



ELECTRONIC TUBE REFERENCE

EM34

Tuning Indicator electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TUNING INDICATOR

Dual-sensitivity electron-ray tuning indicator with two display systems of different sensitivity for visual tuning across a broad signal range.

GENERAL CHARACTERISTICS

BASE DESIGNATION	Octal	BASE PINS	8
NOMINAL HEATER	6.3 V / 200 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Tuning Indicator

MAXIMUM PLATE VOLTAGE	275 V
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Published ratings/characteristics promoted where clearly stated; repeated identical rectifier sections compressed to one section row.

SECTION2 Triode

MAXIMUM PLATE VOLTAGE	300 V
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Tuning indicator with two display systems of different sensitivity.

Electron-ray tuning indicator. Indirectly heated Mazda/Belvu receiving tube; descriptive text translated to English from the French source.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1951 Mullard Valve and Service Manual

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1951 MULLARD VALVE AND SERVICE MANUAL

Section 1 · Tuning Indicator

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Visual tuning indication	—



SOURCE OPERATING CONDITIONS

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1953 La Radiotechnique

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1953 LA RADIOTECHNIQUE

Section 1 · Tuning Indicator

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	200 mA	Published nominal value



SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 AMPEREX CONDENSED

Section 1 · Tuning Indicator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	200 mA	Published heater rating

1963 AMPEREX CONDENSED

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate and target supply voltage	250 V	TuningIndicator
Target current	2 mA	TuningIndicator
Application	Double-sensitivity tuning indicator	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid bias end of control range section 1	-5 V	TuningIndicator;Section1
Grid bias end of control range section 2	-16 V	TuningIndicator;Section2



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Mullard

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1963 MULLARD

Section 1 · Tuning Indicator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentCurrent	200 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	—
Target Current	0.75 mA	—
GridVoltageForMinimumShadow1	-5 V	—
GridVoltageForMinimumShadow2	-16 V	—
PeakPlateVoltageMaximum	550 V	—
Plate Voltage Maximum	275 V	—
HeaterCathodeVoltageMaximum	100 V	—



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Philips Electron Tubes Handbook V1a

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1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Tuning Indicator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Supply voltage	200 V	Indicator
Anode resistor	1 MOhm	Indicator
Plate current at grid 0 V	1.4 mA	Indicator
Grid voltage for minimum shadow	-4.2 V	System1; SupplyVoltage=200V
Grid voltage for minimum shadow	-12.5 V	System2; SupplyVoltage=200V
Supply voltage	250 V	Indicator
Plate current at grid 0 V	2 mA	Indicator; SupplyVoltage=250V
Grid voltage for minimum shadow	-5 V	System1; SupplyVoltage=250V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid voltage for minimum shadow	-16 V	System2; SupplyVoltage=250V

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Display systems	2 count	Different sensitivity



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1967 Mullard Receiving Tubes for Maintenance

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1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Tuning Indicator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ra	1	OPERATING CONDITIONS
Vg ("	2 V	OPERATING CONDITIONS
Vg (" , min .) (	-5 V	OPERATING CONDITIONS
Vg (" . min.) (	16 V	OPERATING CONDITIONS
Vallbl max	550 V	LIMITING VALUES
Val max	275 V	LIMITING VALUES
Va2	550 V	LIMITING VALUES
Va2 max	275 V	LIMITING VALUES



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

1968 Mazda Belvu

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1968 MAZDA BELVU

Section 1 · Tuning Indicator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension filament ...n VI	6.3 V	—
Courant filament If	200 mA	—
Tension d'anode n° 1 à courant nul esrsesmeres Va, bl	550 V	—
Tension d'anode n° 1 vcsrscecrceus Va,	275 V	—
Tension d'anode n° 2 à courant nul Va, bl	550 V	—
Tension d'anode n° 2 Va	275 V	—
Tension de cible à courant nul Vc bl	550 V	—
Tension de cible e	275 V	—
Tension de grille pourun courant de grl119 de+0 3 ,uA -Ve	1.3 V	—
Tension entre filament et cathode ...c Vfk	100 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension d'alimentation d'anode Van 100 200	250 V	—
Courant de cible pour Vg = 0 ... IC 0,55	0.75 mA	—
pour un angle d'ombre de 5° (1) Ve -4,2	-5 V	—
pour ur angle d'ombre de	0 s	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS E-Z

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical datum	—	Chauffage: indirect par C.A. ou C.C. $V_e = 6,37$
Published electrical datum	200 mA	gégntation parallele ou $I_f = 200$ mA
Published electrical datum	1 MΩ	$R_{a1} = R_{a2} = 1,0$ 1,0 MΩ
Published electrical datum	0 V	$I_y (V_s = 0 \text{ V}) = 1,4$ 2,0 mA
Published electrical datum	-16 V	$V_g (a_2 = \text{min.}) = 12,5$ -16 V
Published electrical datum	200 V	$a^\circ v, = 200V$
Published electrical datum	-20 W	-20 W] -8B —10 -5 0
Published electrical datum	20 W	20 W) -5 ~10 -5 0

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical datum	300 V	$V_{a1} = \text{max. } 300V \sim V_g (I_g = +0,3\mu A) = \text{max. } 1,3$ V
Published electrical datum	5507 V	$V_{a20} = \text{max. } 5507V R_g = \text{max, } 3$ MΩ
Published electrical datum	300 V	$V_{az} = \text{max., } 300V R_y = \text{max, } 20$ kΩ
Heater voltage	6.3 V	Nominal heater rating
Heater current	200 mA	Nominal heater rating