

Service
Service
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00B/00R/05R
CD584/00R

Remote control is available under
code number 4822 218 20782



Service Manual

COMPACT
disc
DIGITAL AUDIO

CONTENTS

1. Contents and control buttons
1. Technical specifications
2. Servicing hints, loading and cabinet parts
3. Electrical measurements and adjustments
4. Blockdiagram, panel data and parts list of the main panel
5. Control and display, wiring diagram and electrical parts list
6. Changes

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambio identici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

CLASS 1
LASER PRODUCT

3122 110 03420

Documentation Technique Service Dokumentation Documentazione di Servizio Huolto-Ohje Manual de Servicio Manual de Servicio



Subject to modification

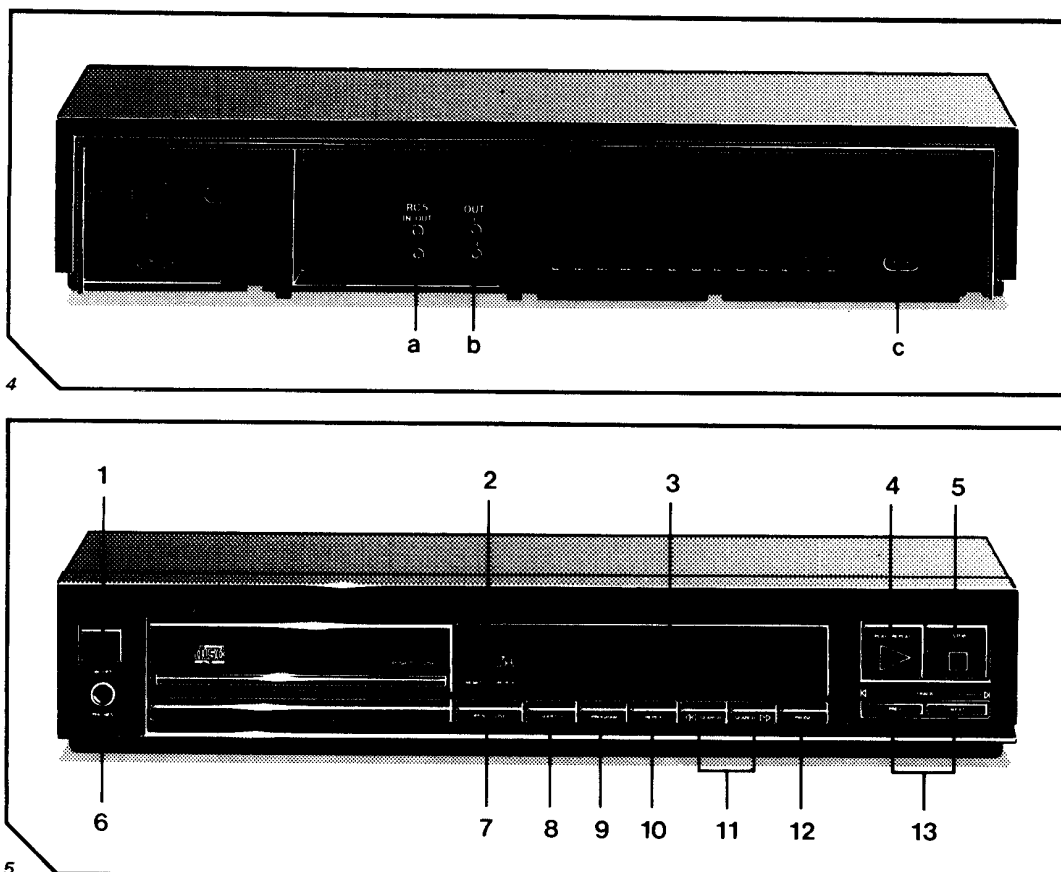
4822 725 22124

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PHILIPS

Published by
Service Consumer Electronics



43 781 B11

- 1 ON/OFF KEY** key
For switching on and off.
- 2 REMOTE CONTROL** eye
Receives the signals from the remote control.
- 3 DISPLAY**
Informs you about the functioning of the player.
Displays details from the disc contents list.
- 4 PLAY/REPLAY** key
For starting play (PLAY).
For returning to the beginning of a track (REPLAY).
- 5 STOP** key
For stopping play.
For erasing a program.
- 6 PHONES** socket
For connection of headphones.
- 7 OPEN/CLOSE** key
For opening and closing the disc tray.
- 8 SHUFFLE** key
For playing all tracks on a disc in random order.
- 9 PROGRAM** key
For storing track numbers in a program.
For erasing track numbers from a program.
For checking the program.
- 10 REPEAT** key
For repeating a disc or a program.
- 11 << SEARCH** and **SEARCH >>** keys
For fast search to a particular passage during play.
('<<' backwards, '>>' forwards.)
- 12 PAUSE** key
For briefly interrupting play.
For holding play at the start of a disc, track or passage.
- 13 PREV TRACK NEXT** keys
for selecting a previous or a later track during play.
For selecting the track number you want play to begin with.
For selecting track numbers when compiling a program.
('PREV' from high to low, 'NEXT' from low to high.)
- a RC/ IN/OUT:** for a remote control system.
Use this connection for:
- Connecting up the equipment when you are incorporating the player in a HiFi system with its own remote control system.
 - Connecting the remote control receiver EM 2200, available as an accessory, if the siting of the player prevents its REMOTE CONTROL-eye from receiving the signals from the remote control directly.
- b OUT L R:** for the connecting cable to the amplifier.

TECHNICAL DATA**General**

1. Mains voltage : 110, 127, 220, 240 Volt (+/- 10%)
2. Mains frequency : 50-60 Hz
3. Mains voltage selection : By soldering (220/240 Volt-version)
By changing transformer (110/127 Volt-version)
4. Power consumption mains, operated : 15 W

External

The apparatus is prepared for remote control by means of a 2 cinch connector.

Specification: V-in Low: from -2,0 V to +1,6 V
V-in High: from +3 V to +7,5 V
R-in: from 47 k to 68 k

Line output

1. Number of channels : 2
2. Output voltage : 2 Vrms +/- 0,2 dB
3. Unbalance Left-Right : max. +/- 0,2 dB
4. Output resistance : 200 Ohm
5. Nominal load impedance : 100 kOhm // 100 pF
6. Amplitude linearity : max. +/- 0,1 dB from 20 Hz to 20 kHz into nominal load
7. Phase non-linearity : max. +/- 1,0° from 20 Hz to 20 kHz into nominal load
8. Signal to noise ratio : min 96 dB from 20 Hz to 20 kHz into nominal load
9. Dynamic range : min 90 dB from 20 Hz to 20 kHz into nominal load
10. Total harmonic distortion + noise : min -90 dB from 20 Hz to 20 kHz into nominal load
11. Intermodulation distortion : max. 0.003% (min -90 dB) from 20 Hz to 20 kHz into nominal load
12. Out-band attenuation : min 60 dB above 24,1 kHz from 20 Hz to 20 kHz into nominal load
13. Channel separation : min 93 dB from 20 Hz to 20 kHz into nominal load
14. Muting during random access : min 90 dB from 20 Hz to 20 kHz into nominal load
15. Automatic switched de-emphasis with time constants 15/50 us

Headphone (fixed)

1. Output voltage : Max. 2 Vrms +/- 1 dB
2. Unbalance Left-right : Max. +/- 0,5 dB
3. Output resistance : 150 Ohm
4. Load impedance range : 32 Ohm tp 600 kOhm
5. Output power : Max. 30 mW into 32 Ohm load
Max. 50 mW into 150 Ohm load
Max. 30 mW into 600 Ohm load
6. Amplitude linearity : Max. +/- 0,1 dB from 20 Hz to 20 kHz into 600 Ohm
7. Phase non-linearity : Max. +/-° from 20 Hz to 20 kHz into 600 Ohm
8. Signal to noise ratio : Min 90 dB from 20 Hz to 20 kHz into 600 Ohm
9. Dynamic range : Min 90 dB from 20 Hz to 20 kHz into 600 Ohm
10. Total harmonic distortion + noise : Max 0,005% (min-86 dB) from 20 Hz to kHz
11. Intermodulation distortion : max 0,005% (min-86 dB) from 20 Hz to 20 kHz
12. Channel separation : min 65 dB from 20 Hz to 20 kHz into 600 Ohm

Dimensions and weight

1. Place and height of feet acc. to Philips specification
2. Apparatus tray closed WxDxM : 420 x 288 x 85 mm
3. Apparatus tray open WxDxM : 420 x 423 x 85 mm
4. Weight 3,5 kg

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet muni d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

**NL WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SERVICING HINTS

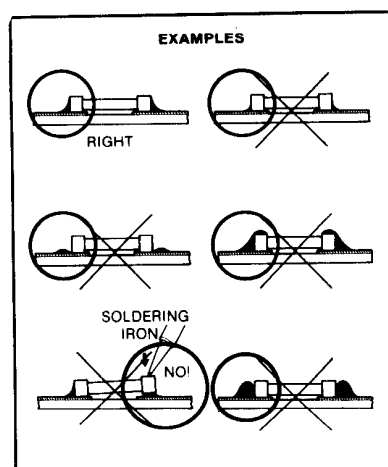
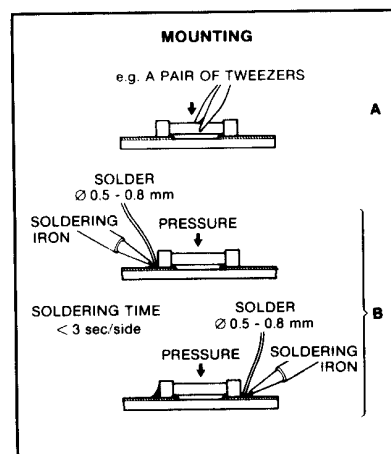
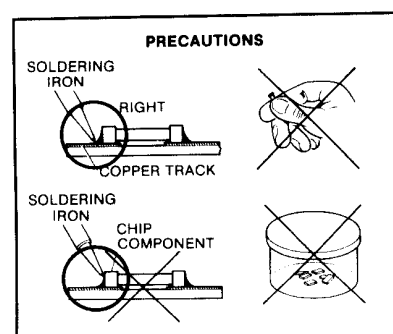
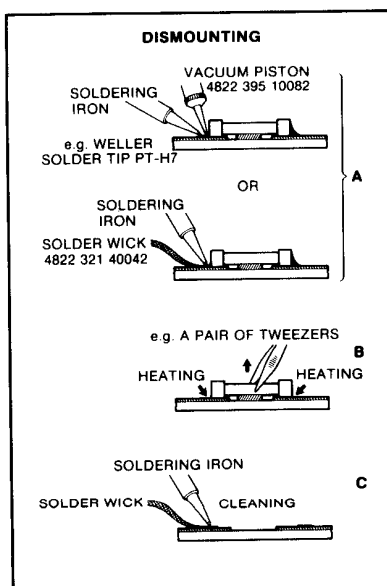
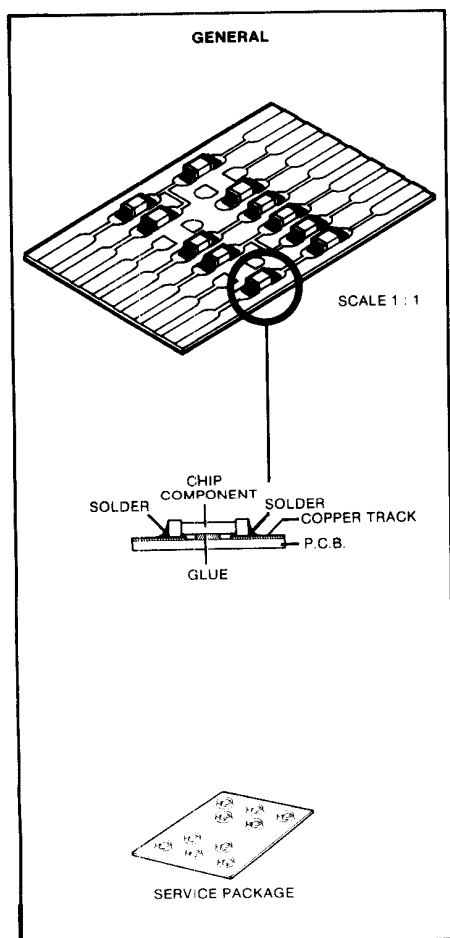
In the set chip components have been applied.
For disassembly and assembly of chip components see the figure below.

The disc should always rest properly on the turntable.
To achieve this a disc hold-down has been mounted in a bracket of the tray mechanism.
If the tray mechanism has to be disassembled for servicing, one or more than one separate disc hold-downs should be used.
The set can function normally then.
Code number of the disc hold-down is 4822 462 50383.

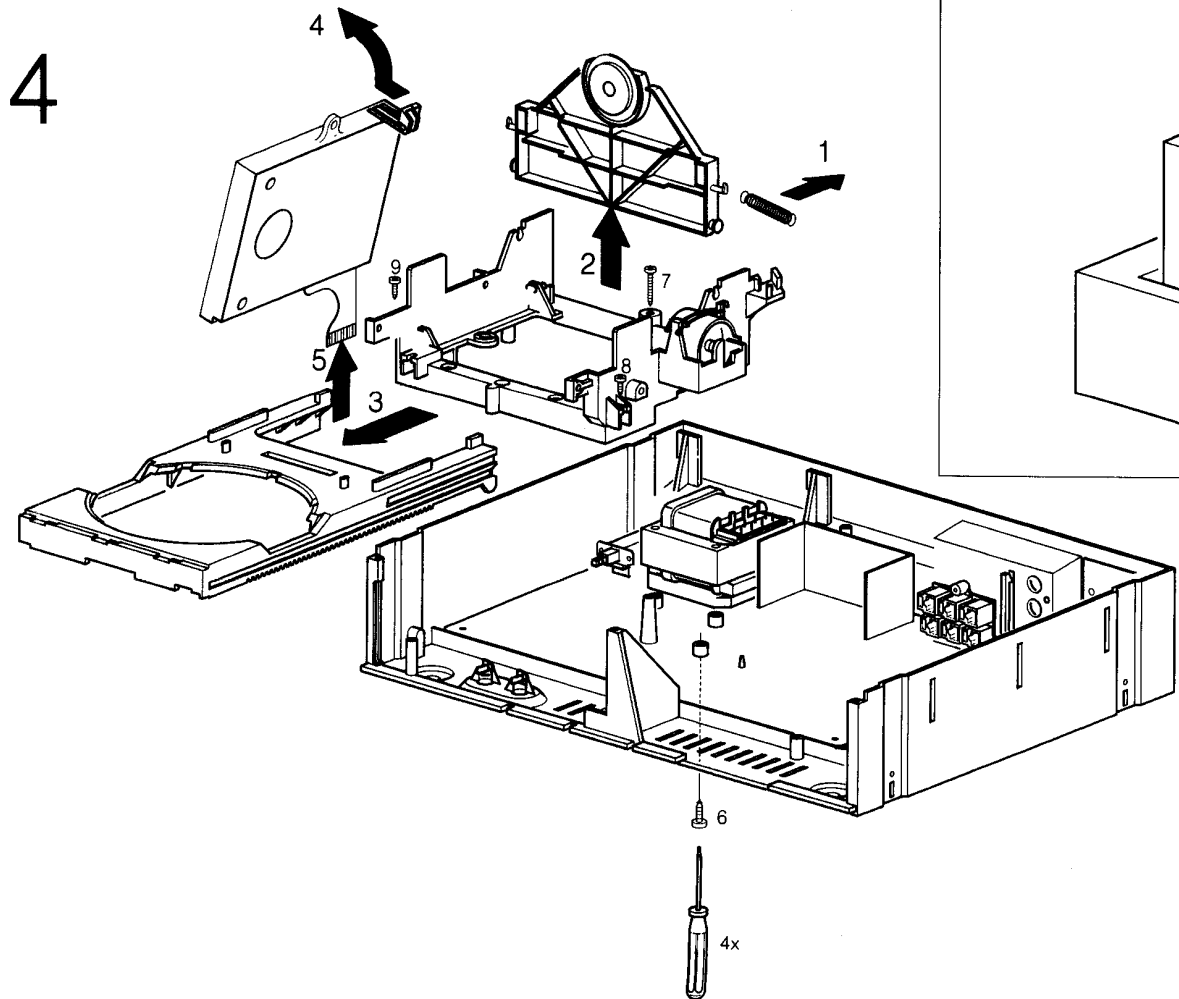
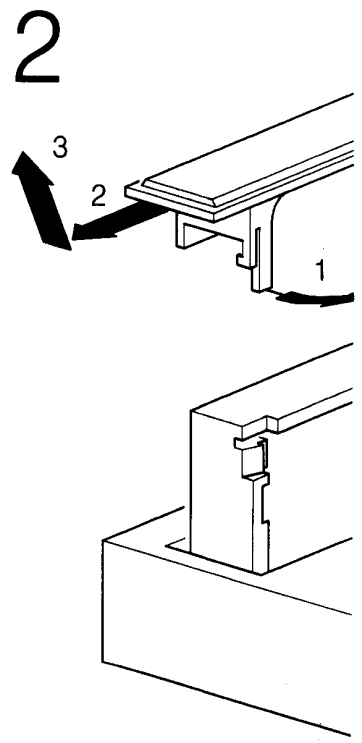
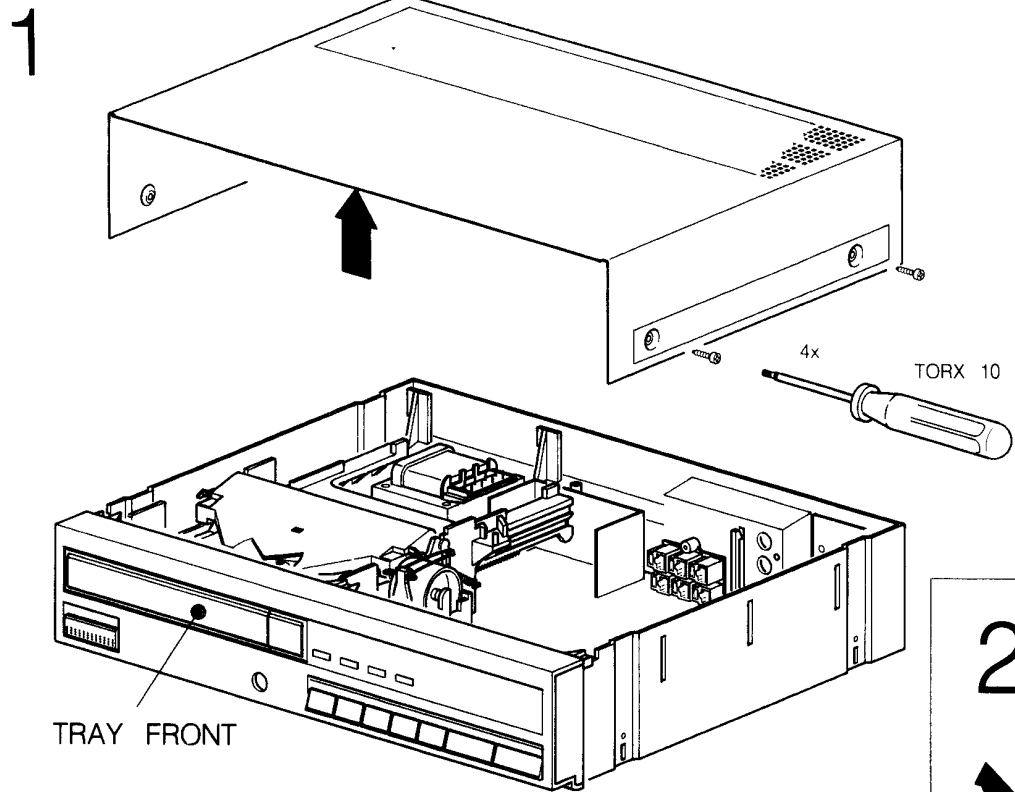
When the tray mechanism has been disassembled the tray switch must be activated in order to ensure normal operation.

SERVICE TOOLS

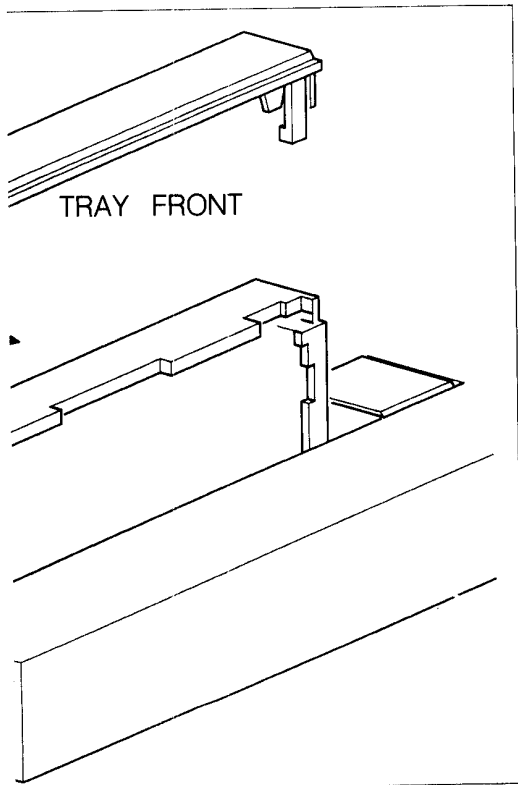
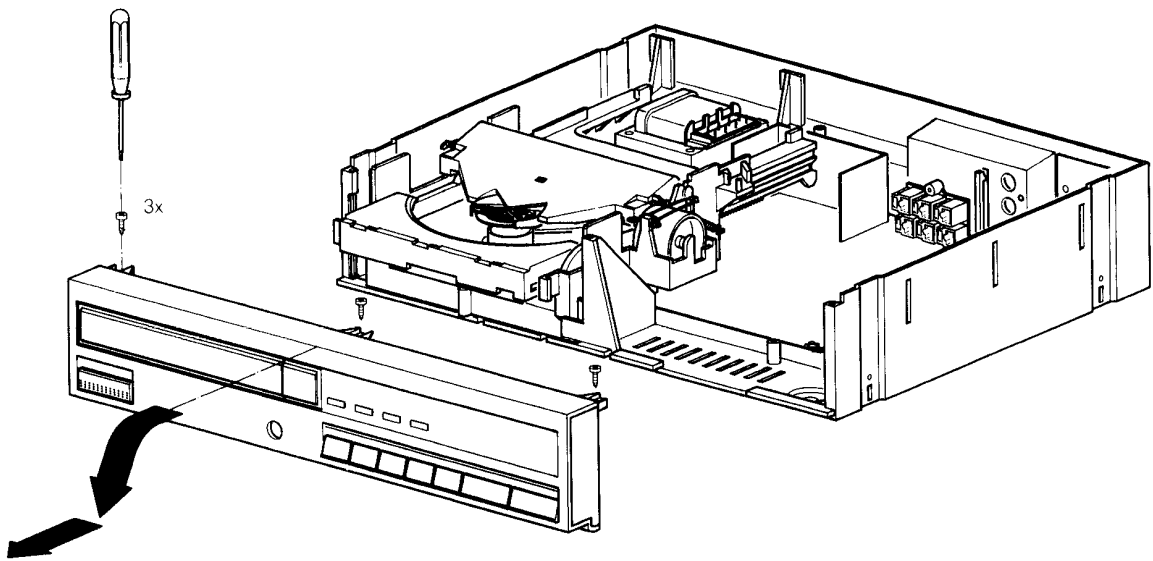
Audio signals disc 1	4822 397 30185
Disc without errors (test disc 5) + disc with DO errors, black spots and fingerprints (test disc 5A)	4822 397 30096
Disc 65 min 1 kHz without pause	4822 397 30155
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
Service cable (14p)	4822 321 21598
Service flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676



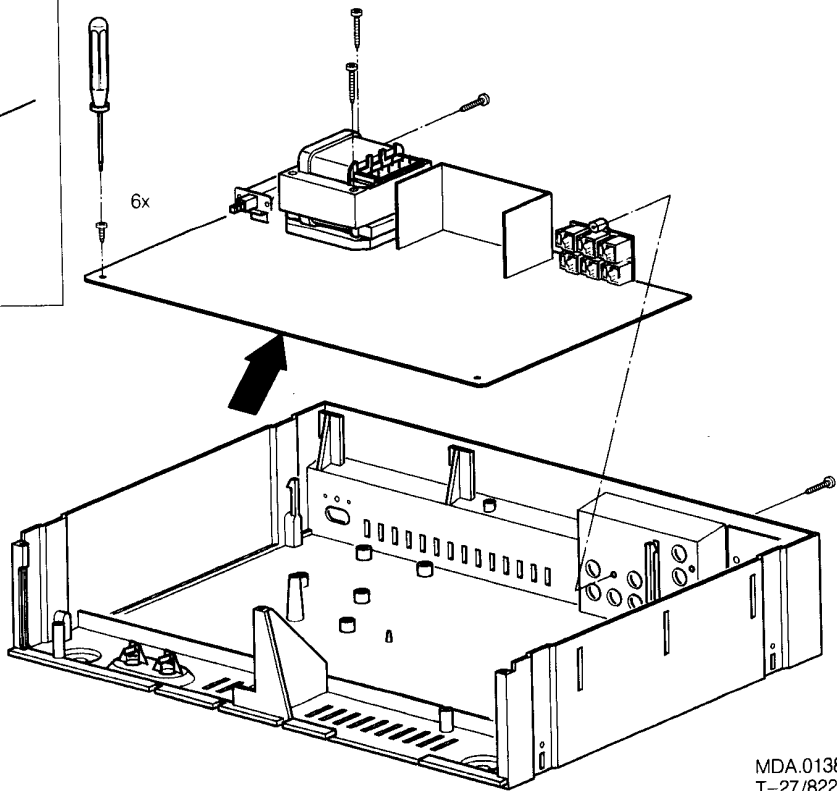
DISASSEMBLY OF THE CABINET AND LOADING



3



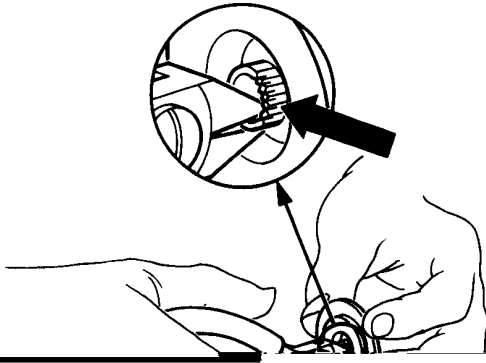
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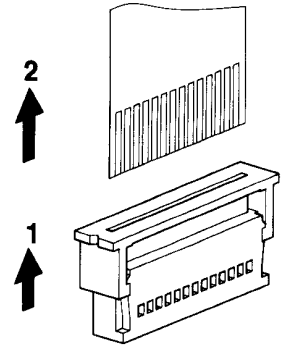
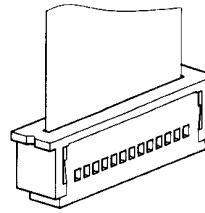
MDA.01382
T-27/822

2-3-a

SERVICE DISC-HOLDDOWN



DEMOUNTING FOIL CDM

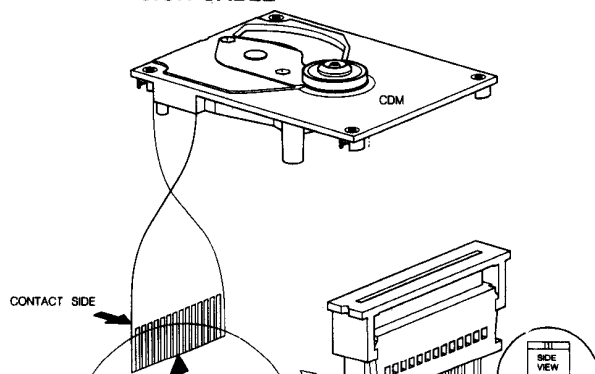


42 565 A12

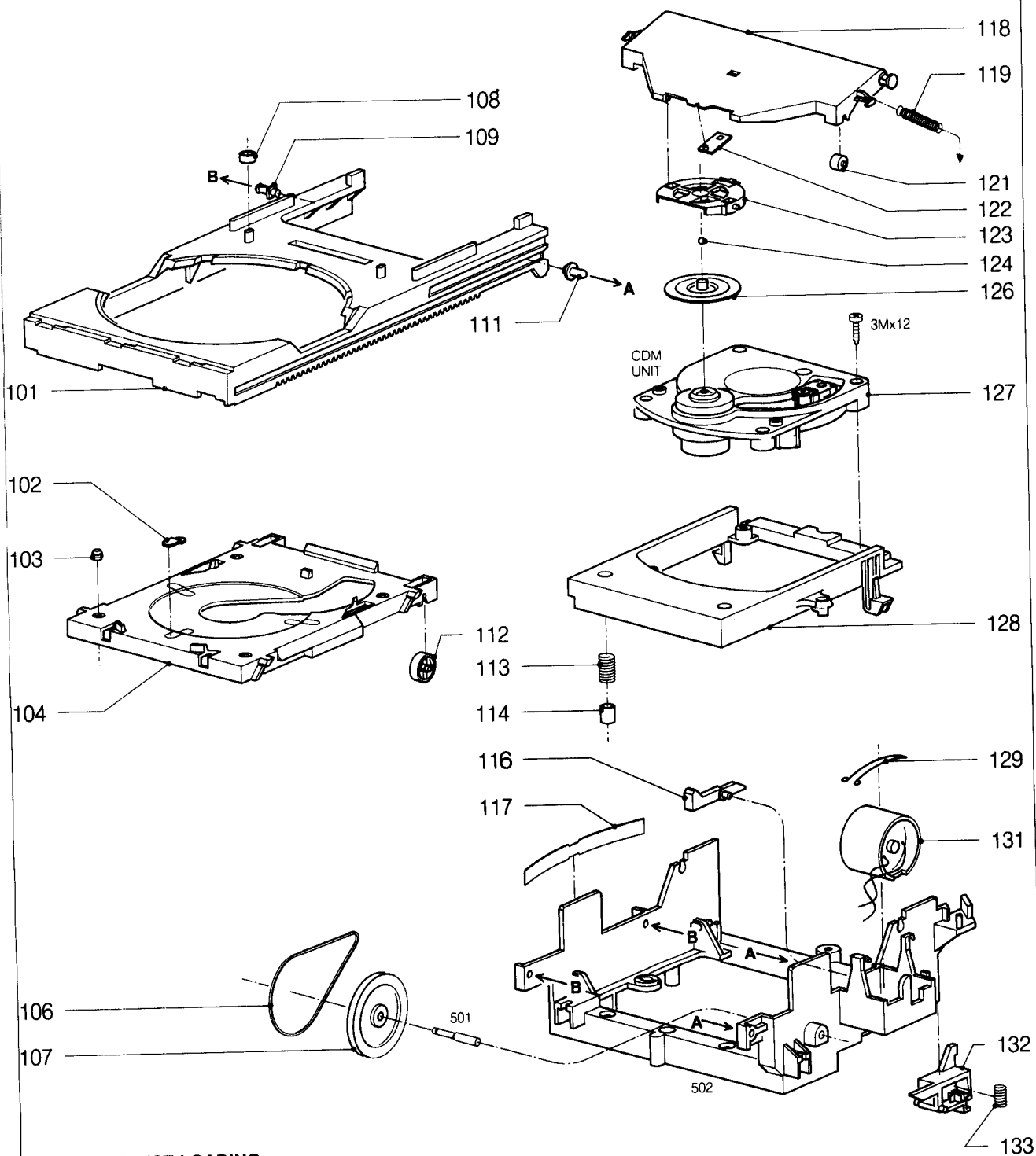
Compose a service disc hold-down in the following way

- Cut in the most inner ring of a disc hold-down (4822 462 50383) with small and sharp nippers, See fig. above.
- Enlarge the diameter of the innermost ring slightly with the hind part of a pencil or ballpoint, so that it jams onto the turntable with sufficient force.
- If the jamming force decreases after certain time of use, the diameter has to be enlarged with a pencil or ballpoint again.

CDM EXTENSION CABLE



LOADING



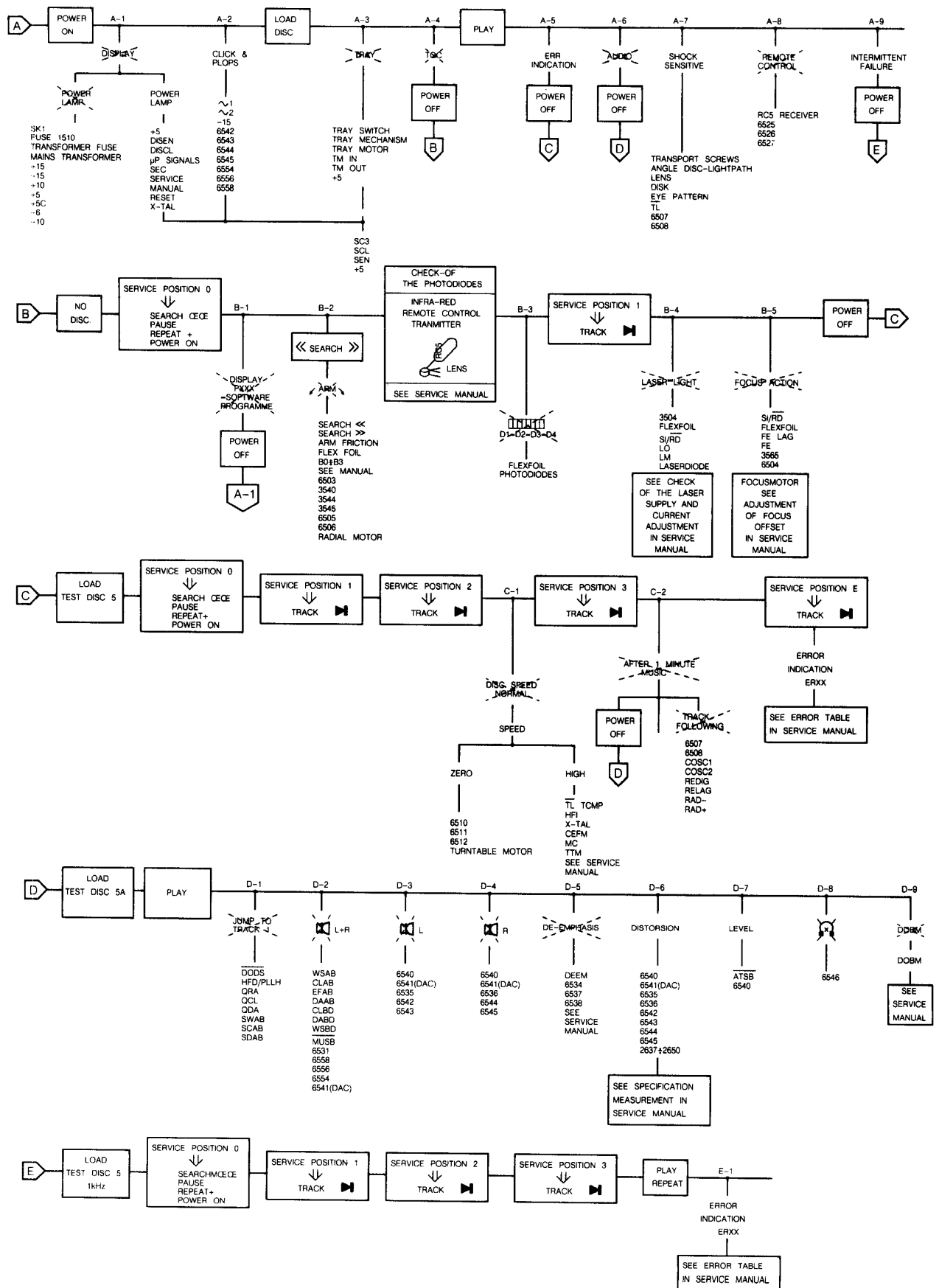
PARTS LIST LOADING

101	4822 444 50603	113	4822 492 51902	126	4822 530 80503
102	4822 325 50176	114	4822 466 61587	127	4822 691 30209
103	4822 325 50177	116	4822 402 61107	128	4822 402 61196
104	4822 466 92251	117	4822 492 63659	129	4822 492 63746
106	4822 358 10115	118	4822 444 60568	131	4822 361 20998
107	4822 522 32359	119	4822 492 32883	132	4822 402 50244
108	4822 532 51518	121	4822 528 90639	133	4822 492 51935
109	4822 402 61081	122	4822 466 92257		
111	4822 402 61132	123	4822 402 61207		
112	4822 528 90638	124	4822 520 40177		

EVA.00594
821/T19

3-1-a

ELECTRICAL MEASUREMENTS AND ADJUSTMENTS


 PRS 00316
 T-04 835

A1
uP-SIGNALS

SIGNAL	MODE				REMARKS
RESET	POWER ON	100		PULS "HIGH"	
X-TAL	STAND BY	101		4MHz	
TRAY IN	OPEN/CLOSE	83			HIGH WHEN TRAY IS CLOSING
TRAY OUT	OPEN/CLOSE	83A			LOW WHEN TRAY IS OPENING
ATSB	DISC SEARCH	89		"LOW"	
MUTE	STAND BY PLAY	67		"HIGH"	

MDA 01389
T-08 823

B2
B0,B1,B2,B3 SIGNALS

SIGNAL	MODE				REMARKS
B0	SERVICE POSITION 0 OR 1; SEARCH	36		"LOW"	
	SERVICE POSITION 0 OR 1; SEARCH	36		"LOW"	
B1	SERVICE POSITION 0 OR 1; SEARCH	34		"HIGH"	
	SERVICE POSITION 0 OR 1; SEARCH	34		"HIGH"	
B2	SERVICE POSITION 0 OR 1; SEARCH	33		"LOW"	
	SERVICE POSITION 0 OR 1; SEARCH	33		"HIGH"	
B3	SERVICE POSITION 0 OR 1; SEARCH	32		"HIGH"	
	SERVICE POSITION 0 OR 1; SEARCH	32		"HIGH"	

MDA 01386
T-08 823

B3
CHECK OF THE PHOTODIODES

STEP	SIGNAL	MODE				REMARKS
1	—	POWER ON		—	—	SEE DRAWING 38314A12 SIGNAL DEPENDS ON DISTANCE LENS REMOTE CONTROL




MDA 01378
T-08 824

B4
CHECK OF LASER SUPPLY (WITH DEMOUNTED CDM AND ADDITIONAL CIRCUIT)




STEP	SIGNAL	MODE				REMARKS
1	LO	SERV. POS. 2		—	$1.8 < V < 3$	
	LM			—	$170 < mV < 220$	
2	LO	SERV. POS. 2		—	$1.8 < V < 3$	LITTLE LIGHT CONNECTED DIRECTLY TO PANEL
	LM			—	$170 < mV < 220$	
3	LO	POWER ON		—	$0V \pm 0.2V$	NO LIGHT

MDA 01379
T-08 824




D5
DEEM CIRCUIT

SIGNAL	MODE				REMARKS
DEEM	TEST DISC 5A TRACK 14: PLAY TRACK 15: PLAY	84		"LOW" "HIGH"	SEE TESTPOINT 92 AND 91 ON DEEM CIRCUIT
TESTPOINT 92	TEST DISC 5A TRACK 14	92		LF SIGNAL	
TESTPOINT 92	TEST DISC 5A TRACK 15	92		NO SIGNAL	
TESTPOINT 91	TEST DISC 5A TRACK 14	91		LF SIGNAL	
TESTPOINT 91	TEST DISC 5A TRACK 15	91		NO SIGNAL	

MDA 01363
T-08 825
D6
SPECIFICATIONS MEASUREMENT

SIGNAL	MODE				REMARKS
BU2-L	TEST DISC 3, PLAY, TOTAL HARMONIC DISTORSION	FILTER OUTPUT	0.003%		SEE DRAWING: 30459A12
BU2-R	TEST DISC 3, PLAY, TOTAL HARMONIC DISTORSION	FILTER OUTPUT	0.003%		SEE DRAWING: 30459A12
BU2-L	TEST DISC 3, PLAY, SIGNAL-TO-NOISE RATIO	FILTER OUTPUT	96dB		SEE DRAWING: 30459A12
BU2-R	TEST DISC 3, PLAY, SIGNAL-TO-NOISE RATIO	FILTER OUTPUT	96dB		SEE DRAWING: 30459A12

MDA 01365
T-08 823
D9
DOBM DIGITAL OUTPUT

SIGNAL	MODE				REMARKS
DOBM	TEST DISC 5A, PLAY	88			SEE DRAWING: MDA 00238

MDA 01391
T-08 823
ERROR TABLE
System errors

Indi- cation	Cause	Check
Er 01	No RD	Si, Sc, RD, Photodiode signal processor
Er 02	No TL pulse at start-up	TL, HF, Photodiode signal processor, CD disc present
Er 03	No lead-in track found	CD disc, radial arm position, REdig, Radial error processor
Er 04	Too many TL pulses in PLAY	CD disc, HFD
Er 05	TL pulse > 50 msec. in PLAY	CD disc, HF in, photodiodes
Er 06	No TL pulse within 0.5 sec. during track jumping	RE-lag circuit
Er 07	Subcoding error during PLAY	HF
Er 08	TOC error	CD disc, turntable motor control, radial arm position

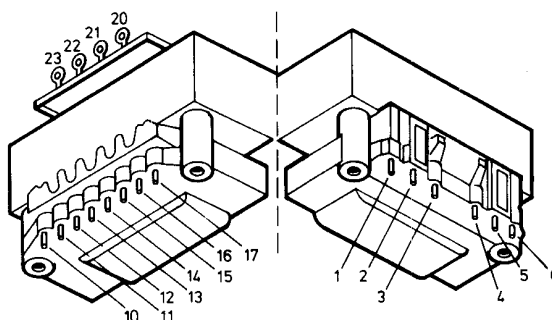
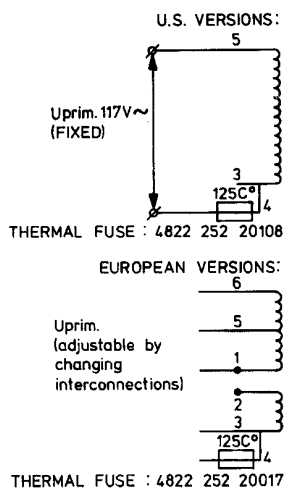
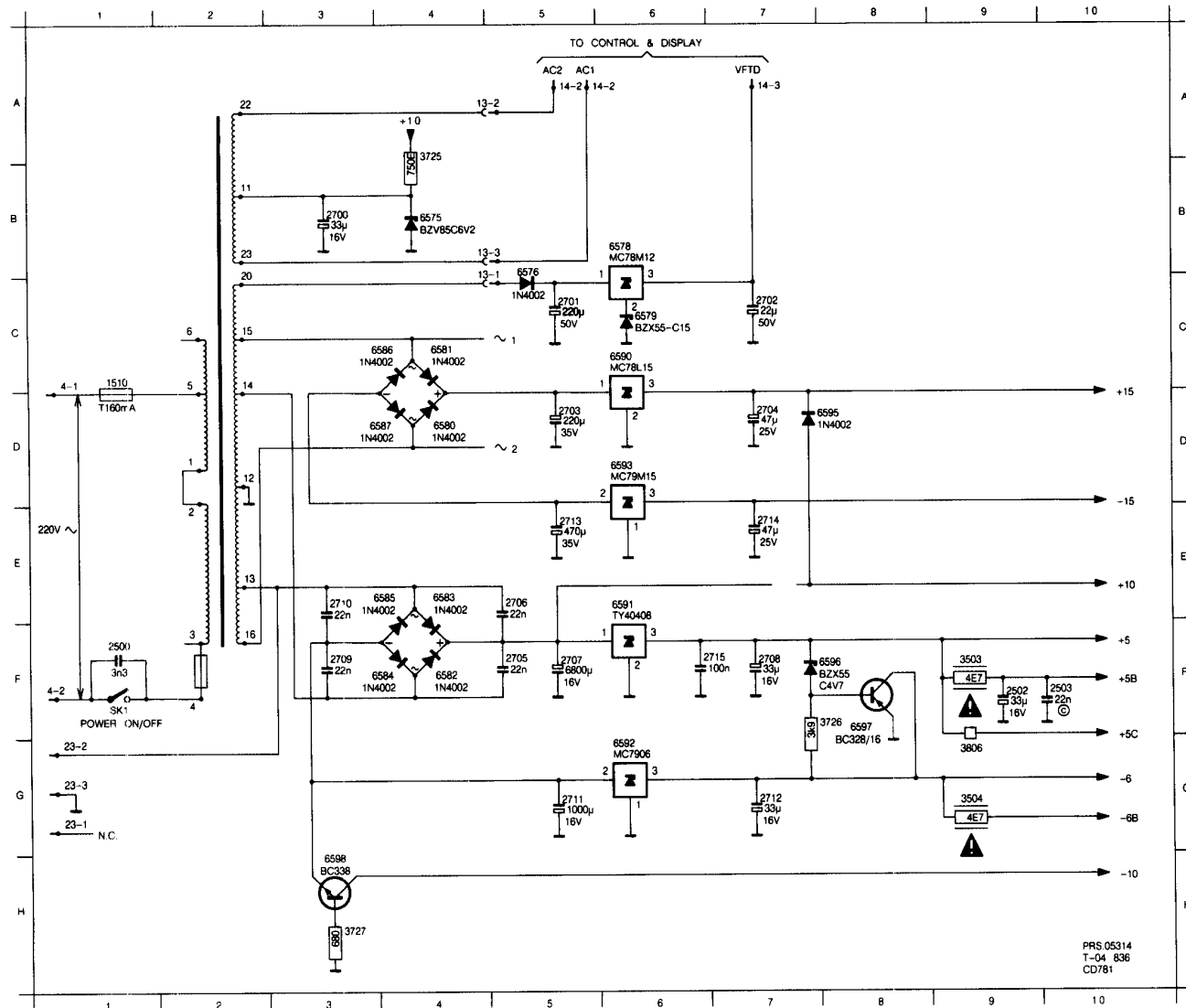
Operating errors

- Er 30 "NEXT" key operated during the last track, with "REPEAT" turned off.
- Er 31 "PREVIOUS" key operated during the first track, with "REPEAT" turned off.
- Er 32 Index selected before a track has been selected.
- Er 33 The selected index number does not exist on this disc.
- Er 34 Programme survey requested; no programme present.
- Er 35 The programme memory is full.
- Er 36 The programmed track is not present on this CD disc.
- Er 37 The selected track is not present on this CD disc.
- Er 60 End of the "FAST FORWARD" search motion.
- Er 61 End of the "FAST REVERSE" search motion.

4-1-a

POWER SUPPLY

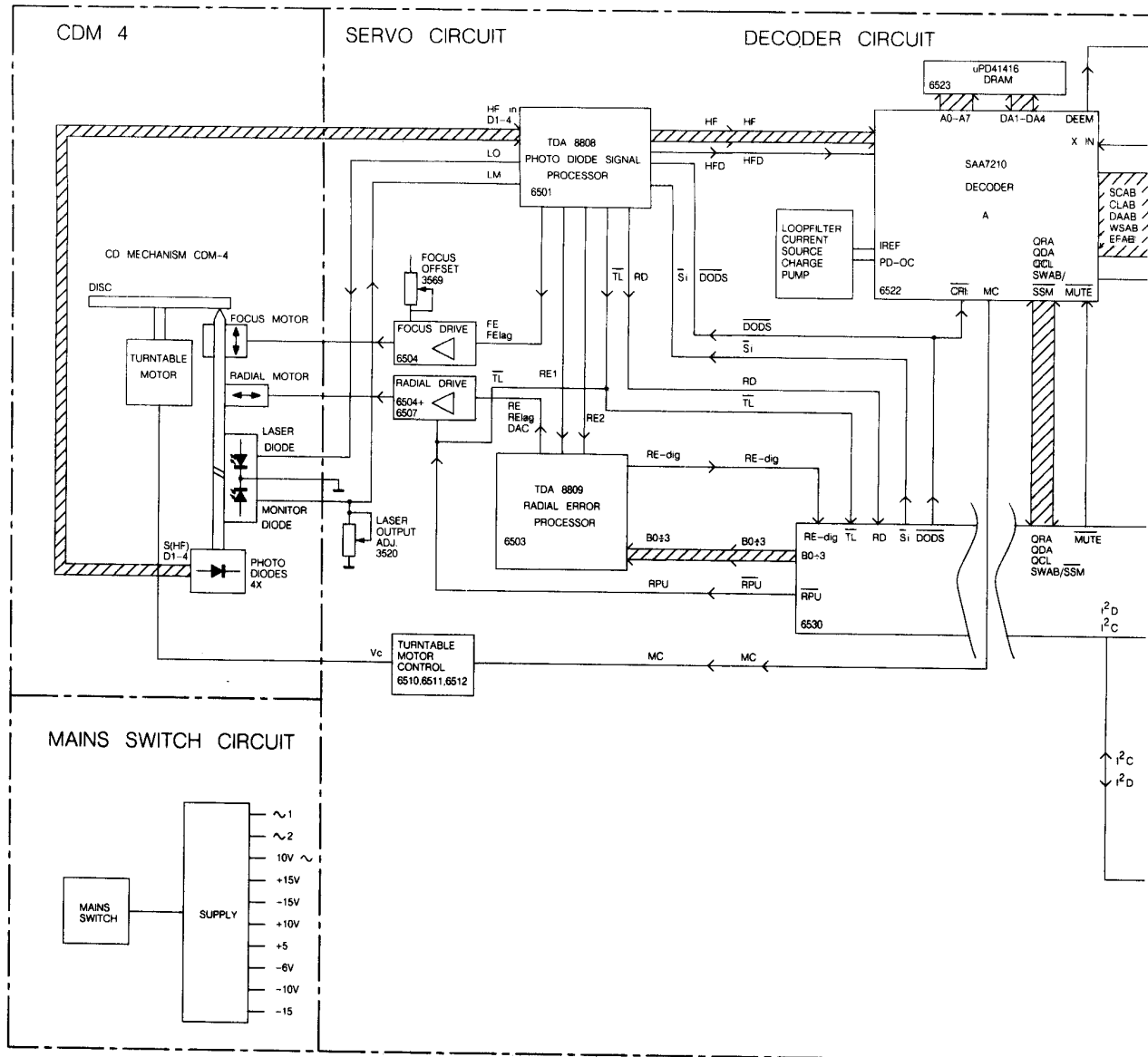
1510	C 1	2700	B 3	2704	D 7	2708	F 7	2712	G 7	3503	F 9	3727	H 3	6578	B 6	6582	F 4	6586	C 4	6592	G 6	6597	F 8
2500	F 1	2701	C 5	2705	F 5	2709	F 3	2713	E 5	3504	G 9	3806	G 9	6579	C 6	6583	E 4	6587	D 4	6593	D 6	6598	H 3
2502	F 9	2702	C 7	2706	E 5	2710	E 3	2714	E 7	3725	A 4	6575	B 4	6580	D 4	6584	F 4	6588	C 6	6595	D 8	SK1	F 1
2503	F 10	2703	D 5	2707	F 5	2711	G 5	2715	F 7	3726	F 8	6576	B 5	6581	C 4	6585	E 4	6591	E 6	6596	F 8		



Uprim. (V) ~	Winding	Inter - connect
110	4-1	3-1/5-2
127	4-6	3-1/5-2
220	4-5	1-2
240	4-6	1-2

44 241 A11

BLOCK DIAGRAM

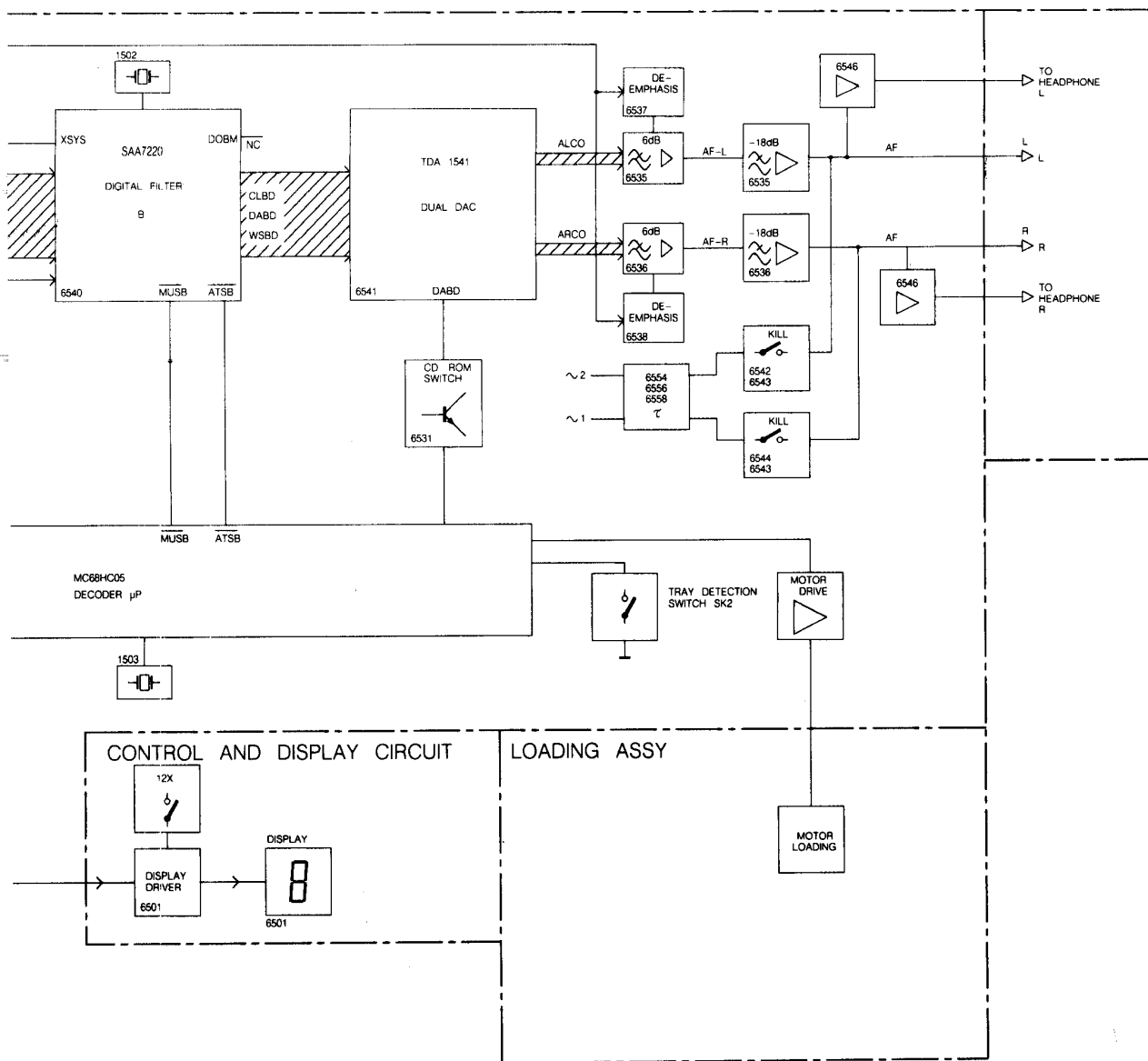


AGC
 B0-B3
 BEQ
 BGC
 Cosc1
 Cosc2
 DEC
 DET
 DIV4
 DODS
 D1+4
 FE
 FE lag
 HF
 HFD
 HF-in
 HF-out
 LM
 LO
 MC
 offset IN
 offset OUT
 PLLH
 RADout
 RE

- Automatic Gain Control
- Control bits for radial circuit
- Equalizer reference current input
- DC and LF gain control reference input
- Capacitor wobble oscillator
- Capacitor wobble oscillator
- Decoupling input of inkruat bypass
- HF detector voltage input
- Divide by 4 input
- Drop out detector suppression
- Photodiode currents
- Focus error signal
- Focus error signal for LAG network
- HF output for DEMOD
- HF detector output for DEMOD
- HF current input to HF amplifier
- HF amplifier and equalizer voltage output
- Laser monitor diode input
- Laser amplifier current output
- Motor control signal
- Offset control input
- Offset control output
- PLL on hold output
- output of RE2-RE1 input
- Radial error signal (Amplified RE₂-RE₁ currents)

Rosc
 Rwob
 RE1
 RE2
 RE dig
 RE lag
 Sc
 Si/RD
 TL
 TTM-
 TTM+
 Vext-
 Vext+

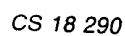
- Resistor wobble oscillator
- Wobble generator input
- Radial error signal 1 (summation of amplified currents D₃ and D₄)
- Radial error signal 2 (summation of amplified currents D₁ and D₂)
- Radial error digital
- Radial error signal for LAG network
- Starting up capacitor input
- On/off control for laser supply and focus circuit. Ready signal, Starting up procedure succesful.
- Track loss output signal
- Control voltage for turntable motor
- Control voltage for turntable motor
- Supply connection
- Supply connection



PRS 05151
102-823

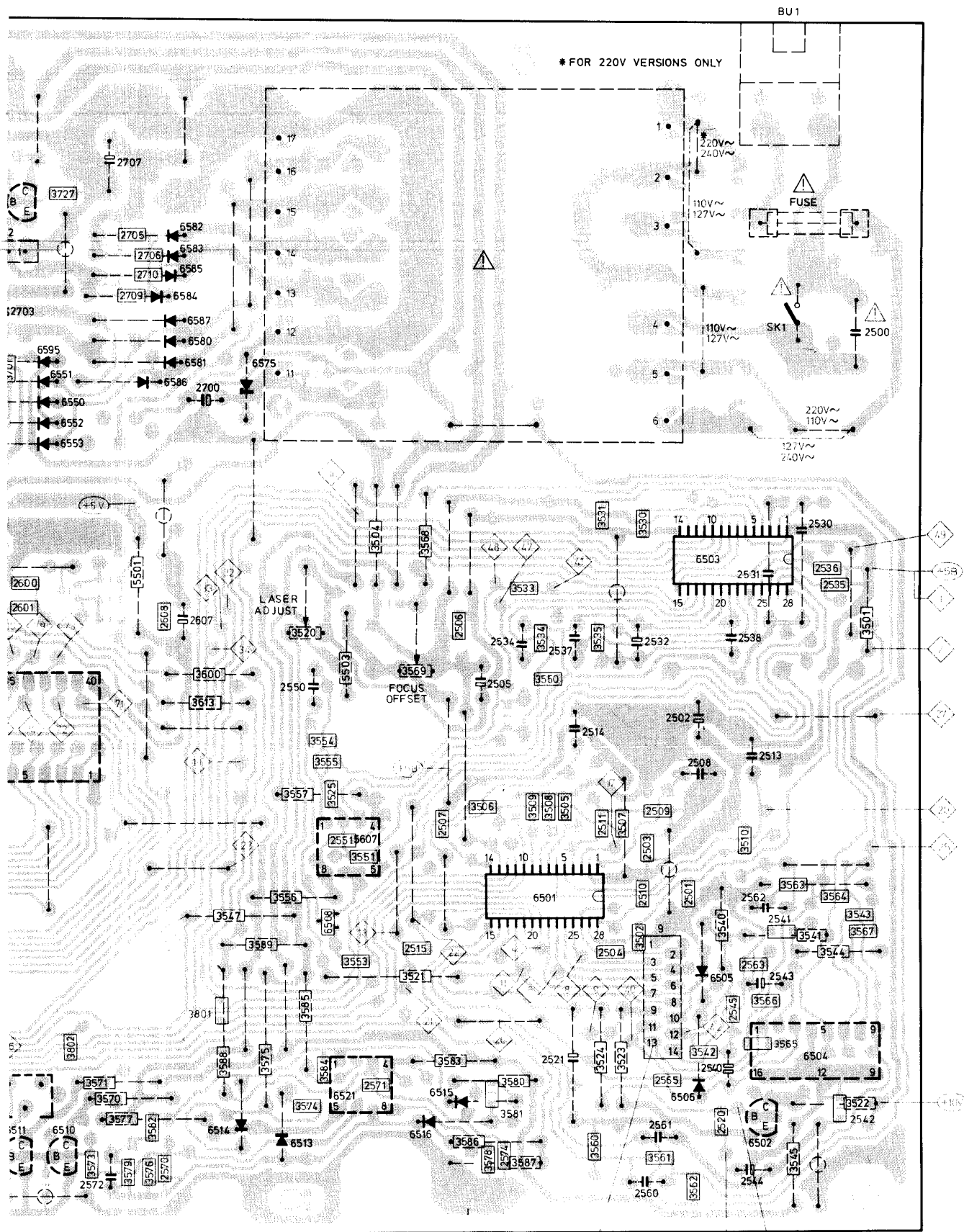
<u>ATSB</u>	- Attenuation of Audio level in Search position (Cueing)
<u>CD ROM Switch</u>	- Digital Data information on disc signal
<u>CEFM</u>	- Clock Eight-to-Fourteen Modulator
<u>CLAB</u>	- Clock signal Decoder-A to Filter-B
<u>CLBD</u>	- Clock signal Filter-B to DAC
<u>CREF</u>	- Reference Current
<u>CRI</u>	- Counter Reset Inhibit
<u>DAAB</u>	- Data signal Decoder-A to Filter-B
<u>DABD</u>	- Data signal Filter-B to DAC
<u>DEEM</u>	- Deemphasis
<u>DOBM</u>	- Digital out signal
<u>EFAB</u>	- Error flag Decoder-A to Filter-B
<u>MUTE</u>	- Mute signal

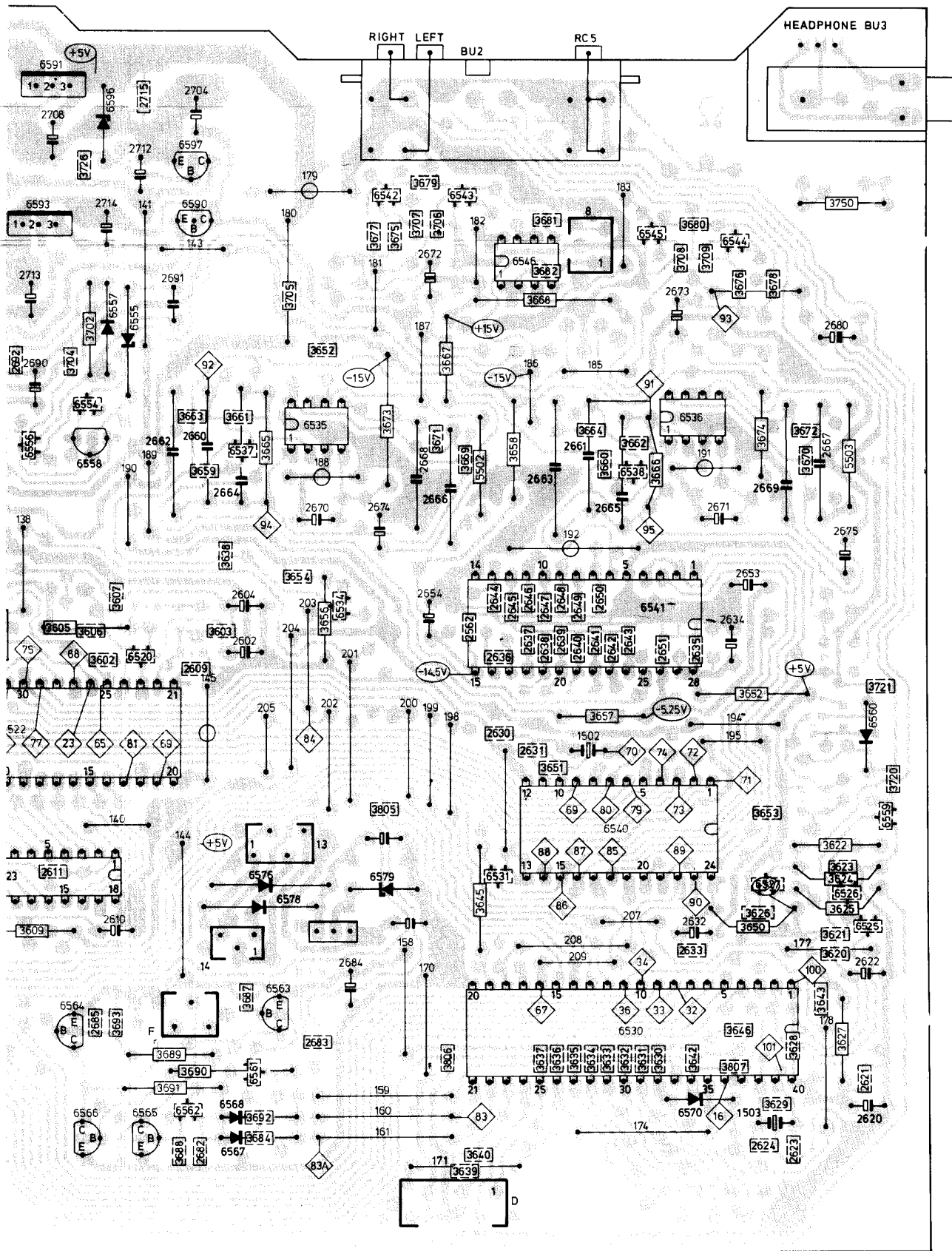
<u>MUSB</u>	- Soft Mute signal
<u>PD/OC</u>	- Phase detector - oscillator control
<u>QCL</u>	- Q-channel Clock signal
<u>QDA</u>	- Q-channel Data signal
<u>QRA</u>	- Q-channel Request Acknowledge
<u>SCAB</u>	- Subcode clock Decoder-A to Filter-B
<u>SDAB</u>	- Subcode data Decoder-A to Filter-B
<u>SWAB/SSM</u>	- Subcode Word/Start-stop motor signal
<u>WSAB</u>	- Word select Decoder-A to Filter-B
<u>WSBD</u>	- Word Select Filter-B to DAC
<u>XIN</u>	- Oscillator signal in Decoder-A
<u>XSYS</u>	- Oscillator signal out Filter-B



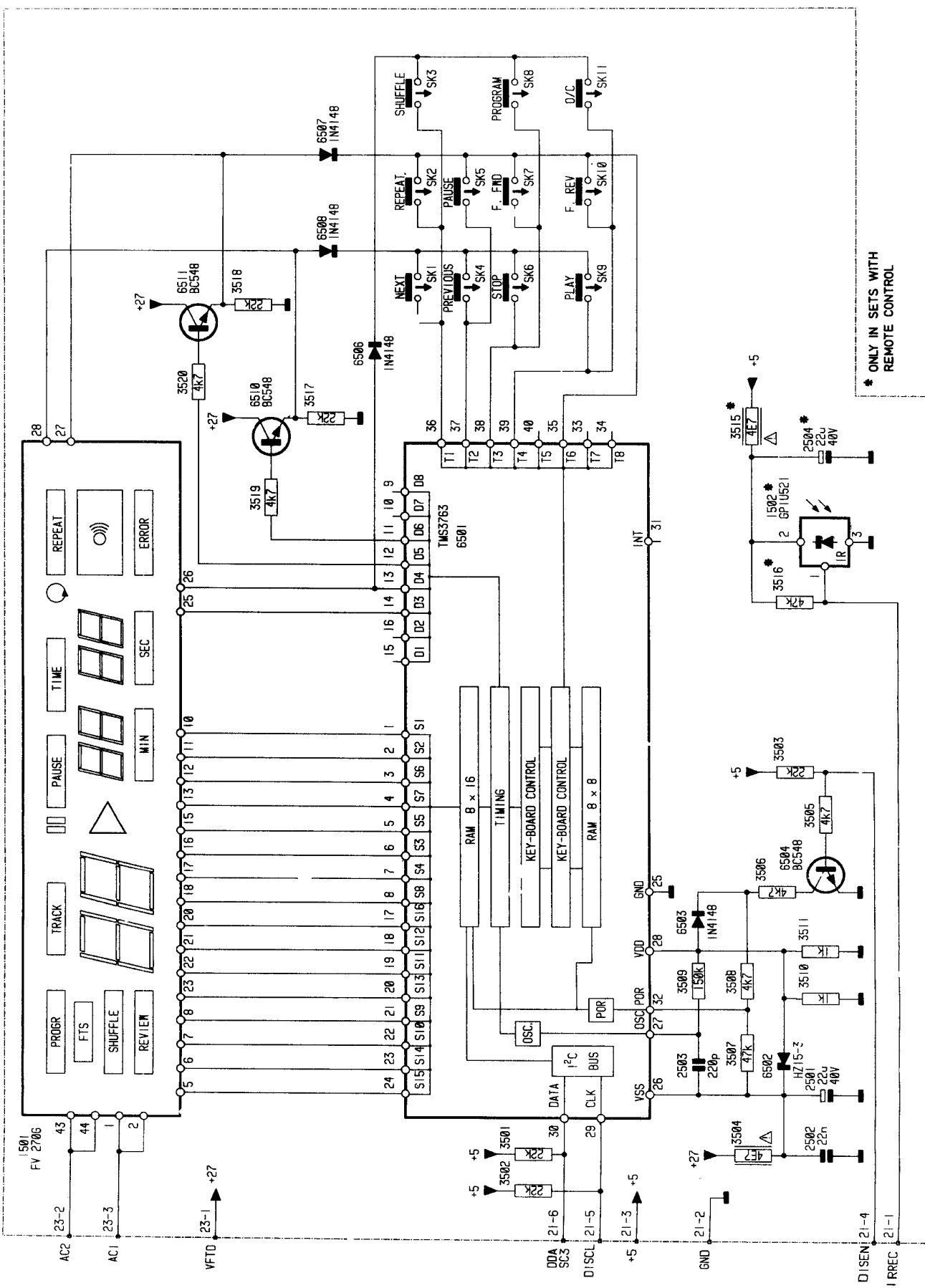
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CONTROL & DISPLAY CIRCUIT



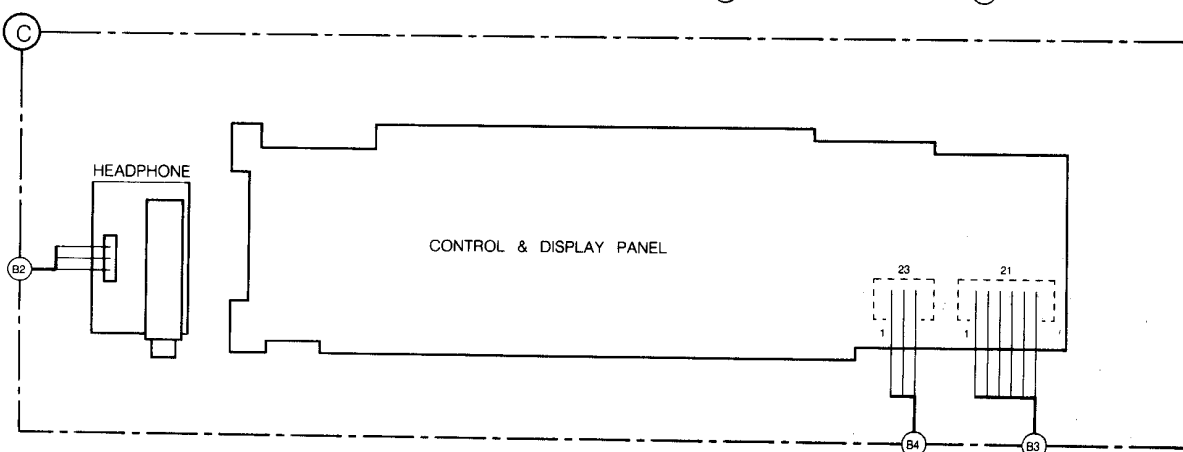
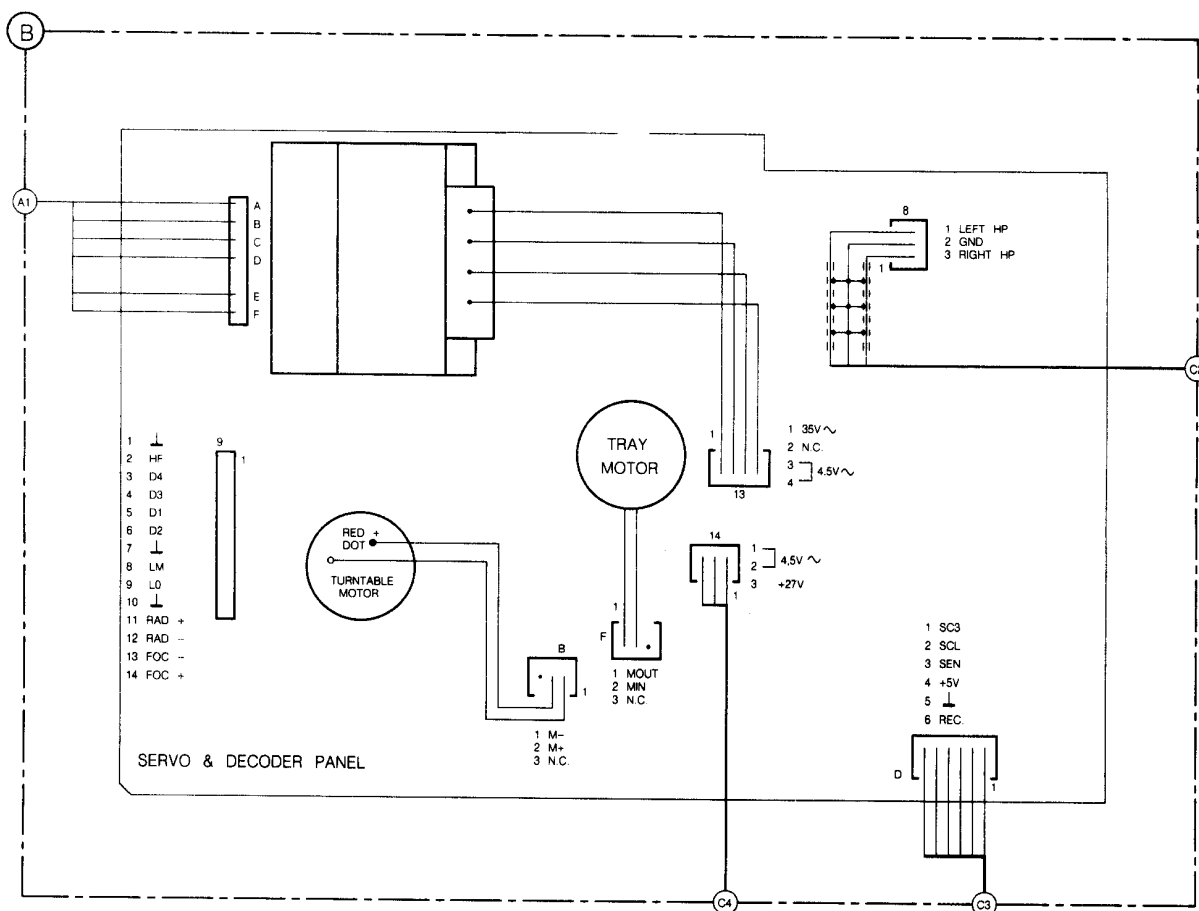
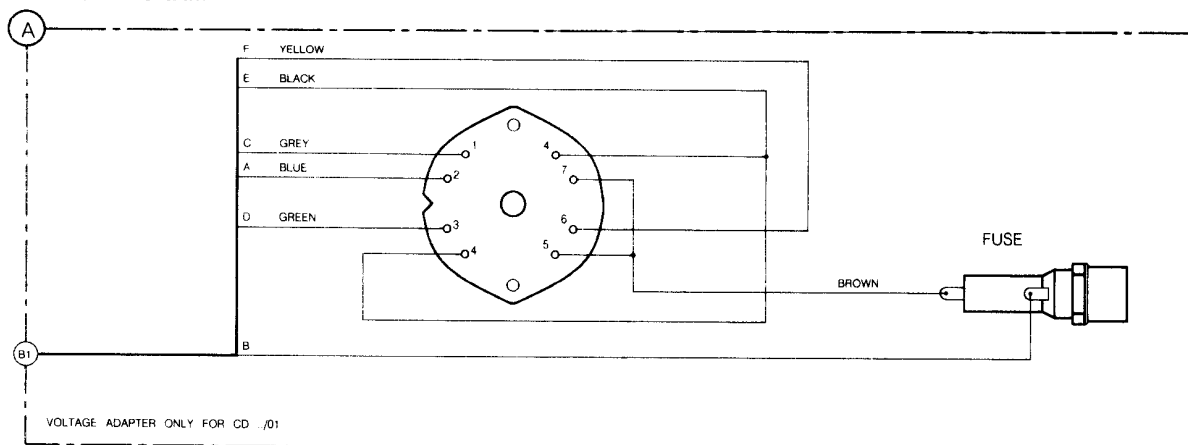
* ONLY IN SETS WITH
REMOTE CONTROL

CONTROL & DISPLAY PANEL

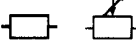



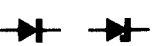
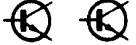
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 0023 0 3 102 0 5 104 0 6 106 0 7 108 0 8 110 0 9 112 0 10 114 0 11 116 0 12 118 0 13 120 0 14 122 0 15 124 0 16 126 0 17 128 0 18 130 0 19 132 0 20 134 0 21 136 0 22 138 0 23 140 0 24 142 0 25 144 0 26 146 0 27 148 0 28 150 0 29 152 0 30 154 0 31 156 0 32 158 0 33 160 0 34 162 0 35 164 0 36 166 0 37 168 0 38 170 0 39 172 0 40 174 0 41 176 0 42 178 0 43 180 0 44 182 0 45 184 0 46 186 0 47 188 0 48 190 0 49 192 0 50 194 0 51 196 0 52 198 0 53 200 0 54 202 0 55 204 0 56 206 0 57 208 0 58 210 0 59 212 0 60 214 0 61 216 0 62 218 0 63 220 0 64 222 0 65 224 0 66 226 0 67 228 0 68 230 0 69 232 0 70 234 0 71 236 0 72 238 0 73 240 0 74 242 0 75 244 0 76 246 0 77 248 0 78 250 0 79 252 0 80 254 0 81 256 0 82 258 0 83 260 0 84 262 0 85 264 0 86 266 0 87 268 0 88 270 0 89 272 0 90 274 0 91 276 0 92 278 0 93 280 0 94 282 0 95 284 0 96 286 0 97 288 0 98 290 0 99 292 0 100 294 0 101 296 0 102 298 0 103 300 0 104 302 0 105 304 0 106 306 0 107 308 0 108 310 0 109 312 0 110 314 0 111 316 0 112 318 0 113 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5-2-a

WIRING DIAGRAM



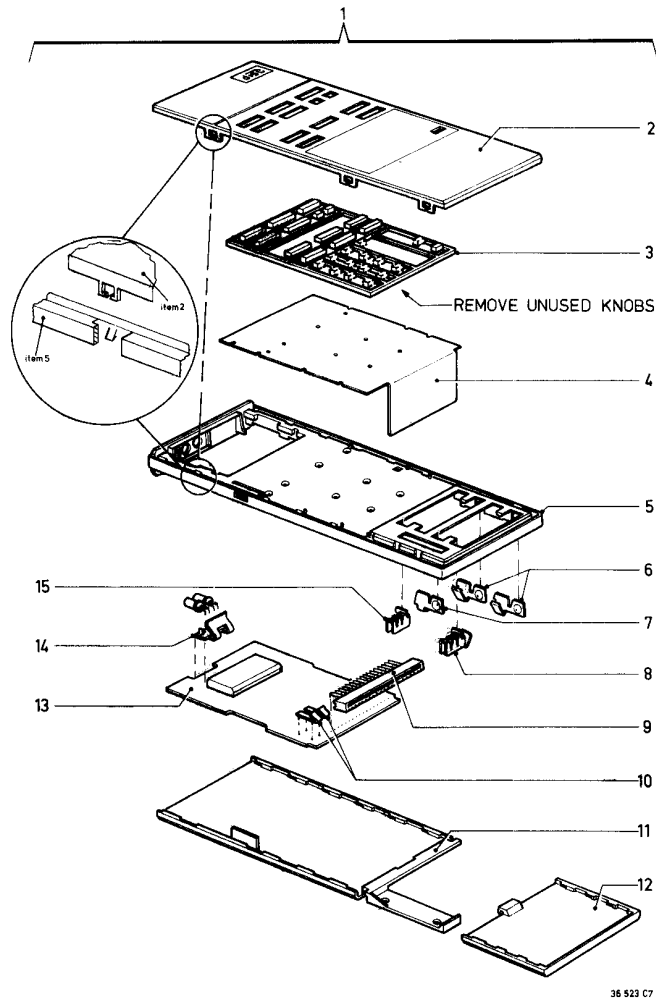
ELECTRICAL PARTSLIST SERVO 8 DECODER PANEL

 <p> Safety res. 4E7 4822 111 30499 Potm. trimmer 4k7 LIN 4822 101 10685 Safety res. 12E 4822 111 30511 Safety res. 18E 4822 111 30515 Safety res. 1E 4822 111 30483 Potm. carb. track 22k LIN 4822 100 20522 Metal film 100k 1% 4822 116 52973 Safety res. 10E 4822 111 30508 Metal film 1k8 1% 4822 116 53109 Safety res. 33E 4822 111 30522 </p>	 <p> LM833N 4822 209 83163 MC68HC05C8/P105 4822 209 73232 MC78L15ACPRE 4822 209 80889 MC78M12CT 4822 209 86176 MC79M15CT 4822 209 86361 MC7906CT 4822 209 82056 NJM4560D 4822 209 83274 SAA7210P/04 4822 209 71001 SAA7220 4822 209 11157 TCA0372DP2 4822 209 72587 TDA1541 4822 209 72544 TDA8808T/C3 4822 209 73234 TDA8809T/C2 4822 209 73235 TY40408 4822 209 71579 UPD41416C-20 4822 209 82903 MN4264-15 4822 209 70422 </p>
 <p> Ceramic cap. 3N3 400V 4822 122 40327 Foil cap. 47n 100V 5322 121 42491 Ceramic cap. 1000p 50V 4822 122 31746 Foil cap. 220n 63V 4822 121 42245 Foil cap. 470n 100V 4822 121 51252 Foil cap. 8μ2 63 V 1% 4822 121 51321 Foil cap. 330n 63V 5322 121 42661 Ceramic cap. 33n 63V 5322 122 31848 Bipolar cap. Elco 680n 50V 4822 124 41583 Foil cap. 6n8 50V 4822 121 51093 Foil cap. 4n7 50V 4822 121 51314 Foil cap. 4n7 160V 1% 4822 121 51051 Foil cap. 15n 63V 1% 4822 121 51049 Foil cap. 2n 250V 1% 4822 121 51053 Foil cap. 1n 400V 1% 4822 121 43066 Bipolar cap. Elco 100μ 16 V 4822 124 22339 Bipolar cap. Elco 10μ 25V 4822 124 41558 </p>	 <p> 5501 4.7 μH 4822 157 53139 5502, 5503 470 μH 4822 157 53141 Chip coil 4822 157 53548 </p>
 <p> BAT85 4822 130 31983 BA314 4822 130 30879 BZV85-C6V2 5322 130 32962 HZ15-3 4822 130 80138 HZ3B2 4822 130 32831 HZ4B2 4822 130 32843 HZ5B1 4822 130 32986 HZ7C2 4822 130 32862 1N4002 5322 130 30684 1N4148 4822 130 30621 BZX55C7V5 4822 130 81101 BZX55C3V0 4822 130 81122 BZX55C3V9 4822 130 33637 BZX85C6V2 5322 130 32962 BZX55C15V0 4822 130 81086 BZX55C4C7 5322 130 80275 </p>	<p>Miscellaneous</p> <p> X-tal 11289.60 kHz 4822 242 71644 Ceramic filter CSA 4.00 MG 4822 242 70831 Fuse holder 4822 256 30274 Mains inlet BU1 4822 265 20291 Phone socket BU3/00R/05R/17R 4822 267 30743 Phone socket BU3/00B 4822 267 30522 Cinch socket 4822 267 40766 Power switch 4822 276 11309 Tray switch sk2 4822 276 11896 Clamping spring for heat sinc 4822 492 63076 Fuse /00B, /00R, /05R 4822 253 30009 Fuse /17R 4822 253 30217 Mains transformer /00B, /00R, /05R 4822 146 30702 Mains transformer /17R 4822 146 30719 Remote control neutral 4822 218 20782 Tact switch 4822 276 11896 Dir. for use CD582/00B/00R 4822 736 13982 Dir. for use CD584/00R 4822 736 20157 Dir. for use CD582/17R 4822 736 20018 Dir. for use CD582/05R 4822 736 20019 CDM-4 mini horizontal 4822 691 30209 </p>
 <p> BC328 4822 130 44104 BC328-16 4822 130 41023 BC338 4822 130 44121 BC548 4822 130 40938 BC818 4822 130 42675 BC848 5322 130 41981 BC848C 5322 130 42136 BC858 5322 130 42012 BF550 4822 130 42131 BSR56 4822 130 42633 </p>	

CHANGES**Introductions with A88-254**

Description	Reason
Table of contents	1-1-a
Service hints	2-1-a
Service tools	2-3-a
Exploded view cabinet	2-4-a
Electrical measurements and adjustments	3-1-a
Power supply	4-1-a
Servo circuit	4-3-a
Main panel	4-4-a
Main panel	4-5-a
Control a display panel	5-1-a
Wiring diagram and partslist	5-2-a
	Contents adapted
	Contents adapted
	Drawings and text added
	Front for CD584 added
	Fault finding diagram changed
	Circuit diagram changed
	Circuit changed
	Drawing changed
	Drawing changed
	Drawings changed
	Partslist adapted

8. REMOTE CONTROL

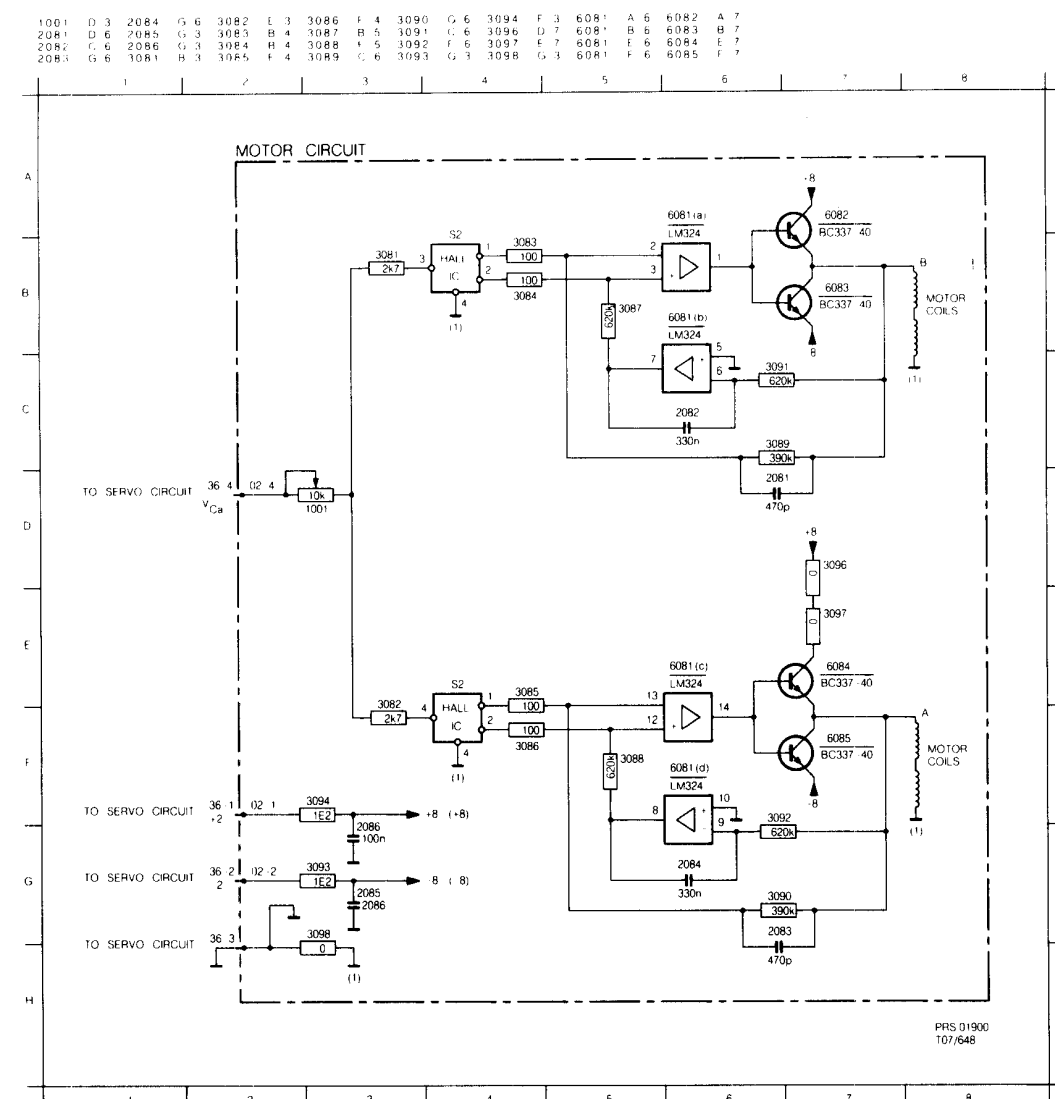


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4	4822 218 20418
5	4822 432 30163
6	4822 492 62879
7	4822 492 62881
8	4822 492 62883
9	4822 267 50418
10	4822 492 62904
11	4822 432 30165
12	4822 432 30164
13	4822 214 50418
14	4822 256 90506
15	4822 492 62882

SAA3006P		4822 209 81891
BC328-40		4822 130 41715
BC548B		4822 130 40937
BA317		4822 130 30847
CQY89A/11		4822 130 31332
2001	1000 μ F 8 V	4822 124 21341
1001	CSB429PB2	4822 242 70675



MOTOR CIRCUIT



MOTOR PANEL

