

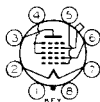


IA7-GT/G

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## PENTAGRID CONVERTER

Filament	Coated	
Voltage	1.4	d-c volts
Current	0.05	amp.
Direct Interelectrode Capacitances: <sup>o</sup>		
Grid #4 to Plate	0.5 max.	μuf
Grid #4 to Grid #2	0.4 max.	μuf
Grid #4 to Grid #1	0.2 max.	μuf
Grid #1 to Grid #2	0.9	μuf
Grid #4 to All Other Electrodes (R-F Input)	7.0	μuf
Grid #2 to All Other Electrodes Except Grid #1 (Osc. Output)	4.4	μuf
Grid #1 to All Other Electrodes Except Grid #2 (Osc. Input)	3.4	μuf
Plate to All Other Electrodes (Mixer Output)	10	μuf
Maximum Overall Length		3-5/16"
Maximum Seated Height		2-3/4"
Maximum Diameter		1-5/16"
Bulb		T-9
Cap		Skirted Miniature
Base		Small Wafer Octal 8-Pin, Sleeve
Pin 1 - Base Sleeve		Pin 6 - Grid #2
Pin 2 - Filament +		Pin 7 - Filament -
Pin 3 - Plate		Pin 8 - No Connection
Pin 4 - Grids #3 & #5		Cap - Grid #4
Pin 5 - Grid #1		
Mounting Position		Any



BOTTOM VIEW (GT-7Z)

Maximum Ratings Are Design-Center Values

CONVERTER SERVICE

Plate Voltage	110 max.	volts
Screen (Grids #3 & #5) Voltage	60 max.	volts
Screen Supply Voltage	110 max.	volts
Anode-Grid (Grid #2) Voltage	110 max.	volts
Total Zero-Sig. Cathode Current	4 max.	ma.

## Typical Operation:

Plate	90	volts
Screen **	45	volts
Anode-Grid	90	volts
Control-Grid (Grid #4)*	0	volts
Oscillator-Grid (Grid #1) Resistor	200000	ohms
Plate Res.	0.6	megohm
Conversion Transcond.	250	μmhos
Conversion Transcond. with Grid #4 bias of -3 volts	5 approx.	μmhos
Plate Cur.	0.6	ma.
Screen Cur.	0.7	ma.
Anode-Grid Cur.	1.2	ma.
Oscillator-Grid Cur.	0.035	ma.
Total Cathode Cur.	2.5	ma.

NOTE: The transconductance of the oscillator portion (not oscillating) is 550 micromhos under the following conditions: plate volts, 90; screen volts, 45; control-grid volts, 0; anode-grid volts, 90; and oscillator-grid volts, 0.

<sup>o</sup> With external shield connected to negative filament terminal.

\*\* Obtained preferably by using a properly by-passed 45000- to 75000-ohm voltage-dropping resistor in series with the 90-volt supply.

\* A resistance of at least 1.0 megohm should be in the grid return to negative filament pin. ← Indicates a change.

Typical Pentagrid Converter Circuit is shown under Type 1A6.

Jan. 1, 1943

RCA VICTOR DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

1A7-GT/G



1A7-GT/G

## OPERATION CHARACTERISTIC

$E_f = 1.4$  VOLTS D.C.

PLATE VOLTS = 90

GRIDS N<sup>o</sup> 3 & N<sup>o</sup> 5 (SCREEN) VOLTS = 45\*

GRID N<sup>o</sup> 4 (CONTROL GRID) VOLTS = 0

GRID N<sup>o</sup> 2 (ANODE GRID) VOLTS = 90

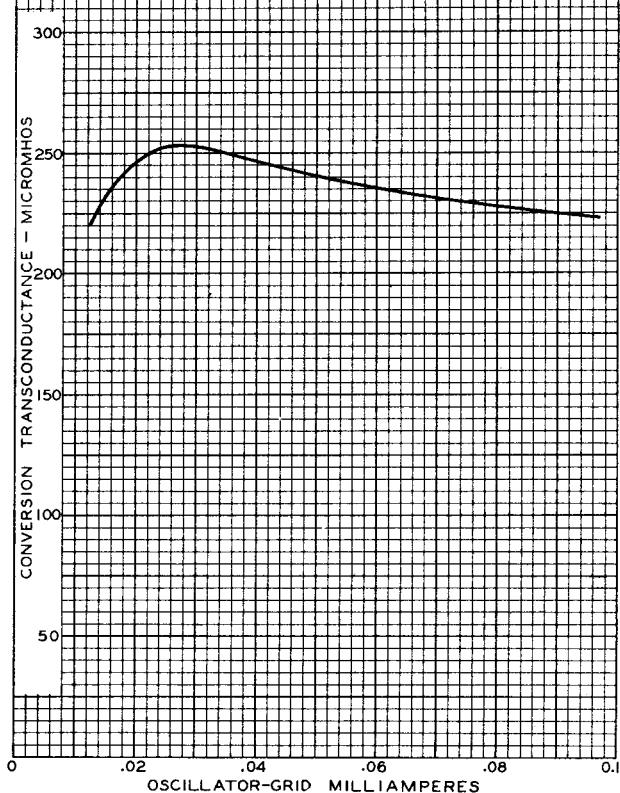
GRID N<sup>o</sup> 1 (OSCILLATOR GRID)

RESISTOR - OHMS = 200000

\* OBTAINED THROUGH 70000-OHM

DROPPING RESISTOR FROM

90-VOLT SUPPLY



OCT. 23, 1939

RCA VICTOR DIVISION  
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92C-6091