PVDM
PRO & Consumer Audio

Quick Reference Guide to AKAI GX-270D:

Page:

2 location of the circuit boards, action list

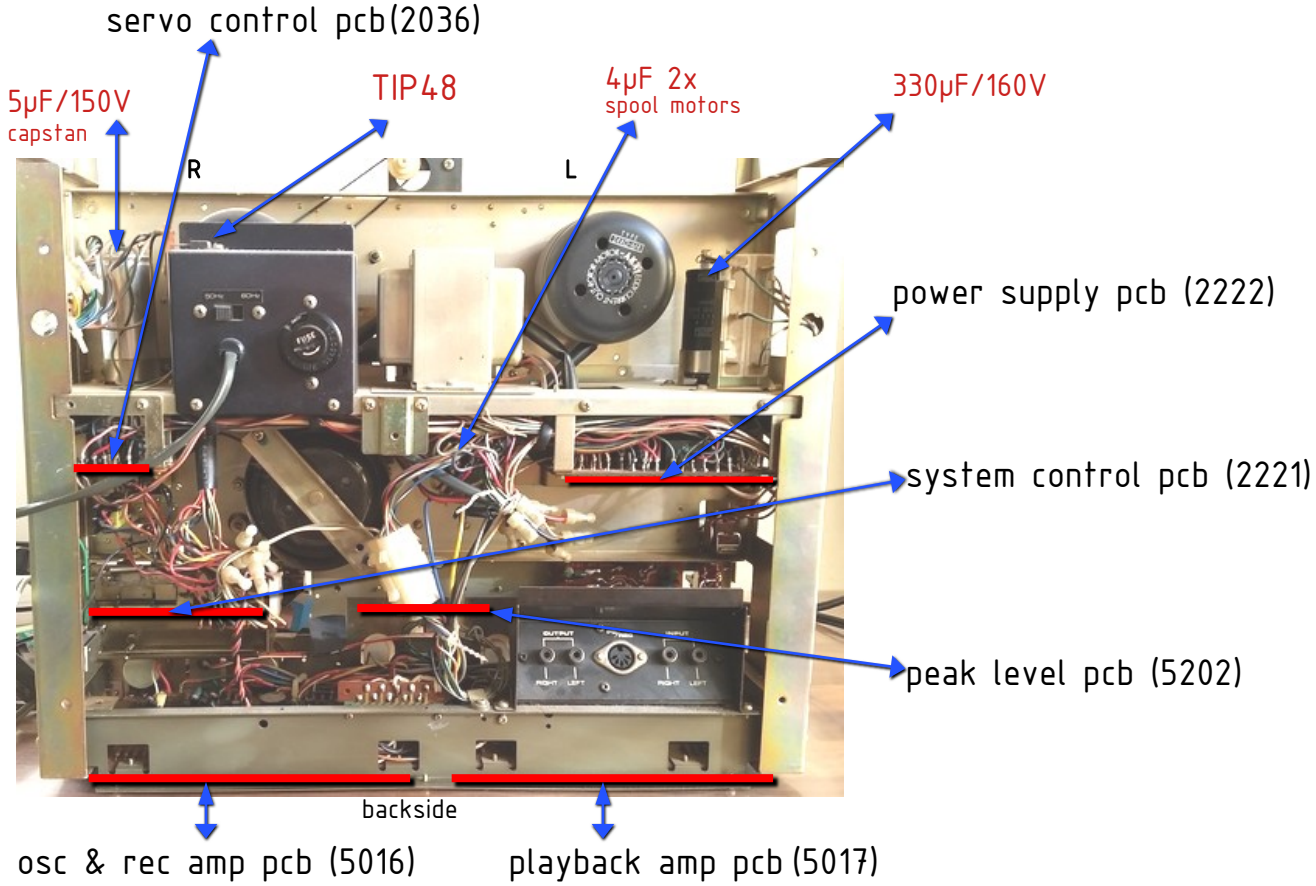
3 component layout of the rec & pb boards

4 component layout of the power supply & system control boards

5 component layout of servo control & peak level pcb location of adjustment / calibration pots / coils etc.

6 component list per circuit board

Location of the internal printed circuit boards:



Common problems, service, revise, overhaul, refurbish actions etc:

General:

- replace all sparkkillers (7x) on power supply pcb, and 1 between reels on front

Audio:

- Replace all caps on REC & PB boards, see pg. 3, 4 & 5
- Replace all transistors on REC & PB boards with KSC1845, see pg. 3, 4 & 5

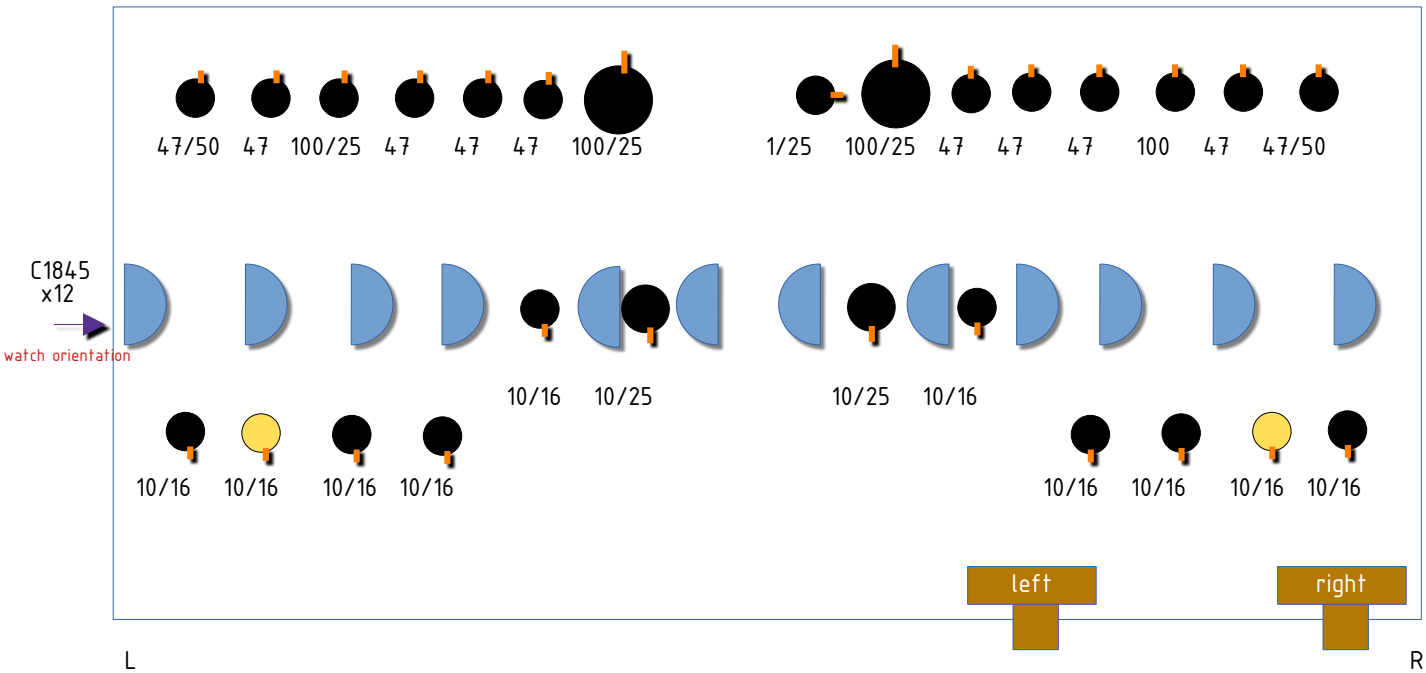
Mechanical:

- clean both speed switches
- TIP48 transistor replace with TIP50
- replace 4 diodes on servoboard with FR207 (1000V / 2A) (speed issues)
- replace 8 diodes on power supply board with FR207 (1000V / 2A) (speed issues)
- motor caps 5µF/150V capstanmotor + 2x 4µF/250V spoolmotor. could be replaced if necessary
- big 330µF/160V high ripple cap could be replaced

*) All specs are for the CEE 220/240V version

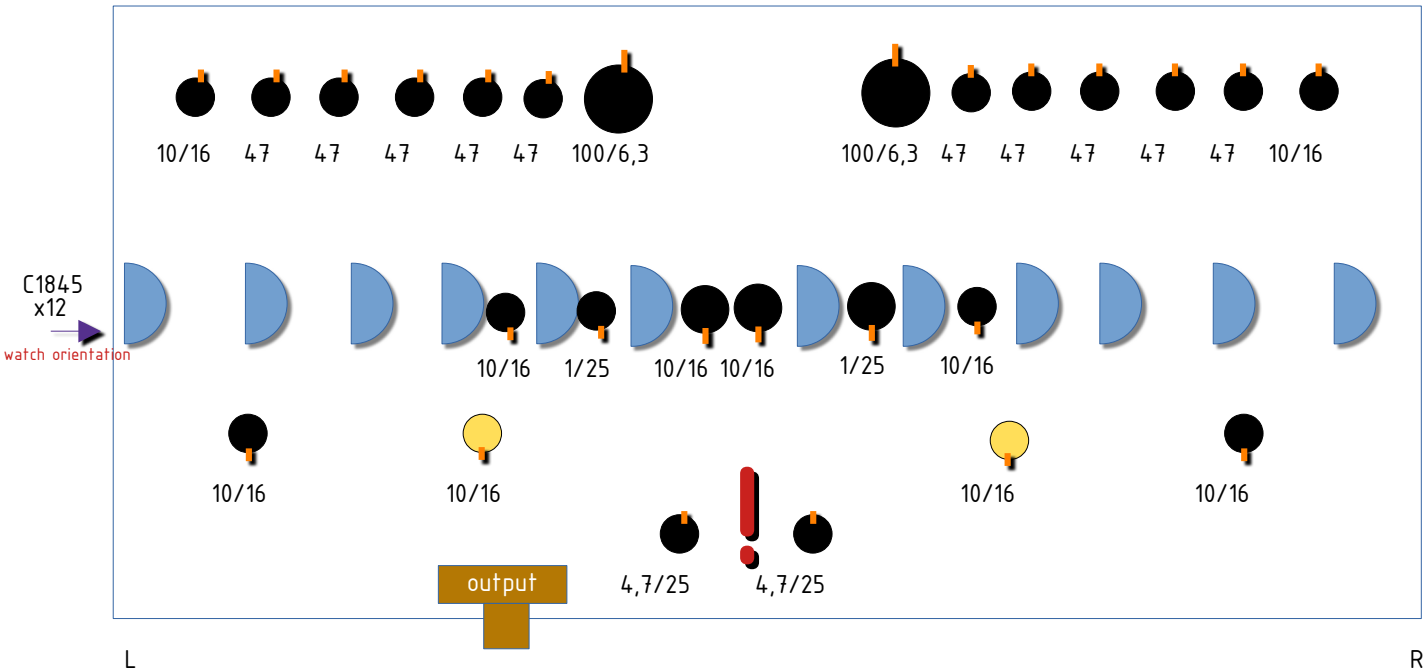
osc & rec amp pcb (5016)

Component side

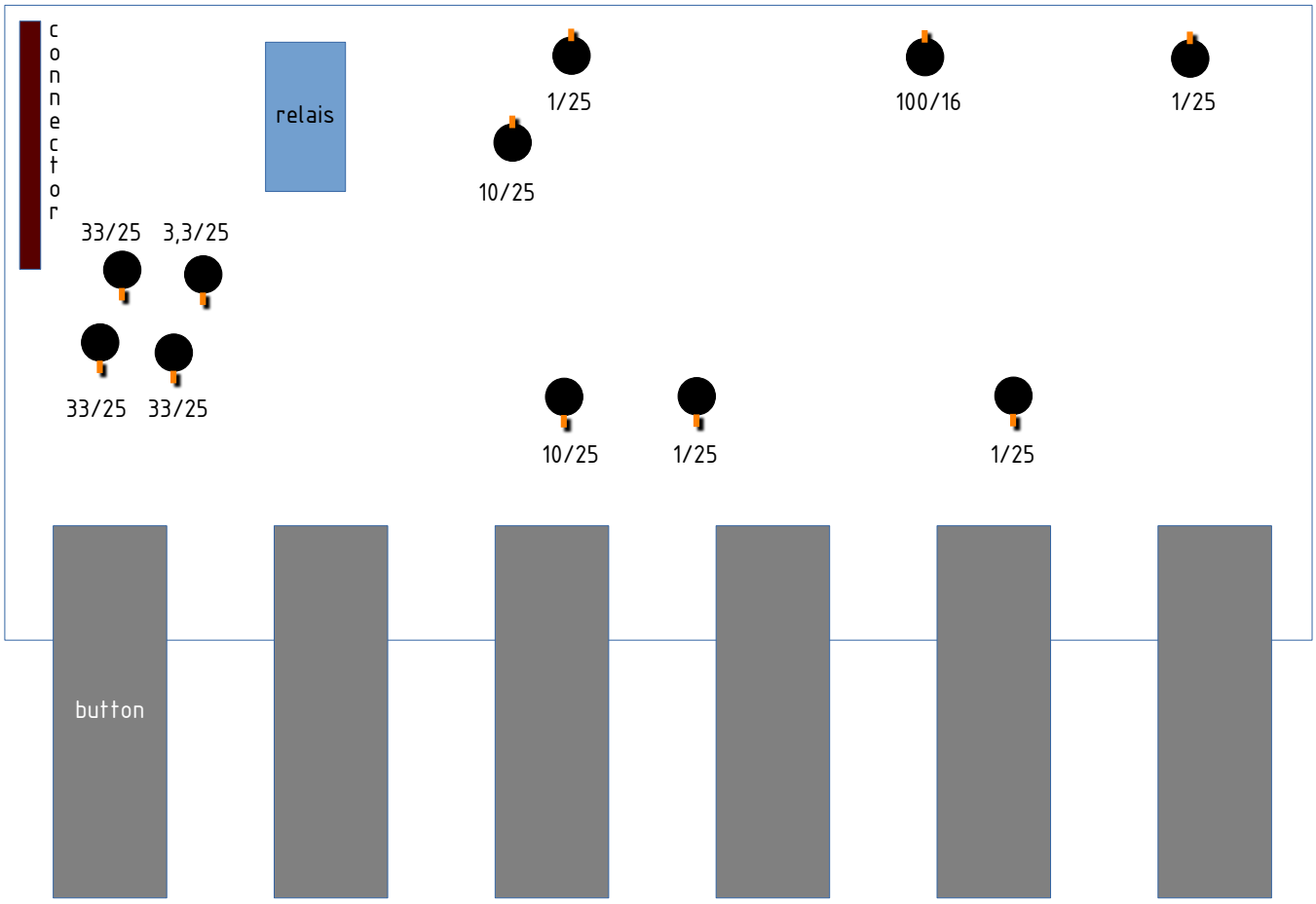


playback amp pcb (5017)

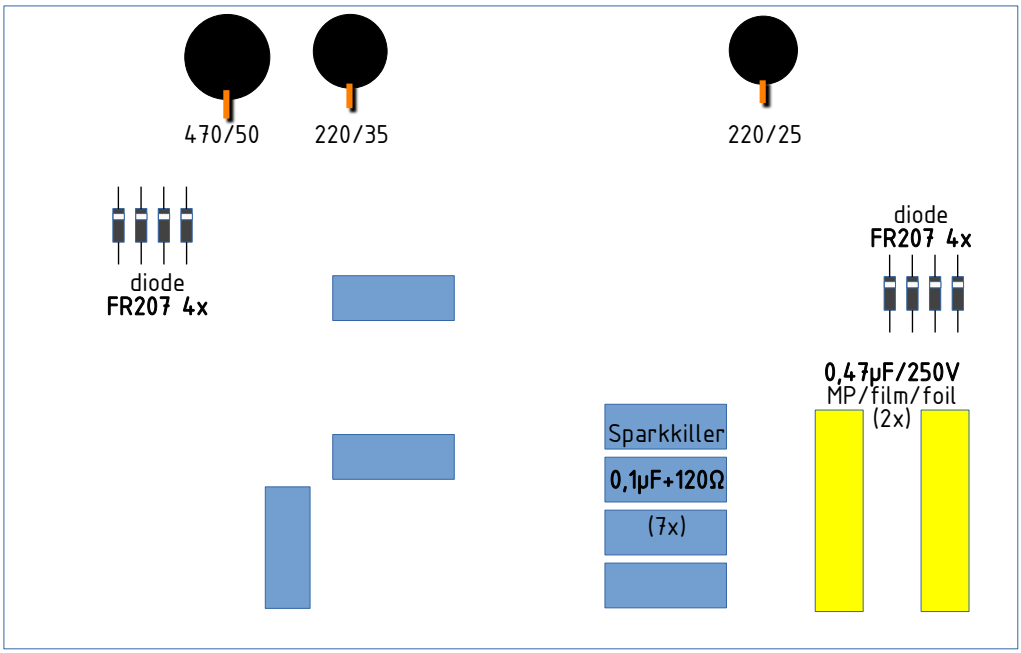
Component side



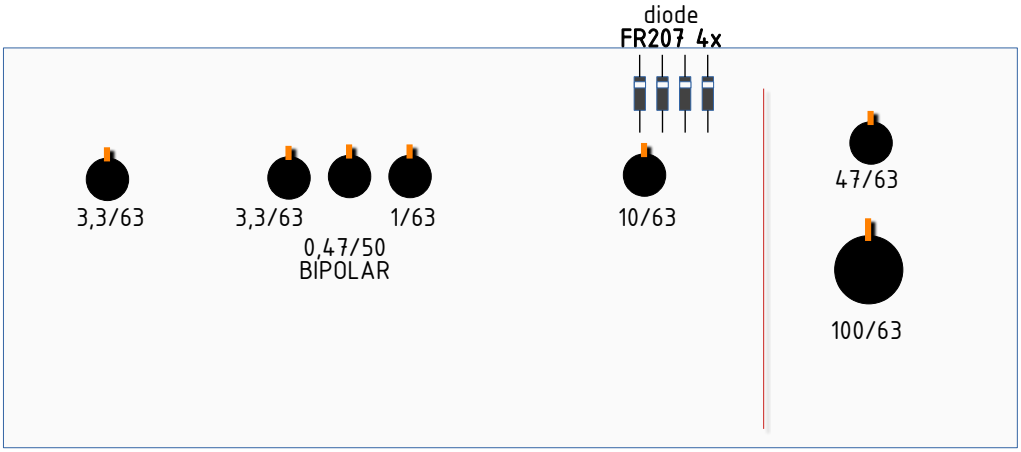
system control pcb (2221)



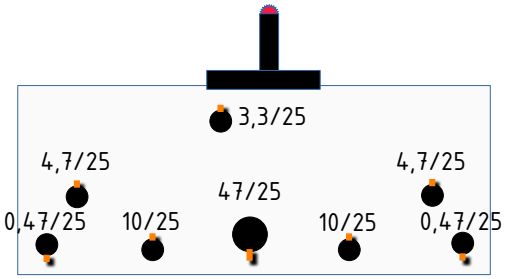
power supply pcb (2222)



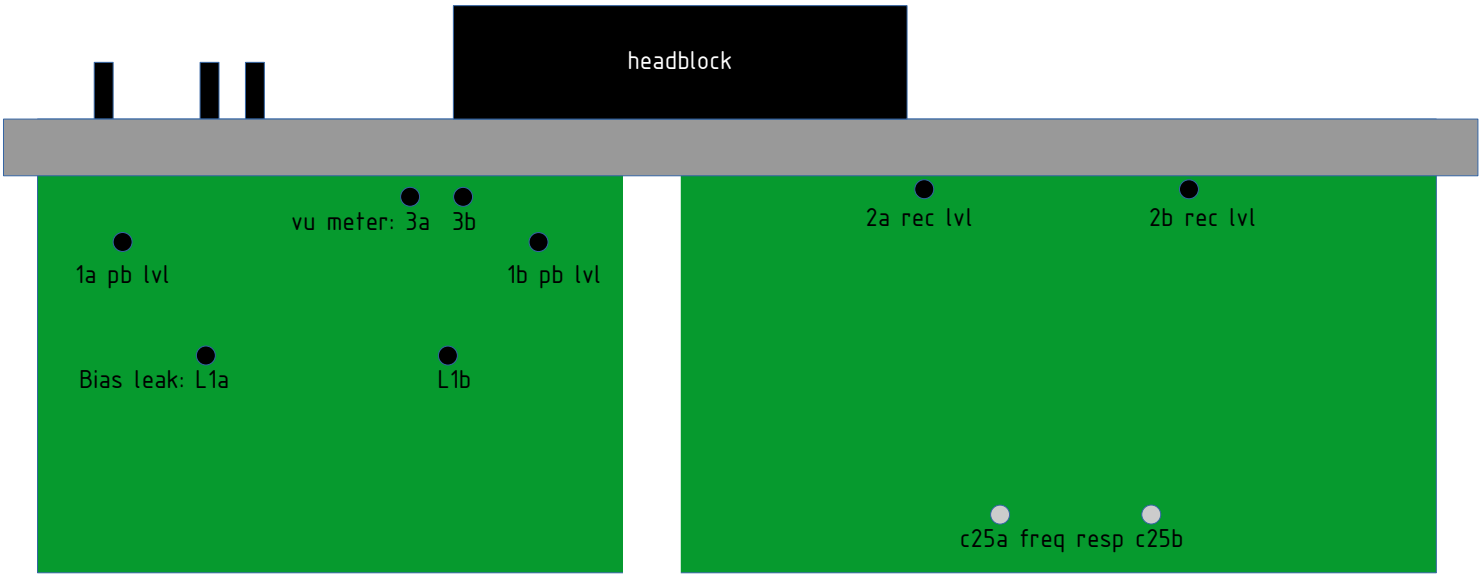
Servo control pcb (2036)



Peak Level pcb (5202)



Location of adjustment / calibration pots / coils / etc.



Playback amp pcb
a = left
b = right

UNDERSIDE

rec amp pcb

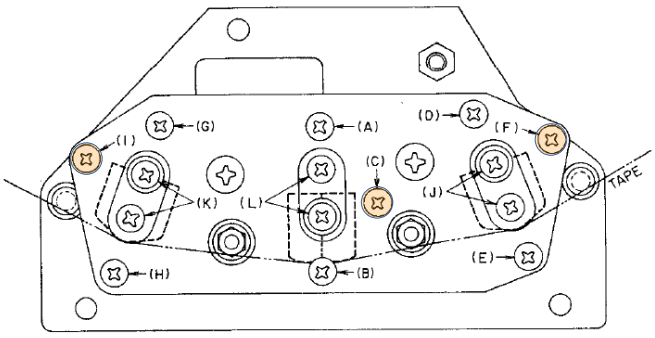
Component list per PCB

	cap µF/volt	#	transistor/semi/diodes	#
power supply pcb	0,47/250	2 axial, film	replace all 10D4 ⟶ FR207	4x
	220/35	2	replace all 10D5 ⟶ FR207	4x
5 caps total	470/50	1		
	0,1+120hm	7 sparkkiller		
system ctrl pcb	1/25	4		
	3,3/25	1		
	10/25	2		
	33/25	3		
11 caps in total	100/16	1		
servo pcb	**0,47/50**BiPolar	1	replace all 10D2 ⟶ FR207	4x
	1/25	1	maybe TIP48 ⟶ TIP50	1x
	3,3/25	2		
	10/16	1	maybe	
	47/50	1		
7 caps in total	100/25	1		
peak level pcb	0,47/25	2		
	3,3/25	1		
	4,7/25	2		
	10/25	2		
8 caps in total	47/25	1		
playback pcb	1/25	2	replace all trans. ⟶ c1845	12x
	4,7/25	2		
	10/16	10		
	47/25	10		
26 caps total	100/6,3	2		
rec + osc pcb	1/25	1	replace all trans. ⟶ c1845	12x
	10/25	12		
	47/25	10		
27 caps in total	100/25	4		

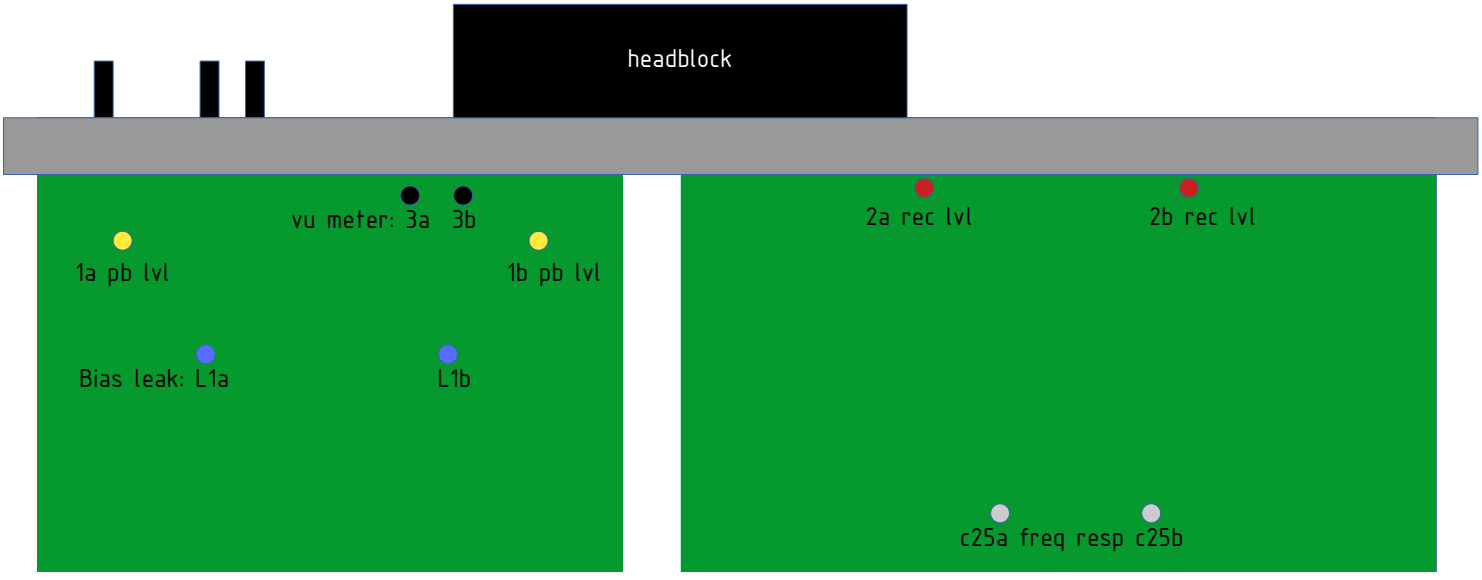
Total		**84** + 7 sparkkillers		

*[**some caps are combined at a higher voltage for convenience**]*

Mechanical & electrical adjustments, calibration instruction



1) The azimuth screws for the 3 heads are in orange in the above picture
2) For adjustment: Set tape speed at 19 cm/s
3) For adjustment: Set tape selector at LOW NOISE
4) For adjustment: Set output volume MAXIMUM
5) Adjust power supply voltage VR1 to 24 Volt (terminal 39, power supply board)
6) Adjust tape speed for 9,5 and 19 cm/s (located XXXXXX)
7) Adjust playback level: reference tone level VR1 0,775 V on output
8) Adjust VU meter reference tone level VR3 "0" VU
9) Adjust recording level: record 1 kHz @ 0 VU VR2 0,775 V on output, monitor switch on SOURCE
10) Frequency responce adj: record 1-10kHz @ -20dB C25 for flat reproduction. Repeat after bias adjustment
11) Bias leak adjustment: record less than -30 VU, with monitor switch at TAPE and SOURCE positions



Playback amp pcb
a = left
b = right

UNDERSIDE

rec amp pcb