

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

TYPE	NAME	BASE	SOCKET CONNEC-TIONS	DIMENSIONS		CATHODE TYPE #	RATING			
				MAXIMUM OVERALL LENGTH X DIAMETER	FILAMENT OR HEATER		PLATE	SCREEN		
							VOLTS	AMPERES	MAX. VOLTS	MAX. VOLTS
RCA-1A6	PENTAGRID CONVERTER #	SMALL 6-PIN	FIG. 26	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.06	180	67.5
RCA-2A3	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$5\frac{3}{8}'' \times 2\frac{1}{8}''$	FILAMENT		2.5	2.5	250	—
RCA-2A5	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 18A	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		2.5	1.75	250	250
RCA-2A6	DUPLEX-DIODE HIGH-MU TRIODE	SMALL 6-PIN	FIG. 13	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		2.5	0.8	250	—
RCA-2A7	PENTAGRID CONVERTER #	SMALL 7-PIN	FIG. 20	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		2.5	0.8	250	100
RCA-2B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		2.5	0.8	250	125
RCA-6A4	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 6	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	FILAMENT		6.3	0.3	180	180
RCA-6A7	PENTAGRID CONVERTER #	SMALL 7-PIN	FIG. 20	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		6.3	0.3	250	100
RCA-6B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		6.3	0.3	250	125
RCA-6F7	TRIODE-PENTODE	SMALL 7-PIN	FIG. 27	$4\frac{1}{2}'' \times 1\frac{1}{8}''$	HEATER		6.3	0.3	250	100
UX-200-A	DETECTOR TRIODE	MEDIUM 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		5.0	0.25	45	—
RCA-01-A	DETECTOR* AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		5.0	0.25	135	—
RCA-10	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$5\frac{3}{8}'' \times 2\frac{1}{8}''$	FILAMENT		7.5	1.25	425	—

* 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.

TYPE	NAME	BASE	SOCKET CONNEC-TIONS	DIMENSIONS	CATHODE TYPE #	FILAMENT OR HEATER	PLATE	SCREEN
				MAXIMUM OVERALL LENGTH X DIAMETER			VOLTS	MAX. VOLTS
WD-11	DETECTOR* AMPLIFIER TRIODE	WD 4-PIN	FIG. 12	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		1.1	0.25
WX-12	DETECTOR* AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		5.0	0.25
UX-112-A	AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.26
RCA-19	AMPLIFIER TRIODE	SMALL 6-PIN	FIG. 25	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		3.3	0.132
UX-120	POWER AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		3.3	0.132
RCA-22	R-F AMPLIFIER TETRODE	MEDIUM 4-PIN	FIG. 4	$5\frac{3}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.5	1.75
RCA-24-A	R-F AMPLIFIER TETRODE	MEDIUM 6-PIN	FIG. 9	$5\frac{3}{8}'' \times 1\frac{1}{8}''$	HEATER		2.5	1.75
RCA-26	AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	FILAMENT		1.5	1.05
RCA-27	DETECTOR* AMPLIFIER TRIODE	MEDIUM 5-PIN	FIG. 8	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	HEATER		2.5	1.75
RCA-30	DETECTOR* AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.06
RCA-31	POWER AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.13
RCA-32	R-F AMPLIFIER TETRODE	MEDIUM 4-PIN	FIG. 4	$5\frac{3}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.06
RCA-33	POWER AMPLIFIER PENTODE	MEDIUM 5-PIN	FIG. 6	$4\frac{1}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.26
RCA-34	SUPER-CONTROL PENTODE	MEDIUM 4-PIN	FIG. 4A	$5\frac{3}{8}'' \times 1\frac{1}{8}''$	D-C FILAMENT		2.0	0.06
RCA-35	SUPER-CONTROL PENTODE	MEDIUM 5-PIN	FIG. 9	$5\frac{3}{8}'' \times 1\frac{1}{8}''$	HEATER		2.5	1.75

* For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
 # Either A, C, or D, C, may be used on filament or heater, except as specifically noted. For use of D, C, on A-C filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.

USE	PLATE SUPPLY VOLTS	GRID VOLTS #	SCREEN VOLTS	SCREEN MILLI-AMP.	PLATE MILLI-AMP.	A-C RESISTANCE OHMS	MUTUAL INDUCTANCE MHOS	VOLTAGE FACTOR	LOAD FOR STATED OUTPUT OHMS	POWER OUTPUT WATTS	TYPE
CONVERTER	180	-3.0 min.	67.5	2.4	1.3	500000	Anode Grid (# 2) 135 Max. Volts, 2.3 Ma. Oscillator Grid (# 1) Resistor, 50000 Ohms. Conversion Conductance, 300 Microhmhos.	—	—	—	C-1A6
CLASS A AMPLIFIER	250	-45	—	—	60.0	300	5250	4.2	2500	3.5	C-2A3
CLASS B AMPLIFIER	300	-62	Self-bias	40.0	40.0	—	Power Output is for 2 tubes at stated load, plate-to-plate	—	5000	10.0	C-2A5
CLASS A AMPLIFIER	250	-16.5	250	6.5	34.0	100000	2200	220	7000	3.0	C-2A6
CLASS A AMPLIFIER	250*	-1.35	—	—	0.4	—	—	Gain per stage = 50-60	—	—	C-2A7
CONVERTER	250	-3.0	100	2.2	3.5	360000	Anode Grid (# 2) 200 Max. Volts, 4.0 Ma. Oscillator Grid (# 1) Resistor, 50000 Ohms. Conversion Conductance, 520 Microhmhos.	—	—	—	C-2B7
PENTODE UNIT AS R-F AMPLIFIER	250	-3.0	100	1.7	5.8	300000	950	285	—	—	C-6A4
PENTODE UNIT AS A-F AMPLIFIER	250*	-4.5	50	—	0.65	—	1125	730	—	—	C-6A7
CLASS A AMPLIFIER	180	-6.5	100	1.6	9.0	83250	1200	100	11000	0.31	C-6B7
CONVERTER	250	-3.0	100	2.2	3.5	360000	Anode Grid (# 2) 200 Max. Volts, 4.0 Ma. Oscillator Grid (# 1) Resistor, 50000 Ohms. Conversion Conductance, 520 Microhmhos.	—	—	—	C-6F7
PENTODE UNIT AS R-F AMPLIFIER	250	-3.0	100	1.7	5.8	300000	950	285	—	—	CX-300-A
PENTODE UNIT AS A-F AMPLIFIER	250*	-4.5	50	—	0.65	—	1125	730	—	—	C-01-A
TRIODE UNIT AS AMPLIFIER	100	-3.0	—	—	—	—	—	—	—	—	C-10
PENTODE UNIT AS MIXER	250	-10.0	100	0.6	2.8	—	666	20	—	—	C-11
GRID LEAK DETECTOR	45	Grid Return to (-) Filament	—	—	—	—	—	—	—	—	CX-112-A
CLASS A AMPLIFIER	90	-4.5	—	—	2.5	110000	725	8.0	—	—	C-19
CLASS A AMPLIFIER	135	-9.0	—	—	3.0	10000	800	8.0	—	—	CX-220
CLASS A AMPLIFIER	425	-39.0	—	—	16.0	5150	1550	8.0	11000	0.9	C-22
CLASS A AMPLIFIER	90	-16.5	—	—	3.0	8000	415	3.3	9600	0.045	C-24-A
CLASS A AMPLIFIER	135	-22.5	—	—	6.5	6500	525	3.3	6500	0.110	C-26
SCREEN GRID R-F AMPLIFIER	135	-1.5	45	0.6*	1.7	725000	375	270	—	—	C-27
SCREEN GRID R-F AMPLIFIER	135	-1.5	67.5	1.3*	3.7	325000	500	160	—	—	C-30
SCREEN GRID R-F AMPLIFIER	180	-3.0	90	1.7*	4.0	400000	1000	400	—	—	C-31
BIAS DETECTOR	275	-5.0 approx.	20 to 45	—	4.0	600000	1050	650	—	—	C-32
CLASS A AMPLIFIER	90	-7.0	—	—	2.9	8900	935	8.3	—	—	C-33
CLASS A AMPLIFIER	135	-14.5	—	—	6.2	7500	1150	8.3	—	—	C-34
CLASS A AMPLIFIER	250	-21.0	—	—	4.5	9000	1000	9.0	—	—	C-35
BIAS DETECTOR	250	-30.0	—	—	5.2	9750	975	9.0	—	—	C-36
CLASS A AMPLIFIER	90	-4.5	—	—	2.5	11000	850	9.3	—	—	C-37
CLASS A AMPLIFIER	135	-9.0	—	—	3.0	10300	900	9.3	—	—	C-38
CLASS A AMPLIFIER	135	-22.5	—	—	3.1	10300	900	9.3	—	—	C-39
SCREEN GRID R-F AMPLIFIER	135	-30.0	—	—	8.0	4100	925	3.8	7000	0.185	C-40
SCREEN GRID R-F AMPLIFIER	180	-3.0	67.5	0.4*	12.5	3600	1050	3.8	5700	0.375	C-41
BIAS DETECTOR	180	-6.0 approx.	67.5	0.4*	1.7	650000	640	610	—	—	C-42
CLASS A AMPLIFIER	135	-13.5	135	3.0	14.5	50000	1450	70	7000	0.7	C-43
SCREEN GRID R-F AMPLIFIER	180	-3.0 min.	67.5	1.0	2.8	600000	600	360	—	—	C-44
SCREEN GRID R-F AMPLIFIER	180	-3.0 min.	90	2.5*	6.3	1000000	620	620	—	—	C-45
SCREEN GRID R-F AMPLIFIER	250	-3.0 min.	90	2.5*	6.5	400000	1050	420	—	—	C-46

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

* Applied through plate coupling resistor of 200000 ohms.
 * Applied through plate coupling resistor of 250000 ohms.
 * Applied through plate coupling resistor of 150000 ohms or 500-henry choke shunted by 0.25 megohm resistor.
 * 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	
						HEATER	SCREEN
RCA-79	TWIN-TRIODE AMPLIFIER	SMALL 6-PIN	FIG. 19	4 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ "	HEATER	6.3	0.6
RCA-85	DIPOLE-TRIODE TRIODE	SMALL 6-PIN	FIG. 13	4 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ "	HEATER	6.3	0.3
RCA-89	TRIPLE-GRID POWER AMPLIFIER	SMALL 6-PIN	FIG. 14	4 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ "	HEATER	6.3	0.4
UV-189 UX-189	DETECTOR- AMPLIFIER TRIODE	SMALL 9-PIN SMALL 4-PIN	FIG. 10 FIG. 1	3 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ " 4 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	D.C. FILAMENT	3.3	0.063
RCA-864	AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	4" x 1 $\frac{1}{8}$ "	D.C. FILAMENT	1.1	0.25

*For Grid-leak Detection—plate volts 45; grid return to + filament or to cathode.
 †Either A, C, or D, C, may be used on filament or heater, except as specifically noted. For use
 of D, C, on A-C filament types, decrease stated grid volts by ½ (approx.) of filament voltage.

RECTIFIERS

RCA-523	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 $\frac{1}{8}$ " x 2 $\frac{1}{8}$ "	FILAMENT	5.0	3.0
RCA-1223	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 $\frac{1}{4}$ " x 1 $\frac{1}{8}$ "	HEATER	12.6	0.3
RCA-2525	RECTIFIER- DOUBLER	SMALL 6-PIN	FIG. 5	4 $\frac{1}{4}$ " x 1 $\frac{1}{8}$ "	HEATER	25.0	0.3
RCA-1-V ^o	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 $\frac{1}{4}$ " x 1 $\frac{1}{8}$ "	HEATER	6.3	0.3
RCA-80	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	FILAMENT	5.0	2.0
UX-381	HALF-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 3	6 $\frac{1}{8}$ " x 2 $\frac{1}{8}$ "	FILAMENT	7.5	1.25
RCA-82	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	FILAMENT	2.5	3.0
RCA-83	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 $\frac{1}{8}$ " x 2 $\frac{1}{8}$ "	FILAMENT	5.0	3.0
RCA-84 also 6Z4	FULL-WAVE RECTIFIER	SMALL 5-PIN	FIG. 23	4 $\frac{1}{4}$ " x 1 $\frac{1}{8}$ "	HEATER	6.3	0.5
RCA-866	HALF-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 3 See Note E	6 $\frac{1}{8}$ " x 2 $\frac{1}{8}$ "	FILAMENT	2.5	5.0

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

PHOTOTUBES

RCA-868	PHOTOTUBE	SMALL 4-PIN	FIG. 1 See Note →	4 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	Note: Pins No. 1 and No. 3—No Con- nections, 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, 2A-4, 2T1, 35, 55, 56, 57, 58	2A7
3.3	20	22, 99	—
5.0	112-A, 71-A	01-A, 140, 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.	PLATE MILLI-AMP.	A-C PLATE RESISTANCE OHMS	MUTUAL INDUCTION MICRO-MHOS	VOLT-AGE 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	—	—	3-7	11000	750	8-3	25000	0.075	C-85
AS TRIODE #1 CLASS A AMPLIFIER	160	-20.0	—	—	17.0	3500	1425	4-7	7000	0.300	—
AS TRIODE #2 CLASS A AMPLIFIER	230	-22.5	—	—	32.0	2600	1800	4-7	5500	0.400	—
AS PENTODE #1 CLASS A AMPLIFIER	180	-18.0	100	1.6	9.5	10000	1200	125	10700	0.33	C-89
AS TRIODE #2 CLASS A AMPLIFIER	250	-25.0	250	5.5	32.0	7000	1800	125	6900	3.50	—
CLASS B AMPLIFIER	180	0	—	—	—	—	—	—	9400	3.50	—
CLASS A AMPLIFIER	90	-4.5	—	—	2.5	15500	425	6-6	—	—	C-299 CX-299
CLASS A AMPLIFIER	90	-4.5	—	—	2.9	13500	610	8-2	—	—	C-864

** Grid #1 is control grid. Grid #2 is screen. 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	350 Volts, RMS
Maximum D-C Output Current	60 Milliamperes
Maximum A-C Voltage per Plate	125 Volts, RMS
Maximum D-C Output Current	100 Milliamperes
Maximum A-C Voltage per Plate	350 Volts, RMS
Maximum D-C Output Current	50 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	500 Volts, RMS
Maximum D-C Output Current	125 Milliamperes
Maximum A-C Voltage per Plate	500 Volts, RMS
Maximum D-C Output Current	250 Milliamperes
Maximum A-C Voltage per Plate	225 Volts, RMS
Maximum D-C Output Current	50 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	55 Microamperes per Lumen
Dynamic Sensitivity	50 and 48 Microamperes per Lumen at 1000 and 5000 Cycles per second, respectively.

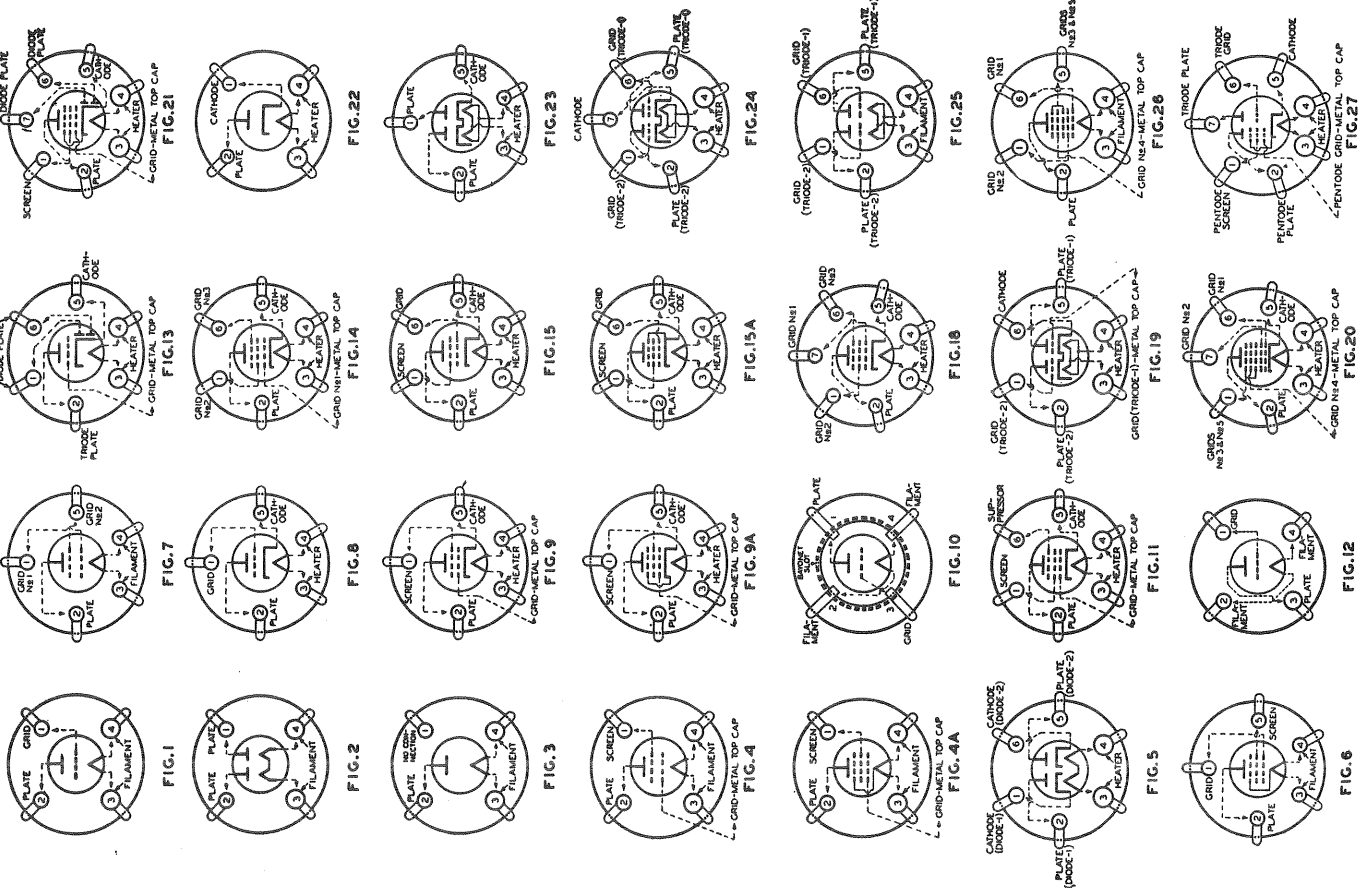
INDEX OF TYPES BY USE AND BY CATHODE VOLTAGE

CATHODE VOLTS	DETECTORS	MIXER TUBES IN SUPERHETERODYNES	RECTIFIERS
1.1	11, 12, 864	—	—
1.5	—	—	—
2.0	30, 32	1A6, 34	—
2.5	2A6, 2B7, 2A-4, 2T1, 55, 56, 57	2A7, 35, 58	82, 866 (C-366)
3.3	—	—	—
5.0	00-A, 01-A, 140, 112-A	—	523, 80, 83
6.3	6B7, 6F7, 36, 37, 75, 77, 85	6A7, 6F7, 39-44, 78	1-V, 84
7.5	—	—	81
12.6	—	—	1223
25.0	—	—	2525
30.0	—	—	—

*For Grid-leak Detection—plate volts 45; grid return to + filament or to cathode.
 †Either A, C, or D, C, may be used on filament or heater, except as specifically noted. For use
 of D, C, on A-C filament types, decrease stated grid volts by ½ (approx.) of filament voltage.
 ‡ Requires different socket from small 7-pin.

© Grids #1 and #2 connected together. Grid #3 tied to plate.

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."

