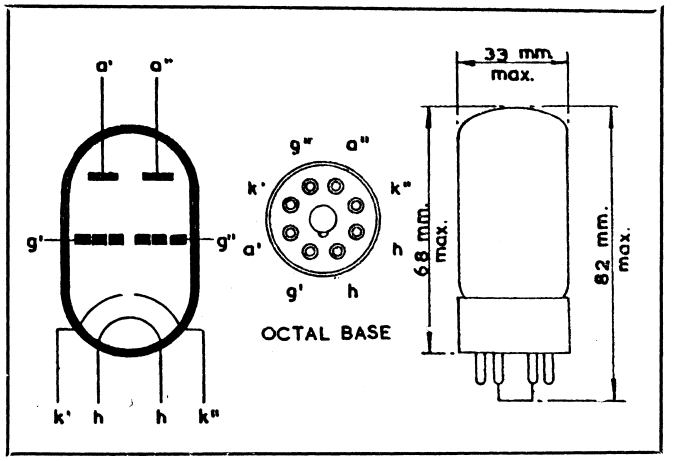
ECC33

TWIN TRIODE (Separate Cathodes)



HEATER (The heaters of the two cathodes are connected in series)

V_h	6.3	V
I_h	0.4	A

CAPACITANCES

$C_{a'-a''}$	0.75	$\mu\mu$F
C_{a-g} (each section)	2.5	$\mu\mu$F
C_{in} (each section)	3.5	$\mu\mu$F
C_{out}'	1.2	$\mu\mu$F
C_{out}''	1.5	$\mu\mu$F

CHARACTERISTICS (each section)

V_a	250	V
V_g	-4.0	V
I_a	9.0	mA
g_m	3.6	mA/V
μ	35	
r_a	9,700	Ω

LIMITING VALUES (each section)

$V_{a(b)}$ max.	300	V
V_a max.	550	V
p_a max.	2.5	W
I_k max.	20	mA
R_{g-k} max.	1.5	MΩ
V_{h-k} max.	100	V
R_{h-k} max.	20,000	Ω

OPERATING CONDITIONS AS R.C. COUPLED A.F. AMPLIFIER

V_b (V)	R_a (Ω)	I_a (mA)	R_k (Ω)	V_{out} / V_{in}	*V_{out} (V)	D_{tot} (%)	**R_{g1} (Ω)
400	47,000	4.0	1200	25.5	74	6.1	150,000
350	47,000	3.5	1200	25	62.5	5.9	150,000
300	47,000	3.0	1200	25	50	5.6	150,000
250	47,000	2.5	1200	25	41	5.6	150,000
200	47,000	2.0	1200	24.5	30.5	5.3	150,000
400	100,000	2.05	2200	28	78.5	5.7	330,000
350	100,000	1.8	2200	27.5	66.5	5.6	330,000
300	100,000	1.55	2200	27	54.5	5.6	330,000
250	100,000	1.3	2200	27	43	5.4	330,000
200	100,000	1.05	2200	26.5	43	5.2	330,000
400	220,000	1.1	3900	28	74.5	5.1	680,000
350	220,000	0.98	3900	28	63	5.0	680,000
300	220,000	0.83	3900	28	51	5.0	680,000
250	220,000	0.7	3900	27.5	41	4.8	680,000
200	220,000	0.53	3900	27	30.5	4.8	680,000

* Output voltage at the start of I_{g1}. At output voltages lower than those shown, the distortion is approximately proportional to voltage.

** Grid resistor of following valve.

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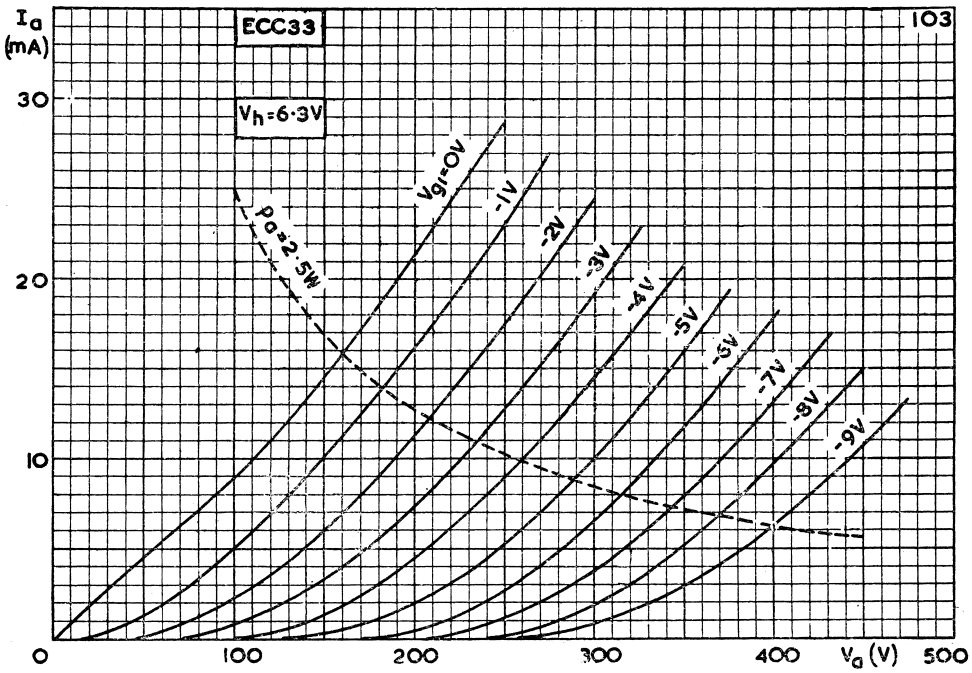

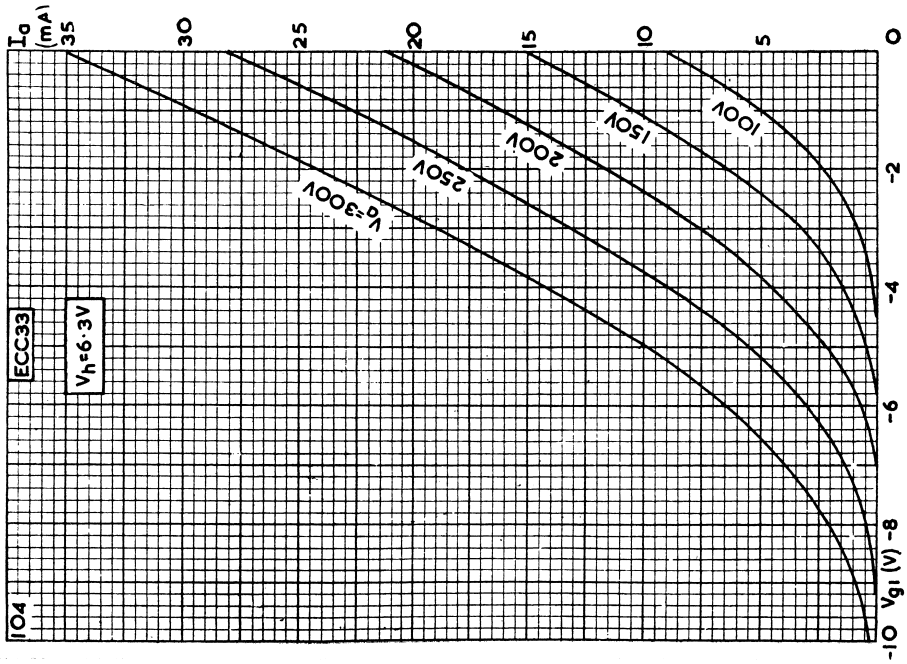

PHILIPS
RADIO and TELEVISION MANUAL

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PHILIPS ELECTRICAL INDUSTRIES OF AUSTRALIA PTY. LTD.
SYDNEY, AUSTRALIA

SECOND EDITION — JANUARY, 1952

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