 <sup>4</sup>	—	—	—	—	6K8	
						Single-Tube Class-A <sup>1,5</sup> Amp. Fixed Bias	375	-9.0	125	0.7 <sup>4</sup>	2.4 <sup>4</sup>	—	—	—	—	6K8	
						Single-Tube Class-A <sup>1,5</sup> Amp. Self Bias	375	-17.5	250	2.5 <sup>4</sup>	5.7 <sup>4</sup>	—	—	—	—	6K8	
						Push-Pull A <sup>1,5</sup> Fixed Bias	400	-25	300	6 <sup>6</sup>	102 <sup>6</sup>	—	—	—	—	6K8	
						Push-Pull AB <sup>1,5</sup> Fixed Bias	400	-20	250	4 <sup>6</sup>	88 <sup>6</sup>	—	—	—	—	6K8	
						Push-Pull AB <sup>1,5</sup> Self-Bias	400	-93.5	300	7.0 <sup>6</sup>	112 <sup>6</sup>	—	—	—	—	6K8	
						Push-Pull AB <sup>2,5</sup> Fixed Bias	400	-19.0	250	4.6 <sup>6</sup>	96 <sup>6</sup>	—	—	—	—	6K8	
						R.F. Amplifier	250	-3.0	100	5.5	5.3	800000	1100	—	—	6L7	
						Mixer	250	-6.0	150	8.3	3.3	over 1 meg.	Oscillator-grid (No. 3) voltage = -15.0	—	—	6L7	

Oscillator peak volts = 7.0

Triode Plate (No. 2) 100 volts, 3.8 ma.

Power Output for 2 tubes. Load plate-to-plate

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	—	—	1.1	58000	1900	70	—	—	6Q7
6R7	Duplex-Diode Triode	7V	Htr.	6.3	0.3	Triode Amplifier	250	—9	—	—	9.5	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	—	—	2.0	53000	1325	70	—	—	6SC7
6SF5	High- $\mu$ Triode	6AB	Htr.	6.3	0.3	Class-A Amplifier	250	—2	—	—	0.9	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	—	—	0.8	91000	1100	100	—	—	6SQ7
6T7	Duplex-Diode Triode	7V	Htr.	6.3	0.15	Class-A Amplifier	250	—3	—	—	1.2	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, Amplifier	300	—30	300	6.5 <sup>13</sup>	38 <sup>7</sup> /69	—	—	—	4000	5.0	1621
1622	Beam Power Amplifier	7AC	Htr.	6.3	0.9	Class-A, Triode <sup>3</sup> 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	1622 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.

Characteristics same as 617

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	5950	4.2	2500	3.75	6A5G
6A86G	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	6A86G
6AC6G	Direct-Coupled Amplifier	7W	Htr.	6.3	1.1	Class-A Amplifier	250	0	—	—	5	—	1800	72	8000	3.5	6A86G
						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)