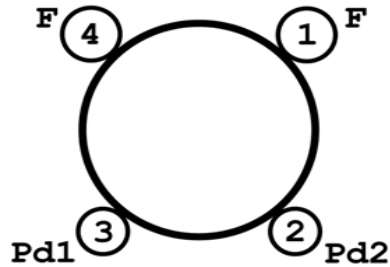


# VACUUM TUBE PINOUT SHEETS

<u>Tube</u>	<u>Page</u>	<u>Tube</u>	<u>Page</u>	<u>Tube</u>	<u>Page</u>	<u>Tube</u>	<u>Page</u>
<a href="#">5AR4</a>	5	<a href="#">6K11</a>	29	<a href="#">18GD6A</a>	11	<a href="#">7025</a>	19
<a href="#">5AU4</a>	6	<a href="#">6L6</a>	10	<a href="#">35Z5</a>	7	<a href="#">7027A</a>	16
<a href="#">5BR8</a>	24	<a href="#">6Q11</a>	29	<a href="#">36AM3</a>	4	<a href="#">7189</a>	22
<a href="#">5BS8</a>	20	<a href="#">6SJ7</a>	18	<a href="#">50BM8</a>	23	<a href="#">7189A</a>	22
<a href="#">5FV8</a>	24	<a href="#">6SL7</a>	14	<a href="#">50L6</a>	10	<a href="#">7199</a>	15
<a href="#">5U4</a>	6	<a href="#">6SN7</a>	14	<a href="#">5881</a>	10	<a href="#">7591A</a>	17
<a href="#">5V3</a>	6	<a href="#">6V6</a>	10	<a href="#">6072A</a>	19	<a href="#">76</a>	3
<a href="#">5Y3</a>	6			<a href="#">60FX5</a>	12	<a href="#">7868</a>	28
<a href="#">5Z3</a>	2	<a href="#">12AT7</a>	19	<a href="#">6201</a>	19		
		<a href="#">12AU6</a>	11	<a href="#">6550</a>	13	<a href="#">ECC81</a>	19
<a href="#">6AU6</a>	11	<a href="#">12AU7</a>	19	<a href="#">6679</a>	19	<a href="#">ECC82</a>	19
<a href="#">6BM8</a>	23	<a href="#">12AX7</a>	19	<a href="#">6680</a>	19	<a href="#">ECC83</a>	19
<a href="#">6BQ5</a>	22	<a href="#">12AY7</a>	19	<a href="#">6681</a>	19	<a href="#">ECC832</a>	19
<a href="#">6BR8A</a>	24	<a href="#">12BH7</a>	19	<a href="#">6922</a>	20	<a href="#">ECC88</a>	20
<a href="#">6C4</a>	8	<a href="#">12BV7</a>	21			<a href="#">ECL82</a>	23
<a href="#">6C6</a>	9	<a href="#">12BY7A</a>	21			<a href="#">EL34</a>	15
<a href="#">6CA7</a>	15	<a href="#">12DQ7</a>	21			<a href="#">EL84</a>	22
<a href="#">6CG7</a>	26	<a href="#">12DW7</a>	19			<a href="#">GZ34</a>	5
<a href="#">6DJ8</a>	20	<a href="#">12FX5</a>	12			<a href="#">KT66</a>	10
<a href="#">6EU7</a>	27	<a href="#">12SL7</a>	14			<a href="#">KT88</a>	15
<a href="#">6FQ7</a>	26	<a href="#">12SN7</a>	14			<a href="#">UCL82</a>	23
<a href="#">6FV8A</a>	24						

# 5Z3

## FULL-WAVE RECTIFIER



**PIN DIAGRAM: 4C**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

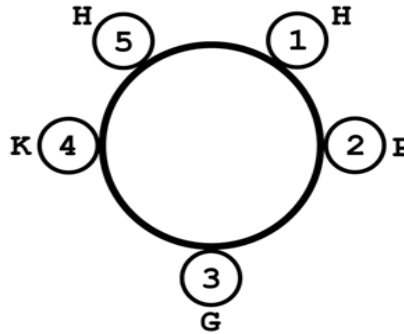
MODEL:

SERIAL NO:

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Filament						
2	d2 - Plate						
3	d1 - Plate						
4	Filament						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc



**PIN DIAGRAM: 5A**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

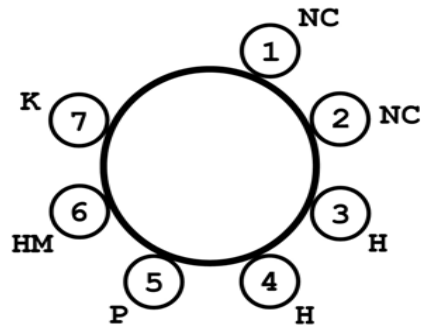
SERIAL NO:

**MEDIUM-MU TRIODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Heater						
2	Plate						
3	Grid						
4	Cathode						
5	Heater						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 36AM3



**PIN DIAGRAM: 5BQ**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

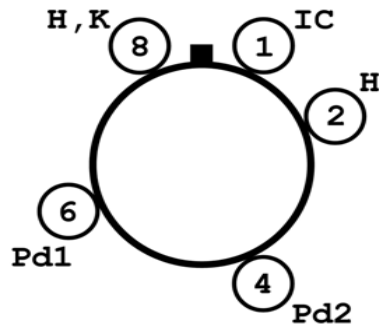
SERIAL NO:

## HALF-WAVE RECTIFIER

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	NC						
2	NC						
3	Heater						
4	Heater						
5	Plate						
6	Heater Tap						
7	Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 5AR4 / GZ34



PIN DIAGRAM: 5DA

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## FULL-WAVE RECTIFIER

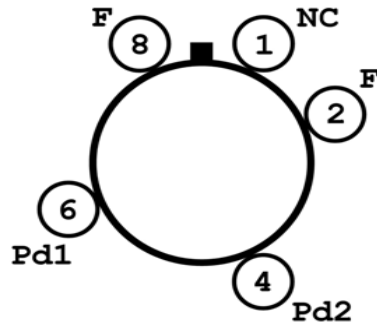
PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	IC						
2	Heater						
4	d2 - Plate						
6	d1 - Plate						
8	Heater, Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**5Y3GT**  
**5U4GB**  
**5V3A/5AU4**

**FULL-WAVE RECTIFIER**



**PIN DIAGRAM: 5T**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

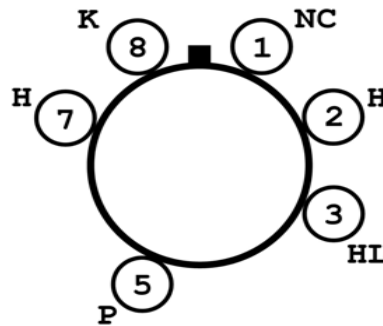
MODEL:

SERIAL NO:

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	NC						
2	Filament						
	NC or OMITTED						
4	d2 - Plate						
	NC or OMITTED						
6	d1 - Plate						
	NC or OMITTED						
8	Filament						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 35Z5GT



**PIN DIAGRAM: 6AD**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

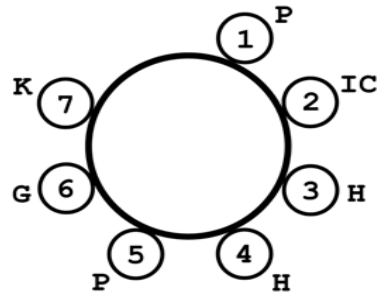
## HALF-WAVE RECTIFIER

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	NC or OMITTED						
2	Heater						
3	Heater Tap - Panel Lamp						
5	Plate						
7	Heater						
8	Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6C4



**PIN DIAGRAM: 6BG**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

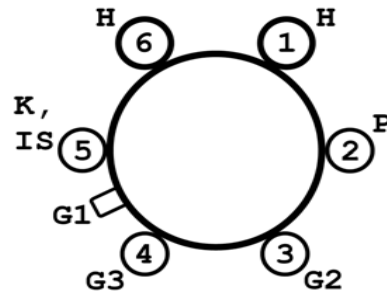
## POWER TRIODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Plate						
2	IC						
3	Heater						
4	Heater						
5	Plate						
6	Grid						
7	Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6C6



PIN DIAGRAM: 6F

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## SHARP-CUTOFF PENTODE

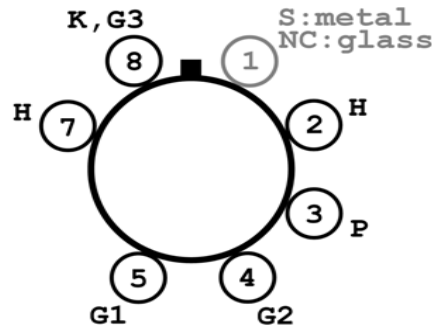
PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Heater						
2	Plate						
3	Screen Grid						
4	Suppressor Grid						
5	Cathode, IS						
6	Heater						
cap	Control Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6L6, 6L6GC**  
**6V6, 6V6GTA**  
**5881, 50L6**  
**KT66**

**BEAM POWER TUBE**



**PIN DIAGRAM: 7AC**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

[INDEX](#)

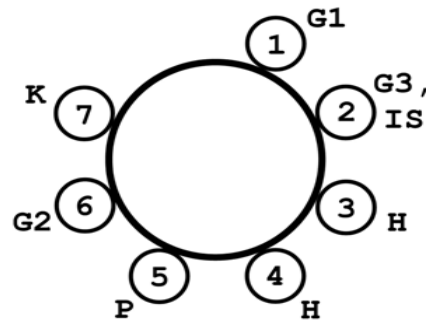
PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	S or NC or OMITTED						
2	Heater						
3	Plate						
4	Screen Grid						
5	Control Grid						
7	Heater						
8	Cathode, Suppressor Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**18GD6A**

**12AU6**

**6AU6**



**PIN DIAGRAM: 7BK**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

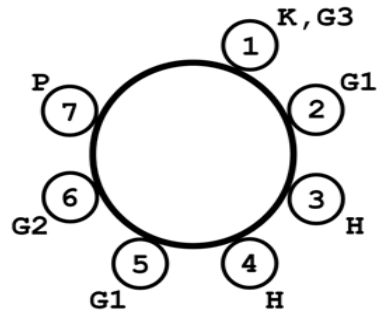
SERIAL NO:

**SHARP-CUTOFF PENTODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Control Grid						
2	Suppressor Grid, IS						
3	Heater						
4	Heater						
5	Plate						
6	Screen Grid						
7	Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**60FX5**  
**12FX5**



**PIN DIAGRAM: 7CV**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

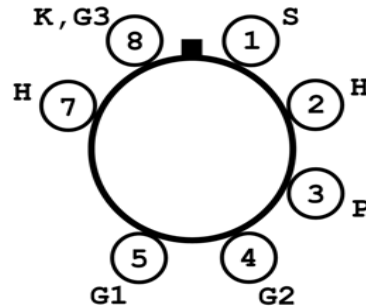
SERIAL NO:

**POWER PENTODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Cathode, Suppressor Grid						
2	Control Grid						
3	Heater						
4	Heater						
5	Control Grid						
6	Screen Grid						
7	Plate						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6550



PIN DIAGRAM: 7S

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

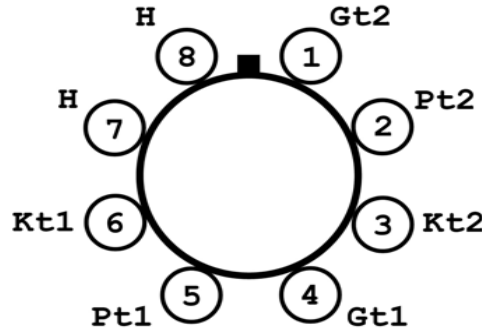
SERIAL NO:

## BEAM POWER PENTODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Metal Shell						
2	Heater						
3	Plate						
4	Screen Grid						
5	Control Grid						
7	Heater						
8	Cathode, Suppressor Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6SL7, 12SL7**  
**6SN7, 12SN7**



**PIN DIAGRAM: 8BD**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

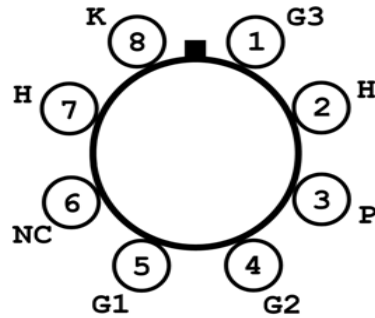
**TWIN TRIODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t2 - Grid						
2	t2 - Plate						
3	t2 - Cathode						
4	t1 - Grid						
5	t1 - Plate						
6	t1 - Cathode						
7	Heater						
8	Heater						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6CA7 / EL34**  
**KT88**



**PIN DIAGRAM: 8ET**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

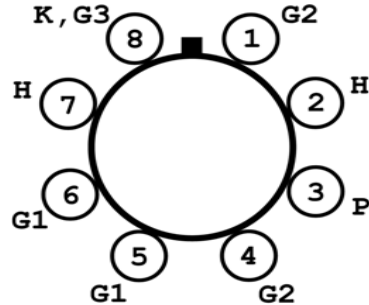
**POWER PENTODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Suppressor Grid						
2	Heater						
3	Plate						
4	Screen Grid						
5	Control Grid						
6	NC						
7	Heater						
8	Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 7027A



PIN DIAGRAM: 8HY

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

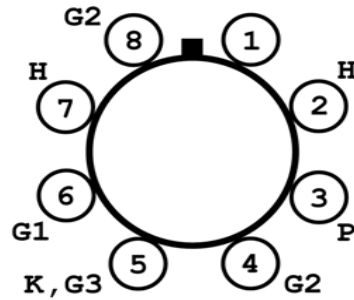
SERIAL NO:

## BEAM POWER PENTODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Screen Grid						
2	Heater						
3	Plate						
4	Screen Grid						
5	Control Grid						
6	Control Grid						
7	Heater						
8	Cathode, Suppressor Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 7591A



**PIN DIAGRAM: 8KQ**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

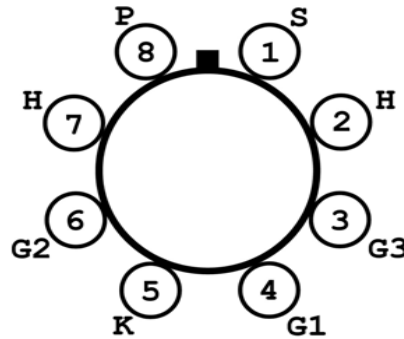
SERIAL NO:

## POWER PENTODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1							
2	Heater						
3	Plate						
4	Screen Grid						
5	Cathode, Suppressor Grid						
6	Control Grid						
7	Heater						
8	Screen Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6SJ7



**PIN DIAGRAM: 8N**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## SHARP-CUTOFF PENTODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	S						
2	Heater						
3	Suppressor Grid						
4	Control Grid						
5	Cathode						
6	Screen Grid						
7	Heater						
8	Plate						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

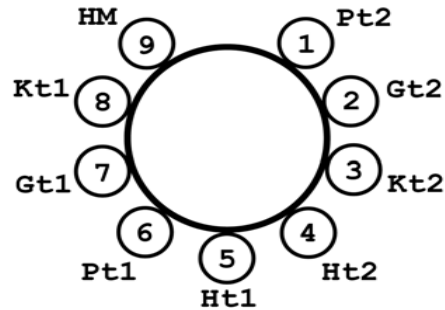
12AT7/ECC81/6679/6201

12AU7/ECC82/6680, 12BH7

12AX7/ECC83/6681/7025

12AY7/6072A, 12DW7/ECC832

**TWIN TRIODE**



**PIN DIAGRAM: 9A**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

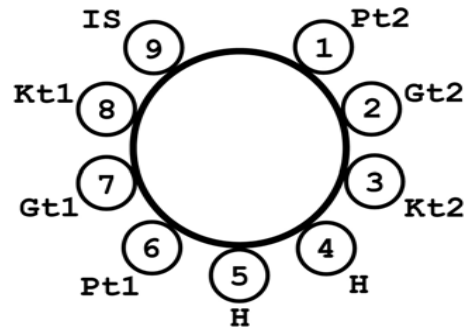
SERIAL NO:

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t2 - Plate						
2	t2 - Grid						
3	t2 - Cathode						
4	t2 - Heater						
5	t1 - Heater						
6	t1 - Plate						
7	t1 - Grid						
8	t1 - Cathode						
9	Heater common						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6DJ8/ECC88/6922

## 5BS8



PIN DIAGRAM: 9AJ

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

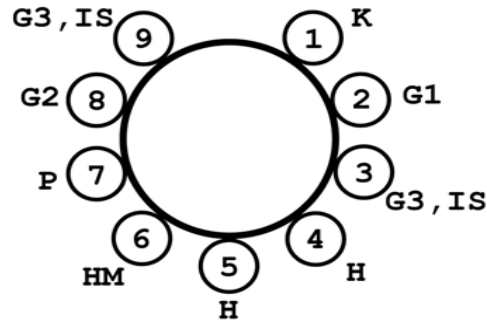
[INDEX](#)

### MEDIUM-MU TWIN TRIODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t2 - Plate						
2	t2 - Grid						
3	t2 - Cathode						
4	t2 - Heater						
5	t1 - Heater						
6	t1 - Plate						
7	t1 - Grid						
8	t1 - Cathode						
9	IS						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 12BY7A/12BV7/12DQ7



**PIN DIAGRAM: 9BF**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## SHARP-CUTOFF PENTODE

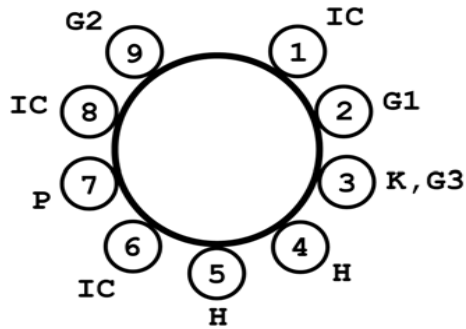
PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Cathode						
2	Control Grid						
3	Suppressor Grid, IS						
4	Heater						
5	Heater						
6	Heater common						
7	Plate						
8	Screen Grid						
9	Suppressor Grid, IS						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6BQ5 / EL84

**7189**

**7189A** - pins 1 & 2 connect; pins 6 & 9 connect



**PIN DIAGRAM: 9CV**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## POWER PENTODE

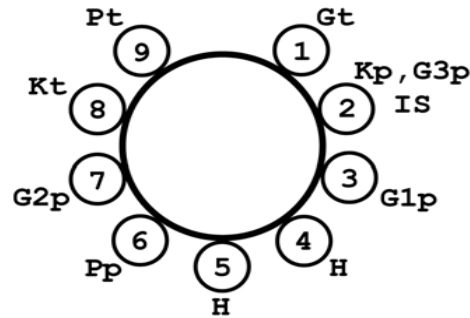
PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	IC						
2	Control Grid						
3	Cathode, Suppressor Grid						
4	Heater						
5	Heater						
6	IC						
7	Plate						
8	IC						
9	Screen Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6BM8/ECL82**  
**50BM8/UCL82**

**HIGH-MU TRIODE,  
 POWER PENTODE**



**PIN DIAGRAM: 9EX**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

[INDEX](#)

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t - Grid						
2	p - Cathode, Supp Grid, IS						
3	p - Control Grid						
4	Heater						
5	Heater						
6	p - Plate						
7	p - Screen Grid						
8	t - Cathode						
9	t - Plate						

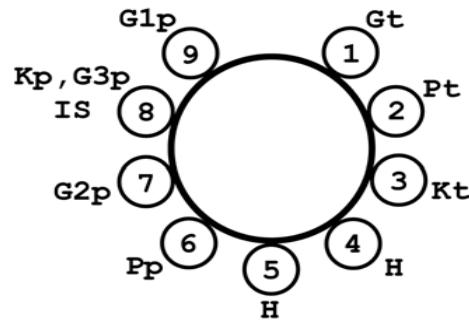
TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6BR8A**

**6FV8A**

**5BR8/5FV8**

**MEDIUM-MU TRIODE,  
SHARP-CUTOFF PENTODE**



**PIN DIAGRAM: 9FA**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

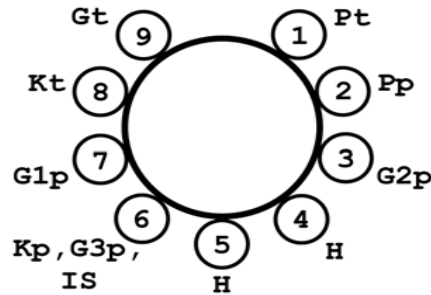
[INDEX](#)

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t - Grid						
2	t - Plate						
3	t - Cathode						
4	Heater						
5	Heater						
6	p - Plate						
7	p - Screen Grid						
8	p - Cathode, Supp Grid, IS						
9	p - Control Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 7199

## MEDIUM-MU TRIODE, SHARP-CUTOFF PENTODE



**PIN DIAGRAM: 9JT**

WIRING SIDE OF SOCKET IS SHOWN

AMPLIFIER MAKE:

MODEL:

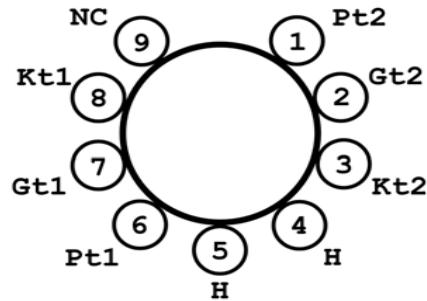
SERIAL NO:

[INDEX](#)

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t - Plate						
2	p - Plate						
3	p - Screen Grid						
4	Heater						
5	Heater						
6	p - Cathode, Supp Grid, IS						
7	p - Control Grid						
8	t - Cathode						
9	t - Grid						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

**6FQ7**  
**6CG7**



**PIN DIAGRAM: 9LP**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

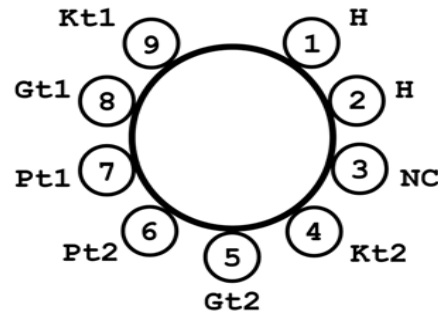
SERIAL NO:

**MEDIUM-MU TWIN TRIODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	t2 - Plate						
2	t2 - Grid						
3	t2 - Cathode						
4	Heater						
5	Heater						
6	t1 - Plate						
7	t1 - Grid						
8	t1 - Cathode						
9	NC						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6EU7



**PIN DIAGRAM: 9LS**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

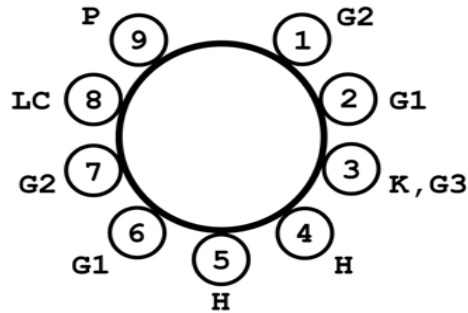
MODEL:

SERIAL NO:

## TWIN TRIODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Heater						
2	Heater						
3	NC						
4	t2 - Cathode						
5	t2 - Grid						
6	t2 - Plate						
7	t1 - Plate						
8	t1 - Grid						
9	t1 - Cathode						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc



**PIN DIAGRAM: 9RW**

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

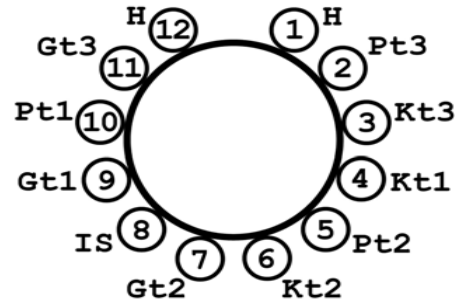
SERIAL NO:

**POWER PENTODE**

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Screen Grid						
2	Control Grid						
3	Cathode, Suppressor Grid						
4	Heater						
5	Heater						
6	Control Grid						
7	Screen Grid						
8	Limited Connection						
9	Plate						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.  
 SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc

# 6K11/6Q11



PIN DIAGRAM: 12BY

WIRING SIDE OF SOCKET IS SHOWN

[INDEX](#)

AMPLIFIER MAKE:

MODEL:

SERIAL NO:

## THREE-UNIT TRIODE

PIN	ELECTRODE	VOLTAGE READINGS					
		<i>a:</i>	<i>b:</i>	<i>c:</i>	<i>d:</i>	<i>e:</i>	<i>f:</i>
1	Heater						
2	t3 - Plate						
3	t3 - Cathode						
4	t1 - Cathode						
5	t2 - Plate						
6	t2 - Cathode						
7	t2 - Grid						
8	IS						
9	t1 - Grid						
10	t1 - Plate						
11	t3 - Grid						
12	Heater						

TERMINAL ABBREVIATIONS: H = Heater End (Unpolarized). HM = Heater Tap. IC = Do Not Use (Internal Connection). IS = Internal Shield (Electrostatic). K = Cathode. NC = No Internal Connection. S = Metal Shell.

SUBSCRIPTS FOR MULTI-UNIT TUBES: b = Beam Power Unit. d = Diode Unit. hp = Heptode Unit. hx = Hexode Unit. p = Pentode Unit. t = Triode Unit. tr = Tetrode Unit. 1, 2, 3, etc. = No. 1, No. 2, No. 3, etc