



5890

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REMOTE-CUTOFF BEAM PENTODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc	volts
Current	0.6		amp

Mu-Factor, Grid No.2 to

Grid No.1 5

Direct Interelectrode Capacitances:

Grid No.1 to Plate	0.018	$\mu\mu\text{f}$
Input	7.5	$\mu\mu\text{f}$
Output	1.6	$\mu\mu\text{f}$

Mechanical:

Mounting Position	Any
Overall Length	6-1/2" \pm 1/4"
Seated Length	6" \pm 1/4"
Maximum Diameter	1-1/2"
Cap.	Small
Base	Small-Shell Duodecal 7-Pin
Basing Designation for BOTTOM VIEW	12J

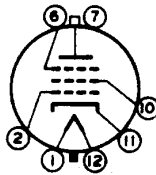
Pin 1 - Heater

Pin 2 - Grid No.1

Pin 6 - Grid No.3

Pin 7 - Internal Con.-

Do Not Use



Pin 10 - Grid No.2

Pin 11 - Cathode

Pin 12 - Heater

Cap - Plate

Bulb Temperature 220 max. °C

VOLTAGE-CONTROL SERVICE

Maximum CCS* Ratings, Absolute Values:

DC PLATE VOLTAGE	30000 max.	volts
DC GRID-No.3 VOLTAGE	6600 max.	volts
DC GRID-No.2 VOLTAGE	450 max.	volts
DC GRID-No.1 VOLTAGE:		
Negative bias value	-200 max.	volts
Positive bias value	0 max.	volts
Positive peak value	2 max.	volts
MAX.-SIGNAL DC PLATE VOLTAGE	500 max.	volts
MAX.-SIGNAL GRID-No.3 INPUT	1 max.	watt
MAX.-SIGNAL GRID-No.2 INPUT	0.1 max.	watt
PLATE DISSIPATION	10 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode:		
During equipment warm-up period		
not exceeding 15 seconds	450 max.	volts
After equipment warm-up period	165 max.	volts
Heater positive with respect to cathode.	165 max.	volts

*: See next page.

MAY 1, 1950

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA

5890



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REMOTE-CUTOFF BEAM PENTODE

Typical Operation as Shunt Voltage-

Regulator Tube in Accompanying Circuit

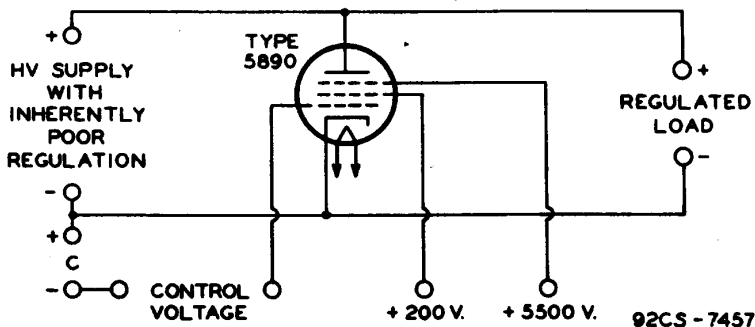
DC Plate Voltage.	20000	30000	volts
DC Grid-No.3 Voltage.	5500	5500	volts
DC Grid-No.2 Voltage*	200	200	volts
DC Grid-No.1 Voltage**	-60	-60	volts
Peak Grid-No.1 Voltage.	45	20	volts
Zero-Sig. DC Plate Cur.	0	0	μ amp
Max.-Sig. DC Plate Cur.	500	60	μ amp
Zero-Sig. DC Grid-No.3 Cur.	0	0	μ amp
Max.-Sig. DC Grid-No.3 Cur.	0	0	μ amp
Zero-Sig. DC Grid-No.2 Cur.	0	0	μ amp
Max.-Sig. DC Grid-No.2 Cur.	0	0	μ amp
Grid-No.1 Bias (Approx.) for plate current of 10 μ amp.	-52	-52	volts
Grid-No.1—Plate Transconductance	11	3	μ hos

• Continuous commercial service.

* Subject to variation of $\pm 40\%$ if grid-No.1 voltage is desired at indicated value.

** Subject to variation of $\pm 40\%$ if grid-No.2 voltage is desired at indicated value.

Shunt Voltage-Regulator Circuit



NOTE: THE CONTROL VOLTAGE MAY BE TAKEN FROM THE LOAD CIRCUIT OR FROM A CIRCUIT SUPPLYING SIGNAL TO THE LOAD CIRCUIT, DEPENDING ON THE TYPE OF LOAD INVOLVED.

OPERATING NOTES

Operation of the 5890 with a plate voltage above approximately 16000 volts results in the production of soft x-rays which can constitute a health hazard on prolonged exposure unless the tube is adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.

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