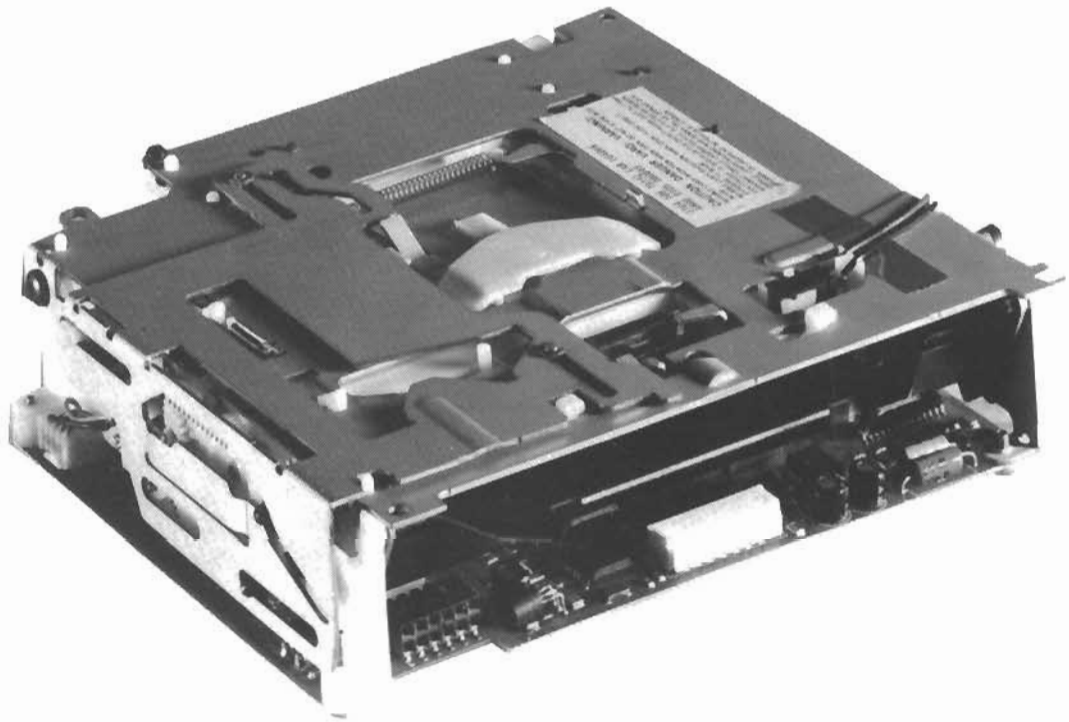
Service
Service
Service

Service Manual

12 V



CLASS 1
LASER PRODUCT

Published by Philips Car Systems Printed in The Netherlands 4822 725 23506

PCS 67 611

CONTENTS

SPEZIFICATION

Operating voltage:	10 V - 16 V
Operating temperature:	15°C - +70°C
Accesstime:	max. 2sec (inner to outer track)
Load- / Eject- time:	max. 4sec
Mounting angle (see page 5):	-10° - +20°
	+30° - +60° (optional)
Playability:	
- Testdisc 5A (4822 397 30096):	wedges 900m
	(track 9, time 19'59)
	blackdots - 800µm
	(track 17, time 40'04)
	fingerprints
	(track 18 + 19, time 42'46 + 45'06)
- Scewdisc (4822 701 11922):	first 10min without interruptions
- Eccentricity disc (4822 701 11923):	first 10min without interruptions

NOTE: Switch off power supply before connect and disconnect CDM 9 - Module and set (danger of shortcircuit)!

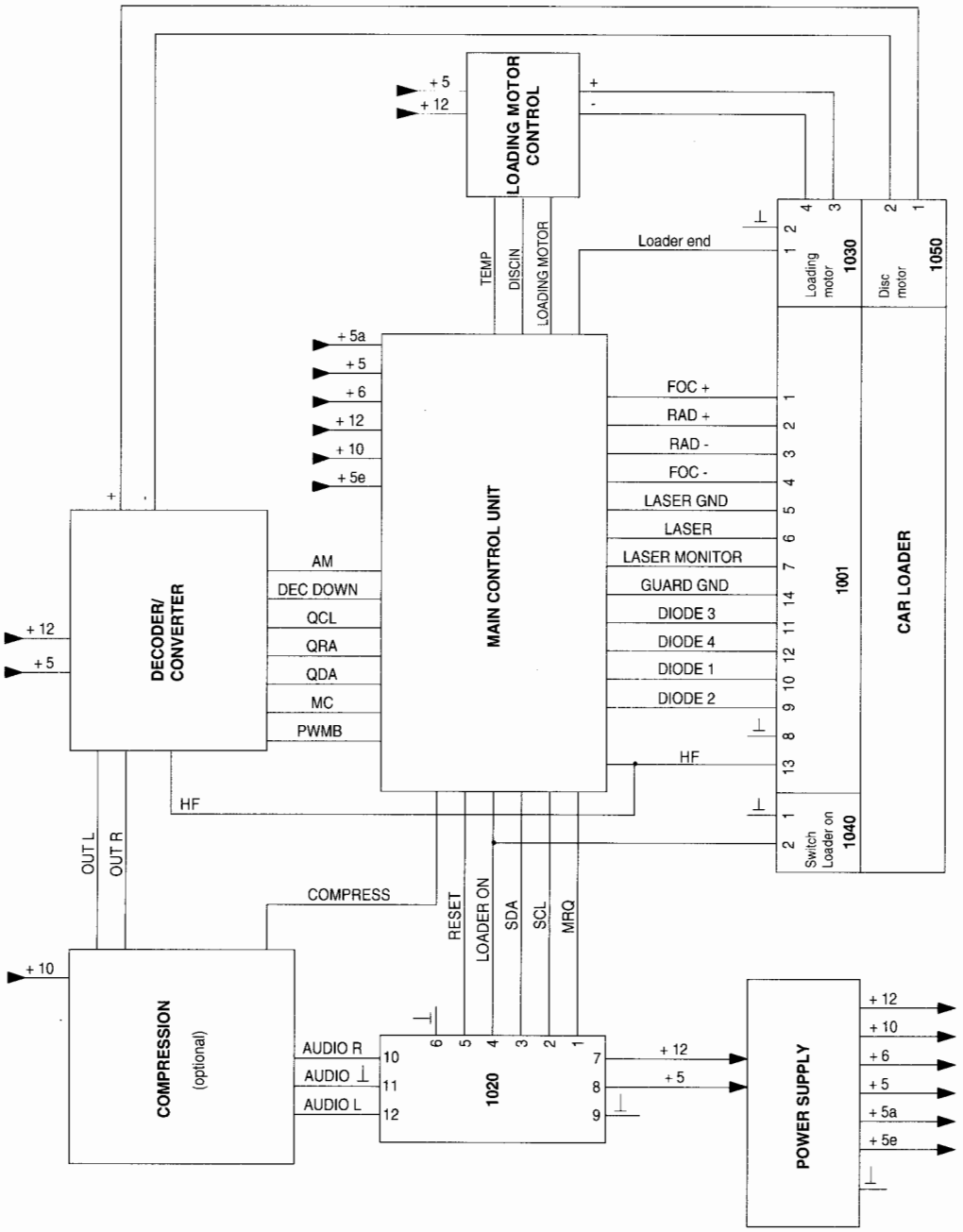
NOTE: Use the coded plugs and sockets to build the needed extension cables.

NOTE: The chassis of CDM 9 is not grounded when separated from the set.

NOTE: Only PLAY but no LOAD and EJECT can be realized in upside-down position.

NOTE: Measurements are done in PLAY (P), STANDBY (S) and DISC OUT (O), DC → GND.

Wiring Diagram

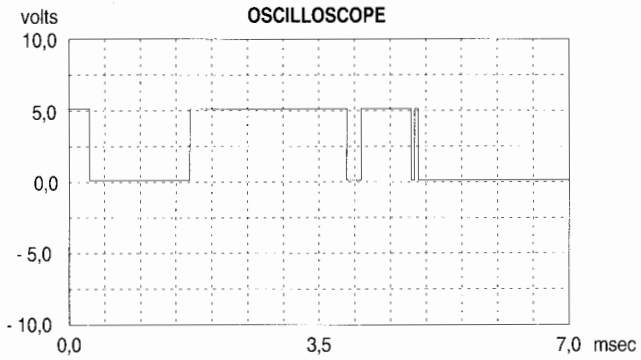


all values measured in PLAY (P), DC - GND

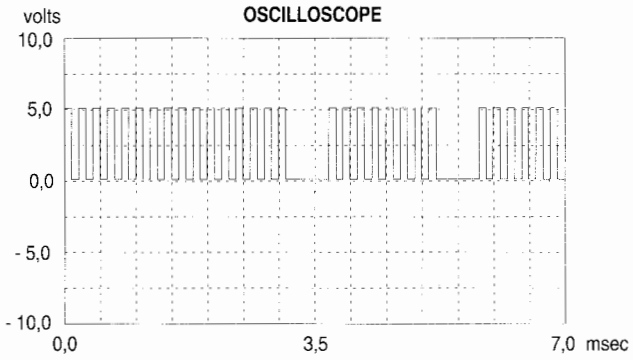
+ 5	= 5,0 V
+ 5a	= 4,7 V
+ 5e	= 5,0 V
+ 6	= 6,0 V
+10	= 8,4 V
+12	= 12,0 V
AUDIO-LEVEL (L+R)	= 0,0 V (1,2 V_{eff})
MRQ	= see oscillogram MRQ
SCL	= see oscillogram SCL
SDA	= see oscillogram SDA
LOADER ON	= 5,0 V
RESET	= 30 mV
COMPRESS	= HIGH when COMPRESS OFF, LOW when COMPRESS ON
HF	= 3,1 V (POS.1001, PIN 13)
QDA	= see oscillogram QDA
QRA	= see oscillogram QRA
QCL	= see oscillogram QCL
PWMB	= 5,0 V (intermittend data when focussing)
DEC. DOWN	= 0,0 V

AM	= 5,0 V
MC	= see oscillogram MC
TEMP	= 3,9 V (0,0 V if T ≥ 70°C)
DISC MOTOR +	= 5,4 V
DISC MOTOR -	= 4,8 V
LOADING MOTOR	= 3,4 V (5,0 V load, 0,0 V eject)
LOADING MOTOR +	= 3,7 V (0,9 V load, 6,3 V eject)
LOADING MOTOR -	= 3,7 V (6,3 V load, 0,9 V eject)
LOADER END	= 0,0 V (5,0 V CD OFF)
DISCIN	= 3,8 V (0,0 V during load)
FOC +	= 2,4 V
FOC -	= 2,6 V
RAD +	= see oscillogram RAD
RAD -	= see oscillogram RAD
LASER GND	= 0,0 V
LASER	= 2,0 V
LASER MONITOR	= 0,2 V
GUARD GND	= 0,0 V
DIODE 1	= 1,3 V
DIODE 2	= 1,3 V
DIODE 3	= 1,3 V
DIODE 4	= 1,3 V

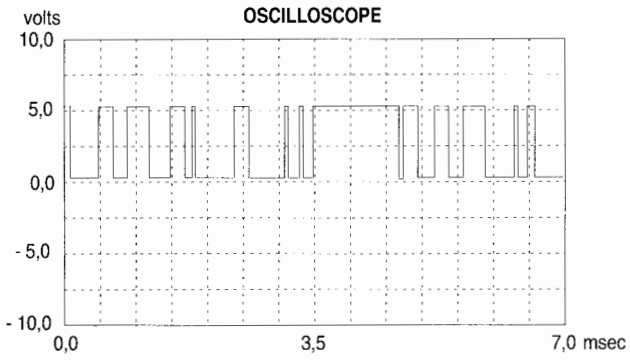
MRQ



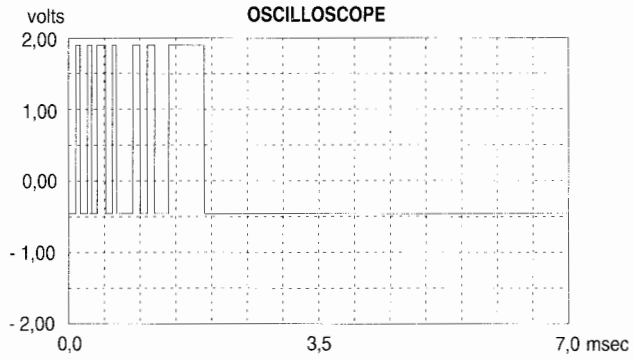
SCL



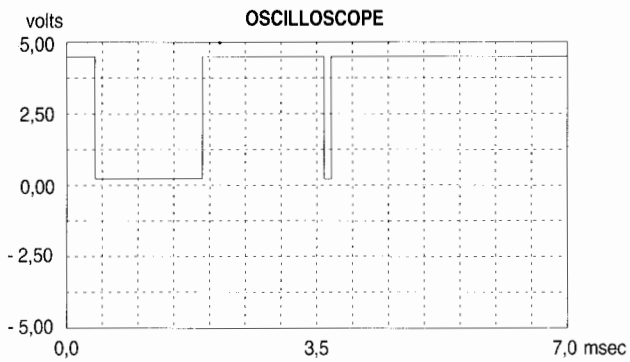
SDA



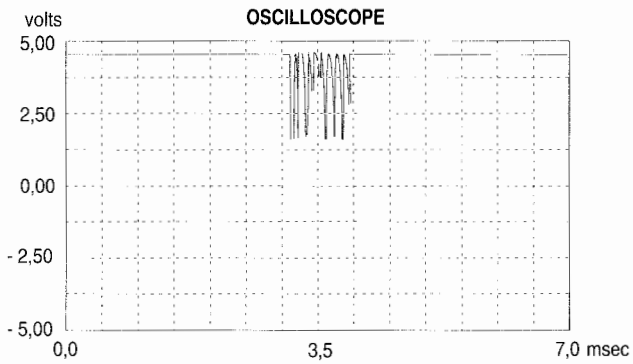
QDA



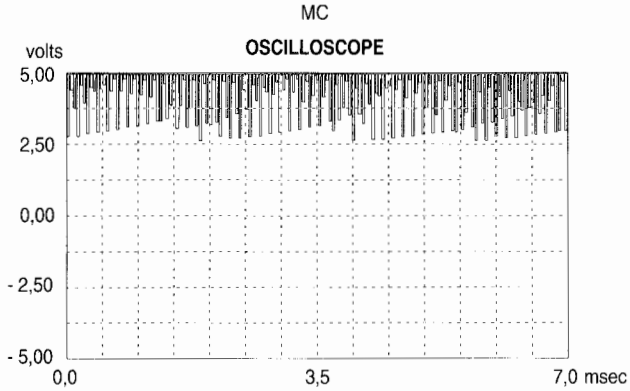
QRA



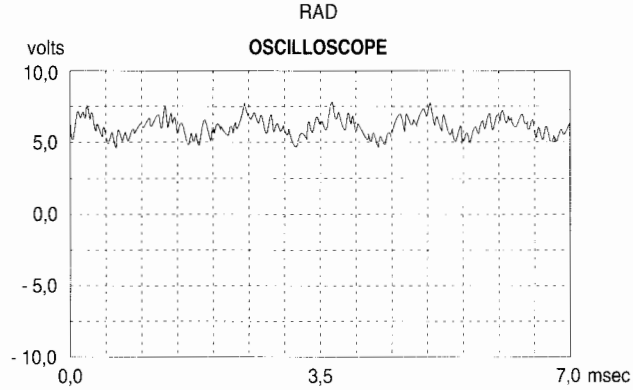
QCL



MC



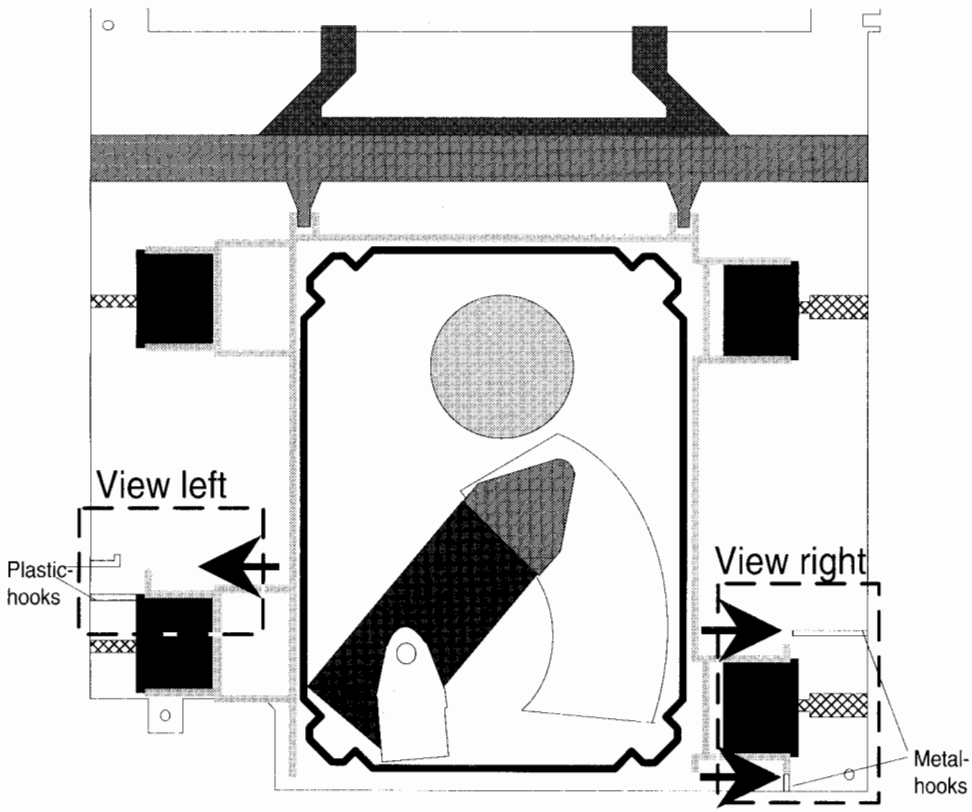
RAD

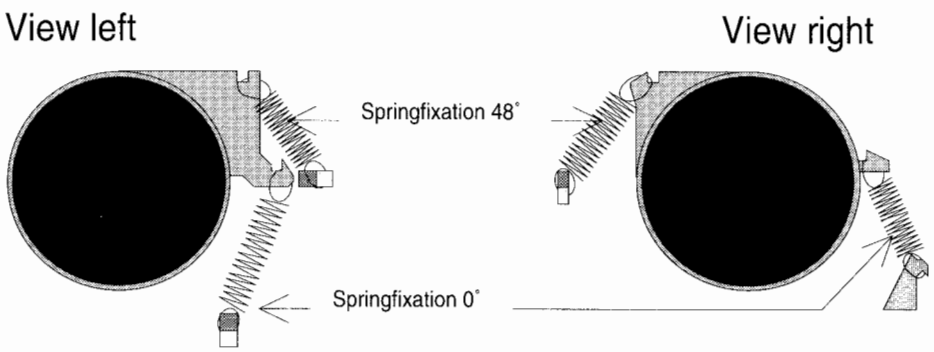


PCS 67 614

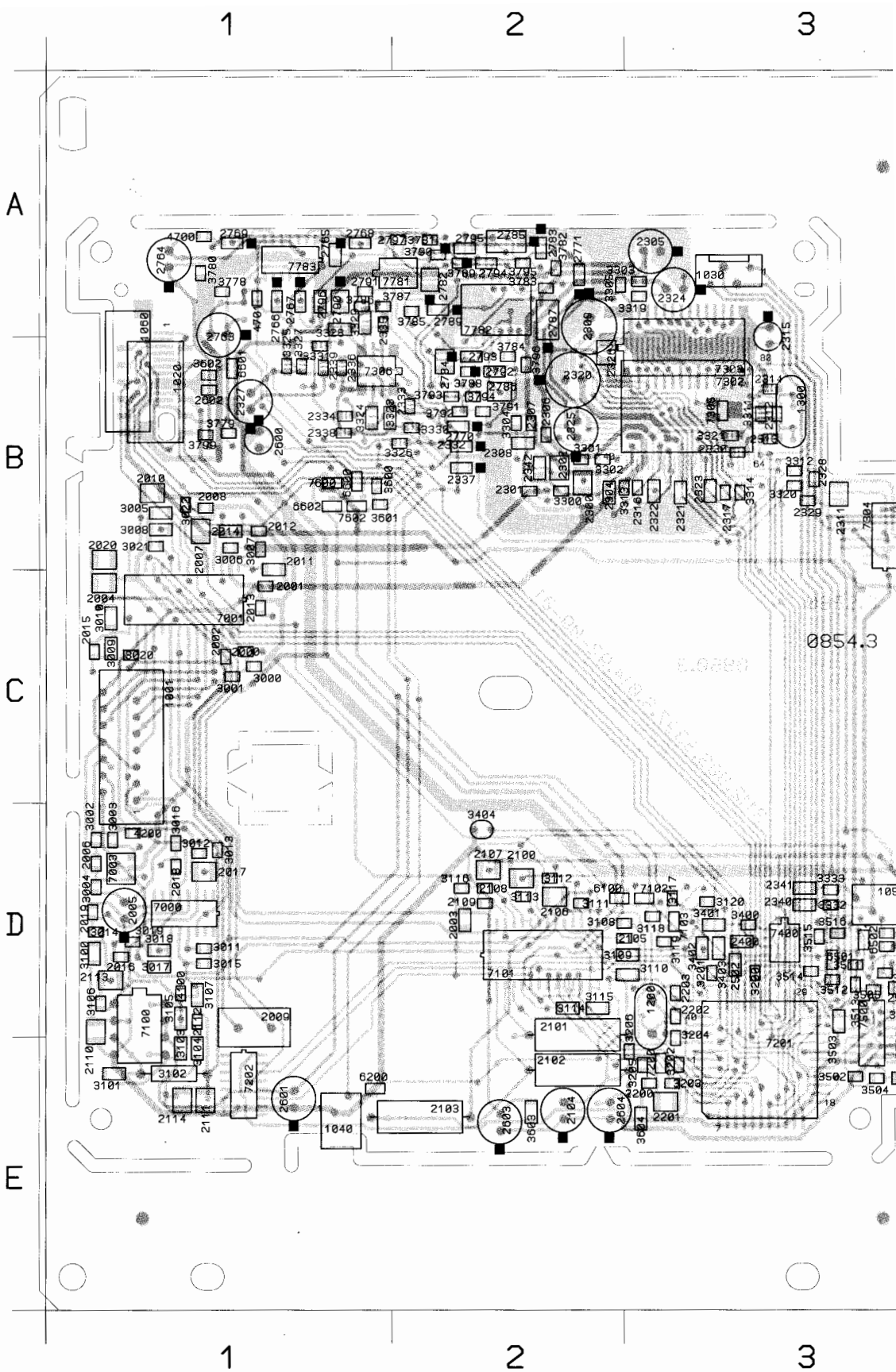
Adaptation of CDM 9 for playability at a mounting angle of 30° to 60°

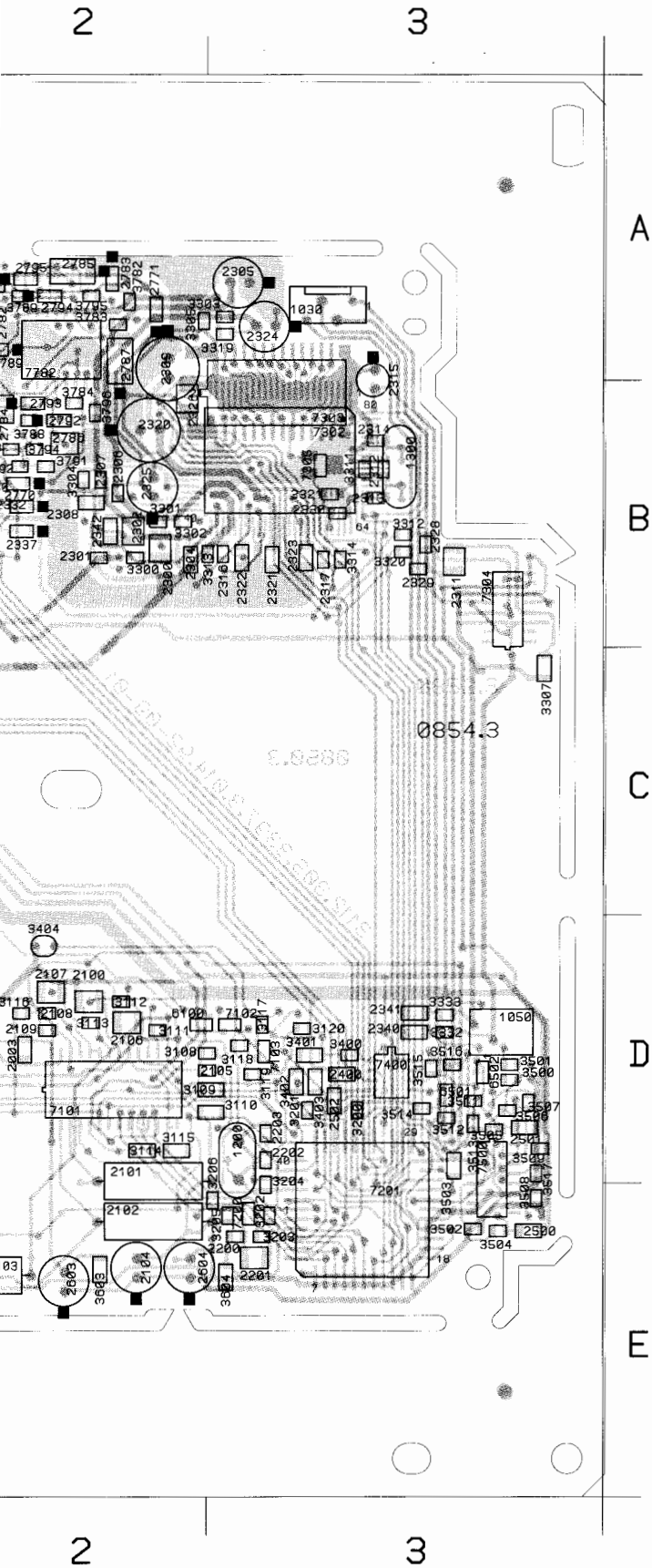
Take the rear springs from the suspensions and put them in the additional fixation hooks as shown in the figure below (see also service-information A92 - 402).



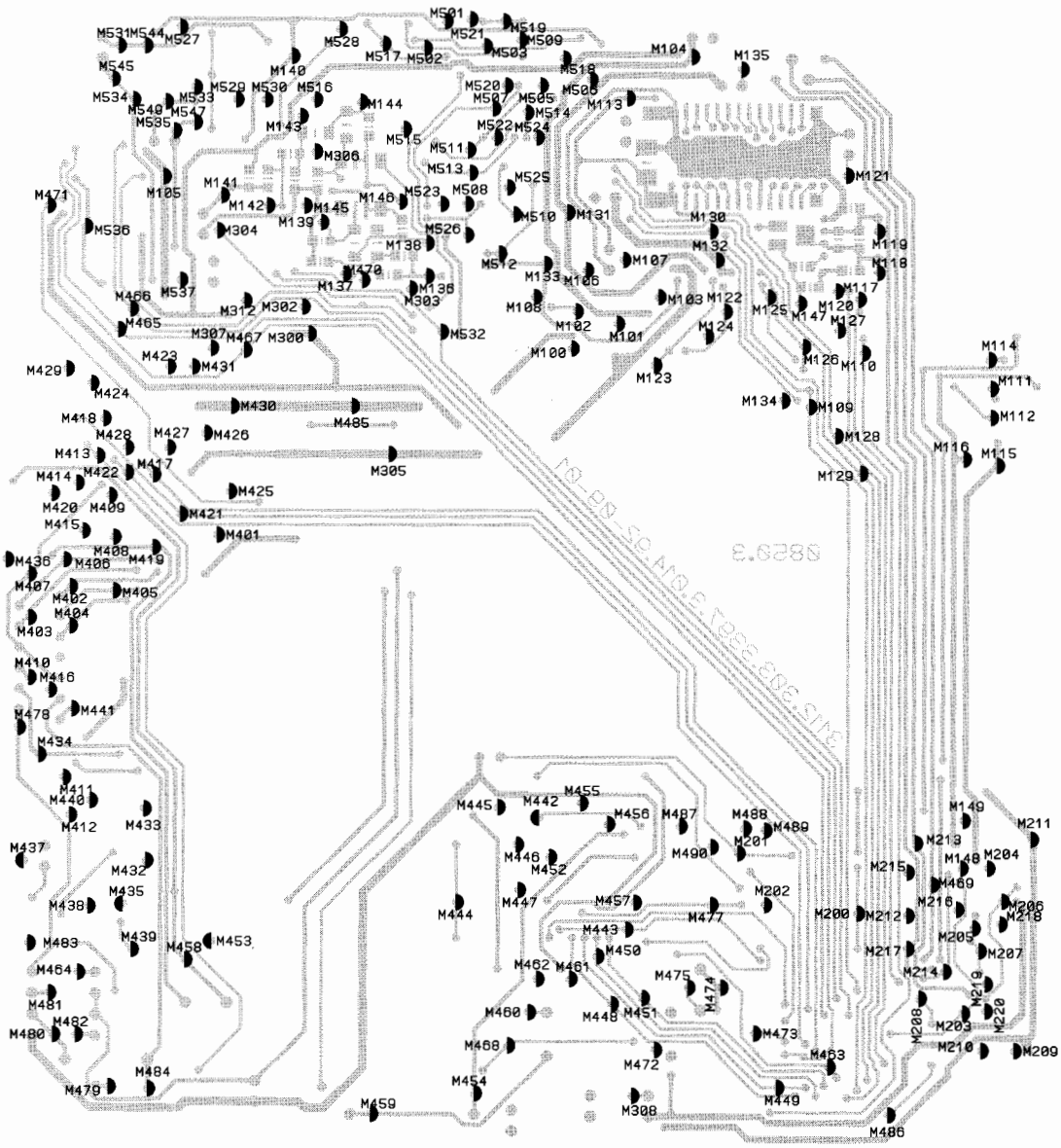


Technician remarks


1
2
3
A
B
C
D
E
0854.3



M100 B 2	M307 B 1	M475 D 3	2014 B 1	2767 A 1	3307 C 3	7000 D 1
M101 B 2	M308 E 2	M477 D 3	2015 C 1	2768 A 1	3311 B 3	7001 C 1
M102 B 2	M312 B 1	M478 D 1	2016 D 1	2769 A 1	3312 B 3	7003 D 1
M103 B 2	M401 C 1	M479 E 1	2017 D 1	2770 B 2	3313 B 2	7100 D 1
M104 A 3	M402 C 1	M480 E 1	2018 D 1	2771 A 2	3314 B 3	7101 D 2
M105 B 1	M403 C 1	M481 D 1	2019 D 1	2782 A 2	3319 A 3	7102 D 3
M106 B 2	M404 C 1	M482 E 1	2020 B 1	2783 A 2	3320 B 3	7103 D 3
M107 B 2	M405 C 1	M483 D 1	2100 D 2	2784 B 2	3321 B 3	7200 E 3
M108 B 2	M406 C 1	M484 E 1	2101 D 2	2785 A 2	3323 B 1	7201 E 3
M109 B 3	M407 C 1	M485 B 1	2102 E 2	2786 B 2	3324 B 1	7202 E 1
M110 B 3	M408 C 1	M486 E 3	2103 E 1	2787 A 2	3325 B 1	7302 B 3
M111 B 3	M409 C 1	M487 D 3	2104 E 2	2789 A 2	3326 B 2	7303 B 3
M112 B 3	M410 C 1	M488 D 3	2105 D 2	2790 A 1	3327 B 1	7304 B 3
M113 A 2	M411 D 1	M489 D 3	2106 D 2	2791 A 1	3328 A 1	7305 B 3
M114 B 3	M412 D 1	M490 D 3	2107 D 2	2792 B 2	3329 A 1	7306 B 1
M115 C 3	M413 C 1	M501 A 2	2108 D 2	2793 B 2	3330 B 2	7400 D 3
M116 C 3	M414 C 1	M502 A 2	2109 D 2	2794 A 2	3331 B 1	7500 D 3
M117 B 3	M415 C 1	M503 A 2	2110 D 1	2795 A 2	3332 D 3	7600 B 1
M118 B 3	M416 C 1	M505 A 2	2111 E 1	2796 A 1	3333 D 3	7602 B 1
M119 B 3	M417 C 1	M506 A 2	2112 D 1	2797 A 2	3400 D 3	7781 A 2
M120 B 3	M418 B 1	M507 A 2	2113 D 1	3000 C 1	3401 D 3	7782 A 2
M121 B 3	M419 C 1	M508 B 2	2114 E 1	3001 C 1	3402 D 3	7783 A 1
M122 B 3	M420 C 1	M509 A 2	2200 E 3	3002 D 1	3403 D 3	
M123 B 2	M421 C 1	M510 B 2	2201 E 3	3003 D 1	3404 D 2	
M124 B 3	M422 C 1	M511 B 2	2202 D 3	3004 D 1	3500 D 3	
M125 B 3	M423 B 1	M512 B 2	2203 D 3	3005 B 1	3501 D 3	
M126 B 3	M424 B 1	M513 B 2	2300 B 2	3006 B 1	3502 E 3	
M127 B 3	M425 C 1	M514 A 2	2301 B 2	3007 B 1	3503 D 3	
M128 C 3	M426 B 1	M515 A 2	2302 B 2	3008 B 1	3504 E 3	
M129 C 3	M427 C 1	M516 A 1	2304 B 2	3009 C 1	3505 D 3	
M130 B 3	M428 C 1	M517 A 2	2305 A 3	3010 C 1	3506 D 3	
M131 B 2	M429 B 1	M518 A 2	2306 B 2	3011 D 1	3507 D 3	
M132 B 3	M430 B 1	M519 A 2	2307 B 2	3012 D 1	3508 E 3	
M133 B 2	M431 B 1	M520 A 2	2308 B 2	3013 D 1	3509 D 3	
M134 B 3	M432 D 1	M521 A 2	2309 A 2	3014 D 1	3511 D 3	
M135 A 3	M433 D 1	M522 A 2	2311 B 3	3015 D 1	3512 D 3	
M136 B 2	M434 D 1	M523 B 2	2312 B 3	3016 D 1	3513 D 3	
M137 B 1	M435 D 1	M524 A 2	2313 B 3	3017 D 1	3514 D 3	
M138 B 2	M436 C 1	M525 B 2	2314 B 3	3018 D 1	3515 D 3	
M139 B 1	M437 D 1	M526 B 2	2315 B 3	3019 D 1	3516 D 3	
M140 A 1	M438 D 1	M527 A 1	2316 B 3	3020 C 1	3517 D 3	
M141 B 1	M439 D 1	M528 A 1	2317 B 3	3021 B 1	3600 B 1	
M142 B 1	M440 D 1	M529 A 1	2320 B 2	3022 B 1	3601 B 1	
M143 A 1	M441 C 1	M530 A 1	2321 B 3	3100 D 1	3602 B 1	
M144 A 1	M442 D 2	M531 A 1	2322 B 3	3101 E 1	3603 E 2	
M145 B 1	M443 D 2	M532 B 2	2323 B 3	3102 E 1	3604 E 3	
M146 B 2	M444 D 2	M533 A 1	2324 A 3	3103 E 1	3778 A 1	
M147 B 3	M445 D 2	M534 A 1	2325 B 2	3104 E 1	3779 B 1	
M148 D 3	M446 D 2	M535 A 1	2326 B 2	3105 D 1	3780 A 1	
M149 D 3	M447 D 2	M536 B 1	2327 B 1	3106 D 1	3781 A 2	
M200 D 3	M448 D 2	M537 B 1	2328 B 3	3107 D 1	3782 A 2	
M201 D 3	M449 E 3	M544 A 1	2329 B 3	3108 D 2	3783 A 2	
M202 D 3	M450 D 2	M545 A 1	2330 B 3	3109 D 3	3784 B 2	
M203 D 3	M451 D 2	M547 A 1	2332 B 2	3110 D 3	3785 A 2	
M204 D 3	M452 D 2	M549 A 1	2333 B 2	3111 D 2	3786 A 1	
M205 D 3	M453 D 1	1001 C 1	2334 B 1	3112 D 2	3787 A 1	
M206 D 3	M454 E 2	1020 B 1	2335 A 1	3113 D 2	3788 B 2	
M207 D 3	M455 D 2	1030 A 3	2336 B 1	3114 D 2	3789 A 2	
M208 D 3	M456 D 2	1040 E 1	2337 B 2	3115 D 2	3790 A 2	
M209 E 3	M457 D 2	1050 D 3	2338 B 1	3116 D 2	3791 B 2	
M210 E 3	M458 D 1	1060 A 1	2339 B 1	3117 D 3	3792 B 2	
M211 D 3	M459 E 1	1200 D 3	2340 D 3	3118 D 3	3793 B 2	
M212 D 3	M460 D 2	1300 B 3	2341 D 3	3119 D 3	3794 B 2	
M213 D 3	M461 D 2	2000 C 1	2342 B 2	3120 D 3	3795 A 2	
M214 D 3	M462 D 2	2001 C 1	2400 D 3	3200 D 3	3796 B 2	
M215 D 3	M463 E 3	2002 C 1	2500 E 3	3201 D 3	3799 B 1	
M216 D 3	M464 D 1	2003 D 2	2501 D 3	3202 E 3	4100 D 1	
M217 D 3	M465 B 1	2004 C 1	2502 D 3	3203 E 3	4200 D 1	
M218 D 3	M466 B 1	2005 D 1	2600 B 1	3204 E 3	4700 A 1	
M219 D 3	M467 B 1	2006 D 1	2601 E 1	3205 E 3	4701 A 1	
M220 D 3	M468 E 2	2007 B 1	2602 B 1	3206 E 3	6100 D 2	
M300 B 1	M469 D 3	2008 B 1	2603 E 2	3300 B 2	6200 E 1	
M302 B 1	M470 B 1	2009 D 1	2604 E 2	3301 B 2	6501 D 3	
M303 B 2	M471 B 1	2010 B 1	2763 A 1	3302 B 2	6502 D 3	
M304 B 1	M472 E 2	2011 B 1	2764 A 1	3303 A 3	6600 B 1	
M305 C 2	M473 E 3	2012 B 1	2765 A 1	3304 B 2	6601 B 1	
M306 B 1	M474 D 3	2013 C 1	2766 A 1	3305 A 2	6602 B 1	


M501
M531M544
M527
M528
M521
M519
M509
M517
M502
M503
M104
M135
M545
M140
M518
M534
M533
M529
M530
M516
M520
M507
M505
M506
M144
M113
M540
M547
M514
M535
M143
M522
M524
M515
M511
M306
M513
M525
M121
M471
M105
M141
M142
M145
M146
M523
M508
M510
M131
M130
M139
M304
M536
M526
M138
M132
M119
M572
M107
M118
M470
M137
M136
M133
M106
M117
M466
M537
M303
M108
M103
M122
M120
M312
M302
M125
M147
M127
M465
M102
M124
M307
M467
M300
M532
M101
M114
M100
M126
M110
M423
M431
M123
M429
M111
M424
M134
M109
M430
M485
M112
M418
M428
M427
M426
M128
M116
M413
M417
M305
M115
M414
M422
M129
M425
M420
M409
M421
M415
M401
M408
M436
M406
M419
M407
M405
M402
M404
M403
M410
M416
M478
M441
M434
M411
M440
M412
M433
M445
M442
M455
M456
M487
M488
M489
M149
M211
M437
M446
M452
M490
M201
M213
M148
M204
M432
M215
M435
M444
M447
M457
M202
M469
M438
M477
M200
M212
M216
M206
M218
M439
M443
M205
M483
M458
M453
M450
M217
M207
M462
M461
M214
M464
M475
M474
M219
M481
M460
M448
M451
M220
M208
M482
M480
M473
M203
M468
M463
M210
M209
M472
M484
M454
M449
M479
M459
M308
M486

POS. 7302 SAA 7341

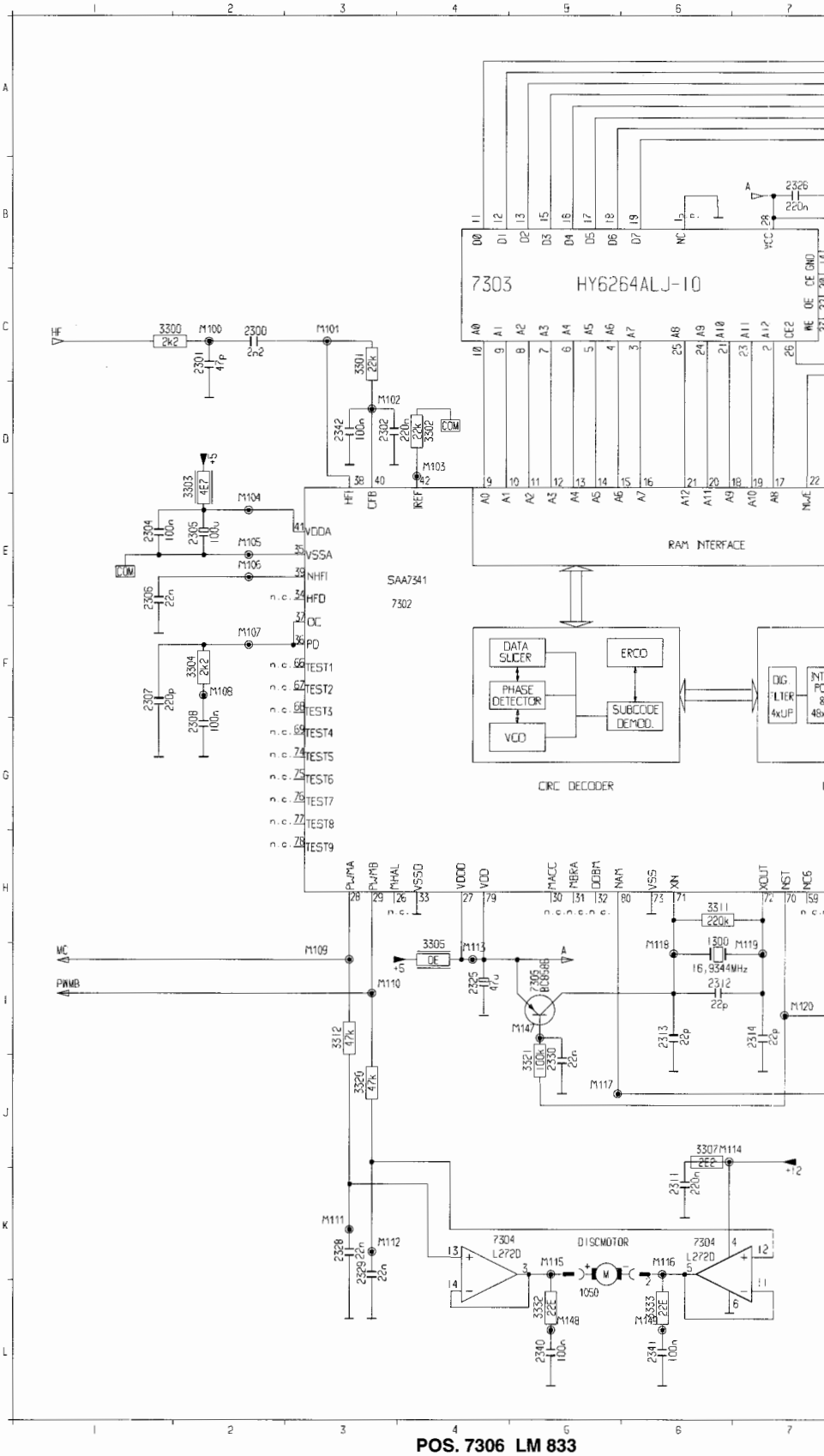
	1 - 22: DATA
M128	23: see QRA (P) / 40 mV (S,O)
M129	24: see QDA (P) / 0,0 V (S,O)
M130	25: see QCL (P) / 5,0 V (S,O)
	26: nc
M113	27: 5,0 V (P,S,O)
M109	28: see MC (P) / 0,0 V (S,O)
M110	29: 5,0 V (P,S,O)
	30 - 32: nc
	33: GND
	34: nc
	35: GND
M107	36: 2,8 V (P) / 130 mV (S,S-O) / 5,0 V (P-O)
M107	37: 2,8 V (P) / 130 mV (S,S-O) / 5,0 V (P-O)
M101	38: 2,5 V (P,S,O)
M106	39: 2,5 V (P,S,O)
M102	40: 2,5 V (P,S,O)
M104	41: 5,0 V (P,S,O)
M103	42: 2,2 V (P,S,O)
M133	43: 2,2 V (P,S,O)
	44 - 45: nc
M131	46: 4,4 V (P,S,O)
M123	47: 2,2 V (P) / 2,3 V (S,O)
	48: GND
M122	49: AF (P) / 0,0 V (S,O)
	50: GND
M132	51: 2,2 V (P,S,O)
M132	52: 2,2 V (P,S,O)
	53: GND
M125	54: AF (P) / 0,0 V (S,O)
	55: GND
M126	56: 2,2 V (P) / 2,3 V (S,O)
M131	57: 4,4 V (P,S,O)
	58 - 59: nc
M134	60: 2,2 V (P,S,O)
	61 - 64: nc
M121	65: 5,0 V (P,S,O)
	66 - 69: nc
M120	70: DEC.DOWN
M118	71: 2,2 V (P) / 5,0 V (S,O)
M119	72: 2,3 V (P) / 0,0 V (S,O)
	73: GND
	74 - 78: nc
M113	79: 5,0 V (P,S,O)
M117	80: 5,0 V (P,S,O)

POS. 7303 HY 6264 ALJ-10

	1: GND
	2 - 13: DATA
	14: GND
	15 - 19: DATA
	20: GND
	21: DATA
	22: GND
	23 - 25: DATA
	26: 5,0 V (P,S,O)
	27: DATA
	28: 5,0 V (P,S,O)

POS. 7304 L 272D

	1: nc
	2: nc
M115	3: 4,2 V (P) / 5,0 V (S,O)
M114	4: 12,0 V (P,S,O)
M116	5: 5,0 V (P,S,O)
	6: GND
	7: nc
	8: nc
	9: nc
	10: nc
M116	11: 5,0 V (P,S,O)
M112	12: 5,0 V (P,S,O)
M111	13: 4,2 V (P) / 5,0 V (S,O)
M115	14: 4,2 V (P) / 5,0 V (S,O)
	15: nc
	16: nc

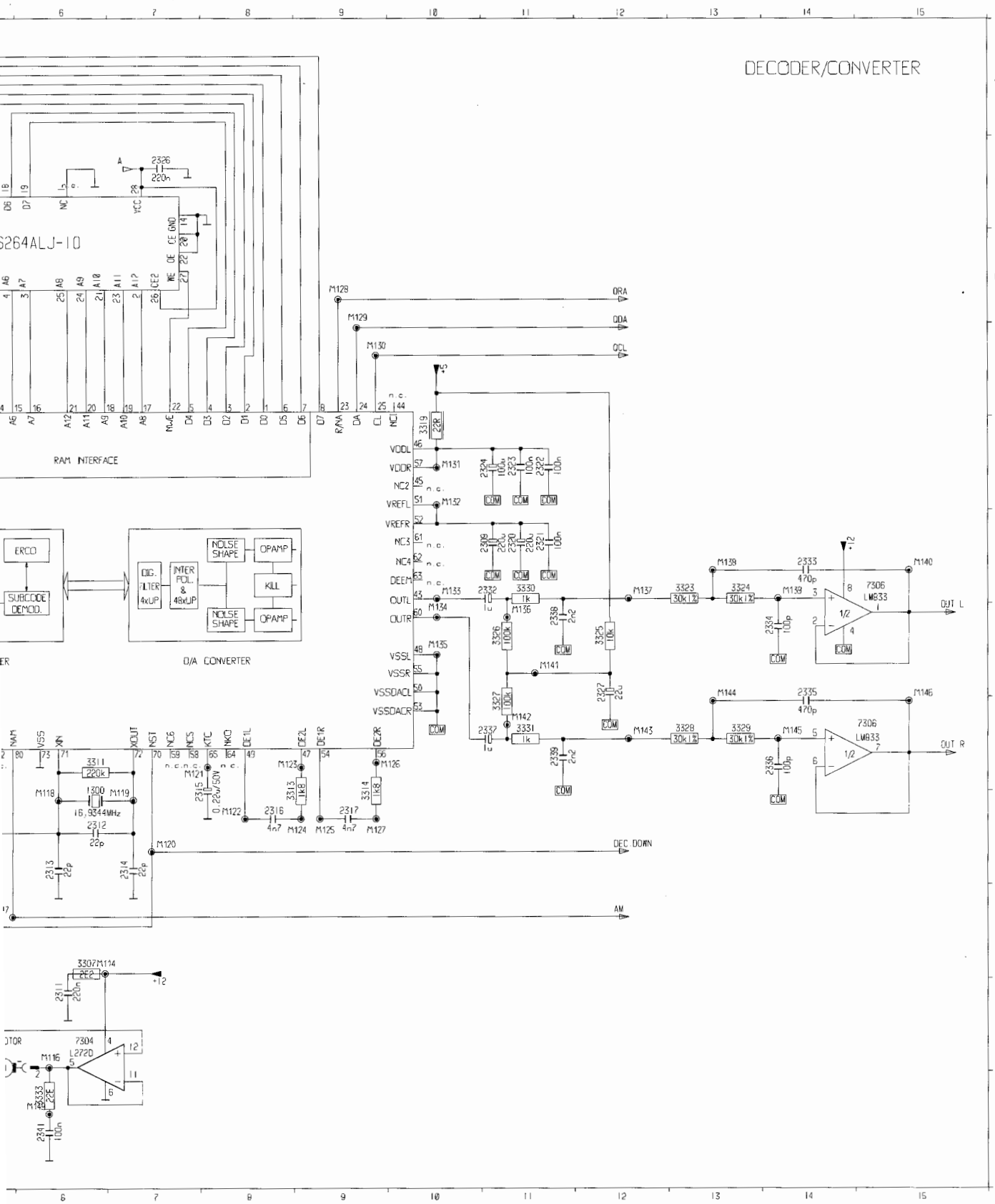


POS. 7305 BC 858

M147	B: 5,0 V (P) / 4,4 V (S,O)
M118	C: 2,2 V (P) / 5,0 V (S;O)
M113	E: 5,0 V (P,S,O)

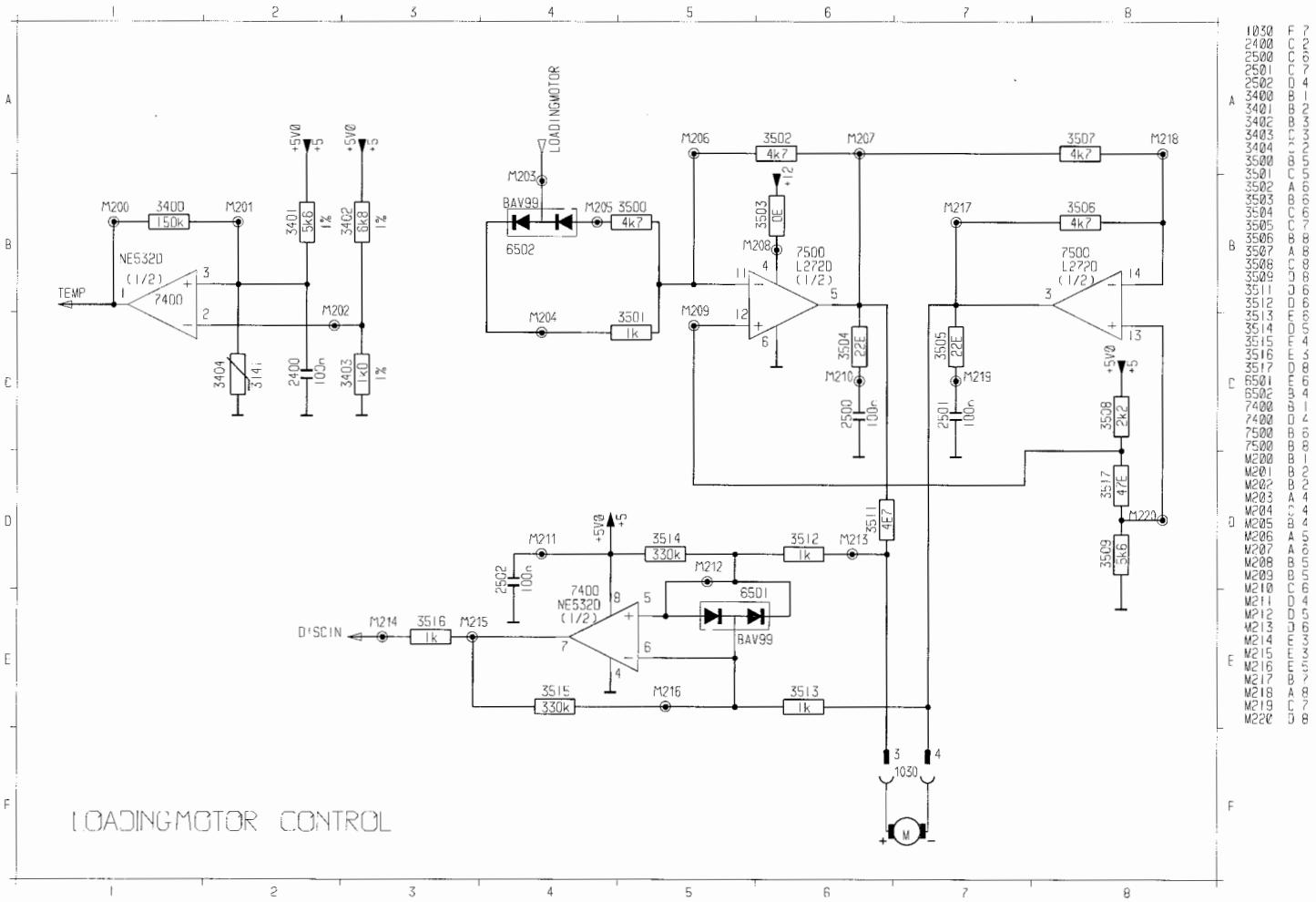
POS. 7306 LM 833

M140	1: AF 5,0 V (P) / 5,0 V (S,O)
M140	2: AF 5,0 V (P) / 5,0 V (S,O)
M139	3: AF 5,0 V (P) / 5,0 V (S,O)
	4: GND
M145	5: AF 5,0 V (P) / 5,0 V (S,O)
M146	6: AF 5,0 V (P) / 5,0 V (S,O)
M146	7: AF 5,0 V (P) / 5,0 V (S,O)
	8: 12,0 V



(P) / 5,0 V (S,O)
(P) / 5,0 V (S,O)
(P) / 5,0 V (S,O)

(P) / 5,0 V (S,O)
(P) / 5,0 V (S,O)
(P) / 5,0 V (S,O)


LOADINGMOTOR CONTROL
LOADINGMOTOR
TEMP
DISCIN
NE5320
(1/2)
7400
7500
L272D
(1/2)
BAV99
6502
6501
M200
M201
M202
M203
M204
M205
M206
M207
M208
M209
M210
M211
M212
M213
M214
M215
M216
M217
M218
M219
M220
3400
150k
3401
5k6
3402
6k8
3403
1k2
3404
3500
4k7
3501
1k
3502
4k7
3503
0E
3504
22E
3505
22E
3506
4k7
3507
4k7
3508
2k2
3509
5k6
3511
4E7
3512
1k
3513
1k
3514
330k
3515
330k
3516
1k
3517
47E
2400
100n
2500
100n
2501
100n
2502
100n
1030
+5V0
+5
+12

POS. 6501 BAV 99

M212	1: 3,6 V (P,S,O)
M212	2: 3,6 V (P,S,O)
M216	3: 3,5 V (P,S,O)

POS. 6502 BAV 99

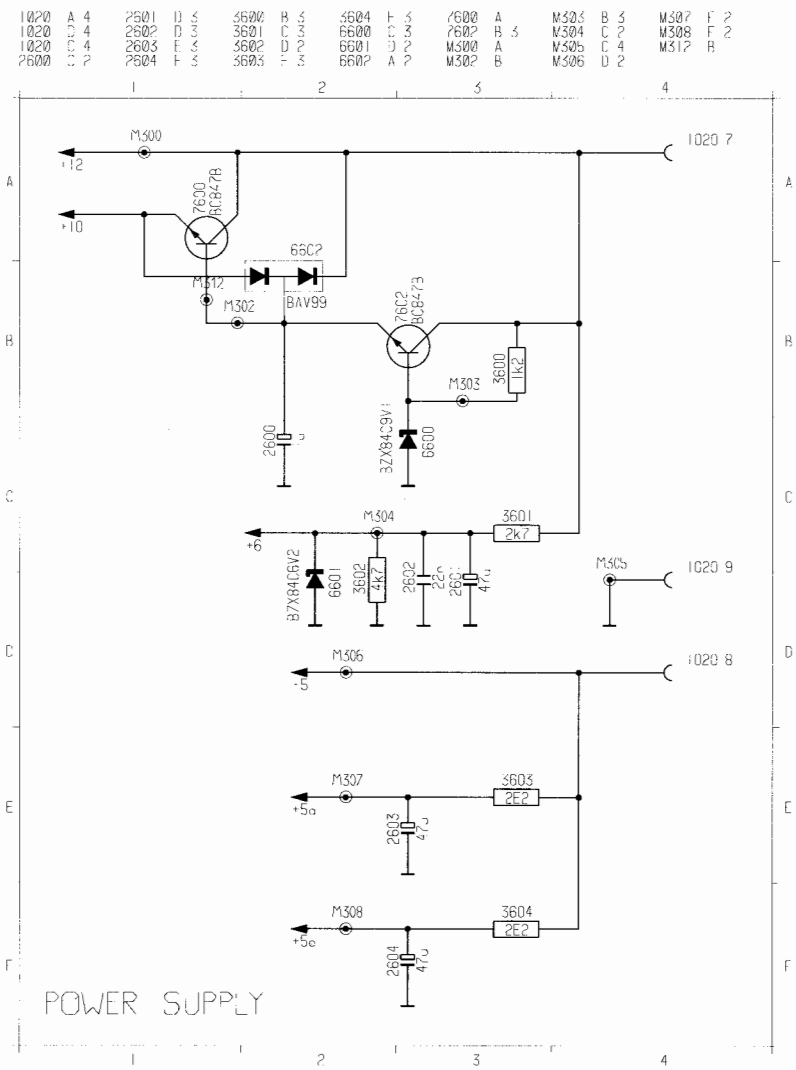
M204	1: 3,6 V (P,S,O) / 4,2 V (LOAD)
M205	2: 3,6 V (P,S,O) / 1,0 V (EJECT)
M203	3: 3,4 V (P,S,O) / 5,0 V (LOAD) / 0,0 V (EJECT)

POS. 7400 NE 532D

M200	1: 3,9 V (P,S,O) / 0,0 V (T 70$C)
M202	2: 0,6 V (P,S,O)
M201	3: 2,3 V (P,S,O)
	4: GND
M212	5: 3,6 V (P,S,O)
M216	6: 3,5 V (P,S,O)
M215	7: 3,8 V (P,S,O) / 0,0 V (LOAD)
M211	8: 5,0 V (P,S,O)

POS. 7500 L 272D

	1: nc
	2: nc
M217	3: 3,5 V (P,S,O) / 6,5 V (LOAD) / 0,5 V (EJECT)
M208	4: 12,0 V (P,S,O)
M207	5: 3,5 V (P,S,O) / 0,5 V (LOAD) / 6,5 V (EJECT)
	6: GND
	7: nc
	8: nc
	9: nc
	10: nc
M206	11: 3,6 V (P,S,O)
M209	12: 3,6 V (P,S,O)
M220	13: 3,6 V (P,S,O)
M218	14: 3,6 V (P,S,O)
	15: nc
	16: nc



POS. 6602 BAV 99

M300	1: 12,0 V (P,S,O)
	2: 8,4 V (P,S,O)
M302	3: 9,0 V (P,S,O)

POS. 7600 BC 847B

M302	B: 9,0 V (P,S,O)
M300	C: 12,0 V (P,S,O)
	E: 8,4 V (P,S,O)

POS. 7602 BC 847B

M303	B: 9,5 V (P,S,O)
M300	C: 12,0 V (P,S,O)
M302	E: 9,0 V (P,S,O)

POS. 7000 L 272D

	1: nc
	2: nc
M434	3: 2,6 V (P) / 2,4 V (S,O)
M437	4: 12,0 V (P,S,O)
M441	5: 2,4 V (P) / 2,6 V (S,O)
	6: GND
	7: nc
	8: nc
	9: nc
	10: nc
M438	11: 2,5 V (P,S,O)
M439	12: 2,5 V (P,S,O)
M435	13: 2,5 V (P,S,O)
M432	14: 2,5 V (P,S,O)
	15: nc
	16: nc

POS. 7001 TDA 8808T/C3

M426	1: 2,5 V (P) / 0,4 V (S,O)
	2: 4,7 V (P) / 5,0 V (S,O)
M427	3: 2,0 V (P) / 2,5 V (S,O)
M423	4: 2,2 V (P,S,O)
	5: not const. (P) / 0 V (S,O)
M417	6: 2,8 V (P) / 0,0 V (S,O)
M428	7: 0,6 V (P,S,O)
M424	8: 1,3 V (P,S,O)
M418	9: 0,0 V (P,S,O)
M422	10: 4,6 V (P) / 70 mV (S,O)
M413	11: 4,7 V (P) / 5,0 V (S,O)
M421	12: 5,0 V (P) / 0,0 V (S,O)
	13: GND
M429	14: 2,8 V (P) / 3,8 V (S,O)
M420	15: 2,5 V (P,S,O)
M419	16: 2,5 V (P,S,O)
M416	17: 3,4 V (P) / 0 V (S,O)
M415	18: 0,2 V (P) / 0,0 V (S,O)
M414	19: 1,7 V (P) / 4,2 V (S,O)
M409	20: 2,9 V (P) / 3,7 V (S,O)
M408	21: 2,9 V (P) / 3,7 V (S,O)
M404	22: 1,3 V (P) / 0,0 V (S,O)
M403	23: 1,3 V (P) / 0,0 V (S,O)
M405	24: 1,3 V (P) / 0,0 V (S,O)
M406	25: 1,3 V (P) / 0,0 V (S,O)
	26: 1,4 V (P,S,O)
	27: GND
M425	28: 3,2 V (P) / 3,6 V (S,O)

POS. 7003 BC 868

M412	B: 3,5 V (P) / 0 V (S,O)
	C: 3,8 V (P) / 4,7 V (S,O)
M411	E: 2,8 V (P) / 0 V (S,O)

POS. 7100 TCA 0372DP1

M478	1: 6,0 V (P,S,O)
M481	2: 12,0 V (P,S,O)
M480	3: 6,0 V (P,S,O)
	4: GND
M482	5: 6,0 V (P,S,O)
	6: 6,0 V (P,S,O)
	7: 6,0 V (P,S,O)
M464	8: 6,0 V (P,S,O)

POS. 7101 TDA 8809T/C2

	1: 4,7 V (P) / 5,0 V (S,O)
M459	2: sinus 2,5 V (P,S,O)
M460	3: sinus 2,5 V (P,S,O)
M462	4: 0,1 V (P,S,O)
M461	5: 1,3 V (P,S,O)
M444	6: 4,5 V (P,S,O)
M443	7: 2,3 V (P) / 5,0 V (S,O)
M448	8: 0,0 V (P,S,O)
M449	9: 5,0 V (P) / 0,0 V (S,O)
M450	10: 5,0 V (P,S,O)
M451	11: 5,0 V (P,S,O)
	12: 8,4 V (P,S,O)
	13: GND
	14: GND
M453	15: 6,0 V (P,S,O)
M454	16: 2,5 V (P,S,O)
M456	17: 2,5 V (P,S,O)
M455	18: 2,5 V (P,S,O)
M457	19: 2,5 V (P,S,O)
M458	20: 2,5 V (P,S,O)
M442	21: not const. 1,8...2,1 V (P) / 3,7 V (S,O)
M452	22: 1,2 V (P,S,O)
M445	23: not const. (P) / 0,6 V (S,O)
M445	24: not const. (P) / 0,6 V (S,O)
M446	25: 2,6 V (P) / 5,0 V (S,O)
M447	26: 2,0 V (P) / 4,3 V (S,O)
M409	27: 2,9 V (P) / 3,7 V (S,O)
M408	28: 2,9 V (P) / 3,7 V (S,O)

POS. 7102 BC 847B

M487	B: 1,8 V (P) / 3,5 V (S,O)
M488	C: 4,3 V (P) / 3,0 V (S,O)
M490	E: 3,0 V (P,S,O)

POS. 7103 BC 858B

M489	B: 4,3 V (P,S,O)
M486	C: 0,0 V (P) / 5,0 V (S,O)
	E: 5,0 V (P,S,O)

POS. 7200 BC 847B

M472	B: 20 mV (P,S,O)
M473	C: 5,0 V (P,S,O)
	E: GND

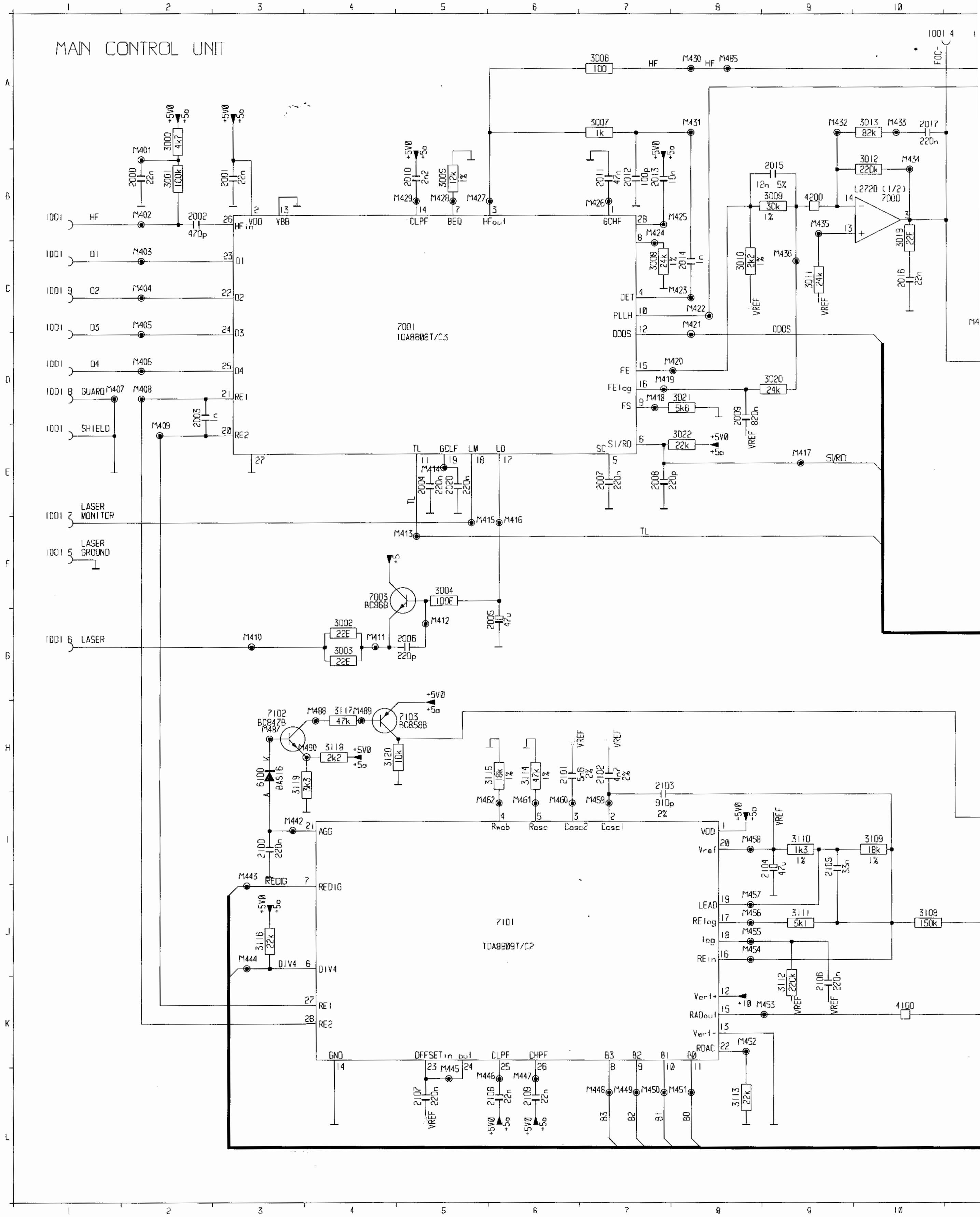
POS. 7201 MC 68HC05C8

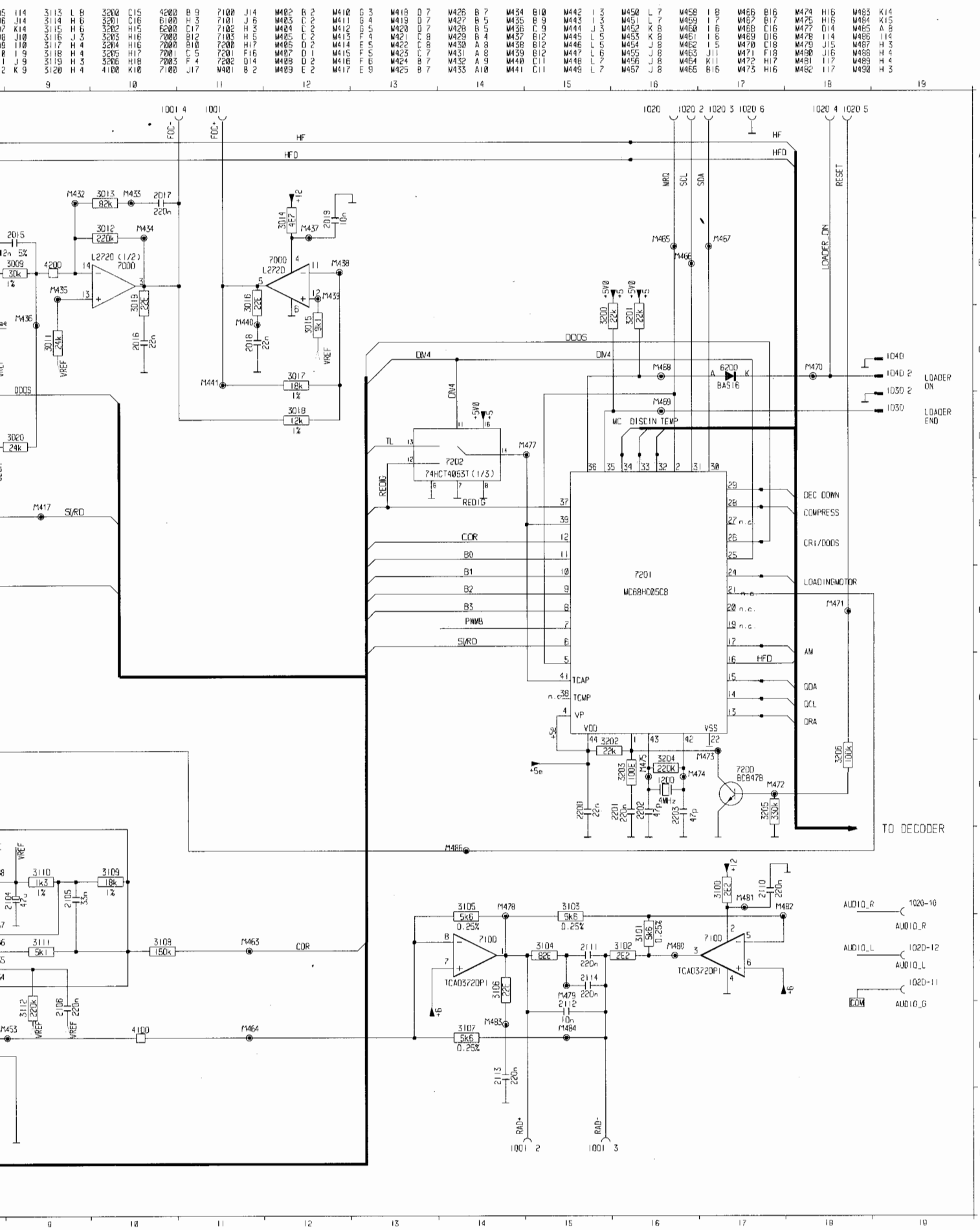
M473	1: 5,0 V (P,S,O)
M465	2: see MRQ (P) / 5,0 V (S,O)
	3: nc
	4: 5,0 V (P,S,O)
M465	5: see MRQ (P) / 5,0 V (S,O)
M417	6: 2,8 V (P) / 0,0 V (S,O)
M110	7: 5,0 V (P,S,O)
M448	8: 0,0 V (P,S,O)
M449	9: 5,0 V (P) / 0,0 V (S,O)
M450	10: 5,0 V (P,S,O)
M451	11: 5,0 V (P,S,O)
M463	12: 2,3 V (P,S,O)
M128	13: see QRA (P) / 40 mV (S,O)
M130	14: see QCL (P) / 5,0 V (S,O)
M129	15: see QDA (P) / 0,0 V (S,O)
M422	16: 3,9 V (P) / 70 mV (S,O)
M117	17: 5,0 V (P,S,O)
	18: nc
	19: nc
	20: nc
M486	21: 0,0 V (P) / 5,0 V (S,O)
	22: GND
	23: nc
M203	24: 3,4 V (P,S,O)
M444	25: 4,5 V (P,S,O)
M421	26: 5,0 V (P) / 0,0 V (S,O)
	27: nc
M532	28: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M120	29: 0,0 V (P) / 5,0 V (S,O)
M467	30: see SDA (P) / 5,0 V (S,O)
M466	31: see SCL (P) / 5,0 V (S,O)
M200	32: 3,9 V (P,S,O)
M214	33: 3,8 V (P,S,O) / 0,0 V (LOAD)
M109	34: see MC (P) / 70 mV (S,O)
M469	35: 0,0 V (P,S) / 5,0 V (O)
M468	36: 5,0 V (P,S,O)
M443	37: 2,3 V (P) / 5,0 V (S,O)
	38: nc
M477	39: 4,7 V (P) / 5,0 V (S,O)
	40: nc
M477	41: 4,7 V (P) / 5,0 V (S,O)
M474	42: 2,7 V (P,S,O)
M475	43: 2,4 V (P,S,O)
	44: 5,0 V (P,S,O)

1001	A11	1001	C1	1020	A17	1030	D19	2004	E5	2012	B7	2020	E5	2107	L5
1001	L14	1001	C1	1020	A18	1040	C19	2005	G6	2013	B7	2100	I3	2108	L6
1001	L15	1001	C1	1020	A18	1040	C19	2006	G5	2014	C8	2101	H6	2109	L6
1001	A10	1001	D1	1020	A17	1200	H16	2007	E7	2015	B9	2102	H7	2110	I17
1001	F1	1001	B1	1020	I19	2000	B2	2008	E7	2016	C10	2103	H7	2111	J15
1001	G1	1001	E1	1020	J19	2001	B3	2009	D8	2017	A10	2104	I9	2112	K15
1001	F1	1020	A16	1020	J19	2002	B2	2010	B5	2018	C11	2105	I9	2113	K14
1001	D1	1020	A16	1030	D19	2003	D2	2011	B7	2019	B12	2106	K9	2114	J15

2200	H15	3004	F5	3012	B10	3020	D9	3105	I14	3113	L8	3200	C15	4200	B9
2201	H16	3005	B5	3013	A10	3021	D8	3106	J14	3114	H6	3201	C16	6100	H3
2202	H16	3006	A7	3014	B12	3022	E8	3107	K14	3115	H6	3202	H15	6200	C17
2203	H15	3007	A7	3015	C12	3100	I17	3108	J10	3116	J3	3203	H16	7000	B12
3000	A2	3008	C7	3016	B11	3101	J16	3109	I10	3117	H4	3204	H16	7000	B10
3001	B2	3009	B9	3017	C12	3102	J16	3110	I9	3118	H4	3205	H17	7001	C5
3002	G4	3010	C8	3018	D12	3103	I15	3111	J9	3119	H3	3206	H18	7003	F4
3003	G4	3011	C9	3019	B10	3104	J15	3112	K9	3120	H4	4100	K10	7100	J17

MAIN CONTROL UNIT




FOC-
FOC+
HF
HFO
SCL
SDA
RESET
LOADER ON
LOADER END
DDDS
DIV4
REDIG
COR
B0
B1
B2
B3
PWMB
SVRD
TCAP
TCMP
VP
VDD
VSS
AM
HFD
QDA
QCL
QRA
DEC DOWN
COMPRESS
CR1/DDDS
LOADINGMOTOR
MC DISCIN TEMP
7201
MC68HC05C8
L2720 (1/2)
7000
L2720
74HCT4053T (1/3)
7202
BC847B
7200
BAS16
TCA0372DP1
VREF
TO DECODER
AUDIO_R
AUDIO_L
COM
AUDIO_G

POS. 7781 LM 833

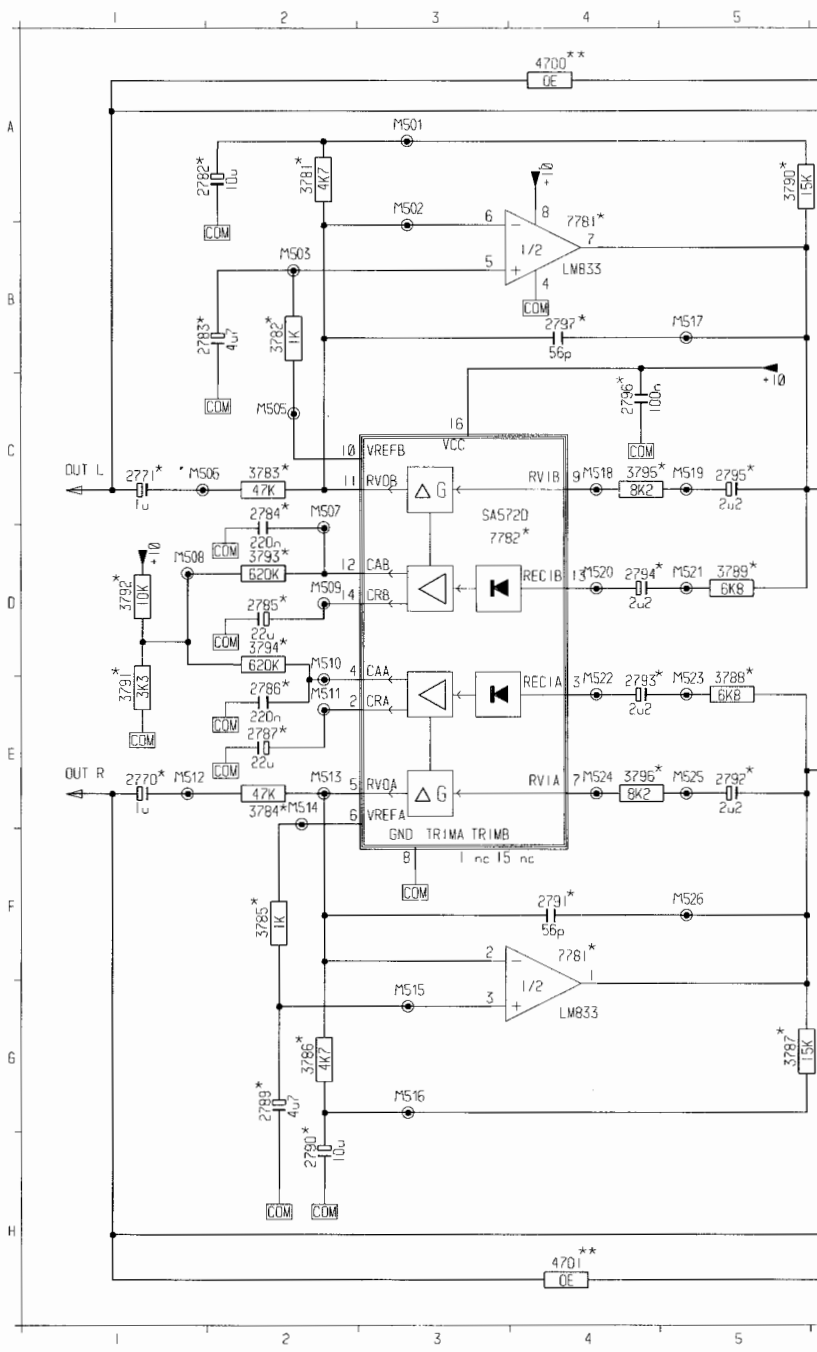
M526	1: 2,5 V (P,S,O)
M513	2: 2,5 V (P,S,O)
M515	3: 2,5 V (P,S,O)
	4: GND
M503	5: 2,5 V (P,S,O)
M502	6: 2,5 V (P,S,O)
M517	7: 2,5 V (P,S,O)
	8: 8,0 V (P,S,O)

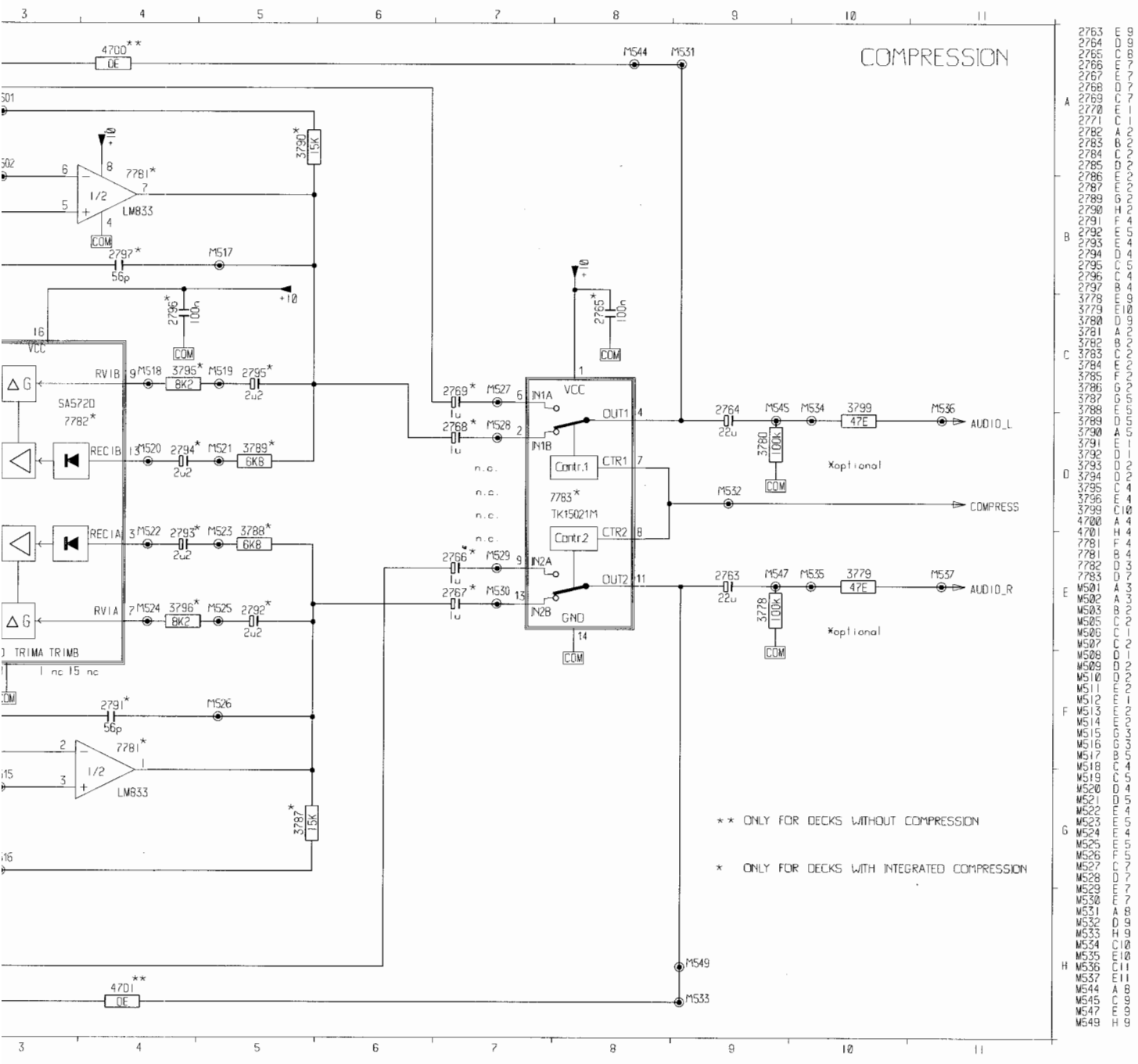
POS. 7782 SA 572D

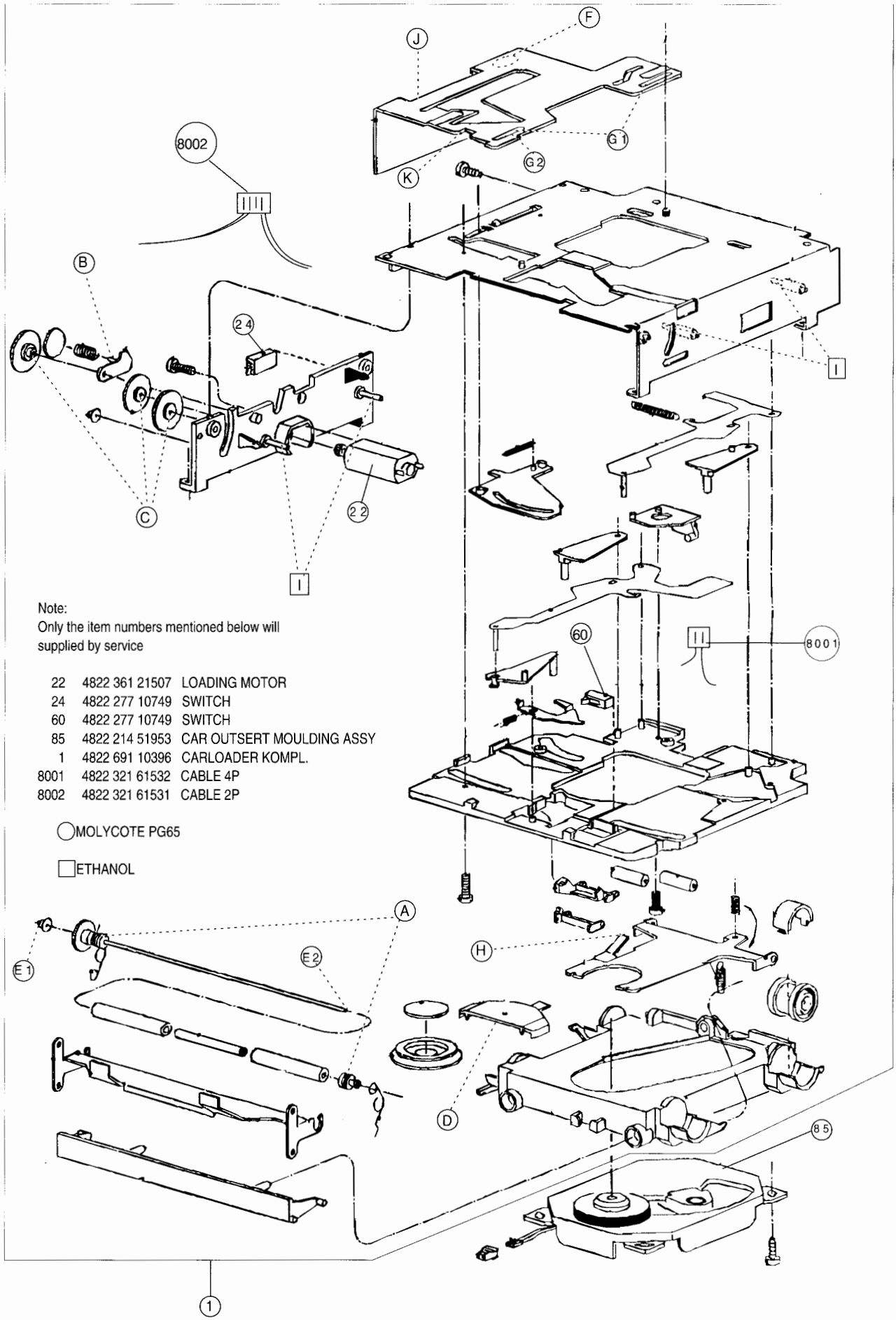
	1: nc
M511	2: AF 1,5 V (P) / 1,1 V (S,O)
M522	3: 2,5 V (P,S,O)
M510	4: AF 1,5 V (P) / 1,1 V (S,O)
M513	5: 2,5 V (P,S,O)
M514	6: 2,5 V (P,S,O)
M524	7: 2,5 V (P,S,O)
	8: GND
M518	9: 2,5 V (P,S,O)
M505	10: 2,5 V (P,S,O)
M502	11: 2,5 V (P,S,O)
M507	12: AF 1,5 V (P) / 1,1 V (S,O)
M520	13: 2,5 V
M509	14: AF 1,5 V (P) / 1,1 V (S,O)
	15: nc
	16: 8,0 V (P,S,O)

POS. 7783 TK 15021M

	1: 8,0 V (P,S,O)
M528	2: 4,0 V (P,S,O)
	3: nc
M531	4: 4,0 V (P,S,O)
	5: nc
M527	6: 4,0 V (P,S,O)
M532	7: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M532	8: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M529	9: 4,0 V (P,S,O)
	10: nc
M549	11: 4,0 V (P,S,O)
	12: nc
M530	13: 4,0 V (P,S,O)
	14: GND




COMPRESSION
4700**
OE
M544
M531
7781*
1/2
LM833
2797*
56p
M517
3790*
15K
+10
2796*
100n
COM
VCC
SA5720
7782*
RV1B
RE1B
RE1A
RV1A
M518
3795*
8K2
2u2
M519
2795*
M520
2794*
M521
3789*
6K8
M522
2793*
M523
3788*
M524
3796*
M525
2792*
TRIMA TRIMB
nc 15 nc
2791*
56p
M526
7781*
1/2
LM833
3787*
15K
4701**
OE
M549
M533
2769*
1u
M527
2768*
1u
M528
2766*
1u
M529
2767*
1u
M530
2765*
100n
IN1A
IN1B
IN2A
IN2B
OUT1
OUT2
GND
Contr.1
Contr.2
CTR1
CTR2
n.c.
7783*
TK15021M
2764
22u
M545
M534
3799
47E
M536
AUDIO_L
3780
100K
*optional
M532
COMPRESS
2763
22u
M547
M535
3779
47E
M537
AUDIO_R
3778
100K
*optional
** ONLY FOR DECKS WITHOUT COMPRESSION
* ONLY FOR DECKS WITH INTEGRATED COMPRESSION



Note:
Only the item numbers mentioned below will supplied by service

22	4822 361 21507	LOADING MOTOR
24	4822 277 10749	SWITCH
60	4822 277 10749	SWITCH
85	4822 214 51953	CAR OUTSERT MOULDING ASSY
1	4822 691 10396	CARLOADER KOMPL.
8001	4822 321 61532	CABLE 4P
8002	4822 321 61531	CABLE 2P

◯MOLYCOTE PG65

□ETHANOL

Mechanical partslist

1	4822 502 11715	M 2,5X5 PAN>STZNBK
2	4822 502 30541	2,2X(PT/PAN+STZN
8 1 1	4822 529 10277	SHOCK ABSORBER
9 1 1	4822 529 10277	SHOCK ABSORBER
10 1 1	4822 529 10277	SHOCK ABSORBER
11 1 1	4822 529 10277	SHOCK ABSORBER
22 1 1	4822 361 21507	MOTOR ASSY
24 1 1	4822 277 10749	SWITCH MUTE
34 1 1	4822 502 12001	M 2 X 4PANZNBK
35 1 1	4822 502 12001	M 2 X 4PANZNBK
36 1 1	4822 502 12001	M 2 X 4PANZNBK
37 1 1	4822 502 12001	M 2 X 4PANZNBK
38 1 1	4822 502 12001	M 2 X 4PANZNBK
39 1 1	4822 502 12001	M 2 X 4PANZNBK
60 1 1	4822 277 10749	SWITCH MUTE
77 1 1	4822 502 12001	M 2 X 4PANZNBK
8001	4822 321 61531	CABLE, 2P
3 8001	4822 267 30871	CONNECTOR 2P.
8002	4822 321 61532	CABLE, 4P
5 8002	4822 267 40672	DISC 4POL.
81 1	4822 691 30275	MECH UNITCDM-9
8 81 1	4822 701 10425	M 2 X10T/PANZNBK
9 81 1	4822 701 10425	M 2 X10T/PANZNBK

LUBRICATING INSTRUCTIONS

Car loader

* A) The roller spindle (pos 28) : 2 x on diameter 2,5 mm.
(On the bearing points)

* B) The spindle of the swing bracke (all lenght).

* C) The spindles of the gearwheels (3 x all lenght).

* D) The pivot bearing of the pivot cover (pos 69)
(in the middle of the closing plate)

* E) E1The roller spindle on the top on diameter 1,2 mm
E2The metal pin on the motorplate assy (pos 15)
(Diameter 1,2 mm).

* F) The sliding surface on the top control bracket (pos 73)
in which the plastic pen of the motorplate assy is guiding.

* G) G1The guiding grooves (2 x) on the control bracket in
which the guide pins of the chassis are guiding.
G2The tag on the control bracket which actuate the switch brackets.

* H) The tag on the pressure plate (pos 66).

\# I) The suspension pins (2 x) of the chassis.
The suspension pins (2 x) of the motorplate assy.

* J) The teeth of the control bracket.

* K) On the control bracket the sliding surface of the detection bracket.

* MOLYCOTE PG 65/Q5-7565 code nr. 1304 501 0841

\# ETHANOL code nr. 1322 506 35201

Capacitors

2000	5322 122 32654	22NF10%X7R 63V
2001	5322 122 32654	22NF10%X7R 63V
2002	5322 122 32268	470PF 10% 50V
2003	4822 122 31746	1000PF 2%NP0 63V
2004	4822 122 32916	220NF10%X7R 63V
2005	4822 124 22646	47UF20% 16V
2006	4822 122 33584	220PF 5%
2007	4822 122 32916	220NF10%X7R 63V
2008	4822 122 33584	220PF 5%
2009	4822 121 51436	820NF10% 63V
2010	5322 122 33816	2200PF 2%NP0 63V
2011	4822 122 32542	47NF10%X7R 63V
2012	5322 122 32531	100PF 5%NP0 50V
2013	4822 122 33177	10NF 20% X7R 50V
2014	4822 122 31746	1000PF 2%NP0 63V
2015	4822 126 12104	12NF 5%
2016	5322 122 32654	22NF10%X7R 63V
2017	4822 126 12106	220NF 5%
2018	5322 122 32654	22NF10%X7R 63V
2019	4822 122 33177	10NF 20% X7R 50V
2020	4822 122 32916	220NF10%X7R 63V
2100	4822 122 32916	220NF10%X7R 63V
2101	4822 121 51361	5,6NF 2% 160V
2102	4822 121 51051	4.7NF 1% 160V
2103	4822 121 51262	910PF 1% 400V
2104	4822 124 22646	47UF20% 16V
2105	4822 126 12105	33NF 5%
2106	4822 122 32916	220NF10%X7R 63V
2107	4822 122 32916	220NF10%X7R 63V
2108	5322 122 32654	22NF10%X7R 63V
2109	5322 122 32654	22NF10%X7R 63V
2110	4822 122 32916	220NF10%X7R 63V
2111	4822 122 32916	220NF10%X7R 63V
2112	4822 122 33177	10NF 20% X7R 50V
2113	4822 122 32916	220NF10%X7R 63V
2114	4822 122 32916	220NF10%X7R 63V
2200	5322 122 32654	22NF10%X7R 63V
2201	4822 122 32916	220NF10%X7R 63V
2202	5322 122 32452	47PF 5%NP0 63V
2203	5322 122 32452	47PF 5%NP0 63V
2300	5322 122 33816	2200PF 2%NP0 63V
2301	5322 122 32452	47PF 5%NP0 63V
2302	4822 122 32916	220NF10%X7R 63V
2304	4822 122 33496	100NF10%X7R 63V
2305	4822 124 80453	100UF 20% 10V
2306	5322 122 32654	22NF10%X7R 63V
2307	4822 122 33584	220PF 5%
2308	4822 122 33496	100NF10%X7R 63V
2309	4822 124 23582	220UF 20% 10V
2311	4822 122 32916	220NF10%X7R 63V
2312	5322 122 32658	22PF 5% 50V
2313	5322 122 32658	22PF 5% 50V
2314	5322 122 32658	22PF 5% 50V
2315	4822 124 80109	0.22UF20% 50V
2316	5322 126 10223	4,7NF 5% XR7
2317	2222 580 16523	4,7NF 5% XR7
2320	4822 124 23582	220UF 20% 10V
2321	4822 122 33496	100NF10%X7R 63V
2322	4822 122 33496	100NF10%X7R 63V
2323	4822 122 33496	100NF10%X7R 63V
2324	4822 124 80453	100UF 20% 10V
2325	4822 124 22646	47UF20% 16V
2326	4822 122 32916	220NF10%X7R 63V
2327	4822 124 23279	22UF20% 16V
2328	5322 122 32654	22NF10%X7R 63V
2329	5322 122 32654	22NF10%X7R 63V
2331	4822 122 32916	220NF10%X7R 63V
2332	4822 124 11353	1UF 20% 16V
2333	5322 122 32268	470PF 10% 50V
2334	5322 122 32531	100PF 5%NP0 50V
2335	5322 122 32268	470PF 10% 50V
2336	5322 122 32531	100PF 5%NP0 50V
2337	4822 124 11353	1UF 20% 16V
2338	4822 122 33175	2,2NF 20% X7R 50V
2339	4822 122 33175	2,2NF 20% X7R 50V
2340	4822 122 33496	100NF10%X7R 63V
2341	4822 122 33496	100NF10%X7R 63V
2342	4822 122 33496	100NF10%X7R 63V
2400	4822 122 33496	100NF10%X7R 63V
2500	4822 122 33496	100NF10%X7R 63V
2501	4822 122 33496	100NF10%X7R 63V
2502	4822 122 33496	100NF10%X7R 63V
2600	4822 124 23282	1UF20% 50V
2601	4822 124 22646	47UF20% 16V
2602	5322 122 32654	22NF10%X7R 63V
2603	4822 124 22646	47UF20% 16V
2604	4822 124 22646	47UF20% 16V
2763	4822 124 23279	22UF20% 16V
2764	4822 124 23279	22UF20% 16V

Resistors

3000	4822 051 20472	4K70 5% 0,1W
3001	4822 051 20104	100K00 5% 0,1W
3002	4822 051 20229	22R00 5% 0,1W
3003	4822 051 20229	22R00 5% 0,1W
3004	4822 051 20101	100R00 5% 0,1W
3005	4822 051 51203	12K00 1% 0,125W
3006	4822 051 20101	100R00 5% 0,1W
3007	4822 051 20102	1K00 5% 0,1W
3008	4822 051 52403	24K00 1% 0,125W
3009	4822 051 53003	30K00 1% 0,125W
3010	4822 051 10222	2K20 2% 0,25W
3011	4822 051 20243	24K00 5% 0,1W
3012	4822 051 20224	220K00 5% 0,1W
3013	4822 051 20823	82K00 5% 0,1W
3014	4822 051 20478	4R70 5% 0,1W
3015	4822 051 20912	9K10 5% 0,1W
3016	4822 051 20229	22R00 5% 0,1W
3017	4822 051 51803	18K00 1% 0,125W
3018	4822 051 51203	12K00 1% 0,125W
3019	4822 051 20229	22R00 5% 0,1W
3020	4822 051 20243	24K00 5% 0,1W
3021	4822 051 20562	5K60 5% 0,1W
3022	4822 051 20223	22K00 5% 0,1W
3100	4822 051 10228	2R20 5% 0,25W
3101	4822 116 83634	5K6 0,25% 0.25W
3102	4822 050 22208	2R20 1% 0,6W
3103	4822 116 83634	5K6 0,25% 0.25W
3104	4822 051 10829	82R00 2% 0,25W
3105	4822 116 83634	5K6 0,25% 0.25W
3106	4822 051 20229	22R00 5% 0,1W
3107	4822 116 83634	5K6 0,25% 0.25W
3108	4822 051 20154	150K00 5% 0,1W
3109	4822 051 51803	18K00 1% 0,125W
3110	4822 051 51302	1K30 1% 0,125W
3111	4822 051 20512	5K10 5% 0,1W
3112	4822 051 20224	220K00 5% 0,1W
3113	4822 051 20223	22K00 5% 0,1W
3114	4822 051 54703	47K00 1% 0,125W
3115	4822 051 51803	18K00 1% 0,125W
3116	4822 051 20223	22K00 5% 0,1W
3117	4822 051 20473	47K00 5% 0,1W
3118	4822 051 20222	2K20 5% 0,1W
3119	4822 051 20332	3K30 5% 0,1W
3120	4822 051 20103	10K00 5% 0,1W
3200	4822 051 20223	22K00 5% 0,1W
3201	4822 051 20223	22K00 5% 0,1W

3202	4822 051 20223	22K00 5% 0,1W
3203	4822 051 20101	100R00 5% 0,1W
3204	4822 051 20224	220K00 5% 0,1W
3205	4822 051 20334	330K00 5% 0,1W
3206	4822 051 20104	100K00 5% 0,1W
3300	4822 051 20222	2K20 5% 0,1W
3301	4822 051 20223	22K00 5% 0,1W
3302	4822 051 20223	22K00 5% 0,1W
3303	4822 051 20478	4R70 5% 0,1W
3304	4822 051 20222	2K20 5% 0,1W
3305	4822 051 20008	0R00 5% 0,1W
3307	4822 051 10228	2R20 5% 0,25W
3311	4822 051 20224	220K00 5% 0,1W
3312	4822 051 20473	47K00 5% 0,1W
3313	4822 051 20182	1K80 5% 0,1W
3314	4822 051 20182	1K80 5% 0,1W
3319	4822 051 20229	22R00 5% 0,1W
3320	4822 051 20473	47K00 5% 0,1W
3321	4822 051 20104	100K00 5% 0,1W
3323	4822 051 53003	30K00 1% 0,125W
3324	4822 051 53003	30K00 1% 0,125W
3325	4822 051 20103	10K00 5% 0,1W
3326	4822 051 20104	100K00 5% 0,1W
3327	4822 051 20104	100K00 5% 0,1W
3328	4822 051 53003	30K00 1% 0,125W
3329	4822 051 53003	30K00 1% 0,125W
3330	4822 051 20102	1K00 5% 0,1W
3331	4822 051 20102	1K00 5% 0,1W
3332	4822 051 20229	22R00 5% 0,1W
3333	4822 051 20229	22R00 5% 0,1W
3400	4822 051 20154	150K00 5% 0,1W
3401	4822 051 10562	5K60 2% 0,25W
3402	4822 051 10682	6K80 2% 0,25W
3403	4822 051 10102	1K00 2% 0,25W
3404	4822 116 30426	4K7 3% 0.1W
3500	4822 051 20472	4K70 5% 0,1W
3501	4822 051 20102	1K00 5% 0,1W
3502	4822 051 20472	4K70 5% 0,1W
3503	4822 051 10008	0R00 5% 0,25W
3504	4822 051 20229	22R00 5% 0,1W
3505	4822 051 20229	22R00 5% 0,1W
3506	4822 051 20472	4K70 5% 0,1W
3507	4822 051 20472	4K70 5% 0,1W
3508	4822 051 20222	2K20 5% 0,1W
3509	4822 051 20562	5K60 5% 0,1W
3511	4822 051 20478	4R70 5% 0,1W
3512	4822 051 20102	1K00 5% 0,1W
3513	4822 051 20102	1K00 5% 0,1W
3514	4822 051 20334	330K00 5% 0,1W
3515	4822 051 20334	330K00 5% 0,1W
3516	4822 051 20102	1K00 5% 0,1W
3517	4822 051 20479	47R00 5% 0,1W
3600	4822 051 20122	1K20 5% 0,1W
3601	4822 051 20272	2K70 5% 0,1W
3602	4822 051 20472	4K70 5% 0,1W
3603	4822 051 10228	2R20 5% 0,25W
3604	4822 051 10228	2R20 5% 0,25W
3778	4822 051 20104	100K00 5% 0,1W
3779	4822 051 20479	47R00 5% 0,1W
3780	4822 051 20104	100K00 5% 0,1W
3799	4822 051 20479	47R00 5% 0,1W
4100	4822 051 20008	0R00 5% 0,1W
4200	4822 051 20008	0R00 5% 0,1W
4700	4822 051 20008	0R00 5% 0,1W
4701	4822 051 20008	0R00 5% 0,1W

Diods

5100	5322 130 31928	BAS16
5200	5322 130 31928	BAS16
5501	5322 130 34337	BAV99
6502	5322 130 34337	BAV99
6600	4822 130 33996	BZX84-C9V1
6601	5322 130 33671	BZX84-C6V2
6602	5322 130 34337	BAV99

IC's

7000	4822 209 31131	L272D
7001	4822 209 73234	TDA8808T/C3
7003	5322 130 61569	BC868
7100	4822 209 62059	TCA0372DP1
7101	4822 209 31973	TDA8809T/C2/S1/13
7102	4822 130 60511	BC847B
7103	5322 130 41983	BC858B
7200	4822 130 60511	BC847B
7201	4822 209 32153	MC68HC705C8CFN-CDM9V06
7202	5322 209 14481	HEF4053BT
7302	4822 209 30388	SAA7341GP
7303	4822 209 31553	HY6264ALJ-10
7304	4822 209 31131	L272D
7305	5322 130 41983	BC858B
7306	4822 209 30095	LM833D
7400	4822 209 30510	LM 2904D
7500	4822 209 31131	L272D
7600	4822 130 60511	BC847B
7602	4822 130 60511	BC847B

Miscellaneous

1001	4822 267 50838	14 PIN
1001	4822 214 52063	PCB CDM9-MOD-4
1020	4822 265 41209	12P
1030	4822 265 30957	4P
1040	4822 265 30956	2P
1050	4822 265 30958	2P
1200	4822 242 70831	CSA 4,00MG
1300	4822 242 81414	16,934MHZ
1002	4822 691 10366	
1 1002	4822 691 10396	CARLOADER
1003	4822 267 51146	12 PIN GOLD
2001	4822 122 33496	100NF 10% XR7 63V