



861

861

SCREEN GRID R-F POWER AMPLIFIER

Filament	Thoriated Tungsten	
Voltage	11	a-c or d-c volts
Current	10	amp.
Amplification Factor	300 approx.	
Transconductance for		
plate current of 130 ma.	2100	μ hos
Direct Interelectrode Capacitances (approx.):		
Grid to Plate	0.10* maximum	μ f
Input	14.5	μ f
Output	10.5	μ f
Overall Length		17-3/32" $\pm$ 1/8"
Maximum Radius		6-5/8"
Bulb		GT-56 with arm
Cap (opposite filament base)		No. 3909
Cap (on side of bulb)		No. 3910
Base		No. 3503
RCA End-Mountings		Types UT-1085, UT-1086

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS**R-F POWER AMPLIFIER - Class B Telephony***Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage	3500 max.	volts
D-C Screen Voltage	750 max.	volts
D-C Plate Current	250 max.	ma.
Plate Input	600 max.	watts
Screen Input	35 max.	watts
Plate Dissipation	400 max.	watts

Typical Operation:

D-C Plate Voltage	2500	3000	3500	volts
D-C Screen Voltage $\square$	500	500	500	volts
D-C Grid Voltage	-60	-60	-60	volts
Peak R-F Grid Voltage	250	245	215	volts
D-C Plate Current	190	175	150	ma.
D-C Grid Current **	4	4	4	approx. ma.
Driving Power $\circ$ **	20	15	15	approx. watts
Power Output	140	160	175	approx. watts

 $\square$ Use of a series resistor is not recommended. $\circ$ At crest of a-f cycle with modulation factor of 1.0.**PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony***Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage	3000 max.	volts
D-C Screen Voltage	750 max.	volts
D-C Grid Voltage	-1000 max.	volts
D-C Plate Current	300 max.	ma.
D-C Grid Current	75 max.	ma.
Plate Input	650 max.	watts
Screen Input	30 max.	watts
Plate Dissipation	270 max.	watts

* With external shielding.

See next page.

 $\leftarrow$ Indicates a change.

JULY 1, 1938

RCA RADIONRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA



861

SCREEN GRID R-F POWER AMPLIFIER

(continued from preceding page)

Typical Operation:

D-C Plate Voltage	2000	2500	3000	volts
D-C Screen Voltage ^Δ	{ 30000	50000	70000	ohms
	{ 425	400	375	volts
D-C Grid Voltage ¶	{ 3900	3800	3600	ohms
	{ -250	-225	-200	volts
Peak R-F Grid Voltage	675	625	575	volts
D-C Plate Current	250	220	200	ma.
D-C Grid Current **	65	60	55	approx.ma.
Driving Power **	45	40	35	approx.watts
Power Output	285	340	400	approx.watts

^Δ Obtained from modulated fixed supply or modulated plate-voltage supply through resistor.

¶ Obtained by grid-leak resistor or partial self-bias methods.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation[#]

D-C Plate Voltage	3500 max.	volts
D-C Screen Voltage	750 max.	volts
D-C Grid Voltage	-1000 max.	volts
D-C Plate Current	350 max.	ma.
D-C Grid Current	75 max.	ma.
Plate Input	1200 max.	watts
Screen Input	35 max.	watts
Plate Dissipation	400 max.	watts

Typical Operation:

D-C Plate Voltage	2000	3000	3500	volts
D-C Screen Voltage □	500	500	500	volts
D-C Grid Voltage •	{ 6300	6300	6300	ohms
	{ -250	-250	-250	volts
Peak R-F Grid Voltage	725	725	725	volts
D-C Plate Current	300	300	300	ma.
D-C Screen Current	60	50	40	ma.
D-C Grid Current **	40	40	40	approx.ma.
Driving Power **	30	30	30	approx.watts
Power Output	400	600	700	approx.watts

• Obtained by grid-leak resistor or other fixed- or self-bias method.

□ Use of series resistor is not recommended.

[#] Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

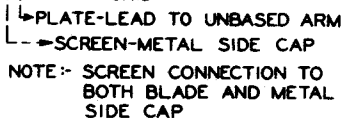
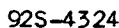
** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

For use of the 861 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

← Indicates a change.



SCREEN GRID R-F POWER AMPLIFIER





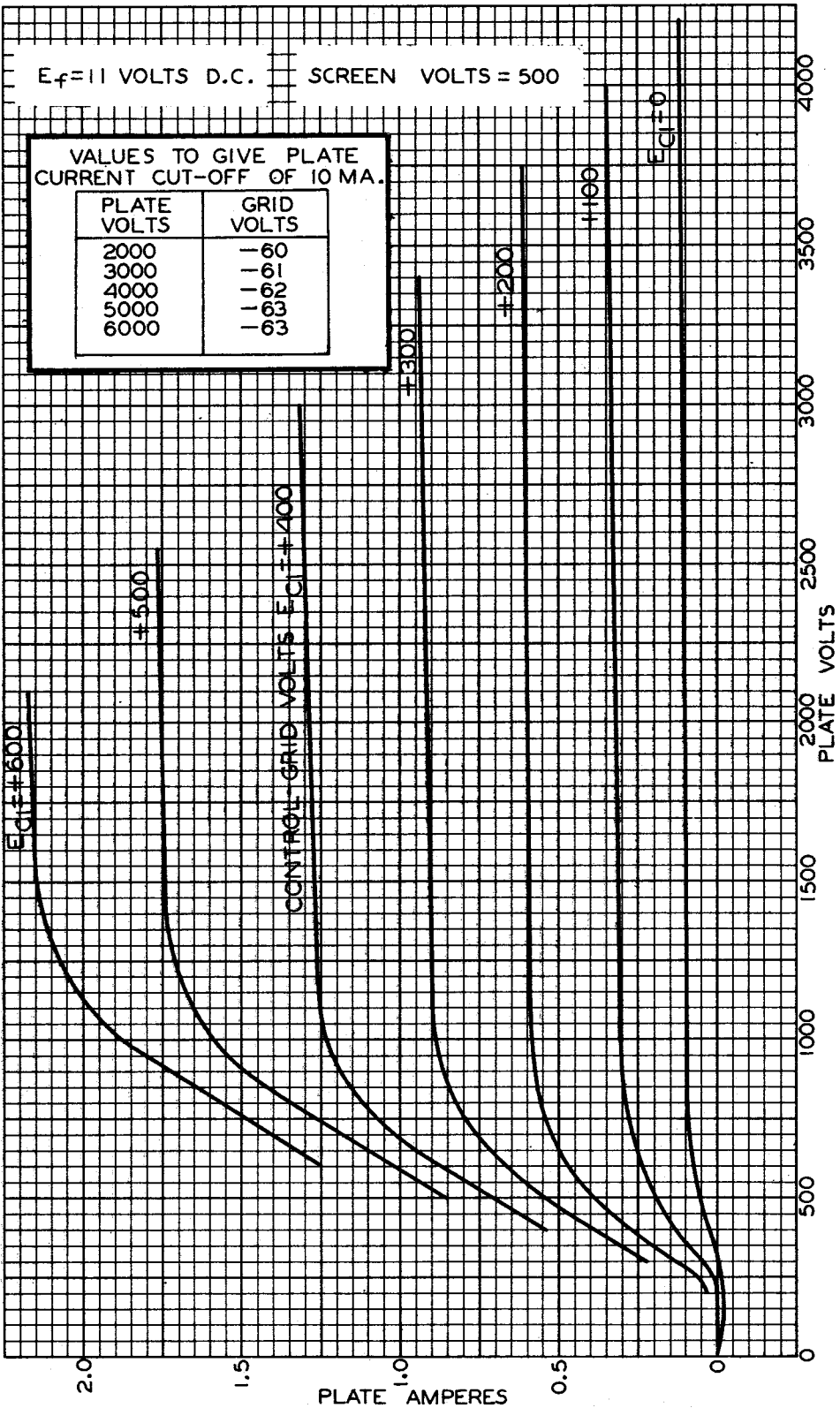
AVERAGE PLATE CHARACTERISTICS

 $E_f = 11$ VOLTS D.C.

SCREEN VOLTS = 500

VALUES TO GIVE PLATE
CURRENT CUT-OFF OF 10 MA.

PLATE VOLTS	GRID VOLTS
2000	-60
3000	-61
4000	-62
5000	-63
6000	-63

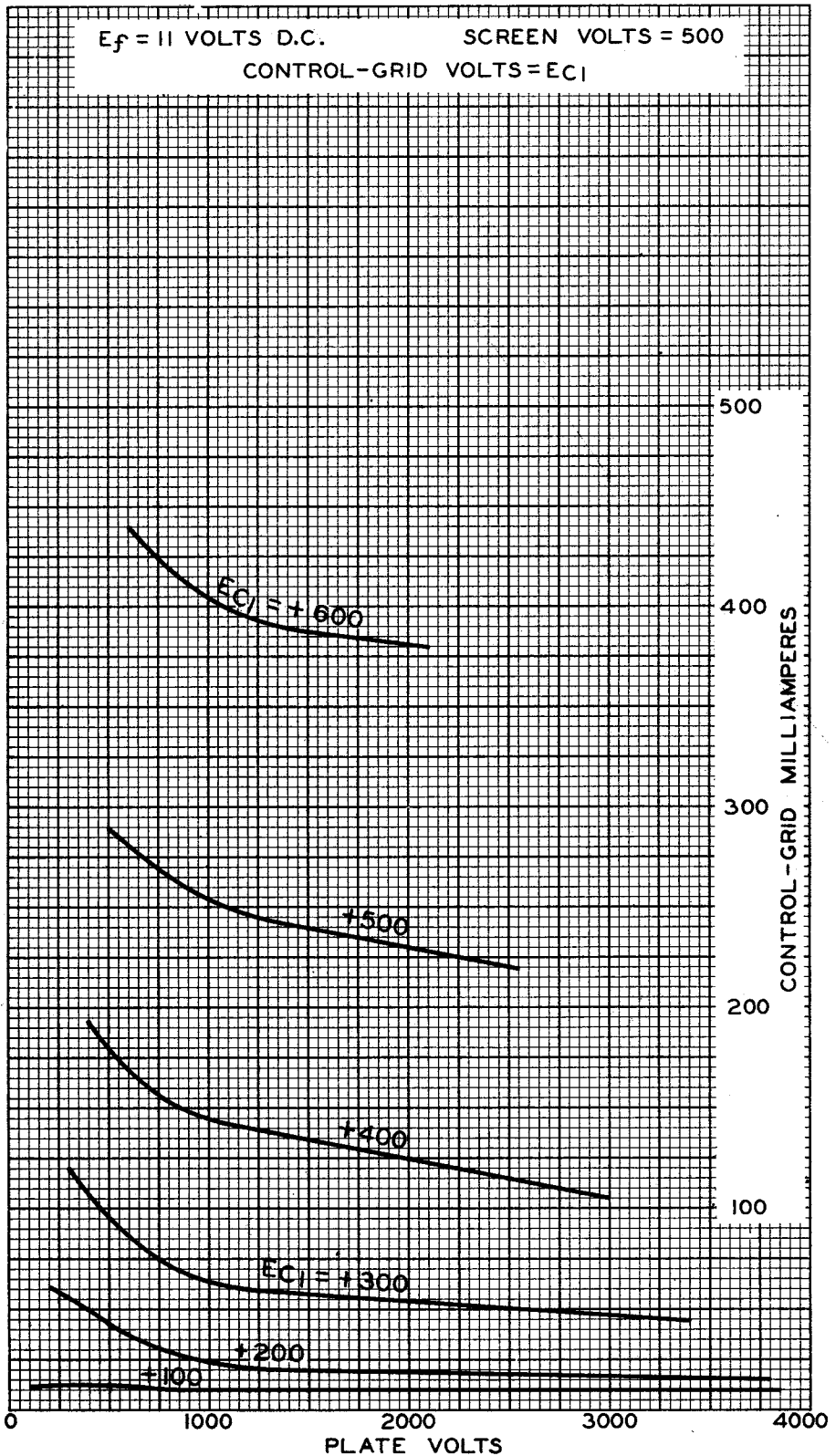




861

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AVERAGE CHARACTERISTICS



JUNE 22, 1934

RCA RADOTRON DIVISION
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92C-5550

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861

AVERAGE CHARACTERISTICS

