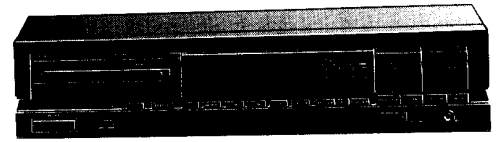


Service
Service
Service



44 840 A11

Service Manual

COMPACT
disc
DIGITAL AUDIO

CONTENTS

- 1 Contents and control buttons
- 2 Technical specifications
Servicing hints
- 3-1 Disassembly of the cabinet and loading
- 3-2 Exploded view
- 4 Fault finding tree
Electrical measurements and adjustments
Wiring diagram
Block diagram
- 5 Servo decoding panel
- 6 Variable line out panel
Power supply panel
- 7 Control and display panel
- 8 μ P + F.T.S. panel
- 9 Partslist

(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)

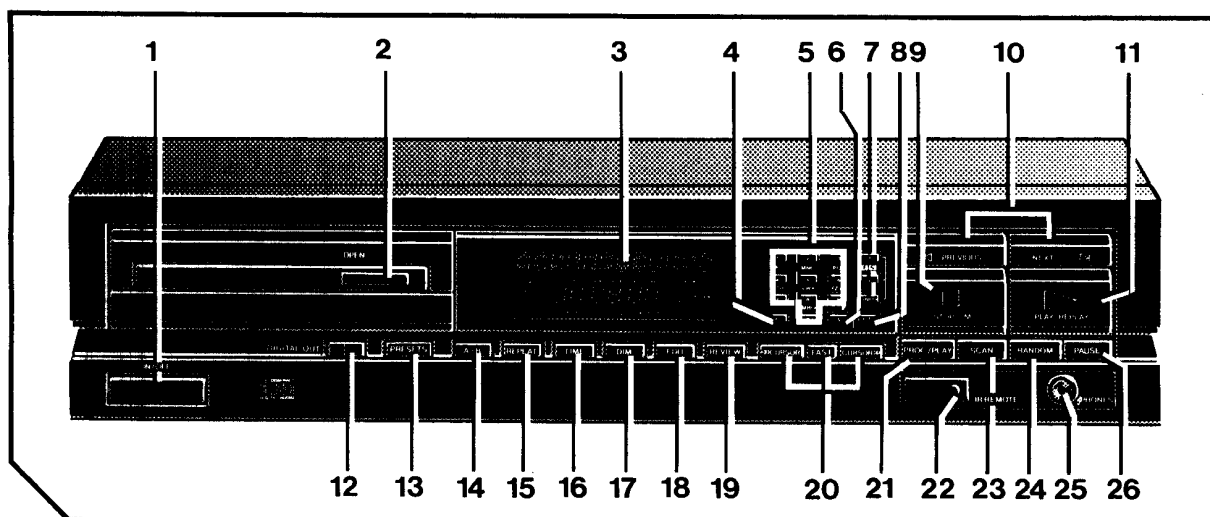
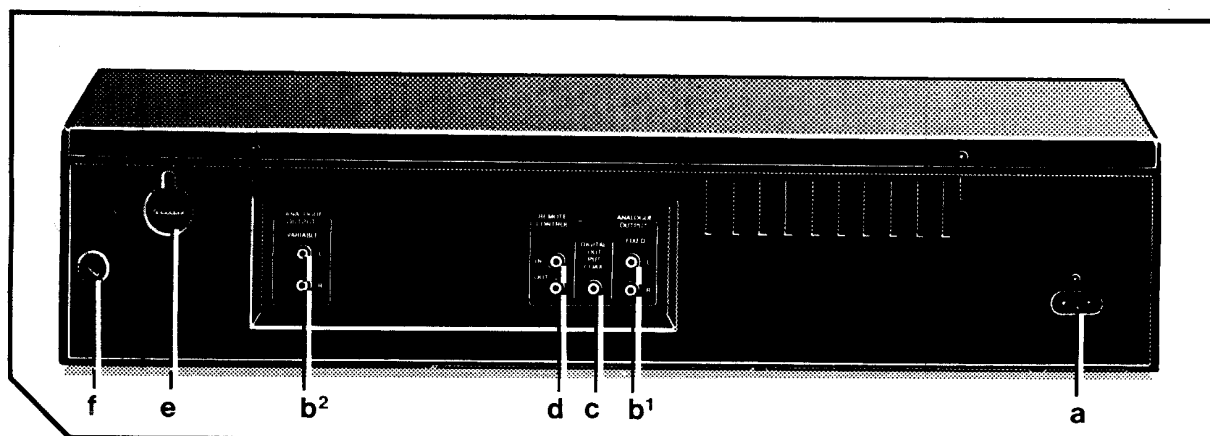
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

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

**CLASS 1
LASER PRODUCT**

3122 110 03420



44 840 A11

OPERATION

EXPLANATION OF KEYS

- 1 On/Off
- 2 Open
- 3 Display
- 4 C(lear)
- 5 Digit/alphabet keys
- 6 S(tore)
- 7 FTS
- 8 Info
- 9 Title
- 10 Stop/CM
- 11 Previous/next
- 12 Play/Replay
- 13 Digital out
- 14 Presets
- 15 'A-B'
- 16 Repeat
- 17 Time
- 18 DIM
- 19 Edit
- 20 Review
- 21 << Cursor >>
- 22 Prog(ram) play
- 23 IR remote
- 24 Scan
- 25 Random
- 26 Phones
- 26 Pause

CONNECTIONS

- a Mains lead
- b Analogue output
- c Digital out coax
- d Remote control In/Out
- e Voltage selector
- f Mains fuse holder

TECHNICAL DATA**General**

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

External RC-5 connection

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

Line output

- | | |
|--|---|
| 1. Number of channels | : 2 |
| 2. Output voltage | : 2 Vrms +/- 2 dB |
| 3. Unbalance Left-Right | : max. +/- 0,2 dB |
| 4. Output resistance | : 200 Ohm |
| 5. Amplitude linearity | : max. +/- 0,15 dB from 20 Hz to 20 kHz |
| 6. Phase non-linearity | : max. +/- 1,0° from 20 Hz to 20 kHz |
| 7. Signal to noise ratio | : min 96 dB from 20 Hz to 20 kHz |
| 8. Dynamic range | : min 90 dB from 20 Hz to 20 kHz |
| 9. Total harmonic distortion + noise | : min -88 dB from 20 Hz to 20 kHz |
| 10. Intermodulation distortion | : max. 0.004% (min -88 dB) from 20 Hz to 20 kHz |
| 11. Out-band attenuation | : min 60 dB |
| 12. Channel separation | : min 93 dB from 20 Hz to 20 kHz |
| 13. Muting during random access | : min 90 dB from 20 Hz to 20 kHz |
| 14. Automatic switched de-emphasis with time constants | 15/50 us |

Headphone (fixed)

- | | |
|--------------------------------------|---|
| 1. Output voltage | : Max. 2 Vrms +/- 2 dB |
| 2. Unbalance Left-right | : Max. +/- 0,2 dB |
| 3. Output resistance | : 150 Ohm |
| 4. Load impedance range | : 32 Ohm to 600 Ohm |
| 5. Output power | : Max. 6 mW into 32 Ohm load
Max. 10 mW into 150 Ohm load
Max. 6 mW into 600 Ohm load |
| 6. Signal to noise ratio | : Min 93 dB from 20 Hz to 20 kHz |
| 7. Dynamic range | : Min 90 dB from 20 Hz to 20 kHz |
| 8. Total harmonic distortion + noise | : Min 88 dB from 20 Hz to 20kHz |
| 9. Intermodulation distortion | : Min 88 dB from 20 Hz to 20 kHz |
| 10. Channel separation | : min 80 dB from 20 Hz to 20 kHz |

Dimensions and weight

- | | |
|---|-------------------------------|
| 1. Place and height of feet acc. to Philips specification | |
| 2. Apparatus tray closed | WxDxM : 420 x 280 x 90/104 mm |
| 3. Apparatus tray open | WxDxM : 420 x 423 x 90/104 mm |
| 4. Weight | 4,0 kg |

SERVICING HINTS

When the tray mechanism and CDM-unit has been disassembled the player can be prepared for measurements by bridging the "tray detection" switch SK2 on the main panel.

Service disc hold-down

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.

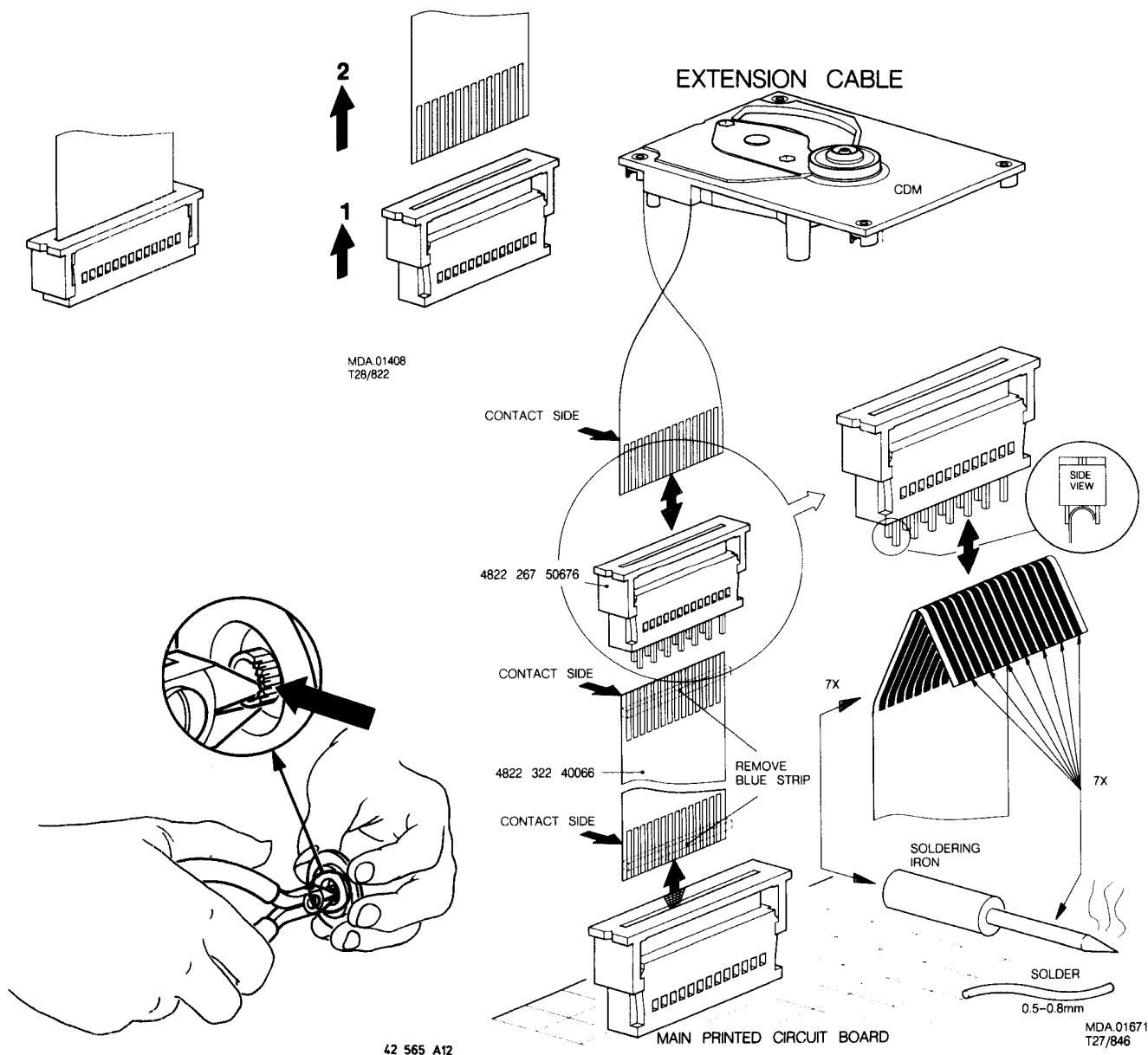
If the tray mechanism has to be disassembled for servicing, a separate disc hold-down should be used. For a service disc hold-down see the figure below.

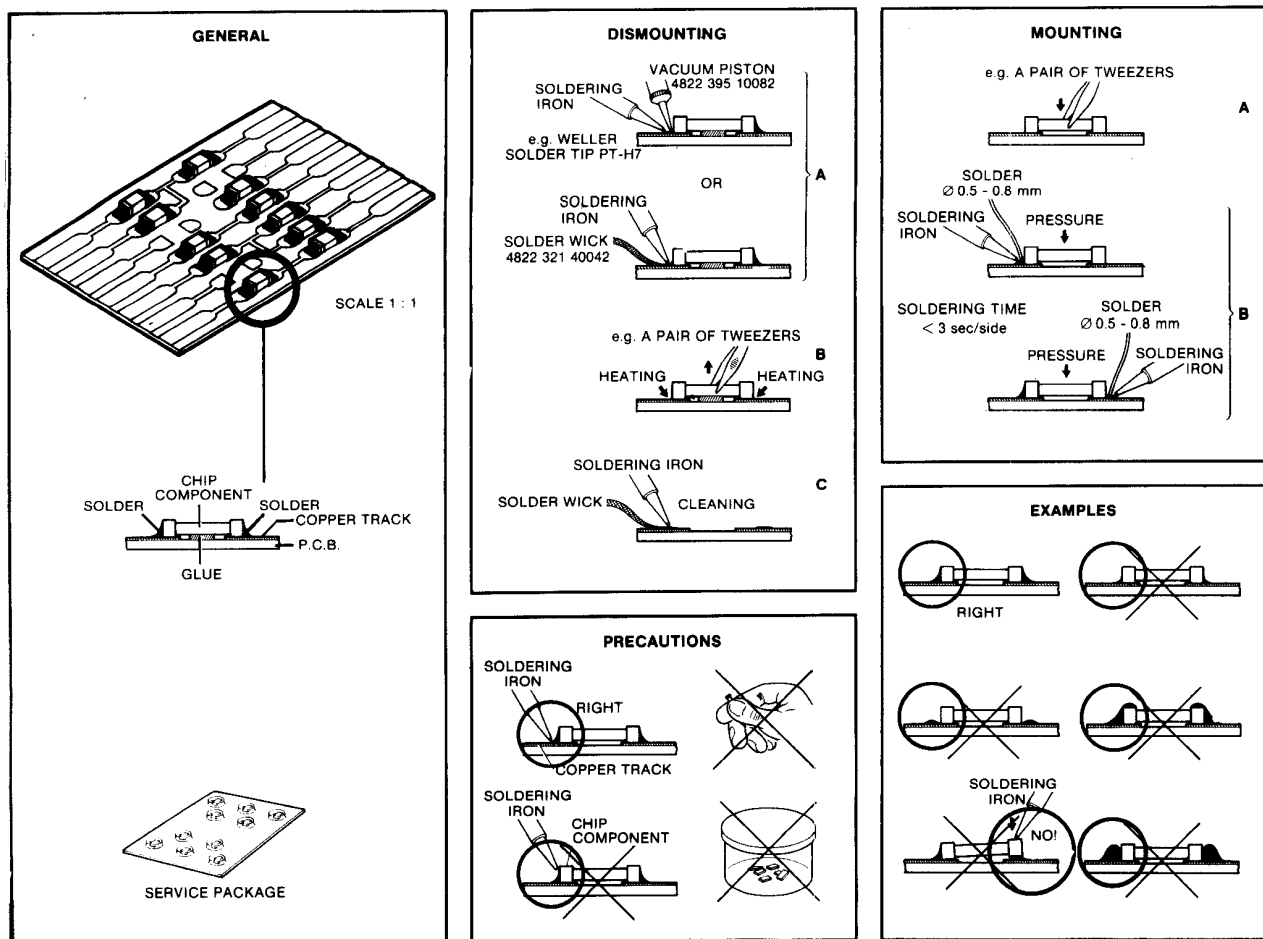
Compose a service Disc hold-down in the following way.

- Cut in the most inner ring of a disc hold-down (4822 462 50383) with small and sharp nippers. See fig. below.
- 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.

SERVICE TOOLS

Audio test disc 1	4822 397 30185
Disc without errors + disc with DO errors, black spots and fingerprints	4822 397 30096
Disc (65 min, 1kHz) without pause	4822 397 30155
Maximum diameter disc	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204





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 enfilier 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.

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 ditzelfde potentiaal.

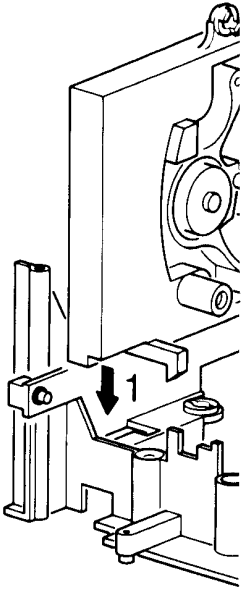
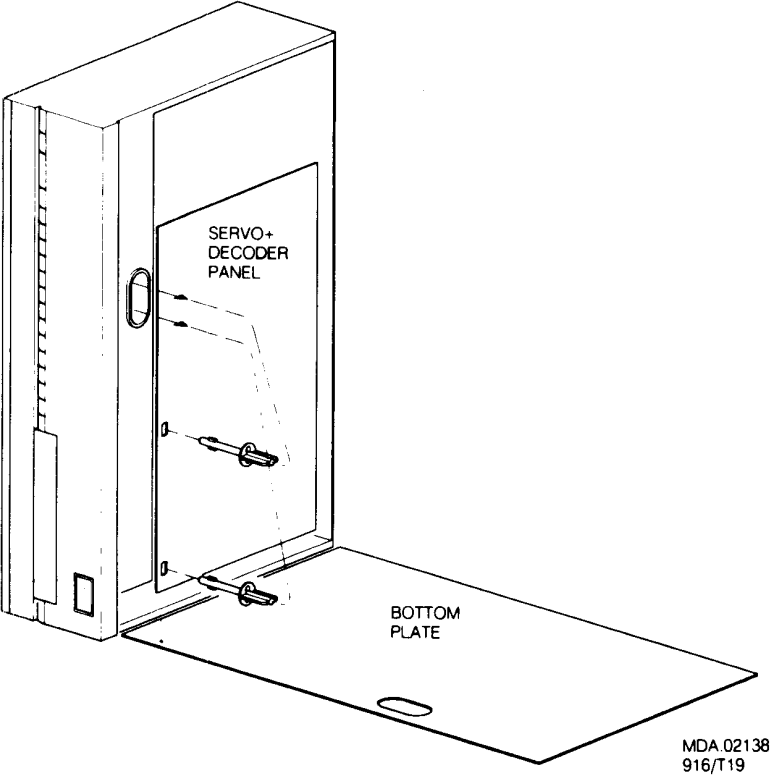
Ⓘ AVVERTIMENTO

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 cautela 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.

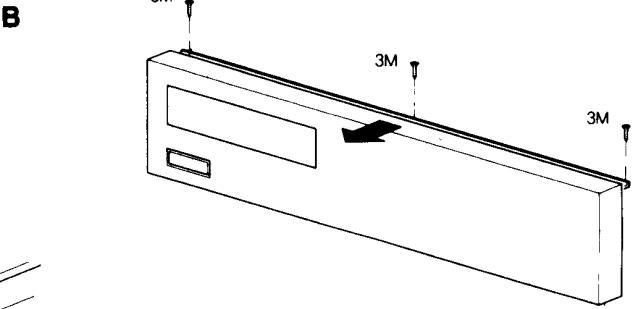
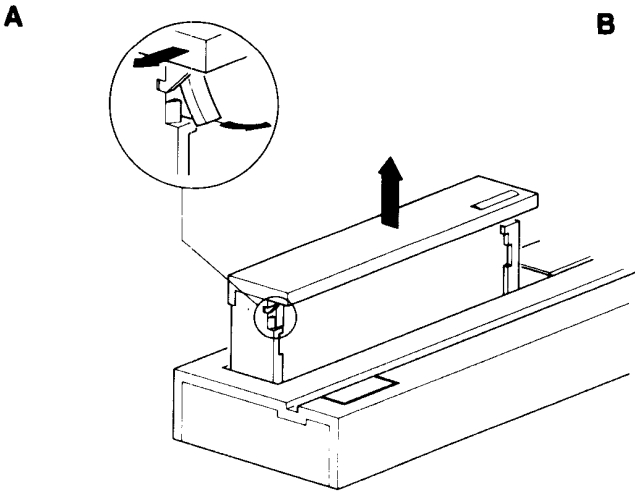
DISASSEMBLY OF THE CABINET AND CDM

MEASURING AND ADJUSTMENT POSITION

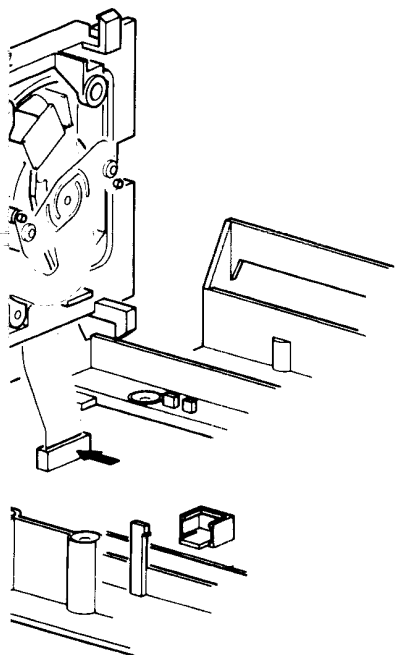
FOIL CONNECTION



CABINET DISASSEMBLY HINTS

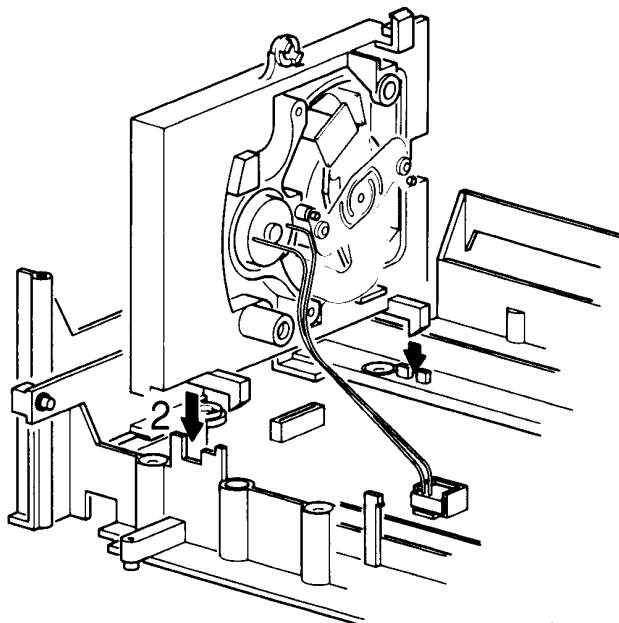


I POSITION



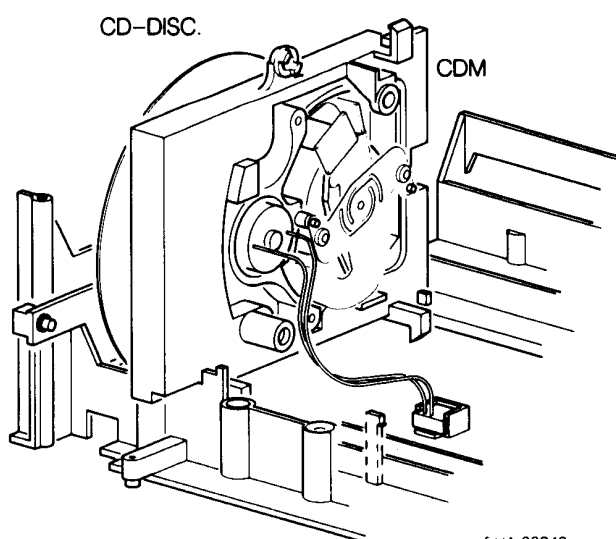
PLAY-SERVICE POSITION

CAUTION
INVISIBLE LASER RADIATION WHEN
OPEN DO NOT STARE INTO BEAM
3104 106 75942



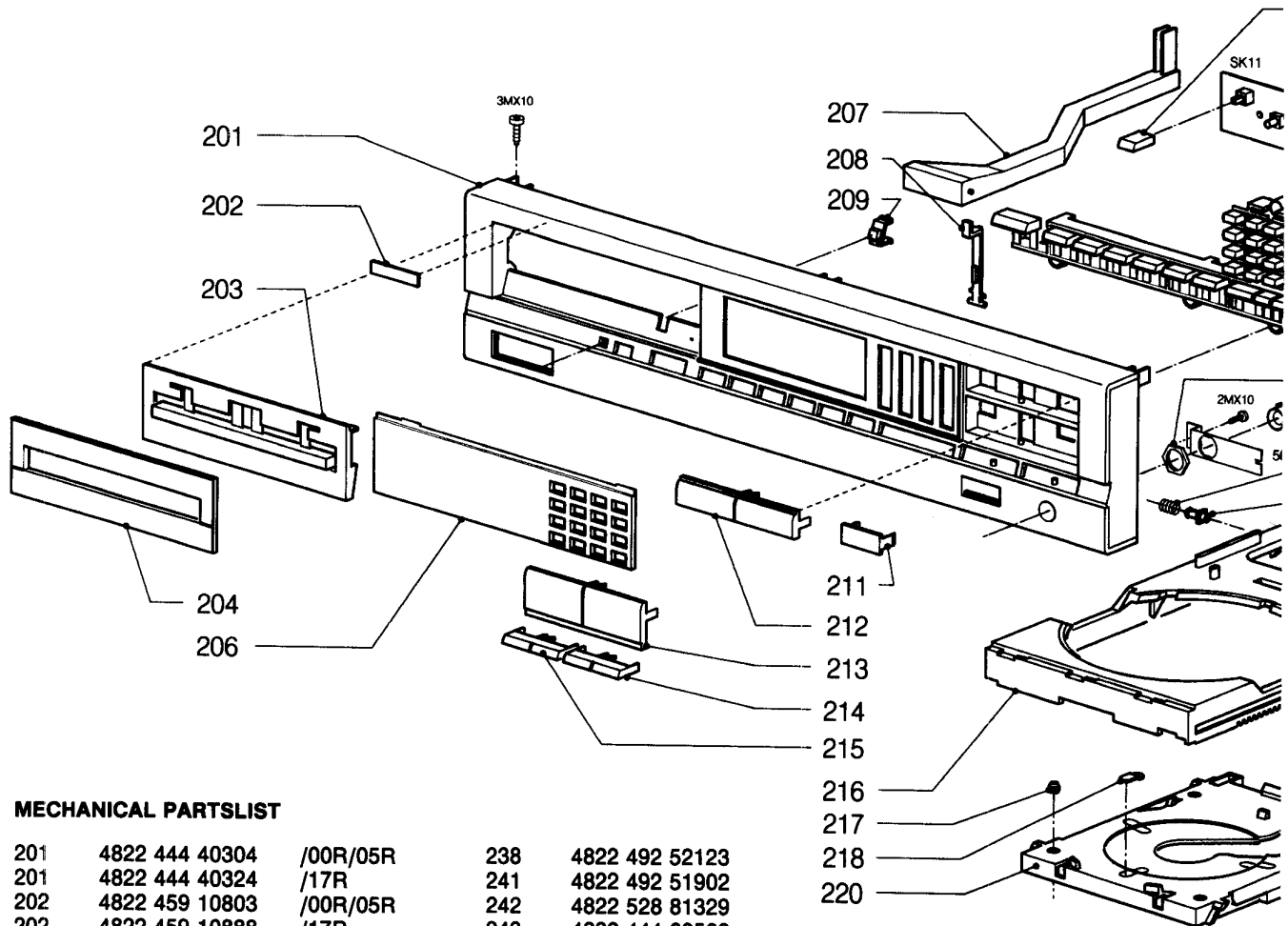
EVA.00848
916/T19

SERVICE POSITION PLAY



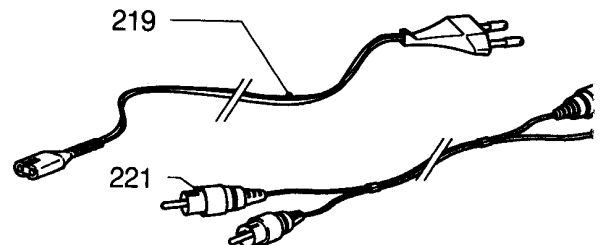
EVA 00849
916/T19

EXPLODED VIEW CABINET

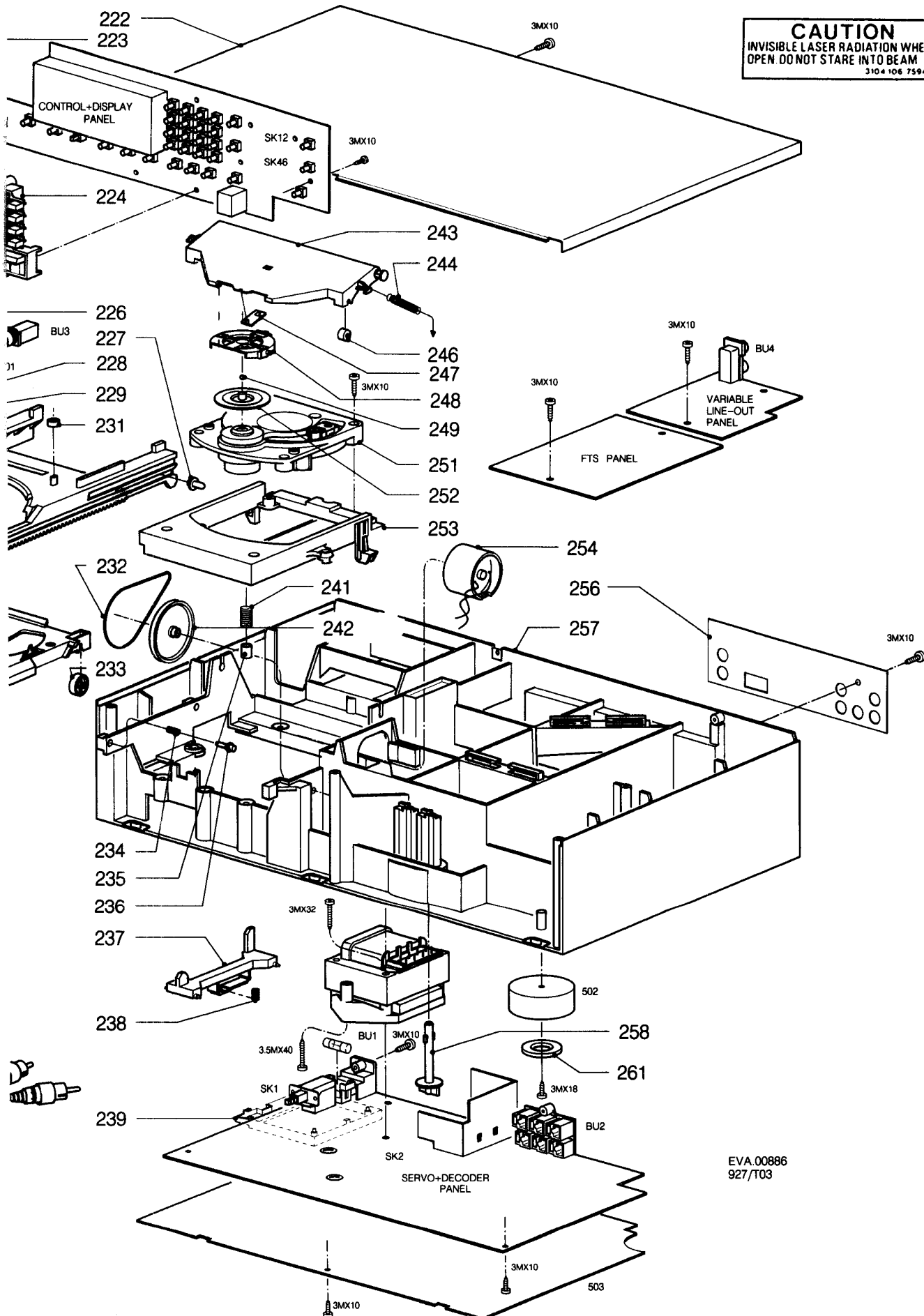


MECHANICAL PARTSLIST

201	4822 444 40304	/00R/05R	238	4822 492 52123
201	4822 444 40324	/17R	241	4822 492 51902
202	4822 459 10803	/00R/05R	242	4822 528 81329
202	4822 459 10888	/17R	243	4822 444 60568
203	4822 444 60626		244	4822 492 32883
204	4822 450 61356		246	4822 528 90639
206	4822 410 60101		247	4822 466 92257
207	4822 410 60105		248	4822 402 61207
208	4822 402 61249		249	4822 520 40177
209	4822 381 11052		251	4822 691 30209
211	4822 381 11051		252	4822 530 80503
212	4822 410 60094		253	4822 402 61196
213	4822 410 60095		254	4822 361 21258
214	4822 410 60099		256	4822 444 30416
215	4822 410 60102		257	4822 444 50621
216	4822 444 50603		261	4822 444 30404
217	4822 325 50177			
218	4822 325 50176			
219	4822 321 10457	/00R		
219	4822 321 10522	/05R		
219	4822 321 10445	/17R		
220	4822 466 92251			
221	4822 321 22832			
222	4822 444 30417			
223	4822 410 60104			
224	4822 410 60098			
226	4822 505 10571			
227	4822 402 61253			
228	4822 492 52094			
229	4822 402 61252			
231	4822 532 51756			
232	4822 358 10115			
233	4822 528 90638			
235	4822 466 61587			
237	4822 402 50276			



CAUTION
INVISIBLE LASER RADIATION WHEN
OPEN. DO NOT STARE INTO BEAM.
3104 106 75942



EVA.00886
927/T03

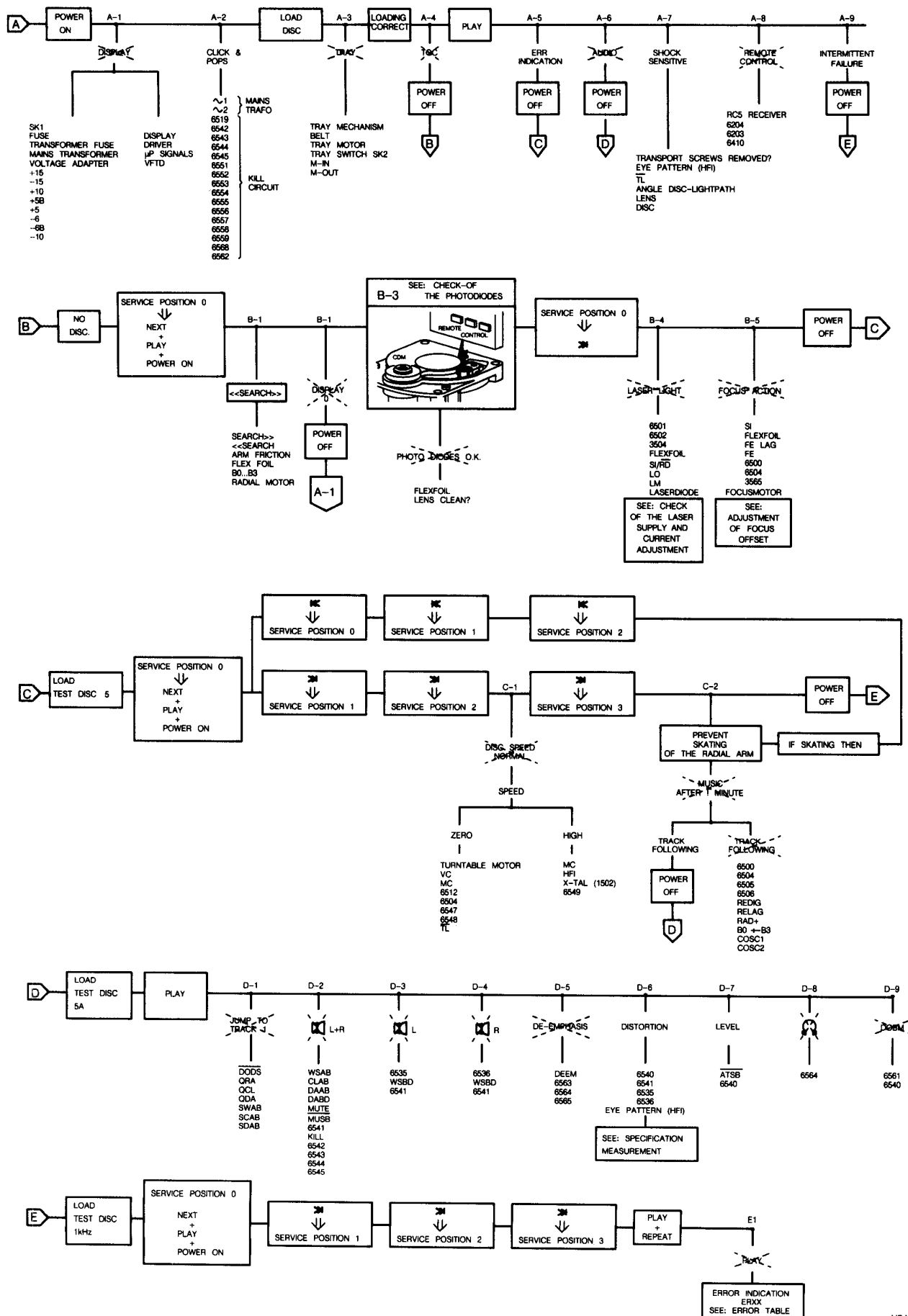
MEASUREMENTS AND ADJUSTMENTS

TROUBLE SHOOTING (FAULT FINDING TREE)

START-UP PROCEDURE

Follow the path of the faultfinding tree beginning at the top left. Perform the actions you come across in the various blocks. Look at the various side branches to find out if the information you see there applies to your problem. If, for instance, you find the indication **display**, this means that no picture appears on the display.

If you establish this fault, follow the branch and perform the recommended actions. Check the signals mentioned. In a number of branches further reference is made to measurements you could carry out. These measurements are explained in several tables further on in this manual.



B-3 CHECK OF THE PHOTODIODES

Step	Signal	Mode					Remarks
1	D2 D1 D3 D4	power on		-	-	signal $4 \pm 6 \pm 7 \pm 8$	Signal depends on Distance lens \leftrightarrow IR LED of remote control

T-22407A

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

STEP	SIGNAL	MODE					REMARKS
1	LO LM	SERV. POS. 2 		-	$1.8 < V < 3$	-	
				-	$170 < mV < 220$	-	LITTLE LIGHT
2	LO LM	SERV. POS. 2 		-	$1.8 < V < 3$	-	
				-	$170 < mV < 220$	-	LITTLE LIGHT
3	LO	POWER ON		-	$0V \pm 0.2V$	-	

During the change over from SK closed to SK open, the LED will emit more light for a short moment.

MDA.01379
T-08 624**B4 LASER CURRENT ADJUSTMENT**




STEP	SIGNAL	MODE					REMARKS
1	-	POWER OFF		R3520	1k	-	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	-	HIGH-OHMIC MEASUREMENT

MDA.01778
T28/901**B5 ADJUSTMENT OF FOCUS-OFFSET**

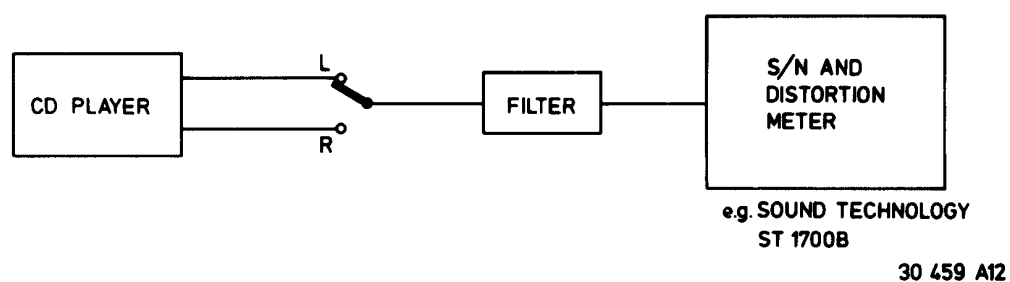
STEP	SIGNAL	MODE					REMARKS
1	-	POWER ON	-	R3569	-	-	ADJUST FOR OPTICAL MID-POSITION
2	FE LAG	PLAY TEST DISC 5 TRACK 1		R3569	$400mV \pm 40mV$ DC	-	FINE ADJUSTMENT

MDA.01381
T-08 624

SPECIFICATIONS MEASUREMENT

Signal	Mode				Remarks
BU2-L	Test disc 3, play total harmonic distortion	filter output	See spec.		See drawing 30459A12
BU2-R	Test disc 3, play total harmonic distortion	filter output	See spec.		See drawing 30459A12
BU2-L	Test disc 3, play signal-to-noise ratio	filter output	See spec.		See drawing 30459A12
BU2-R	Test disc 3, play signal-to-noise ratio	filter output	See spec.		See drawing 30459A12

T-222550

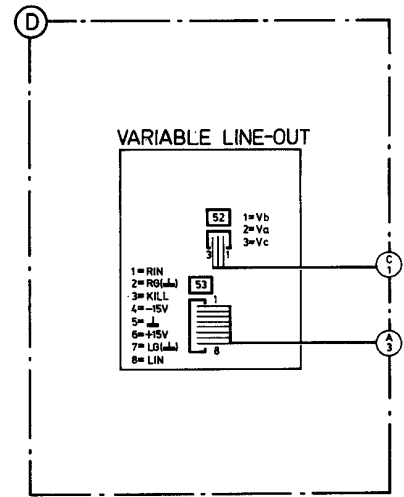
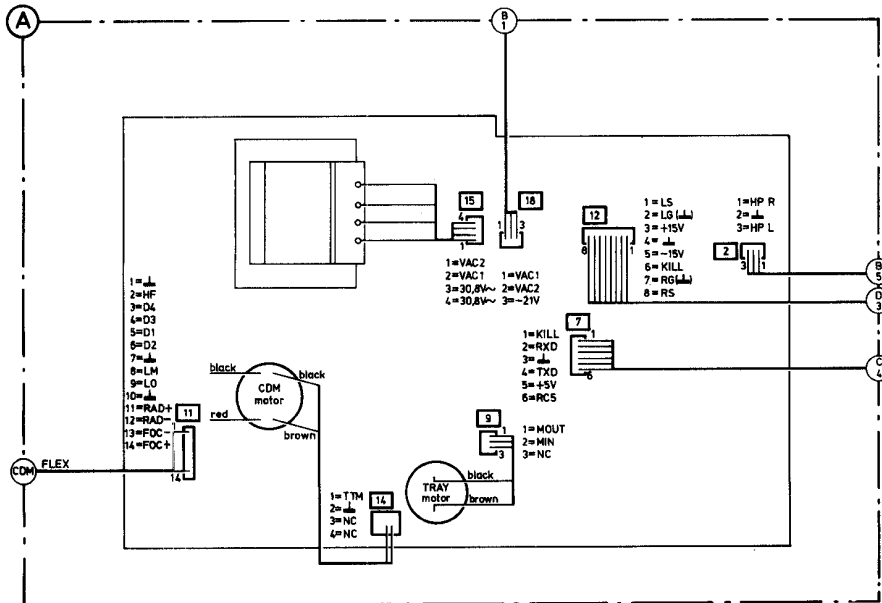
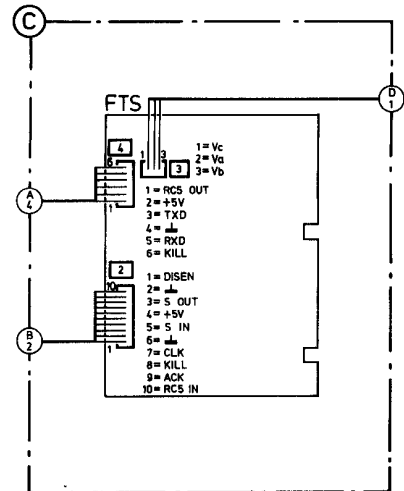
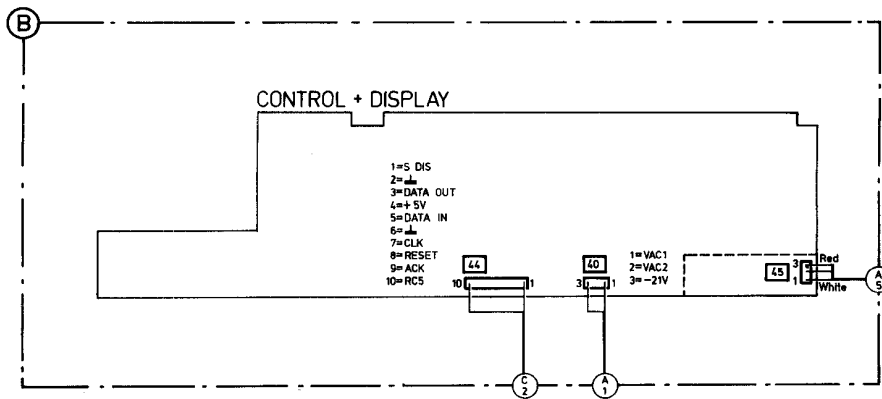
**ERROR CODE TABLE****SYSTEM ERRORS**

ERROR 01 Tray error
 ERROR 02 Focus error
 ERROR 03 Radial error
 ERROR 04 Too many TL
 ERROR 05 TL low to long
 ERROR 06 Jump error
 ERROR 07 Subcode error
 ERROR 08 TOC error

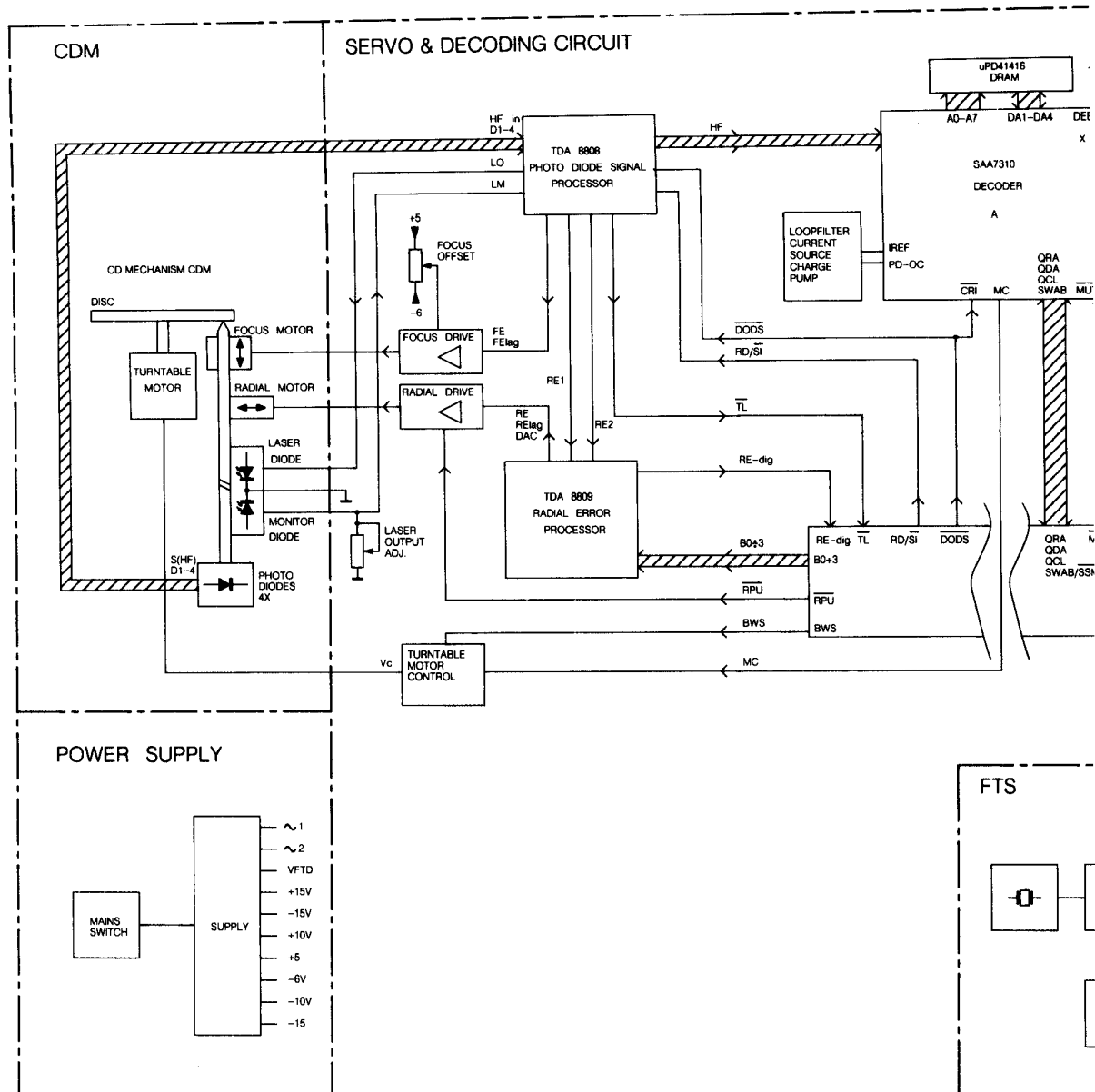
OPERATING ERRORS

ERROR 10 Selected track not accessible
 ERROR 11 Relative time not accessible
 ERROR 12 Absolute time not accessible
 ERROR 30 Next operated during last track without repeat
 ERROR 31 Previous operated during last track without repeat
 ERROR 42 Selected track does not exist

WIRING DIAGRAM



BLOCK DIAGRAM

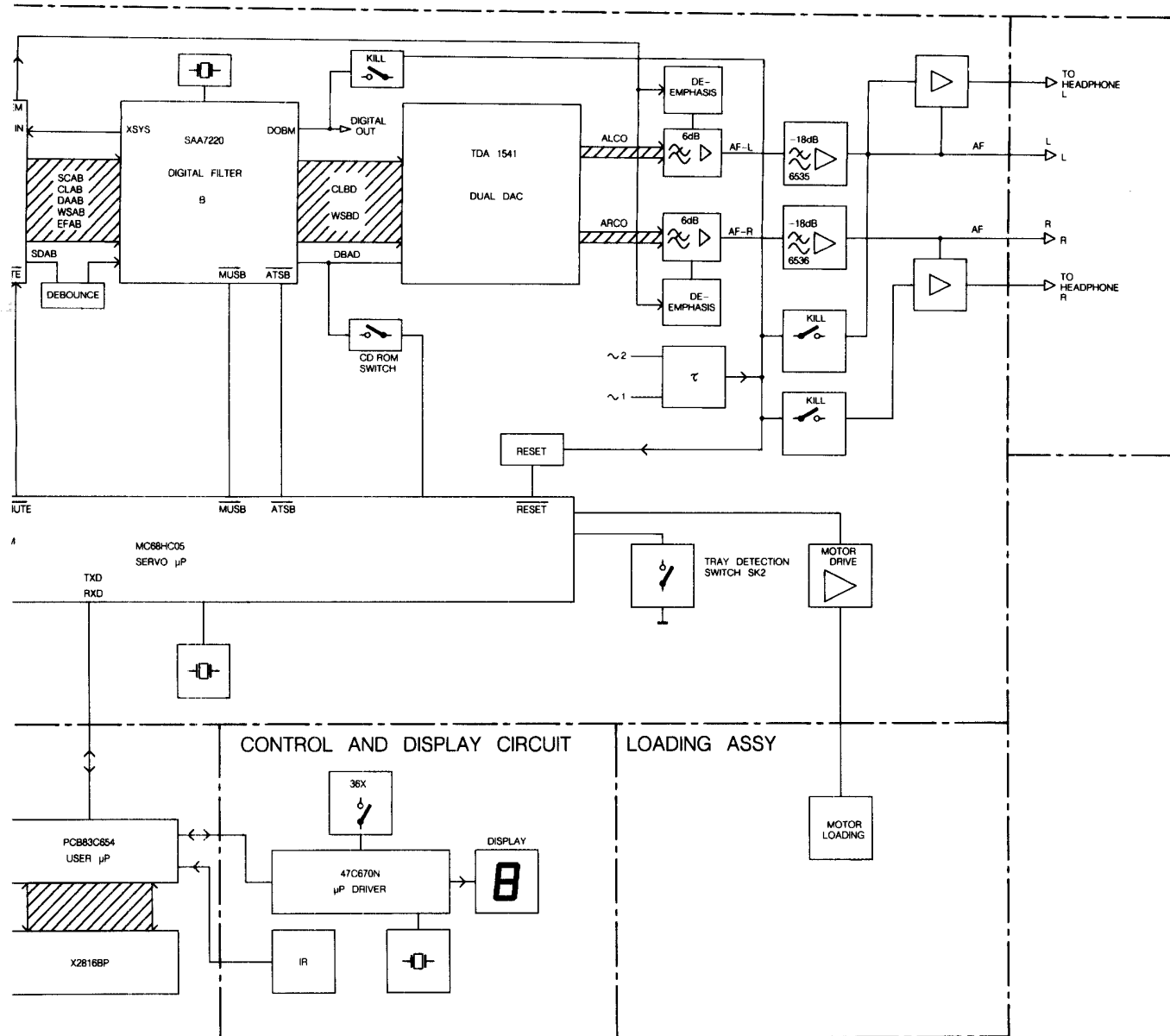


AGC
 B0-B3
 BEQ
 BGC
 Cosc1
 Cosc2
 DEC
 DET
 DIV4
 DODS
 D1+4
 FE
 FE lag
 HF
 HFD
 HF-in
 HF-out
 LM
 LO
 MC
 offset IN
 offset OUT
 PLLH
 RADout
 RE

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

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

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



PRS 06101
T-08 927

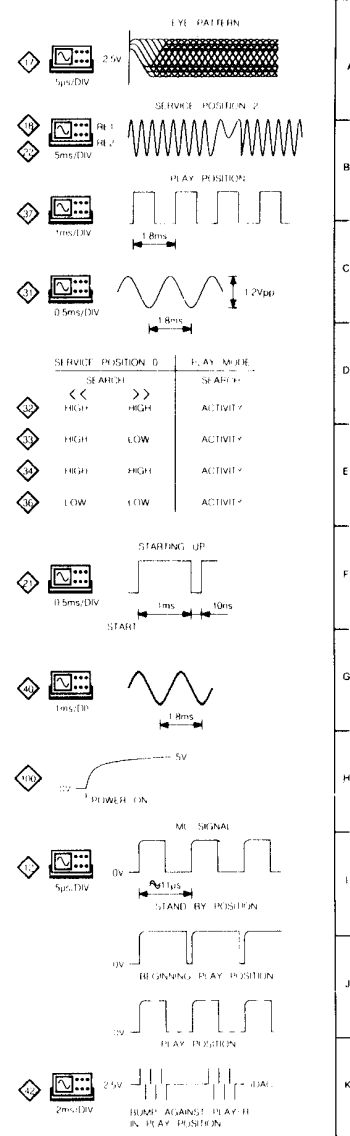
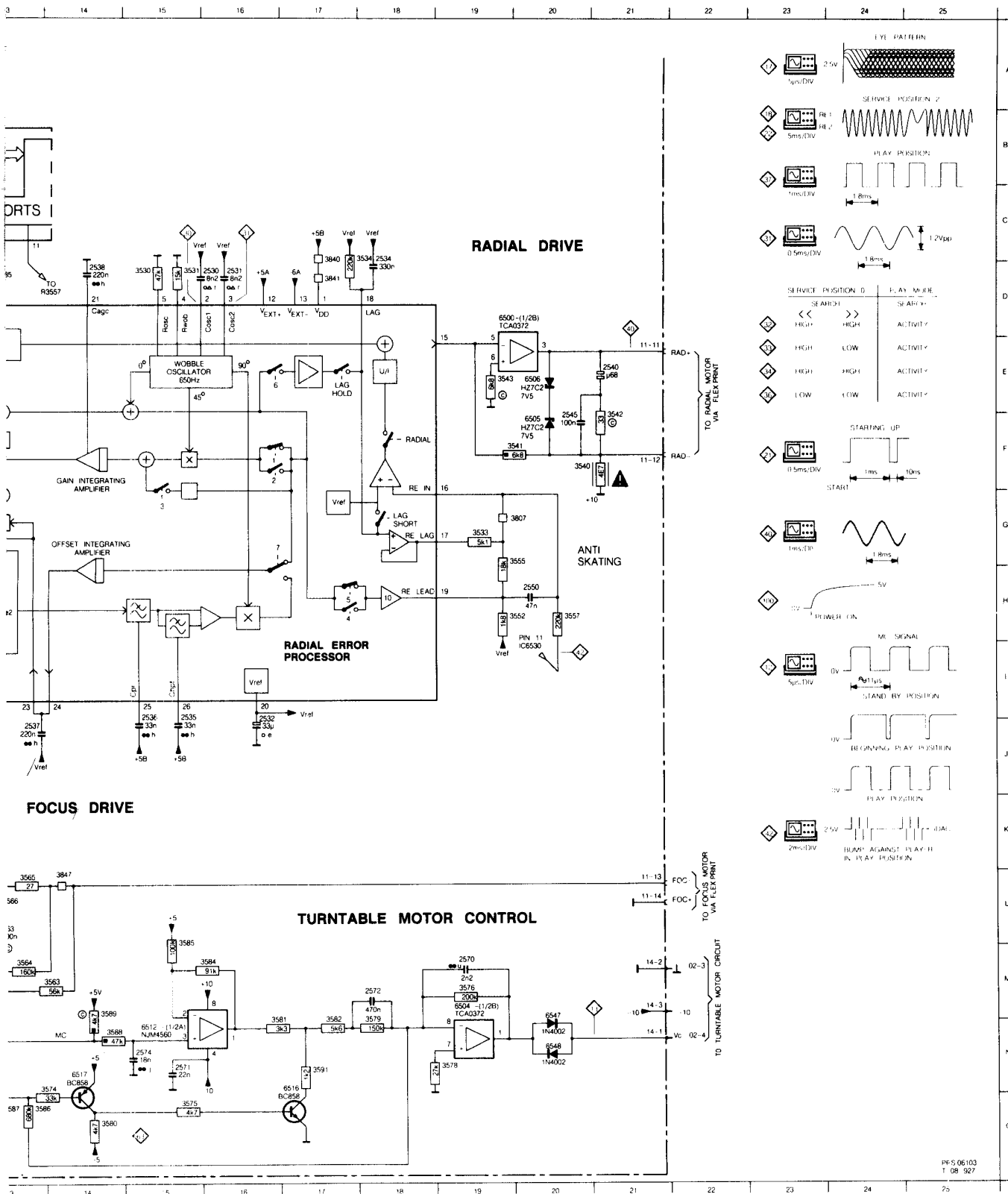
ATSBCD ROMSwitchCEFMCLABCLBDCREFCRIDAABDABDDEEMDOBMEFABMUTE

- Attenuation of Audio level in Search position (Cueing)
- Digital Data information on disc signal
- Clock Eight-to-Fourteen Modulator
- Clock signal Decoder-A to Filter-B
- Clock signal Filter-B to DAC
- Reference Current
- Counter Reset Inhibit
- Data signal Decoder-A to Filter-B
- Data signal Filter-B to DAC
- Deemphasis
- Digital out signal
- Error flag Decoder-A to Filter-B
- Mute signal

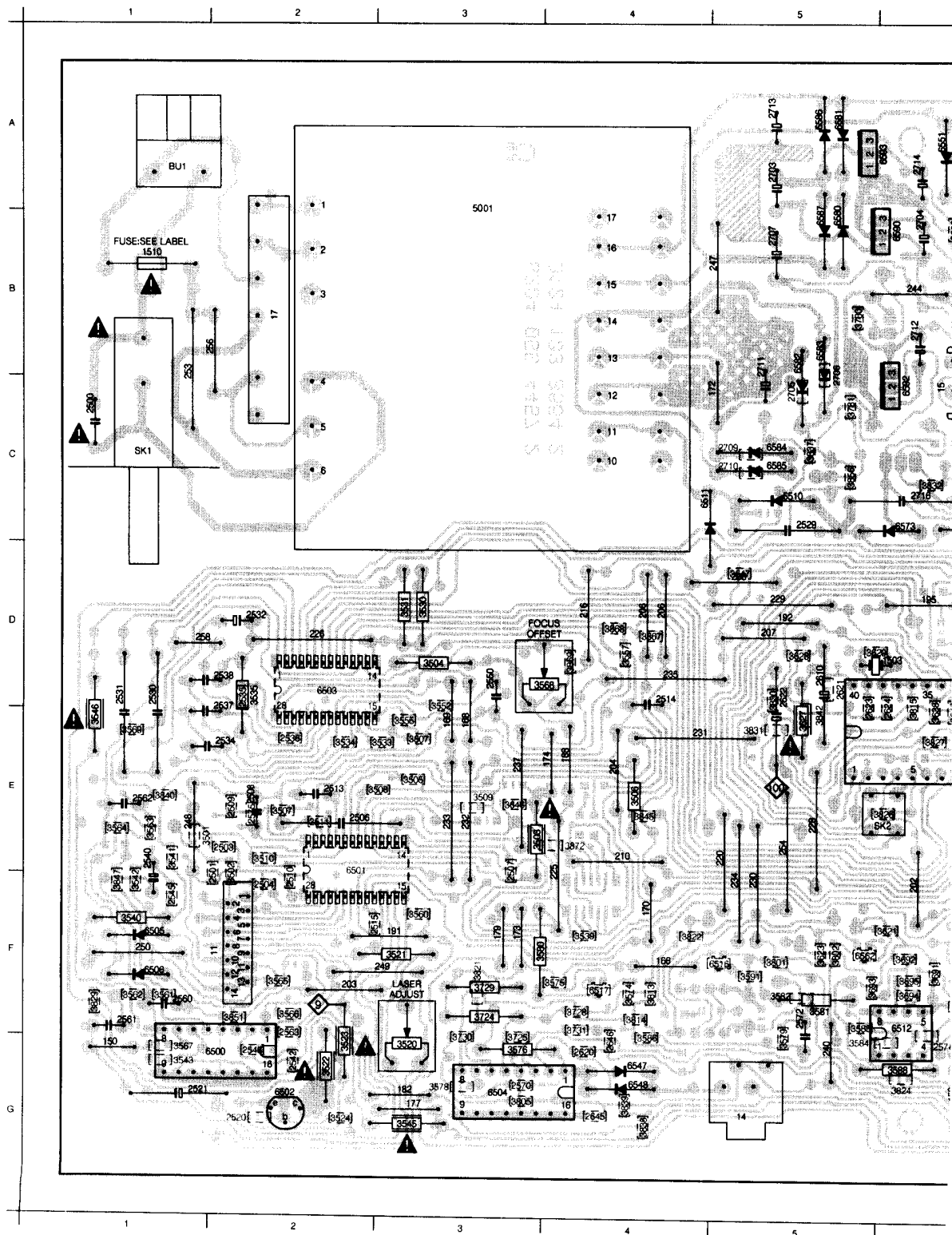
MUSBPD/OCQCLQDAQRASCABSDABSWAB/SSMWSABWSBDXINXSYSBSW

- Soft Mute signal
- Phase detector - oscillator control
- Q-channel Clock signal
- Q-channel Data signal
- Q-channel Request Acknowledge
- Subcode clock Decoder-A to Filter-B
- Subcode data Decoder-A to Filter-B
- Subcode Word/Start-stop motor signal
- Word select Decoder-A to Filter-B
- Word Select Filter-B to DAC
- Oscillator signal in Decoder-A
- Oscillator signal out Filter-B
- Bandwidth switch turntable motor circuit

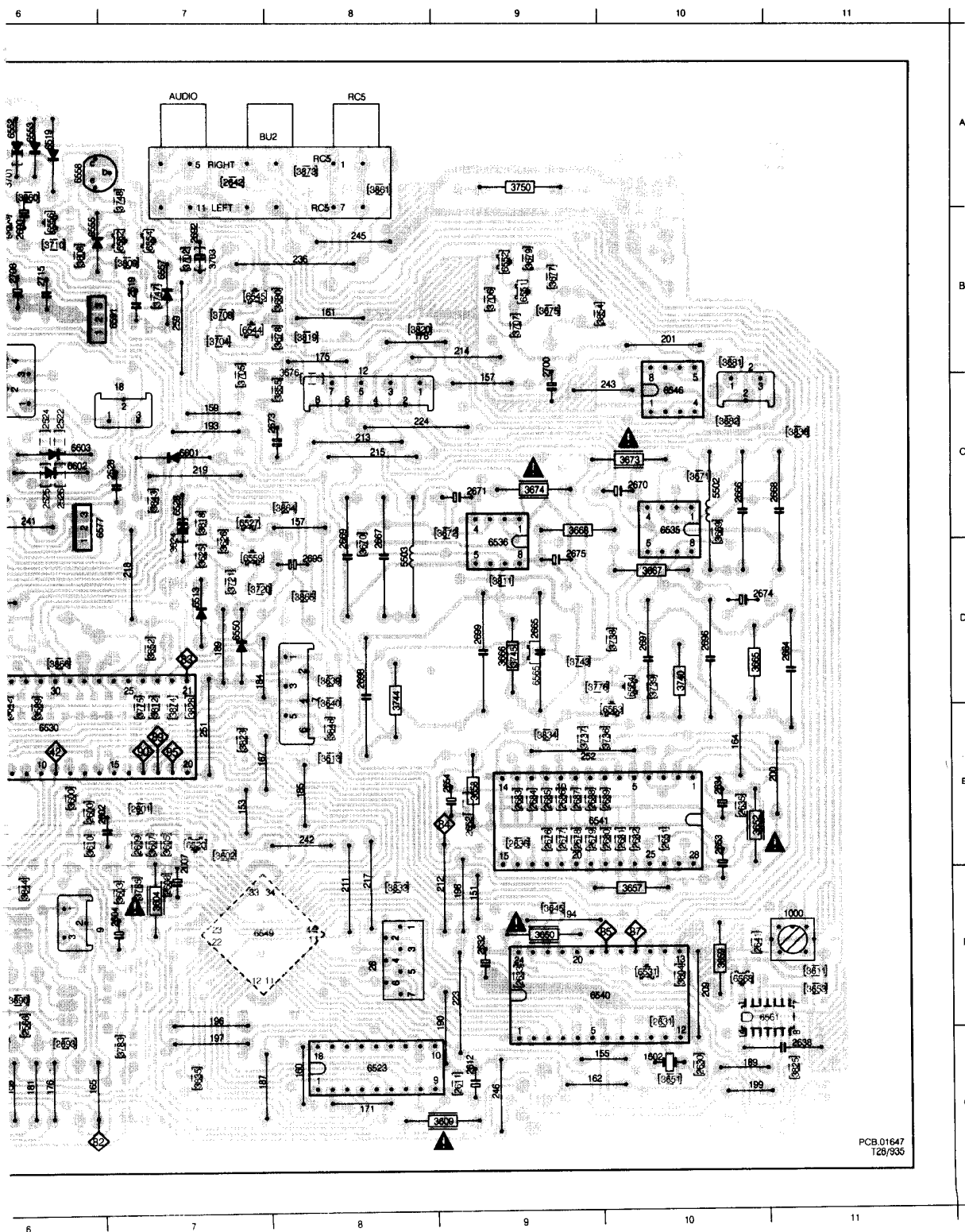
18	D10	3543	E19	3557	H20	3564	M13	3569	M11	3579	M18	3585	L15	3591	N17	3807	G20	3826	I10	3851	K10	6504	M19	6517	N14
19	F11	3545	K12	3560	L10	3565	L13	3574	N14	3580	O14	3586	O13	3627	A9	3813	N12	3829	I9	3850	D19	6505	F20	6530	A5
10	F20	3546	L12	3561	K11	3566	L13	3575	O15	3581	M16	3587	O13	3628	A8	3815	D8	3840	C17	6500	K11	6508	E20	6547	N20
11	F20	3552	H20	3562	M11	3567	L11	3576	M19	3582	M17	3588	N14	3629	A10	3822	D7	3841	D17	6502	J3	6512	N15	6548	N20
12	F21	3555	G20	3563	M14	3568	M12	3578	N19	3584	M16	3589	M14	3646	D8	3822	B3	3847	L14	6503	D11	6516	N17		



651	C	4	181	G	6	206	D	4	230	F	5	258	D	1	2500	C	1	253	B	1	2575	E	2	2633	F	9	2673	C	8	2697	D10	3505	E	3	
654	G	4	182	G	3	206	D	4	231	E	2	259	B	7	251	G	2	250	F	8	261	F	8	264	F10	2674	D11	2698	D	8	3507	E	4		
151	F	9	184	D	7	207	D	5	232	E	3	1000	F11	2503	F	2	2531	D	1	260	F	8	2635	E	10	2675	D11	2699	D	9	3508	E	5		
153	E	7	185	E	8	208	D	5	233	E	3	11	F	2	2504	F	2	2532	D	2	268	E	6	2636	E	9	2676	E	9	2700	B	9	3508	E	6
157	C	9	187	G	7	209	F10		234	F	5	12	B	8	2506	E	2	2534	E	2	2601	E	7	2638	G11	2677	E	9	2703	A	5	3509	E	7	
158	G	6	188	E	4	210	E	4	235	D	4	14	G	5	2507	C	3	2535	D	2	2602	E	6	2641	F10	2678	E	9	2704	B	6	3510	E	8	
160	G	8	189	G10	211	F	8		236	B	8	15	C	6	2508	E	2	2536	E	2	2604	F	7	2642	A	7	2679	E	9	2705	C	5	3520	G	3
164	E10	180	F	9	212	F	9		237	E	3	150	G	1	2509	E	2	2537	D	2	2607	E	7	2642	A	7	2680	E10	2706	B	5	3521	F	3	
165	G	6	191	F	3	213	F	8	240	E	3	1501	C	3	2510	E	7	2538	D	2	2608	F	7	2645	G	4	2681	E10	2707	B	5	3522	G	2	
167	E	7	192	D	5	215	B	9	241	C	1	1502	G10					2539	D	2	2609	F	7	2646	E	4	2682	E10	2708	B	5	3523	G	1	
168	E	3	193	C	7	215	B	8	242	E	8	1503	D	6	2511	E	2	2542	G	2	2610	D	5	2651	E10	2709	B	5	3524	G	2	3524	G	1	
169	E	3	194	F	9	216	D	4	243	C10	1510	B	1	2513	E	2	2545	F	1	2611	G	9	2652	E	9	2684	E	9	2710	C	5	3530	D	3	
170	F	4	195	D	6	217	F	8	244	B	6	155	G10	2514	D	4	2546	G	2	2612	G	9	2653	E10	2685	E	9	2711	B	5	3531	D	3		
171	G	8	196	F	7	218	D	7	245	B	8	157	C	8	2515	F	2	2550	D	3	2619	B	7	2654	E	9	2686	E	9	2712	B	6	3533	E	4
172	F	4	197	G	7	219	C	7	246	G	9	159	C	7	2520	G	2	2560	F	1	2620	G	4	2664	D11	2687	E	9	2713	A	5	3534	E	2	
173	F	3	198	F	9	220	E	5	247	B	4	161	B	8	2521	G	1	2561	F	1	2621	D	5	2665	D	9	2688	E	9	2714	A	6	3535	D	4
174	F	3	198	F10	223	F	9		248	E	1	162	G	9	2522	G	6	2562	E	1	2622	D	5	2666	E10	2689	E10	2715	B	6	3539	F	4		
175	B	8	200	E11	225	E	4		249	E	1	166	A	4	2523	G																			

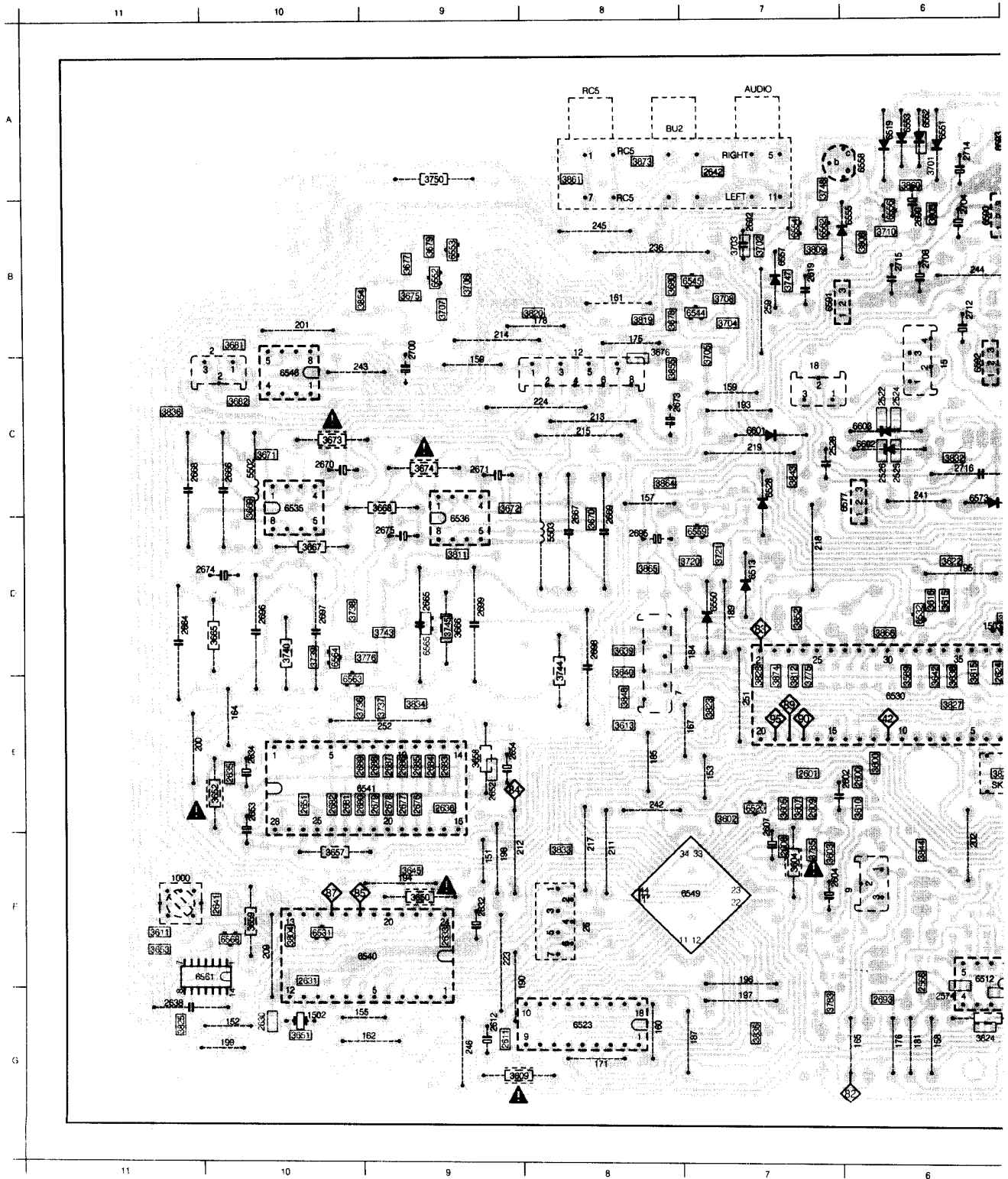


3546	E 1	3584	G 5	3628	D 5	3671	C10	3705	B 7	3748	A 7	3819	B 8	3842	D 5	5502	C10	6536	D 9	6562	F 5	6602	C 6
3552	D 3	3585	F 5	3629	D 6	3672	C 9	3706	B 9	3750	A 9	3820	B 8	3843	D 6	5503	D 8	6536	F 10	6562	B 7	6603	C 6
3555	D 3	3586	F 4	3630	D 6	3673	C 10	3707	B 9	3755	D 7	3821	F 3	3844	F 4	5504	E 2	6540	F 10	6563	E 10	7	D 8
3557	D 4	3588	G 6	3633	D 8	3674	C 9	3708	B 9	3776	D 10	3822	F 4	3845	F 4	5505	E 2	6541	B 7	6564	D 10	9	F 6
3560	F 3	3589	D 6	3640	D 8	3675	B 9	3710	B 6	3780	B 5	3823	E 7	3847	F 1	5506	G 2	6545	B 7	6565	D 9	BU1	A 1
3561	F 1	3591	F 5	3642	D 6	3676	B 8	3720	D 7	3781	C 5	3824	G 6	3848	E 8	5507	D 2	6546	C 10	6566	F 10	BU2	A 8
3562	F 1	3592	E 6	3645	F 9	3677	B 9	3721	D 7	3783	G 7	3825	G 11	3851	F 2	5508	G 3	6548	G 4	6567	C 6	SK1	C 1
3563	F 1	3602	E 7	3646	E 3	3678	B 8	3724	F 3	3785	F 7	3826	E 6	3852	D 7	5509	F 1	6549	F 7	6568	C 6	SK2	E
3564	F 1	3603	F 7	3647	D 5	3679	B 9	3725	F 3	3801	F 5	3827	E 6	3854	B 10	5510	F 1	6550	F 7	6569	A 5		
3565	F 2	3604	F 7	3650	F 9	3680	B 8	3728	F 4	3802	F 5	3828	D 7	3855	C 8	5511	C 5	6550	D 7	6571	A 5		
3566	F 2	3605	E 7	3651	G 10	3681	B 10	3729	F 3	3803	B 6	3829	F 1	3856	C 5	5512	F 6	6551	B 9	6572	B 5		
3567	G 4	3607	E 7	3652	E 10	3682	C 10	3730	F 3	3804	F 10	3830	D 5	3860	A 6	5513	D 7	6551	A 6	6573	B 5		
3568	D 4	3609	G 9	3653	F 11	3690	F 6	3731	F 4	3805	G 3	3831	E 5	3861	A 8	5514	F 5	6552	B 9	6574	C 5		
3569	F 1	3610	E 6	3657	F 10	3691	F 6	3736	E 10	3807	E 3	3832	C 6	3864	C 8	5515	F 4	6552	A 6	6575	C 5		
3574	F 4	3611	F 11	3658	E 9	3692	F 6	3737	F 9	3808	B 6	3833	F 8	3865	E 8	5516	A 6	6553	A 6	6576	A 5		
3575	F 4	3613	E 8	3659	F 10	3693	F 5	3738	D 10	3809	B 7	3834	E 9	3866	D 6	5517	E 7	6554	B 7	6577	A 5		
3576	G 3	3621	F 6	3665	D 10	3694	F 6	3739	D 10	3811	D 9	3835	G 7	3867	D 4	5518	G 8	6555	B 6	6578	B 6		
3578	G 3	3623	F 5	3666	D 9	3695	F 6	3740	D 10	3812	D 9	3836	C 11	3868	D 4	5519	C 7	6556	B 6	6579	B 7		
3579	F 5	3624	C 7	3667	D 10	3701	A 6	3743	D 9	3813	F 4	3837	C 5	3869	D 4	5520	C 7	6557	B 7	6580	C 6		
3580	F 5	3625	C 7	3668	C 9	3702	B 7	3744	D 8	3814	F 4	3838	G 4	3872	E 4	5521	E 6	6558	A 6	6581	A 6		
3581	F 5	3626	C 7	3669	C 10	3703	B 7	3745	D 9	3815	D 6	3839	G 4	3873	A 8	5522	F 10	6559	D 7	6582	A 6		
3582	F 5	3627	E 5	3670	C 8	3704	B 7	3747	B 7	3818	C 7	3840	E 1	3874	D 7	5523	C 10	6561	F 10	6583	C 7		

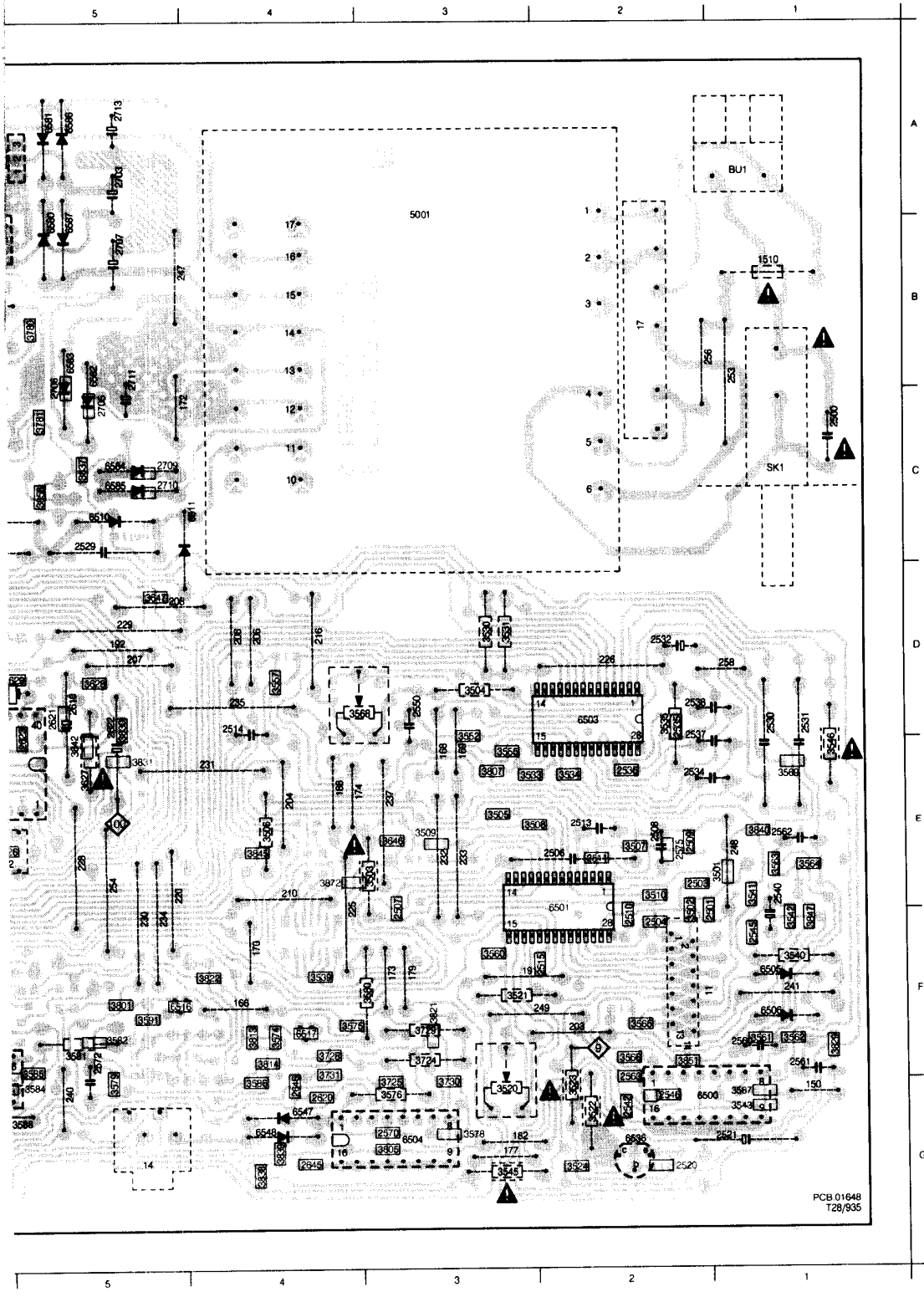


SERVO AND DECODING PANEL

651	C 4	181	G 6	206	D 4	230	F 5	258	D 1	2500	C 1	253	B 1	2575	E 2	2633	F 9	2673	C 8	2697	D10	3505	E 3	3546	E 1
654	G 4	182	G 3	206	D 4	231	F 4	259	B 7	2501	C 2	2530	B 1	26	E 8	2634	E10	2674	D11	2698	D8	3506	E 4	3546	E 1
151	F 9	184	D 7	207	D 5	232	F 3	1000	F11	2503	F 2	2531	D1	26	F 8	2635	E 9	2675	D9	2699	D9	3507	E 2	3546	E 3
153	E 7	185	E 8	208	D 5	233	F 3	11	F 2	2504	F 2	2532	D2	26	E 6	2636	E 9	2676	D9	2700	B 9	3508	E 3	3546	E 3
157	C 9	187	G 7	209	F10	234	F 5	12	B 8	2506	F 2	2533	D2	26	E 6	2637	G11	2677	E 9	2703	A 5	3509	E 3	3546	E 3
158	G 6	188	E 4	210	E 4	235	D 4	14	G 5	2507	F 3	2535	D2	26	E 6	2638	F10	2678	E 9	2704	B 6	3510	E 2	3546	E 3
160	G10	189	G10	211	F 8	236	B 8	15	C 6	2508	E 2	2536	D2	26	E 6	2639	A 7	2679	E 9	2705	C 5	3511	E 3	3546	E 3
164	E10	190	F 9	212	F 9	237	E 3	150	G 1	2509	E 2	2537	D2	26	E 6	2640	A 7	2680	E10	2706	B 5	3512	E 3	3546	E 3
165	G 6	191	F 3	213	C 8	240	G 5	1501	A 3	251	E 2	2538	D2	26	E 6	2641	G 4	2681	E10	2707	B 5	3513	E 3	3546	E 3
167	E 7	192	D 5	214	B 9	241	C 6	1502	G10	2510	E 2	2539	D2	26	E 6	2642	F 4	2682	E 9	2708	C 5	3514	E 3	3546	E 3
168	E 3	193	C 7	215	C 8	242	E 8	1503	D 6	2511	E 2	2540	D2	26	E 6	2643	E 9	2683	E 9	2709	C 5	3515	E 3	3546	E 3
169	E 3	194	F 9	216	D 4	243	C10	1510	B 1	2513	E 2	2545	F 1	26	E 6	2644	E 9	2684	E 9	2710	C 5	3516	E 3	3546	E 3
170	F 4	195	D 6	217	F 8	244	B 6	155	G10	2514	D 4	2546	G 2	26	E 6	2645	E 9	2685	E 9	2711	B 6	3517	E 3	3546	E 3
171	G 8	196	F 7	218	D 7	245	B 8	157	C 8	2515	F 2	2550	D 3	26	E 6	2646	E 9	2686	E 9	2712	B 6	3518	E 3	3546	E 3
172	C 4	197	G 7	219	C 7	246	G 9	159	C 7	2520	G 2	2560	F 1	26	E 6	2647	E 9	2687	E 9	2713	A 5	3519	E 3	3546	E 3
173	F 3	198	F 9	220	F 9	247	B 4	161	B 8	2521	F 1	2561	F 1	26	E 6	2648	E 9	2688	E 9	2714	A 6	3520	E 3	3546	E 3
174	E 4	199	G10	223	C 8	248	E 1	162	G 9	2522	C 6	2562	F 2	26	E 6	2649	E 9	2689	E 9	2715	B 6	3521	E 3	3546	E 3
175	B 8	200	E11	224	C 8	249	F 3	166	F 4	2524	C 6	2563	F 2	26	E 6	2650	E 9	2690	B 6	2716	C 6	3522	E 3	3546	E 3
176	G 6	201	B10	225	E 4	250	F 1	17	B 2	2525	C 6	2566	F 6	26	E 6	2651	E 9	2691	B 6	2717	C 6	3523	E 3	3546	E 3
177	G 3	202	F 6	226	D 2	252	E 9	18	C 7	2526	C 6	2570	G 3	26	E 6	2652	E 9	2692	B 7	2718	C 6	3524	E 3	3546	E 3
178	B 8	203	F 2	228	E 5	254	E 1	189	D 7	2528	C 7	2572	F 5	26	E 6	2653	E 9	2693	C 6	2719	C 6	3525	E 3	3546	E 3
179	F 3	204	E 4	229	D 5	256	B 1	2	B10	2529	C 5	2574	G 6	26	E 6	2654	E 9	2694	C 9	2720	D 3	3526	E 3	3546	E 3

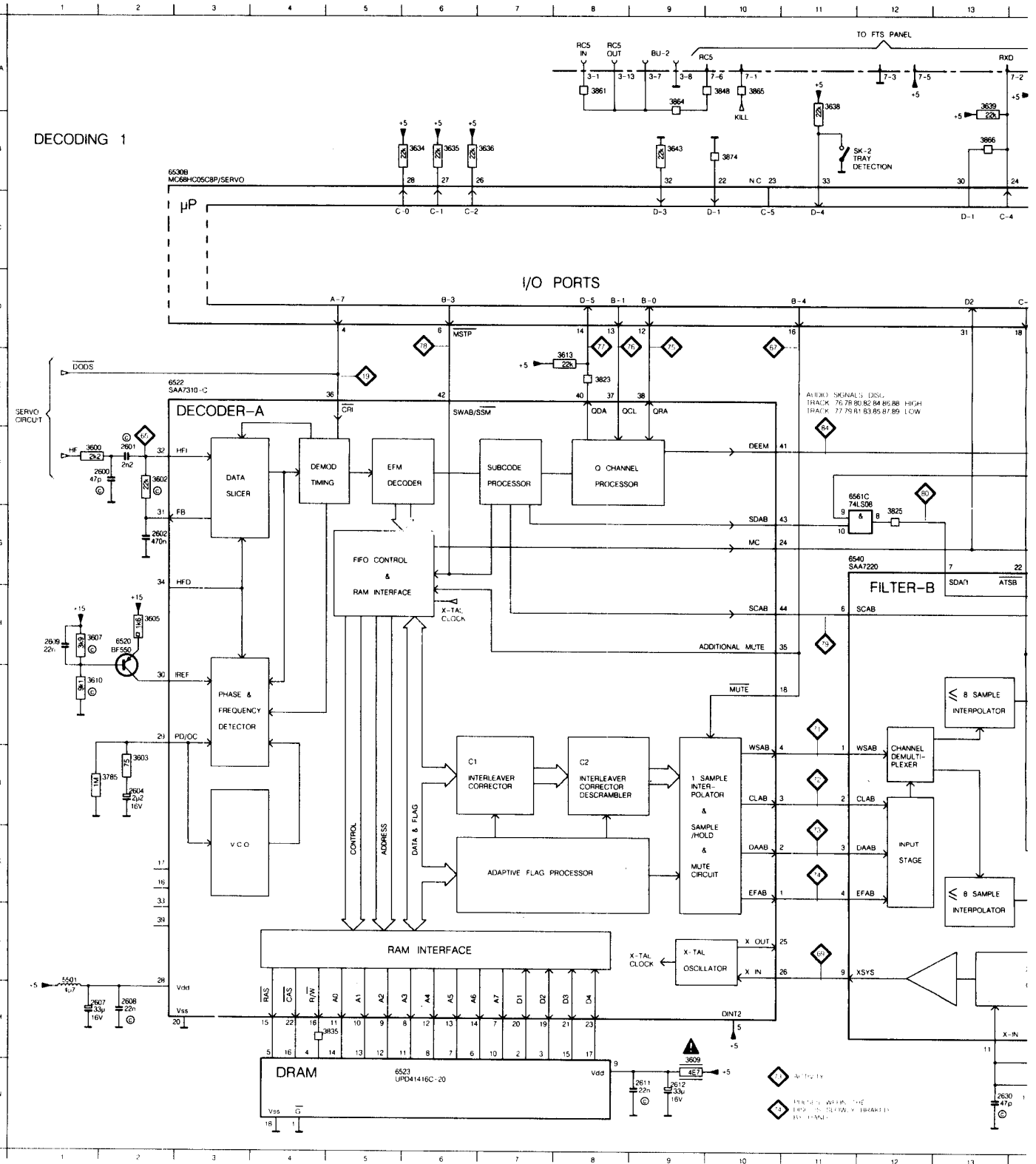


3584	G 5	3628	D 5	3671	C10	3705	B 7	3748	A 7	3819	B 8	3842	D 5	5502	C10	6536	D 9	6562	F 5	6602	C 6
3585	F 4	3629	D 6	3672	C 9	3706	B 9	3750	A 9	3820	B 8	3843	C 7	5503	D 8	6540	D 9	6563	F 7	6603	C 6
3586	G 6	3630	D 6	3673	C10	3707	B 9	3751	D 7	3821	F 3	3844	F 6	5504	G 2	6541	E10	6564	D10	7	C 6
3587	D 6	3631	D 8	3674	C 9	3708	B 7	3752	D10	3822	F 4	3845	E 4	5505	E 2	6542	B 7	6565	D10	9	F 1
3588	D 6	3632	D 8	3675	B 9	3709	B 6	3753	B 5	3823	E 7	3846	F 1	5506	G 2	6543	B 7	6566	D 9	BU1	A 8
3589	F 5	3633	D 6	3676	B 8	3710	D 7	3754	C 5	3824	G 6	3847	E 8	5507	D 2	6544	C10	6567	F10	BU2	A 8
3590	E 6	3634	F 9	3677	B 9	3711	D 7	3755	G 7	3825	G11	3848	F 2	5508	G 3	6545	G 4	6568	C 6	SK1	C 1
3600	E 7	3635	E 3	3678	B 8	3712	F 3	3756	F 7	3826	E 6	3849	D 7	5509	F 1	6546	F 7	6569	C 6	SK2	E 6
3601	F 7	3636	D 5	3679	B 9	3713	F 3	3757	F 5	3827	E 6	3850	C 5	5510	C 5	6547	B 9	6570	B 5		
3602	E 7	3637	F 11	3680	B 8	3714	F 3	3758	B 6	3828	D 7	3851	A 6	5511	D 7	6548	A 6	6571	B 5		
3603	F 7	3638	E 9	3681	B10	3715	F 4	3759	G 3	3829	F 1	3852	A 8	5512	F 5	6549	A 8	6572	C 5		
3604	E 7	3639	F 10	3682	C10	3716	F 4	3760	E 3	3830	D 5	3853	C 8	5513	F 4	6550	A 8	6573	C 5		
3605	E 7	3640	F 11	3683	F 6	3717	F 4	3761	E 3	3831	E 5	3854	C 8	5514	F 4	6551	A 8	6574	C 5		
3606	E 7	3641	F 11	3684	F 6	3718	F 4	3762	E 3	3832	C 6	3855	D 8	5515	A 6	6552	A 8	6575	C 5		
3607	E 7	3642	F 11	3685	F 6	3719	F 4	3763	E 3	3833	F 8	3856	D 8	5516	A 6	6553	A 8	6576	C 5		
3608	G 9	3643	F 11	3686	F 6	3720	F 4	3764	E 3	3834	E 9	3857	D 4	5517	C 7	6554	B 7	6577	A 5		
3609	G 9	3644	F 11	3687	F 6	3721	F 4	3765	E 3	3835	G 7	3858	D 4	5518	C 7	6555	B 6	6578	B 6		
3610	E 6	3645	F 11	3688	F 6	3722	F 4	3766	E 3	3836	C11	3859	D 4	5519	C 7	6556	B 6	6579	B 7		
3611	F 11	3646	E 9	3689	F 6	3723	F 4	3767	E 3	3837	C 5	3860	D 4	5520	E 6	6557	B 7	6580	C 6		
3612	F 11	3647	E 9	3690	F 6	3724	F 4	3768	E 3	3838	G 4	3861	A 8	5521	F 10	6558	A 6	6581	A 6		
3613	E 8	3648	F 10	3691	F 6	3725	F 4	3769	E 3	3839	G 4	3862	A 8	5522	C10	6559	D 7	6582	A 6		
3614	F 8	3649	F 10	3692	F 6	3726	F 4	3770	E 3	3840	E 1	3863	D 7	5523	C10	6560	F10	6583	C 7		
3615	F 8	3650	F 10	3693	F 6	3727	F 4	3771	E 3												
3616	F 8	3651	F 10	3694	F 6	3728	F 4	3772	E 3												
3617	F 8	3652	F 10	3695	F 6	3729	F 4	3773	E 3												
3618	F 8	3653	F 10	3696	F 6	3730	F 4	3774	E 3												
3619	F 8	3654	F 10	3697	F 6	3731	F 4	3775	E 3												
3620	F 8	3655	F 10	3698	F 6	3732	F 4	3776	E 3												
3621	F 8	3656	F 10	3699	F 6	3733	F 4	3777	E 3												
3622	F 8	3657	F 10	3700	F 6	3734	F 4	3778	E 3												
3623	F 8	3658	F 10	3701	F 6	3735	F 4	3779	E 3												
3624	F 8	3659	F 10	3702	F 6	3736	F 4	3780	E 3												
3625	F 8	3660	F 10	3703	F 6	3737	F 4	3781	E 3												
3626	F 8	3661	F 10	3704	F 6	3738	F 4	3782	E 3												
3627	F 8	3662	F 10	3705	F 6	3739	F 4	3783	E 3												



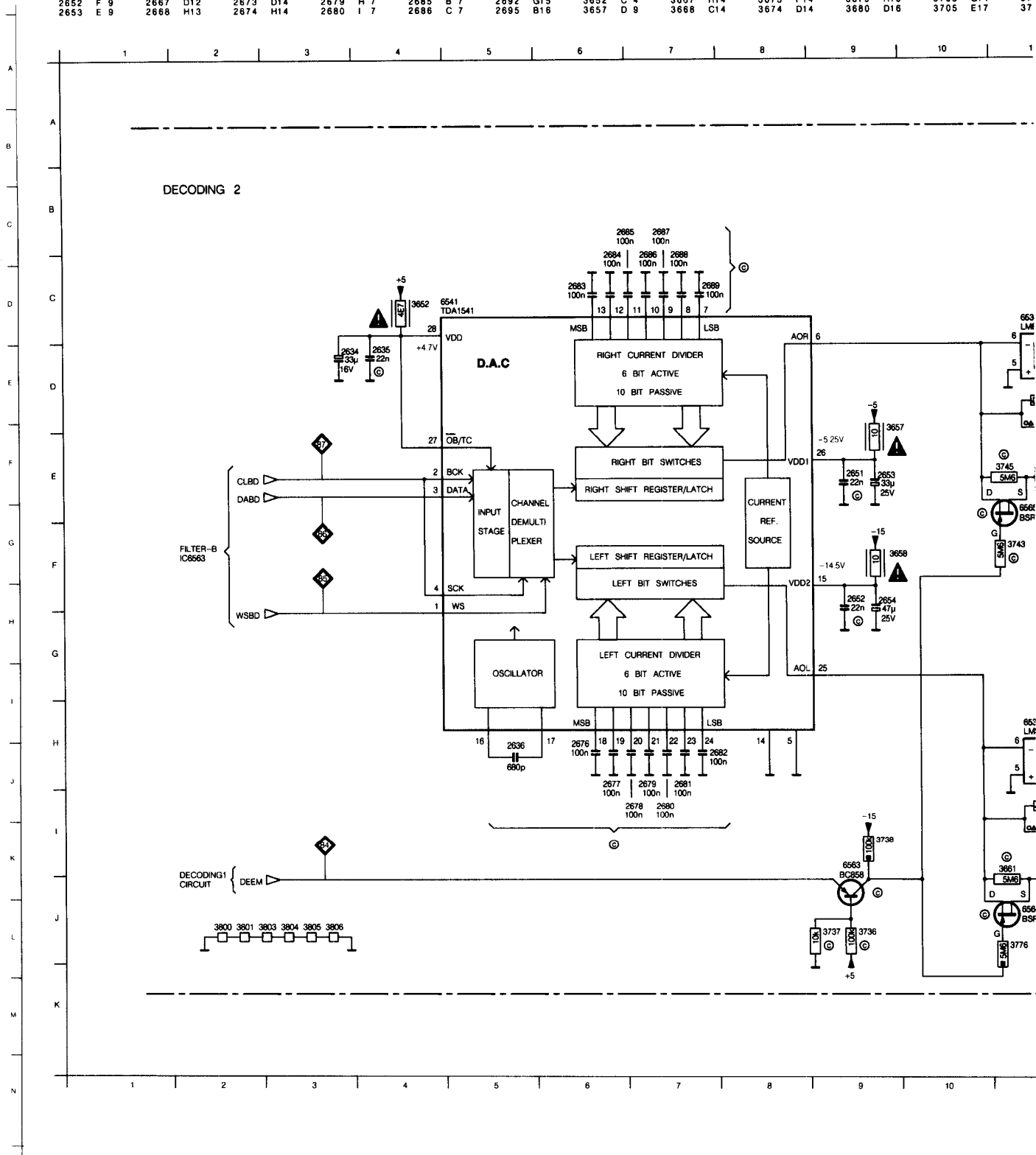
DECODING 1

1000	H21	2602	G 2	2609	H 1	2630	N13	2638	G20	2646	C19	3605	H 2	3611	H21	3636	B 7	3643	B 9	3653	K19	3725	A19	3731	C20	3821
1502	N14	2604	J 2	2611	N 9	2631	N15	2641	I 21	3600	F 1	3607	H 1	3613	E 8	3638	A11	3645	E15	3653	H20	3728	C18	3775	C16	3822
2600	F 2	2607	M 2	2612	N 9	2632	N18	2642	I 21	3602	F 2	3609	M 9	3634	B 6	3639	A13	3650	N18	3659	I 20	3729	C18	3785	J 2	3823
2601	F 2	2608	M 2	2620	B19	2633	N17	2645	C19	3603	J 2	3610	I 1	3635	B 6	3640	A14	3651	M14	3724	A18	3730	C18	3812	H19	3825



DECODING 2

2634	D 4	2654	F 9	2669	E 11	2675	C 14	2681	H 7	2687	B 7	2696	I 12	3658	F 10	3669	H 12	3675	H 15	3681	G 19	37
2635	D 4	2664	I 11	2669	D 13	2676	H 6	2682	H 8	2688	C 7	2697	J 11	3661	I 11	3670	D 12	3676	D 15	3682	F 19	37
2636	H 5	2665	D 11	2670	I 14	2677	H 6	2683	C 6	2689	C 7	2698	E 12	3664	I 11	3671	H 13	3677	H 15	3701	G 14	37
2651	E 9	2666	H 12	2671	D 14	2678	I 7	2684	C 6	2690	F 14	2700	H 14	3666	D 11	3672	D 13	3678	D 15	3702	G 15	37
2652	F 9	2667	D 12	2673	D 14	2679	H 7	2685	B 7	2692	G 15	3652	C 4	3667	H 14	3673	I 14	3679	H 16	3703	G 14	37
2653	E 9	2668	H 13	2674	H 14	2680	I 7	2686	C 7	2695	B 16	3657	D 9	3668	C 14	3674	D 14	3680	D 16	3705	E 17	37



12 13 14 15 16 17 18 19 20

KILL
SERVO
CIRCUIT

15
+14.6V

5A 333N (1/2)

3666
1k5
2666
2n4
3744
82
2669
5n6
18n

56

65368 LM833N (1/2)

3670
2k4
3672
2k4
2667
2n2
2669
1n
3662
3674
2671
100u
25V
-15

5503
470u

16V
100u

2673
100u

3678
100
3676
100
3680
100
6544 BC818
3709
3708

12-8
R
VAR. LINE-OUT

C BU2-R
LINE OUT
RIGHT

1
2
3
4
5
6
7
8

6519
1N4002
6551
1N4002
6552
1N4148
6553
1N4148
+20V ±3V
2690
220u
35V
3748
3-9
6555
HZ4B2
/C3V9
6558 BC848B
3747
3808
6562 BC848B
3705
56k
-15

+16 ±2V
3701
4k7
3703
367
2682
100n
6567
5M6
1N4148
3710

5A 333N (1/2)

3664
1k5
2664
2n4
3740
820
2667
5n6
18n

56

65368 LM833N (1/2)

3669
2k4
3671
2k4
2666
2n2
2669
1n
3661
3673
2670
100u
35V
-15

5502
470u

16V
100u

2700
100u

3677
100
3675
100
3679
100
6542 BC818
3707
6543 BC818
3706

12-1
L
VAR. LINE-OUT

C BU2-L
LINE OUT
LEFT

1
2
3
4
5
6
7
8

6546 NJM4580
3682
150
2-1
RIGHT HP
2-2
HEAD-
PHONE
3-1
LEFT HP
3681
150
+15

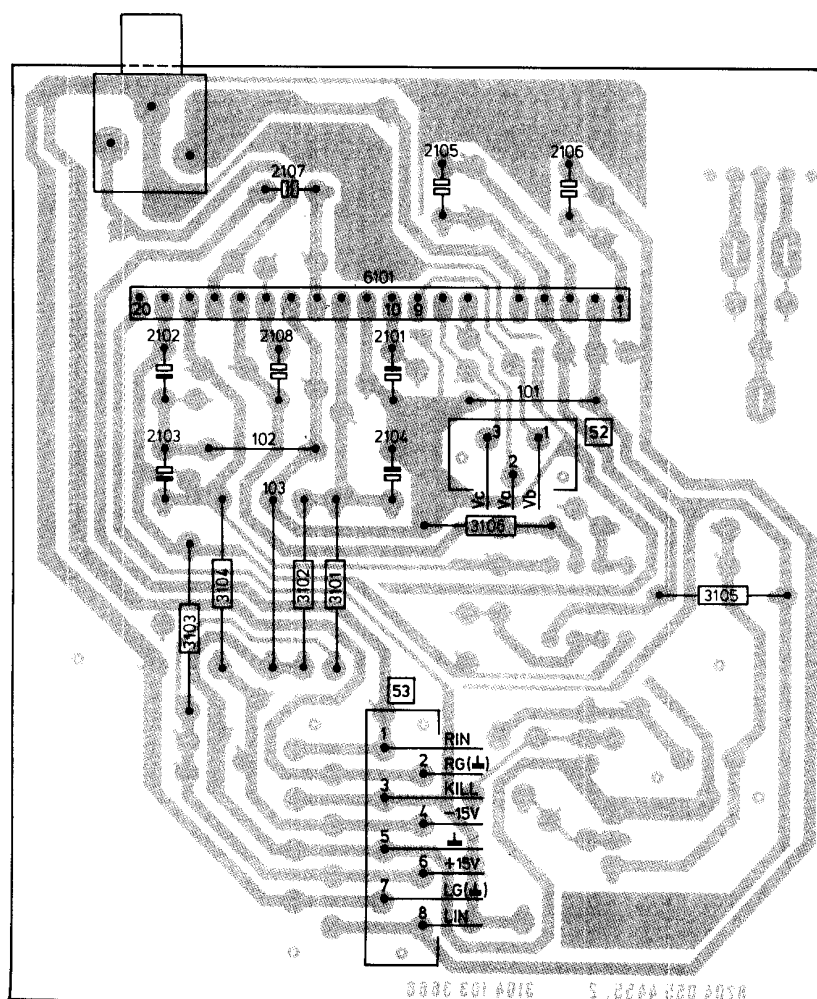
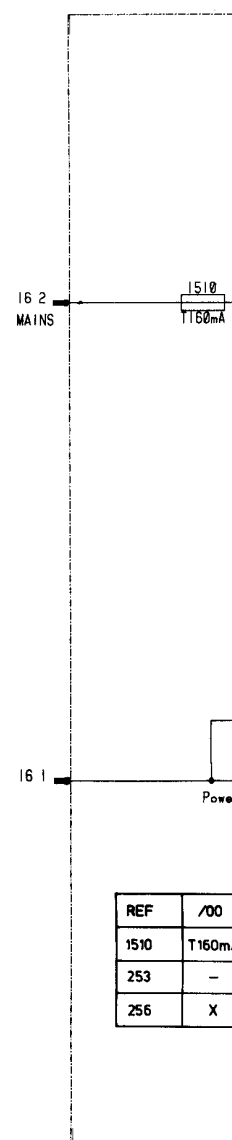
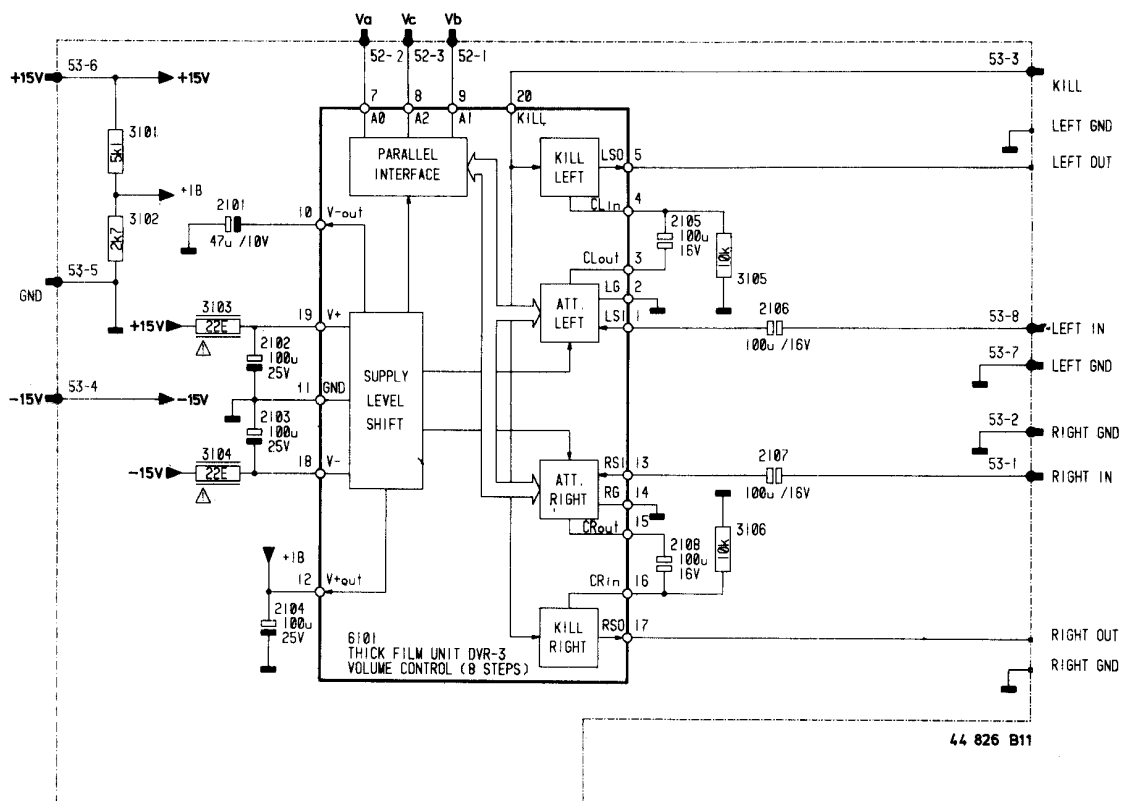
12-1
L
VAR. LINE-OUT

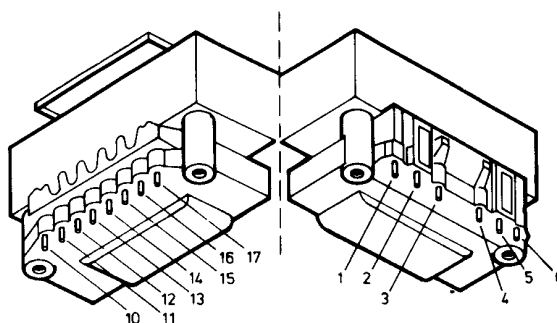
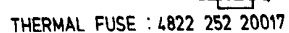
20V
0V
-15V

POWER ON
POWER OFF

PRS.06102
T-08 927

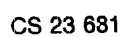
VARIABLE LINE OUT

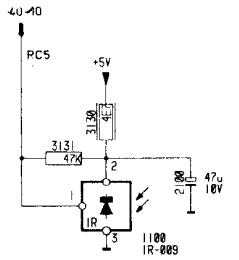
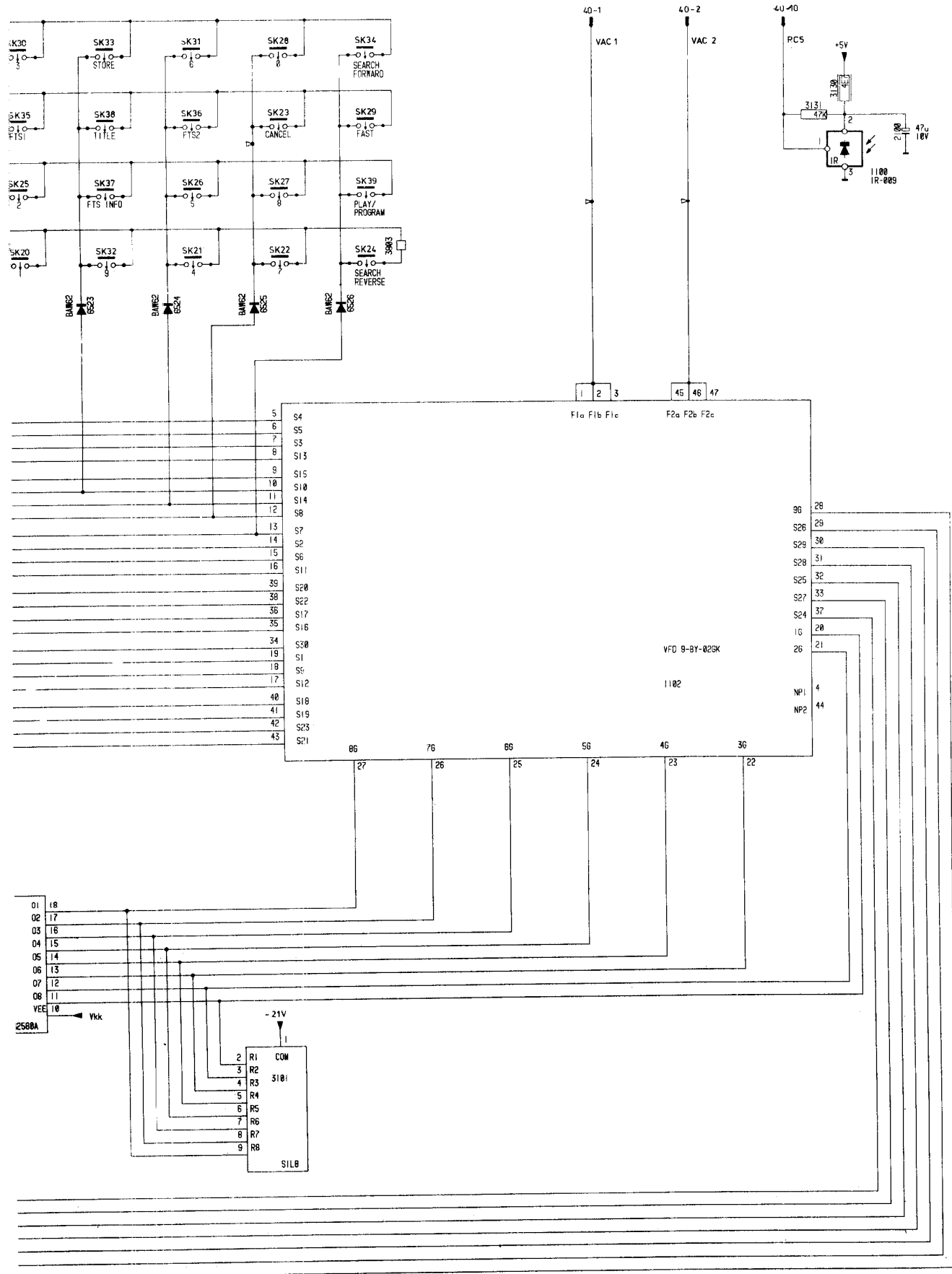


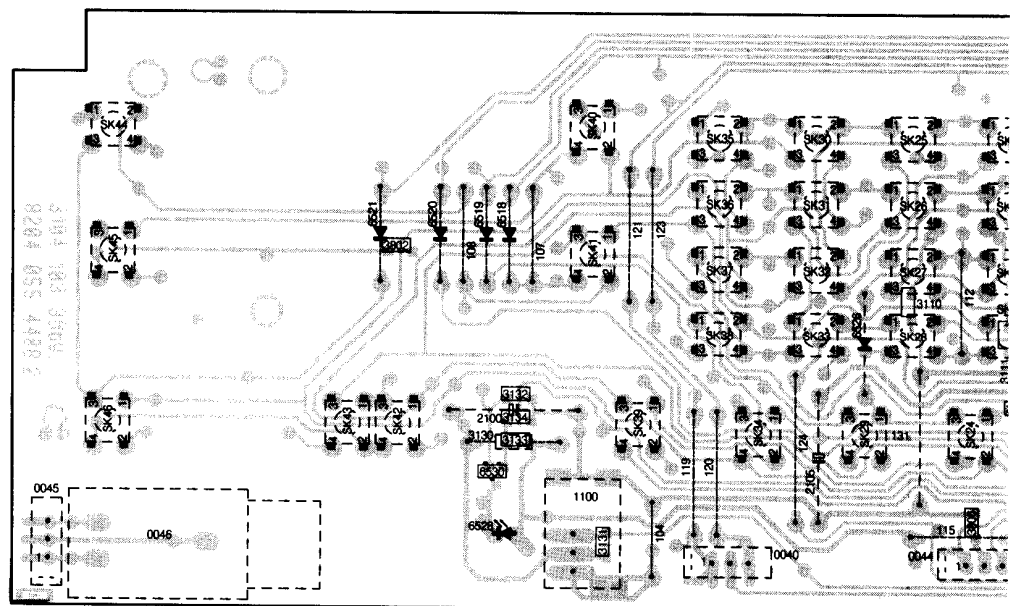


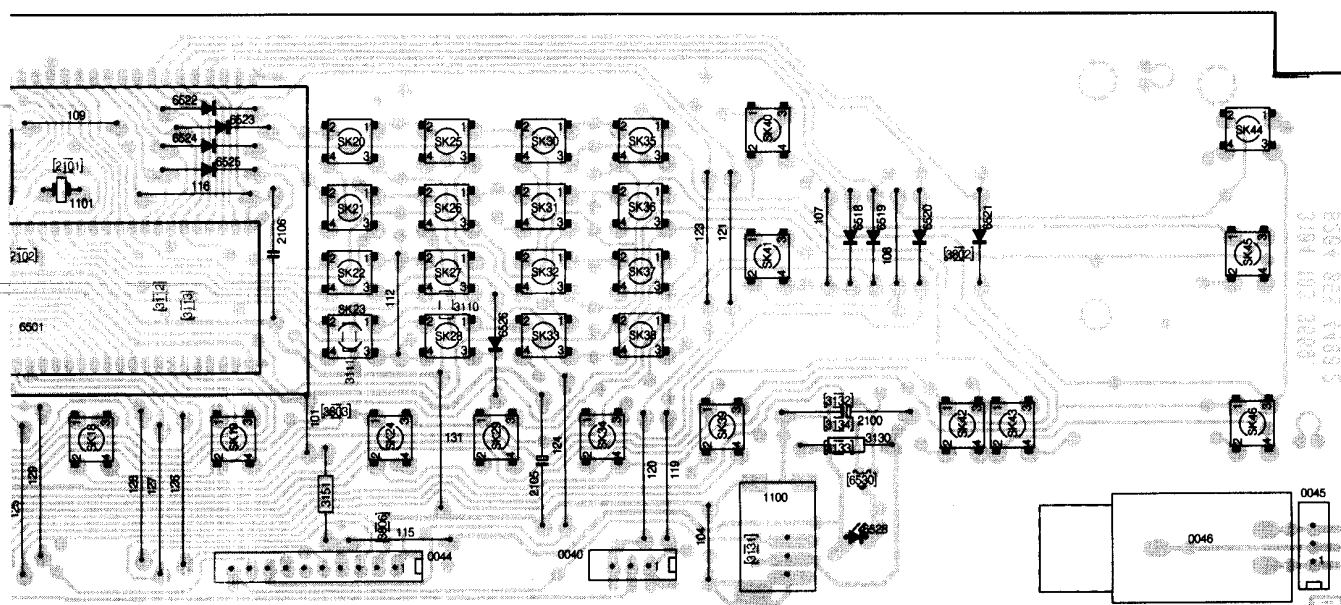
Uprim. (V) ~	Winding	Inter - connect
110	4-1	3-1/5-2
127	4-6	3-1/5-2
220	4-5	1-2
240	4-6	1-2

44 577 A11

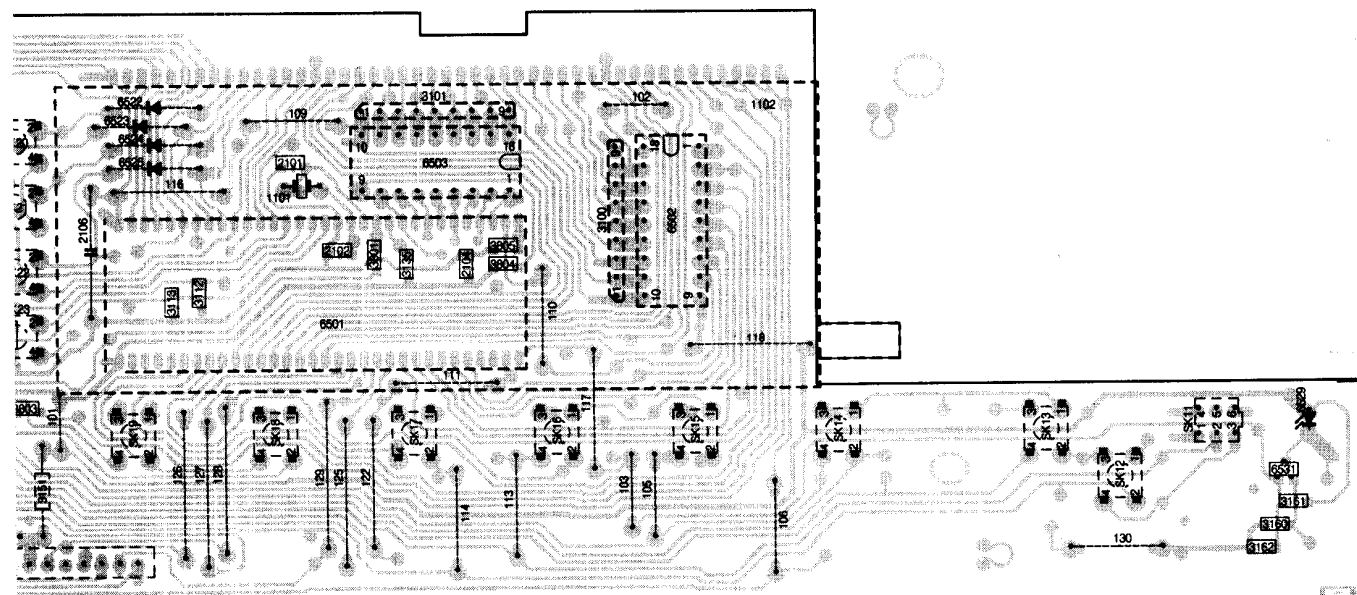


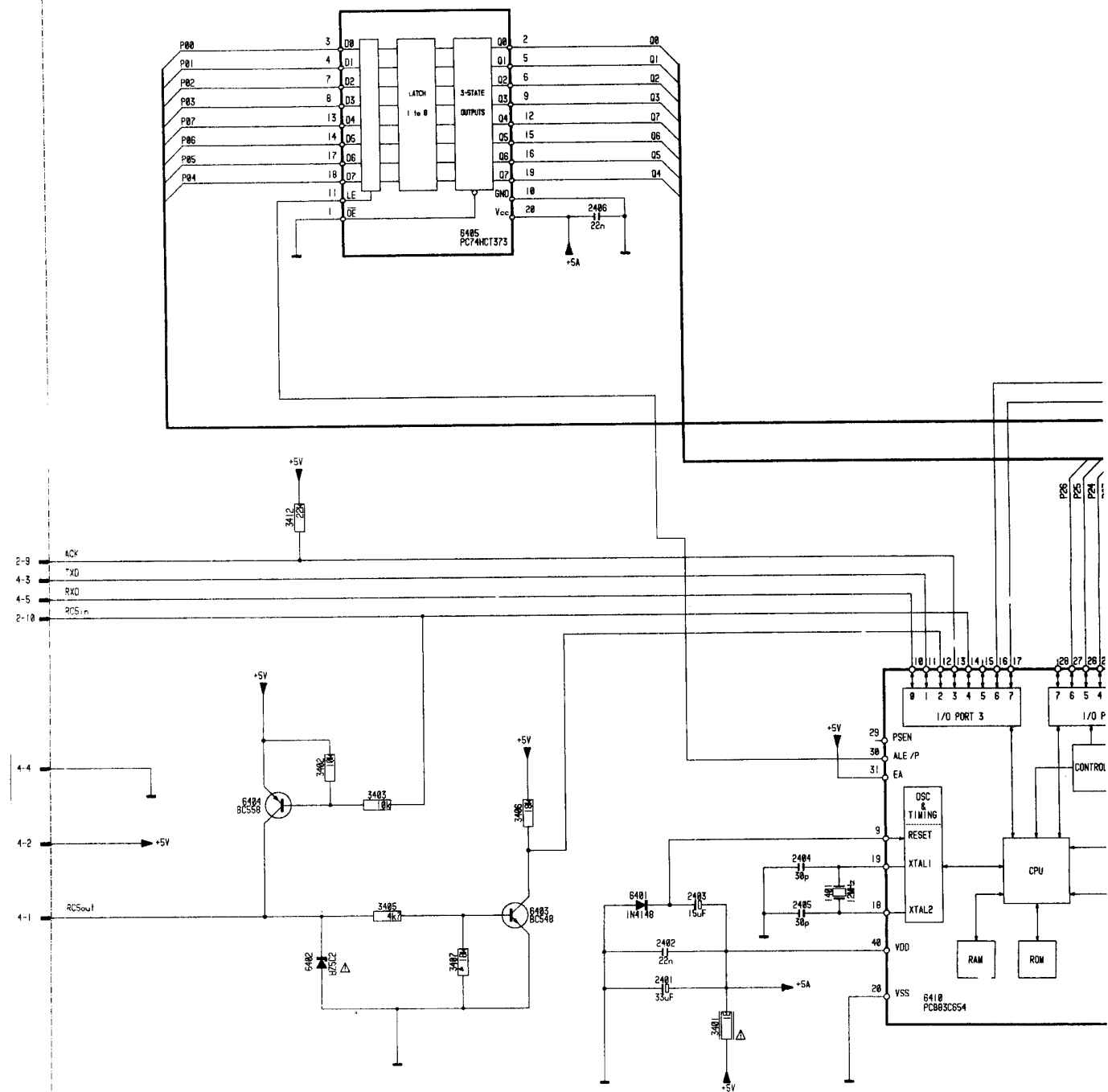


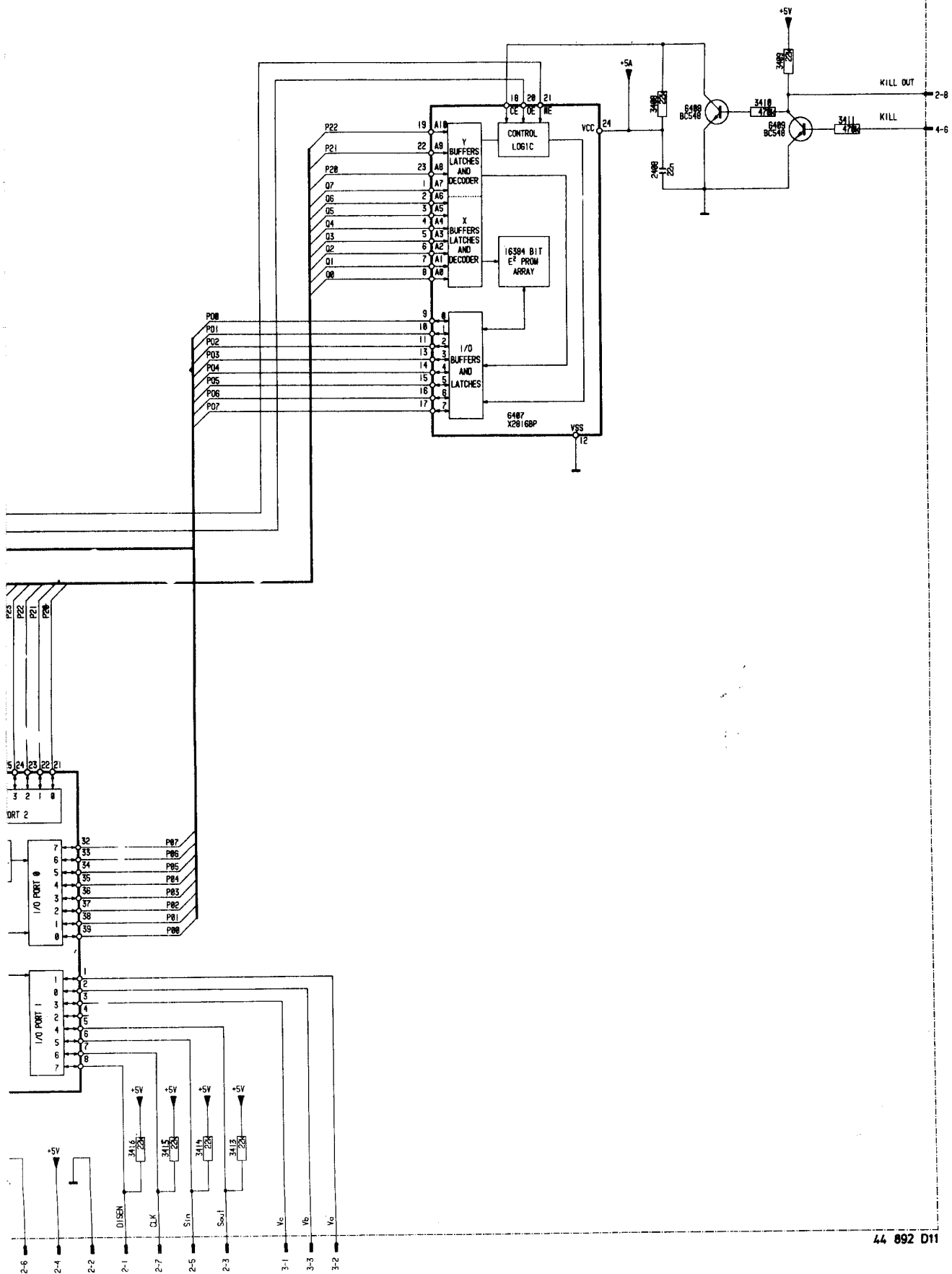


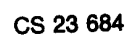


PCB.01631
T21/929

PCB.01672
T21/929




















9-1 ELECTRICAL PARTSLIST SERVO & DECODER PANEL

Miscellaneous			-II-		
BU-1	4822 265 20291	Mains inlet	2608	4822 122 33147	22nF 20%
BU-2	4822 267 20368	Cinch socket 5P	2609	4822 122 33147	22nF 20%
SK-1	4822 276 11309	Mains switch	2610	4822 124 20688	33μF 50% 16V
SK-2	4822 276 12523	Tact switch (4.3mm)	2611	4822 122 33147	22nF 20%
	4822 256 30274	Fuse holder	2612	4822 124 40272	33μF 20% 16V
	4822 492 63076	Clamping spring	2620	4822 122 33147	22nF 20%
HF-transformer			2621	4822 122 33147	22nF 20%
1000	4822 148 80281	HF-transformer for Digital Output	2622	4822 124 22031	4μ7 20% 63V
Crystal			2623	4822 122 31772	47pF 5% 50V
1502	4822 242 71349	11,289600 MHz Quartz Crystal	2624	4822 122 31772	47pF 5% 50V
1503	4822 242 70831	4.00 MHz Ceramic Ceramic Resonator	2630	4822 122 31772	47pF 5% 50V
-II-			2631	4822 122 31772	47pF 5% 50V
2500	4822 126 10005	3n3 400V 20% Ceramic disc cap.	2632	4822 124 40272	33μF 20% 16V
2501	4822 122 33147	22nF 20% for /05R	2633	4822 122 33147	22nF 20%
2501	4822 122 32863	22nF 20% for /00R	2634	4822 124 40272	33μF 20% 16V
2503	4822 122 33147	22nF 20% for /05R	2635	4822 122 33147	22nF 20%
2503	4822 122 32863	22nF 20% for /00R	2636	4822 122 31775	680pF 5% 50V
2504	4822 122 31727	470pF 5% 63V	2638	4822 122 10166	22nF 30% 16V
2506	4822 122 10166	22nF 30% 16V	2641	4822 122 32183	56nF 10% 50V
2507	4822 122 31644	2n2 10% 63V	2642	4822 122 32183	56nF 10% 50V
2509	4822 122 31765	100pF 5% 50V	2645	4822 122 33147	22nF 20%
2510	4822 122 32442	10nF 50V	2646	4822 122 33104	100nF 10% 63V
2511	4822 122 31746	1000pF 5% 50V	2651	4822 122 33147	22nF 20%
2513	4822 121 42245	220nF 10% 63V	2652	4822 122 33147	22nF 20%
2514	4822 121 51252	470nF 5% 100V	2653	4822 124 40272	33μF 20% 16V
2515	4822 122 31746	1000pF 5% 50V	2654	4822 124 41527	47μF 25V
2520	4822 122 31965	220pF 5% 63V	2664	4822 121 51111	2n4 2% 250V
2521	4822 124 41527	47μF 25V	2665	4822 121 51111	2n4 2% 250V
2522	4822 122 33147	22nF 20%	2666	4822 121 42783	2n2 2%
2524	4822 122 33147	22nF 20%	2667	4822 121 42783	2n2 2%
2525	4822 122 33147	22nF 20%	2668	4822 121 43066	1nF 1% 400V
2526	4822 122 33147	22nF 20%	2669	4822 121 43066	1nF 1% 400V
2528	4822 124 41799	220μF 63V for /05R	2670	4822 124 41528	100μF 25V
2530	4822 121 51321	8μ2 1% 63V	2671	4822 124 41528	100μF 25V
2531	4822 121 51321	8μ2 1% 63V	2673	4822 124 22339	100μF 20% 16V Bipolar
2532	4822 124 40272	33μF 20% 16V	2674	4822 124 41528	100μF 25V
2534	5322 121 42661	330nF 5% 63V	2675	4822 124 41528	100μF 25V
2535	5322 122 31848	33nF 10% 63V	2676	4822 122 33104	100nF 10% 63V
2536	5322 122 31848	33nF 10% 63V	2677	4822 122 33104	100nF 10% 63V
2537	4822 121 42245	220nF 10% 63V	2678	4822 122 33104	100nF 10% 63V
2538	4822 121 42245	220nF 10% 63V	2679	4822 122 33104	100nF 10% 63V
2540	4822 124 41583	0μ68 Bipolar Elco	2680	4822 122 33104	100nF 10% 63V
2542	4822 122 33147	22nF 20%	2681	4822 122 33104	100nF 10% 63V
2545	4822 122 33104	100nF 10% 63V	2682	4822 122 33104	100nF 10% 63V
2546	4822 122 33147	22nF 20%	2683	4822 122 33104	100nF 10% 63V
2550	5322 121 42491	47nF 5% 100V	2684	4822 122 33104	100nF 10% 63V
2560	4822 121 51314	4n7 5% 50V	2685	4822 122 33104	100nF 10% 63V
2561	4822 121 51252	470nF 5% 100V	2686	4822 122 33104	100nF 10% 63V
2562	5322 121 42661	330nF 5% 63V	2687	4822 122 33104	100nF 10% 63V
2563	4822 122 33104	100nF 10% 63V	2688	4822 122 33104	100nF 10% 63V
2566	4822 122 33147	22nF 20%	2689	4822 122 33104	100nF 10% 63V
2570	4822 122 31644	2n2 10% 63V	2690	4822 124 41573	470μF 20% 35V
2572	5322 121 42661	330nF 5% 63V	2691	4822 121 51252	470nF 5% 100V for /05R
2574	4822 122 31759	18nF 10%	2691	5322 121 42498	680nF 10% 63V for /00R
2600	4822 122 31772	47pF 5% 50V	2692	5322 121 42386	100nF 5% 63V
2601	4822 122 31644	2n2 10% 63V	2693	4822 122 33147	22nF 20%
2602	4822 121 51252	470nF 5% 100V	2695	4822 124 41558	10μF 20% 25V Bipolar
2604	4822 124 41576	2μ2 20% 50V	2696	4822 121 51225	18nF 2% 63V
2607	4822 124 40272	33μF 20% 16V	2697	4822 121 51361	5n6 2% 160V
			2698	4822 121 51361	5n6 2% 160V
			2699	4822 121 51225	18nF 2% 63V
			2700	4822 124 22339	100μF 20% 16V Bipolar
			2703	4822 124 41594	330μF 20% 35V
			2704	4822 124 41527	47μF 25V
			2705	4822 122 33147	22nF 20%
			2706	4822 122 33147	22nF 20%
			2707	4822 124 41591	6800μF 20% 16V




					
2708	4822 124 40272	33μF 20% 16V	3604	4822 111 30499	4Ω7 5% 0,33W
2709	4822 122 33147	22nF 20%	3605	5322 111 90265	1k6 2% 0,25W
2710	4822 122 33147	22nF 20%	3607	4822 111 90571	3k9 2% 0,25W
2711	4822 124 41571	1000μF 20% 16V	3609	4822 111 30499	4Ω7 5% 0,33W
2712	4822 124 40272	33μF 20% 16V	3610	4822 111 90373	9k1 2% 0,25W
2713	4822 124 41573	470μF 20% 35V	3611	4822 111 90366	620Ω 2% 0,25W
2714	4822 124 41527	47μF 25V	3613	4822 111 90251	22k 2% 0,25W
2715	5322 121 42386	100nF 5% 63V	3627	4822 111 30499	4Ω7 5% 0,33W
			3628	4822 111 90251	22k 2% 0,25W
3501	5322 111 90111	4k7 2% 0,25W	3629	4822 111 90197	220k 2% 0,25W
3502	4822 111 90214	100k 2% 0,25W	3638	4822 111 90251	22k 2% 0,25W
3503	4822 111 30499	4Ω7 5% 0,33W	3639	4822 111 90251	22k 2% 0,25W
3504	4822 111 30499	4Ω7 5% 0,33W	3640	4822 111 90251	22k 2% 0,25W
3505	4822 111 90253	12k 2% 0,25W	3642	4822 111 90251	22k 2% 0,25W
3506	4822 116 52389	100Ω 5% 0,5W	3645	5322 111 90111	4k7 2% 0,25W
3507	5322 111 90092	1k 2% 0,25W	3646	4822 111 90251	22k 2% 0,25W
3508	4822 111 90512	24k 2% 0,25W	3647	4822 111 90251	22k 2% 0,25W
3509	4822 111 90572	5k6 2% 0,25W	3650	4822 111 30483	1Ω 5% 0,33W
3510	4822 111 90249	10k 2% 0,25W	3651	4822 111 90197	220k 2% 0,25W
3520	4822 101 10685	4k7 20%LIN 0,05W trimpot	3652	4822 111 30499	4Ω7 5% 0,33W
3521	4822 116 52849	220Ω 1% 0,5W	3653	4822 116 52428	560Ω 5% 0,5W
3522	4822 111 30515	18Ω 5% 0,33W	3657	4822 111 30499	4Ω7 5% 0,33W
3523	4822 111 30511	12Ω 5% 0,33W	3658	4822 111 30508	10Ω 5% 0,33W
3524	5322 111 90091	100Ω 2% 0,25W	3659	4822 116 52426	4k7 5% 0,5W
3530	4822 116 52857	MRS25 47k 1%	3665	5322 116 53478	1k5 1% 0,6W
3531	4822 116 53083	MRS25 15k 1%	3666	5322 116 53478	1k5 1% 0,6W
3533	5322 111 90268	5k1 2% 0,25W	3667	4822 111 30511	12Ω 5% 0,33W
3534	4822 111 90197	220k 2% 0,25W	3668	4822 111 30511	12Ω 5% 0,33W
3535	4822 116 53081	12k 1% 0,6W	3669	4822 116 90271	2k4 2%
3539	4822 111 90251	22k 2% 0,25W	3670	4822 116 90271	2k4 2%
3540	4822 111 30499	4Ω7 5% 0,33W	3671	4822 116 90271	2k4 2%
3541	4822 111 90544	6k8 2% 0,25W	3672	4822 116 90271	2k4 2%
3542	4822 111 90357	33Ω 2% 0,25W	3673	4822 111 30511	12Ω 5% 0,33W
3543	4822 111 90544	6k8 2% 0,25W	3674	4822 111 30511	12Ω 5% 0,33W
3545	4822 111 30483	1Ω 5% 0,33W	3675	4822 111 90249	10k 2% 0,25W
3546	4822 111 30483	1Ω 5% 0,33W	3676	4822 111 90249	10k 2% 0,25W
3552	5322 111 90101	1k8 2% 0,25W	3677	5322 111 90091	100Ω 2% 0,25W
3555	4822 111 90238	180k 2% 0,25W	3678	5322 111 90091	100Ω 2% 0,25W
3557	4822 111 90197	220k 2% 0,25W	3679	5322 111 90091	100Ω 2% 0,25W
3560	4822 111 91494	11k 2%	3680	5322 111 90091	100Ω 2% 0,25W
3561	4822 116 90417	150k 2%	3681	5322 116 80431	150Ω 5% 0,25W
3562	4822 111 90568	120k 2% 0,25W	3682	5322 116 80431	150Ω 5% 0,25W
3563	4822 111 90573	56k 2% 0,25W	3701	5322 111 90111	4k7 2% 0,25W
3564	4822 111 91495	160k 2%	3702	4822 111 90425	5M6 5% 0,25W
3565	5322 111 90105	27Ω 2% 0,25W	3703	5322 111 90108	39k 2% 0,25W
3566	4822 111 90186	22Ω 2% 0,25W	3704	5322 111 90096	1k2 2% 0,25W
3567	4822 111 90575	82k 2% 0,25W	3705	4822 111 90573	56k 2% 0,25W
3568	4822 100 20522	22k 20%LIN 0,05W trimpot	3706	5322 111 90096	1k2 2% 0,25W
3569	4822 111 90368	680k 2% 0,125W	3707	5322 111 90096	1k2 2% 0,25W
3574	5322 111 90267	33k 2% 0,25W	3708	5322 111 90096	1k2 2% 0,25W
3575	5322 111 90111	4k7 2% 0,25W	3710	5322 111 90099	150k 2% 0,25W
3576	4822 116 52848	200k 1% 0,6W	3720	5322 111 90092	1k 2% 0,25W
3578	4822 111 90575	82k 2% 0,25W	3721	4822 111 90543	47k 2% 0,25W
3579	4822 116 90417	150k 2%	3724	4822 116 53081	12k 1% 0,6W
3580	4822 116 52426	4k7 5% 0,5W	3725	4822 111 90253	12k 2% 0,25W
3581	4822 116 53105	3k3 1% 0,6W	3728	4822 111 90572	5k6 2% 0,25W
3582	4822 111 90572	5k6 2% 0,25W	3729	4822 116 53081	12k 1% 0,6W
3584	4822 111 91492	91k 2%	3730	4822 111 90253	12k 2% 0,25W
3585	4822 111 90214	100k 2% 0,25W	3731	4822 111 90186	22Ω 2% 0,25W
3586	4822 111 90368	680k 2% 0,125W	3732	4822 116 52422	3k9 5% 0,33W
3588	4822 116 52472	47k 5% 0,5W	3732	4822 116 52849	220Ω 1% 0,6W
3589	5322 111 90111	4k7 2% 0,25W	3736	4822 111 90214	100k 2% 0,25W
3591	5322 111 90096	1k2 2% 0,25W	3737	4822 111 90249	10k 2% 0,25W
3600	4822 111 90248	2k2 2% 0,25W	3738	4822 111 90214	100k 2% 0,25W
3602	4822 111 90251	22k 2% 0,25W	3739	4822 111 90425	5M6 5% 0,25W
3603	4822 111 90371	75Ω 2% 0,25W	3740	4822 116 52864	820Ω 1% 0,6W
			3743	4822 111 90425	5M6 5% 0,25W
			3744	4822 116 52864	820Ω 1% 0,6W
			3745	4822 111 90425	5M6 5% 0,25W




					
3747	4822 111 90249	10k 2% 0,25W	6500	4822 209 72587	TCA0372DP2
3748	4822 111 90571	3k9 2% 0,25W	6501	4822 209 73234	TDA8808T/C3
3775	5322 111 90111	4k7 2% 0,25W	6502	4822 130 44121	BC338
3776	4822 111 90425	5M6 5% 0,25W	6503	4822 209 73235	TDA8809T/C2
3785	4822 116 52493	1M 5% 0,33W	6504	4822 209 72587	TCA0372DP2
			6505	4822 130 34173	BZX79-B5V6
3801	4822 111 90163	jumper	6506	4822 130 34173	BZX79-B5V6
3802	4822 111 90163	jumper	6511	4822 130 31456	BZV85-C5V1
3803	4822 111 90163	jumper	6512	4822 209 83274	NJM4560D
3804	4822 111 90163	jumper	6516	5322 130 42012	BC858
3805	4822 111 90163	jumper	6517	5322 130 42012	BC858
3808	4822 111 90163	jumper	6519	5322 130 30684	1N4002
3809	4822 111 90163	jumper	6520	4822 130 42131	BF550
3811	4822 111 90163	jumper	6523	4822 209 70422	MN4264-15
3812	4822 111 90163	jumper	6530	4822 209 60801	MC68HC05C9P/SC409009 for
3813	4822 111 90163	jumper	6530	4822 209 61428	/00R MC68HC05C9P/409010 for
3814	4822 111 90163	jumper	6531	4822 130 42675	/05R BC818
3819	4822 111 90163	jumper	6535	5322 209 86234	NE5532N
3820	4822 111 90163	jumper	6535	4822 209 83163	LM833N
3821	4822 111 90163	jumper	6536	5322 209 86234	NE5532N
3822	4822 111 90163	jumper	6536	4822 209 83163	LM833N
3823	4822 111 90163	jumper	6537	5322 130 30684	1N4002
3824	4822 111 90163	jumper	6538	5322 130 30684	1N4002
3825	4822 111 90163	jumper	6540	4822 209 72545	SAA7220
3826	4822 111 90163	jumper	6541	4822 209 72544	TDA1541
3827	4822 111 90163	jumper	6542	4822 130 42675	BC818
3828	4822 111 90163	jumper	6543	4822 130 42675	BC818
3829	4822 111 90163	jumper	6544	4822 130 42675	BC818
3830	4822 111 90163	jumper	6545	4822 130 42675	BC818
3831	4822 111 90163	jumper	6547	5322 130 30684	1N4002
3833	4822 111 90163	jumper	6548	5322 130 30684	1N4002
3834	4822 111 90163	jumper	6549	4822 209 60775	SAA7310
3835	4822 111 90163	jumper	6550	5322 130 30684	1N4002
3836	4822 111 90163	jumper	6551	5322 130 30684	1N4002
3837	4822 111 90163	jumper	6552	4822 130 30621	1N4148 (FSC)
3838	4822 111 90163	jumper	6553	4822 130 30621	1N4148 (FSC)
3839	4822 111 90163	jumper	6554	4822 130 42513	BC858C
3840	4822 111 90163	jumper	6555	4822 130 31981	BZX55-C3V9
3841	4822 111 90163	jumper	6556	4822 130 61207	BC848
3842	4822 111 90163	jumper	6557	4822 130 30621	1N4148 (FSC)
3843	4822 111 90163	jumper	6558	4822 130 44121	BC338
3844	4822 111 90163	jumper	6559	4822 130 61207	BC848
3845	4822 111 90163	jumper	6561	4822 209 60803	SN74LS08D (MTLA)
3847	4822 111 90163	jumper	6562	4822 130 61207	BC848
3848	4822 111 90163	jumper	6563	5322 130 42012	BC858
3852	4822 111 90163	jumper	6564	4822 130 42633	BSR56
3854	4822 111 90163	jumper	6565	4822 130 42633	BSR56
3855	4822 111 90163	jumper	6568	4822 130 61207	BC848
3856	4822 111 90163	jumper	6573	4822 130 34167	BZX55-C6V2
3857	4822 111 90163	jumper	6573	4822 130 34167	BZX55-C6V2
3858	4822 111 90163	jumper	6577	5322 130 41899	MC7915CT
3859	4822 111 90163	jumper	6580	5322 130 30684	1N4002
3860	4822 111 90163	jumper	6581	5322 130 30684	1N4002
3861	4822 111 90163	jumper	6582	5322 130 30684	1N4002
3862	4822 111 90163	jumper	6583	5322 130 30684	1N4002
3864	4822 111 90163	jumper	6584	5322 130 30684	1N4002
3865	4822 111 90163	jumper	6585	5322 130 30684	1N4002
3866	4822 111 90163	jumper	6586	5322 130 30684	1N4002
			6587	5322 130 30684	1N4002
5502	4822 157 53141	coil 470µH	6590	4822 209 80808	MC78M15CT
5503	4822 157 53141	coil 470µH	6591	4822 209 71579	TY40408 = MC7805CT
				selected	
			6592	5322 209 11222	MC7905CT
			6593	5322 130 41899	MC7915CT

Switch SK.. 4822 276 12276 TACT SWITCH 9,5MM SK11 4822 276 20463 SWITCH ASSY SPPH2136			 3801 4822 111 90163 jumper 3802 4822 111 90163 jumper 3803 4822 111 90163 jumper 3804 4822 111 90163 jumper 3805 4822 111 90163 jumper 3806 4822 111 90163 jumper		
Miscellaneous BU3 4822 267 30743 PHONE SOCKET 1100 4822 214 51772 IR RECEIVER GP1U521X 1101 4822 242 71508 CER RESONATOR 6MHz 1102 4822 130 90667 FL DISPLAY 9BY-02GK			   6501 4822 209 61191 MUP TMP47C670N/,, 6502 4822 209 60886 UND-2580A 6503 4822 209 60886 UND-2580A 6518 4822 130 30613 BAW62 6519 4822 130 30613 BAW62 6520 4822 130 30613 BAW62 6521 4822 130 30613 BAW62 6522 4822 130 30613 BAW62 6523 4822 130 30613 BAW62 6524 4822 130 30613 BAW62 6525 4822 130 30613 BAW62 6526 4822 130 30613 BAW62 6528 4822 130 80849 LED TLHR4499 (RED) 6529 4822 130 80848 LED TLHR4499 (GREEN) 6530 4822 130 61207 BC848 6531 4822 130 61207 BC848		
 2100 4822 124 22027 47µF 25V 2101 4822 122 32444 33pF 2102 4822 122 32444 33pF 2104 4822 122 33147 22nF 20% 2105 4822 124 22027 47µF 25V 2106 4822 122 10166 22nF 30% 16V					
 3100 5322 111 91484 RST NETWORKS 4609X 3101 5322 111 91484 560Ω 1% 0,2W 3130 4822 111 30499 4Ω7 5% 0,33W 3131 5322 116 80446 47kΩ 3132 4822 111 90124 82Ω 5% 0,33W 3133 5322 116 80427 1kΩ 3134 4822 111 90366 620Ω 5% 0,33W 3135 4822 111 90249 10kΩ 2% 0,33W 3151 4822 111 30499 4Ω7 5% 0,33W 3160 4822 111 90124 82Ω 5% 0,33w 3161 5322 116 80427 1kΩ 3162 4822 111 90366 620Ω 5% 0,33W					

F.T.S. PANEL

VARIABLE LINE OUT PANEL

Miscellaneous		
1401	4822 242 71222	12 MHz Crystal
		
2401	4822 124 22027	47µF 25V
2402	4822 122 10166	22nF 16V
2403	4822 124 22187	15µF 63V
2404	4822 122 32444	33pF
2405	4822 122 32444	33pF
2406	4822 122 10166	22nF 16V
2407	4822 122 10166	22nF 16V
2408	4822 122 10166	22nF 16V
		
3401	4822 111 30483	1Ω 5% 0,33W
3402	4822 111 90249	10kΩ 2% 0,33W
3403	4822 116 52452	10kΩ 2% 0,33W
3404	4822 111 90248	2kΩ 5% 0,33W
3405	5322 116 80445	4k7
3406	4822 111 90238	18kΩ 5% 0,33W
3407	4822 111 90238	18kΩ 5% 0,33W
3408	4822 111 90251	22kΩ 5% 0,33W
3409	4822 111 90251	22kΩ 5% 0,33W
3410	5322 116 80447	470kΩ
3411	5322 116 80447	470kΩ
		
6401	4822 130 30621	DIODE 1N4148
6402	4822 130 34233	BZX55-C5V1
6403	4822 130 61207	TRANS SMD BC848
6404	5322 130 42012	TRANS SMD BC858
6405	5322 209 11118	PC74HCT373P
6406	4822 209 60857	EPROM M27128A-2F1
6407	4822 209 72102	EEPROM X2816BP
6408	4822 130 61207	TRANS SMD BC848
6409	4822 130 61207	TRANS SMD BC848
6410	4822 209 60858	UP PCB83C654P/CD630

Miscellaneous		
BU4	4822 267 30878	CINCH SOCKET 2P
		
2101	4822 124 41527	47µF 25V
2102	4822 124 41528	100µF 25V
2103	4822 124 41528	100µF 25V
2104	4822 124 41528	100µF 25V
2105	4822 124 22339	100µF 20% 25V
2106	4822 124 22339	100µF 20% 25V
2107	4822 124 22339	100µF 20% 25V
2108	4822 124 22339	100µF 20% 25V
		
3101	4822 116 52437	5k1 5% 0,33W
3102	4822 116 52413	2k7 5% 0,33W
3103	4822 111 30517	22Ω 5% 0,33W
3104	4822 111 30517	22Ω 5% 0,33W
3105	4822 116 52452	10k 5% 0,33W
3106	4822 116 52452	10k 5% 0,33W
		
6101	4822 214 51724	DVR-3

MISCELLANEOUS

1501	4822 253 30009	FUSE T 160 mA
1501	4822 253 30217	FUSE T 300mA
5001	4822 146 21441	MAINSTRANSFORMER
TOOLS	4822 397 60141	AUDIO TEST MAX DIAM
TOOLS	4822 397 30184	CD AUDIO SIGNALS
TOOLS	4822 395 50145	TORX SCREWDRIVERSET
TOOLS	4822 397 30096	AUDIO TEST DISC 5 + 5A
TOOLS	4822 395 50132	TORX SCREW SQUARE
TOOLS	4822 395 30204	13TH ORDER TER
TOOLS	4822 322 40066	SERVICE CABLE (14P)
TOOLS	4822 267 50676	SERVICE CONN (14P)
TOOLS	5322 130 32182	LED GREEN CQYG11
TOOLS	4822 321 21284	SERVICE CABLE (4P)
TOOLS	4822 397 30155	AUDIO TEST DISC 1kHz