



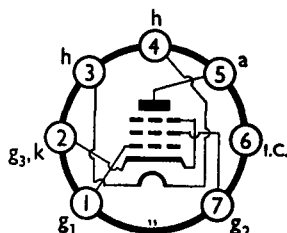
**MINIATURE  
OUTPUT PENTODE  
6.3V INDIRECTLY HEATED**

**A2134**  
**MARCH, 1955**

The A2134 is the commercial equivalent of CV2179.

It is particularly suitable for use as the series valve in voltage stabilising equipment.

**BASE CONNECTIONS AND VALVE DIMENSIONS**



View from underside  
of base.

Base : B7G  
Bulb : Tubular

Overall length : 64—70 mm.  
Seated length : 58—64 mm.  
Max. diameter : 19 mm.

**HEATER**

|       |       |   |
|-------|-------|---|
| $V_h$ | 6.3   | V |
| $I_h$ | 0.635 | A |

**MAXIMUM RATINGS (design centre)**

| Pentode connection |     |   | Triode connection |     |   |
|--------------------|-----|---|-------------------|-----|---|
| $V_a$              | 300 | V | $V_{a, g2}$       | 300 | V |
| $V_{g2}$           | 300 | V | $P_{a, g2}$       | 12  | W |
| $V_{h-k}$ (pk)     | 150 | V |                   |     |   |
| $P_a$              | 9   | W |                   |     |   |
| $P_{g2}$           | 3   | W |                   |     |   |

**CHARACTERISTICS**

| Pentode connection |      |            | Triode connection |     |          |
|--------------------|------|------------|-------------------|-----|----------|
| $V_a$              | 165  | V          | $V_{a, g2}$       | 165 | V        |
| $V_{g2}$           | 165  | V          | $V_{g1}$          | -9  | V        |
| $V_{g1}$           | -9   | V          | $\mu$             | 10  |          |
| $\mu$              | 220  |            | $r_a$             | 835 | $\Omega$ |
| $r_a$              | 23.2 | k $\Omega$ | $g_m$             | 12  | mA/V     |
| $g_m$              | 9.5  | mA/V       |                   |     |          |

**CAPACITANCES (of unscreened valve) :**

$C_{a-all}$  10 pF       $C_{g1-all}$  10 pF       $C_{a-g1}$  0.3 pF

**TYPICAL OPERATION**

**Pentode Connection**

**Single Valve. Class A**

|               |      |      |      |      |       |            |
|---------------|------|------|------|------|-------|------------|
| % full input  | 45   | 100  | 100  | 75   | 50    | %          |
| $V_a$         | 100  | 150  | 165  | 165  | 165   | V          |
| $V_{g2}$      | 100  | 150  | 165  | 165  | 165   | V          |
| $V_{g1}$ (o)  | -4.6 | -7.8 | -9.3 | -10  | -11.4 | V          |
| $I_a$ (o)     | 39   | 56   | 53   | 40   | 29    | mA         |
| $I_{g2}$ (o)  | 6.5  | 9.5  | 9    | 7.2  | 5.4   | mA         |
| $R_k$         | 100  | 120  | 150  | 220  | 330   | $\Omega$   |
| $V_{in}$ (pk) | 5    | 7    | 8.5  | 6.7  | 4.7   | V          |
| $R_L$         | 2.5  | 3    | 3    | 4    | 6     | k $\Omega$ |
| $P_{cut}$     | 1.45 | 3.5  | 4.1  | 2.84 | 2.3   | W          |
| D             | 8.6  | 11   | 10   | 10   | 10    | %          |

The conditions given in the last two columns are those obtained when the valve is over-biased. They are useful when H.T. power is limited and reduced power output can be tolerated.

**MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED**

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Two Valves. Push-pull, Class AB<sub>1</sub>

Data per pair unless otherwise stated.

|                                                        |      |       |      |       |    |
|--------------------------------------------------------|------|-------|------|-------|----|
| V <sub>a</sub>                                         | 100  | 165   | 200  | 250   | V  |
| V <sub>g2</sub>                                        | 100  | 165   | 165  | 165   | V  |
| V <sub>g1</sub> (o)                                    | -5   | -11.9 | -10  | -11.2 | V  |
| I <sub>a</sub> (o)                                     | 70   | 107   | 87   | 66    | mA |
| I <sub>a</sub> (max. sig.)                             | 73   | 110   | 100  | 80    | mA |
| I <sub>g2</sub> (o)                                    | 12   | 18    | 14   | 10    | mA |
| I <sub>g2</sub> (max. sig.)                            | 15   | 36    | 25   | 24    | mA |
| R <sub>k</sub> (per valve)                             | 120  | 150   | 200  | 300   | Ω  |
| v <sub>in</sub> (pk) (g <sub>1</sub> -g <sub>1</sub> ) | 11   | 20    | 25   | 30    | V  |
| R <sub>L</sub> (a-a)                                   | 3    | 3     | 4.5  | 7.5   | kΩ |
| P <sub>out</sub>                                       | 2.25 | 9     | 11.5 | 13.3  | W  |
| D                                                      | 3.3  | 4.6   | 4    | 4.5   | %  |

Triode Connection

Two Valves. Push-pull, Class AB<sub>1</sub>.

Data per pair unless otherwise stated.

|                                                        |       |    |
|--------------------------------------------------------|-------|----|
| V <sub>a,g2</sub>                                      | 165   | V  |
| V <sub>g1</sub> (o)                                    | -10.5 | V  |
| I <sub>a,g2</sub> (o)                                  | 65    | mA |
| I <sub>a,g2</sub> (max. sig.)                          | 74    | mA |
| R <sub>k</sub> (per valve)                             | 330   | Ω  |
| v <sub>in</sub> (pk) (g <sub>1</sub> -g <sub>1</sub> ) | 24    | V  |
| R <sub>L</sub> (a-a)                                   | 3     | kΩ |
| P <sub>out</sub>                                       | 2.6   | W  |
| D                                                      | 1.4   | %  |

GRID RESISTOR

The maximum permissible D.C. resistance from control grid to cathode is limited to 0.27 MΩ ± 20% for auto-bias and 0.1 MΩ for fixed bias applications.

SCREENING

No internal or external screening is fitted to the valve.

MOUNTING

Any position.

RETAINING

The use of a retaining device is recommended.

VENTILATION

Free air circulation around the bulb is preferable. If a retaining device in the form of a canister is employed, the surfaces should be blackened. The temperature of the hottest part of the bulb must not exceed 250°C.

MICROPHONY

Free from microphony in all normal receiver applications.

