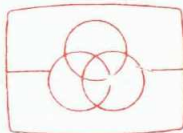


Service
Service
Service



43 726 A12



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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 partslist of the main panel
- 5 Control and display, wiring diagram and electrical partslist
- 6 Changes
- 7 Additional information

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.

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.

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

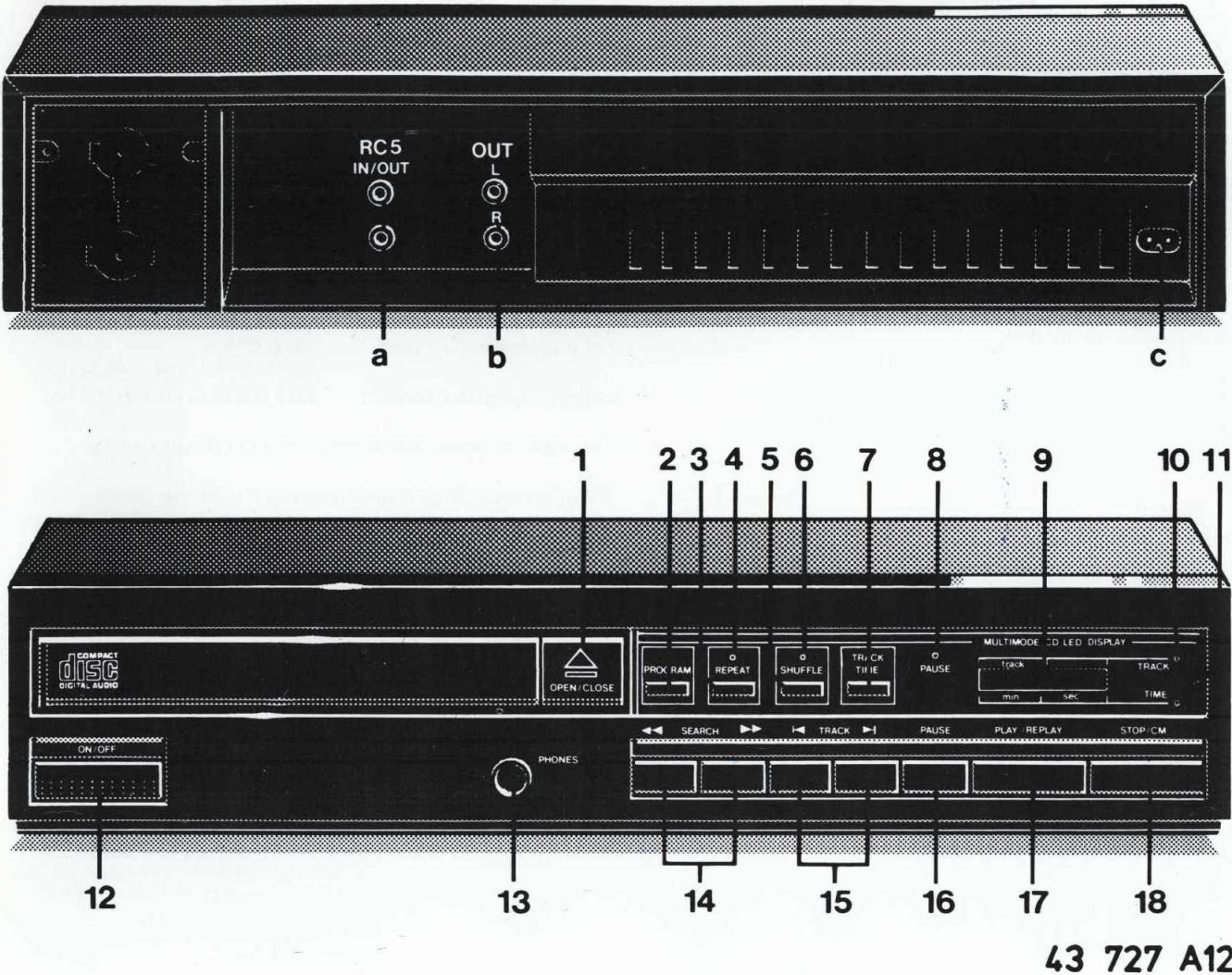
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiaggio identici a quelli specificati.

CLASS 1
LASER PRODUCT

3122 110 03420



CONTROL BUTTONS



43 727 A12

Front of player

- | | |
|-----------------------------|----------------|
| 1 OPEN/CLOSE key | (SK 19) |
| 2 PROGRAM key | (SK 20) |
| 3 REPEAT key | (SK 18) |
| 4 REPEAT LED | (6504) |
| 5 SHUFFLE key | (SK 22) |
| 6 SHUFFLE LED | (6506) |
| 7 TRACK/TIME key | (SK 21) |
| 8 PAUSE LED | (6503) |
| 9 MULTI mode CD LED display | (6501) |
| 10 TRACK LED | (6508) |
| 11 TIME LED | (6505) |
| 12 ON/OFF key | (SK 1) |
| 13 HEADPHONE socket | (BU 3) |
| 14 ◀ SEARCH ▶ keys | (SK 15, SK 16) |
| 15 ◀ TRACK ▶ keys | (SK 13, SK 14) |
| 16 PAUSE key | (SK 17) |
| 17 PLAY/REPLAY key | (SK 11) |
| 18 STOP/CM key | (SK 19) |

Rear of player

- | | | |
|-------------------------|---|--------|
| a RC 5 IN/OUT | } | (BU 2) |
| b OUT L/R | | (BU 1) |
| c Mains lead connection | | |

2-1-a

TECHNICAL DATA

Typical Audio Performance Dual DAC.

- Number of Channels: 2
- Frequency Range: 2-20 000 Hz
- Output resistance: 200 Ω
- Nominal load impedance: 100 k Ω /100 pF
- Amplitude Linearity: $\pm 0,1$ dB (20-20 000 Hz)
- Phase Linearity: $\pm 1,0^\circ$ (20-20 000 Hz)
- Dynamic Range: 90 dB (20-20 000 Hz)
- Signal-to-Noise Ratio: 96 dB (20-20 000 Hz)
- Channel Separation: 98 dB (20-20 000 Hz)
- Total Harmonic Distortion: 0,003% (20-20 000 Hz)
- Wow and Flutter: quartz crystal precision
- D/A Conversion: quadruple oversampling (176.4 kHz) with digital filter and two 16 bit D/A converters
- Error Correction System: Cross Interleaved Reed Solomon Code (CIRC)
- Audio Output Level: 2 V_{rms}
- Headphones load impedance: 32-600 Ω

Optical Readout System

- Laser: semi-conductor AlGaAs
- Wavelength: 780 nm

Signal Format

- Sampling Frequency: 44.1 kHz
- Quantization: 16 bit linear/channel

Power Supply

- Mains Voltage: see type plate at rear of player
- Mains Frequencies: 50 and 60 Hz
- Power Consumption: 15 W approx.
- Safety Requirements: IEC

Cabinet, general

- Dimensions (w x h x d): 360 x 80 x 300 mm
- Weight: 3.5 kg approx.

Typical Audio Performance DAC4

Signal to noise ratio	typ 95dB min 90dB (20Hz-20kHz)
Dynamic range (-60dB)	typ 86dB (20Hz-20kHz) min 80dB (20Hz-20kHz) (0.01%)
Total distortion + noise	typ 0.016% min 0.05% (20Hz-20kHz)
Intermodulation distortion	max 0.016% (20Hz-20kHz)

The right is reserved to change data if necessary

This Compact Disc player complies with the radio interference requirements as laid down in EEC (European Economic Community) regulations.

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.

ESD



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 serti 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 ridatta 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.

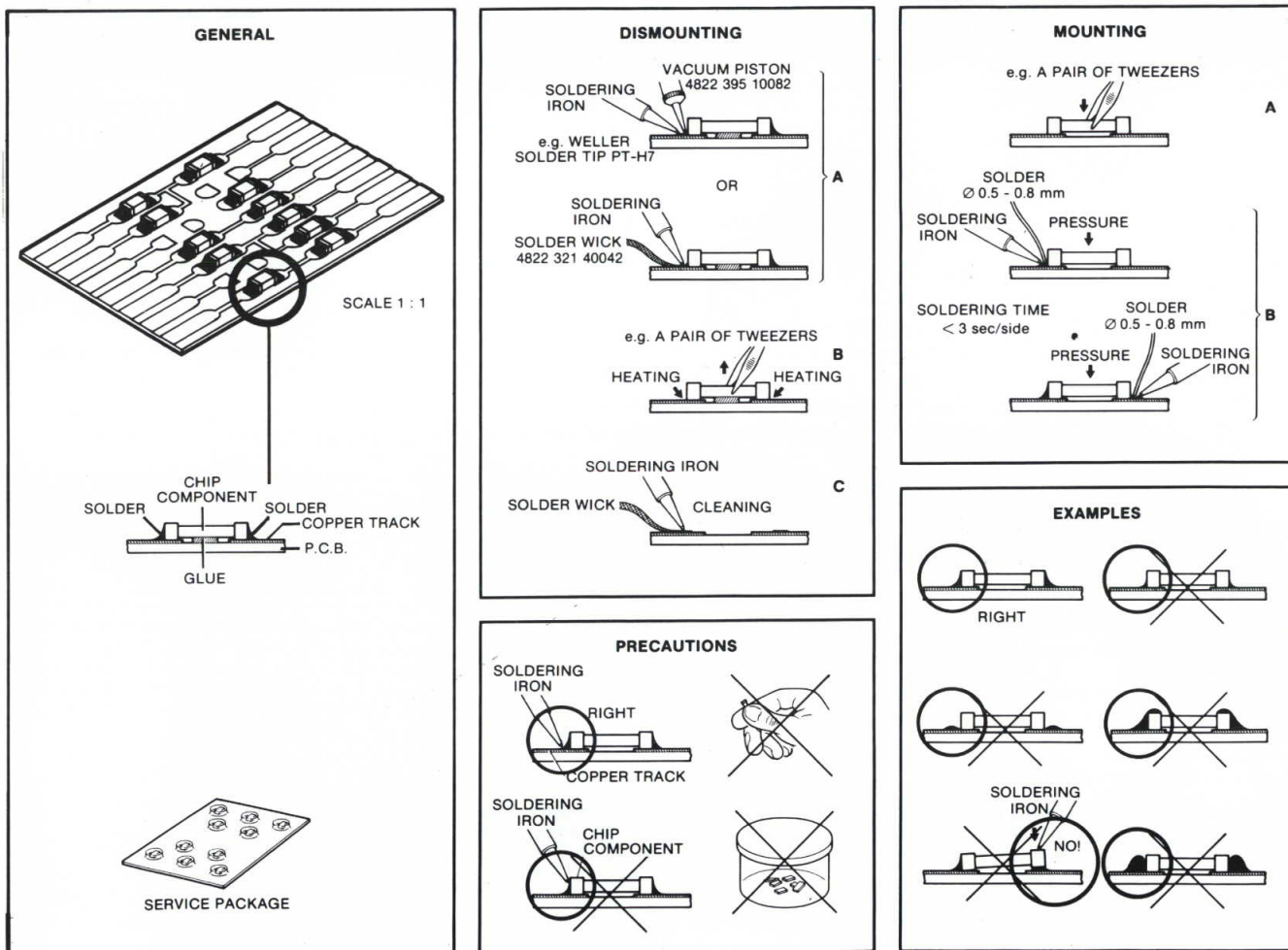
The disc should always rest properly on the turntable. To achieve this a disc hold-down has been mounted in a bracket of the tray mechanism. If the tray mechanism has to be disassembled for servicing, a separate disc hold-down should be used. For a service disc hold-down see drawing 42565 A12.

Test discs

It is important to treat the test discs with great care. The disorders on the discs (black spots, fingerprints, etc.) are exclusive and unambiguously positioned. Damage may cause additional drop-outs etc. rendering the intentional errors no longer exclusive. In that case it will no longer be possible to check e.g. the good working of the track detectors.

SERVICE TOOLS

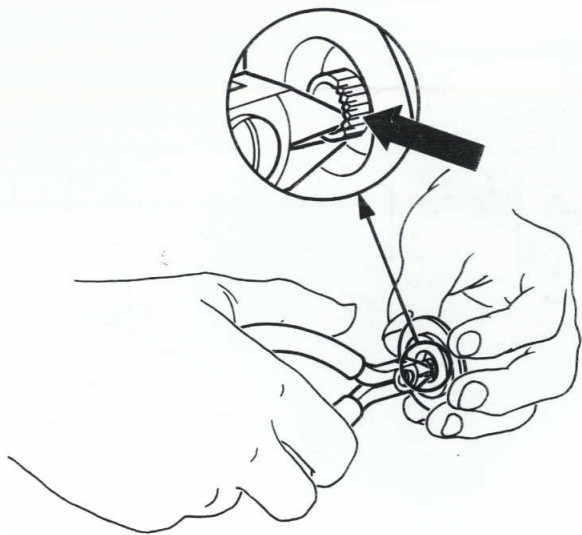
Audio test disc (1)	4822 397 30185
Disc without errors (5)+ disc with DO errors, black spots and fingerprints (5A)	4822 397 30096
Disc 65 min 1kHz without pause	4822 397 30155
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
Service cable (5p)	4822 321 21273
Service cable (14p)	4822 321 21598
Service flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676
Glass disc	4822 395 90204



Digitized by WWW.FREESERVICEMANUALS.INFO

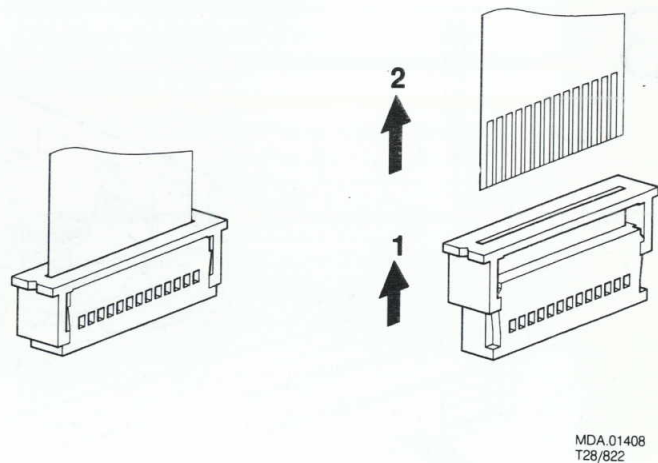
2-3

SERVICE DISC-HOLDDOWN

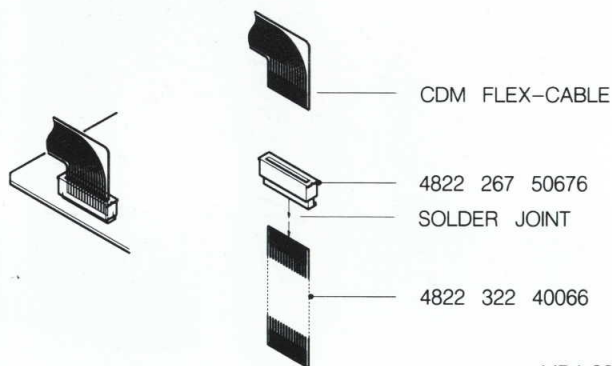


42 565 A12

DEMOUNTING FOIL CDM

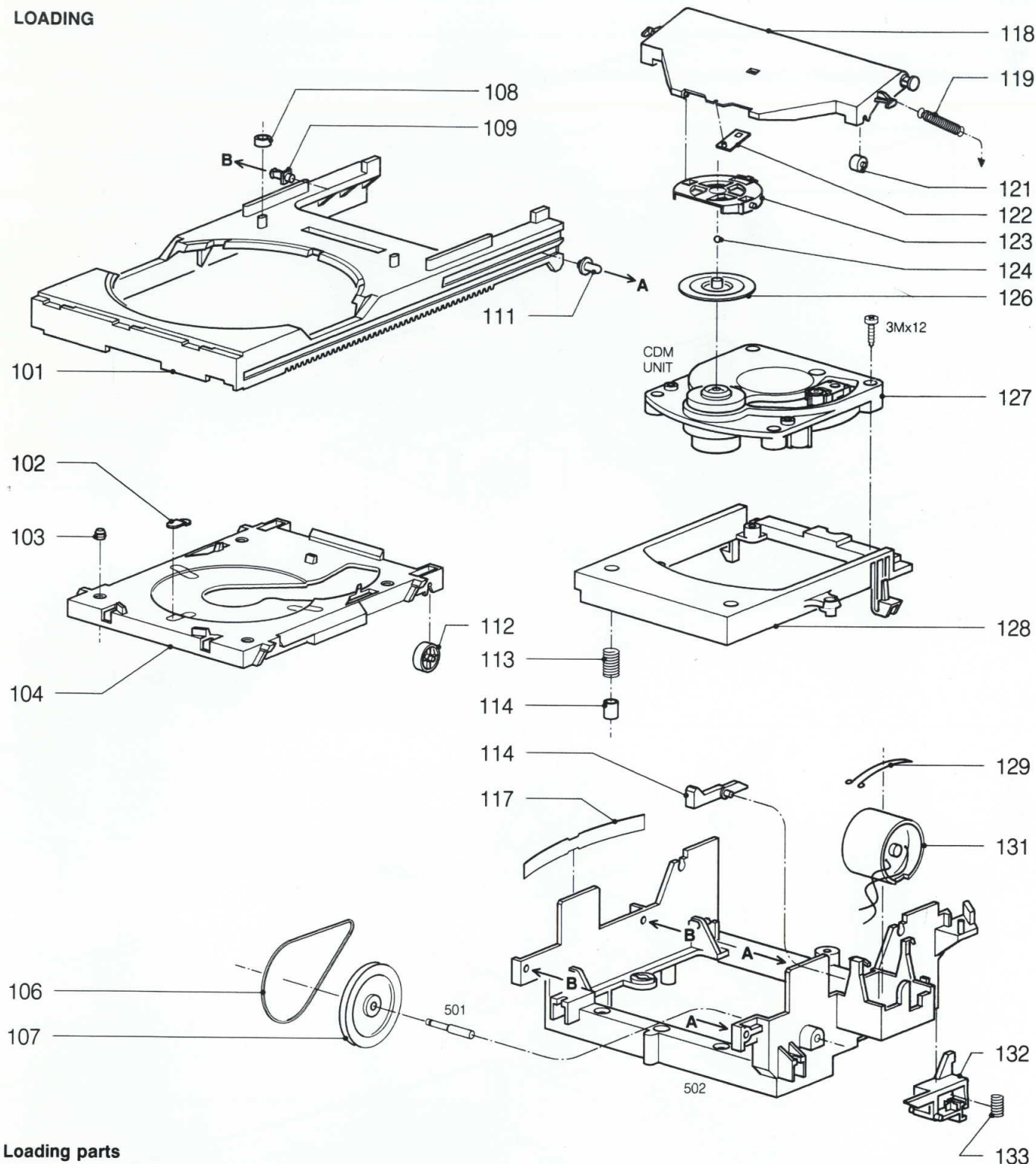


SERVICE CDM FOIL



MDA.00311
T19-730

LOADING



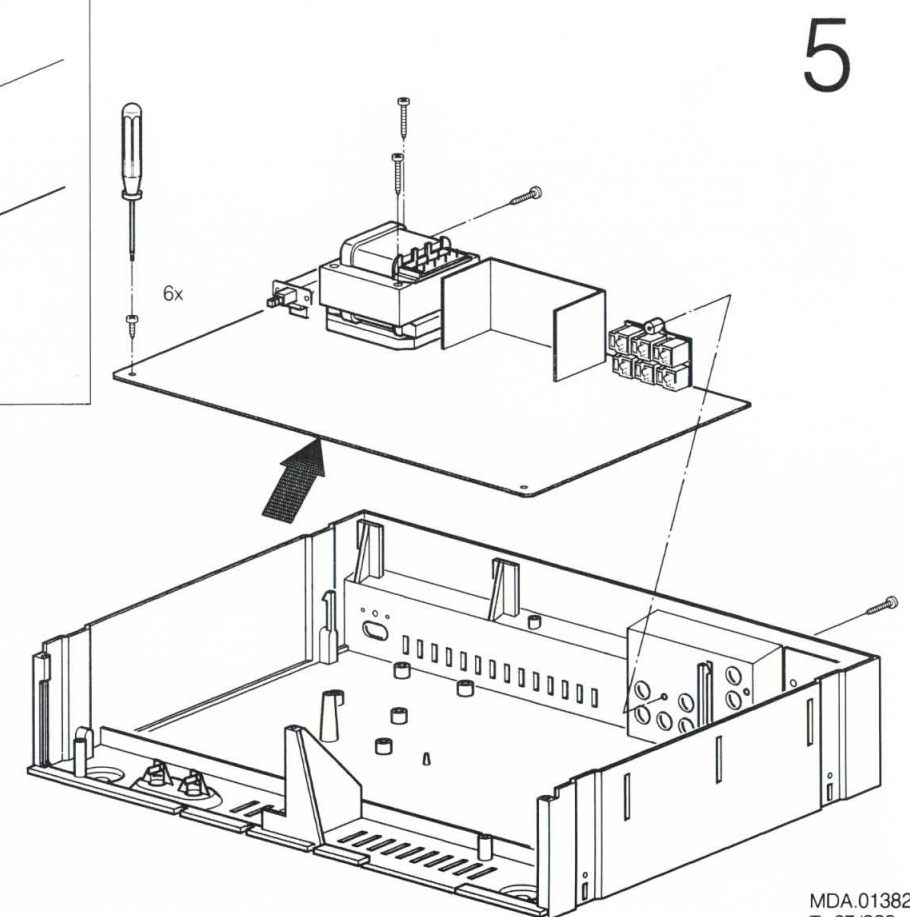
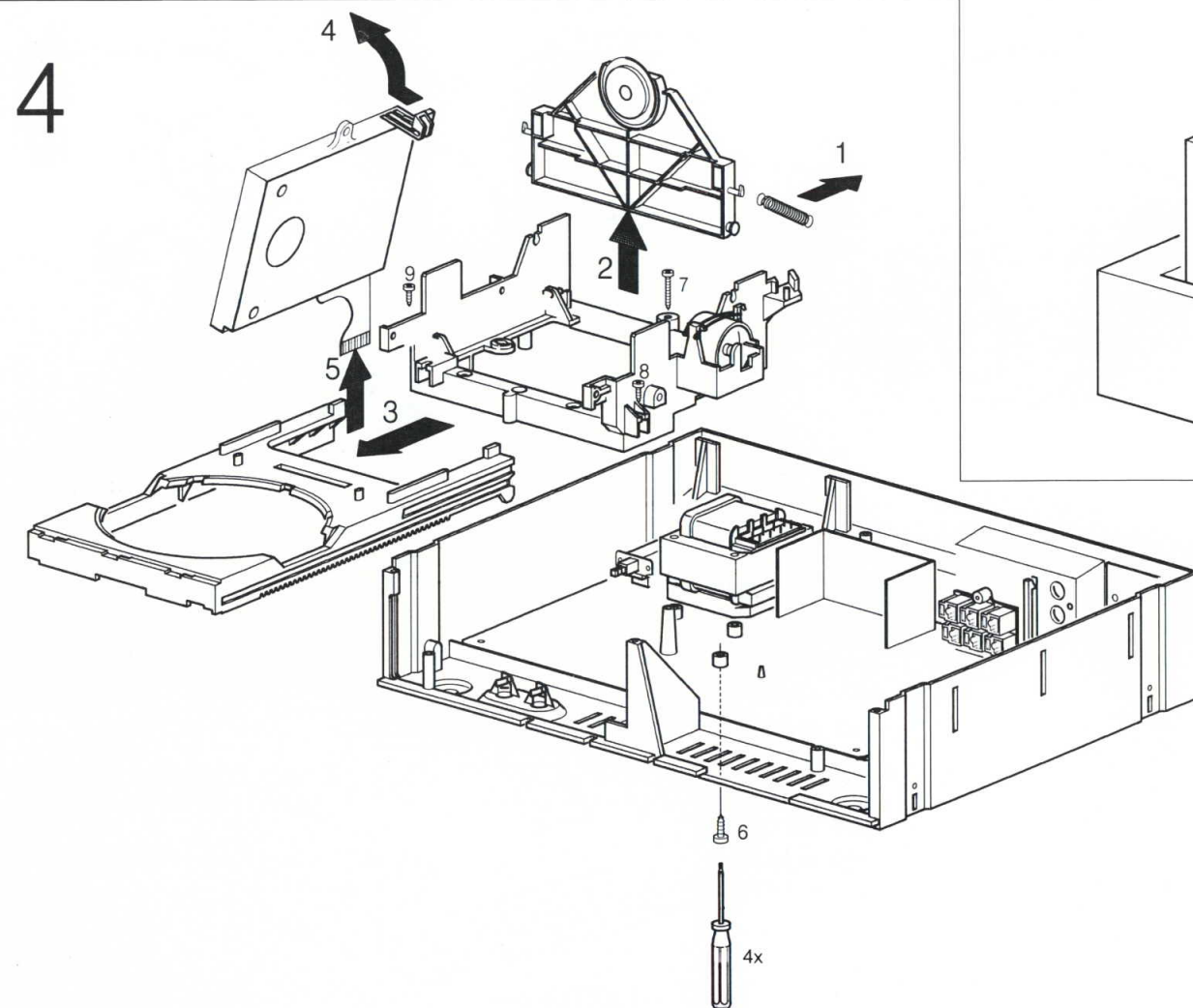
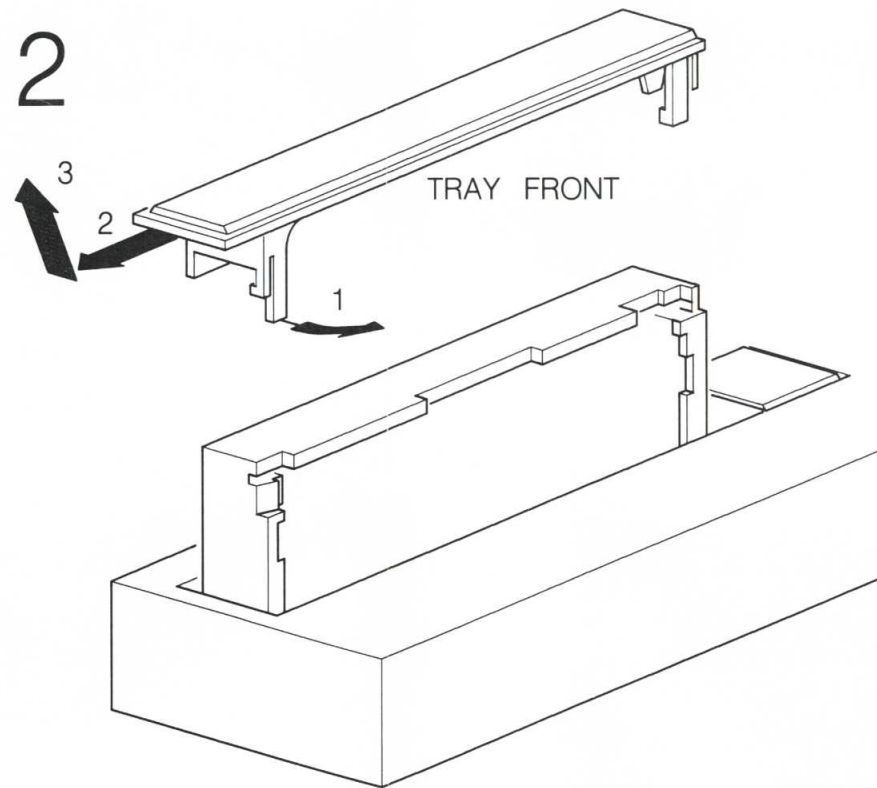
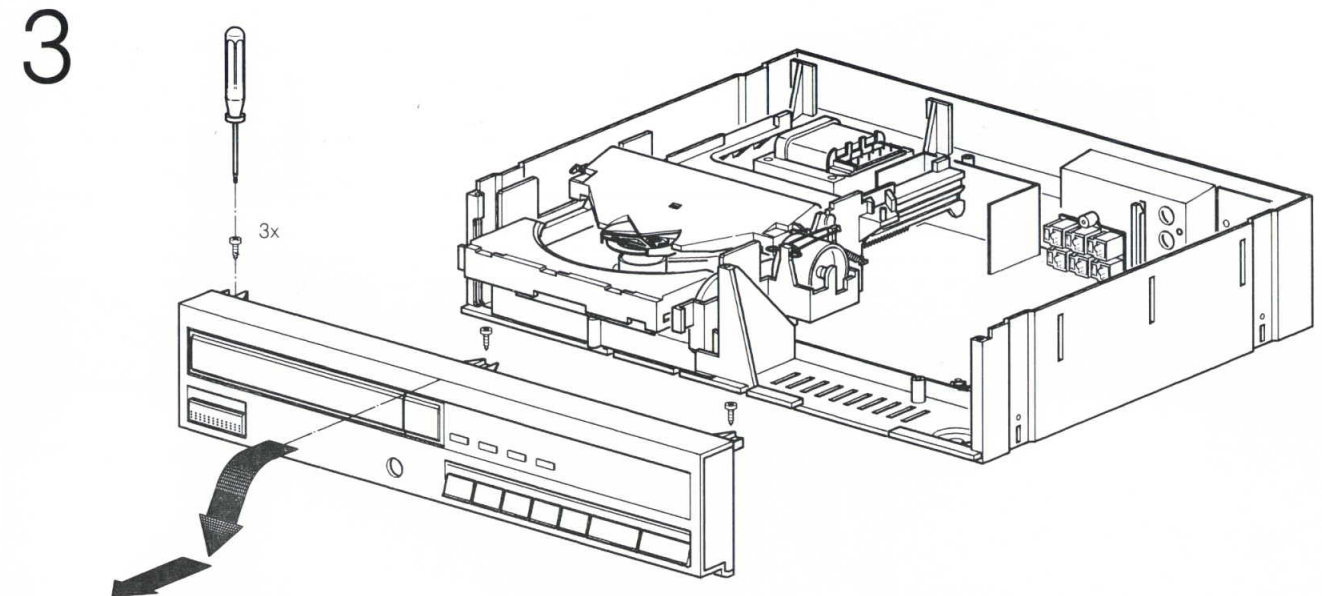
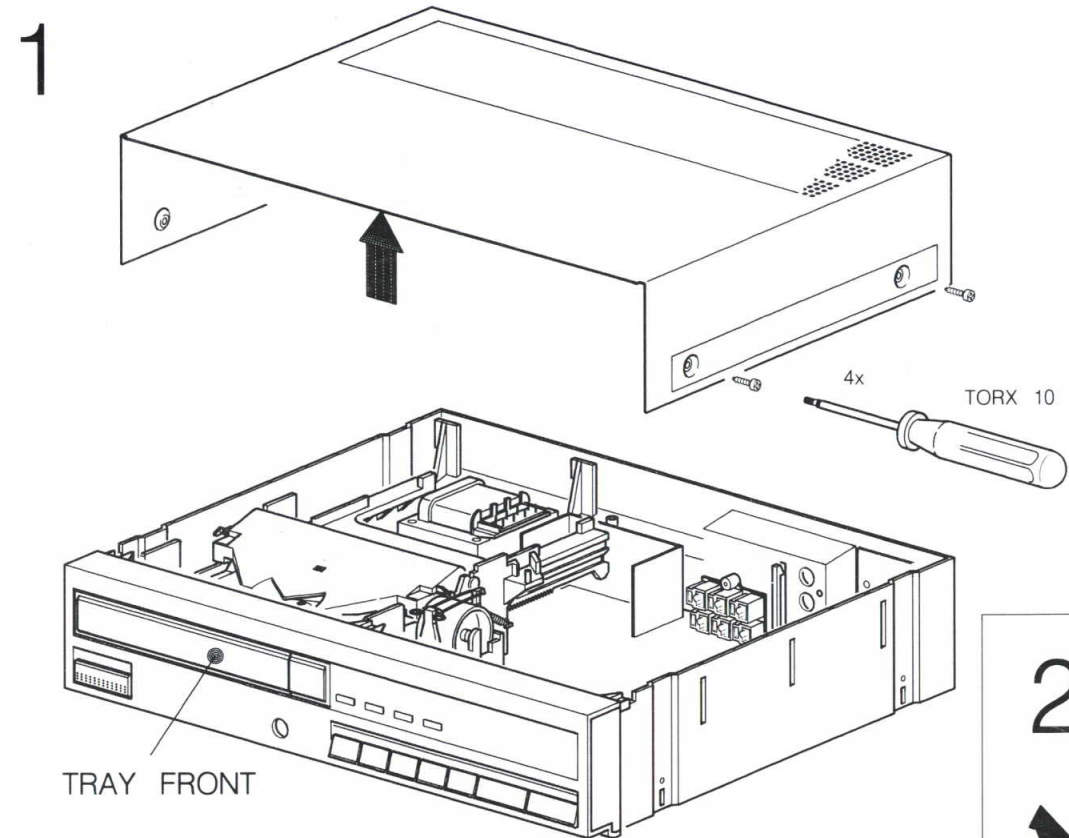
Loading parts

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

EVA.00594
821/T19

DISASSEMBLY OF THE CABINET AND LOADING

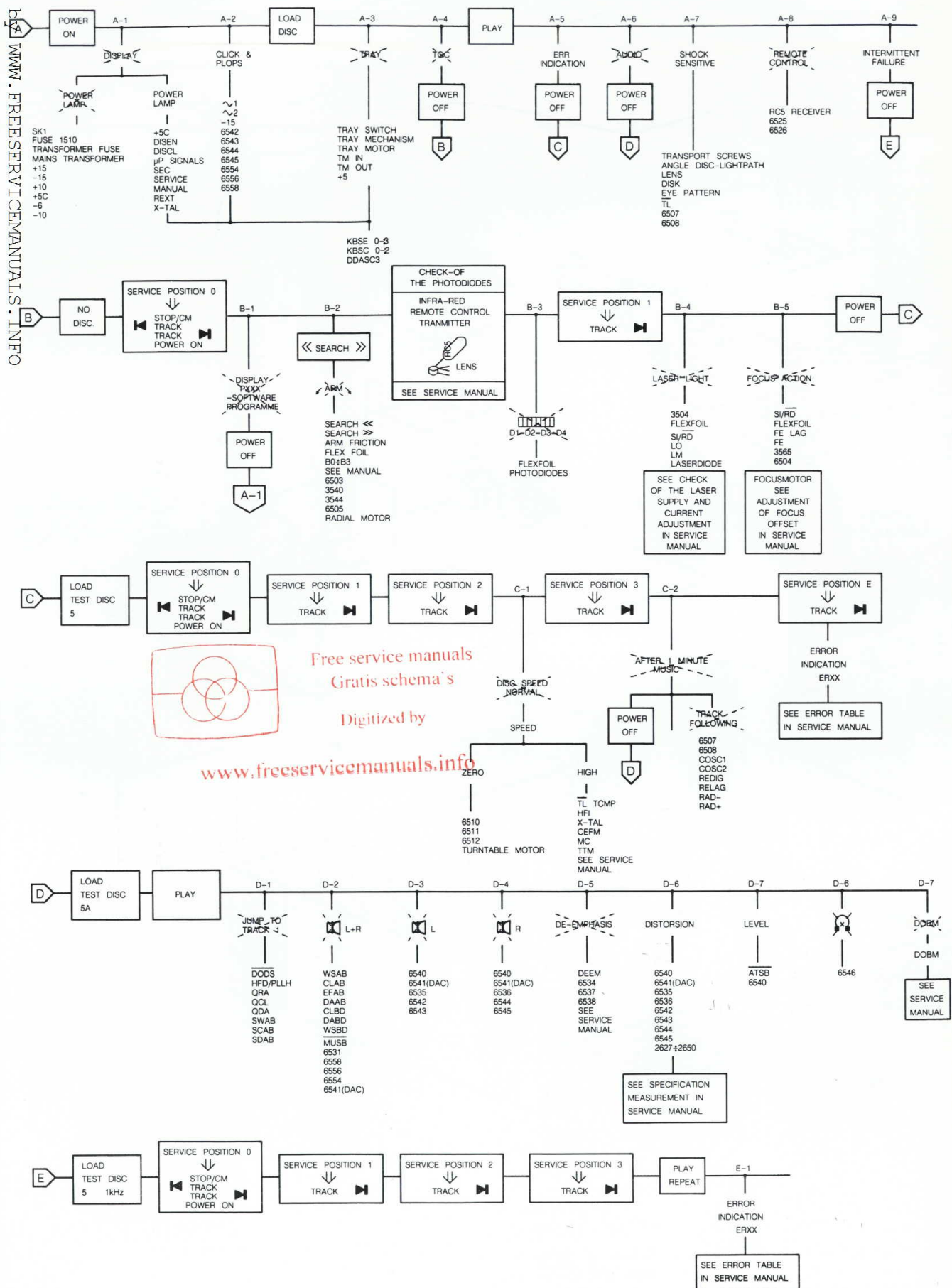
2-2



MDA.01382
T-27/822

CS 16 344

ELECTRICAL MEASUREMENTS AND ADJUSTMENTS



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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

ARM INSIDE

SIGNAL	MODE				REMARKS
B0	SERVICE POSITION 1 OR 2 OR 3: SEARCH >>	36		"HIGH"	ADJUST FOR OPTICAL MID-POSITION
	SERVICE POSITION 1 OR 2 OR 3: SEARCH <<	36		"HIGH"	
B1	SERVICE POSITION 1 OR 2 OR 3: SEARCH >>	34		"HIGH"	
	SERVICE POSITION 1 OR 2 OR 3: SEARCH <<	34		"LOW"	
B2	SERVICE POSITION 1 OR 2 OR 3: SEARCH >>	33		"HIGH"	
	SERVICE POSITION 1 OR 2 OR 3: SEARCH <<	33		"HIGH"	
B3	SERVICE POSITION 1 OR 2 OR 3: SEARCH >>	32		"LOW"	
	SERVICE POSITION 1 OR 2 OR 3: SEARCH <<	32		"LOW"	

MDA 01386
T-08 821

B3
CHECK OF THE PHOTODIODES

STEP	SIGNAL	MODE				REMARKS
1	-	POWER ON		-	-	SEE DRAWING 38314A12 SIGNAL DEPENDS ON DISTANCE LENS -> MR LED OF REMOTE CONTROL

MDA 01378
T-08 824

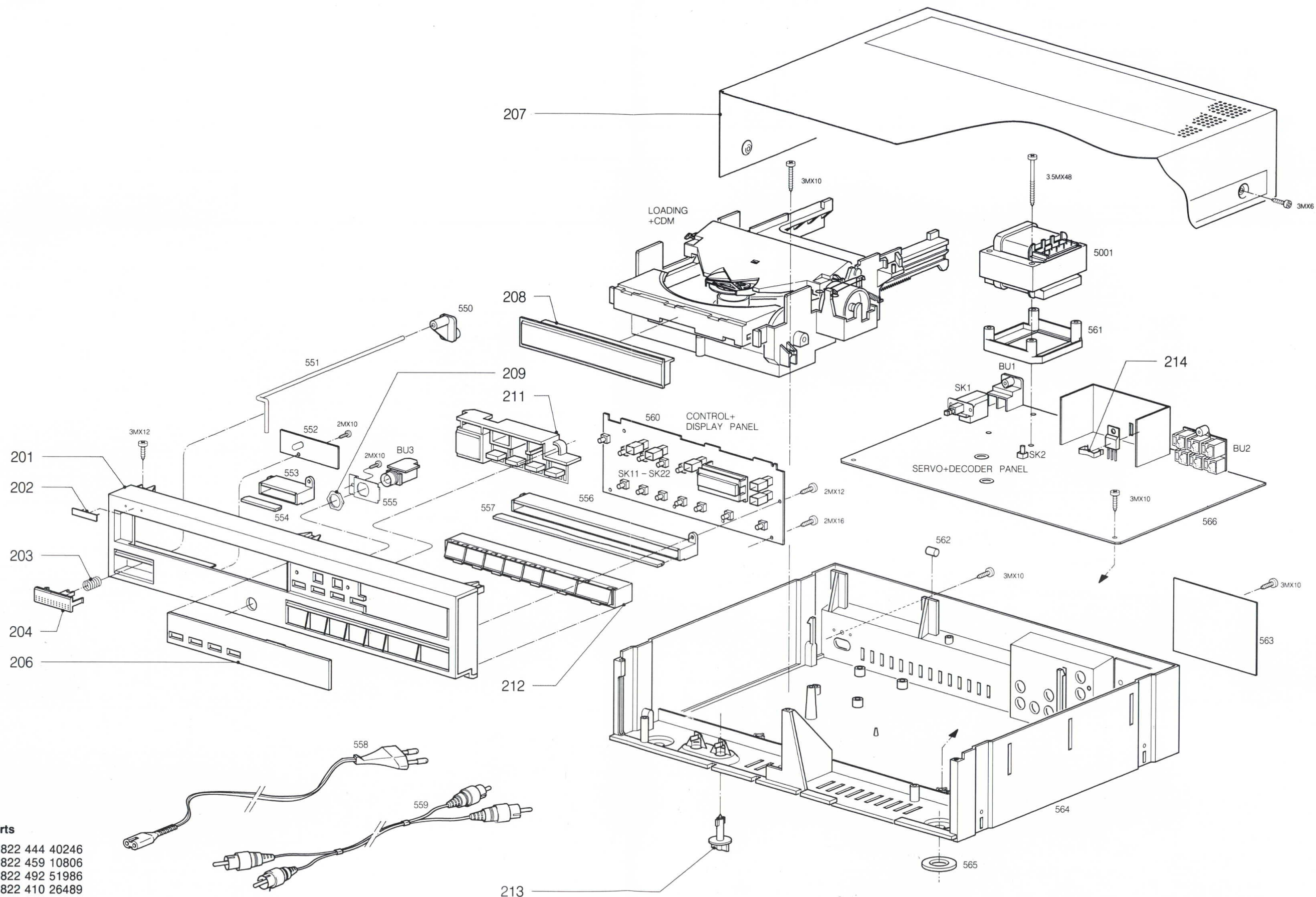
B4
CHECK OF LASER SUPPLY (WITH DEMOUNTED CDM AND ADDITIONAL CIRCUIT)

STEP	SIGNAL	MODE				REMARKS
1	LO	SERV. POS. 2		-	$1.8 < V < 2.3$	S1=1 < 2> GREEN LED A K LITTLE LIGHT CONNECTED DIRECTLY TO PANEL
	LM	SK		-	$170 < mV < 20$	
2	LO	SERV. POS. 2		-	$1.8 < V < 2.3$	S1=1 < 2> GREEN LED A K LITTLE LIGHT CONNECTED DIRECTLY TO PANEL
	LM	SK		-	$170 < mV < 20$	
3	LO	POWER ON		-	$0V \pm 0.2V$	S1=0 < 2> NO LIGHT

MDA 01379
T-08 824

CABINET

2-4



Cabinet parts

201	4822 444 40246
202	4822 459 10806
203	4822 492 51986
204	4822 410 26489
206	4822 381 10988
207	4822 444 30398
208	4822 444 60566
209	4822 505 10571
211	4822 410 26486
212	4822 410 26488
213	4822 417 20162
214	4822 492 63076

EVA.00593
818/T19

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	
DE dig	TEST DISC 5, PLAY OR SERVICE POSITION 3	37		PULSES "HIGH"	WHEN THE DISC IS SLOWLY BRAKED BY HAND
DE lag	TEST DISC 5, PLAY OR SERVICE POSITION 3	41	APPROX 2.5V DC		

MDA 01387
T-08 823

JUMP TO TRACK 1

SIGNAL	MODE				REMARKS
DODS	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			
SCAB	TEST DISC 5A, PLAY	79			SEE DRAWING: MDA.00239
SDAB	TEST DISC 5A, PLAY	80			SEE DRAWING: MDA.00239

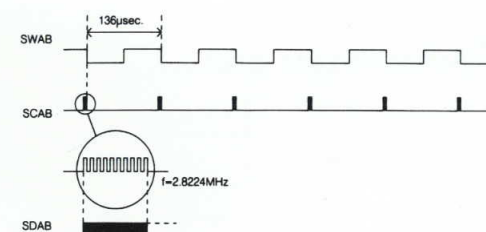
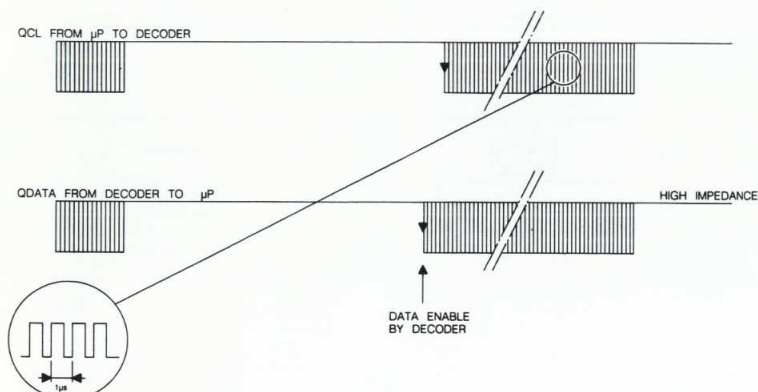
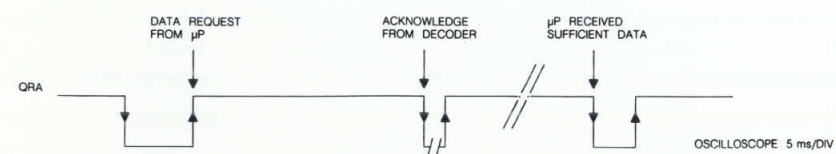
MDA 01388
T-08 823D2
NO AUDIO OUTPUT LEFT + RIGHT

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"	

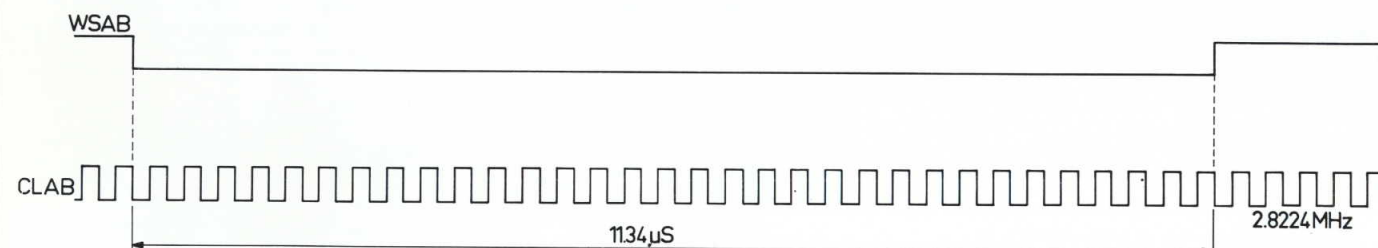
MDA 01390
T-08 823

DAC IC

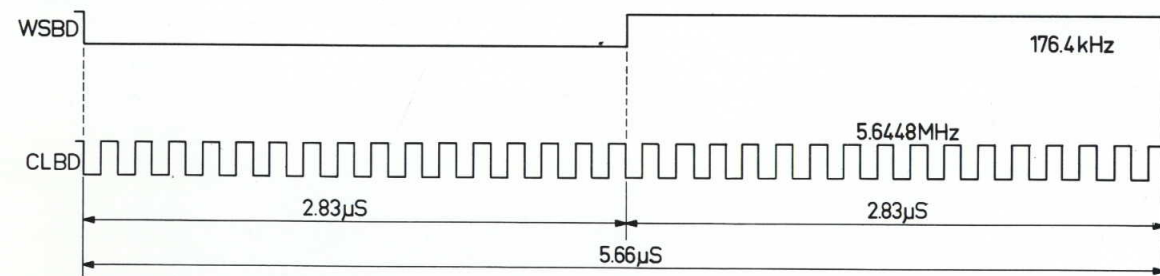
SIGNAL	MODE				REMARKS
OUTPUT OF OP-AMP	DISC, PLAY	94		LF SIGNAL	LEFT CHANNEL
OUTPUT OF OP-AMP	DISC, PLAY	95		LF SIGNAL	RIGHT CHANNEL

MDA 01392
T-08 823MDA 00239
T12/638

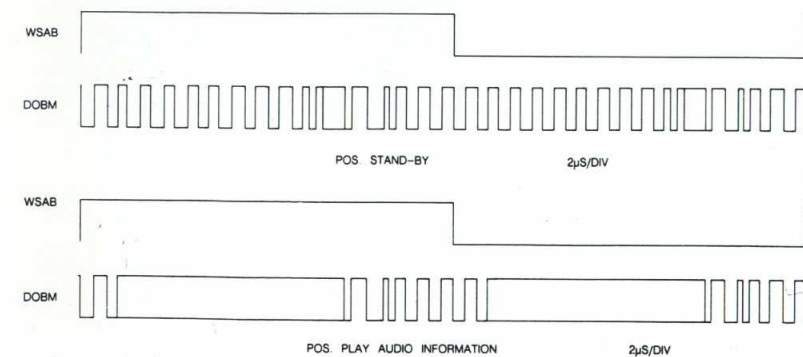
CD450







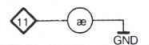

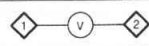
38 847 C12



38 848 C12






MDA 00239
T07/733

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

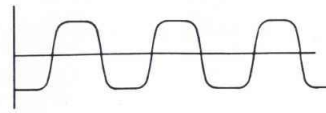
SIGNAL	MODE				REMARKS
Si/Rd	SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	21		PULS "LOW"	SEE DRAWING MDA 01403
FE	TEST DISC 5A, SERVICE POSITION 1 WHEN REPEATING START UP PROCEDURE	26			SEE DRAWING MDA 01413
FE-LAG	TEST DISC 5A	27			SEE: ADJUSTMENT OF FOCUS-OFFSET

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-tal	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		

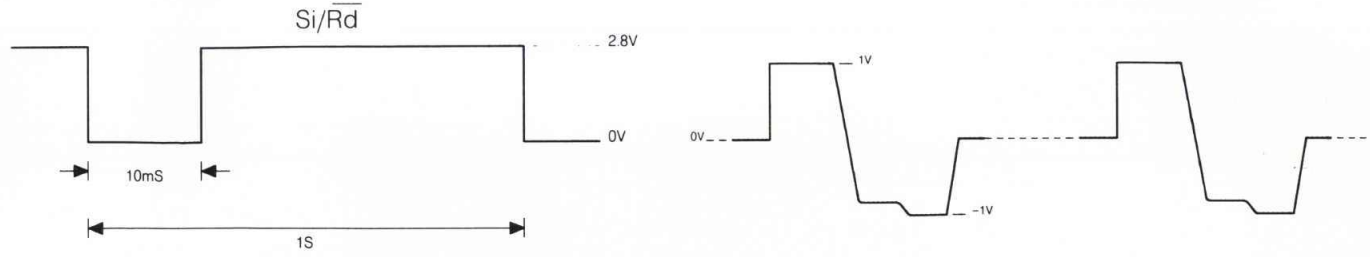
MDA 01385
T-08 823



38 314 A12

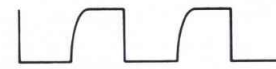


37 017 B8

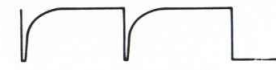


MDA 01403
T33/821

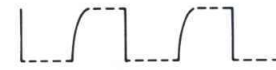
MDA 01413
T33/823



POSITION: STAND BY.




POSITION: PLAY (BEGINNING)



POSITION: PLAY (NORMAL)

38 849 A12




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

MDA 01143
T12 -651






MDA 00240
T07-804




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

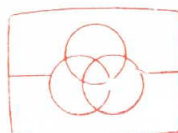
ERROR TABLE

System errors

Indi- cation	Cause	Check
Er 01	No RD	Si, Sc, RD, Photodiode signal processor
Er 02	No 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.

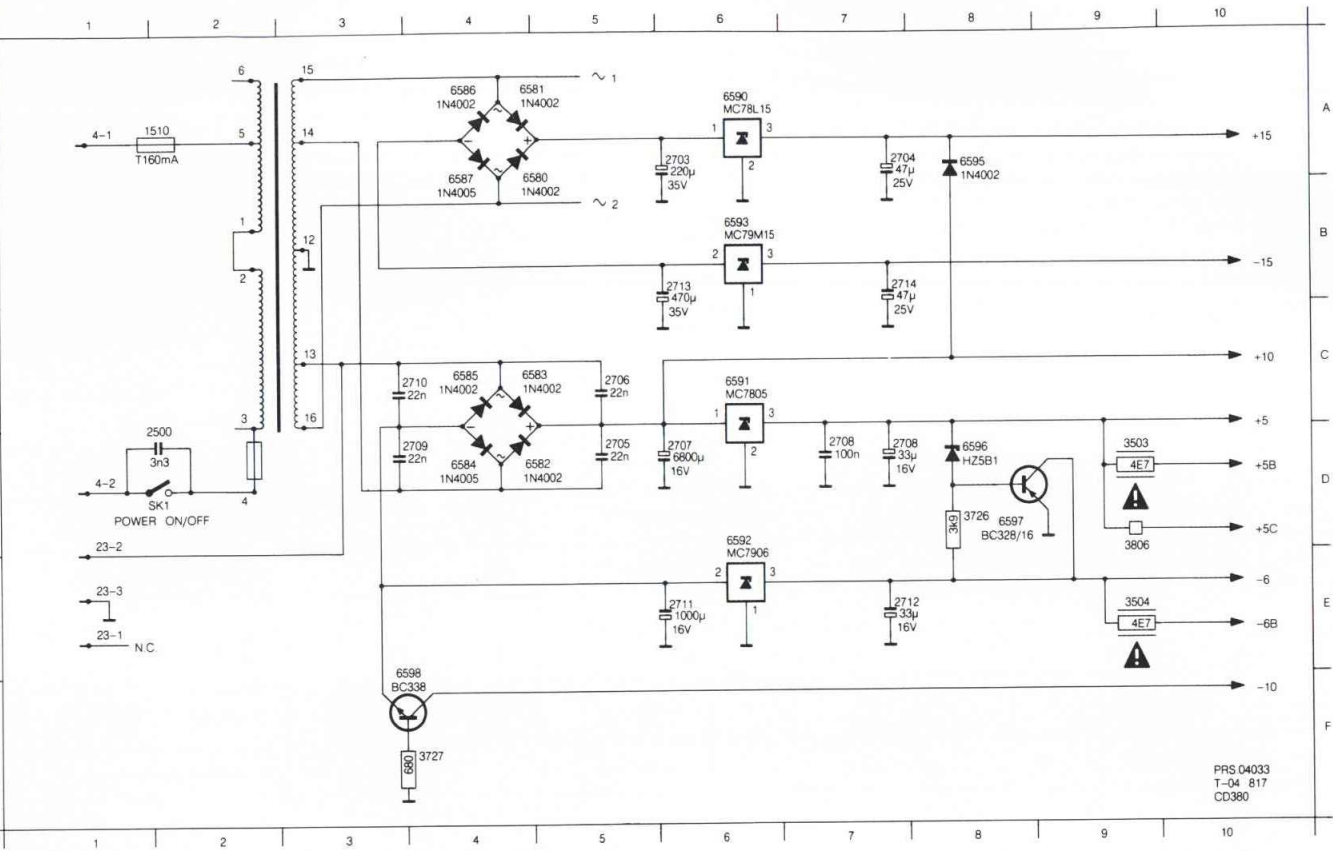
Free service manuals
Gratis schema's

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www.freesevicemanuals.info

Digitized by www.freesevicemanuals.info

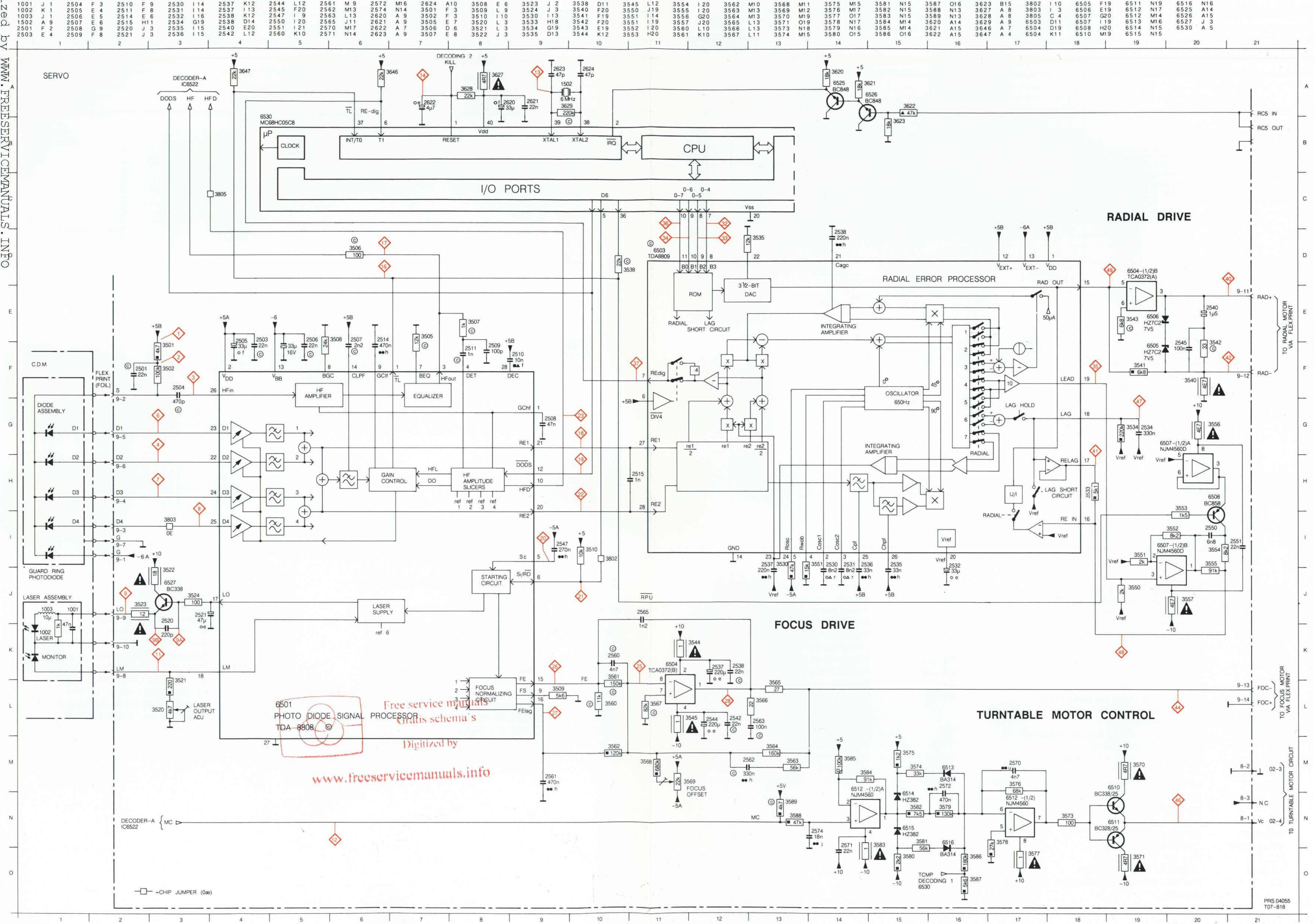
1510	A 2	2705	D 5	2708	D 8	2712	E 8	3504	E 9	6580	A 5	6584	D 4	6590	A 6	6595	A 8	SK1	D 2
2500	C 2	2706	C 5	2709	D 4	2713	B 6	3726	D 8	6581	A 5	6585	C 4	6591	C 6	6596	D 8		
2703	A 6	2707	D 6	2710	C 4	2714	B 8	3727	F 4	6582	D 5	6586	A 4	6592	D 6	6597	D 8		
2704	A 8	2708	D 7	2711	E 6	3503	D 9	3806	D 9	6583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



PRS 04033
T-04 817
CD380

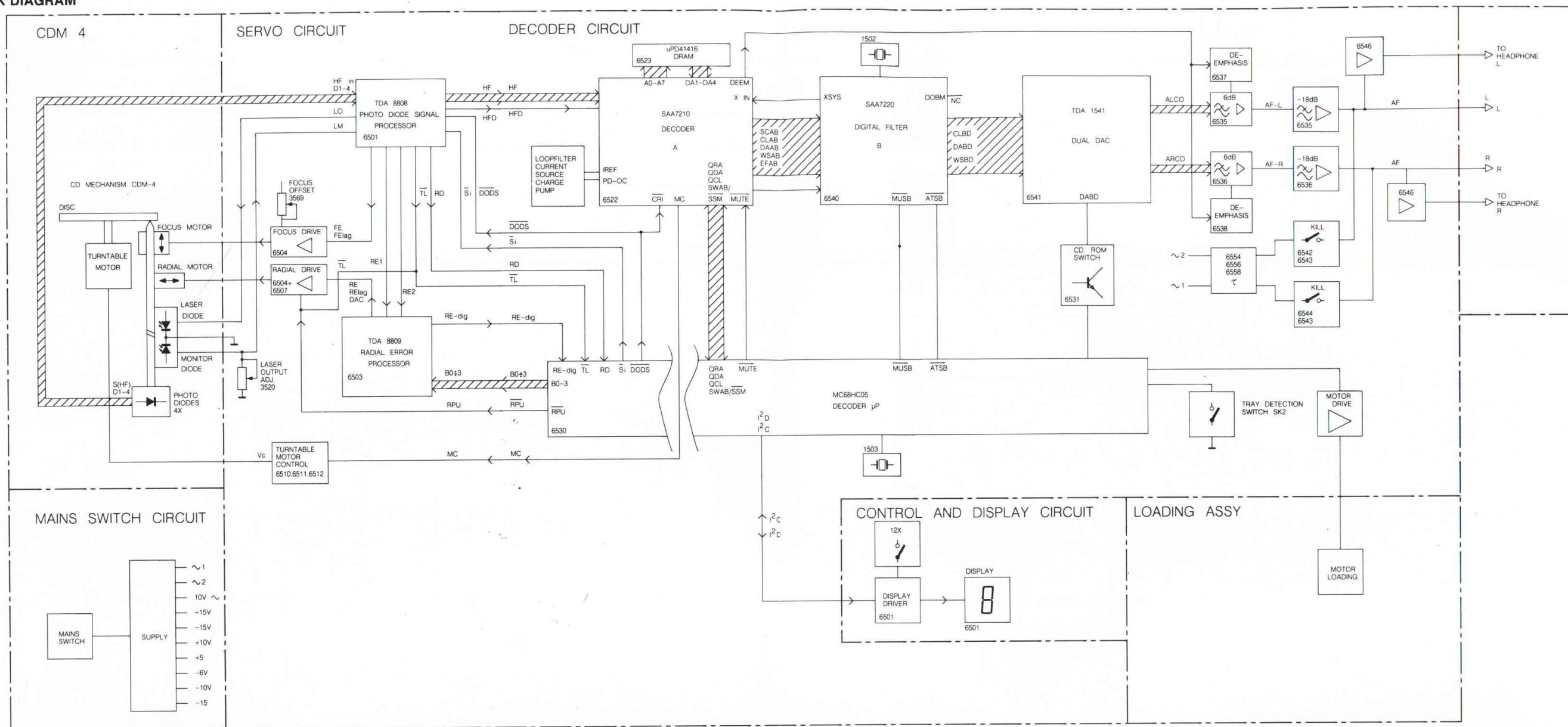
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4-3
SERVO



BLOCK DIAGRAM

4-2

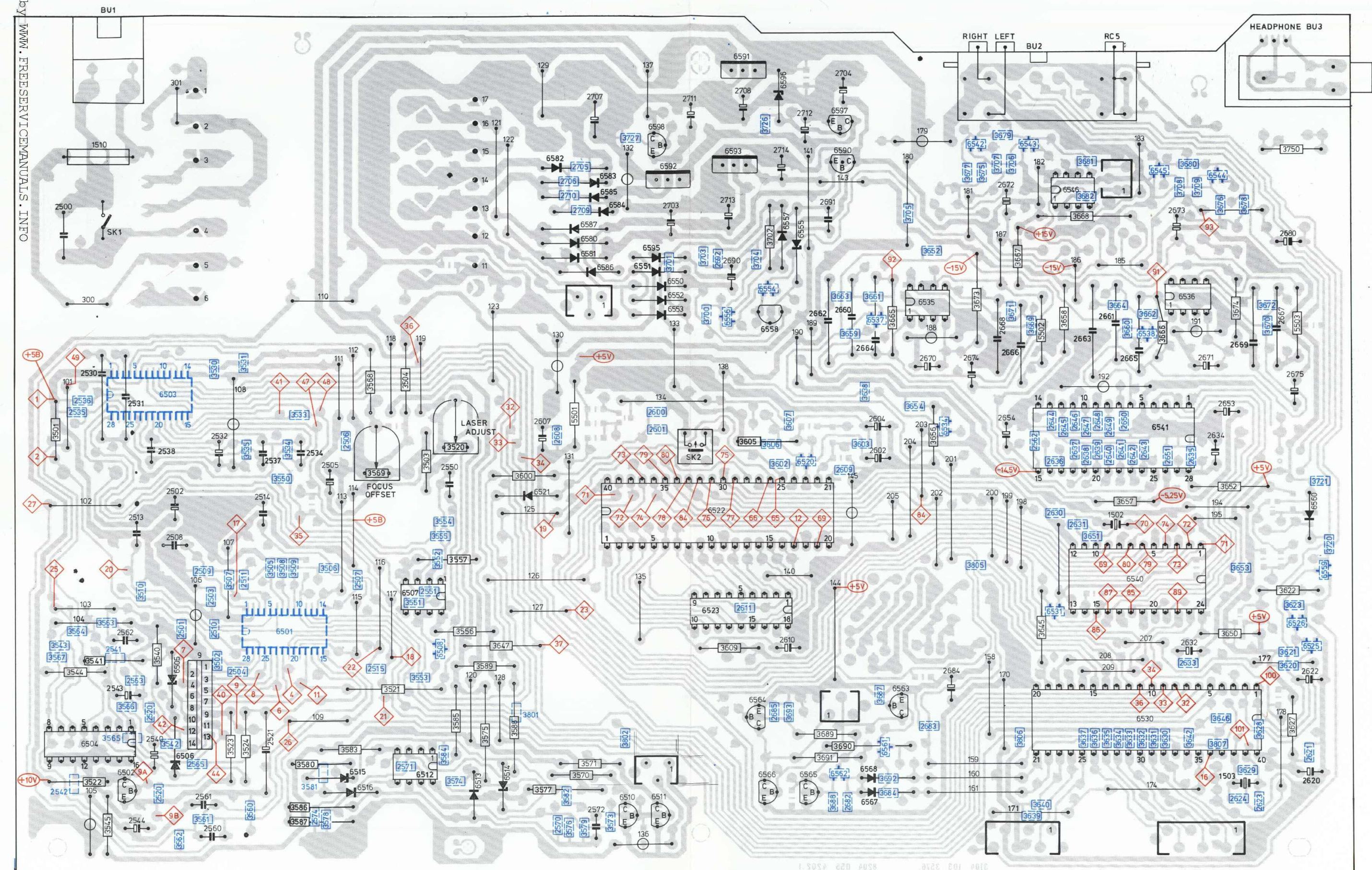
PRS 05151
T02-823

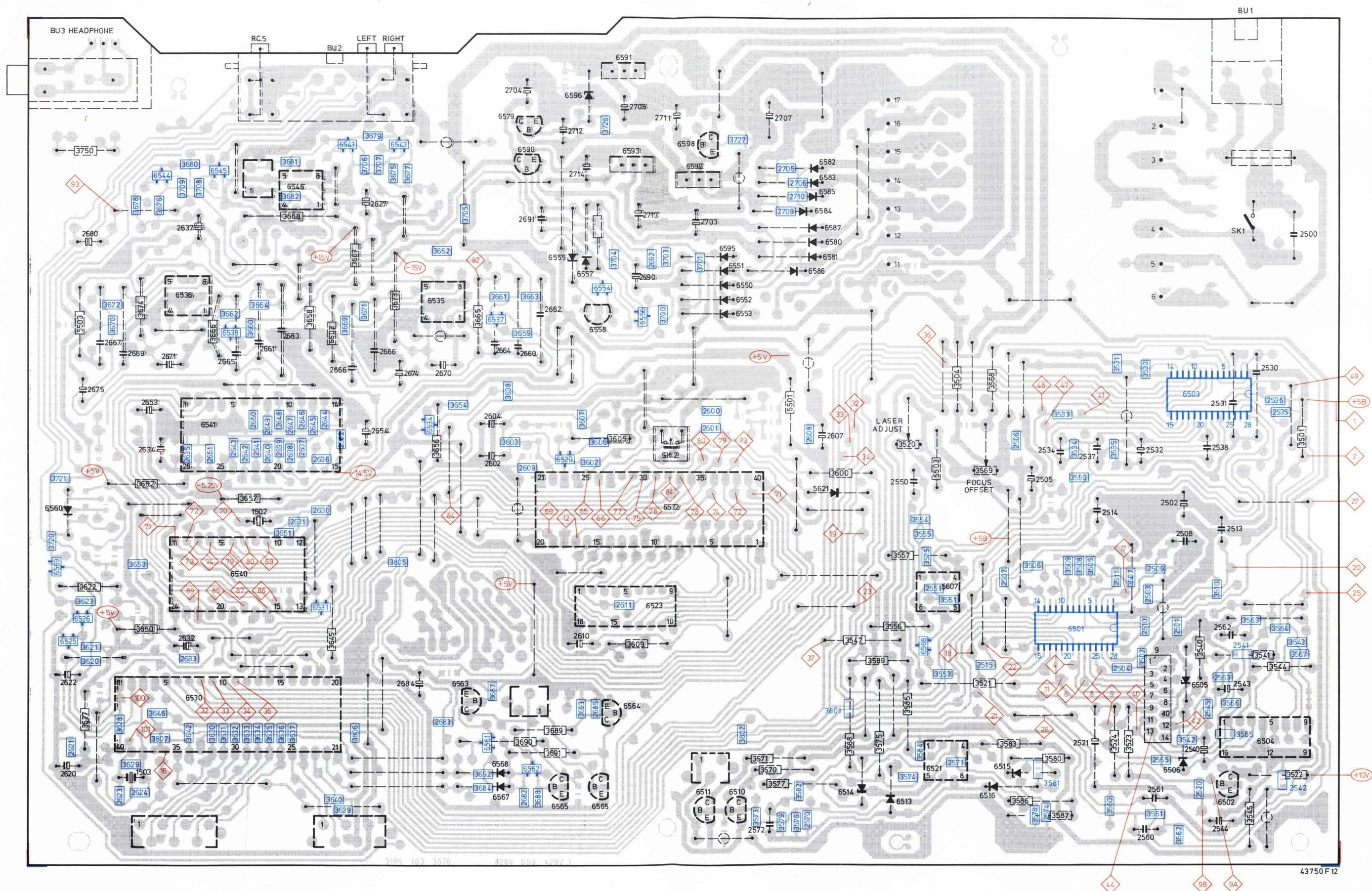
AGC - Automatic Gain Control
 B0-B3 - Control bits for radial circuit
 BEQ - Equalizer reference current input
 BGC - DC and LF gain control reference input
 Cosc1 - Capacitor wobble oscillator
 Cosc2 - Capacitor wobble oscillator
 DEC - Decoupling input of inkruat bypass
 DET - HF detector voltage input
 DIV4 - Divide by 4 input
 DODS - Drop out detector suppression
 D1+4 - Photodiode currents
 FE - Focus error signal
 FE lag - Focus error signal for LAG network
 HF - HF output for DEMOD
 HFD - HF detector output for DEMOD
 HF-in - HF current input to HF amplifier
 HF-out - HF amplifier and equalizer voltage output
 LM - Laser monitor diode input
 LO - Laser amplifier current output
 MC - Motor control signal
 offset IN - Offset control input
 offset OUT - Offset control output
 PLLH - PLL on hold output
 RADout - output of RE2-RE1 input
 RE - Radial error signal (Amplified RE₂-RE₁ currents)

Rosc - Resistor wobble oscillator
 Rwob - Wobble generator input
 RE1 - Radial error signal 1 (summation of amplified currents D₃ and D₄)
 RE2 - Radial error signal 2 (summation of amplified currents D₁ and D₂)
 RE dig - Radial error digital
 RE lag - Radial error signal for LAG network
 Sc - Starting up capacitor input
 Si/RD - On/off control for laser supply and focus circuit. Ready signal, Starting up procedure succesful.
 TL - Track loss output signal
 TTM- - Control voltage for turntable motor
 TTM+ - Control voltage for turntable motor
 Vext- - Supply connection
 Vext+ - Supply connection

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

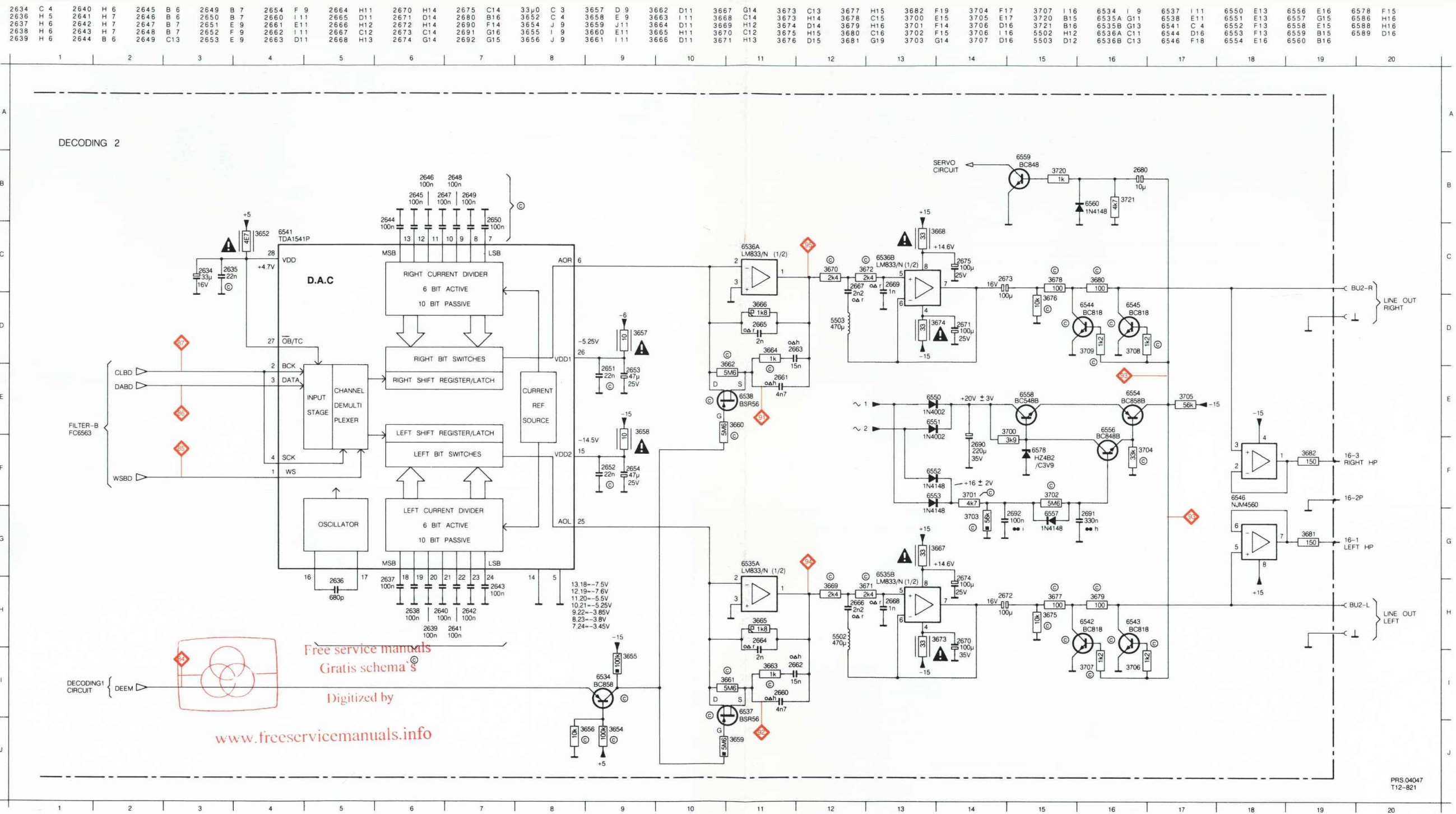
MUSB - Soft Mute signal
 PD/OC - Phase detector - oscillator control
 QCL - Q-channel Clock signal
 QDA - Q-channel Data signal
 QRA - Q-channel Request Acknowledge
 SCAB - Subcode clock Decoder-A to Filter-B
 SDAB - Subcode data Decoder-A to Filter-B
 SWAB/SSM - Subcode Word/Start-stop motor signal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





Digitized by WWW.FREOSERVICEMANUALS.INFO

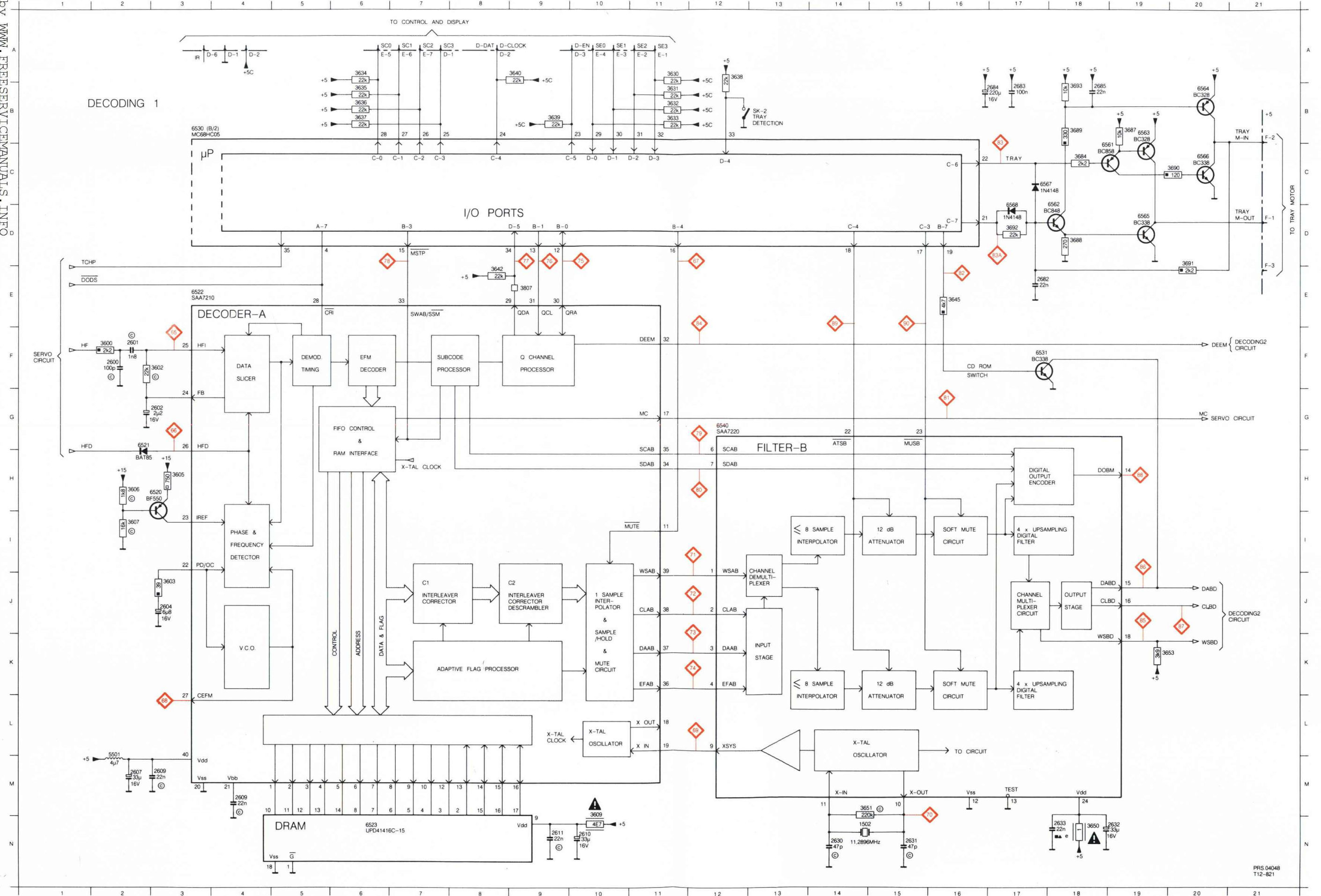
4-7
DECODING 2



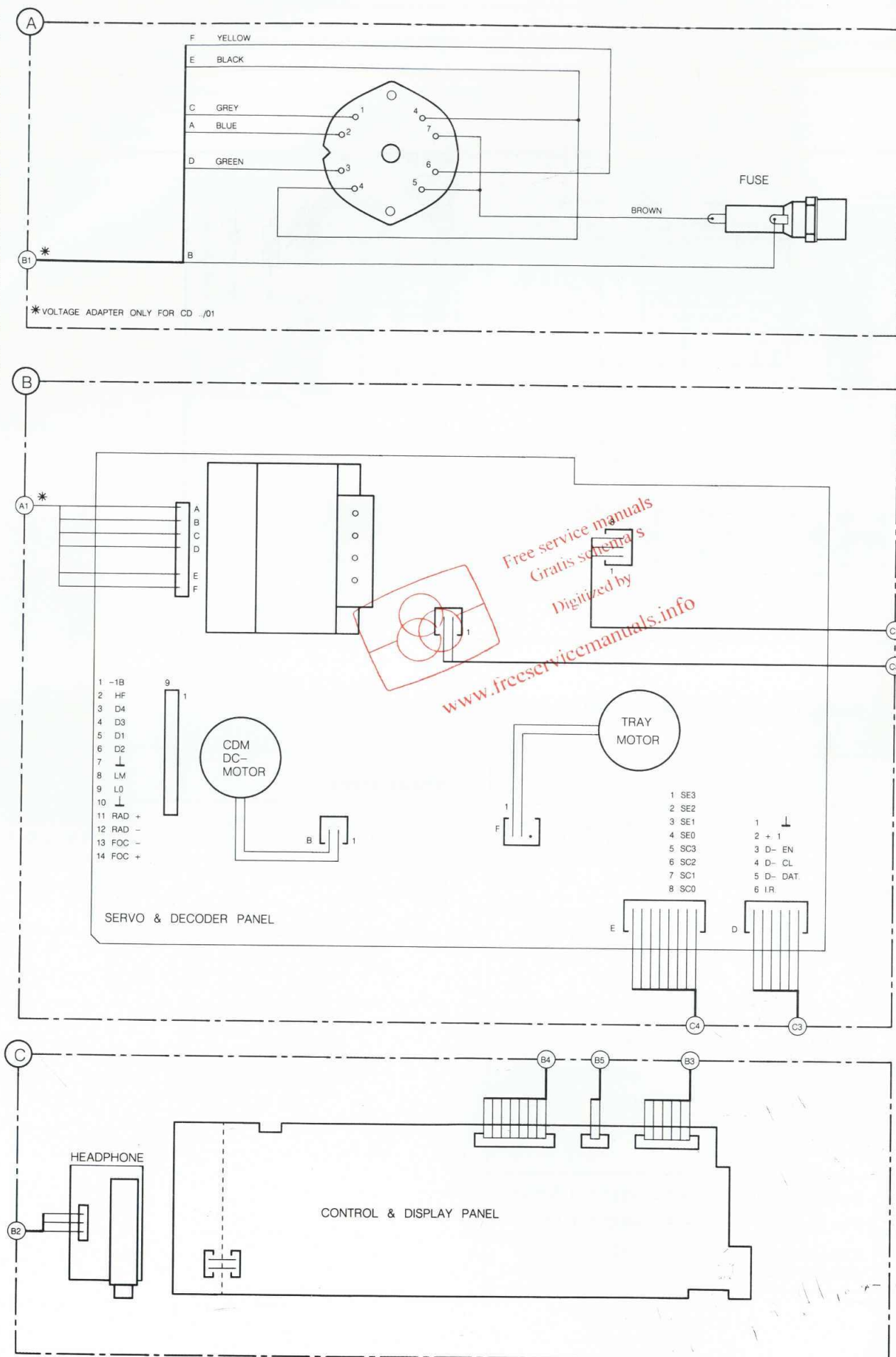
Digitized by WWW.FREESERVICE MANUALS.INFO

DECODING 1

1502	N14	2602	G 3	2609	M 3	2611	N 9	2632	N19	2683	B17	3600	F 2	3605	H 3	3609	M10	3632	B11	3635	B 6	3638	A12	3642	E 8	3651	M14	3687	B19	3690	C20	3693	B18	6520	H 3	6523	N 6	6540	G12	6563	B19	6566	C20	SK-2	B13				
2600	F 2	2604	J 3	2609	M 4	2630	N14	2633	N18	2684	B17	3602	F 3	3606	H 2	3630	A11	3636	B 6	3639	B 9	3645	E16	3653	K20	3688	D18	3691	D20	3807	E 9	6521	G 2	6530	B 3	6561	C18	6564	B20	6567	C17								
2601	F 2	2607	M 2	2610	N10	2631	N15	2682	E17	2685	B18	3603	J 3	3607	I 2	3631	B11	3634	A 6	3637	B 6	3640	A 9	3650	N18	3684	C18	3689	B18	3692	D17	5501	L 2	6522	E 3	6531	F17	6562	C18	6565	D19	6568	C17						



WIRING DIAGRAM

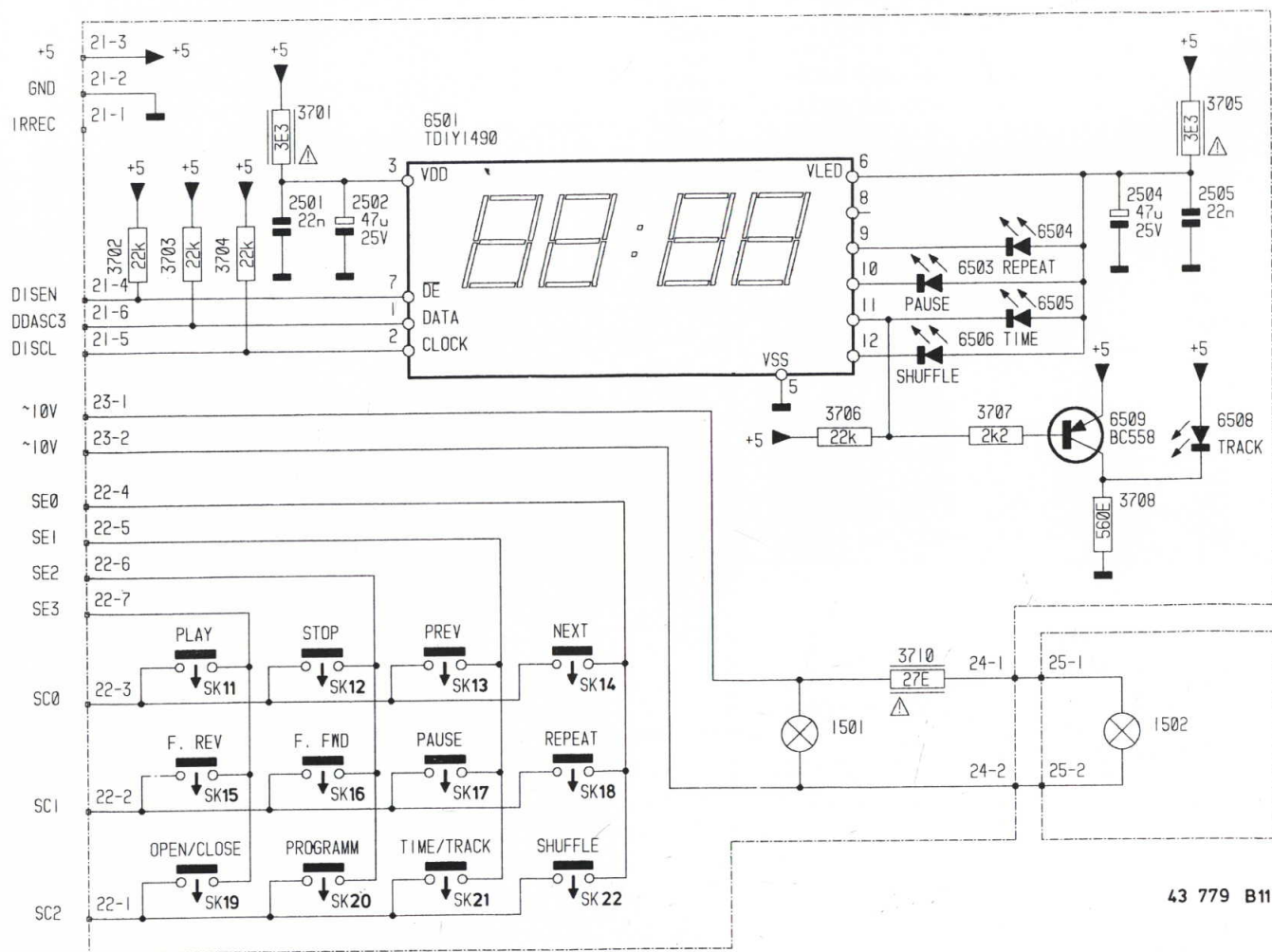
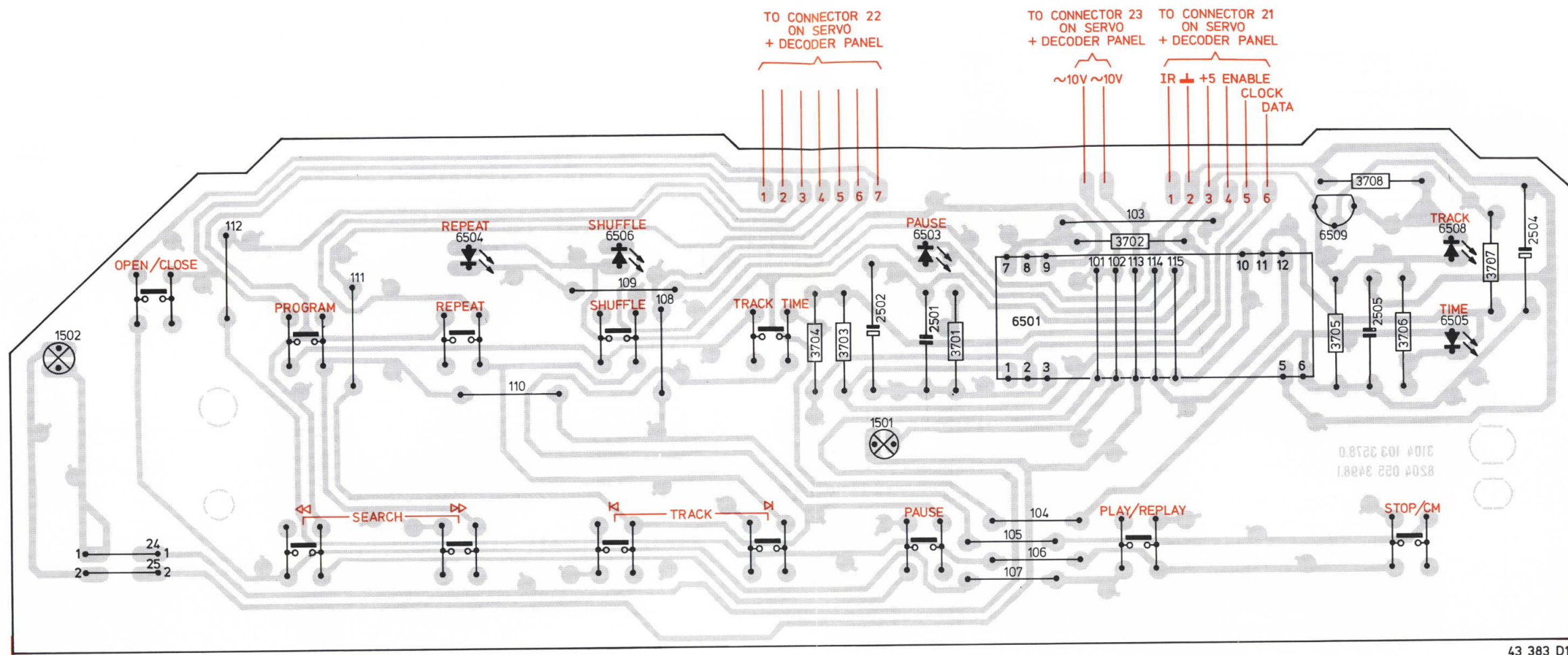
PRS 04122
104/817

ELECTRICAL PARTSLIST SERVO + DECODER PANEL

For non active chip components see separate list.

		MC79L09AC	4822 209 73233
		MC79M15CT	5322 209 86361
		MC7906CT	4822 209 82056
		TY40408 (+5V)	4822 209 71579
		MC78M15	4822 209 80808
		TDA8808T	4822 209 73234
		TDA8809T/C2	4822 209 73235
		SAA7210P/04	4822 209 71001
		uPD41416C-20	4822 209 50582
		SAA7220	4822 209 11157
		TDA1541A/N2	4822 209 72544
		TDA1543	4822 209 73236
		LM833N	4822 209 83163
		NJM4560D	4822 209 83274
		TCA0372DP2	4822 209 72587
		MC68HC05C8	4822 209 73232
		BC328-16	4822 130 41023
		BC328	4822 130 44104
		BC338	4822 130 44121
		BC558B	4822 130 44197
		BC858	5322 130 42012
		BC848	5322 130 41981
		BC818	4822 130 42675
		BF550	4822 130 42131
		Miscellaneous	
		Display	4822 130 90543
		Cinch socket	4822 267 40766
		Tack switch (tray)	4822 276 11896
		Mains switch	4822 276 11309
		Mains inlet	4822 265 20291
		Phone socket	4822 267 30743
		Fuse holder	4822 256 30274
		Mains transformer	4822 146 30701
		330N	5322 121 42661
		4.7M 50V	4822 124 41577
		6M8 50V	4822 124 41578
		33M 16V	4822 124 40272
		47M 25V	4822 124 41527
		100M 25V	4822 124 41528
		220M 16V	4822 124 40196
		220M 35V	4822 124 41572
		470M 35V	4822 124 41573
		1000M 16V	4822 124 41571
		6800M 16V	4822 124 41571
		Bipolar	
		0.68M 16V	4822 124 41583
		10M 25V	4822 124 41558
		100M 16V	4822 124 22339
		1N4002	4822 130 30684
		1N4148	4822 130 30621
		HZ7C2/7V2	4822 130 32862
		BA314	4822 130 30879
		HZ3B2	4822 130 32831
		HZ7A3	4822 130 33523
		BAT85	4822 130 31983
		CSA4.000 11289.6 kHz	4822 242 70831 4822 242 71644
		Coil 4.7 mH	4822 157 71644
		Safety resistors	
		4E7	4822 116 52858
		12E	4822 111 30511
		18E	4822 111 31515
		100E	4822 116 52389
		120E	4822 116 52394
		220R	4822 116 43221
		330E	4822 116 52416
		750R	4822 116 52432
		1K	4822 116 52391
		1K2	4822 116 52395
		1K8	4822 116 53109
		2K2	4822 116 52408
		4K7	4822 116 52426
		5K6	4822 116 52438
		6K8	4822 116 52925
		10K	4822 116 52452
		22K	4822 116 52463
		47K	4822 116 52472
		100K	4822 116 52973
		180K	4822 116 52505
		5M6	4822 116 52533
		Non flameable Resistors	
		1R	4822 111 30483
		4R7	4822 111 30499
		10R	4822 111 30508
		33R	4822 111 30522
		1K8	4822 116 53109
		4K7 22K	4822 101 10685 4822 100 20522

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ELECTRICAL PARTS LIST CONTROL AND DISPLAY

2501,2505	22 nF, 16 V	4822 122 10166	
2502,2504	47 µF, 25 V	4822 124 22027	
6509	BC558	4822 130 40941	
6503, } 6504 }	TLHR4499	4822 130 80849	
6505, } 6508 }	TLHG4499	4822 130 80848	
6506	TLHY4499	4822 130 80851	
3701,3705	Safety Res. 3E3 0,33W 5%	4822 111 30593	
3702,3703 } 3704,3706 }	met film 22k 0,5W 5%	4822 116 52463	
3707	met film 2k2 0,5W 1%	4822 116 52408	
3708	met film 560E 0,5W 5%	4822 116 52428	

Miscellaneous	
Control switches SK 11 ÷ SK 22	4822 276 12276
6501 Display TDIY 1490	4822 130 90543
1066 Mute delay assy	4822 214 51719
1501, } 1502 }	Lamp 4822 134 40634

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

* 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

	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


MDA.00084
T32-735



















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	
	1,1 k 2% 4822 111 90336	1,8 M 5% 4822 111 90414	
	1,2 k 2% 5322 111 90096	2 M 5% 4822 111 90415	
	1,3 k 2% 4822 111 90244	2,2 M 5% 4822 111 90185	
	1,5 k 2% 4822 111 90151	2,4 M 5% 4822 111 90416	
	1,6 k 2% 5322 111 90265	2,7 M 5% 4822 111 90417	
	1,8 k 2% 5322 111 90101	3 M 5% 4822 111 90418	
	2 k 2% 4822 111 90165	3,3 M 5% 4822 111 90191	
	2,2 k 2% 4822 111 90248	3,6 M 5% 4822 111 90419	
	2,4 k 2% 4822 111 90289	3,9 M 5% 4822 111 90421	
	2,7 k 2% 4822 111 90569	4,3 M 5% 4822 111 90422	
	3 k 2% 4822 111 90198	4,7 M 5% 4822 111 90423	
	3,3 k 2% 4822 111 90157	5,1 M 5% 4822 111 90424	
	3,6 k 2% 5322 111 90107	5,6 M 5% 4822 111 90425	
	3,9 k 2% 4822 111 90571	6,2 M 5% 4822 111 90426	
	4,3 k 2% 4822 111 90167	6,8 M 5% 4822 111 90235	
	4,7 k 2% 5322 111 90111	7,5 M 5% 4822 111 90427	
	5,1 k 2% 5322 111 90268	8,2 M 5% 4822 111 90237	
	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	


















0 E jumper 4822 111 90163	
1 E 5% 4822 111 90184	
1,1 E 5% 4822 111 90377	
1,2 E 5% 4822 111 90378	
1,3 E 5% 4822 111 90379	
1,5 E 5% 4822 111 90381	
1,6 E 5% 4822 111 90382	
1,8 E 5% 4822 111 90383	
2 E 5% 4822 111 90384	
2,2 E 5% 5322 111 90104	
2,4 E 5% 4822 111 90385	
2,7 E 5% 4822 111 90386	
3 E 5% 4822 111 90387	
3,3 E 5% 4822 111 90388	
3,6 E 5% 4822 111 90389	
3,9 E 5% 4822 111 90391	
4,3 E 5% 4822 111 90392	

ELECTRICAL PARTSLIST SERVO + DECODER PANEL
(CONTINUED)

For non active chip components see separate stocklist

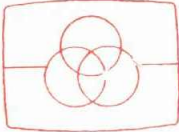
				
3302	4 E 7	5%	0,33 W	4822 111 30499
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3336	4 E 7	5%	0,33 W	4822 111 30499
3360	4 E 7	5%	0,33 W	4822 111 30499
3369	1 R	5%	0,33 W	4822 111 30483
3372	4 E 7	5%	0,33 W	4822 111 30499
3374	4 E 7	5%	0,33 W	4822 111 30499
3381	4 E 7	5%	0,33 W	4822 111 30499
3383	4 E 7	5%	0,33 W	4822 111 30499
3384	4 E 7	5%	0,33 W	4822 111 30499
3385	4 E 7	5%	0,33 W	4822 111 30499
3388	4 E 7	5%	0,33 W	4822 111 30499
3389	4 E 7	5%	0,33 W	4822 111 30499
3390	4 E 7	5%	0,33 W	4822 111 30499
3396	1 R	5%	0,33 W	4822 111 30483
3404	10 M	5%	0,5 W	4822 116 52494
3418	22 E	5%	0,33 W	4822 111 30517
3419	22 E	5%	0,33 W	4822 111 30517
3421	47 E	5%	0,33 W	4822 111 30526
3422	11 K	1%	0,6 W	4822 116 52907
3424	150 E	1%	0,6 W	4822 116 52846
3425	47 E	5%	0,33 W	4822 111 30526
3426	11 K	1%	0,6 W	4822 116 52907
3428	150 E	1%	0,6 W	4822 116 52846
3429	47 E	5%	0,33 W	4822 111 30526
3430	11 K	1%	0,6 W	4822 116 52907
3432	150 E	1%	0,6 W	4822 116 52846
3433	47 E	5%	0,33 W	4822 111 30526
3434	11 K	1%	0,6 W	4822 116 52907
3436	150 E	1%	0,6 W	4822 116 52846
3446	4 E 7	5%	0,33 W	4822 111 30499
3447	10 E	5%	0,33 W	4822 111 30508
3448	4 E 7	5%	0,33 W	4822 111 30499
3454	820 E	1%	0,6 W	4822 116 52864
3455	820 E	1%	0,6 W	4822 116 52864
3458	33 E	5%	0,33 W	4822 111 30522
3459	33 E	5%	0,33 W	4822 111 30522
3460	2 K 4	1%	0,6 W	4822 116 52851
3461	2 K 4	1%	0,6 W	4822 116 52851
3462	2 K 4	1%	0,6 W	4822 116 52851
3463	2 K 4	1%	0,6 W	4822 116 52851
3464	33 E	5%	0,33 W	4822 111 30522
3465	33 E	5%	0,33 W	4822 111 30522
3466	620 E	5%	0,5 W	4822 116 52429
3467	4 E 7	5%	0,33 W	4822 111 30499
3476	620 E	5%	0,5 W	4822 116 52429
3477	4 E 7	5%	0,33 W	4822 111 30499
3482	330 R	1%	0,6 W	5322 116 53736
3483	270 E	1%	0,6 W	5322 116 53288
Miscellaneous				
5001	Spring clip			4822 255 40179
BU 3	Mains transformer			4822 146 30701
BU 2	Phone socket			4822 267 30743
BU 2	Cinch socket 4p			
BU 1	Mains inlet			4822 265 20291
SK1	Mains switch			4822 276 11309
SK2	Switch			4822 276 11896
	Holder fuse			4822 256 30274
1510	Fuse			4822 253 30009

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

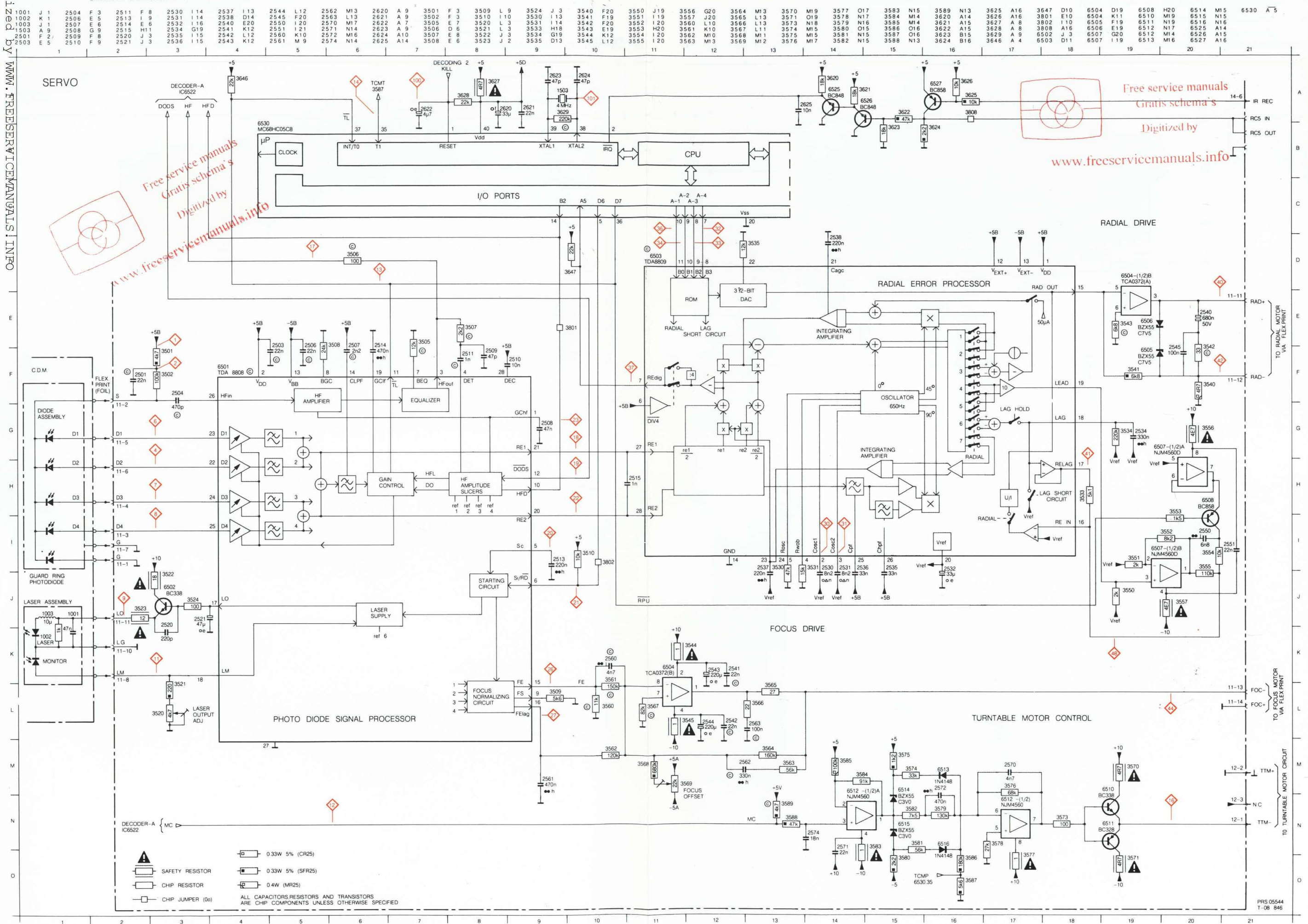
Changes

Changes introduced with A88-255 from marking AH01
already published: none

Description	Reasons
Front page 2-1-a 7-1 to 7-6	Contents adapted Audio test disc (3) no longer available, replaced by audio test disc (1) Diagrams and drawings of the panel of the DAC4 version added <div><div>Free service manuals Gratis schema's Digitized by www.freesevicemanuals.info</div></div>

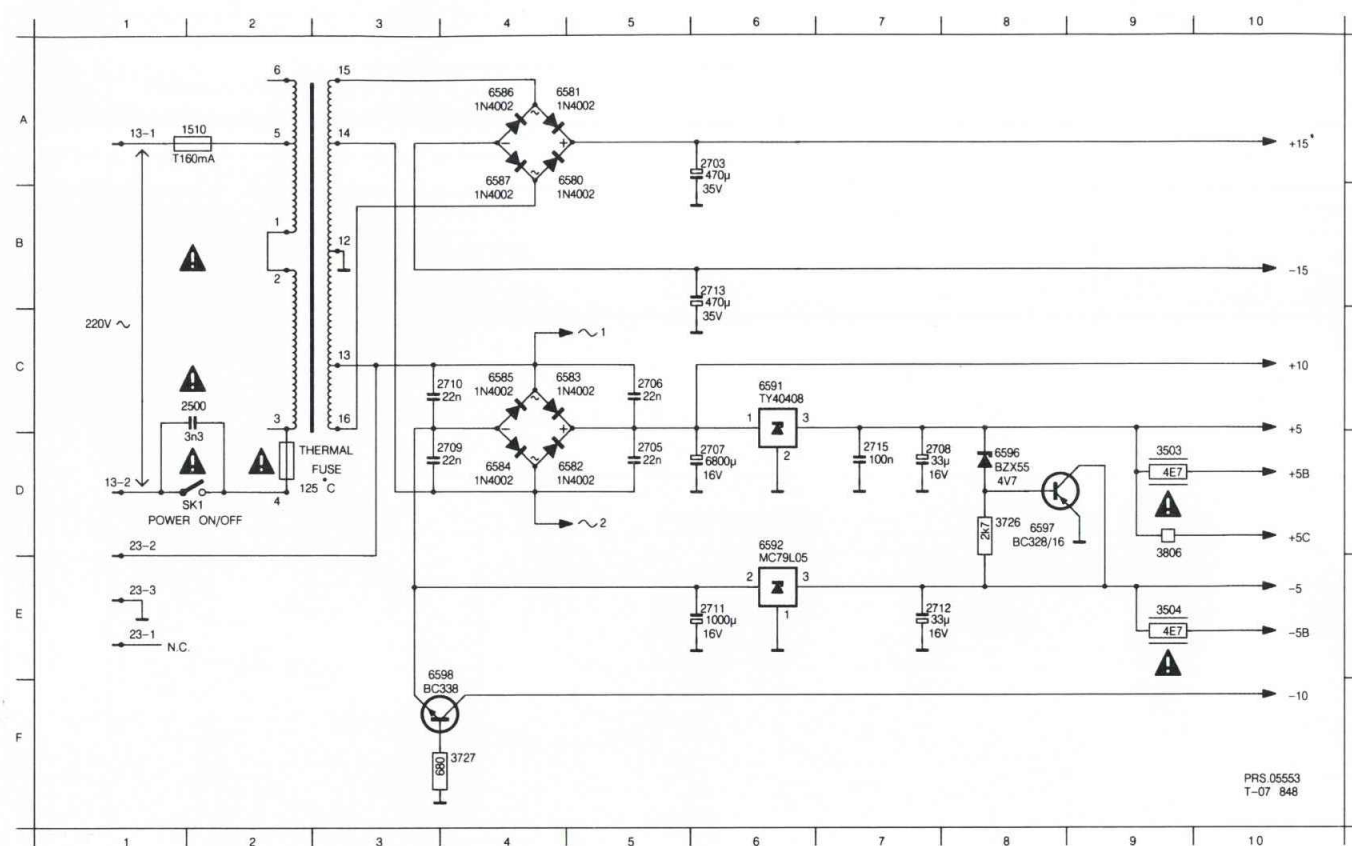
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SERVO DIAGRAM FROM AH01



POWER SUPPLY DIAGRAM FROM AH01

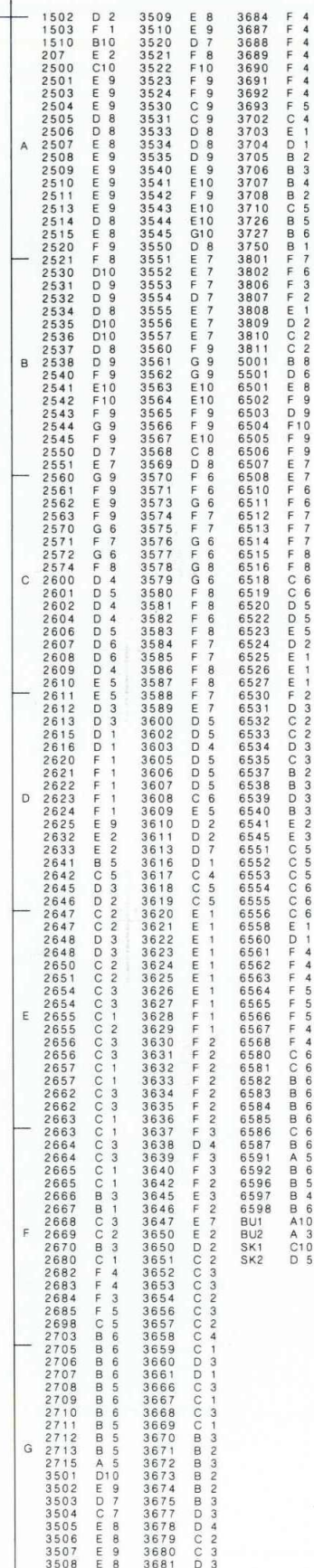
1510	A	2	2705	D	5	2708	D	8	2711	E	6	2715	D	7	3726	D	8	6580	A	5	6583	C	5	6586	A	4	6592	D	6	6598	E	4
2500	C	2	2706	C	5	2709	C	4	2712	E	8	3503	D	9	3727	F	4	6581	A	5	6584	D	4	6587	A	4	6596	D	8	SK1	D	2
2703	A	6	2707	D	6	2710	C	4	2713	B	6	3504	E	9	3806	D	9	6582	D	5	6585	C	4	6591	C	6	6597	D	8			



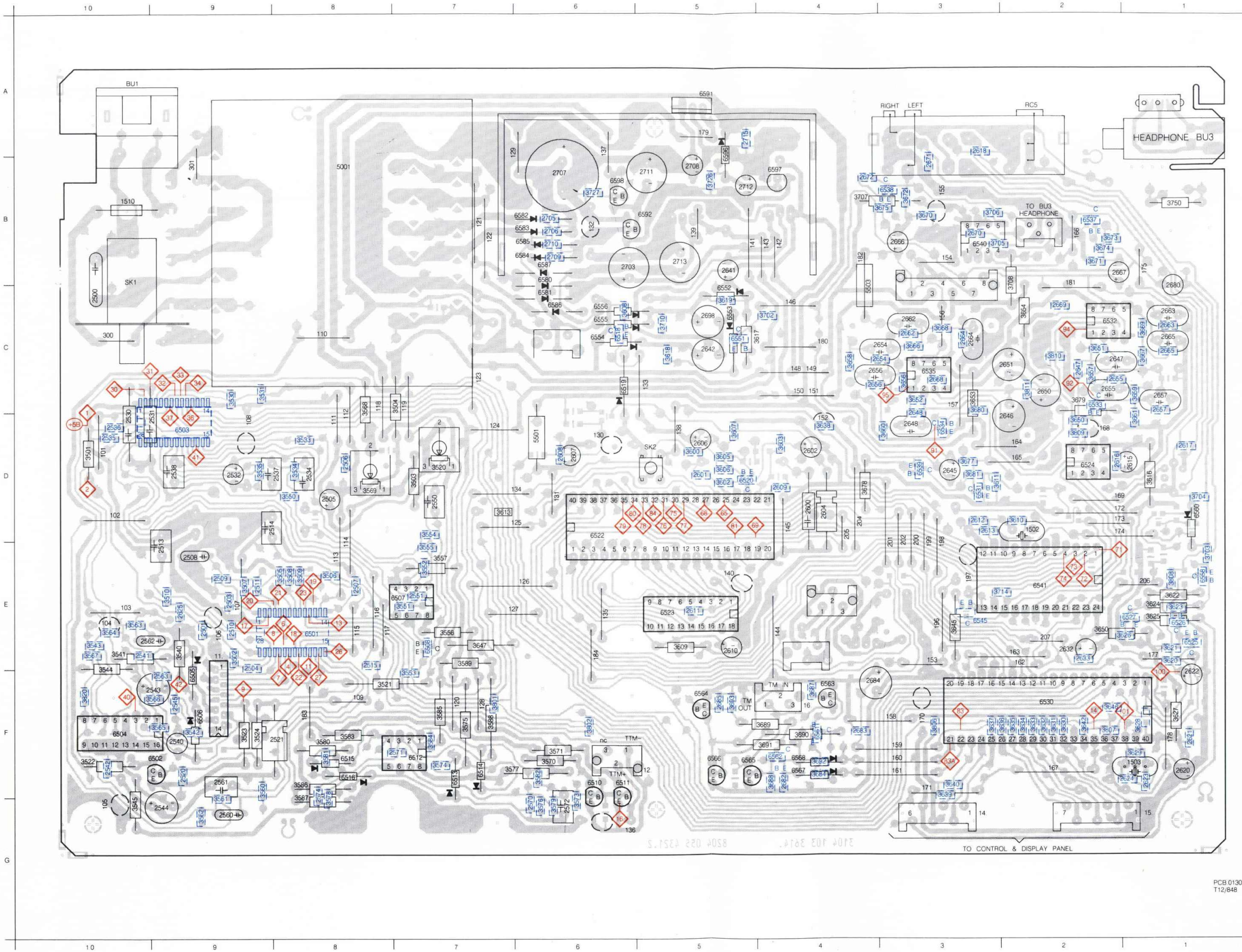
Partslist

TDA 1543 (DAC4)	4822 209 73236
Transformer (DAC4)	4822 146 30707

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SERVO & DECODER PANEL (DAC4) FROM AH01

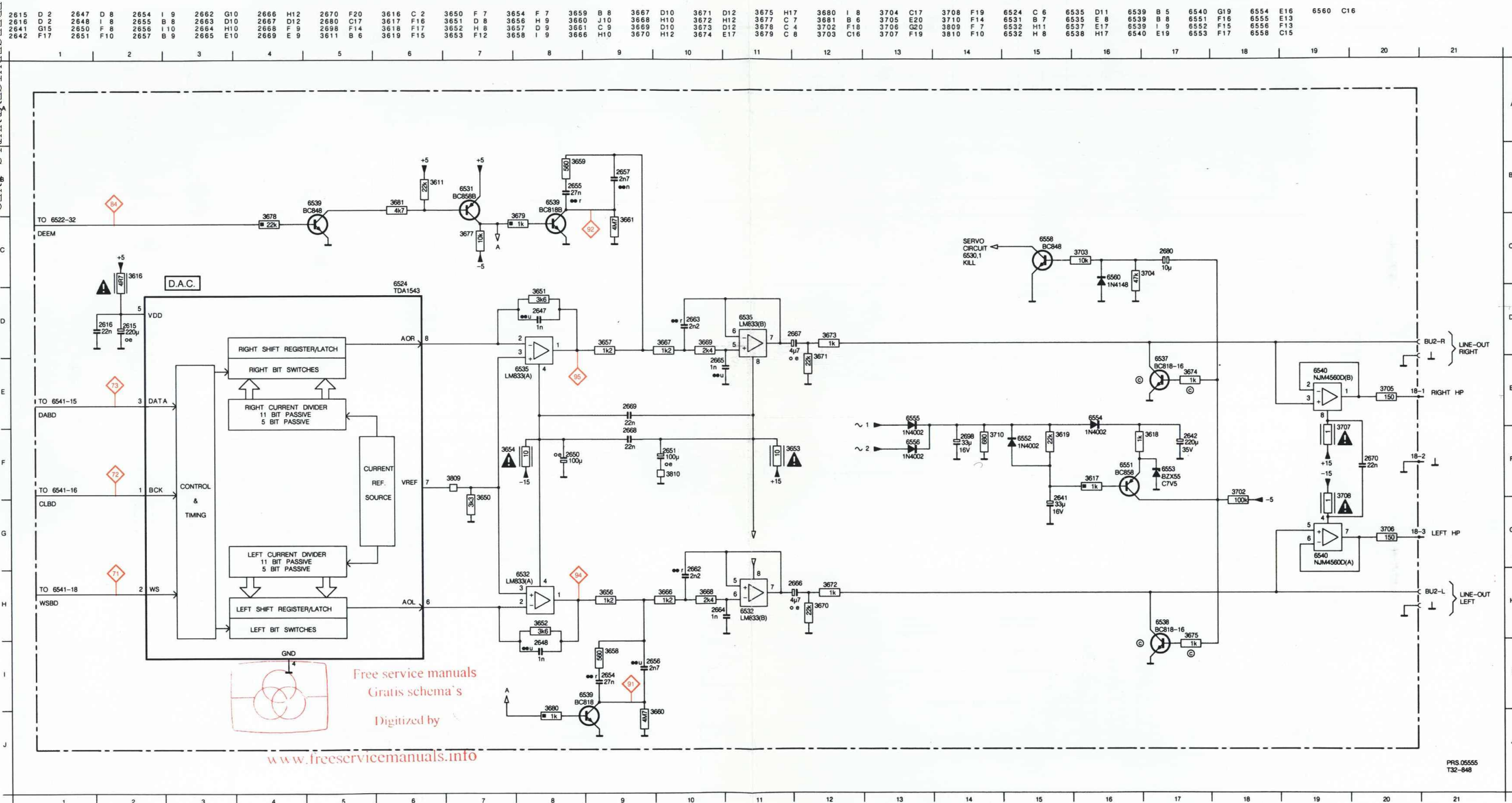


1502	D 2	3509	E 8	3684	F 4
1503	F 1	3510	E 9	3687	F 4
1510	B10	3520	D 7	3688	F 4
207	E 2	3521	F 8	3689	F 4
2500	C10	3522	F10	3690	F 4
2501	E 9	3523	F 9	3691	F 4
2503	E 9	3524	F 9	3692	F 4
2504	E 9	3530	C 9	3693	F 5
2505	D 8	3531	C 9	3702	C 4
2506	D 8	3533	D 8	3703	E 1
2507	E 8	3534	D 8	3704	D 1
2508	E 9	3535	D 9	3705	B 2
2509	E 9	3540	E 9	3706	B 3
2510	E 9	3541	E10	3707	B 4
2511	E 9	3542	F 9	3708	B 2
2513	E 9	3543	F 9	3710	C 5
2514	D 8	3544	E10	3726	B 6
2515	E 8	3545	G10	3727	B 6
2520	F 9	3550	D 8	3750	B 1
2521	F 8	3551	E 7	3801	F 7
2530	D10	3552	E 7	3802	F 6
2531	D 9	3553	F 7	3806	F 3
2532	D 9	3554	D 7	3807	F 2
2534	D 8	3555	E 7	3808	E 2
2535	D10	3556	E 7	3809	D 2
2536	D10	3557	E 7	3810	C 2
2537	D 8	3560	F 9	3811	C 2
2538	D 9	3561	G 9	5001	B 8
2540	F 9	3562	G 9	5501	D 6
2541	E10	3563	E10	5504	D 1
2542	F10	3564	E10	5501	E 8
2543	F 9	3565	F 9	6502	F 9
2544	G 9	3566	F 9	6503	D 9
2545	F 9	3567	E10	6504	F10
2550	D 7	3568	C 8	6505	F 9
2551	E 7	3569	D 8	6506	F 9
2560	G 9	3570	F 6	6507	E 7
2561	F 9	3571	F 6	6508	E 7
2562	F 9	3573	G 6	6510	F 6
2563	F 9	3574	F 7	6511	F 6
2570	G 6	3575	F 7	6512	F 7
2571	F 7	3576	G 6	6513	F 7
2572	D 8	3577	F 6	6514	F 7
2574	D 8	3578	G 6	6515	F 8
2600	D 4	3579	G 6	6516	F 8
2601	D 5	3580	F 8	6518	C 6
2602	D 4	3581	F 8	6519	C 6
2604	D 4	3582	F 8	6520	D 5
2606	D 5	3583	F 8	6522	D 5
2607	D 6	3584	F 7	6523	E 5
2608	D 6	3585	F 7	6524	D 2
2609	F 8	3586	F 8	6525	E 1
2610	E 5	3587	F 8	6526	E 1
2611	E 5	3588	F 7	6527	E 1
2612	D 3	3589	E 7	6530	F 2
2613	D 3	3600	D 5	6531	D 3
2615	D 1	3602	D 5	6532	C 2
2616	D 1	3603	D 4	6533	C 2
2620	F 1	3605	D 5	6534	D 3
2621	F 1	3606	D 5	6535	D 3
2622	F 1	3607	D 5	6537	B 2
2623	F 1	3608	C 6	6538	B 3
2624	F 1	3609	E 5	6539	D 3
2625	E 2	3610	D 2	6540	B 3
2632	E 2	3611	D 2	6541	E 2
2633	E 2	3613	D 7	6545	E 3
2641	B 5	3616	D 1	6551	C 5
2642	C 5	3617	C 4	6552	C 5
2645	D 3	3618	C 5	6553	C 5
2646	C 2	3619	C 5	6554	C 6
2647	C 2	3620	E 1	6555	C 6
2648	D 3	3621	E 1	6556	C 6
2649	D 3	3623	E 1	6560	D 1
2650	C 2	3624	E 1	6561	F 4
2651	C 2	3625	E 1	6562	F 4
2654	C 3	3626	E 1	6563	F 4
2654	C 3	3627	E 1	6564	F 5
2655	C 1	3628	F 1	6565	F 5
2655	C 2	3629	F 1	6566	F 5
2656	C 3	3630	F 2	6567	F 4
2656	C 3	3631	F 2	6568	F 4
2657	C 1	3632	F 2	6580	C 6
2657	C 1	3633	F 2	6581	C 6
2662	C 3	3634	F 2	6582	B 6
2662	C 3	3635	F 2	6583	B 6
2663	C 1	3636	F 2	6584	B 6
2663	C 1	3637	F 3	6585	B 6
2664	C 3	3638	D 4	6586	C 6
2664	C 3	3639	F 3	6587	C 6
2665	C 1	3640	F 3	6591	A 5
2665	C 1	3642	F 2	6592	B 6
2666	B 3	3645	E 3	6596	B 5
2667	B 1	3646	F 2	6597	B 4
2668	C 3	3647	E 7	6598	B 6
2669	C 2	3650	E 2	BU1	A10
2670	B 3	3650	D 2	SK1	C10
2680	C 1	3651	C 2	SK2	D 5
2682	F 4	3652	C 3		
2683	F 4	3653	C 3		
2684	F 3	3654	C 2		
2685	F 3	3656	C 2		
2698	C 5	3657	C 2		
2703	B 6	3658	C 4		
2705	B 6	3659	C 1		
2706	B 6	3660	D 3		
2707	B 6	3661	D 1		
2708	B 5	3666	C 3		
2709	B 6	3667	C 1		
2710	B 6	3668	C 3		
2711	B 5	3669	C 1		
2712	B 5	3670	B 3		
2713	B 5	3671	B 2		
2715	A 5	3672	B 3		
3501	D10	3673	B 2		
3502	E 9	3674	B 2		
3503	D 7	3675	B 3		
3504	C 7	3677	D 4		
3505	E 8	3678	D 3		
3506	E 8	3679	C 2		
3507	E 8	3680	C 3		
3508	E 8	3681	D 3		

PCB 01302
T12/848

8204 055 4324.2

DECODING DIAGRAM 2 FROM AH01



7-5



Service Information

1988-12-01

CD380

A88-255

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/Feuillets de modification/Aenderungsblätter.

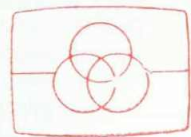
Front page
2-1-a

Supplementary sheets/Toevoegingsbladen/Feuillets d'adjonction/Zusatzblätter

6-1
7-1
7-2
7-3
7-4
7-5
7-6

Compact disc player CD380/00R/05R

Service
Service
Service



Free service manuals
Gratis schema's

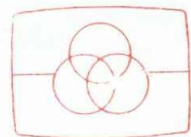
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43 726 A12

Service Manual



Free service manuals
Gratis schema's

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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 partslist of the main panel
- 5 Control and display, wiring diagram and electrical partslist
- 6 Changes
- 7 Additional information

(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.

(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.

(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.

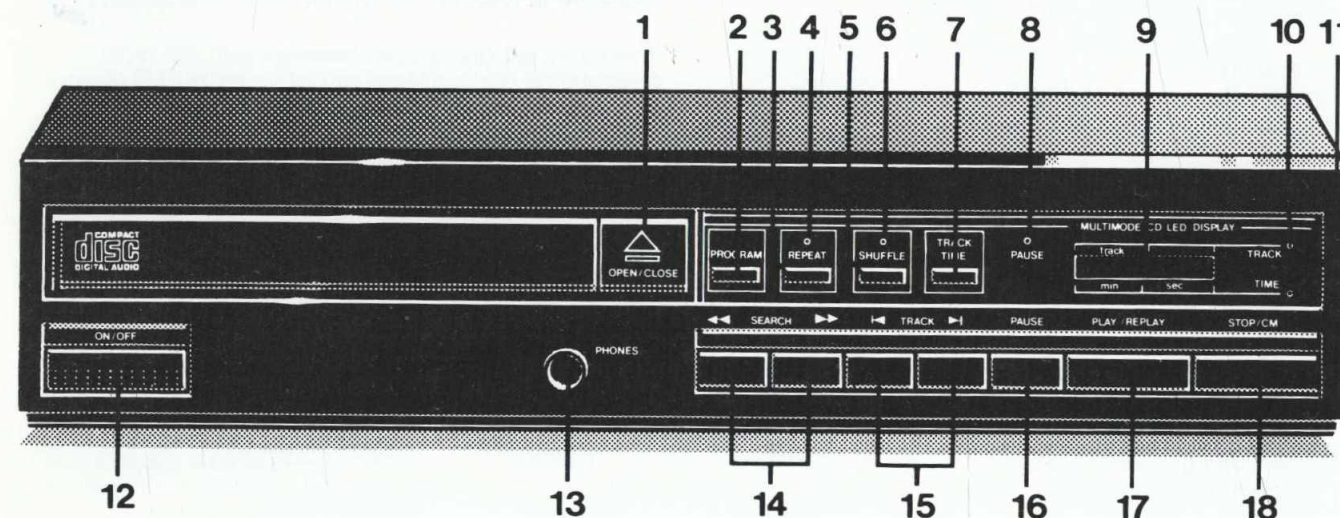
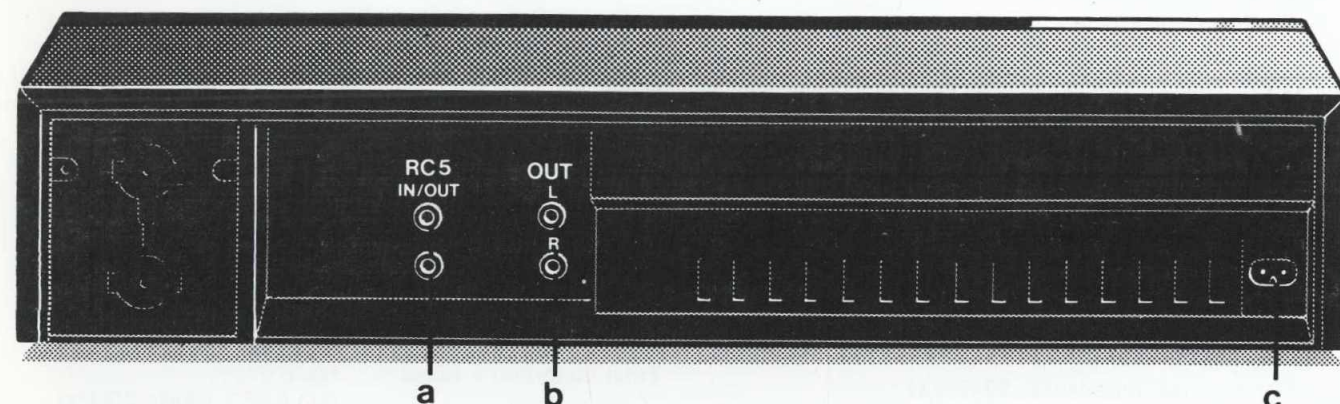
(I)

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

**CLASS 1
LASER PRODUCT**

3122 110 03420

CONTROL BUTTONS



43 727 A12

Front of player

- 1 OPEN/CLOSE key
- 2 PROGRAM key
- 3 REPEAT key
- 4 REPEAT LED
- 5 SHUFFLE key
- 6 SHUFFLE LED
- 7 TRACK/TIME key
- 8 PAUSE LED
- 9 MULTI mode CD LED display
- 10 TRACK LED
- 11 TIME LED
- 12 ON/OFF key
- 13 HEADPHONE socket
- 14 ◀ SEARCH ▶ keys
- 15 ◀ TRACK ▶ keys
- 16 PAUSE key
- 17 PLAY/REPLAY key
- 18 STOP/CM key

- (SK 19)
(SK 20)
(SK 18)
(6504)
(SK 22)
(6506)
(SK 21)
(6503)
(6501)
(6508)
(6505)
(SK 1)
(BU 3)
(SK 15, SK 16)
(SK 13, SK 14)
(SK 17)
(SK 11)
(SK 19)

Rear of player

- a RC 5 IN/OUT }
b OUT L/R }
c Mains lead connection

(BU 2)

(BU 1)



2-1-a

TECHNICAL DATA

Typical Audio Performance Dual DAC.

- Number of Channels: 2
- Frequency Range: 2-20 000 Hz
- Output resistance: 200 Ω
- Nominal load impedance: 100 k Ω /100 pF
- Amplitude Linearity: $\pm 0,1$ dB (20-20 000 Hz)
- Phase Linearity: $\pm 1,0^\circ$ (20-20 000 Hz)
- Dynamic Range: 90 dB (20-20 000 Hz)
- Signal-to-Noise Ratio: 96 dB (20-20 000 Hz)
- Channel Separation: 98 dB (20-20 000 Hz)
- Total Harmonic Distortion: 0,003% (20-20 000 Hz)
- Wow and Flutter: quartz crystal precision
- D/A Conversion: quadruple oversampling (176.4 kHz) with digital filter and two 16 bit D/A converters
- Error Correction System: Cross Interleaved Reed Solomon Code (CIRC)
- Audio Output Level: 2 V_{rms}
- Headphones load impedance: 32-600 Ω

Optical Readout System

- Laser: semi-conductor AlGaAs
- Wavelength: 780 nm

Signal Format

- Sampling Frequency: 44.1 kHz
- Quantization: 16 bit linear/channel

Power Supply

- Mains Voltage: see type plate at rear of player
- Mains Frequencies: 50 and 60 Hz
- Power Consumption: 15 W approx.
- Safety Requirements: IEC

Cabinet, general

- Dimensions (w x h x d): 360 x 80 x 300 mm
- Weight: 3.5 kg approx.

Typical Audio Performance DAC4

Signal to noise ratio	typ 95dB min 90dB (20Hz-20kHz)
Dynamic range (-60dB)	typ 86dB (20Hz-20kHz) min 80dB (20Hz-20kHz) (0.01%)
Total distortion + noise	typ 0.016% min 0.05% (20Hz-20kHz)
Intermodulation distortion	max 0.016% (20Hz-20kHz)

The right is reserved to change data if necessary

This Compact Disc player complies with the radio interference requirements as laid down in EEC (European Economic Community) regulations.

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.

ESD



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 enfiler le bracelet serti 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). Unvorsichtige 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 ridatta 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.

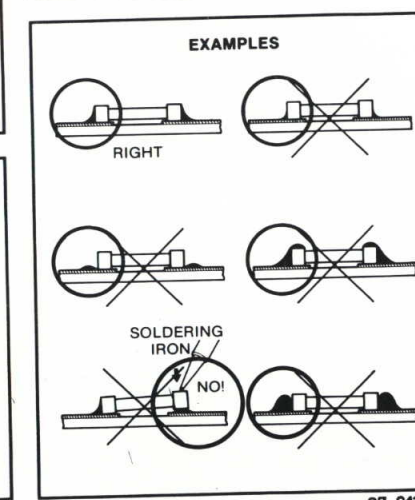
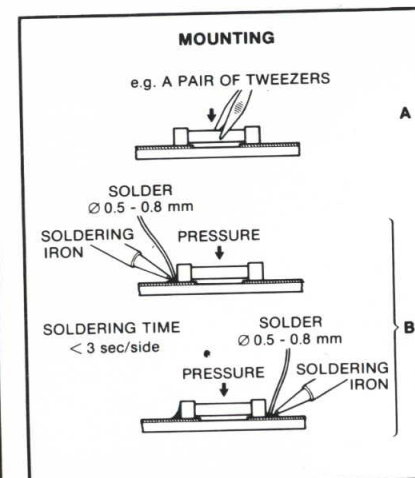
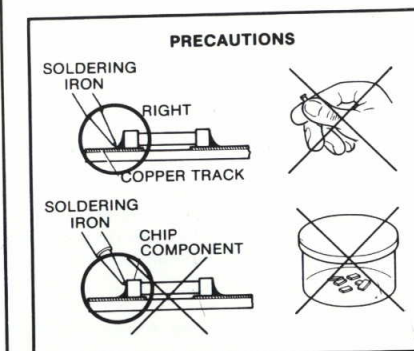
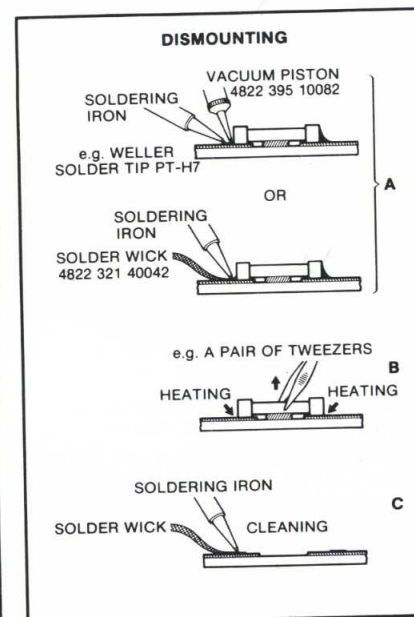
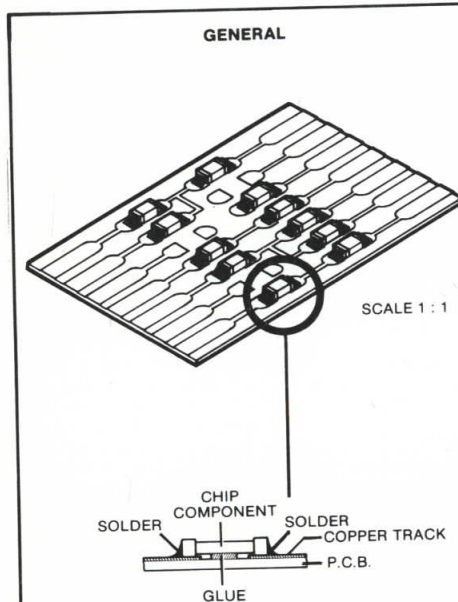
The disc should always rest properly on the turntable. To achieve this a disc hold-down has been mounted in a bracket of the tray mechanism. If the tray mechanism has to be disassembled for servicing, a separate disc hold-down should be used. For a service disc hold-down see drawing 42565 A12.

Test discs

It is important to treat the test discs with great care. The disorders on the discs (black spots, fingerprints, etc.) are exclusive and unambiguously positioned. Damage may cause additional drop-outs etc. rendering the intentional errors no longer exclusive. In that case it will no longer be possible to check e.g. the good working of the track detectors.

SERVICE TOOLS

Audio test disc (1)	4822 397 30185
Disc without errors (5)+ disc with DO errors, black spots and fingerprints (5A)	4822 397 30096
Disc 65 min 1kHz 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 (5p)	4822 321 21273
Service cable (14p)	4822 321 21598
Service flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676
Glass disc	4822 395 90204



27 012C12

Changes

6-1

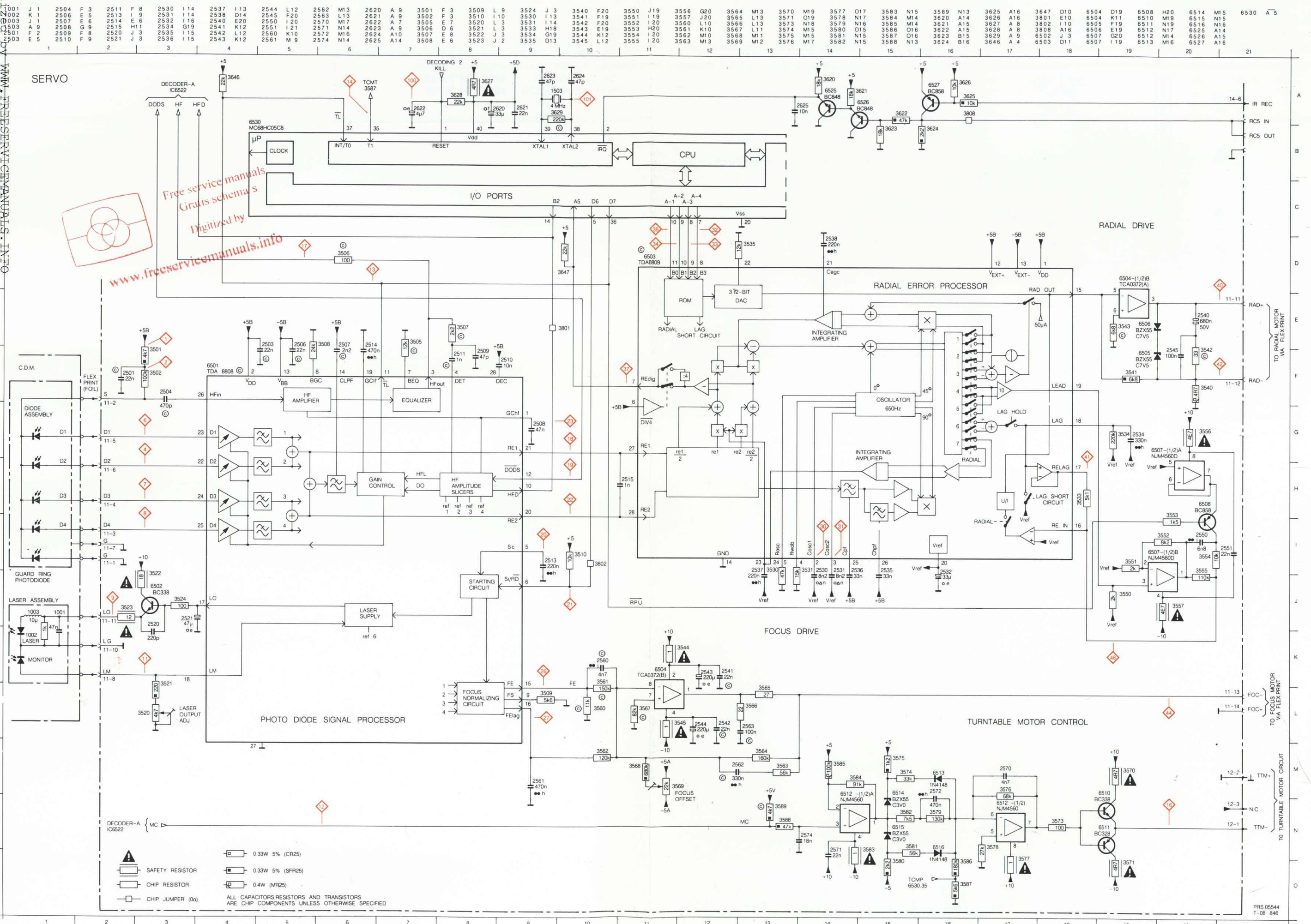
Changes introduced with A88-255 from marking AH01
already published: none

Description	Reasons
Front page 2-1-a	Contents adapted Audio test disc (3) no longer available, replaced by audio test disc (1)
7-1 to 7-6	Diagrams and drawings of the panel of the DAC4 version added

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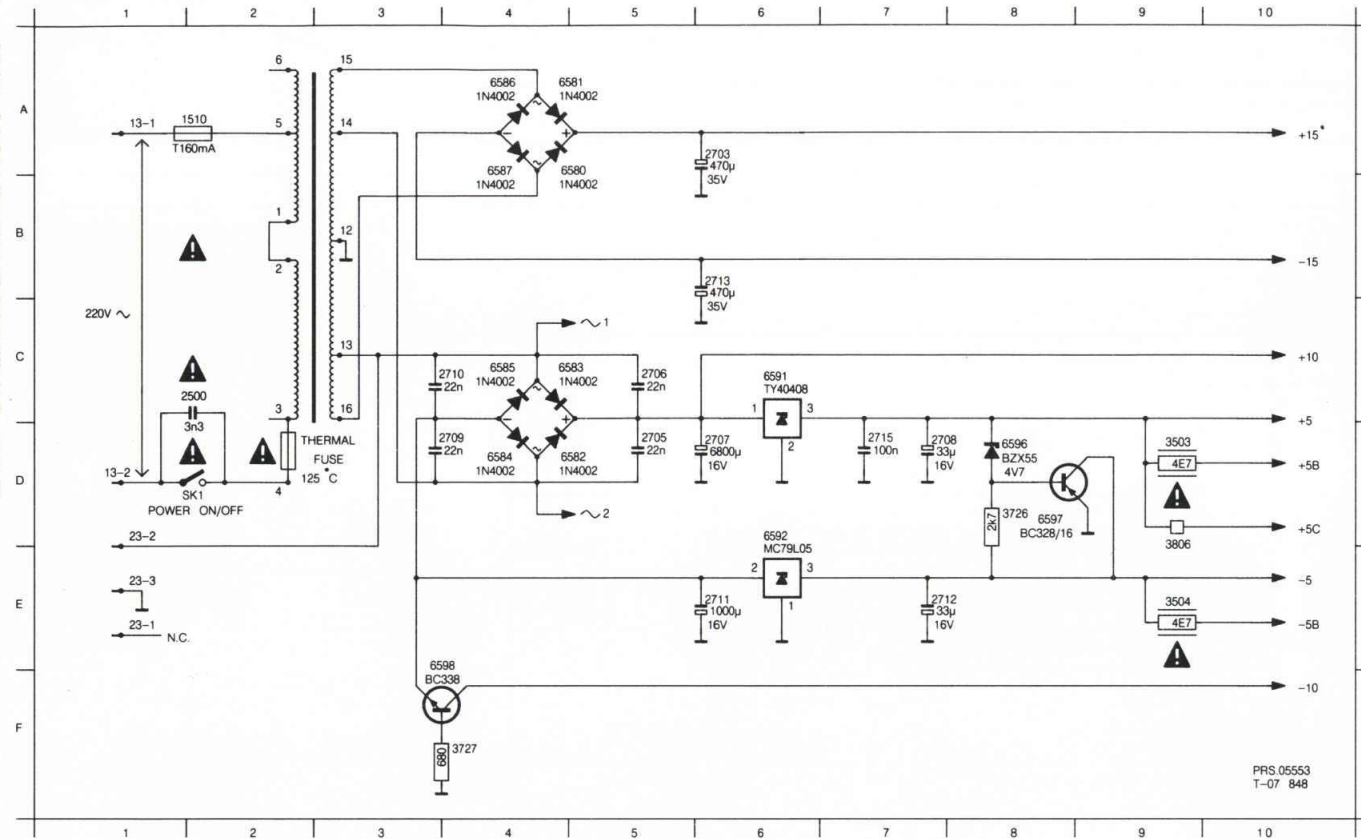
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SERVO DIAGRAM FROM AH01



POWER SUPPLY DIAGRAM FROM AH01

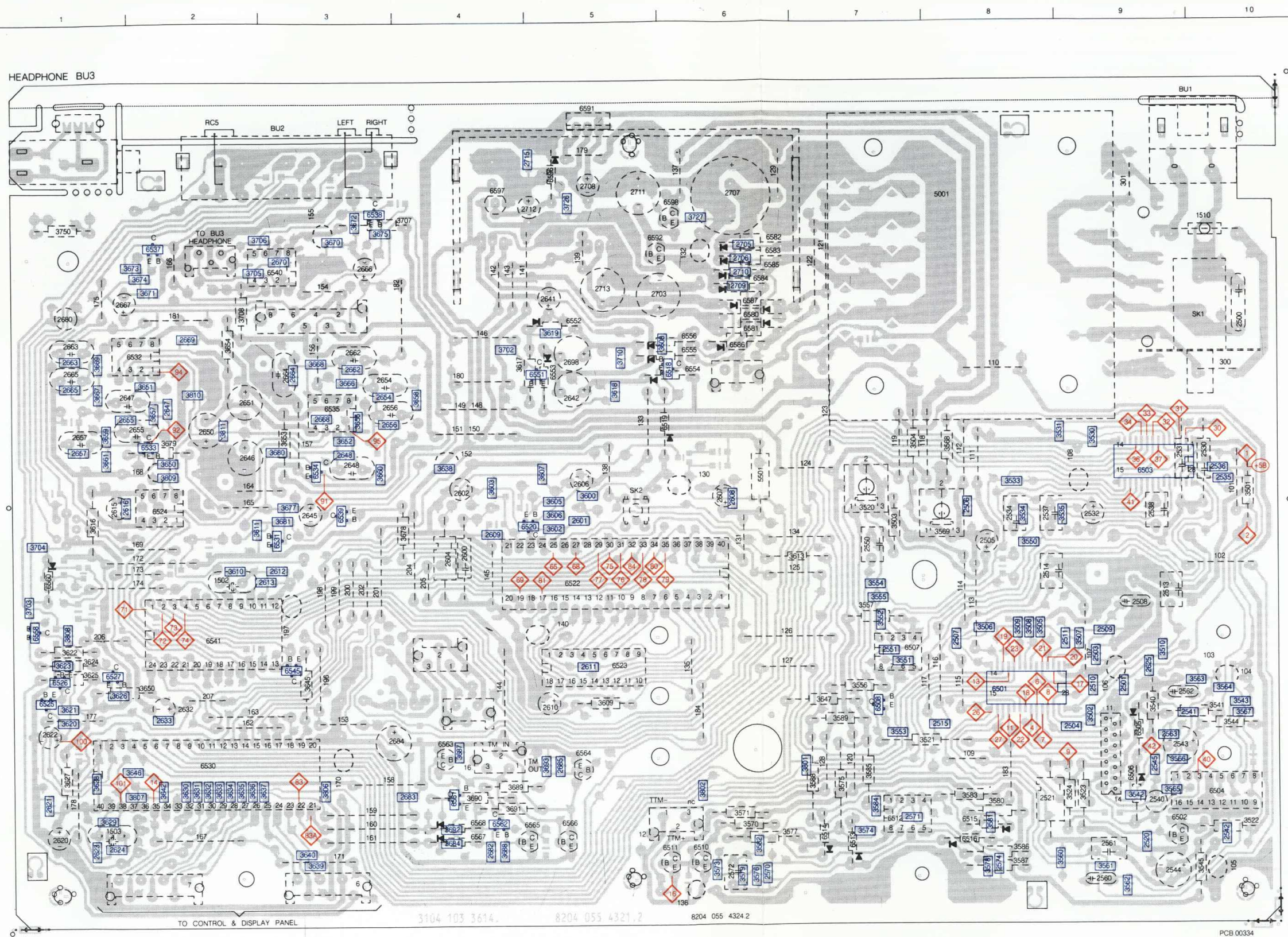
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2500	C	2	2706	C	5	2709	D	4	2712	E	8	3503	D	9	3727	F	4	6581	A	5	6584	D	4	6587	A	4	6596	D	8	SK1	D	2
2703	A	6	2707	D	6	2710	C	4	2713	B	6	3504	D	9	3806	D	9	6582	D	5	6585	C	4	6591	C	6	6597	D	8			



Partslist

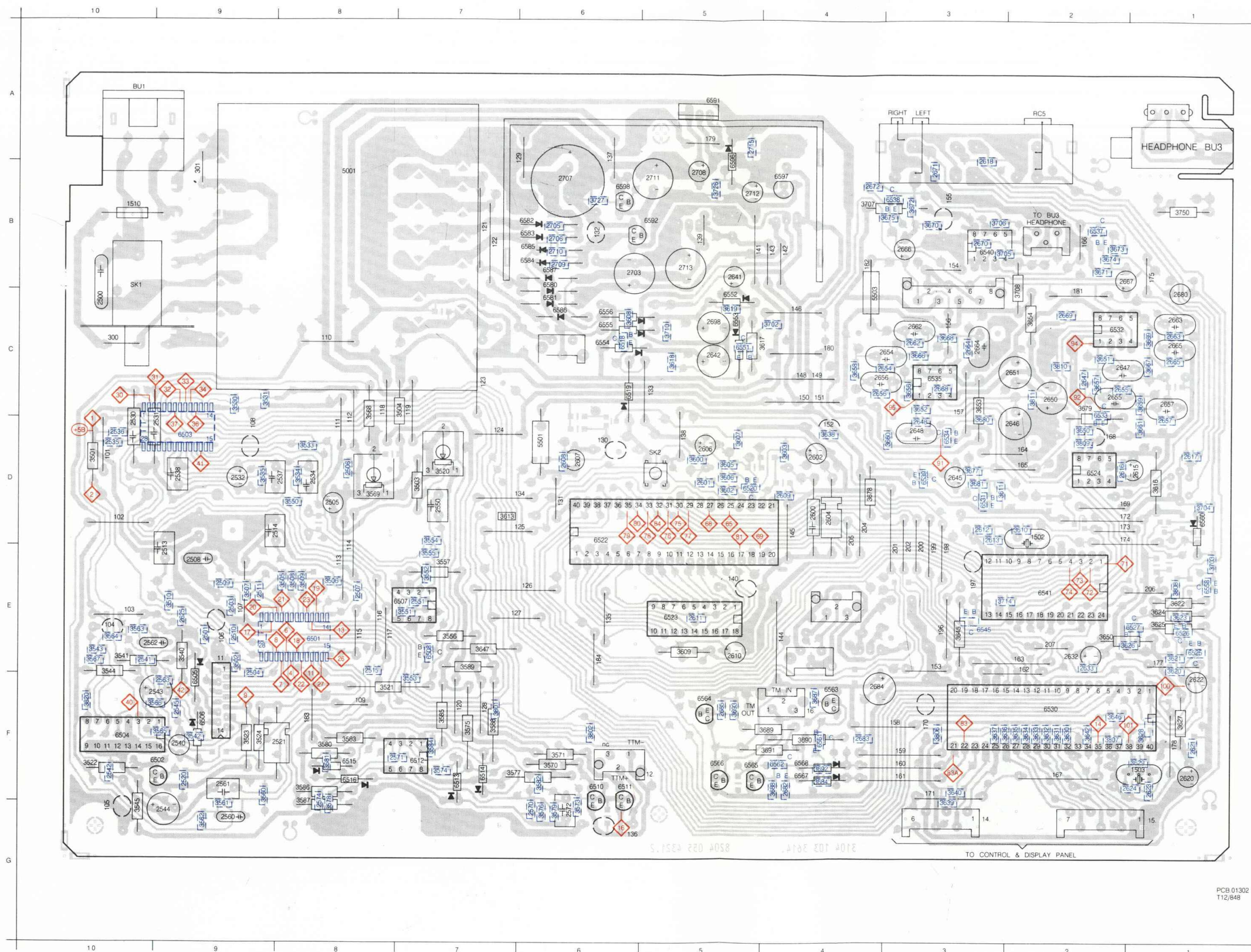
TDA 1543 (DAC4)	4822 209 73236
Transformer (DAC4)	4822 146 30707

SERVO & DECODER PANEL FROM AH01



1502	D 2	3509	E 8	3684	F 4
1503	F 1	3510	E 9	3687	F 4
1510	B10	3520	D 7	3688	F 4
207	E 2	3521	F 8	3689	F 4
2500	C10	3522	F10	3690	F 4
2501	E 9	3523	F 9	3691	F 4
2503	E 9	3524	F 9	3692	F 4
2504	E 9	3530	C 9	3693	F 5
2505	D 8	3531	C 9	3702	C 4
2506	D 8	3533	D 8	3703	E 1
2507	E 8	3534	D 8	3704	D 2
2508	E 9	3535	D 9	3705	B 2
2509	E 9	3540	E 9	3706	B 3
2510	E 9	3541	E10	3707	B 4
2511	E 9	3542	F 9	3708	B 2
2513	E 9	3543	E10	3710	C 5
2514	D 8	3544	E10	3726	B 5
2515	E 8	3545	G10	3727	B 6
2520	F 9	3550	D 8	3750	B 1
2521	F 8	3551	E 7	3801	F 7
2530	D10	3552	E 7	3802	F 6
2531	D 9	3553	F 7	3806	F 3
2532	D 9	3554	D 7	3807	F 2
2534	D 8	3555	E 7	3808	E 1
2535	D10	3556	E 7	3809	D 2
2536	D10	3557	E 7	3810	C 2
2537	D 8	3560	F 9	3811	C 2
2538	D 9	3561	G 8	3812	B 8
2540	F 9	3562	G 9	5501	D 6
2541	E10	3563	E10	5501	D 6
2542	F10	3564	E10	5502	F 9
2543	F 9	3565	F 9	5503	D 9
2544	G 9	3566	F 9	5504	F10
2545	F 9	3567	E10	5505	F 9
2550	D 7	3568	C 8	5506	C 8
2551	E 9	3569	D 8	5507	E 7
2561	F 9	3570	F 6	5508	E 7
2562	E 9	3571	F 6	5510	F 6
2563	F 9	3574	F 7	5512	F 7
2570	G 6	3575	F 7	5513	F 7
2571	F 7	3576	G 6	5514	F 7
2572	G 6	3577	F 6	5515	F 8
2574	F 8	3578	G 8	5516	F 8
2600	D 4	3579	G 6	5518	C 6
2601	D 5	3580	F 8	5519	C 6
2602	D 4	3581	F 8	5520	D 5
2604	D 4	3582	F 6	5522	D 5
2606	D 5	3583	F 8	5523	E 5
2607	D 6	3584	F 7	5524	D 2
2608	D 6	3585	F 7	5525	E 1
2609	D 4	3586	F 8	5526	E 1
2610	E 5	3587	F 9	5527	E 1
2611	E 5	3588	F 9	5530	F 2
2612	D 3	3589	E 7	5531	D 3
2613	D 3	3600	D 5	5532	C 2
2615	D 1	3602	D 5	5533	C 2
2616	D 1	3603	D 4	5534	D 3
2620	F 1	3605	D 5	5535	C 3
2621	F 1	3606	D 5	5537	B 2
2622	F 1	3607	D 5	5538	B 2
2623	F 1	3608	D 5	5539	D 3
2624	F 1	3609	E 9	5540	B 3
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2633	E 2	3613	D 7	5551	C 5
2641	B 5	3616	D 1	5552	C 5
2642	C 5	3617	C 4	5553	C 5
2645	D 3	3618	C 5	5554	C 6
2646	D 3	3619	E 5	5555	C 6
2647	C 2	3620	E 1	5556	C 6
2648	C 2	3621	E 1	5558	E 1
2648	D 3	3622	E 1	5560	D 1
2648	D 3	3623	E 1	5561	F 4
2650	C 2	3624	E 1	5562	F 4
2651	C 2	3625	E 1	5563	F 4
2654	C 3	3626	E 1	5564	F 5
2654	C 3	3627	F 1	5565	F 5
2655	C 1	3628	F 1	5566	F 5
2655	C 2	3629	F 1	5567	F 4
2656	C 3	3630	F 2	5568	F 4
2656	C 3	3631	F 2	5568	C 6
2657	C 1	3632	F 2	5581	C 6
2657	C 1	3633	F 2	5582	B 6
2662	C 3	3634	F 2	5583	B 6
2662	C 3	3635	F 2	5584	B 6
2663	C 1	3636	F 2	5585	B 6
2663	C 1	3637	F 3	5586	C 6
2664	C 3	3638	D 4	5587	B 6
2664	C 3	3639	F 3	5591	A 5
2665	C 1	3640	F 3	5592	B 6
2665	C 1	3642	F 3	5596	B 5
2666	B 1	3645	E 3	5597	B 4
2667	B 1	3646	F 2	5598	B 6
2668	C 3	3647	E 7	5599	B 6
2669	C 2	3650	D 2	BU2	A 3
2670	B 3	3650	D 2	SK1	C10
2680	C 1	3651	C 2	SK2	D 5
2682	F 4	3652	C 3		
2683	F 4	3653	C 3		
2684	F 3	3654	C 3		
2685	F 5	3656	C 3		
2698	C 5	3657	C 2		
2703	B 6	3658	C 4		
2705	B 6	3659	C 1		
2706	B 6	3660	D 3		
2707	B 6	3661	D 1		
2708	B 5	3666	C 3		
2709	B 6	3667	C 1		
2710	B 6	3668	C 3		
2711	B 5	3669	B 1		
2712	B 5	3670	B 3		
2713	B 5	3671	B 2		
2715	A 5	3672	B 3		
3501	D10	3673	B 2		
3502	E 9	3674	B 2		
3503	D 7	3675	B 3		
3504	C 7	3677	D 3		
3505	E 8	3678	D 4		
3506	E 8	3679	C 2		
3507	E 9	3680	C 2		
3508	E 8	3681	D 3		

SERVO & DECODER PANEL (DAC4) FROM AH01



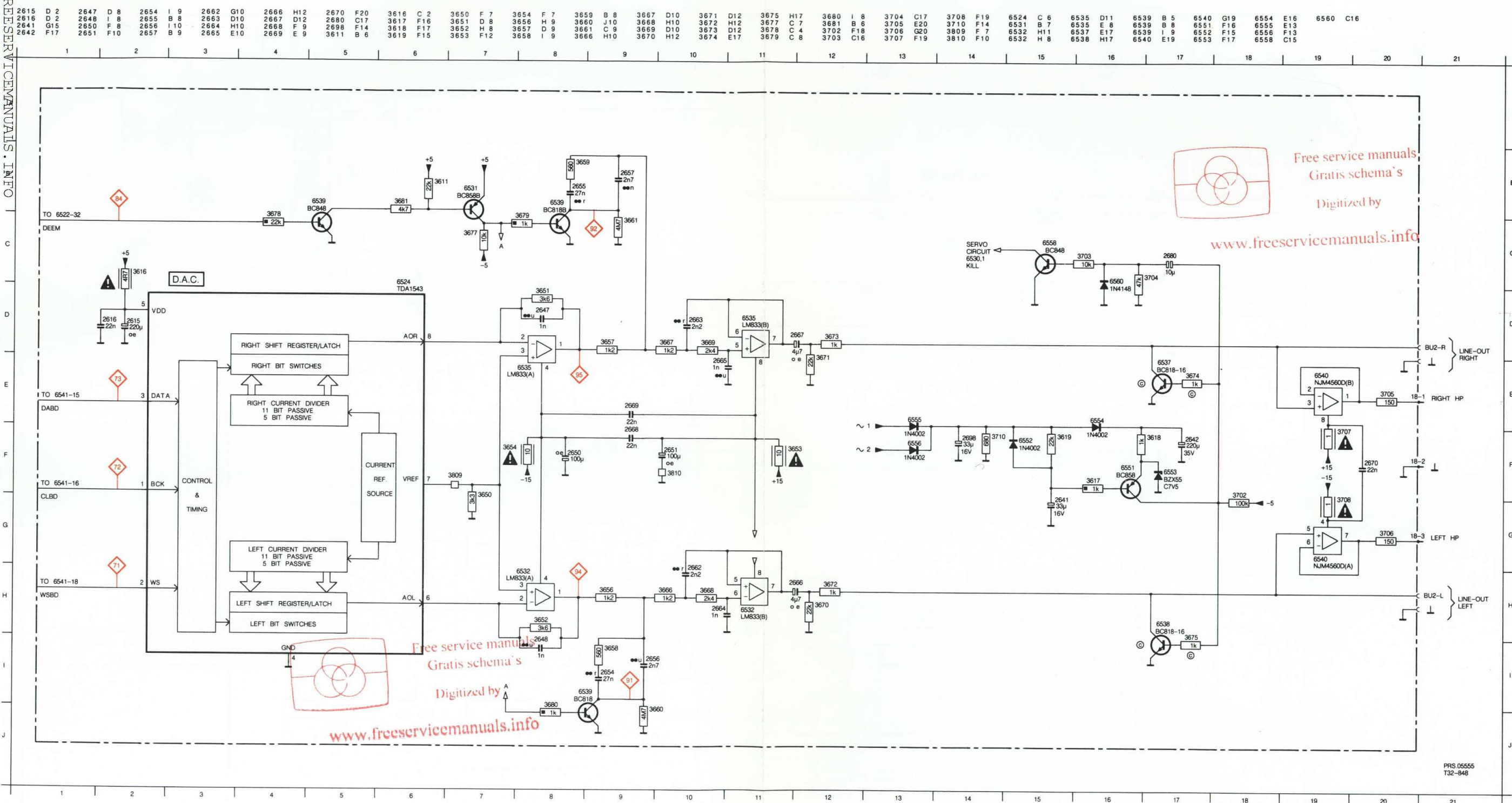
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1510	B10	3520	D 7	3688	F 4
207	F 2	3521	F 10	3689	F 4
2500	C10	3522	F 10	3690	F 4
2501	E 9	3523	F 9	3691	F 4
2503	E 9	3524	F 9	3692	F 4
2504	E 9	3530	C 9	3693	F 5
2505	D 8	3531	C 9	3702	C 4
2506	D 8	3533	D 8	3703	E 1
2507	E 8	3534	D 8	3704	D 1
2508	E 9	3535	D 9	3705	B 2
2509	E 9	3540	E 9	3706	B 3
2510	E 9	3541	E 10	3707	B 4
2511	E 9	3542	F 9	3708	B 2
2513	E 9	3543	E 10	3710	C 5
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2515	E 8	3545	G 10	3727	B 6
2520	F 9	3550	D 8	3750	B 1
2521	F 8	3551	E 7	3801	F 7
2530	D 10	3552	E 7	3802	F 6
2531	D 9	3553	F 7	3806	F 3
2532	D 9	3554	D 7	3807	F 2
2534	D 8	3555	E 7	3808	E 1
2535	D 10	3556	E 7	3809	D 2
2536	D 10	3557	E 7	3810	C 2
2537	D 8	3558	D 8	3811	C 2
2538	D 9	3561	G 9	5001	B 8
2540	F 9	3562	G 9	5501	D 6
2541	E 10	3563	E 10	5504	D 1
2542	F 10	3564	E 10	6501	E 8
2543	F 9	3565	F 9	6502	F 9
2544	G 9	3566	F 9	6503	D 9
2545	F 9	3567	E 10	6504	F 10
2550	D 7	3568	C 8	6505	F 9
2551	E 7	3569	D 8	6506	F 9
2560	G 9	3570	F 6	6507	E 7
2561	F 9	3571	F 6	6508	E 7
2562	E 9	3573	G 6	6510	F 6
2563	F 9	3574	F 7	6511	F 6
2570	G 6	3575	F 7	6512	F 7
2571	F 7	3576	G 6	6513	F 7
2572	F 7	3577	F 8	6514	F 7
2574	F 8	3578	F 8	6515	F 7
2600	D 4	3579	G 8	6516	F 8
2601	D 5	3580	F 8	6518	C 6
2602	D 4	3581	F 8	6519	C 6
2604	D 4	3582	F 8	6520	D 5
2606	D 5	3583	F 8	6522	D 5
2607	D 6	3584	F 7	6523	E 5
2608	D 6	3585	F 7	6524	E 5
2609	D 4	3586	F 8	6525	E 1
2610	E 5	3587	F 8	6526	E 1
2611	E 5	3588	F 7	6527	E 1
2612	D 3	3589	E 7	6530	F 2
2613	D 3	3600	D 5	6531	D 3
2615	D 1	3602	D 5	6532	C 2
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2633	F 2	3613	D 7	6545	E 3
2641	F 1	3616	D 1	6551	C 5
2642	C 5	3617	C 4	6552	C 5
2645	D 3	3618	C 5	6553	C 5
2646	D 2	3619	C 5	6554	C 6
2647	C 2	3620	E 1	6555	C 6
2647	C 2	3621	E 1	6556	C 6
2648	D 3	3622	E 1	6558	E 1
2648	D 3	3623	E 1	6560	D 1
2650	C 3	3624	E 1	6561	F 4
2651	C 2	3625	E 1	6562	F 4
2654	C 3	3626	E 1	6563	F 4
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2655	C 2	3629	F 1	6566	F 5
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2665	C 1	3642	F 2	6592	B 6
2666	B 3	3645	F 3	6596	B 5
2667	B 1	3646	F 2	6597	B 4
2668	C 3	3647	E 7	6598	A 6
2669	C 2	3650	E 2	BU1	B 10
2670	B 3	3650	D 2	SK1	C 10
2680	C 1	3651	C 2	SK2	D 5
2682	F 4	3652	C 2		
2683	F 4	3653	C 3		
2684	F 3	3654	C 2		
2685	F 5	3656	C 2		
2698	C 5	3657	C 2		
2703	B 6	3658	C 4		
2705	B 6	3659	C 1		
2706	B 6	3660	D 3		
2707	B 6	3661	D 1		
2708	B 5	3666	C 3		
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2710	B 6	3668	C 3		
2711	B 5	3669	C 1		
2712	B 5	3670	B 3		
2713	B 5	3671	B 2		
2715	A 5	3672	B 3		
3501	D 10	3673	B 2		
3502	E 9	3674	B 2		
3503	D 7	3675	B 3		
3504	C 7	3677	D 3		
3505	E 8	3678	D 4		
3506	E 8	3679	C 2		
3507	E 9	3680	C 3		
3508	E 8	3681	D 3		

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DECODING DIAGRAM 2 FROM AH01



DECODING DIAGRAM 1 FROM AH01

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