

Radio Tube Chart ← RCA Radiotron-Cunningham → Radio Tube Chart

TYPE	NAME	BASE	SOCKET CONNECTIONS	DIMENSIONS		CATHODE TYPE	RATING		FILAMENT OR HEATER	SCREEN
				MAXIMUM OVERALL LENGTH X DIAMETER	MAX. VOLTS		MAX. AMPERES	MAX. VOLTS		
RCA-1A6	PENTAGRID CONVERTER	SMALL 6-PIN	FIG. 26	4 1/2" x 1 1/8"	180	D-C FILAMENT	2.0	0.06	180	67.5
RCA-2A3	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	5 3/8" x 2 1/8"	250	FILAMENT	2.5	2.5	250	—
RCA-2A5	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 16A	4 1/8" x 1 1/8"	250	HEATER	2.5	1.75	250	250
RCA-2A6	DUPLEX-DIODE HIGH-IMP. TRIODE	SMALL 6-PIN	FIG. 13	4 1/2" x 1 1/8"	250	HEATER	2.5	0.8	250	—
RCA-2A7	PENTAGRID CONVERTER	SMALL 7-PIN	FIG. 20	4 1/2" x 1 1/8"	100	HEATER	2.5	0.8	250	100
RCA-2B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	4 1/2" x 1 1/8"	125	HEATER	2.5	0.8	250	125
RCA-6A4 <i>also 6A</i>	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 8	4 1/8" x 1 1/8"	180	FILAMENT	6.3	0.3	180	180
RCA-6A7	PENTAGRID CONVERTER	SMALL 7-PIN	FIG. 20	4 1/2" x 1 1/8"	100	HEATER	6.3	0.3	250	100
RCA-6B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	4 1/2" x 1 1/8"	125	HEATER	6.3	0.3	250	125
RCA-6F7	THIODE PENTODE	SMALL 7-PIN	FIG. 27	4 1/2" x 1 1/8"	425	HEATER	6.3	0.3	250	100
UX-200-A	DETECTOR TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/8" x 1 1/8"	45	D-C FILAMENT	5.0	0.25	45	—
RCA-01-A	DETECTOR* AMPLIFIER	MEDIUM 4-PIN	FIG. 1	4 1/8" x 1 1/8"	135	D-C FILAMENT	5.0	0.25	135	—
RCA-10	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	5 3/8" x 2 1/8"	275	FILAMENT	7.5	1.25	425	—

TYPE	USE	PLATE SUPPLY VOLTS	GRID VOLTS	SCREEN VOLTS	SCREEN MILLI-AMP.	PLATE MILLI-AMP.	A-C RESISTANCE OHMS	MUTUAL INDUCTANCE MHOS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR POWER OUTPUT OHMS	POWER OUTPUT WATTS
C-1A6	CONVERTER	180	-3.0 min.	67.5	2.4	1.3	500000	—	—	—	—
C-2A3	CLASS A AMPLIFIER PUSH-PULL	250	-4.5	—	—	60.0	300	9250	4.2	2500	3.5
C-2A5	CLASS A AMPLIFIER	300	-62	Self-bias	40.0	40.0	100000	—	—	5000	10.0
C-2A6	THIODE UNIT AS CLASS A AMPLIFIER	250	-16.5	250	6.5	34.0	100000	2200	220	7000	3.0
C-2A7	CONVERTER	250	-1.35	—	—	0.4	—	—	—	Gain per stage = 50-80	—
C-2B7	PENTODE UNIT AS R-F AMPLIFIER	100	-3.0	100	1.7	5.8	300000	950	285	—	—
C-6A4 <i>also 6A</i>	PENTODE UNIT AS A-F AMPLIFIER	250	-3.0	125	2.3	9.0	650000	1125	730	—	—
C-6A7	CONVERTER	250	-3.0	100	2.2	3.5	360000	—	—	—	—
C-6B7	PENTODE UNIT AS R-F AMPLIFIER	100	-3.0	100	1.6	9.0	82350	1200	100	11000	0.31
C-6F7	PENTODE UNIT AS MIXER	250	-12.0	180	3.9	22.0	45500	2200	100	8000	1.40
CX-300-A	GRID LEAK DETECTOR	45	Grid Return to (-) Filament	—	—	—	—	—	—	—	—
C-01-A	CLASS A AMPLIFIER	135	-4.5	—	—	—	—	—	—	—	—
C-10	CLASS A AMPLIFIER	350	-31.0	—	—	—	—	—	—	—	—

*Applied through plate coupling resistor of 200000 ohms.
 *Applied through plate coupling resistor of 250000 ohms.

TYPE	USE	PLATE SUPPLY VOLTS	GRID VOLTS	SCREEN VOLTS	SCREEN MILLI-AMP.	PLATE MILLI-AMP.	A-C RESISTANCE OHMS	MUTUAL INDUCTANCE MHOS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR POWER OUTPUT OHMS	POWER OUTPUT WATTS
WD-11	DETECTOR* TRIODE	90	-4.5	—	—	2.5	15500	425	6.6	—	—
WX-12	DETECTOR* TRIODE	135	-10.5	—	—	3.0	15000	440	6.6	—	—
UX-112-A	DETECTOR* TRIODE	90	-4.5	—	—	5.0	5400	1575	8.5	—	—
RCA-19	CLASS B AMPLIFIER	180	-13.5	—	—	7.7	4700	1800	8.5	—	—
UX-120	CLASS A AMPLIFIER	135	0	—	—	—	—	—	—	10000	2.1
RCA-22	CLASS A AMPLIFIER	135	-3.0	—	—	—	—	—	—	10000	1.9
RCA-24-A	BIAS DETECTOR	275	-5.0 approx.	45	—	—	—	—	—	—	—
RCA-26	CLASS A AMPLIFIER	90	-7.0 approx.	—	—	2.5	8900	935	8.3	—	—
RCA-27	CLASS A AMPLIFIER	180	-14.5	—	—	6.2	7300	1150	8.3	—	—
RCA-30	CLASS A AMPLIFIER	135	-9.0	—	—	4.5	5000	1000	9.0	—	—
RCA-31	BIAS DETECTOR	250	-21.0	—	—	5.2	9250	975	9.0	—	—
RCA-32	CLASS A AMPLIFIER	250	-30.0	—	—	—	—	—	—	—	—
RCA-33	CLASS A AMPLIFIER	90	-4.5	—	—	2.5	11000	850	9.3	—	—
RCA-34	CLASS A AMPLIFIER	135	-9.0	—	—	3.0	10300	900	9.3	—	—
RCA-35	CLASS A AMPLIFIER	180	-13.5	—	—	3.1	10300	900	9.3	—	—

*Grids #3 and #5 are screen. Grid #4 is signal-input control-grid.
 *For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.

▲ Applied through plate coupling resistor of 250000 ohms or 500-henry choke shunted by 0.25 megohm resistor.
 ▼ Applied through plate coupling resistor of 100000 ohms.
 *Maximum.

Radio Tube Chart (Continued) ← RCA Radiotron - Cunningham → Radio Tube Chart (Continued)

TYPE	NAME	BASE	SOCKET CONNECTIONS	DIMENSIONS MAXIMUM OVERALL LENGTH x DIAMETER	CATHODE TYPE	RATING	
						FILAMENT OR HEATER	SCREEN
						VOLTS	MAX. VOLTS
RCA-79	TWIN-TRIODE AMPLIFIER	SMALL 6-PIN	FIG. 19	4 1/2" x 1 1/8"	HEATER	6.3	250
RCA-85	DUPLEX-DIODE TRIODE	SMALL 6-PIN	FIG. 13	4 1/2" x 1 1/8"	HEATER	6.3	250
RCA-89	TRIPLE-GRID POWER AMPLIFIER	SMALL 6-PIN	FIG. 14	4 1/2" x 1 1/8"	HEATER	6.3	250
UV-199	DETECTOR* TRIODE	SMALL 4-NUB	FIG. 10	3 1/2" x 1 1/8"	D-C FILAMENT	3.3	90
UX-199	AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	4" x 1 1/8"	D-C FILAMENT	1.1	135

* For Grid-1's Detection—plate volts 45; grid return to - filament or to cathode.
 † For Grid-2's Detection—plate volts 100; grid return to - filament or to cathode.
 ‡ For Grid-3's Detection—plate volts 150; grid return to - filament or to cathode.
 § For D. C. on A-C filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.

RECTIFIERS

RCA-523	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 3/8" x 2 1/8"	FILAMENT	5.0	3.0
RCA-1223	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 1/4" x 1 1/8"	HEATER	12.6	0.3
RCA-2525	RECTIFIER-DOUBLER	SMALL 6-PIN	FIG. 5	4 1/4" x 1 1/8"	HEATER	25.0	0.3
RCA-1-v°	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 1/4" x 1 1/8"	HEATER	6.3	0.3
RCA-80	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 1/8" x 1 1/8"	FILAMENT	5.0	2.0
UX-581	HALF-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 3	6 1/4" x 2 1/8"	FILAMENT	7.5	1.25
RCA-82	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 1/8" x 1 1/8"	FILAMENT	2.5	3.0
RCA-83	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 3/8" x 2 1/8"	FILAMENT	5.0	3.0
RCA-84	FULL-WAVE RECTIFIER	SMALL 6-PIN	FIG. 23	4 1/4" x 1 1/8"	HEATER	6.3	0.5
RCA-866	HALF-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 3 See Note E	6 3/8" x 2 1/8"	FILAMENT	2.5	5.0

▶ Mercury Vapor Type. * Interchangeable with type 1.
 † Plate connection made to top cap of tube.

PHOTOTUBES

RCA-888	PHOTOTUBE	SMALL 4-PIN	FIG. 1 See Note B	4 1/8" x 1 1/8"	Note: Pins No. 1 and No. 3—No Connections, Pin No. 2—Anode (+), Pin No. 4—Cathode (-).		
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INDEX OF TYPES BY USE AND BY CATHODE VOLTAGE

CATHODE VOLTS	POWER AMPLIFIERS	VOLTAGE AMPLIFIERS <i>Including Diode-Grid Types</i>	CONVERTERS IN SUPERHETERODYNES
1.1	—	11, 12, 864	—
1.5	—	26	—
2.0	19, 31, 33, 49	30, 32, 34	1A6
2.5	2A3, 2A5, 45, 46, 47, 53, 59	2A6, 2B7, 24-A, 27, 35, 55, 56, 57, 58	2A7
3.3	20	22, '99	—
5.0	112-A, 71-A	01-A, '40, 112-A	—
6.3	6A4, 38, 41, 42, 79, 89	6B7, 6F7, 36, 37, 39-44, 75, 77, 78, 85	6A7, 6F7
7.5	10, '50	—	—
12.6	—	—	—
25.0	43	—	—
30.0	48	—	—

USE	PLATE SUPPLY VOLTS	GRID VOLTS	SCREEN VOLTS	SCREEN MILLI-AMP.	SCREEN MILLI-AMP.	A-C PLATE RESISTANCE OHMS	MUTUAL INDUCTANCE MICROHMS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR STATED POWER OUTPUT OHMS	POWER OUTPUT WATTS	TYPE
CLASS B AMPLIFIER	180	0	—	—	—	—	—	—	7000	5.5	C-79
TRIODE UNIT AS CLASS A AMPLIFIER	135	-10.5	—	—	—	—	—	—	14000	8.0	C-85
AS TRIODE †	160	-20.0	—	—	—	—	—	—	25000	0.075	C-85
CLASS A AMPLIFIER	250	-31.0	—	—	—	—	—	—	20000	0.160	C-85
AS PENTODE ††	180	-10.0	100	1.6	—	—	—	—	7000	0.300	C-89
AS TRIODE †††	180	-15.0	180	3.0	—	—	—	—	6500	0.400	C-89
CLASS B AMPLIFIER	250	-25.0	250	5.5	—	—	—	—	10700	0.33	C-89
CLASS A AMPLIFIER	180	0	—	—	—	—	—	—	17000	0.33	C-89
CLASS A AMPLIFIER	90	-4.5	—	—	—	—	—	—	13600	3.50	C-289
CLASS A AMPLIFIER	90	-4.5	—	—	—	—	—	—	15500	—	CX-289
CLASS A AMPLIFIER	135	-9.0	—	—	—	—	—	—	610	—	C-864

Power output values for one tube at stated load, plate-to-plate.
 † Grid #2 is control grid. Grid #3 tied to cathode.
 †† Grid #1 is control grid. Grids #2 and #3 tied to plate.
 ††† Grids #1 and #2 connected together. Grid #3 tied to plate.

RECTIFIERS

Maximum A-C Voltage per Plate	500 Volts, RMS
Maximum D-C Output Current	250 Milliamperes
Maximum A-C Voltage per Plate	250 Volts, RMS
Maximum D-C Output Current	250 Milliamperes
Maximum A-C Voltage per Plate	135 Volts, RMS
Maximum D-C Output Current	100 Milliamperes
Maximum A-C Voltage per Plate	350 Volts, RMS
Maximum D-C Output Current	350 Milliamperes
A-C Voltage per Plate (Volts RMS)	350 400 550
D-C Output Current (Maximum MA)	125 110 135
Maximum A-C Plate Voltage	700 Volts, RMS
Maximum D-C Output Current	85 Milliamperes
Maximum A-C Voltage per Plate	1400 Volts
Maximum D-C Output Current	1400 Milliamperes
Maximum A-C Voltage per Plate	400 Volts
Maximum D-C Output Current	400 Milliamperes
Maximum A-C Voltage per Plate	250 Volts, RMS
Maximum D-C Output Current	250 Milliamperes
Maximum A-C Voltage per Plate	250 Volts, RMS
Maximum D-C Output Current	250 Milliamperes
Maximum Peak Inverse Voltage	750 Volts
Maximum Peak Plate Current	0.6 Ampere

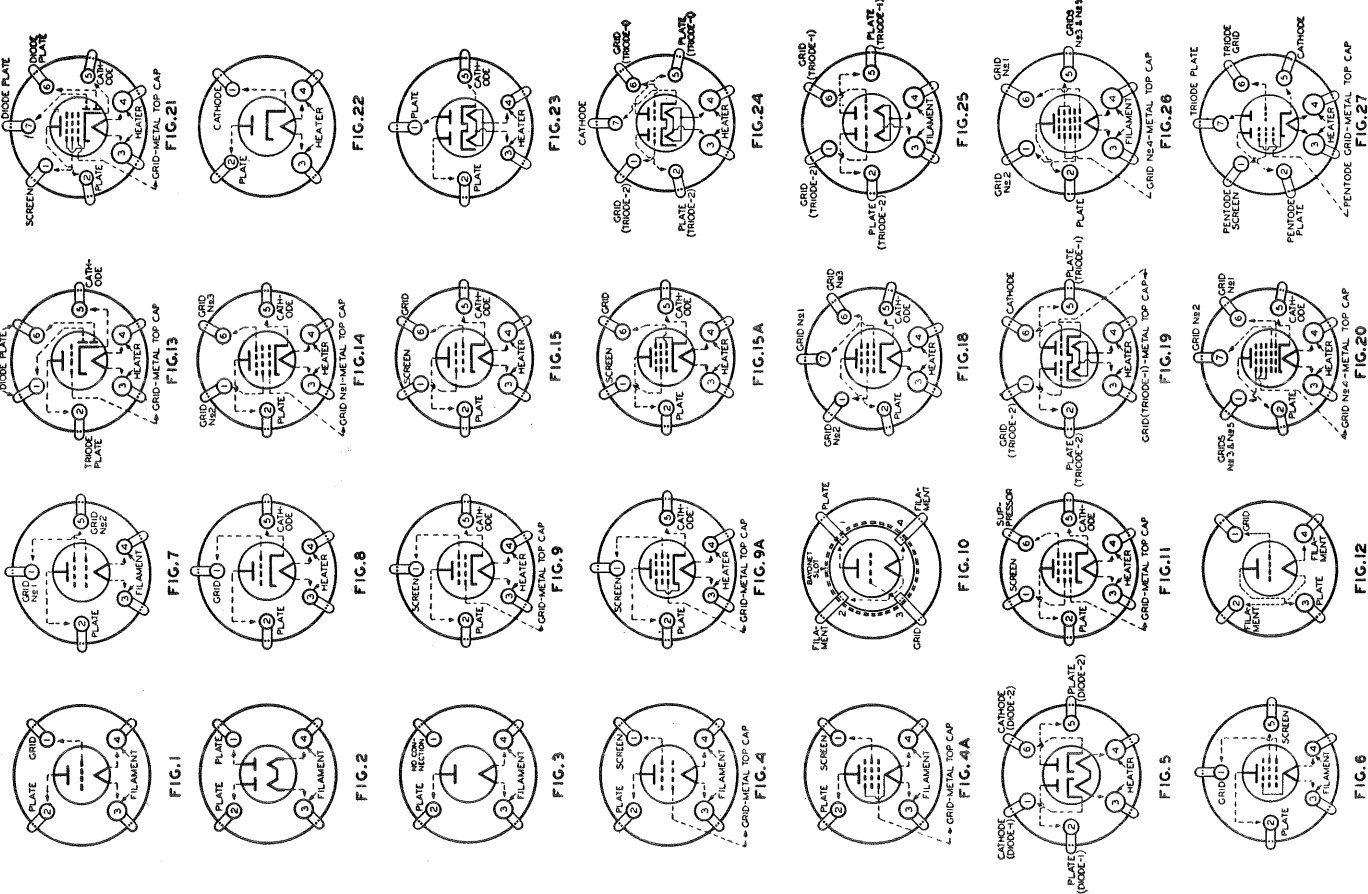
PHOTOTUBES

Max. Anode Supply Voltage	90 Volts
Max. Anode Current	20 Microamperes
Static Sensitivity	35 Microamperes per Lumen
Dynamic Sensitivity	50 and 48 Microamperes per Lumen at 1000 and 5000 Cycles per second, respectively.

INDEX OF TYPES BY USE AND BY CATHODE VOLTAGE

DETECTORS	MIXER TUBES IN SUPERHETERODYNES	RECTIFIERS	CATHODE VOLTS
11, 12, 864	—	—	1.1
30, 32	1A6, 34	—	1.5
2A6, 2B7, 24-A, 27, 35, 55, 56, 57	2A7, 35, 58	82, 866 (C-366)	2.0
199	—	—	2.5
01-A, 01-A, '40, 112-A	—	—	3.3
6B7, 6F7, 36, 37, 75, 77, 85	6A7, 6F7, 39-44, 78	523, 80, 83	5.0
—	—	1-v, 84	6.3
—	—	81	7.5
—	—	12Z3	12.6
—	—	25Z5	25.0
—	—	—	30.0

Tube Symbols and Bottom Views of Socket Connections



Outline Dimensions of RCA Radiotron and Cunningham Radio Tube Types

This chart of tube dimensions is to be used in conjunction with the text. The bulb reference number for each tube is given under its CHARACTERISTICS.

The prefix letters of the bulb designation indicate the bulb shape: as S for "straight side," T for "tubular," ST for a combination of tubular and straight side, or "dome type." The suffix numbers of the bulb designations indicate the nominal maximum diameter of the bulb in eighths of inches, i.e., the diameter of the S-12 is 12 eighths, or 1 1/2".

