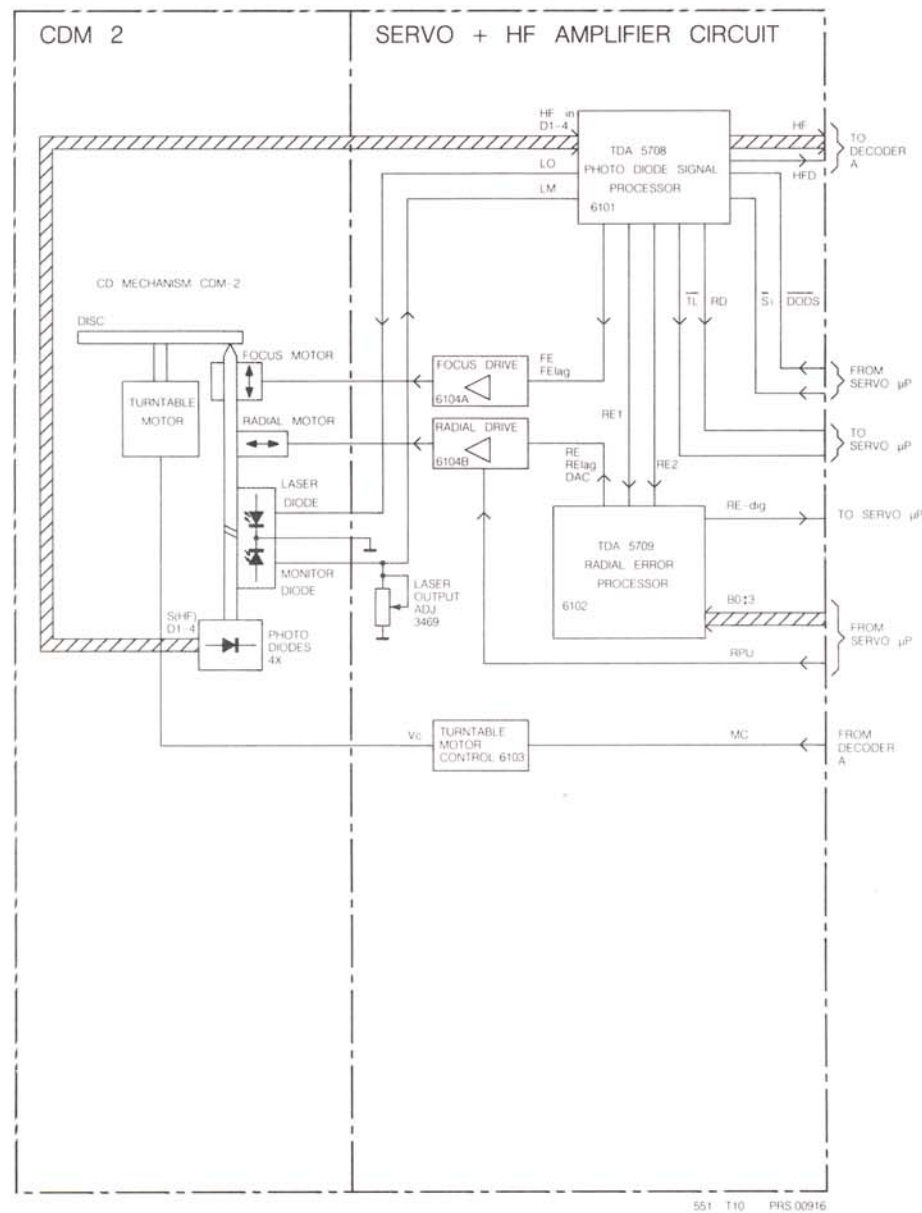
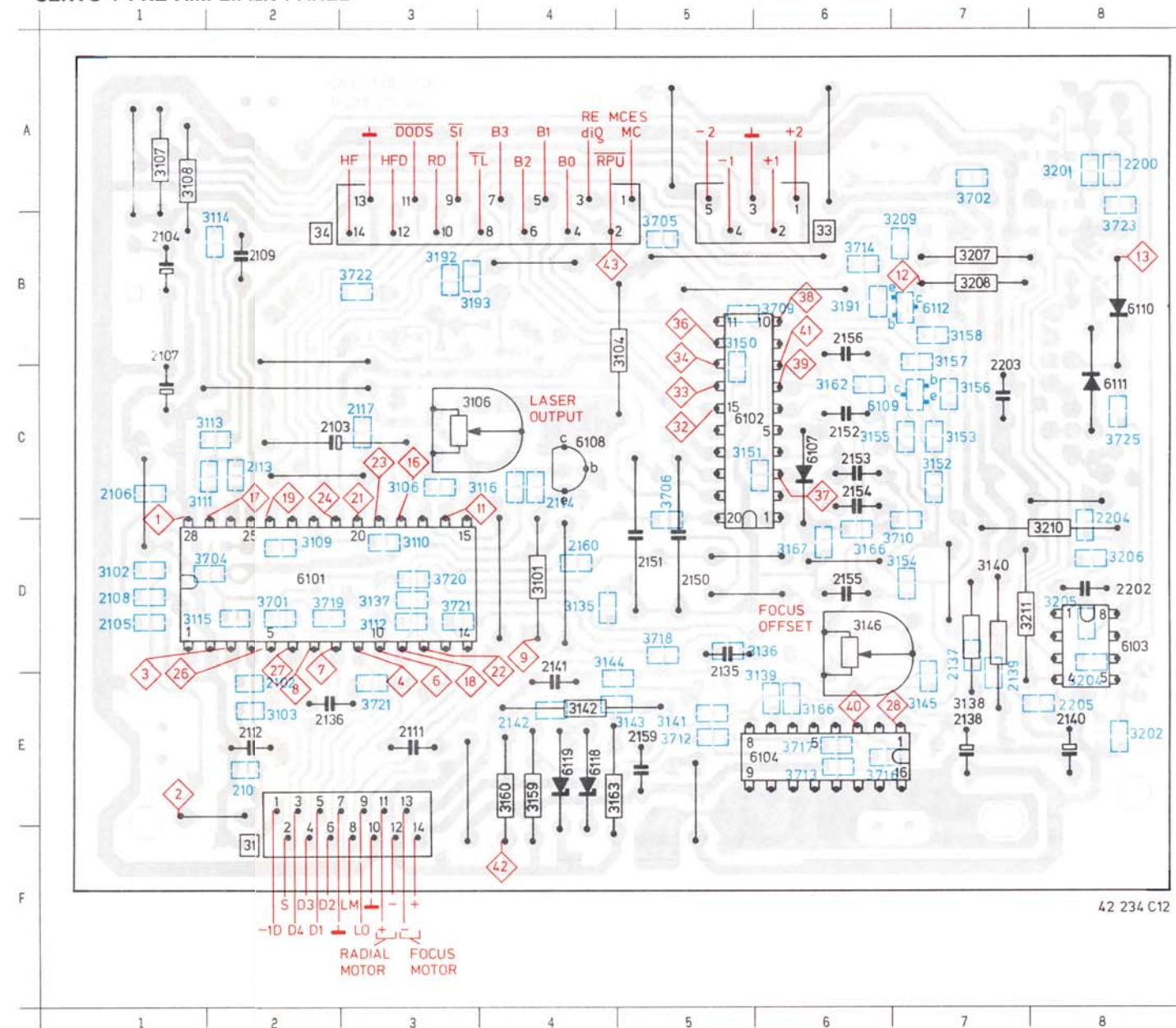


### BLOCK DIAGRAM



### SERVO + PRE-AMPLIFIER PANEL





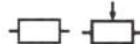



A	2101	E 2	3152	C 7
	2102	E 2	3153	C 7
	2103	C 2	3154	D 7
	2104	B 1	3155	C 6
	2105	D 1	3156	C 7
	2106	C 1	3157	B 7
	2107	B 1	3158	B 7
	2108	D 1	3159	E 4
	2109	B 2	3160	E 4
	2111	E 3	3162	C 6
B	2112	E 2	3163	E 5
	2113	C 2	3166	D 6
	2114	C 4	3166	E 6
	2117	C 3	3167	D 6
	2135	D 5	3191	B 6
	2136	E 2	3201	A 8
	2137	D 7	3202	E 8
	2137	E 7	3204	E 8
	2138	E 7	3205	D 8
	2140	E 8	3206	D 8
C	2141	D 4	3207	B 7
	2142	E 4	3208	B 7
	2150	D 5	3209	B 7
	2151	D 5	3210	D 8
	2152	C 6	3211	D 7
	2153	C 6	3701	D 2
	2154	C 6	3702	A 7
	2155	D 6	3704	D 2
	2156	B 6	3705	B 5
	2159	E 5	3706	C 5
D	2160	D 4	3709	B 6
	2200	A 8	3710	D 7
	2202	D 8	3712	E 5
	2203	C 7	3713	E 6
	2204	C 8	3714	B 6
	2205	E 8	3716	E 6
	3101	D 4	3717	E 6
	3102	D 1	3718	D 5
	3103	E 2	3719	D 2
	3106	C 3	3720	D 3
E	3106	C 3	3721	D 3
	3107	A 1	3721	E 3
	3108	A 1	3723	B 8
	3109	D 2	3725	C 8
	3110	D 3	6101	D 2
	3111	C 1	6102	C 5
	3112	D 3	6103	D 8
	3113	C 2	6104	E 6
	3114	B 2	6107	C 6
	3115	D 1	6108	C 4
F	3116	C 4	6109	C 6
	3135	D 4	6110	B 8
	3136	D 6	6111	C 8
	3137	D 3	6112	B 7
	3138	E 7	6118	E 4
	3139	E 6	6119	E 4
	3140	D 7		
	3141	E 5		
	3142	E 4		
	3143	E 5		
3144	D 4			
3145	E 7			
3146	D 6			
3150	B 5			
3151	C 5			

PRS.02850

B0-B3	-	Control bits for radial circuit	RE1	-	Radial error signal 1 (summation of amplified currents $D_3$ and $D_4$ )
DAC	-	Current output for track jumping (Digital to Analogue Converted)	RE2	-	Radial error signal 2 (summation of amplified currents $D_1$ and $D_2$ )
D0DS	-	Drop out detector suppression	RE dig	-	Radial error digital
D1÷4	-	Photodiode currents	RE lag	-	Radial error signal for LAG network
FE	-	Focus error signal	RD	-	Ready signal, starting up procedure finished
FE lag	-	Focus error signal for LAG network	$\overline{RPU}$	-	Radial puls after track jumping
HF	-	HF output for DEMOD	$\overline{Si}$	-	On/off control for laser supply and focus circuit
HFD	-	HF detector output for DEMOD	$\overline{TL}$	-	Track loss signal
HF-in	-	HF current input	Vc	-	Control voltage for turntable motor
LM	-	Laser monitor diode input			
LO	-	Laser amplifier current output			
MC	-	Motor control signal			
RE	-	Radial error signal (amplified $RE_2$ - $RE_1$ currents)			





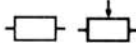

## ELECTRICAL PARTS



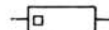











					
6101	TDA5708	4822 209 83202	14p	Flex print connector	4822 290 60602
6102	TDA5709	4822 209 83203			
6103	NJM4560D	4822 209 83274			
6104	L272BH	4822 209 72026			
			2150,2151 3.6 nF-160 V-1% 4822 121 51001 For chip capacitors see list on page 6-4		
6109	BC858B	5322 130 41983			
6108	BC338-16	4822 130 40892			
			3101 12 $\Omega$ NFR25 4822 111 30511 3104 18 $\Omega$ -NFR25 4822 111 30515 3106 1 k $\Omega$ -Trimpot 4822 100 20151 3107,3108 4.7 $\Omega$ -NFR25-5% 4822 111 30499 3138,3140 1 $\Omega$ -NFR25 4822 111 30483 3146 22 k $\Omega$ -Trimpot 4822 100 11193 3160 4.7 $\Omega$ -MRS25 4822 116 52858 For chip resistors see list on page 6-4		
6110,6111	1N4148	4822 130 30621			
6118,6119	HZ7C2	4822 130 32862			



A	2101	E 7	3146	D 3
	2102	E 7	3150	B 4
	2103	C 7	3151	C 3
	2104	B 8	3152	C 2
	2105	D 8	3153	C 2
	2106	C 8	3154	D 3
	2107	B 8	3155	C 2
	2108	D 8	3156	C 2
	2109	B 7	3157	C 3
	2110	D 6	3158	B 2
B	2111	E 6	3159	E 3
	2112	E 7	3160	E 3
	2113	C 7	3161	E 3
	2114	C 5	3162	E 3
	2115	C 6	3163	E 5
	2136	E 4	3166	D 3
	2137	E 7	3167	D 3
	2138	D 2	3191	B 3
	2138	E 2	3192	B 6
	2139	E 2	3193	B 5
C	2140	E 1	3201	A 1
	2141	D 5	3202	E 1
	2142	E 5	3204	E 1
	2150	D 4	3205	D 1
	2151	D 4	3206	D 1
	2152	C 3	3207	B 2
	2153	C 3	3208	B 2
	2154	C 3	3209	B 2
	2155	D 3	3210	D 1
	2156	B 3	3211	D 1
D	2159	E 4	3701	D 7
	2160	D 5	3702	A 7
	2200	A 1	3704	D 2
	2202	D 1	3705	B 4
	2203	C 2	3706	C 4
	2204	C 1	3709	B 9
	2205	E 2	3710	C 2
	3101	D 5	3712	E 4
	3102	D 8	3713	E 3
	3103	E 7	3714	B 3
E	3104	B 5	3716	E 3
	3105	C 6	3717	E 3
	3106	C 6	3718	D 4
	3107	A 8	3720	D 6
	3108	A 8	3721	D 6
	3109	D 7	3722	B 6
	3110	D 6	3723	A 1
	3111	C 8	3725	C 1
	3112	D 6	6101	D 7
	3113	C 7	6103	D 1
F	3114	B 7	6104	E 3
	3115	D 7	6105	C 4
	3116	C 5	6107	C 3
	3119	D 7	6108	C 5
	3135	D 4	6109	C 2
	3135	E 4	6110	B 1
	3137	D 6	6111	C 1
	3138	E 2	6112	B 2
	3139	E 4	6118	E 5
	3140	D 2	6119	E 5
	3141	E 4		
	3142	E 4		
	3143	E 4		
	3144	D 4		
	3145	D 2		

## ELECTRICAL PARTS

					
6101	TDA5708	4822 209 83202	14p	Flex print connector	4822 290 60602
6102	TDA5709	4822 209 83203			
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6109	BC858B	5322 130 41983			
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6110,6111	1N4148	4822 130 30621			
6118,6119	HZ7C2	4822 130 32862			

	Carbon film 0.2 W      70°C      5%		Ceramic plate Tuning $\leq 120$ pF NP.0      2% Others      -20/+80%	<div>*a = 2,5 V b = 4 V c = 6,3 V d = 10 V e = 16 V f = 25 V g = 40 V h = 63 V j = 100 V l = 125 V m = 150 V n = 160 V q = 200 V r = 250 V s = 300 V t = 350 V u = 400 V v = 500 V w = 630 V x = 1000 V A = 1,6 V B = 6 V C = 12 V D = 15 V E = 20 V F = 35 V G = 50 V H = 75 V I = 80 V</div>
	Carbon film 0.33 W      70°C      5%		Polyester flat foil      10%	
	Metal film 0.33 W      70°C      5%		Metalized polyester flat film      10%	
	Carbon film 0.5 W      70°C      5%		Polyester flat foil small size (Mylar)      10%	
	Carbon film 0.67 W      70°C      5%		Polysterene film/foil      1%	
	Carbon film 1.15 W      70°C      5%		Tubular ceramic	
			Miniature single	
			Subminiature tantalum $\pm 20\%$	
© Chip component				





### Adaptations for CDM-4

If a CDM2 has to be replaced, there is a parcel with mechanical components for adaptation of the new CDM.  
**CODE NUMBER: 4822 310 31279.**

This parcel contains the following components:

- 2 spacers item 153
- 2 long screws torx 3Mx30
- 1 cover for the flex PCB item 156
- 2 brackets for fixation of the CDM in the loading item 152

#### IMPORTANT:

**Before the new CDM with the adaptations is reconnected in the set, first the new laser current adjustment has to be performed. It begins without the set being switched on.**

### Laser adjustment for CDM4

- Measure the resistances of R3105 + R3106 with an ohmmeter and adjust potentiometer R3106 so that R3106 + R3105 have a total value of 1 k $\Omega$
- Put test disc 5 on the turntable
- Switch on the set and select the PLAY mode
- Check if HF is present, if not, stop the measurement immediately and analyse the fault. If HF is present, play track 1 of test disc 5 and adjust the sum HF across R3102 (test point 1 and 2) to 50 mV with a DC voltmeter.

**Old codenumber:** 4822 691 30191 (CDM-2/0301)

**New codenumber:** 4822 691 20464 (CDM-4/11)

#### Electrical adaptations:

- See drawing on sheet 6-3
- Replace C2141 by a capacitor having a value of 470 nF
- Replace R3144 by a resistor having a value of 39 k $\Omega$
- Replace R3106 in the laser supply by a trimming potentiometer having a value of 4,7 k $\Omega$  (4822 101 10685)
- Replace R3159 by a resistor having a value of 15 k $\Omega$
- Replace R3162 by a resistor having a value of 91 k $\Omega$
- Replace R3155 by a resistor having a value of 8,2 k $\Omega$
- Replace C2159 by a capacitor having a value of 1,5  $\mu$ F bipolar (4822 124 21918)
- Replace R3163 by a resistor having a value of 33  $\Omega$