# SEL STANDARD ELEKTRIK LORENZ 6HU8/12HU8

Data for EIA Registration

January 2, 1961

RECEIVING TUBE

JEDEC TYPE 6HU8/12HU8

(SEL-Type ELL80/PLL80)

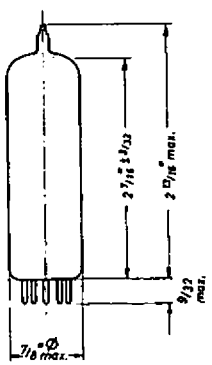
## DESCRIPTION:

Twin output pentode for use as audio-frequency output tube in stereophonic radio receivers and recorders, push-pull output tube and as line frequency oscillator and reactance tube in television receivers.

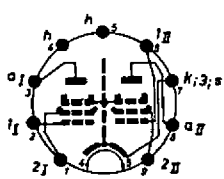
## MECHANICAL DATA:

| | |
|---|---|
| Cathode | Coated unipotential |
| Outline drawing | JEDEC 6-8 |
| Base | E9 - 1 |
| Bulb | T6 1/2 |
| Mounting position | Any |

TUBE OUTLINE



BOTTOM VIEW OF BASE



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| BASE PIN No. | ELEMENT |
|---|---|
| 1 | Grid No. 2 of pentode No. 1 |
| 2 | Grid No. 1 of pentode No. 1 |
| 3 | Plate of pentode No. 1 |
| 4 | Heater |
| 5 | Heater |
| 6 | Grid No. 1 of pentode No. 2 |
| 7 | Cathode, grid No. 3, internal shield |
| 8 | Plate of pentode No. 2 |
| 9 | Grid No. 2 of pentode No. 2 |

## ELECTRICAL DATA:

| Heater Characteristics | 6HU8 | 12HU8 | |
|---|---|---|---|
| Heater voltage | 6,3 | 12 | volts |
| Heater current | 0, 55 | 0,300 | amp. |

SEL

| | | |
|---|---|---|
| Maximum heater-cathode voltage | | |
| Heater negative with respect to cathode DC | 100 | volts |
| total DC and peak | 200 | volts |
| Heater positive with respect to cathode DC | 100 | volts |
| total DC and peak | 200 | volts |

| Direct Interelectrode Capacitances | Pentode No. 1 | Pentode No. 2 | |
|---|---|---|---|
| Grid No. 1 to plate ($g_1$ to p) | <0,2 | <0,15 | μμF |
| Input $g_1$ to (k+h+g2+g3+s) | 7,0 | 7,0 | μμF |
| Output p to (k+h+g2+g3+s) | 4,5 | 4,5 | μμF |

Ratings

| | | |
|---|---|---|
| Maximum plate voltage | 300 | volts |
| Maximum grid No. 2 voltage | 300 | volts |
| Maximum grid No. 2 supply voltage | 500 | volts |
| Maximum negative dc grid No. 1 voltage | 100 | volts |
| Minimum negative dc grid No. 1 voltage | 0 | volts |
| Maximum positive dc grid No. 1 voltage | 0 | volts |
| Maximum plate dissipation | 6 | watts |
| Maximum total plate dissipation | 12 | watts |
| Maximum grid No. 2 dissipation, no signal | 1,25 | watts |
| Maximum grid No. 2 dissipation, full signal (speech or music) | 2,5 | watts |
| Maximum cathode current (each section) | 40 | ma |
| Maximum bulb temperature | 120° C | |
| Maximum grid circuit resistance | | |
| Fixed bias | 0,5 | megohm |
| Self bias | 2,0 | megohms |

Typical Operating Conditions and Characteristics, Power Amplifier

| | | |
|---|---|---|
| Plate voltage | 250 | volts |
| Grid No. 3 voltage | connected to pin No. 7 | at socket |
| Grid No. 2 voltage | 250 | volts |
| Cathode resistor, common for both sections | 160 | ohms |
| Plate resistance (approx.) | 0,08 | megohm |
| Transconductance | 6000 | μmhos |
| Peak a-f signal voltage | 6,0 | volts |
| Zero signal plate current | 24 | ma |
| Zero signal grid No. 2 current | 4,5 | ma |
| Maximum signal plate current | 26 | ma |
| Maximum signal grid No. 2 current | 9 | ma |
| Load resistance | 10 000 | ohms |
| Total harmonic distortion | 10 | % |
| Power output | 3 | watts |

Typical Operation Conditions and Characteristics
Push-Pull Class-B Amplifier

| | | | |
|---|---|---|---|
| Plate voltage | | 250 | volts |
| Grid No. 2 voltage | | 250 | volts |
| Grid No. 1 voltage | | -12 | volts |
| Peak a-f signal voltage | 2x | 8,5 | volts |
| Zero signal plate current | 2x | 11 | ma |
| Zero signal grid No. 2 current | 2x | 2,3 | ma |
| Maximum signal plate current | 2x | 28,5 | ma |
| Maximum signal grid No. 2 current | 2x | 8,8 | ma |
| Load resistance | | 10 000 | ohms |
| Total harmonic distortion | | 5 | % |
| Power output | | 9,2 | watts |

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