



6A7S

6A7S  
6A8-G  
6A8-GT**PENTAGRID CONVERTER**

RENEWAL TYPE FOR MAJESTIC RECEIVERS

Heater <sup>■</sup>	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
Overall Length	4-9/32" to 4-17/32"	
Seated Height	3-21/32" to 3-29/32"	
Maximum Diameter (without shield)	1-9/16"	
Bulb (with form-fitting shield)	ST-12	
Cap	Small Metal	
Base <sup>▲*</sup>	Small 7-Pin	

<sup>■</sup> In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

<sup>▲</sup> Requires a different socket than the medium 7-pin base.

\* Basing arrangement is the same as for the 6A7, except that the external shield on the 6A7S is connected to cathode.

*Typical Operating Conditions and Curves for the 6A7S are the same as for Type 6A8.*

6A8, 6A8-G, 6A8-GT

**PENTAGRID CONVERTER**

Heater <sup>■</sup>	Coated Unipotential Cathode		
Voltage	6.3	a-c or d-c volts	
Current	0.3	amp.	
Direct Interelectrode Cap. <sup>○</sup>	6A8	6A8-G	6A8-GT
Grid #4 to Plate	0.06	0.26	0.26 μf
Grid #4 to Grid #2	0.1	0.19	0.19 μf
Grid #4 to Grid #1	0.09	0.16	0.16 μf
Grid #1 to Grid #2	0.8	1.1	1.1 μf
Grid #4 to All Other Electrodes (R-F Input)	12	9.5	9.5 μf
Grid #2 to All Other Electrodes Except Grid #1 (Osc. Output)	5	4.6	4.6 μf
Grid #1 to All Other Electrodes Except Grid #2 (Osc. Input)	6.5	6	6 μf
Plate to All Other Electrodes (Mixer Output)	12	12	12 μf
Overall Length	{ 3-1/8" max.	{ 4-7/32" to 4-15/32"	{ 3-5/16" max.
Seated Height	{ 2-9/16" max.	{ 3-21/32" to 3-29/32"	{ 2-3/4" max.
Maximum Diameter	1-5/16"	1-9/16"	1-5/16"
Bulb	Metal Shell, MT-8	ST-12	T-9
Cap	Miniature	Skirted Min.	{ Skirted Min. Style C

<sup>■</sup> In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

<sup>○</sup> With shell of 6A8 connected to cathode, and with close-fitting shield on 6A8-G and 6A8-GT connected to cathode.

← Indicates a change.

Dec. 1, 1941

RCA RADIONRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

DATA

6A8  
6A8-G  
6A8-GT



# 6A8, 6A8-G, 6A8-GT

## PENTAGRID CONVERTER

(continued from preceding page)

	6A8	6A8-G	6A8-GT
Base	{ Small Wafer Octal 8-Pin	{ Small Shell Octal 8-Pin	{ Small Wafer Octal 8-Pin, Sleeve
Basing Designation	8A	G-8A	GT-8A
Pin 1	{ 6A8, Shell 6A8-G, No Con. 6A8-GT, Base Sleeve		Pin 5 - Grid #1 Pin 6 - Grid #2 Pin 7 - Heater Pin 8 - Cathode Cap - Grid #4
Pin 2 - Heater			
Pin 3 - Plate			
Pin 4 - Grids #3 & #5			
Mounting Position			Any



BOTTOM VIEW

### CONVERTER SERVICE

Plate Voltage		300 max. volts
Screen (Grids #3 & #5) Voltage		100 max. volts
Screen Supply Voltage		300 max. volts
Anode-Grid (Grid #2) Voltage		200 max. volts
Anode-Grid Supply Voltage*		300 max. volts
Control-Grid (Grid #4) Voltage		0 min. volts
Plate Dissipation		1.0 max. watt
Screen Dissipation		0.3 max. watt
Anode-Grid Dissipation		0.75 max. watt
Total Cathode Current		14 max. ma.
Typical Operation:		
Plate Voltage	100	250 volts
Screen Voltage	50	100 volts
Anode-Grid Voltage	100	- volts
Anode-Grid Supply Voltage	-	250* volts
Control-Grid Voltage	-1.5	-3 volts
Osc.-Grid (Grid #1) Resistor	50000	50000 ohms
Plate Resistance	0.6	0.36 approx. ohms
Conversion Transconductance	360	550 $\mu$ mhos
Conver. Transcond. (approx.) with Control-Grid Bias of -20 volts	3	- $\mu$ mhos
Conver. Transcond. (approx.) with Control-Grid Bias of -35 volts	-	6 $\mu$ mhos
Plate Current	1.1	3.5 ma.
Screen Current	1.3	2.7 ma.
Anode-Grid Current	2	4 ma.
Oscillator-Grid Current	0.25	0.4 ma.
Total Cathode Current	4.6	10.6 ma.

NOTE: The transconductance of the oscillator portion (not oscillating) is 1150 micromhos under the following conditions: plate volts, 250; screen volts, 55; control-grid volts, -2; anode-grid volts, 100; and oscillator-grid volts, -1.

\* Anode-grid supply voltages in excess of 200 volts require use of 20000-ohm voltage-dropping resistor by-passed by 0.1  $\mu$ f condenser.

For Typical Circuit and Coil Design Details, refer to type 2A7.

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6A8

6A8

### OPERATION CHARACTERISTICS WITH 50000-OHM OSCILLATOR-GRID LEAK

