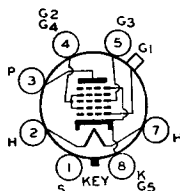
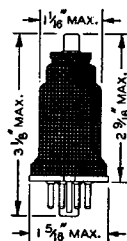


# RCA-6L7

## PENTAGRID MIXER AMPLIFIER



The 6L7 is a multi-electrode vacuum tube of the All-Metal type designed with two separate control grids shielded from each other. This design permits each control grid to

act independently on the electron stream. This tube, therefore, is especially useful as a mixer in superheterodyne circuits having a separate oscillator stage, as well as in other applications where dual control is desirable in a single stage. The design of the tube is such that coupling effects between oscillator and signal circuits are made very small. This feature enables the 6L7 to give high gain in high-frequency circuits. For general discussion of pentagrid types, see Frequency Conversion on page 31.

### CHARACTERISTICS

HEATER VOLTAGE (A. C. or D. C.).....	6.3	Volts
HEATER CURRENT .....	0.3	Ampere
DIRECT INTERELECTRODE CAPACITANCES:*		
Grid No. 1 to Grid No. 3.....	0.12	$\mu\text{f}$
Grid No. 1 to Plate.....	0.0005 max.	$\mu\text{f}$
Grid No. 3 to Plate.....	0.025	$\mu\text{f}$
Grid No. 1 to All Other Electrodes.....	8.5	$\mu\text{f}$
Grid No. 3 to All Other Electrodes.....	11.5	$\mu\text{f}$
Plate to All Other Electrodes.....	12.5	$\mu\text{f}$
CAP .....		Miniature
BASE .....		Small Wafer Octal 7-Pin

#### As Mixer

PLATE VOLTAGE .....	250 max.	Volts	
SCREEN (Grids No. 2 and No. 4) VOLTAGE.....	150 max.	Volts	
TYPICAL OPERATION:			
Plate Voltage .....	250	250†	Volts
Screen Voltage .....	100	150†	Volts
Signal-Grid (Grid No. 1) Voltage.....	-3 min.	-6 min.†	Volts
Oscillator-Grid (Grid No. 3) Voltage**....	-10	-15	Volts
Peak Oscillator Voltage			
Applied to Grid No. 3 (Minimum).....	12	18	Volts
Plate Current .....	2.4	3.3	Milliamperes
Screen Current .....	7.2	9.2	Milliamperes
Plate Resistance .....	Greater than 1		Megohm
Conversion Conductance .....	350	350	Micromhos
Signal-Grid (Grid No. 1) Voltage			
for Conver. Cond. of 5 Micromhos.....	-30	-45	Volts

\*\* The d-c resistance in oscillator-grid-No. 3 circuit should be limited to 50000 ohms.

† Recommended values for all-wave receivers. \* With shell connected to cathode.

#### As Amplifier

PLATE VOLTAGE .....	250 max.	Volts
SCREEN (Grids No. 2 and No. 4) VOLTAGE.....	100 max.	Volts
CONTROL-GRID (Grid No. 1) VOLTAGE.....	-3 min.	Volts
CONTROL-GRID (Grid No. 3) VOLTAGE.....	-3	Volts
PLATE CURRENT .....	5.3	Milliamperes
SCREEN CURRENT .....	6.5	Milliamperes
AMPLIFICATION FACTOR .....	880	





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