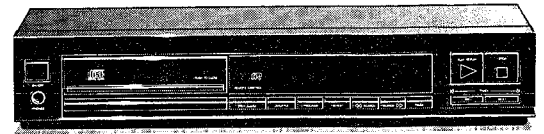


Service
Service
Service

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

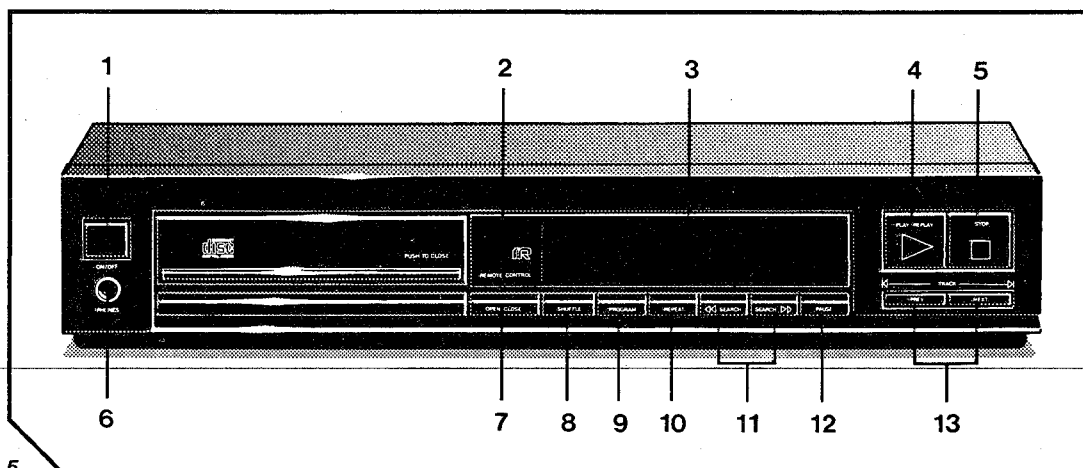
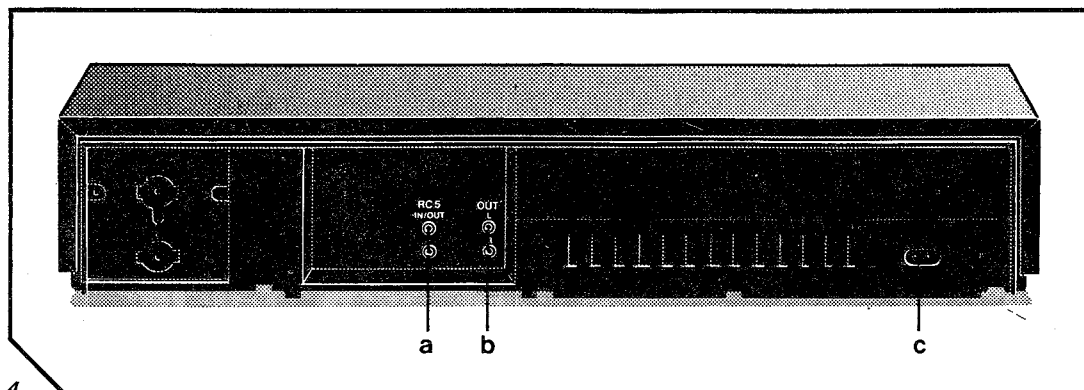
4822 725 22124

Printed in The Netherlands

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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.

2-1-a

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)
For/01R selectable by voltage adapter
4. Power consumption mains, operated : 15 W

External

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

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 to 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 20 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 enfile 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.

ESD



(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 hetzelfde 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 bracciale a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SERVICING HINTS

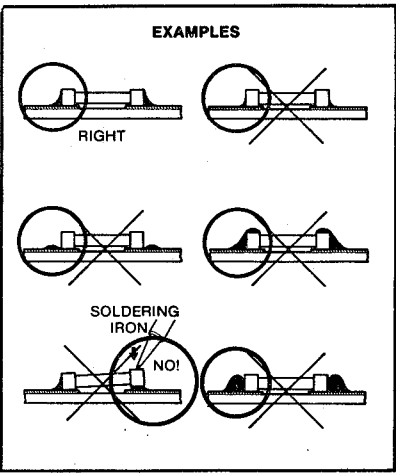
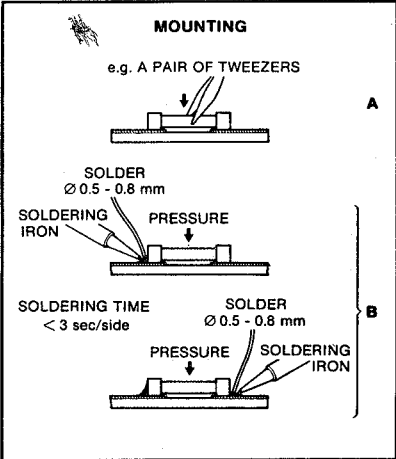
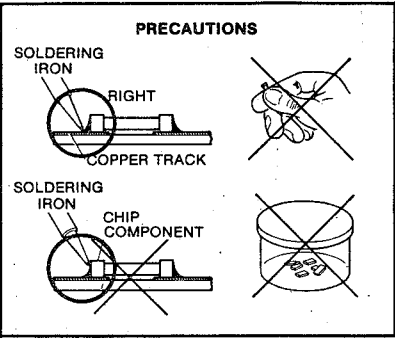
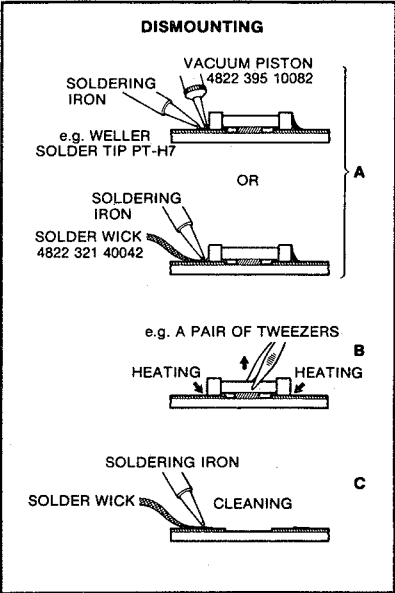
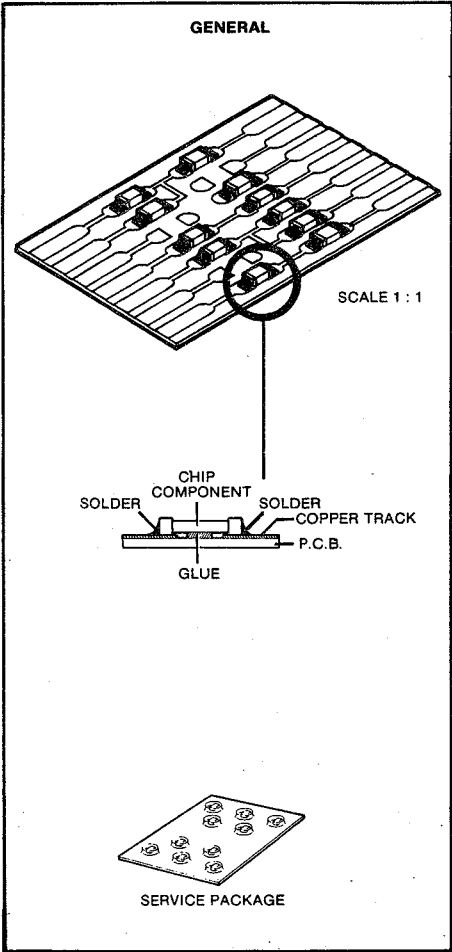
In the set chip components have been applied.
For disassembly and assembly of chip components see the figure below.

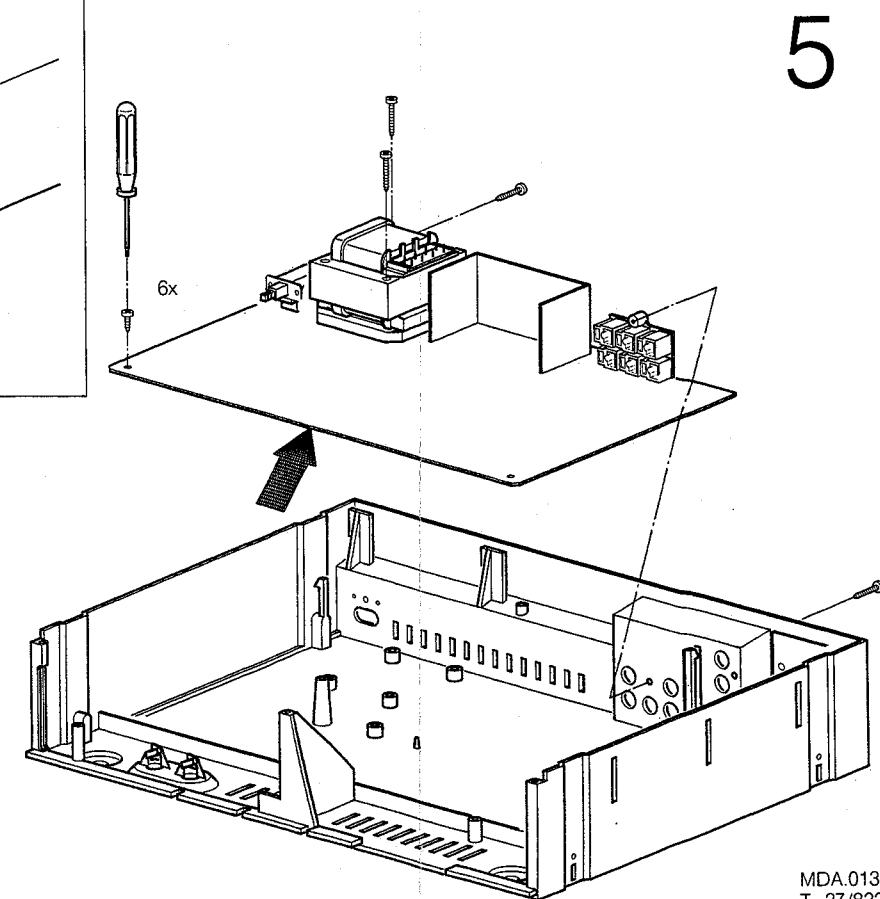
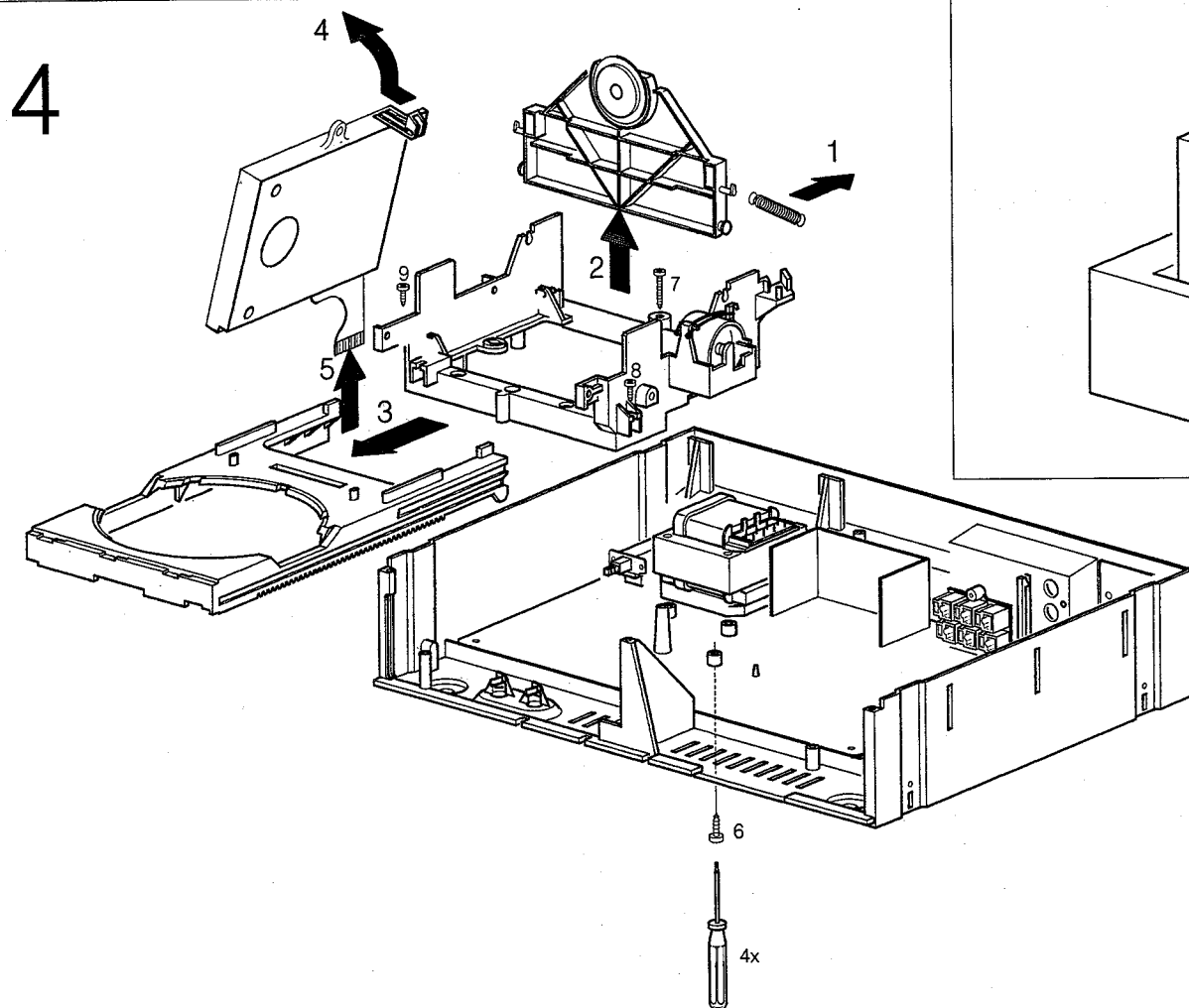
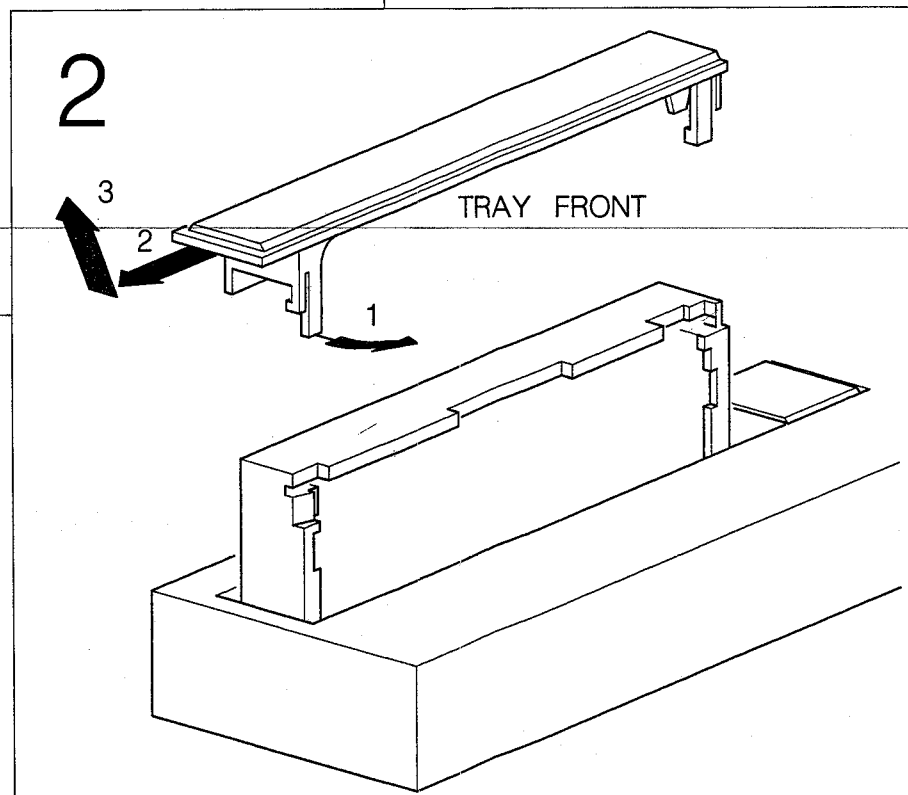
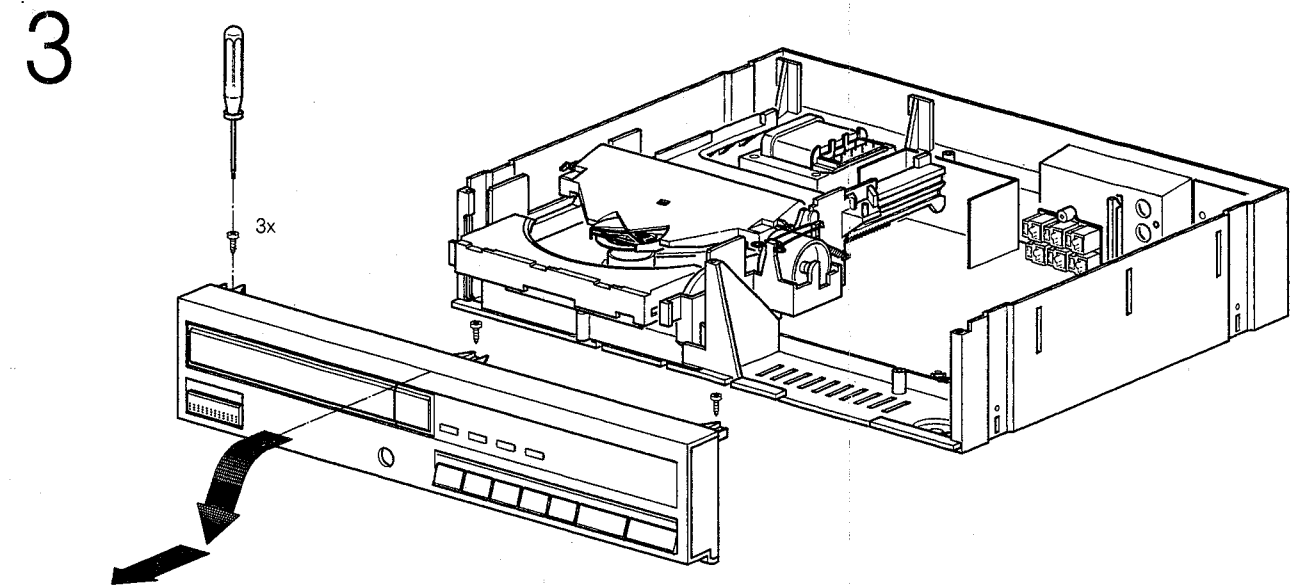
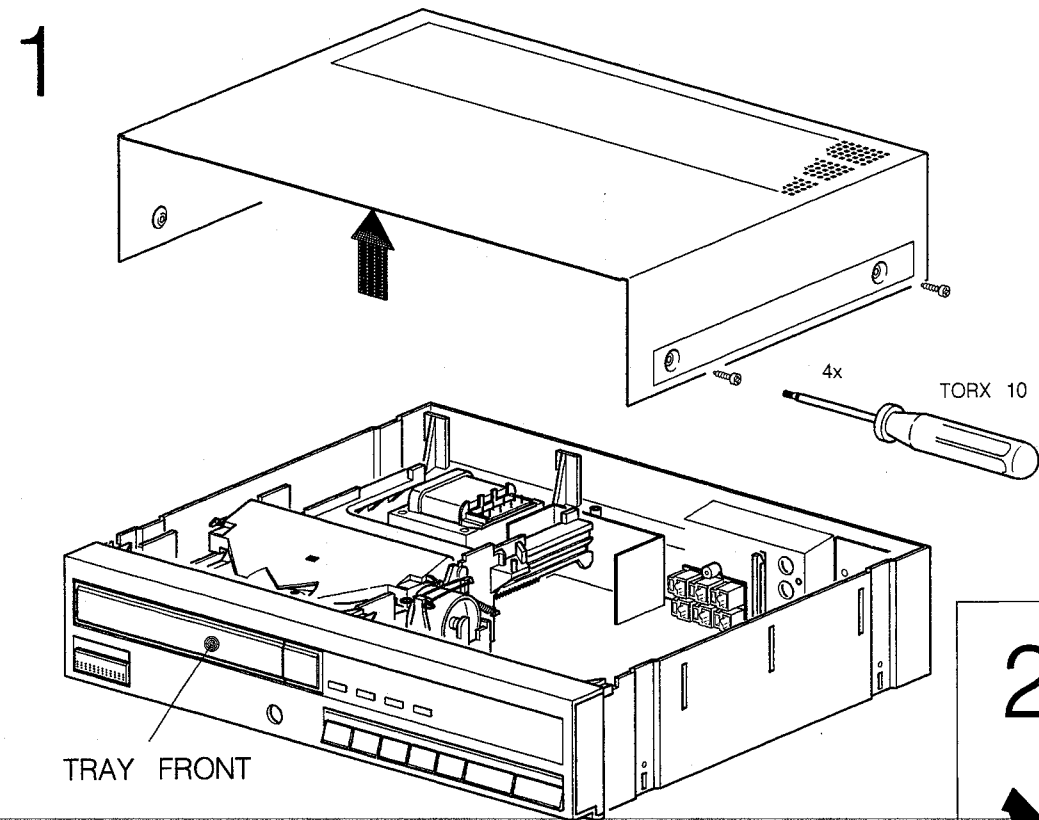
The disc should always rest properly on the turntable.
To achieve this a disc hold-down has been mounted in a bracket of the tray mechanism.
If the tray mechanism has to be disassembled for servicing, one or more than one separate disc hold-downs should be used.
The set can function normally then.
Code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

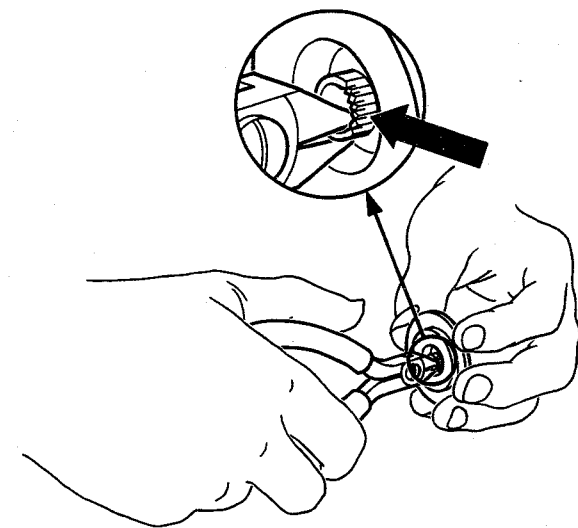
SERVICE TOOLS

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 flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676





2-3-a
SERVICE DISC-HOLDDOWN

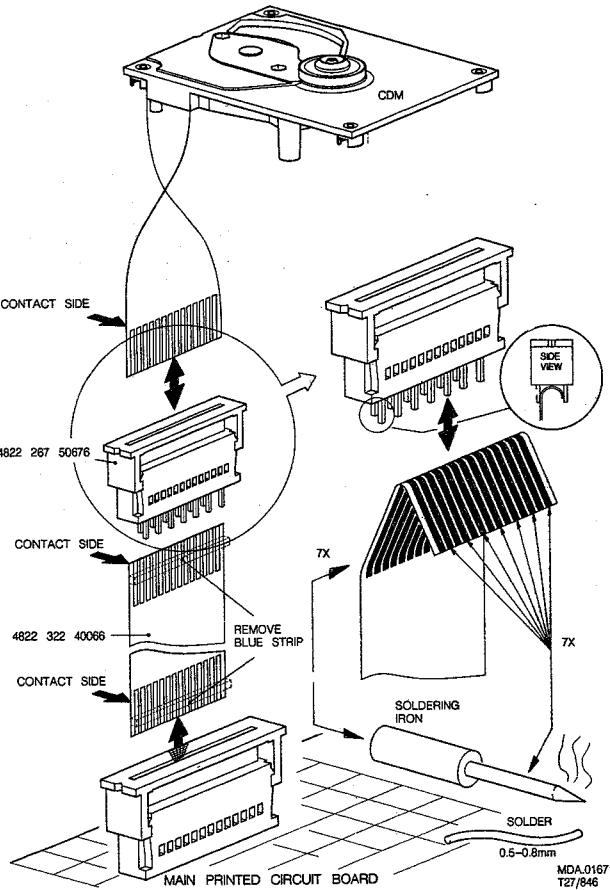


42 565 A12

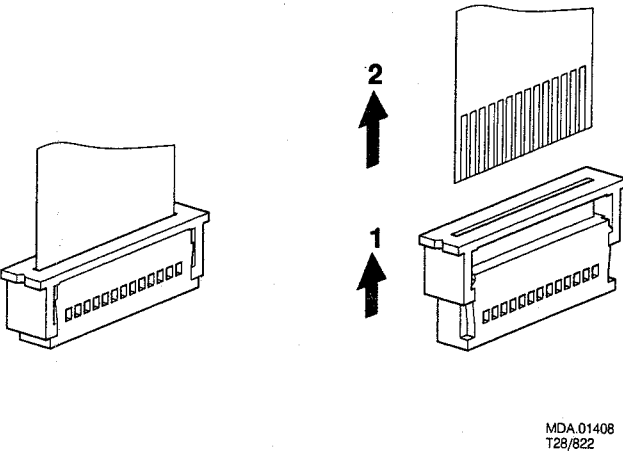
Compose a service disc hold-down in the following way

- 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

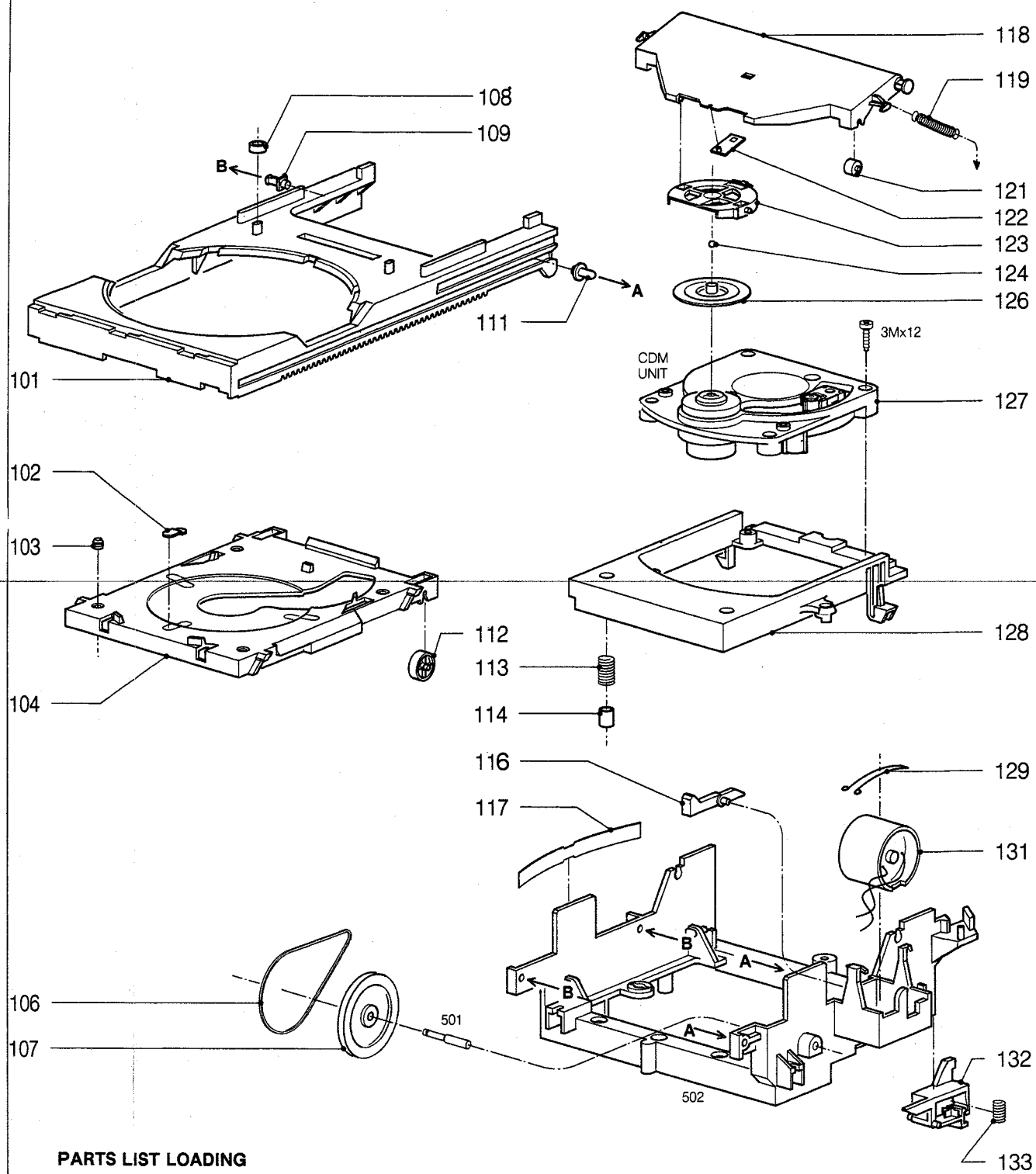


DEMOUNTING FOIL CDM



MDA.01408
T28/822

LOADING



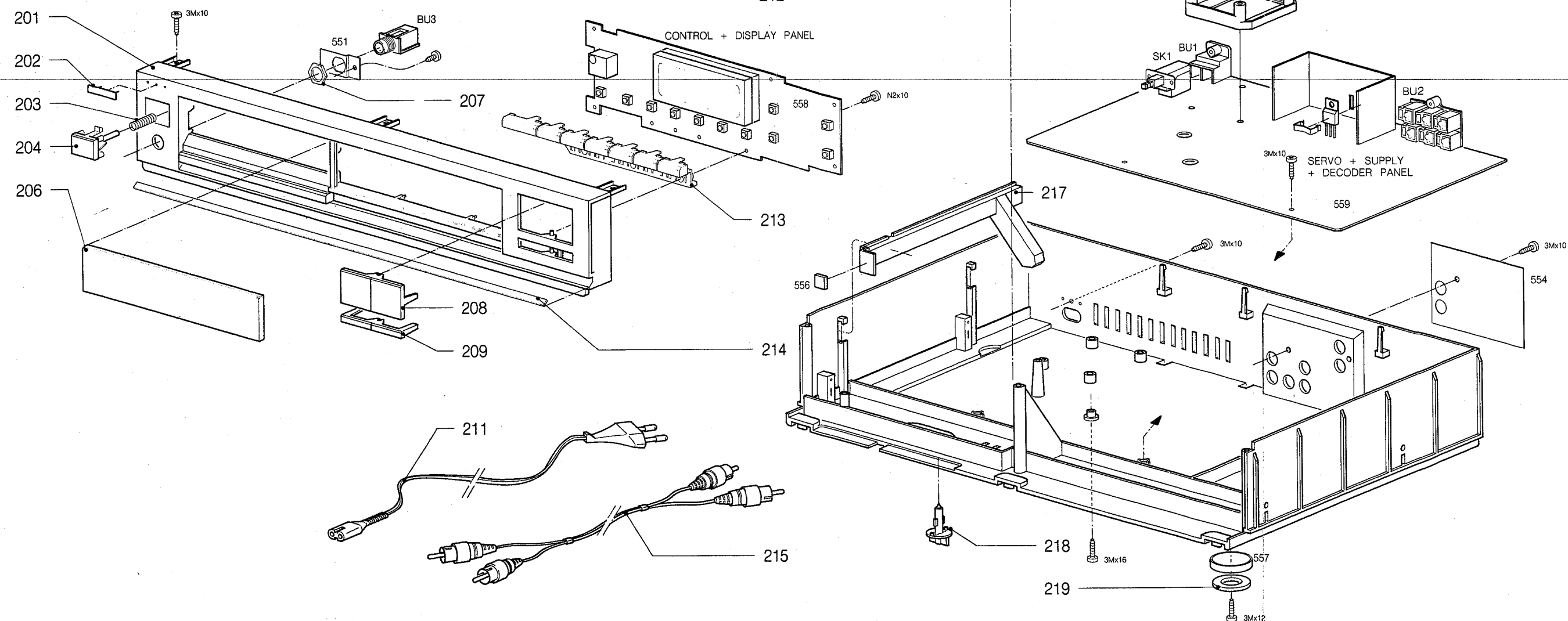
PARTS LIST LOADING

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

MECHNICAL PARTS CABINET

201	4822 444 40261	/00B	211	4822 321 10457	/00B/00R
201	4822 443 40663	/00R/05R	211	4822 321 10522	/05R
201	4822 444 40259	/17R	211	4822 321 10445	/17R
202	4822 459 10771	/00B/00R/05R	212	4822 444 60584	/00B
202	4822 459 10831	/17R	212	4822 443 40662	/00R/05R/17R
203	4822 492 51723		213	4822 410 26642	/00B
204	4822 410 26643	/00B	213	4822 410 30487	/00R/05R/17R
204	4822 410 26533	/00R/05R/17R	214	4822 454 30416	/00B
206	4822 450 61253	/00B	214	4822 460 20749	/00R/05R/17R
206	4822 381 11006	/00R/05R/17R	215	4822 321 22873	
207	4822 505 10571		216	4822 444 60561	/00B
208	4822 410 26641	/00B	216	4822 444 60521	/00R/05R/17R
208	4822 410 26571	/00R/05R/17R	217	4822 535 92405	
209	4822 410 26639	/00B	218	4822 417 20162	
209	4822 410 26572	/00R/05R/17R	219	4822 462 41267	



EVA.00598
T33/820
CD582



MDA.01389
T-08 823

MDA.01386
T-08 823

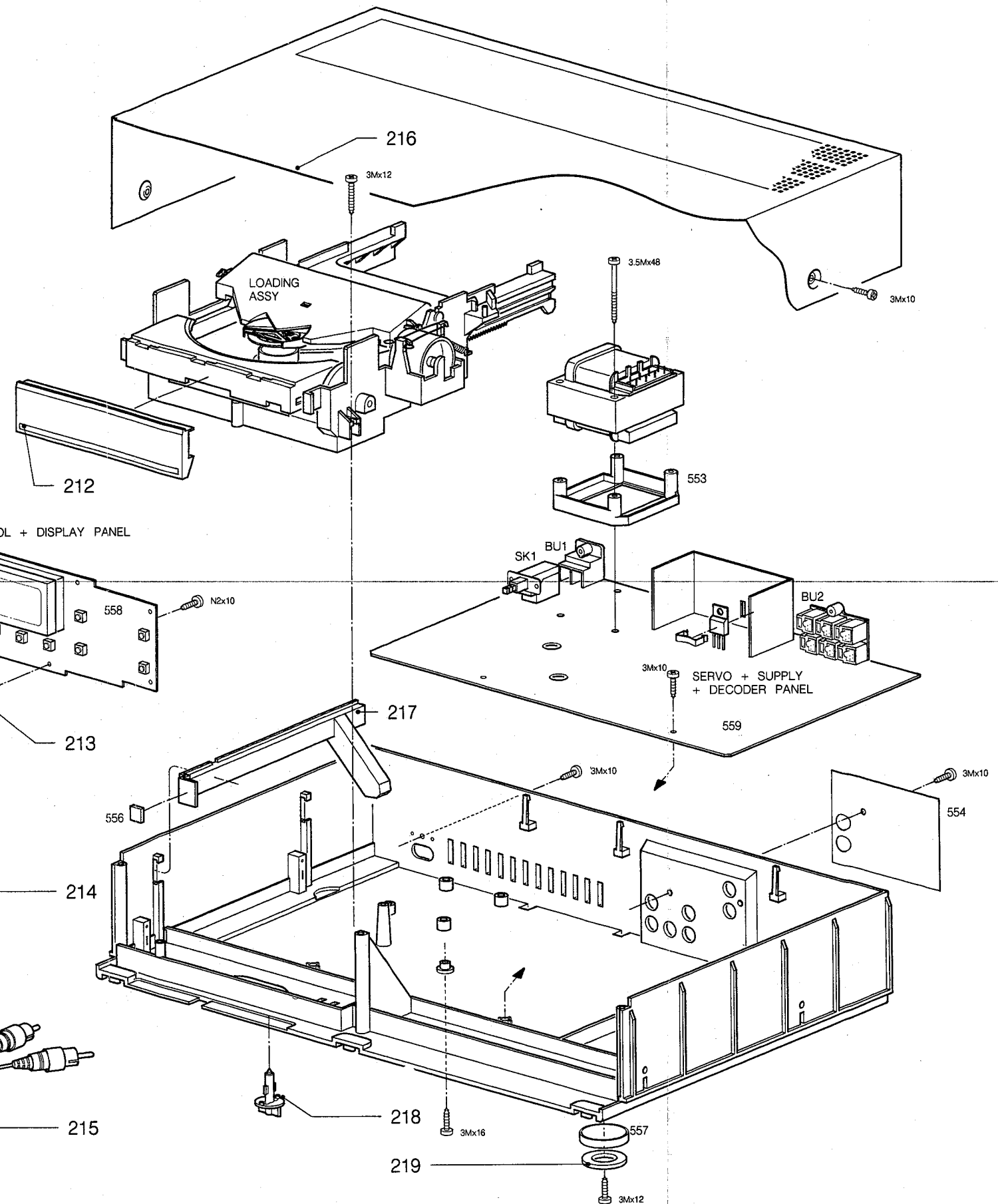
MDA.01378
T-08 824

MDA.01379
T-08. 824

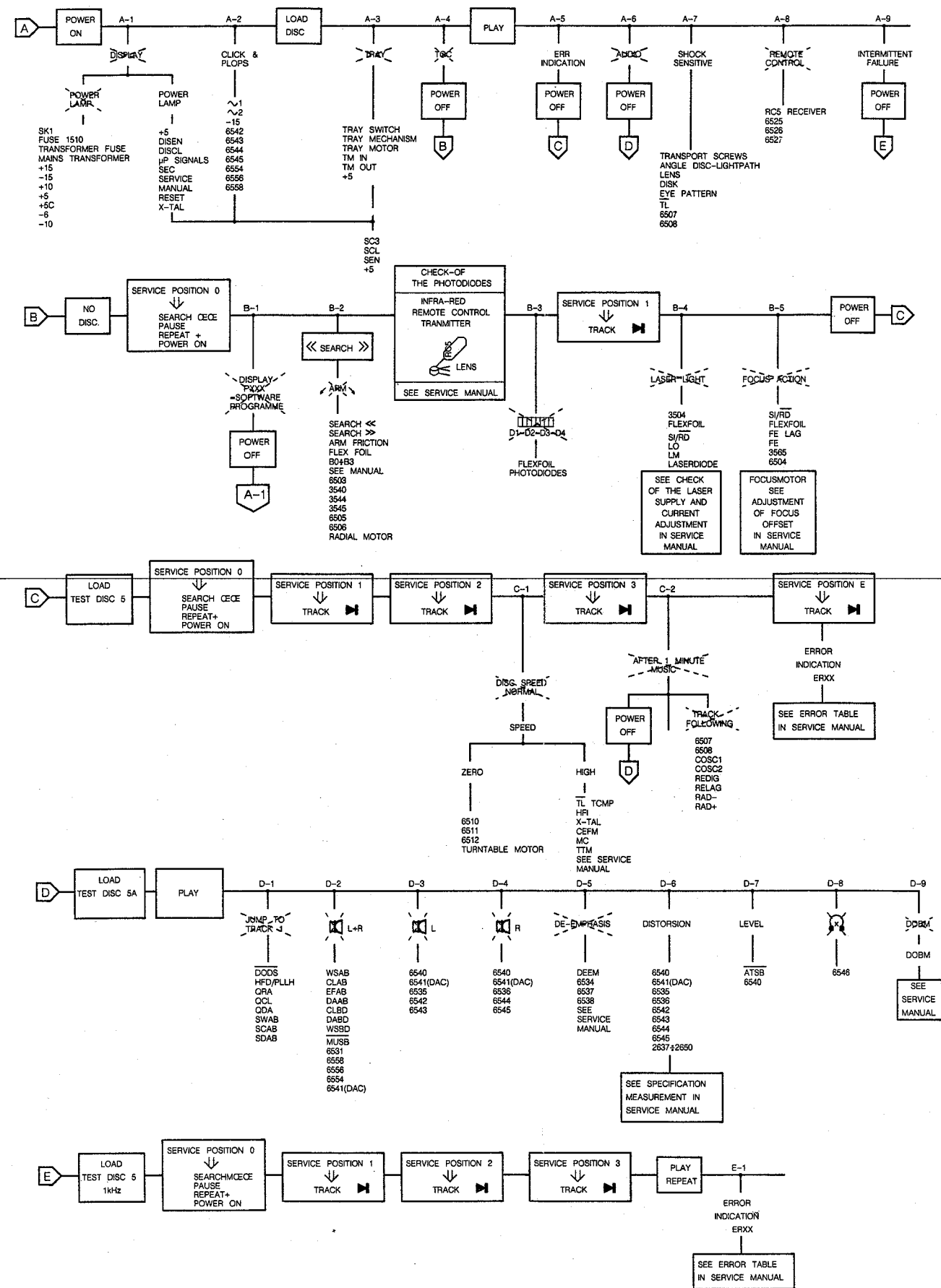
EXPLODED VIEW CABINET

MECHANICAL PARTS CABINET

201	4822 444 40288	584/00R	212	4822 443 40662	582/00R/05R/17R
201	4822 444 40261	582/00B	213	4822 410 26642	582/00B
201	4822 443 40663	582/00R/05R	213	4822 410 30487	582/00R/05R/17R
201	4822 444 40259	582/17R	214	4822 454 30416	582/00B
202	4822 459 10771	582/00B/00R/05R	214	4822 460 20749	582/00R/05R/17R
202	4822 459 10831	582/17R	215	4822 321 22873	
203	4822 492 51723		216	4822 444 60561	582/00B
204	4822 410 26643	582/00B	216	4822 444 60521	582/00R/05R/17R
204	4822 410 26533	582/00R/05R/17R	217	4822 535 92405	
206	4822 450 61253	582/00B	218	4822 417 20162	
206	4822 381 11006	582/00R/05R/17R	219	4822 462 41267	582/00B/00R/05R/17R
207	4822 505 10571		219	4822 444 30404	584/00R
208	4822 410 26641	582/00B			
208	4822 410 26571	582/00R/05R/17R			
209	4822 410 26639	582/00B			
209	4822 410 26572	582/00R/05R/17R			
211	4822 321 10457	582/00B/00R			
211	4822 321 10522	582/05R			
211	4822 321 10445	582/17R			
212	4822 444 60584	582/00B			

EVA.00598
T33/820

3-1-a
ELECTRICAL MEASUREMENTS AND ADJUSTMENTS



A1
μP-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 B23

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 B23

B3
CHECK OF THE PHOTODIODES

STEP	SIGNAL	MODE				REMARKS
1	-	POWER ON				SIGNAL DEPENDS ON DISTANCE LENS ← LED OF REMOTE CONTROL

MDA.01378
T-08 B24

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

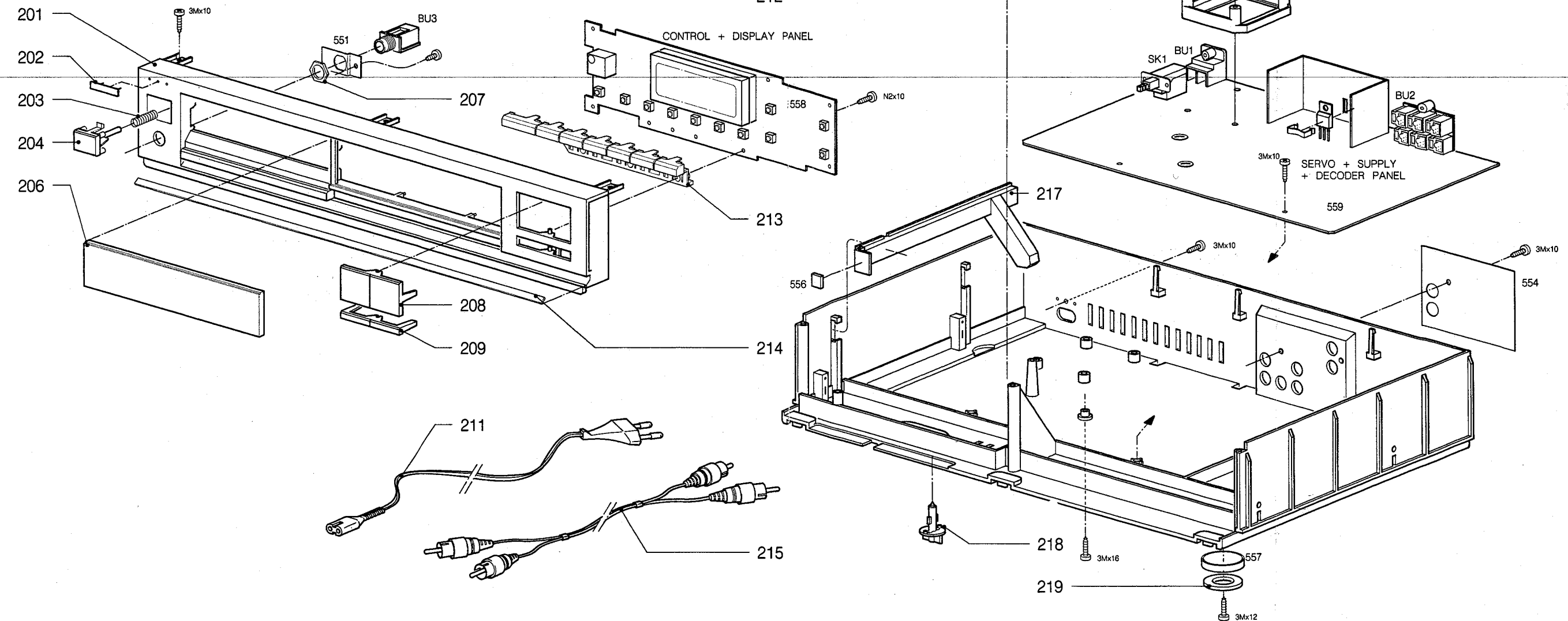
STEP	SIGNAL	MODE				REMARKS
1	LO	SERV. POS. 2			1.8 < V < 2.3	Si=1 GREEN LED to LO to LM CONNECTED DIRECTLY TO PANEL
	LM	SK			170 < mV < 220	
2	LO	SERV. POS. 2			1.8 < V < 2.3	Si=1 GREEN LED to LO to LM CONNECTED DIRECTLY TO PANEL
	LM	SK			170 < mV < 220	
3	LO	POWER ON			0V ± 0.2V	Si=0 NO LIGHT

MDA.01379
T-08 B24

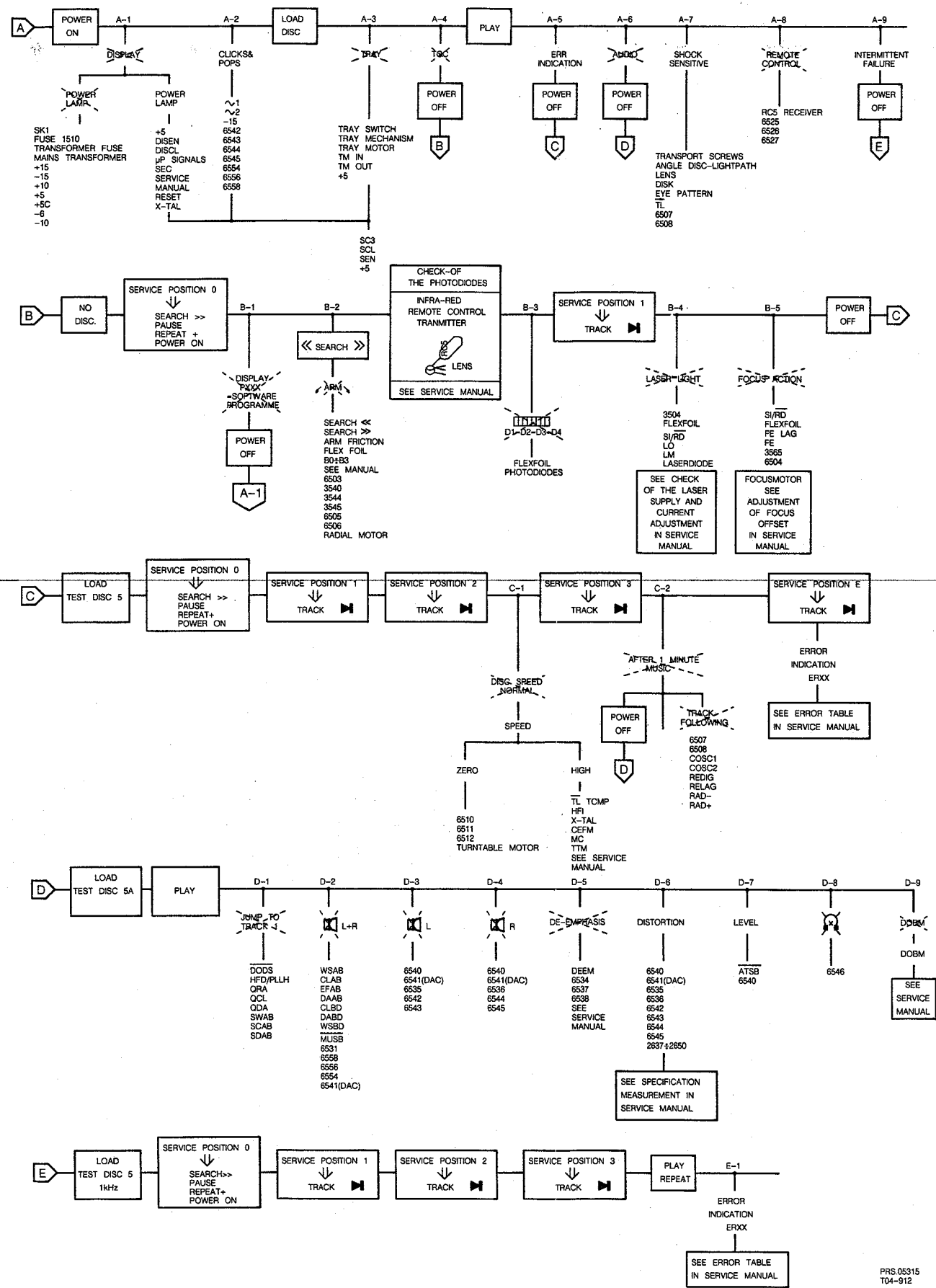
EXPLODED VIEW CABINET

MECHANICAL PARTS CABINET

201	4822 444 40288	584/00R	212	4822 443 40662	582/00R/05R/17R/01R/07R
201	4822 444 40261	582/00B	213	4822 410 26642	582/00B
201	4822 443 40663	582/00R/05R/01R	213	4822 410 30487	582/00R/05R/17R/01R/07R
201	4822 444 40259	582/17R/07R	214	4822 454 30416	582/00B
202	4822 459 10771	582/00B/00R/05R/01R	214	4822 460 20749	582/00R/05R/17R/01R/07R
202	4822 459 10831	582/17R/07R	215	4822 321 22873	
203	4822 492 51723		216	4822 444 60561	582/00B
204	4822 410 26643	582/00B	216	4822 444 60521	582/00R/05R/17R/01R/07R
204	4822 410 26533	582/00R/05R/17R/01R/07R	217	4822 535 92405	
206	4822 450 61253	582/00B	218	4822 417 20162	
206	4822 381 11006	582/00R/05R/17R/01R/07R	219	4822 462 41267	582/00B/00R/05R/17R/01R/07R
207	4822 505 10571		219	4822 444 30404	584/00R
208	4822 410 26641	582/00B			
208	4822 410 26571	582/00R/05R/17R/01R/07R			
209	4822 410 26639	582/00B			
209	4822 410 26572	582/00R/05R/17R/01R/07R			
211	4822 321 10457	582/00B/00R/01R			
211	4822 321 10522	582/05R			
211	4822 321 10445	582/17R/07R			
212	4822 444 60584	582/00B			

EVA.00598
T33/820

3-1-b
ELECTRICAL MEASUREMENTS AND ADJUSTMENTS



A1
µP-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 01388
T-08 823

B3
CHECK OF THE PHOTODIODES

STEP	SIGNAL	MODE					REMARKS
1	-	POWER ON				SEE DRAWING 3831A12	SIGNAL DEPENDS ON DISTANCE LENS -> MR LED OF 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			$1.8 < V < 3$		Si=1 GREEN LED to LO to LM CONNECTED DIRECTLY TO PANEL
	LM	SK			$170 < mV < 220$		
2	LO	SERV. POS. 2			$1.8 < V < 3$		Si=1 GREEN LED to LO to LM CONNECTED DIRECTLY TO PANEL
	LM	SK			$170 < mV < 220$		
3	LO	POWER ON			$0V \pm 0.2V$		Si=0 NO LIGHT

MDA 01379
T-08 824

B4
LASER CURRENT ADJUSTMENT

STEP	SIGNAL	MODE					REMARKS
1	—	POWER OFF		R3520	1k Ω	—	PRE-ADJUSTMENT OHMIC VALUE
2	EYE-PATTERN HF	TEST DISC 5 PLAY		—	—	SEE DRAWING 37017B8	IF NO SIGNAL SEE: "START UP PROCEDURE"
3	LASER CURRENT $\pm$ VOLTAGE ACROSS R3501	TEST DISC 5 PLAY TRACK 1		R3520	50mV DC	—	—

MDA.01380
T-08 823

B5
ADJUSTMENT OF FOCUS-OFFSET

STEP	SIGNAL	MODE					REMARKS
1	—	POWER ON	—	R3569	—	—	ADJUST FOR OPTICAL MID-POSITION
2	FE LAG	PLAY TEST DISC 5 TRACK 1		R3569	400mV $\pm$ 40mV DC	—	FINE ADJUSTMENT

MDA.01381
T-08 824

B5
FOCUS ACTION

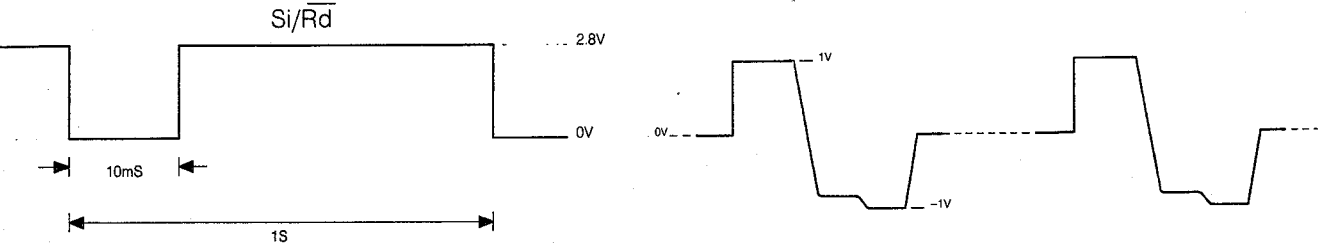
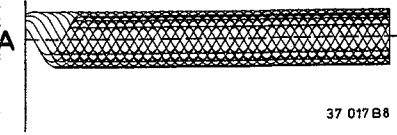
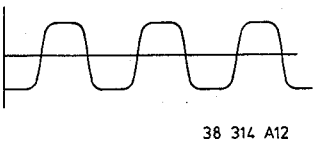
SIGNAL	MODE				REMARKS
Si/Rd	SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	21		PULS "LOW"	SEE DRAWING: MDA.01403
FE	TEST DISC 5A, SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	26			SEE DRAWING: MDA.01413
FE-LAG	TEST DISC 5A,	27			SEE: ADJUSTMENT OF FOCUS-OFFSET

MDA.01384
T-08 823

C1
HIGH SPEED DISC ROTATION

SIGNAL	MODE				REMARKS
TL	TEST DISC 5, PLAY OR SERVICE POSITION 2	13		PULSES "LOW"	WHEN THE DISC IS SLOWLY BRAKED BY HAND
TCMP	TEST DISC 5, PLAY OR SERVICE POSITION 2	14	+5V		AFTER 4 TL PULSES
HFI	TEST DISC 5, PLAY OR SERVICE POSITION 2	65			SEE DRAWING: 37017B8
X-lal	TEST DISC 5A, PLAY OR SERVICE POSITION 2	69		11.28MHz	IF THIS FREQUENCY DEVIATES CHECK X-OUT ON FILTER-B
CEFM	TEST DISC 5A, PLAY OR SERVICE POSITION 2	68		4.32MHz	
MC	TEST DISC 5, PLAY OR SERVICE POSITION 2	81			SEE DRAWING: 38849A12
TTM-	TEST DISC 5A, PLAY OR SERVICE POSITION 2	16	APPROX -1V		

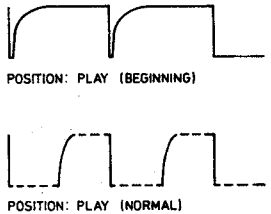
MDA.01385
T-08 823



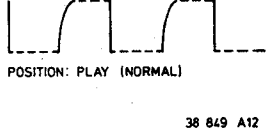
MDA.01413
T33/823



POSITION PLAYER	POWER ON	SERVICE POSITION 3	PLAY	SEARCH, PAUSE
DODS SIGNAL	LOW	HIGH	HIGH	



MDA.01143
T12 -651



MDA.00240
T07-804

C2
TRACK FOLLOWING

SIGNAL	MODE				REMARKS
C osc1	TEST DISC 5, PLAY OR SERVICE POSITION 3	30		650Hz	
C osc2	TEST DISC 5, PLAY OR SERVICE POSITION 3	31		650Hz	
RE dig	TEST DISC 5, PLAY OR SERVICE POSITION 3	37		PULSES "HIGH"	WHEN THE DISC IS SLOWLY BRAKED BY HAND
RE lag	TEST DISC 5, PLAY OR SERVICE POSITION 3	41	APPROX 2.5V DC		

MDA.01387
T-08 823

D1
JUMP TO TRACK 1

SIGNAL	MODE				REMARKS
DOOS	TEST DISC 5A, SEARCH >>R SEARCH <<	19			SEE DRAWING: MDA.01143
HFD/PLLH	TEST DISC 5A: TRACK 15, PLAY	23		PULSES "LOW"	SEE DRAWING: MDA.00240 WHEN THE DISC IS SLOWLY BRAKED BY HAND
QRA	TEST DISC 5A, PLAY	75			SEE DRAWING: MDA.00453
QDA	TEST DISC 5A, PLAY	77			
QCL	TEST DISC 5A, PLAY	76			
SWAB	TEST DISC 5A, PLAY	78			SEE DRAWING: MDA.00239
SCAB	TEST DISC 5A, PLAY	79			SEE DRAWING: MDA.00239
SDAB	TEST DISC 5A, PLAY	80			SEE DRAWING: MDA.00239

MDA.01388
T-08 823

D2
NO AUDIO OUTPUT LEFT + RIGHT

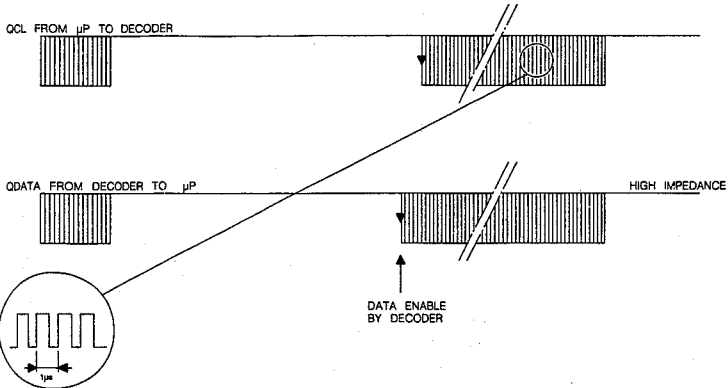
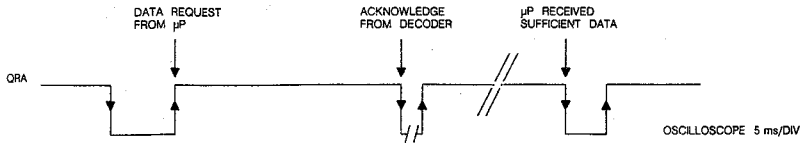
SIGNAL	MODE				REMARKS
WSAB	DISC, PLAY	71			SEE DRAWING: 38847C12
CLAB	DISC, PLAY	72			SEE DRAWING: 38847C12
DAAB	DISC, PLAY	73		ACTIVITY	SEE DRAWING: 38847C12
EFAB	TEST DISC 5A,	74		PULSES	WHEN THE DISC IS SLOWLY BRAKED BY HAND
CLBD	DISC, PLAY	87			SEE DRAWING: 38848C12
DABD	DISC, PLAY	86		ACTIVITY	SEE DRAWING: 38848C12
WSBD	DISC, PLAY	85			SEE DRAWING: 38848C12
MUSB	DISC, PAUSE, OR NEXT OR PREVIOUS	90		"LOW"	

MDA.01390
T-08 823

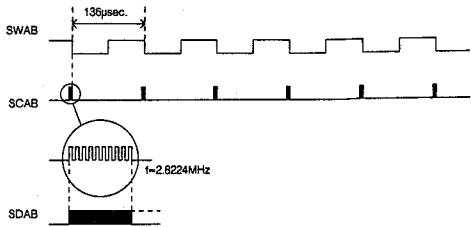
DAC IC

SIGNAL	MODE				REMARKS
OUTPUT OF OP-AMP	DISC, PLAY	94		LF SIGNAL	LEFT CHANNEL
OUTPUT OF OP-AMP	DISC, PLAY	95		LF SIGNAL	RIGHT CHANNEL

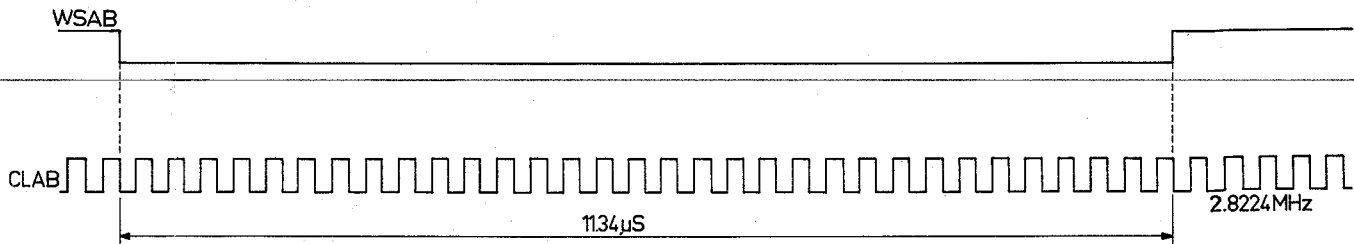
MDA.01392
T-08 823



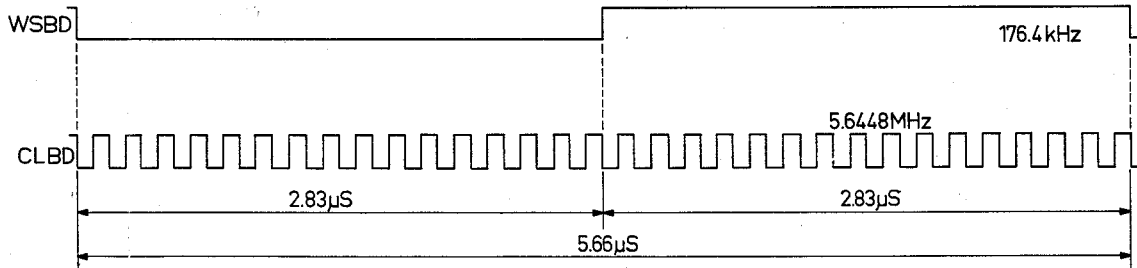
MDA.00453
T27/649



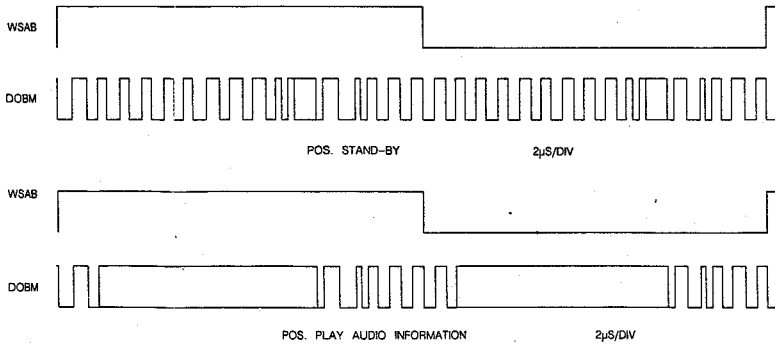
MDA.00239
T12/638
CD450



38 847 C12



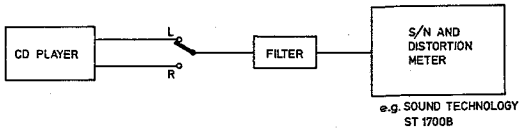
38 848 C12



POS. PLAY AUDIO INFORMATION

2µS/DIV

MDA.00238
T07/733



30 459 A12

B4
LASER CURRENT ADJUSTMENT

STEP	SIGNAL	MODE					REMARKS
1	—	POWER OFF		R3520	1k Ω	—	PRE-ADJUSTMENT OHMIC VALUE
2	EYE-PATTERN HF	TEST DISC 5 PLAY		—	—	SEE DRAWING 37017B8	IF NO SIGNAL SEE: "START UP PROCEDURE"
3	LASER CURRENT $\pm$ VOLTAGE ACROSS R3501	TEST DISC 5 PLAY TRACK 1		R3520	50mV DC	—	—

MDA.01380
T-08 823

B5
ADJUSTMENT OF FOCUS-OFFSET

STEP	SIGNAL	MODE					REMARKS
1	—	POWER ON	—	R3569	—	—	ADJUST FOR OPTICAL MID-POSITION
2	FE LAG	PLAY TEST DISC 5 TRACK 1		R3569	400mV $\pm$ 40mV DC	—	FINE ADJUSTMENT

MDA.01381
T-08 824

B5
FOCUS ACTION

SIGNAL	MODE				REMARKS
Si/Rd	SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	21		PULS "LOW"	SEE DRAWING: MDA.01403 NO DISC INSERTED
FE	TEST DISC 5A, SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	26			SEE DRAWING: MDA.01413 NO DISC
FE-LAG	TEST DISC 5A,	27			SEE: ADJUSTMENT OF FOCUS-OFFSET

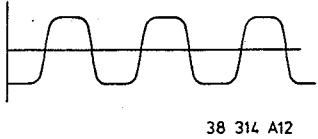
MDA.01384
T-08 841

C1
HIGH SPEED DISC ROTATION

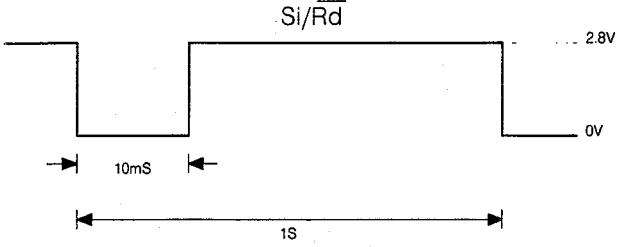
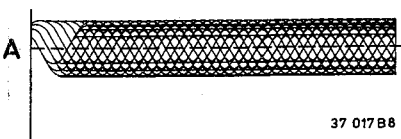
SIGNAL	MODE				REMARKS
TL	TEST DISC 5, PLAY OR SERVICE POSITION 2	13		PULSES "LOW"	WHEN THE DISC IS SLOWLY BRAKED BY HAND
TCMP	TEST DISC 5, PLAY OR SERVICE POSITION 2	14	+5V		AFTER 4 TL PULSES
HFI	TEST DISC 5, PLAY OR SERVICE POSITION 2	65			SEE DRAWING: 37017B8
X-1a1	TEST DISC 5A, PLAY OR SERVICE POSITION 2	69		11.28MHz	IF THIS FREQUENCY DEVIATES CHECK X-OUT ON FILTER-B
CEFM	TEST DISC 5A, PLAY OR SERVICE POSITION 2	68		4.32MHz	
MC	TEST DISC 5, PLAY OR SERVICE POSITION 2	81			SEE DRAWING: 38849A12
TTM-	TEST DISC 5A, PLAY OR SERVICE POSITION 2	16	APPROX -1V		

MDA.01385
T-08 823

CHECK OF THE PHOTODIODES

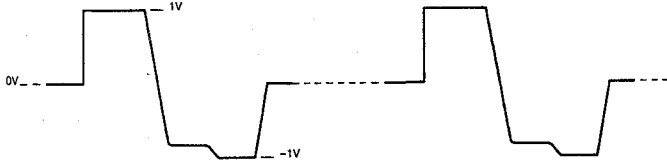


HF-EYE PATTERN



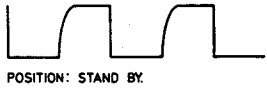
MDA.01403
T33/821

FE-SIGNAL

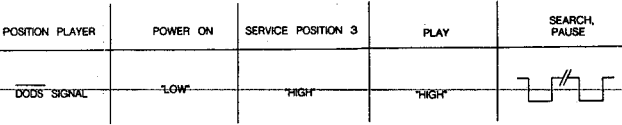


MDA.01413
T33/823

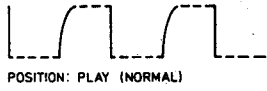
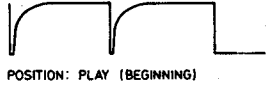
MC-SIGNAL



DODS-SIGNAL

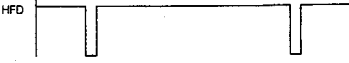


MDA.01143
T12 -651



38 849 A12

HFD-SIGNAL



MDA.00240
T07-804

C2
TRACK FOLLOWING

SIGNAL	MODE				REMARKS
C osc1	TEST DISC 5, PLAY OR SERVICE POSITION 3	30		650Hz	
C osc2	TEST DISC 5, PLAY OR SERVICE POSITION 3	31		650Hz	
RE dig	TEST DISC 5, PLAY OR SERVICE POSITION 3	37		PULSES "HIGH"	WHEN THE DISC IS SLOWLY BRAKED BY HAND
RE lag	TEST DISC 5, PLAY OR SERVICE POSITION 3	41	APPROX 2.5V DC		

MDA.01387
T-08 823

D1
JUMP TO TRACK 1

SIGNAL	MODE				REMARKS
DODS	TEST DISC 5A, SEARCH >>>R SEARCH <<<	19			SEE DRAWING: MDA.01143
HFD/PLH	TEST DISC 5A: TRACK 15, PLAY	23		PULSES "LOW"	SEE DRAWING: MDA.00240 WHEN THE DISC IS SLOWLY BRAKED BY HAND
QRA	TEST DISC 5A, PLAY	75			SEE DRAWING: MDA.00453
ODA	TEST DISC 5A, PLAY	77			
OCL	TEST DISC 5A, PLAY	76			
SWAB	TEST DISC 5A, PLAY	78			SEE DRAWING: MDA.00239
SCAB	TEST DISC 5A, PLAY	79			SEE DRAWING: MDA.00239
SDAB	TEST DISC 5A, PLAY	80			SEE DRAWING: MDA.00239

MDA.01388
T-08 823

D2
NO AUDIO OUTPUT LEFT + RIGHT

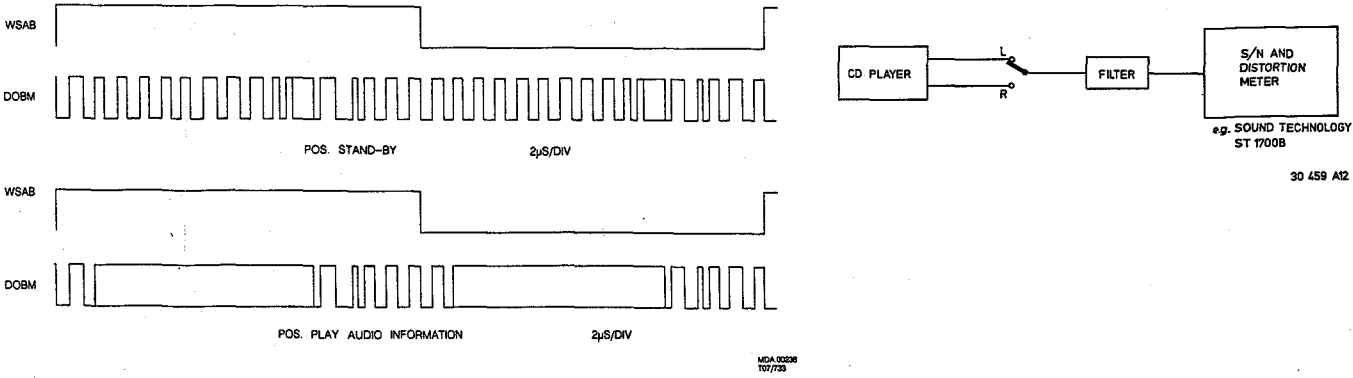
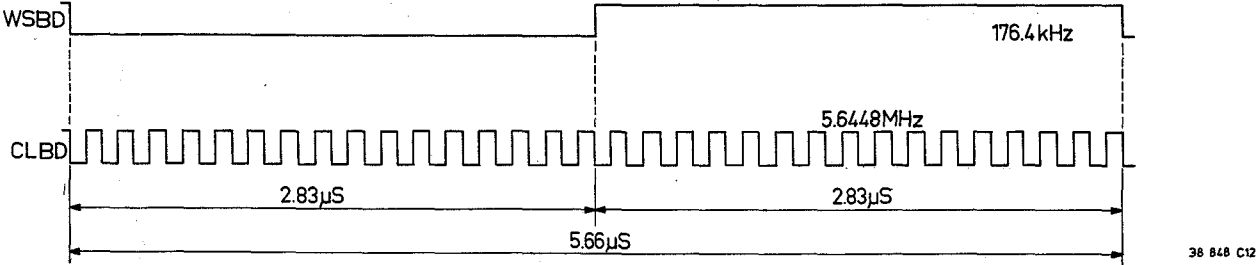
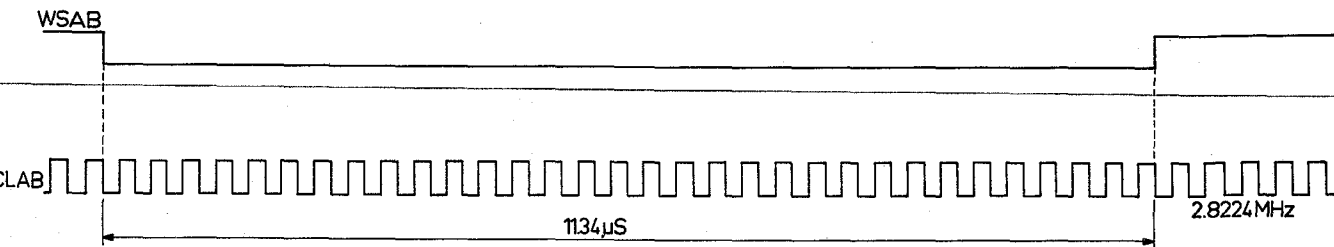
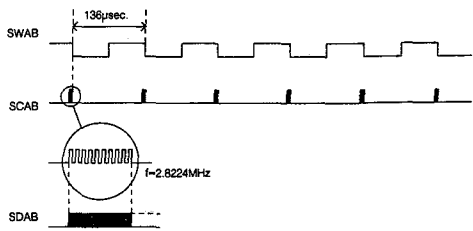
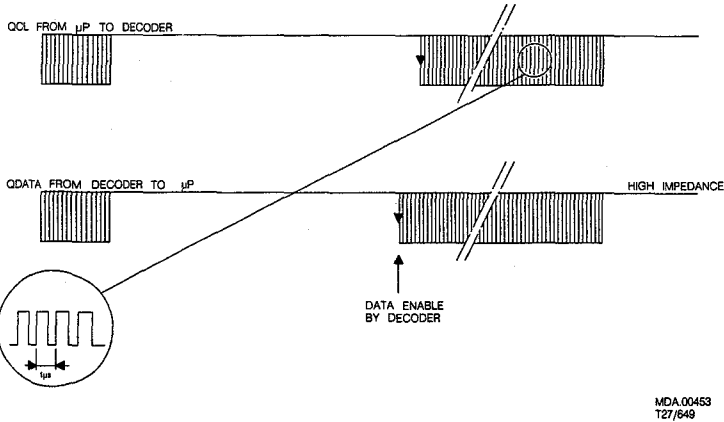
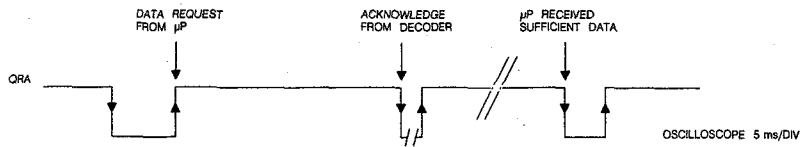
SIGNAL	MODE				REMARKS
WSAB	DISC, PLAY	71			SEE DRAWING: 38847C12
CLAB	DISC, PLAY	72			SEE DRAWING: 38847C12
DAAB	DISC, PLAY	73		ACTIVITY	SEE DRAWING: 38847C12
EFAB	TEST DISC 5A,	74		PULSES	WHEN THE DISC IS SLOWLY BRAKED BY HAND
CLBD	DISC, PLAY	87			SEE DRAWING: 38848C12
DABD	DISC, PLAY	86		ACTIVITY	SEE DRAWING: 38848C12
WSBD	DISC, PLAY	85			SEE DRAWING: 38848C12
MUSB	DISC, PAUSE, OR NEXT OR PREVIOUS	90		"LOW"	

MDA.01390
T-08 823

DAC IC

SIGNAL	MODE				REMARKS
OUTPUT OF OP-AMP	DISC, PLAY	94		LF SIGNAL	LEFT CHANNEL
OUTPUT OF OP-AMP	DISC, PLAY	95		LF SIGNAL	RIGHT CHANNEL

MDA.01392
T-08 823



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.01393
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.01395
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

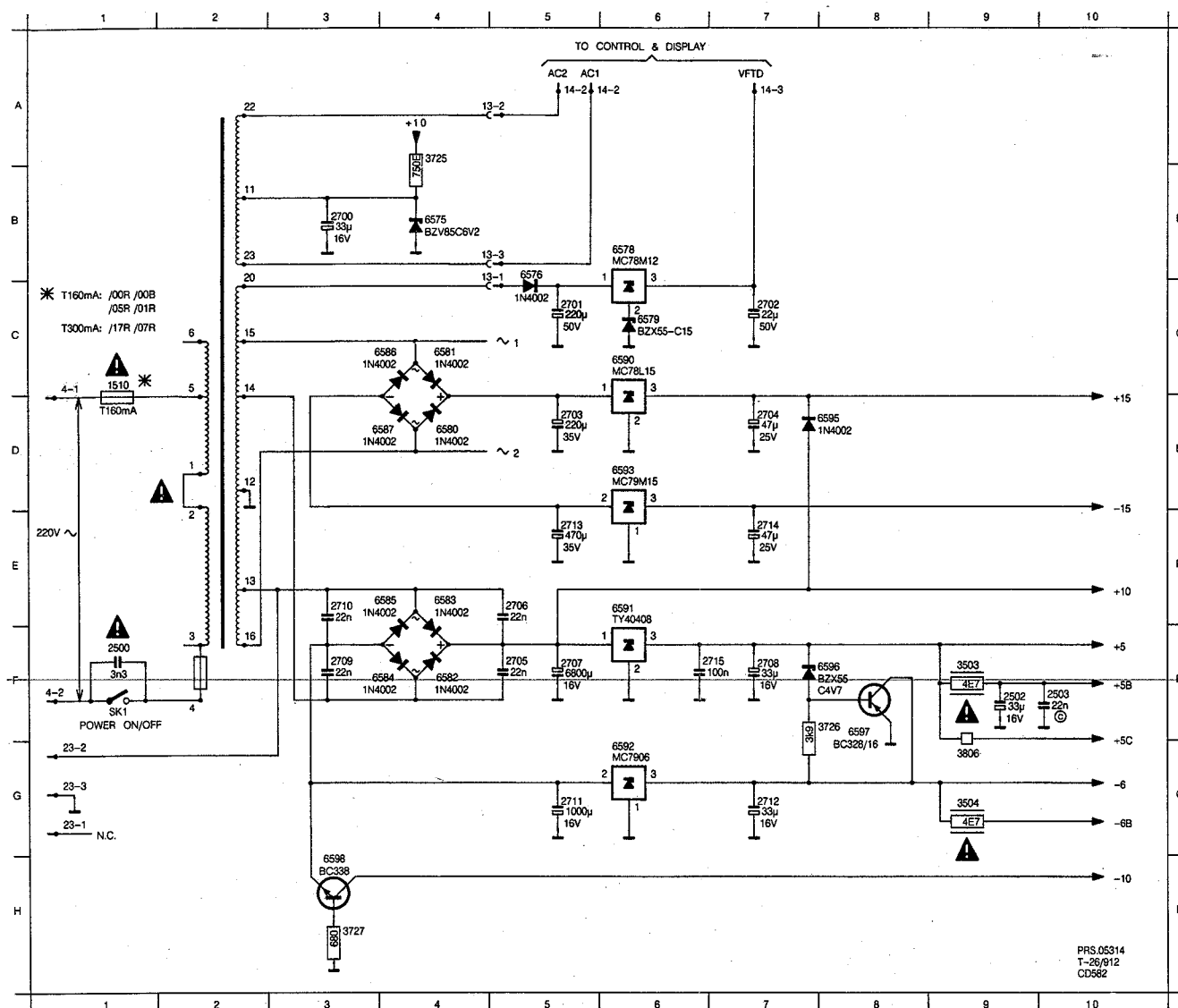
Indi- cation	Cause	Check
Er 01	No RD	Si, Sc, RD, Photodiode signal processor
Er 02	No TL pulse at start-up	TL, HF, Photodiode signal processor, CD disc present
Er 03	No lead-in track found	CD disc, radial arm position, REdig, Radial error processor
Er 04	Too many TL pulses in PLAY	CD disc, HFD
Er 05	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

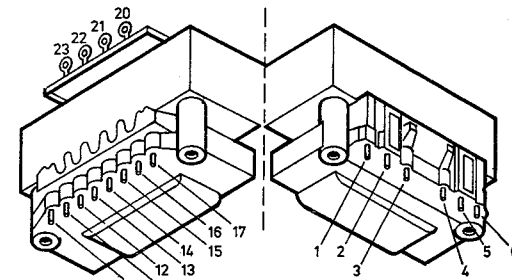
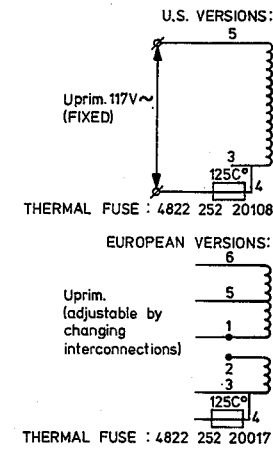
- Er 30 "NEXT" key operated during the last track, with "REPEAT" turned off.
- Er 31 "PREVIOUS" key operated during the first track, with "REPEAT" turned off.
- Er 32 Index selected before a track has been selected.
- Er 33 The selected index number does not exist on this disc.
- Er 34 Programme survey 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-b
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 8	6582	F 4	6586	C 4	6592	G 6	6597	F 8
2500	F 1	2701	C 5	2705	F 5	2709	E 3	2713	E 5	3504	G 9	3806	G 9	6579	C 6	6583	E 4	6587	D 4	6593	D 8	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	6590	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		



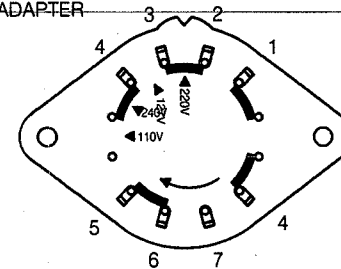
TRANSFORMER CONNECTIONS



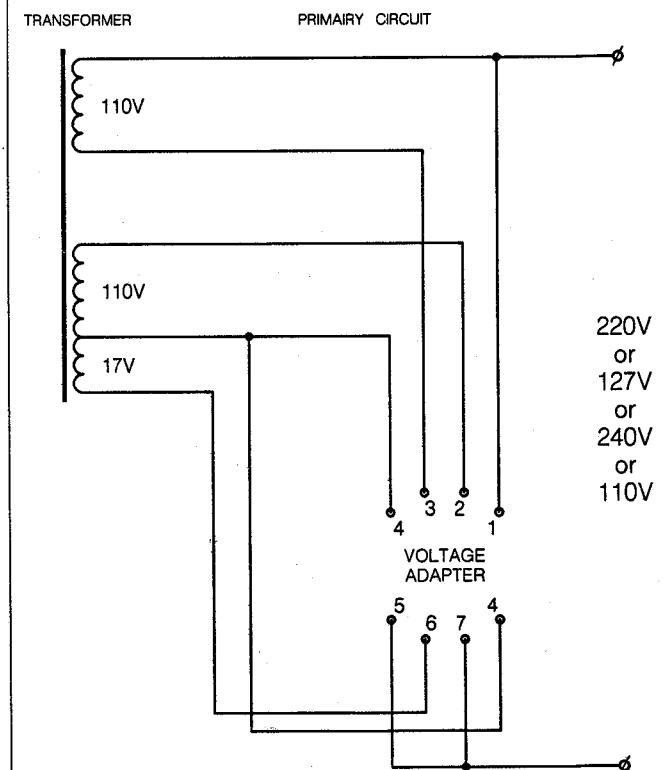
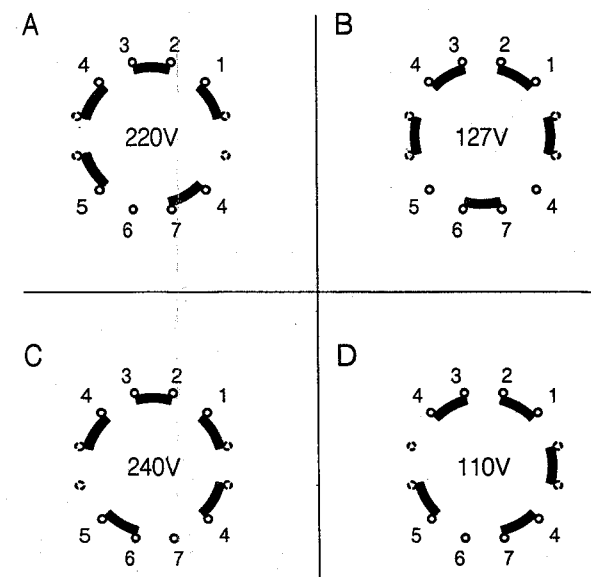
44 241 A11

VOLTAGE ADAPTER (/01R only)

VOLTAGE ADAPTER



CONNECTIONS INSIDE VOLTAGE ADAPTER



MDA.01601
T28/840

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.01393
T-08 825D6
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.01395
T-08 823D9
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

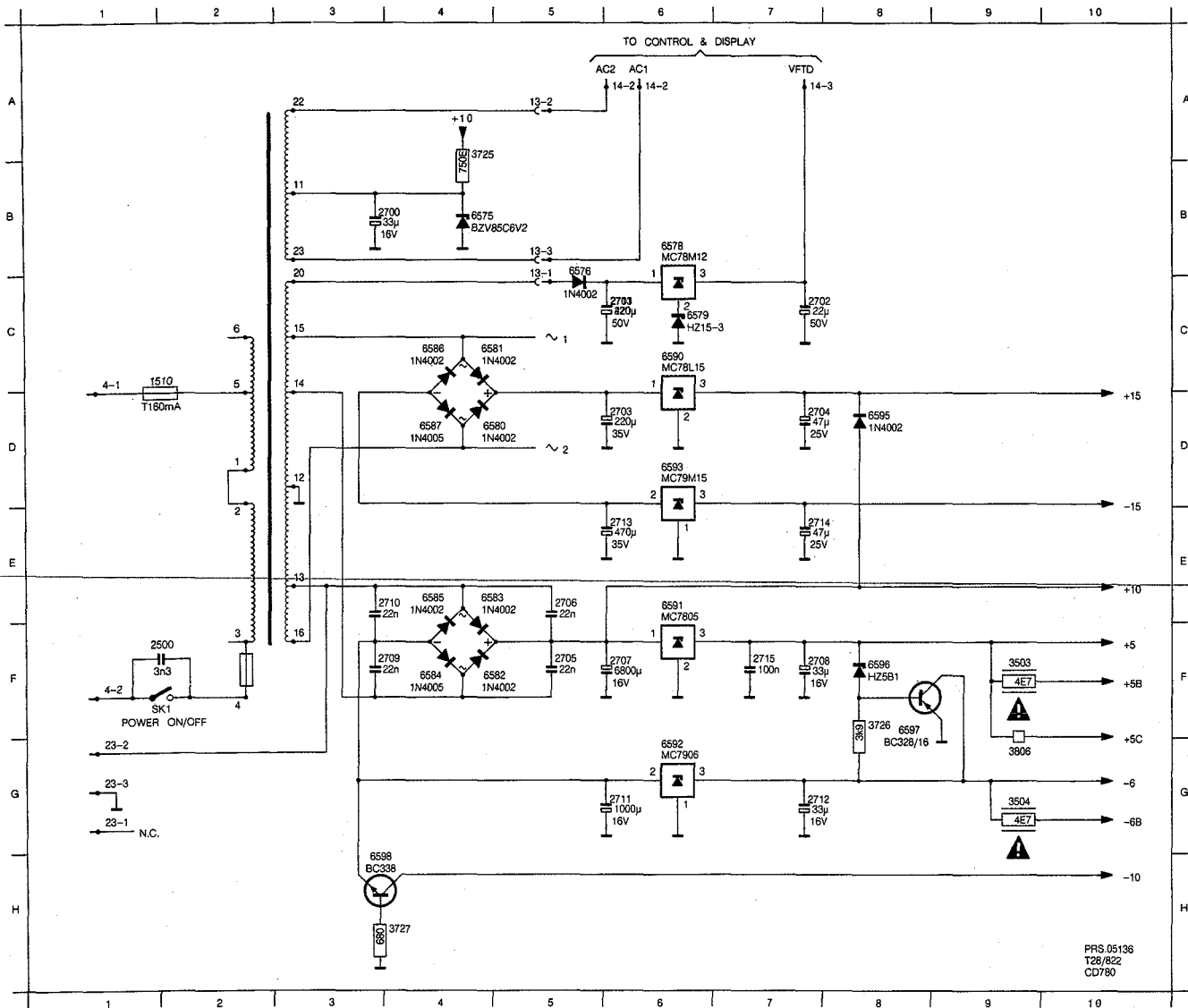
Indi- cation	Cause	Check
Er 01	No RD	Si, Sc, RD, Photodiode signal processor
Er 02	No $\overline{\text{TL}}$ pulse at start-up	$\overline{\text{TL}}$, HF, Photodiode signal processor, CD disc present
Er 03	No lead-in track found	CD disc, radial arm position, REdig, Radial error processor
Er 04	Too many $\overline{\text{TL}}$ pulses in PLAY	CD disc, $\overline{\text{HFD}}$
Er 05	$\overline{\text{TL}}$ pulse > 50 msec. in PLAY	CD disc, HF in, photodiodes
Er 06	No $\overline{\text{TL}}$ 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.
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- 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.

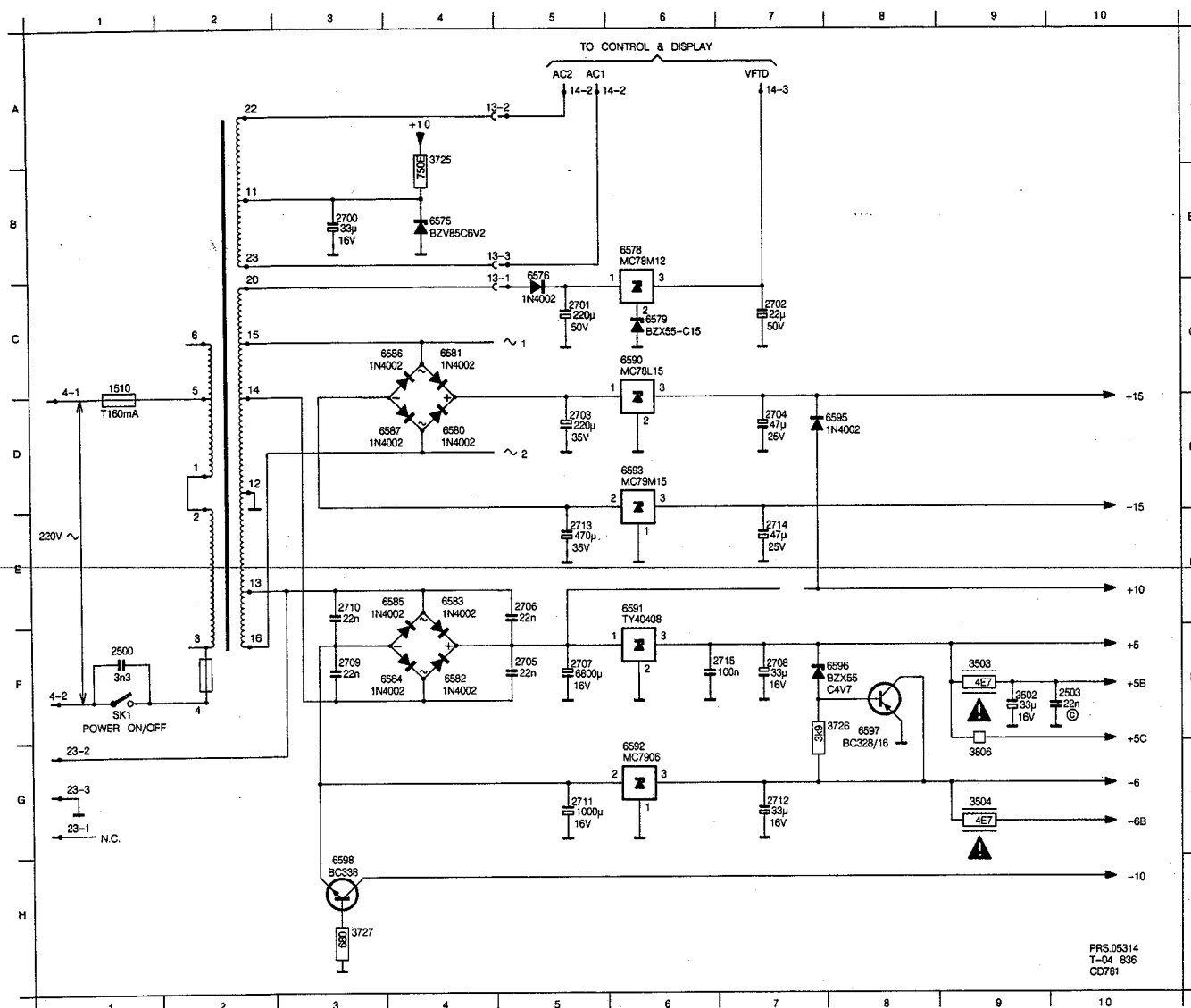
POWER SUPPLY

1510	C 2	2702	C 8	2706	E 5	2710	E 4	2713	C 6	3504	G 9	3806	G 9	6579	C 6	6583	E 5	6587	D 4	6593	D 6	6598	H 3
2500	F 2	2703	D 8	2707	F 6	2711	G 6	2714	E 8	3725	A 4	6575	B 4	6580	D 5	6584	F 4	6590	C 8	6595	D 8	SK1	F 2
2700	B 4	2704	D 8	2708	F 8	2712	G 8	2715	F 7	3726	F 8	6576	B 5	6581	C 5	6585	E 4	6591	E 6	6596	F 8		
2701	C 6	2705	F 5	2709	F 4	2713	E 6	3503	F 9	3727	H 4	6578	B 6	6582	F 5	6586	C 4	6592	G 6	6597	F 8		



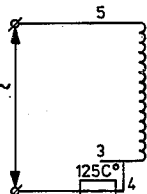
POWER SUPPLY

1510	C	1	2700	B	3	2704	D	7	2708	F	7	2712	G	7	3503	G	9	3727	H	3	6578	B	6	6582	F	4	6586	C	4	6592	G	6	6597	F	8
1500	F	1	2701	C	5	2705	E	5	2709	F	3	2713	E	5	3504	F	9	3806	G	9	6579	B	6	6583	E	4	6587	D	4	6593	D	6	6598	H	3
2500	F	1	2702	C	5	2706	E	5	2710	E	7	2714	E	7	3725	A	4	6575	B	4	6580	D	4	6584	F	4	6590	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			



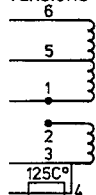
PRS.05314
T-04 836
CD781

Uprim. 1
(FIXED)

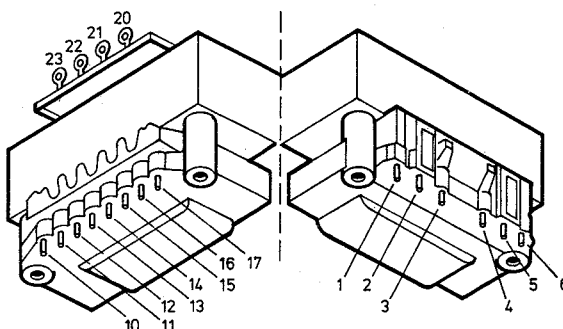


THERMAL FUSE : 4822 252 20108

Uprim.
(adjustable by
changing
interconnections)



THERMAL FUSE : 4822 252 20017



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

**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 01393
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 01395
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

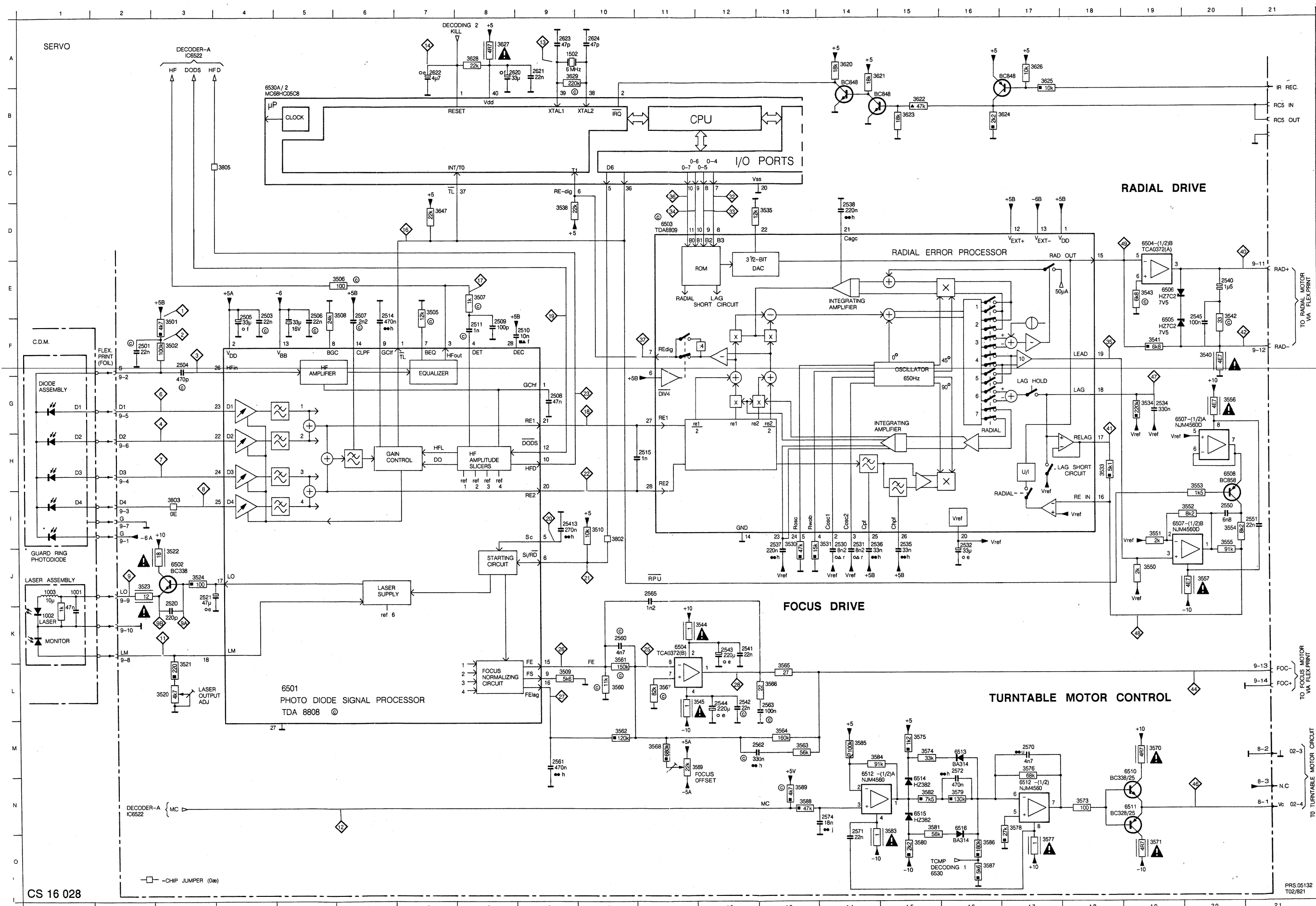
Indi- cation	Cause	Check
Er 01	No RD	Si, Sc, RD, Photodiode signal processor
Er 02	No TL pulse at start-up	TL, HF, Photodiode signal processor, CD disc present
Er 03	No lead-in track found	CD disc, radial arm position, REdig, Radial error processor
Er 04	Too many TL pulses in PLAY	CD disc, HFD
Er 05	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

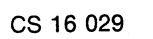
Operating errors

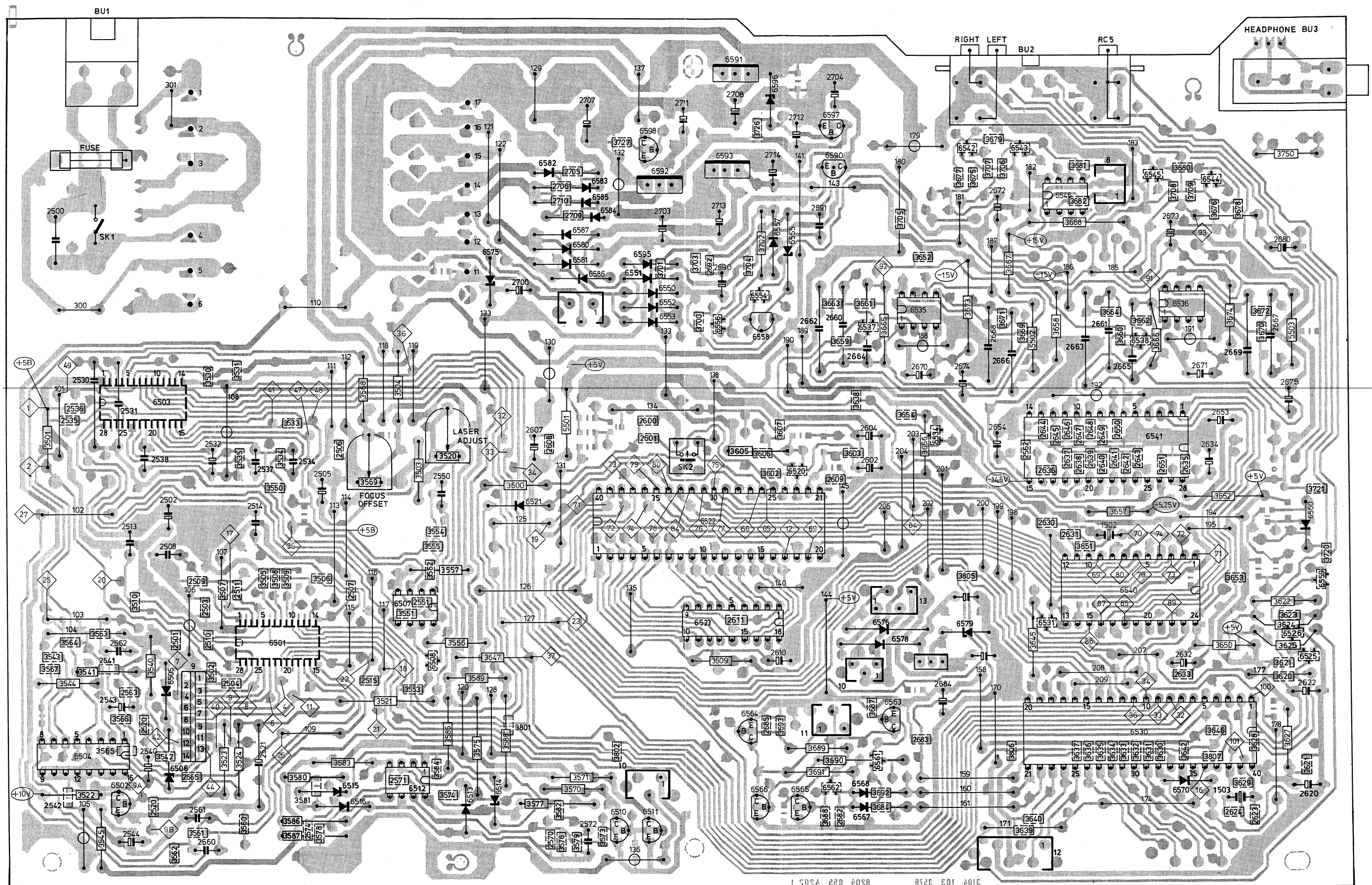
- Er 30 "NEXT" key operated during the last track, with "REPEAT" turned off.
- Er 31 "PREVIOUS" key operated during the first track, with "REPEAT" turned off.
- Er 32 Index selected before a track has been selected.
- Er 33 The selected index number does not exist on this disc.
- Er 34 Programme survey 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.

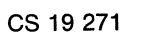


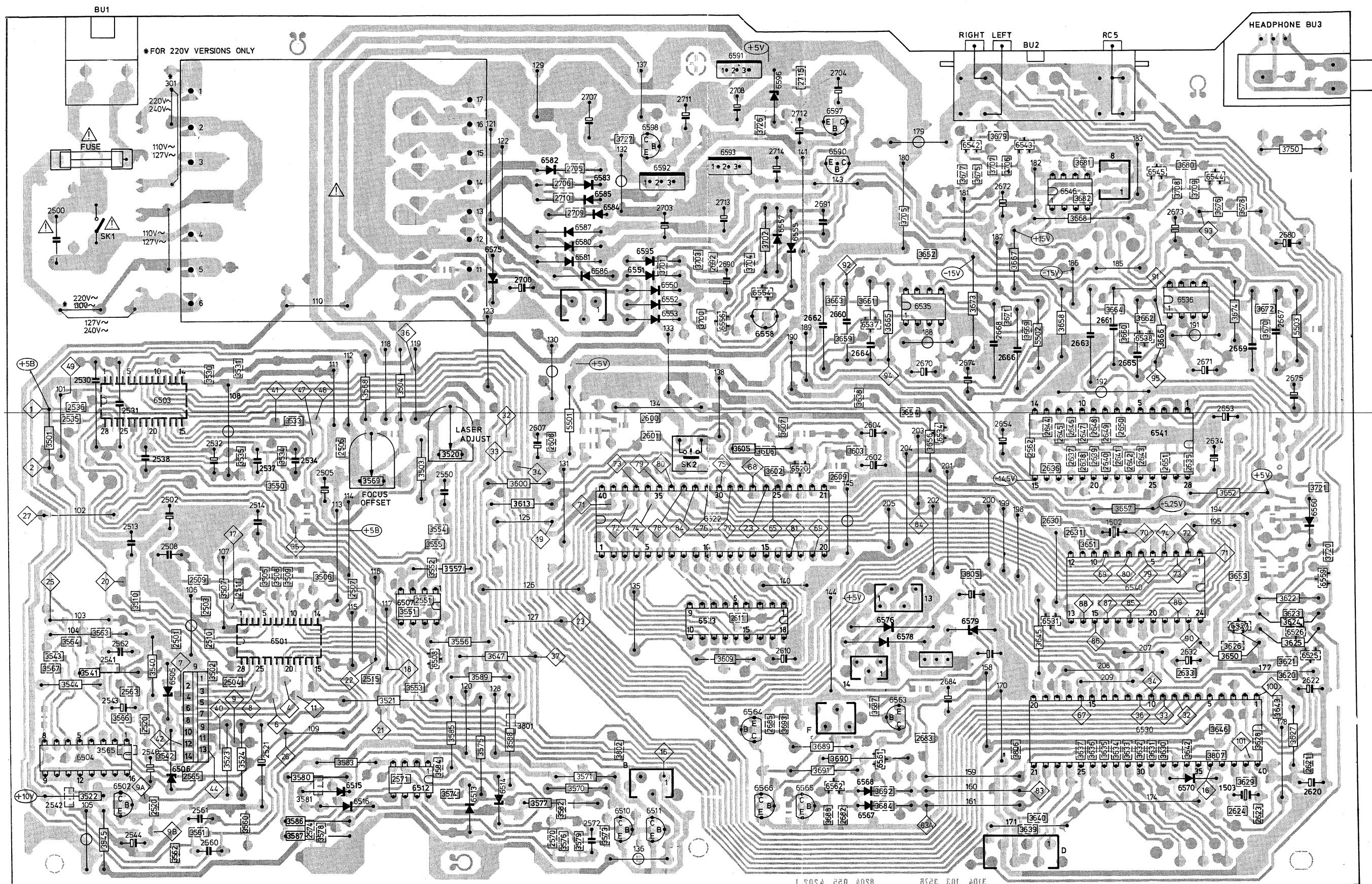
CS 16 352

CS 16 028

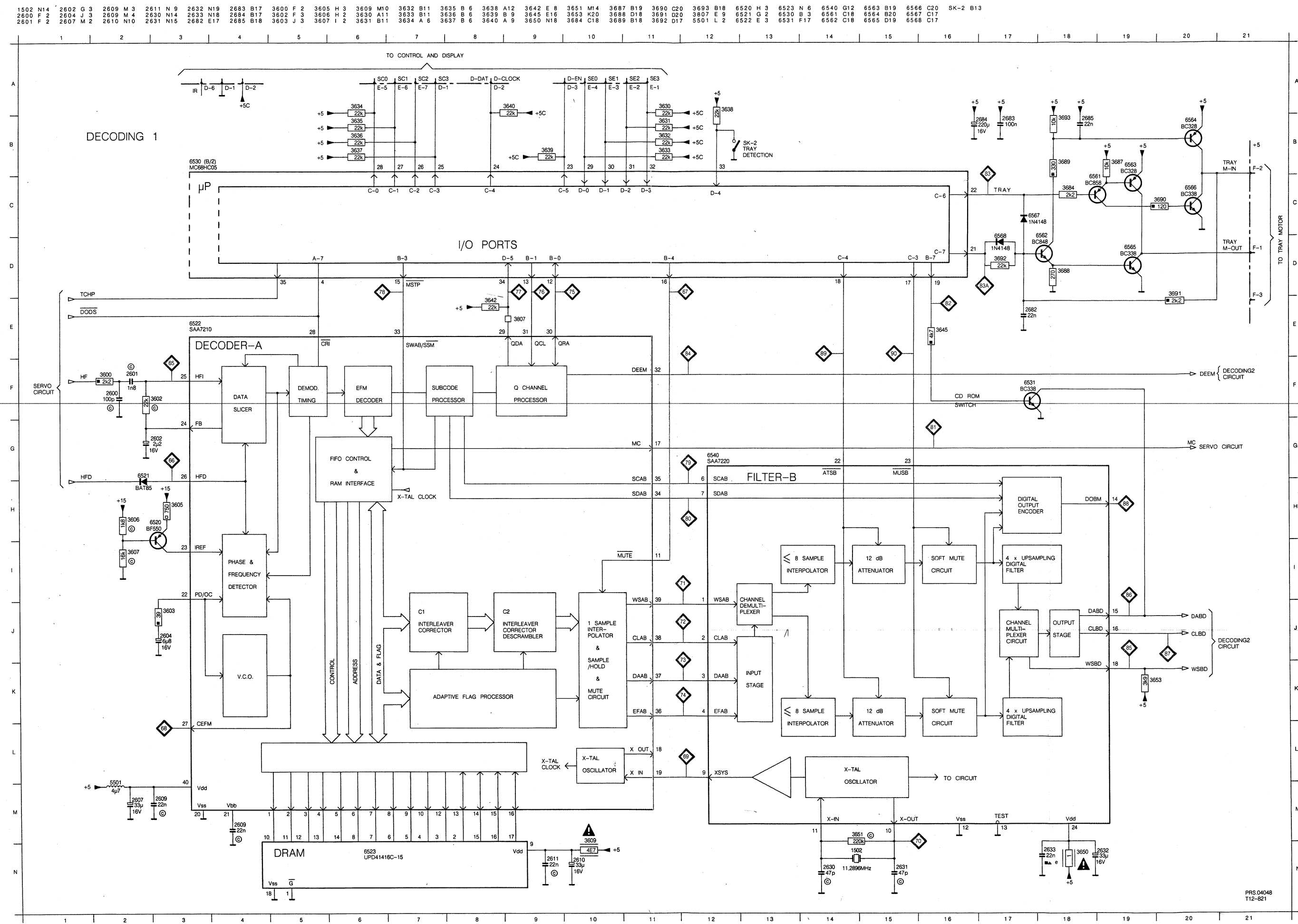






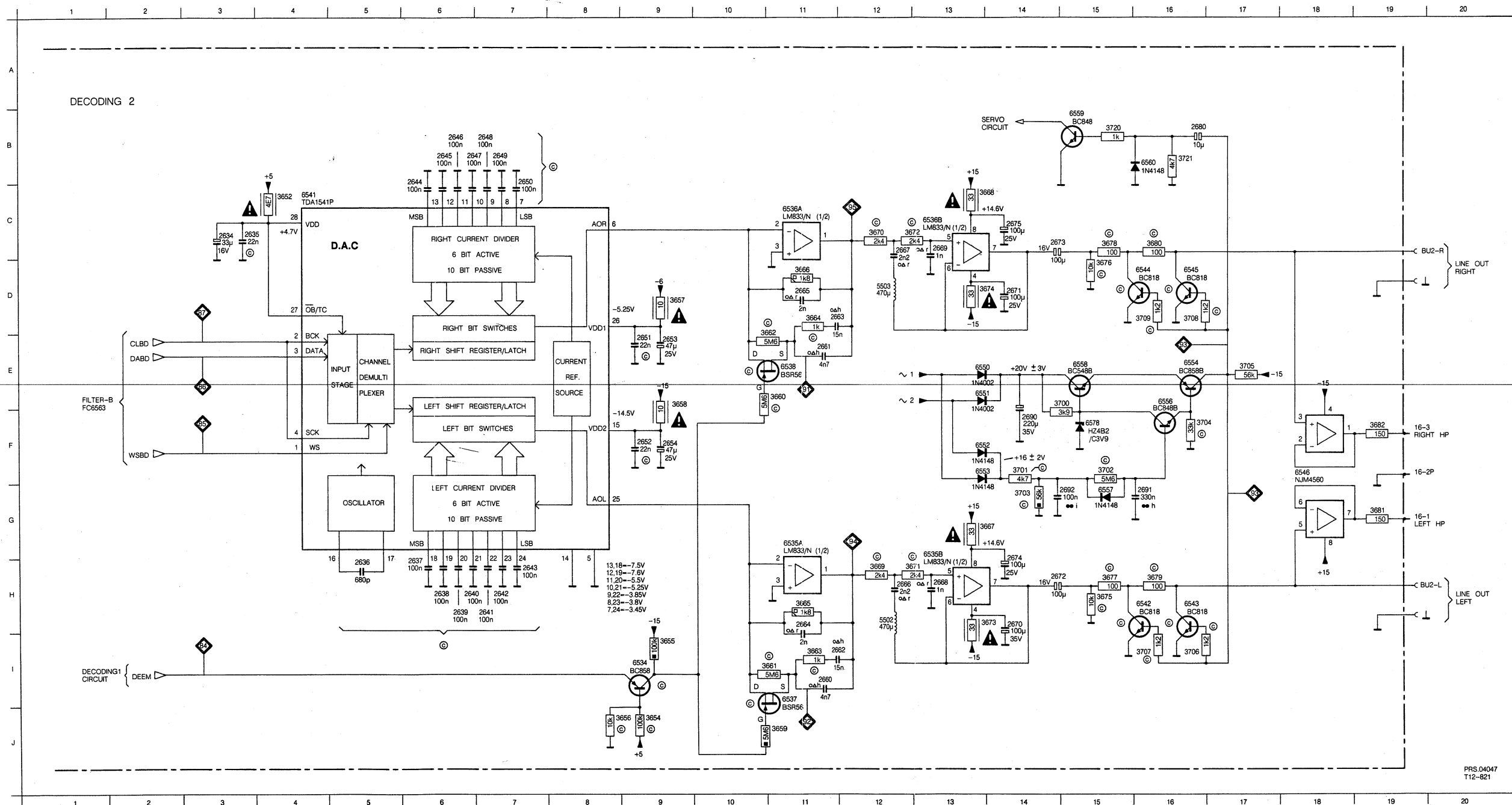


DECODING 1



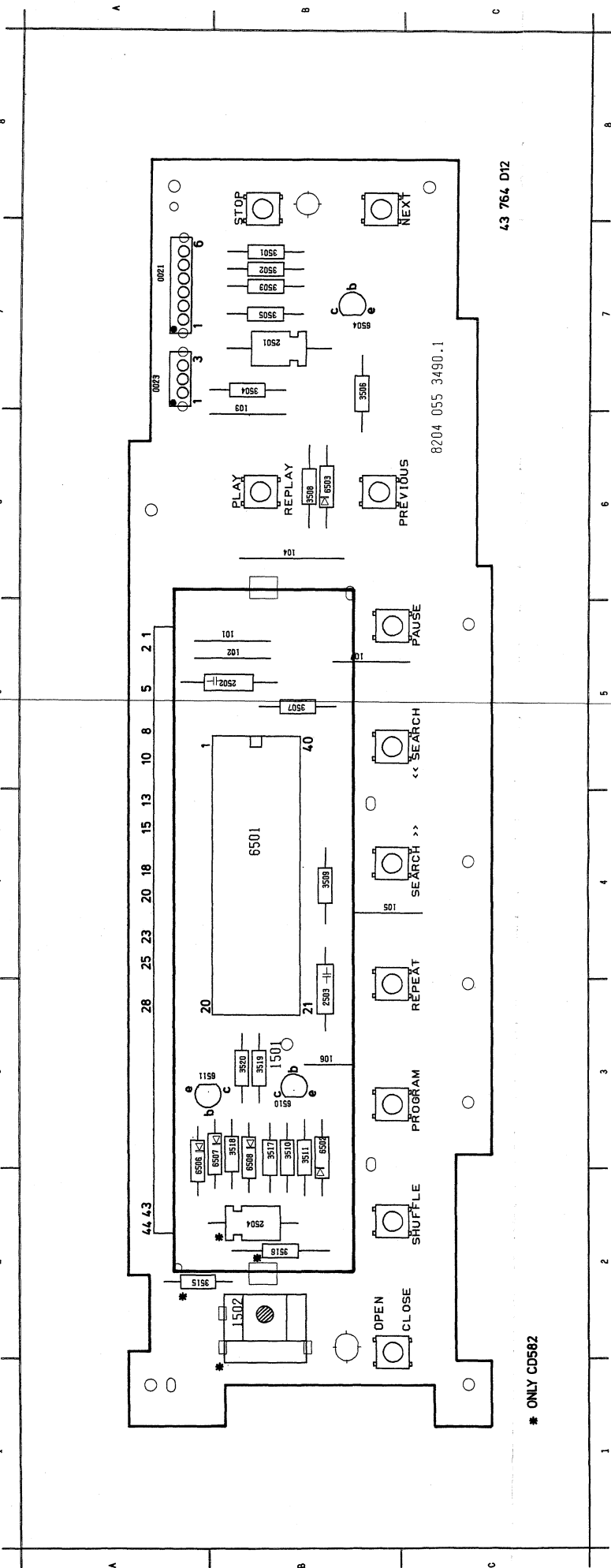
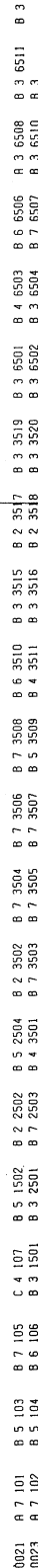
PRS.04048
T12-821

2634	C 4	2640	H 6	2645	B 6	2649	B 7	2654	F 9	2664	H11	2670	H14	2675	C14	33μ0	C 3	3657	D 9	3662	D11	3667	G14	3673	C13	3677	H15	3682	F19	3704	F17	3707	I16	6534	I 9	6537	I11	6550	E13	6556	E16	6578	F15
2636	H 5	2641	H 7	2646	B 6	2650	B 7	2660	I11	2665	D11	2671	D14	2680	B16	3652	C 4	3658	E 9	3663	I11	3668	C14	3673	H14	3678	H15	3700	E15	3705	E17	3720	B15	6535A	G11	6538	E11	6551	E13	6557	G15	6586	H16
2637	H 6	2642	H 7	2647	B 7	2651	E 9	2661	I11	2666	H12	2672	H14	2690	F14	3654	J 9	3659	J11	3664	D11	3669	H12	3674	D14	3679	H16	3701	F14	3706	D16	3721	B15	6535B	G13	6541	C 4	6552	F13	6558	E15	6588	H16
2638	H 6	2643	H 7	2648	B 7	2652	F 9	2662	I11	2667	C12	2673	C14	2691	G16	3655	I 9	3660	E11	3665	H11	3670	C12	3675	H15	3680	C16	3702	F15	3706	I16	5502	H12	6536A	C11	6544	D16	6553	F13	6559	B15	6589	D16
2639	H 6	2644	B 6	2649	C13	2653	E 9	2663	D11	2668	H13	2674	G14	2692	G15	3656	J 9	3661	I11	3666	D11	3671	H12	3676	D15	3681	G19	3703	G14	3707	D16	5503	D12	6536B	C13	6546	F18	6554	E16	6560	B16		





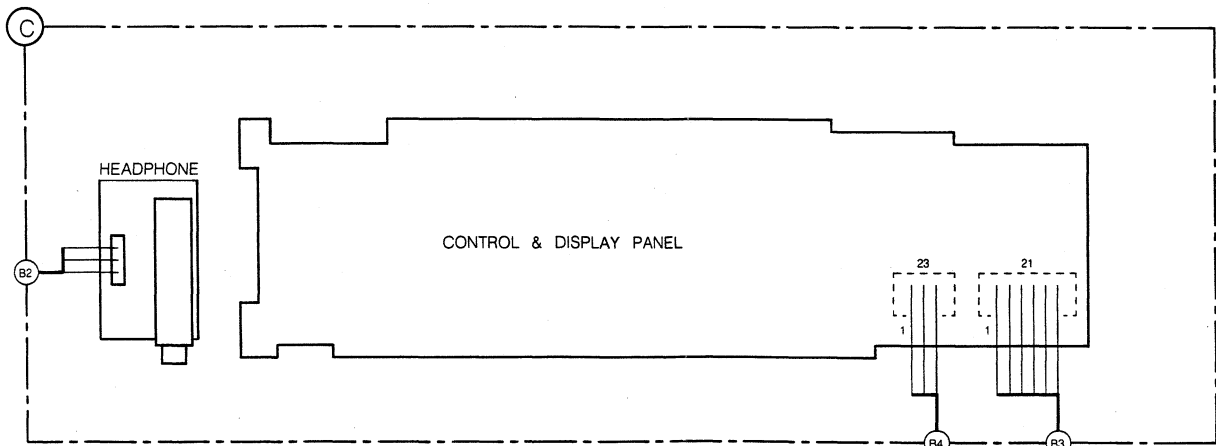
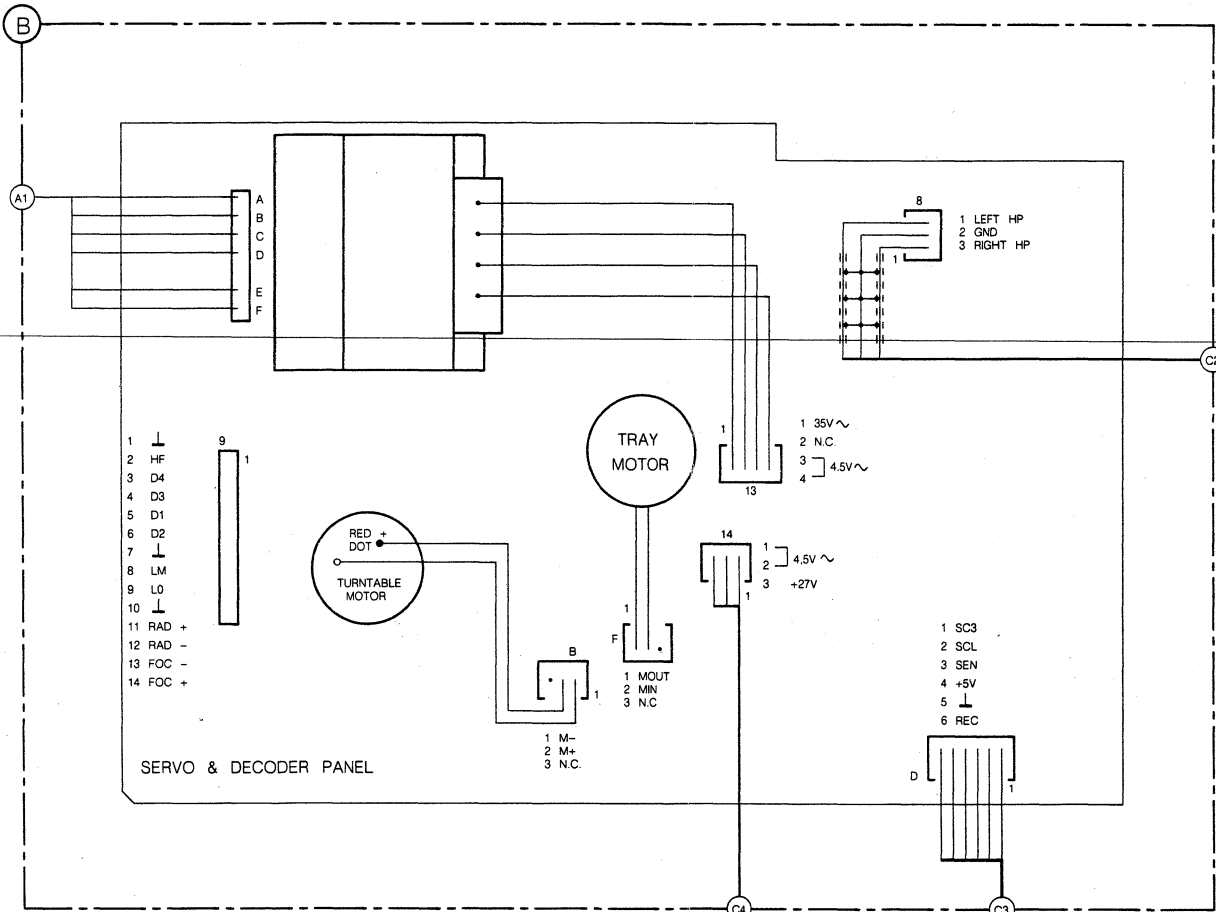
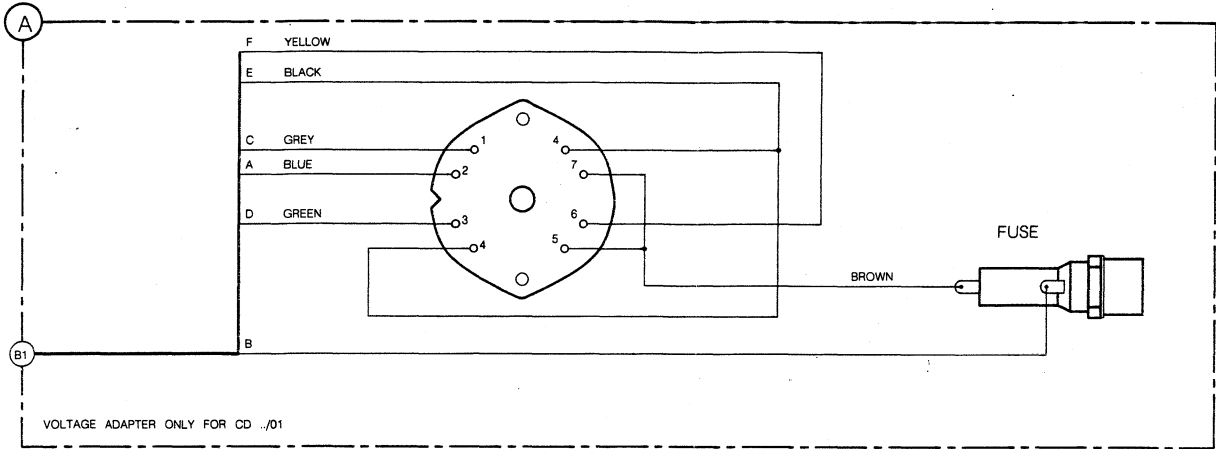
CONTROL & DISPLAY PANEL



ELECTRICAL PARTS C&D PANEL

	4822 111 30499	 	4822 130 40938	Miscellaneous Display FV270G IR Receiver Tact switch	4822 130 90563 4822 214 51723 4822 276 11896
Safety res. 4E7	BC 548				
 	4822 130 80138 4822 130 30621	TMS 3763CNL Display driver	4822 209 73149		

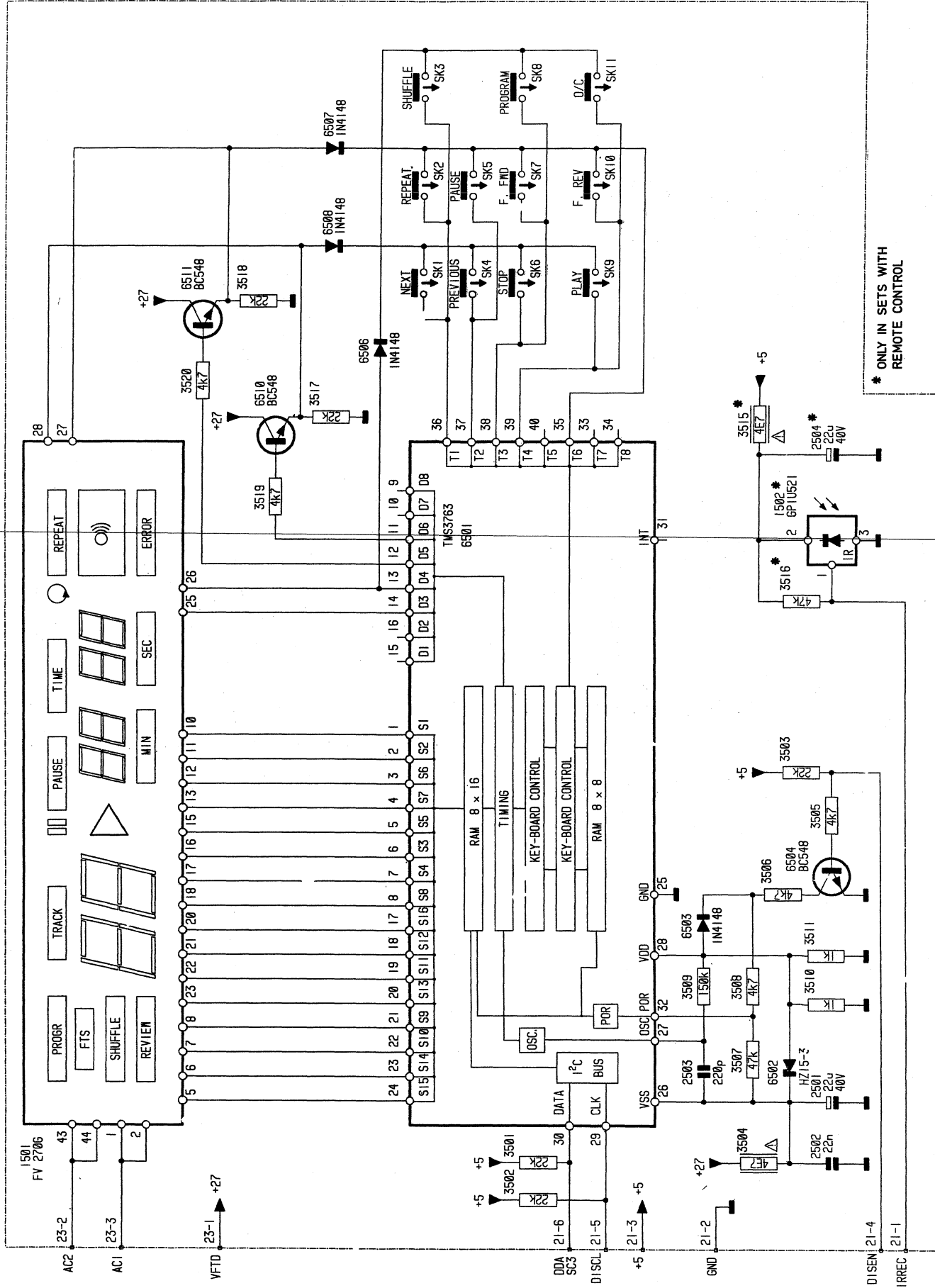
WIRING DIAGRAM



ELECTRICAL PARTSLIST SERVO 8 DECODER PANEL

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

CONTROL & DISPLAY CIRCUIT

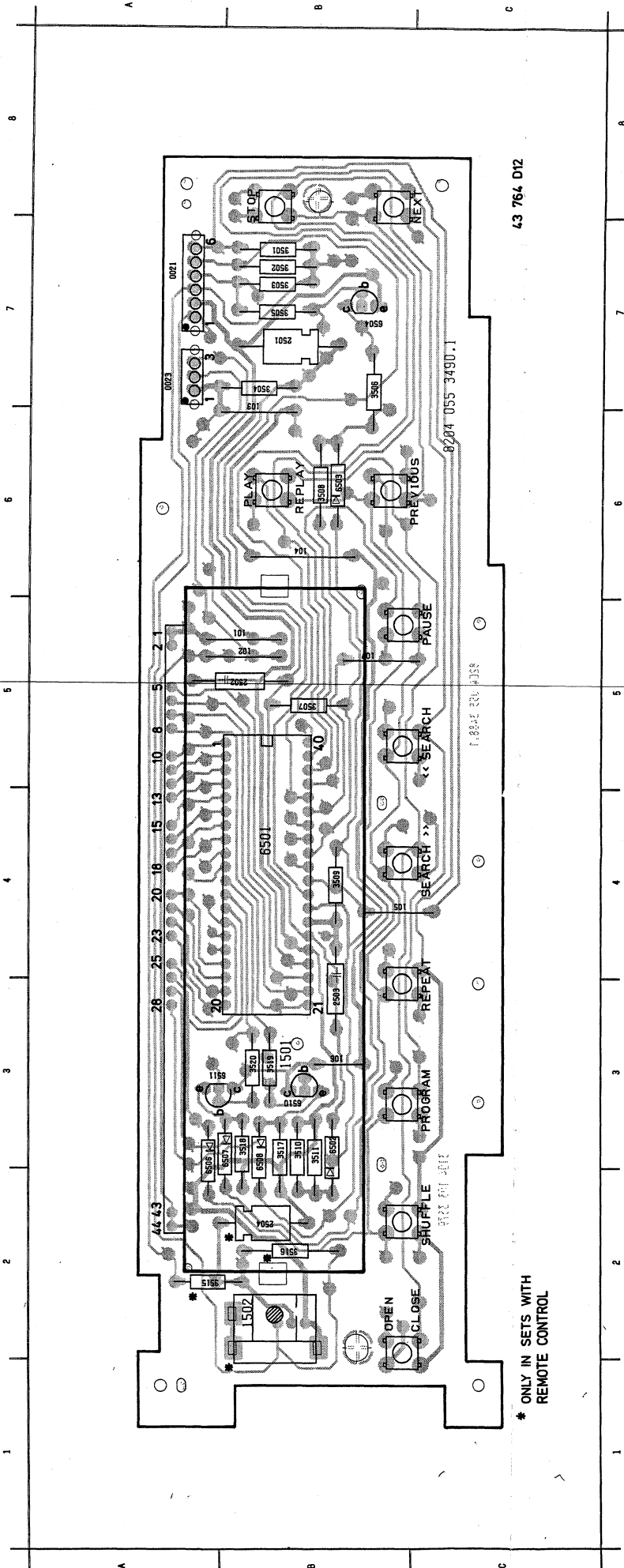


43 721 C-12

* ONLY IN SETS WITH
REMOTE CONTROL

CONTROL & DISPLAY PANEL

0021 A 7 101 B 5 103 C 4 107 D 5 1502 E 5 2504 F 2 3502 G 7 3504 H 7 3506 I 7 3508 J 7 3509 K 7 3507 L 7 3505 M 7 3505 N 7 3505 O 7 3505 P 7 3505 Q 7 3505 R 7 3505 S 7 3505 T 7 3505 U 7 3505 V 7 3505 W 7 3505 X 7 3505 Y 7 3505 Z 7 3505



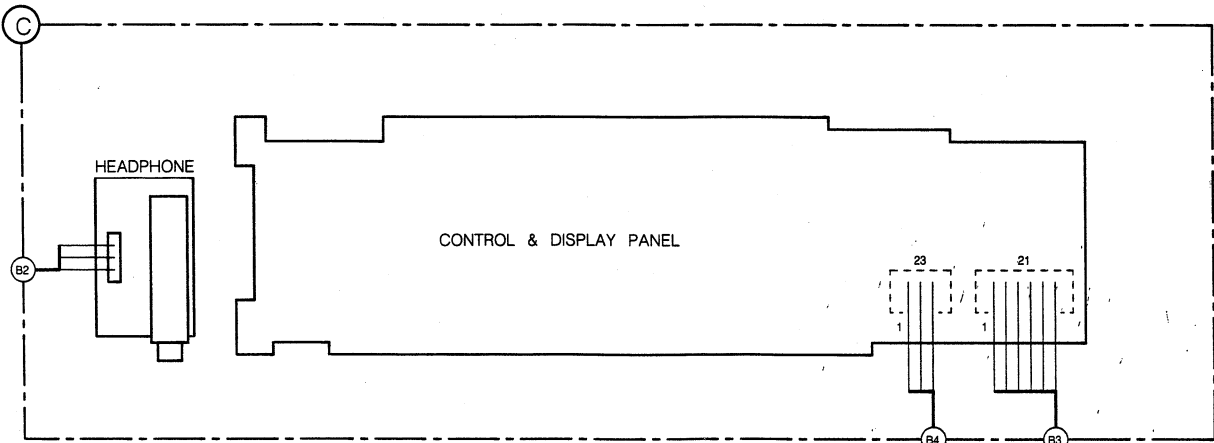
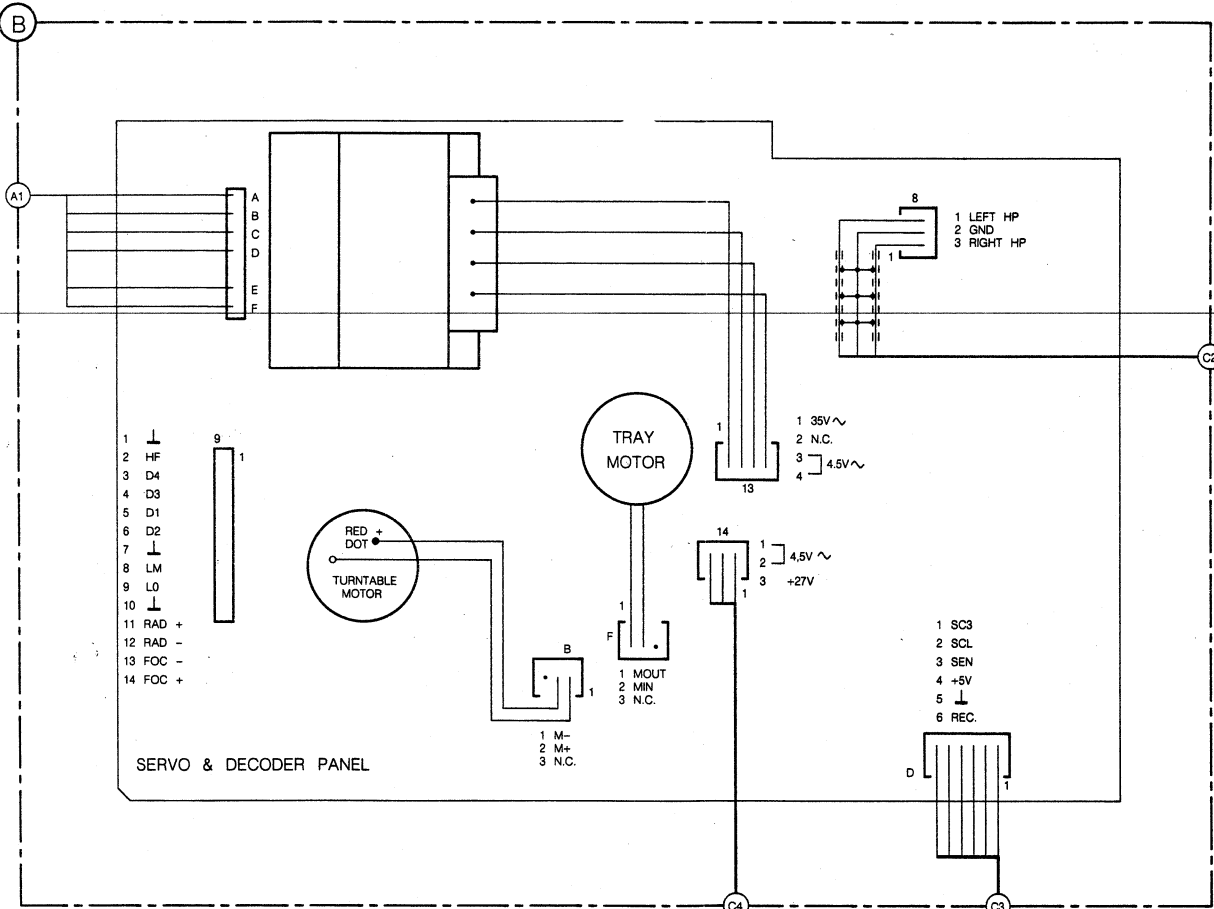
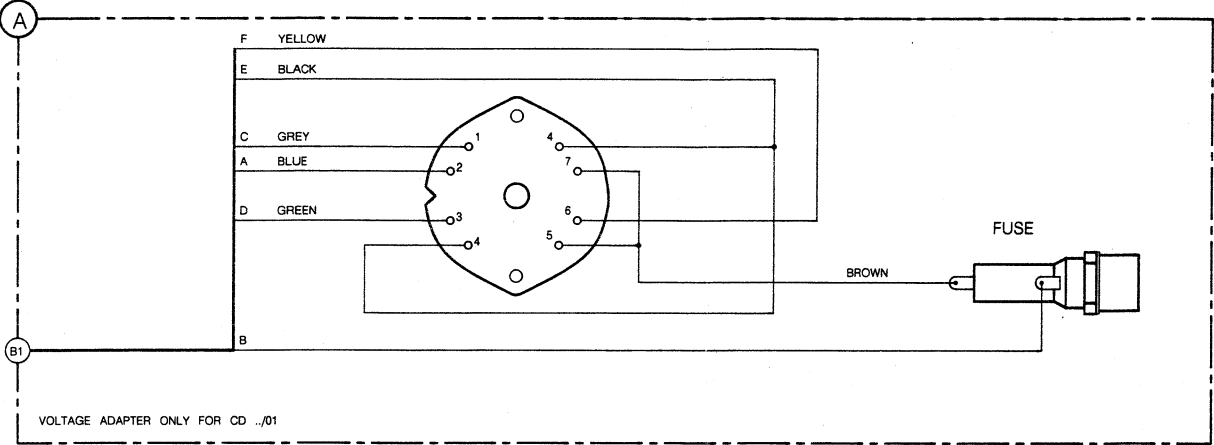
* ONLY IN SETS WITH
REMOTE CONTROL

43 764 D12

ELECTRICAL PARTS C&D PANEL

	Safety res. 4E7 4822 111 30499		BC 548 4822 130 40938	Miscellaneous Display FV270G IR Receiver Tact switch 4822 130 90563 4822 214 51723 4822 276 11896
	HZ 15-3 1N4148 4822 130 80138 4822 130 30621		TMS 3763CNL Display driver 4822 209 73149	

WIRING DIAGRAM



ELECTRICAL PARTSLIST SERVO 8 DECODER PANEL

 			
Safety res. 4E7	4822 111 30499	LM833N	4822 209 83163
Potm. trimmer 4k7 LIN	4822 101 10685	MC68HC05C8/P105	4822 209 73232
Safety res. 12E	4822 111 30511	MC78L15ACPRE	4822 209 80889
Safety res. 18E	4822 111 30515	MC78M12CT	4822 209 86176
Safety res. 1E	4822 111 30483	MC79M15CT	4822 209 86361
Potm. carb. track 22k LIN	4822 100 20522	MC7906CT	4822 209 82056
Metal film 100k 1%	4822 116 52973	NJM4560D	4822 209 83274
Safety res. 10E	4822 111 30508	SAA7210P/04	4822 209 71001
Metal film 1k8 1%	4822 116 53109	SAA7220	4822 209 11157
Safety res. 33E	4822 111 30522	TCA0372DP2	4822 209 72587
		TDA1541	4822 209 72544
Ceramic cap. 3N3 400V	4822 122 40327	TDA8808T/C3	4822 209 73234
Foil cap. 47n 100V	5322 121 42491	TDA8809T/C2	4822 209 73235
Ceramic cap. 1000p 50V	4822 122 31746	TY40408	4822 209 71579
Foil cap. 220n 63V	4822 121 42245	UPD41416C-20	4822 209 82903
Foil cap. 470n 100V	4822 121 51252	MN4264-15	4822 209 70422
Foil cap. 8μ2 63 V 1%	4822 121 51321		
Foil cap. 330n 63V	5322 121 42661	5501 4,7 μH	4822 157 53139
Ceramic cap. 33n 63V	5322 122 31848	5502, 5503 470 μH	4822 157 53141
Bipolar cap. Elco 680n 50V	4822 124 41583	Chip coil	4822 157 53548
Foil cap. 6n8 50V	4822 121 51093		
Foil cap. 4n7 50V	4822 121 51314	Miscellaneous	
Foil cap. 4n7 160V 1%	4822 121 51051	X-tal 11289.60 kHz	4822 242 71644
Foil cap. 15n 63V 1%	4822 121 51049	Ceramic filter CSA 4.00 MG	4822 242 70831
Foil cap. 2n 250V 1%	4822 121 51053	Fuse holder	4822 256 30274
Foil cap. 1n 400V 1%	4822 121 43066	Mains inlet BU1	4822 265 20291
Bipolar cap. Elco 100μ 16 V	4822 124 22339	Phone socket BU3/00R/05R/17R	4822 267 30743
Bipolar cap. Elco 10μ 25V	4822 124 41558	Phone socket BU3/00B	4822 267 30522
 		Cinch socket	4822 267 40766
BAT85	4822 130 31983	Power switch	4822 276 11309
BA314	4822 130 30879	Tray switch sk2	4822 276 11896
BZX85-C6V2	5322 130 32962	Clamping spring for heat sinc	4822 492 63076
HZ15-3	4822 130 80138	Fuse /00B, /00R, /05R	4822 253 30009
HZ3B2	4822 130 32831	Fuse /17R	4822 253 30217
HZ4B2	4822 130 32843	Mains transformer /00B, /00R, /05R	4822 146 30702
HZ5B1	4822 130 32986	Mains transformer /17R	4822 146 30719
HZ7C2	4822 130 32862	Remote control neutral	4822 218 20782
1N4002	5322 130 30684	Tact switch	4822 276 11896
1N4148	4822 130 30621	Dir. for use CD582/00B/00R	4822 736 13982
BZX55C7V5	4822 130 81101	Dir. for use CD584/00R	4822 736 20157
BZX55C3V0	4822 130 81122	Dir. for use CD582/17R	4822 736 20018
BZX55C3V9	4822 130 33637	Dir. for use CD582/05R	4822 736 20019
BZX85C6V2	5322 130 32962	CDM-4 mini horizontal	4822 691 30209
BZX55C15V0	4822 130 81086		
BZX55C4C7	5322 130 80275		
 			
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		

Chips 50 V NP0 S1206			Chips 0,125 W S1206			Chips 0,125 W S1206			1U
1 pF	5%	4822 122 32479	4,7 E	5%	5322 111 90376	6,8 k	2%	4822 111 90544	
1,2 pF	5%	4822 122 33013	5,1 E	5%	4822 111 90393	7,5 k	2%	4822 111 90276	
1,5 pF	5%	4822 122 31792	5,6 E	5%	4822 111 90394	8,2 k	2%	5322 111 90118	
1,8 pF	5%	4822 122 32087	6,2 E	5%	4822 111 90395	9,1 k	2%	4822 111 90373	
2,2 pF	5%	4822 122 32425	6,8 E	5%	4822 111 90254	10 k	2%	4822 111 90249	
3,3 pF	5%	4822 122 32079	7,5 E	5%	4822 111 90396	11 k	2%	4822 111 90337	
3,9 pF	5%	4822 122 32081	8,2 E	5%	4822 111 90397	12 k	2%	4822 111 90253	
4,7 pF	5%	4822 122 32082	9,1 E	5%	4822 111 90398	13 k	2%	4822 111 90509	
5,6 pF	5%	4822 122 32506	10 E	2%	5322 111 90095	15 k	2%	4822 111 90196	
6,8 pF	5%	4822 122 32507	11 E	2%	4822 111 90338	16 k	2%	4822 111 90346	
8,2 pF	5%	4822 122 32083	12 E	2%	4822 111 90341	18 k	2%	4822 111 90238	
10 pF	5%	4822 122 31971	13 E	2%	4822 111 90343	20 k	2%	4822 111 90349	
12 pF	5%	4822 122 32139	15 E	2%	4822 111 90344	22 k	2%	4822 111 90251	
15 pF	5%	4822 122 32504	16 E	2%	4822 111 90347	24 k	2%	4822 111 90512	
18 pF	5%	4822 122 31769	18 E	2%	5322 111 90139	27 k	2%	4822 111 90542	
22 pF	10%	4822 122 31837	20 E	2%	4822 111 90352	30 k	2%	4822 111 90216	
27 pF	5%	4822 122 31966	22 E	2%	4822 111 90186	33 k	2%	5322 111 90267	
33 pF	5%	4822 122 31756	24 E	2%	4822 111 90355	36 k	2%	4822 111 90514	
39 pF	5%	4822 122 31972	27 E	2%	5322 111 90105	39 k	2%	5322 111 90108	
47 pF	5%	4822 122 31772	30 E	2%	4822 111 90356	43 k	2%	4822 111 90363	
56 pF	5%	4822 122 31774	33 E	2%	4822 111 90357	47 k	2%	4822 111 90543	
68 pF	5%	4822 122 31961	36 E	2%	4822 111 90359	51 k	2%	5322 111 90274	
82 pF	10%	4822 122 31839	39 E	2%	4822 111 90361	56 k	2%	4822 111 90573	
100 pF	5%	4822 122 31765	43 E	2%	5322 116 90125	62 k	2%	5322 111 90275	
120 pF	5%	4822 122 31766	47 E	2%	4822 111 90217	68 k	2%	4822 111 90202	
150 pF	5%	4822 122 31767	51 E	2%	4822 111 90365	75 k	2%	4822 111 90574	
180 pF	2%	4822 122 31794	56 E	2%	4822 111 90239	82 k	2%	4822 111 90575	
220 pF	5%	4822 122 31965	62 E	2%	4822 111 90367	91 k	2%	5322 111 90277	
270 pF	5%	4822 122 32142	68 E	2%	4822 111 90203	100 k	2%	4822 111 90214	
330 pF	10%	4822 122 31642	75 E	2%	4822 111 90371	110 k	2%	5322 111 90269	
390 pF	5%	4822 122 31771	82 E	2%	4822 111 90124	120 k	2%	4822 111 90568	
470 pF	5%	4822 122 31727	91 E	2%	4822 111 90375	130 k	2%	4822 111 90511	
560 pF	5%	4822 122 31773	100 E	2%	5322 111 90091	150 k	2%	5322 111 90099	
680 pF	5%	4822 122 31775	110 E	2%	4822 111 90335	160 k	2%	5322 111 90264	
820 pF	5%	4822 122 31974	120 E	2%	4822 111 90339	180 k	2%	4822 111 90565	
1 nF	10%	5322 122 31647	130 E	2%	4822 111 90164	200 k	2%	4822 111 90351	
1,2 nF	5%	4822 122 31807	150 E	2%	5322 111 90098	220 k	2%	4822 111 90197	
1,5 nF	10%	4822 122 31781	160 E	2%	4822 111 90345	240 k	2%	4822 111 90215	
1,8 nF	10%	4822 122 32153	180 E	2%	5322 111 90242	270 k	2%	4822 111 90302	
2,2 nF	10%	4822 122 31644	200 E	2%	4822 111 90348	300 k	2%	5322 111 90266	
2,7 nF	10%	4822 122 31783	220 E	2%	4822 111 90178	330 k	2%	4822 111 90513	
3,3 nF	10%	4822 122 31969	240 E	2%	4822 111 90353	360 k	2%	4822 111 90515	
3,9 nF	10%	4822 122 32566	270 E	2%	4822 111 90154	390 k	2%	4822 111 90182	
4,7 nF	10%	4822 122 31784	300 E	2%	4822 111 90156	430 k	2%	4822 111 90168	
5,6 nF	10%	4822 122 31916	330 E	2%	5322 111 90106	470 k	2%	4822 111 90161	
6,8 nF	10%	4822 122 31976	360 E	1%	4822 111 90288	510 k	2%	4822 111 90364	
10 nF	10%	4822 122 31728	360 E	2%	4822 111 90358	560 k	2%	4822 111 90169	
12 nF	10%	5322 122 31648	390 E	2%	5322 111 90138	620 k	2%	4822 111 90213	
15 nF	10%	4822 122 31782	430 E	2%	4822 111 90362	680 k	2%	4822 111 90368	
18 nF	10%	4822 122 31759	470 E	2%	5322 111 90109	750 k	2%	4822 111 90369	
22 nF	10%	4822 122 31797	510 E	2%	4822 111 90245	820 k	2%	4822 111 90205	
27 nF	10%	4822 122 32541	560 E	2%	5322 111 90113	910 k	2%	4822 111 90374	
33 nF	10%	4822 122 31981	620 E	2%	4822 111 90366	1 M	2%	4822 111 90252	
47 nF	10%	4822 122 32542	680 E	2%	4822 111 90162	1,1 M	5%	4822 111 90408	
56 nF	10%	4822 122 32183	750 E	2%	5322 111 90306	1,2 M	5%	4822 111 90409	
100 nF	10%	4822 122 31947	820 E	2%	4822 111 90171	1,3 M	5%	4822 111 90411	
180 nF	10%	4822 122 32915	910 E	2%	4822 111 90372	1,5 M	5%	4822 111 90412	
220 nF	20%	4822 122 32715	1 k	2%	5322 111 90092	1,6 M	5%	4822 111 90413	
Chips 0,125 W S1206 NP0			1,1 k	2%	4822 111 90336	1,8 M	5%	4822 111 90414	
0 E	jumper	4822 111 90163	1,2 k	2%	5322 111 90096	2 M	5%	4822 111 90415	
1 E	5%	4822 111 90184	1,3 k	2%	4822 111 90244	2,2 M	5%	4822 111 90185	
1,1 E	5%	4822 111 90377	1,5 k	2%	4822 111 90151	2,4 M	5%	4822 111 90416	
1,2 E	5%	4822 111 90378	1,6 k	2%	5322 111 90265	2,7 M	5%	4822 111 90417	
1,3 E	5%	4822 111 90379	1,8 k	2%	5322 111 90101	3 M	5%	4822 111 90418	
1,5 E	5%	4822 111 90381	2 k	2%	4822 111 90165	3,3 M	5%	4822 111 90191	
1,6 E	5%	4822 111 90382	2,2 k	2%	4822 111 90248	3,6 M	5%	4822 111 90419	
1,8 E	5%	4822 111 90383	2,4 k	2%	4822 111 90289	3,9 M	5%	4822 111 90421	
2 E	5%	4822 111 90384	2,7 k	2%	4822 111 90569	4,3 M	5%	4822 111 90422	
2,2 E	5%	5322 111 90104	3 k	2%	4822 111 90198	4,7 M	5%	4822 111 90423	
2,4 E	5%	4822 111 90385	3,3 k	2%	4822 111 90157	5,1 M	5%	4822 111 90424	
2,7 E	5%	4822 111 90386	3,6 k	2%	5322 111 90107	5,6 M	5%	4822 111 90425	
3 E	5%	4822 111 90387	3,9 k	2%	4822 111 90571	6,2 M	5%	4822 111 90426	
3,3 E	5%	4822 111 90388	4,3 k	2%	4822 111 90167	6,8 M	5%	4822 111 90235	
3,6 E	5%	4822 111 90389	4,7 k	2%	5322 111 90111	7,5 M	5%	4822 111 90427	
3,9 E	5%	4822 111 90391	5,1 k	2%	5322 111 90268	8,2 M	5%	4822 111 90237	
4,3 E	5%	4822 111 90392	5,6 k	2%	4822 111 90572	9,1 M	5%	4822 111 90428	
			6,2 k	2%	4822 111 90545	10M	5%	5322 111 91141	

SYMBOL	DESCRIPTION
	Capacitor, general
	Electrolytic capacitor (+ and - may be omitted)
	Bipolar electrolytic capacitor (+ may be omitted)
	Resistor, general
	N.T.C. resistor
	P.T.C. resistor
	Voltage divider with preset adjustment
	Chip jumper
	Pin contact
	Bus contact
	Coil, self-induction
	Transformer with electrically poor conducting core and adjustable pre-magnetization
	Diode
	Zener diode
	Stabistor
	Double variable capacity diode (in one envelope)
	Photo conductive diode
	L.E.D.

SYMBOL	DESCRIPTION
	Transistor (N.P.N.)
	Transistor (P.N.P.)
	Direct current (DC)
	Alternating current (AC)
	Earth (functional)
	Frame or chassis connection
	Direction in which AC voltages are passed on (optional present)
	Interrupted line
	Not-connected crossing lines
	Connected lines
	Cable tree with lead-outs
	Changer, general (arrow is optional)
	Voltage Controlled Oscillator
	Band-pass filter
	Phase changing network
	Delay element
	Amplifier, general

MDA.00083
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SYMBOL	DESCRIPTION
	Operational amplifier
	Differential amplifier
	Splitter
	Operational amplifier with open output
	Exclusive OR gate
	True/complement amplifier with high input
	Flip Flop
	AND gate
	OR gate
	Inverter with high input

	0.2W (CR 16)	≤ 220k ≥ 270k	5% 10%
	0.33W (CR 25)	≤ 1M ≥ 1M	5% 10%
	0.33W (SFR25)		5%
	0.25W (VR 25)	≤ 10M ≥ 10M	5% 10%
	0.5W (CR 37)	≤ 1M ≥ 1M	5% 10%
	0.67W (CR 52)		5%
	1.15W (CR 68)		5%

	Ceramic plate
	Polyester flat foil
	Polyester mepolesco
	Mylar (Polyester flat foil small sized)
	Micropoco
	Tubular ceramic (body colour pink or yellow/green)
	Miniature single elco
	Subminiature tantalum

* a=2,5V
b=4V
c=6,3V
d=10V
e=16V
f=25V
g=40V
h=63V
i=100V
j=125V
l=125V
m=150V
n=160V
q=200V
r=250V
s=300V
t=350V
u=400V
v=500V
w=630V
x=1000V
A=1.6V
B=6V
C=12V
D=15V
E=20V
F=35V
G=50V
H=75V
I=80V

MDA.00084
T32-735

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

Changes

Changes introduced with A89-207
already published: A88-254

Description	Reasons
Frontpage	Versions /01R/07R added
2-1-a	Contents adapted
2-4-b	Cabinet parts for versions /01R, /07R added
3-1-a	Correction on fault finding tree
3-2-a	Signal names added
3-4-a	Page changed from A4 to A3
4-1-b	Power supply diagram adapted + voltage adapter added
5-2-b	Electrical partslist adapted
6-2	Survey of changes

Service Information

1988-11-03

CD582, CD584

A88-254

Product Service Group CE Audio

GB

To adapt the Service Manual the following sheets have been changed/added.

NL

Voor het aanpassen van de Service Manual zijn onderstaande pagina's gewijzigd/toegevoegd.

F

Afin de pouvoir adapter le Manual Service les feuillets suivants ont été soit modifiés, soit ajoutés.

D

Zur Anpassung des Service Manual sind nachstehende Seiten geändert/hinzugefügt.

I

Allo scopo di adattare il manuale di Servizio sono state variate/aggiunte le sequenti pagine.

Change sheets / Wijzigingsbladen / Feuilles de modification / Aenderungsblätter / Fogli di sostituzione:

1-1-a	4-3-a
2-1-a	4-4-a
2-3-a	4-5-a
2-4-a	5-1-a
3-1-a	5-2-a
4-1-a	

valh.

Service Information

1989-03-10

CD582
CD584

A89-207

Product Service Group CE Audio

(GB)

To adapt the Service Manual the following sheets have been changed/added.

(F)

Afin de pouvoir adapter le Manual Service les feuillets suivants ont été soit modifiés, soit ajoutés.

(NL)

Voor het aanpassen van de Service Manual zijn onderstaande pagina's gewijzigd/toegevoegd.

(D)

Zur Anpassung des Service Manual sind nachstehende Seiten geändert/hinzugefügt.

(I)

Allo scopo di adattare il manuale di Servizio sono state variate/aggiunte le sequenti pagine.

**Change sheets/Wijzigingsbladen/Feuillets de
modification/Aenderungsblätter:**

1-1-b
2-1-b 2-4-b
3-1-b 3-2-a
 3-4-a
4-1-a 5-1-a
5-2-b

**Supplementary sheets/Toevoegingsbladen/Feuillets
d'adjonction/Zusatzblätter:**

6-2