

## TVA1 with KT88 - Measurements 5-Oct-09

<b>Bias KT88</b>	<b>V</b>	<b>R cathode, Ohm</b>	<b>I, A</b>
Tube 1	1,001	33,4	0,0300
Tube 2	1,001	33,4	0,0300
Tube 3	1,005	33,4	0,0301
Tube 4	1,004	33,4	0,0301

### Voltages measured

<b>Positive</b>	<b>Vdc</b>
C5 in	616
C2	553
R8 - ECC83	231,2
R7 - ECC83	162,6
R8 - ECC83	161,1
R2 - R4 node	1,545
R4 inlet	-82,4
ECC81 grid	14
ECC81 plate	390 to 414

### Negative

	<b>Vdc</b>
C11/C12	
R4 inlet	-137,4
R4 outlet	-82,4

### Filament, V ca

KT88	6,00
ECC83	6,00
ECC81	6,00

<b>Output Power</b>	<b>Volts</b>	<b>Load, ohm</b>	<b>Watt</b>
	26,5	9,1	<b>77,17</b>
	20	4,7	<b>85,11</b>

<b>At clipping</b>	<b>V</b>	<b>R cathode, Ohm</b>	<b>I, A</b>
Tube 1	4,3	33,4	0,1287

### Voltages for capacitor's rating:

	Max Voltage		Rated Voltage
<b>1. no ECC83 installed</b>			
Vanode ECC83	249	C2 voltage rating is	450
<b>2. No ECC81 installed</b>			
Vanode ECC81	612	C5 voltage rating is	900
V across C7, C8	699,2	C7, C8 V rating is	1000
V across C18, C19	<b>598</b>	C18, C19 V rating is	<b>500</b>

### No HT load (no tube installed)

V across C16, C17	622	C16+C17 V rating is	700
Vanode ECC81	618	C5 voltage rating is	900
V across C7, C8	709,6	C7, C8 V rating is	1000
V across C18, C19	<b>604</b>	C18, C19 V rating is	<b>500</b>

**Power at rest, W (Class A operation)**

18,43  
18,43  
18,51  
18,49

**Bias voltage @kt88**

-85,0  
-80,8  
-84,0  
-87,6

**Notes**

V+ (with no load V+=622V)

at C5

at C2

Vanode1

Vanode2

Vcathode

Node supply of negative voltage

I @ R22

I @ R6

I @ R7

I @ R8

Icathode

I @ R4

I @ R3

Icathode (verification)

**Notes**

Triangular wave 50 Hz 520 mVpp superimposed to the Vdc

Vdc without any triangular wave - Good capacitor job

**Notes**

Simmetric distorsion reached at the same voltage on both channels

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outlet wired for 8 ohm

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**Power, W calculated at cathode resistor**

78,75

OK

OK

OK

Warning!!! However they are high quality Silver/Mica capacitors - No sign of leakage

OK - Would be better 400 \* 2 V

OK

OK

Warning!!! However they are high quality Silver/Mica capacitors - No sign of leakage

### Components Table

	Resistors	Kohm
% max power	R1	100
52,66%	R2	150
52,66%	R3	150
52,87%	R4	31,97
52,82%	R5	0,1
	R6	68
	R7	221
mA	R8	221
	R9	470
3,22	R10	470
3,40	R11	4700
0,31	R12	4700
0,32	R13	2,2
0,28	R14	6,8
-1,72	R15	33
-0,55	R16	33
-0,29	R17	3,9
	R18	10
	R19	10
	R20	203
	R21	203
	R22	100
	R23	47
	R24	47
	R25	22
	R26	22
	R27	

% max power  
225,01%