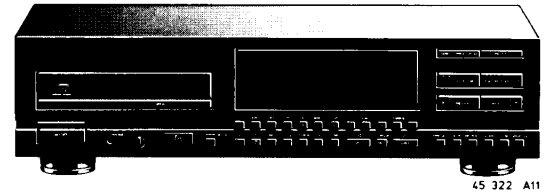


Service
Service
Service



Service Manual

	TABLE OF CONTENTS	PAGE
1.	Technical specifications	1
2.	Controls and connections	2
3.	Warnings	3
4.	Servicing hints	4
5.	Dismantling instructions	6
6.	Blockdiagram	7
7.	Wiring diagram	8
8.	Circuit diagrams and printed boards	
8.1.	Power supply	8
8.2.	Variable headphone amplifier	8
8.3.	Servo circuit diagram	9
8.4.	Servo decoder panel component side	10
8.5.	Servo decoder panel solder side	11
8.6.	Decoding circuit diagram	12
8.7.	Variable headphone circuit	13
8.8.	Audio circuit diagram	13
8.9.	Audio panel component side	14
8.10.	Audio panel solder side	14
8.11.	Control and display circuit diagram	15
8.12.	Control and display panel	16
8.13.	Microprocessor and FTS circuit diagram	17
8.14.	Microprocessor and FTS panel	18
9.	Start up procedure	19
10.	Faultfinding guide	20
11.	Service testprogram/Error code table	20
12.	Electrical adjustments	21
13.	Exploded view	22
14.	Mechanical partslist	22
15.	Electrical partslist	23



TECHNICAL SPECIFICATIONS**General**

- | | | |
|----|---|--|
| 1. | Mains voltage /20B
/25B
/21B /33B | :220V ($\pm 10\%$)
:240V ($\pm 10\%$)
:110V-127V-220V-240V ($\pm 10\%$)
Selectable by voltage adapter |
| 2. | Mains frequency | : 50Hz |
| 3. | Mains voltage selection | : See Circuit Diagram Power Supply |
| 4. | Power consumption mains,operated | : 16W |

Line output (Fixed and Variable)

- | | | |
|-----|--|--|
| 1. | Number of channels | : 2 |
| 2. | Output voltage | : 2 Vrms $\pm 1,5$ dB |
| 3. | Unbalance left right | : max. $\pm 0,6$ dB |
| 4. | Output resistance | : 200 Ohm |
| 5. | Amplitude linearity | : max. $\pm 0,2$ db from 20 Hz to 20 kHz |
| 6. | Phase non-linearity | : max. from 20 Hz to 20 kHz |
| 7. | Signal to noise ratio | : min. 95dB from 20 Hz to 20 kHz |
| 8. | Dynamic range (-60dB) | : min. 92dB from 20 Hz to 20 kHz |
| 9. | Total harmonic distortion + noise | : min. 88dB from 20 Hz to 20 kHz |
| 10. | Intermodulation distortion | : min. 88db from 20 Hz to 20 kHz |
| 11. | Output attenuation | : min. 60dB |
| 12. | Channel separation | : min. 100dB from 20 Hz to 20 kHz |
| 13. | Automatic switched de-emphasis
with time constant | : 15/50 μ s |
| 14. | Non-linearity on -90dB | : ± 2 dB |

Variable headphone

- | | | |
|----|----------------------|---|
| 1. | Output voltage | : max. 7,5 Vrms ± 2 dB |
| 2. | Unbalance left-right | : max. $\pm 0,6$ dB |
| 3. | Output resistance | : 150 Ohm |
| 4. | Load impedance range | : 32 Ohm to 600 Ohm load |
| 5. | Output power | : max. 50 mW into 32 Ohm load
max. 90 mW into 150 Ohm load
max. 50 mW into 600 Ohm load |

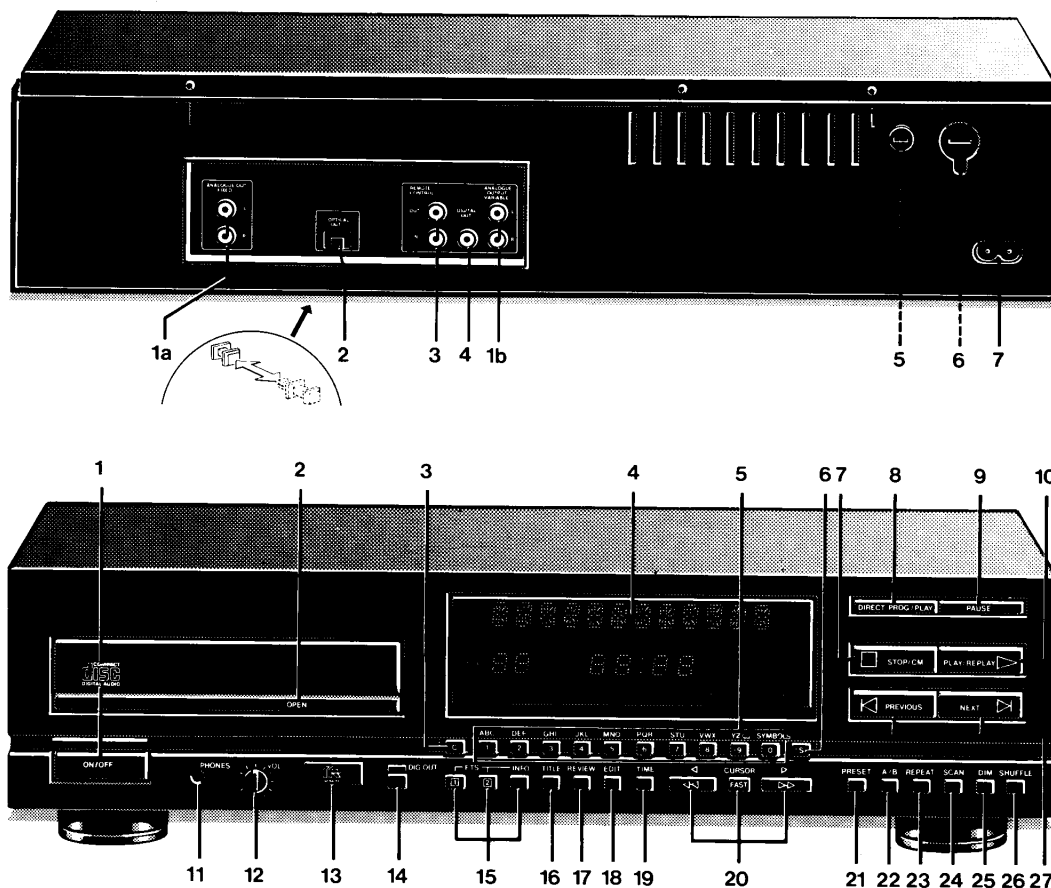
Dimensions and weight

- | | | |
|----|-----------------------|-------------------------------|
| 1. | Apparatus tray closed | : WxDxH 420 x 280 x 90/104 mm |
| 2. | Apparatus tray open | : WxDxH 420 x 423 x 90/104 mm |
| 3. | Weight | : 6,3 kg |

Optical read-out system

- | | | |
|----|---------------------|------------------------|
| 1. | Laser type | : Semiconductor AlGaAs |
| 2. | Wavelength | : 780 nm ± 20 nm |
| 3. | Light output (c.w.) | : 0,4 mW $\pm 0,04$ mW |

CONTROLS AND CONNECTIONS



OPERATION

KEYS

- 1 On/Off
- 2 Open
- 3 C(lear)
- 4 Display
- 5 Digit/alphabet keys
- 6 FTS
- 7 Stop/CM
- 8 Direct prog(ram) play
- 9 Pause
- 10 Play/replay
- 11 Phones
- 12 Vol(ume)
- 13 IR
- 14 Dig(ital) out
- 15 FTS
- 16 Title
- 17 Review
- 18 Edit
- 19 Time
- 20 << Cursor >>
- 21 Reset
- 22 A/B
- 23 Repeat
- 24 Scan
- 25 DIM
- 26 Shuffle
- 27 Previous/next

CONNECTIONS

- 1a Analogue out fixed
- b Analogue out variable
- 2 Optical out
- 3 Remote control out in
- 4 Digital out
- 5 Mains fuse holder
- 6 Voltage selector
- 7 Mains lead

WARNINGS

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



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.

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 gegen elektrostatische Entladungen (ESD).

Unvorsichtige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

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.

DISMANTLING INSTRUCTIONS

GB

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

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.

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.

NL

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

D

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

S Varo!

Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

SF Varning!

Osynlig laserstrålning när denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

**CLASS 1
LASER PRODUCT**

3122 110 03420

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.

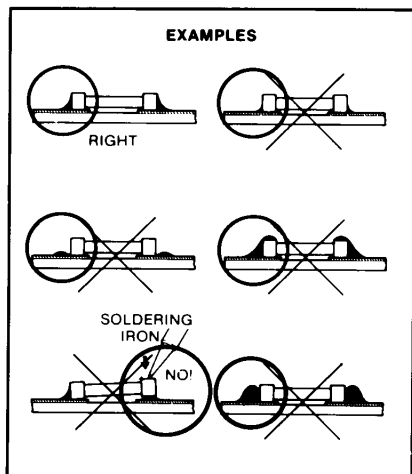
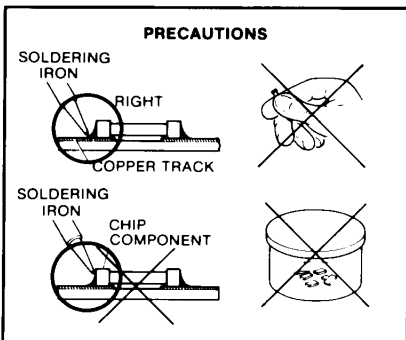
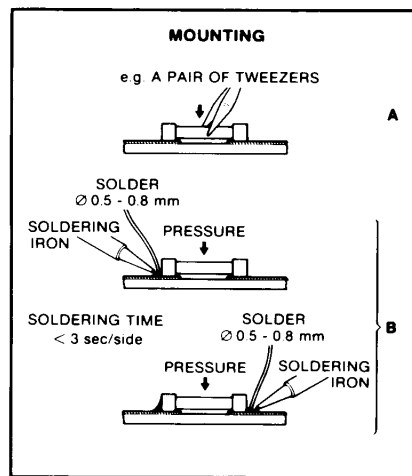
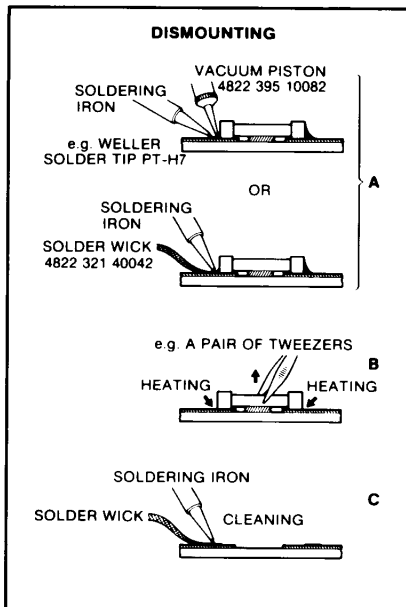
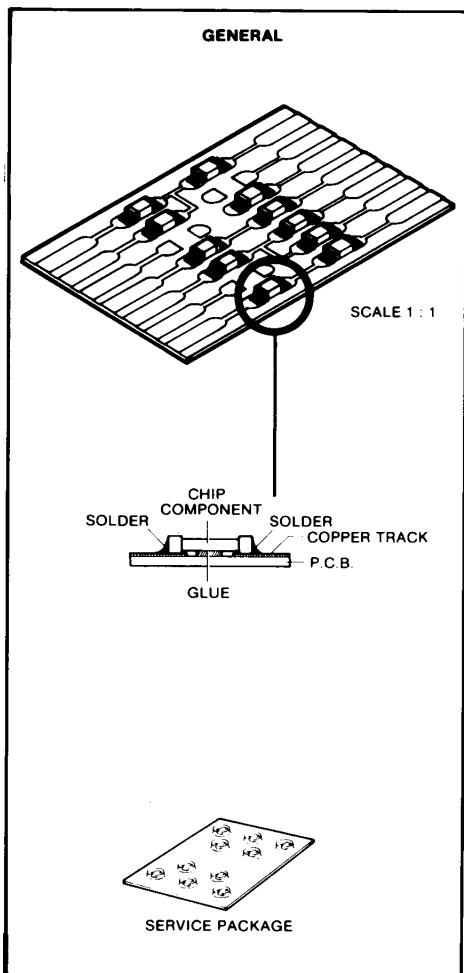
If the tray mechanism has to be disassembled for servicing, a separate disc hold-down should be used. For a service disc hold-down see the figure below. Compose a service Disc hold-down in the following way.

- Cut in the most inner ring of a disc holddown (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.

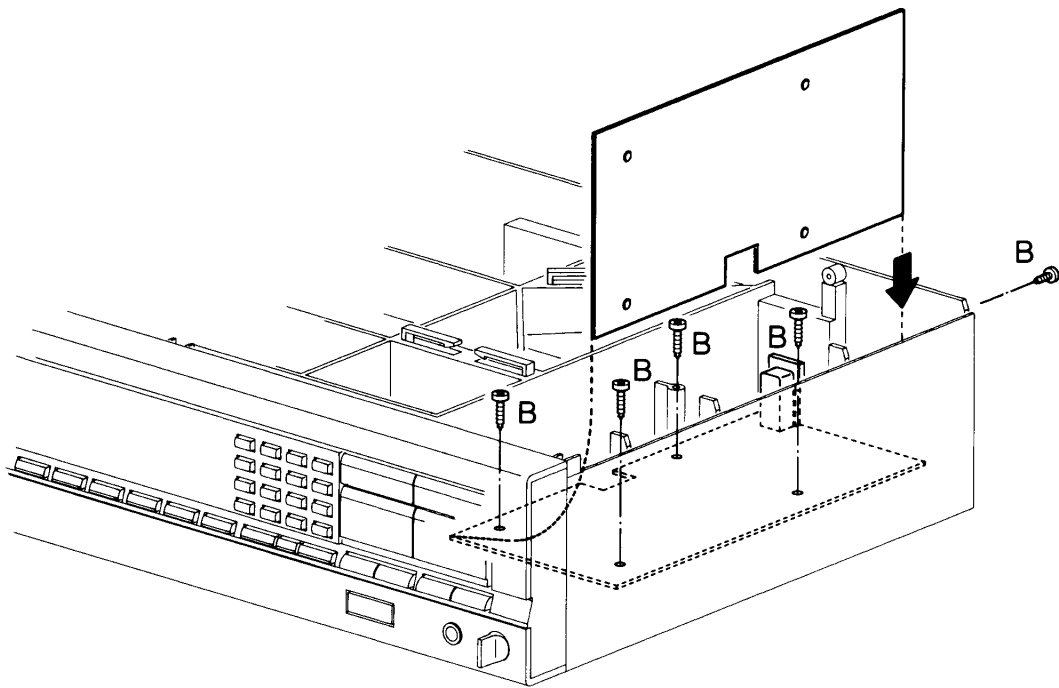
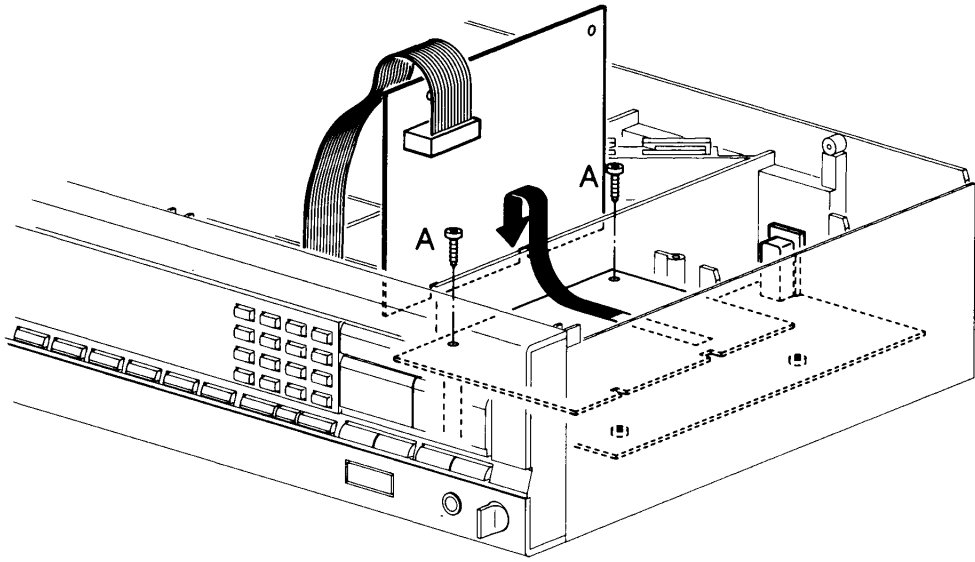
SERVICE TOOLS

Audio signal disc	4822 397 30184
Disc without errors (test disc 5) + disc with DO errors, black spots and fingerprints (test disc 5A)	4822 397 30096
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	
Set (square)	4822 395 50132
13th order filter	4822 395 30204
Service cable (4p)	4822 321 21284
Service flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676
Green LED CQY G11	5322 130 32182
Infra red remote control e.g.	4822 218 10354

DEMOUNTING CDM



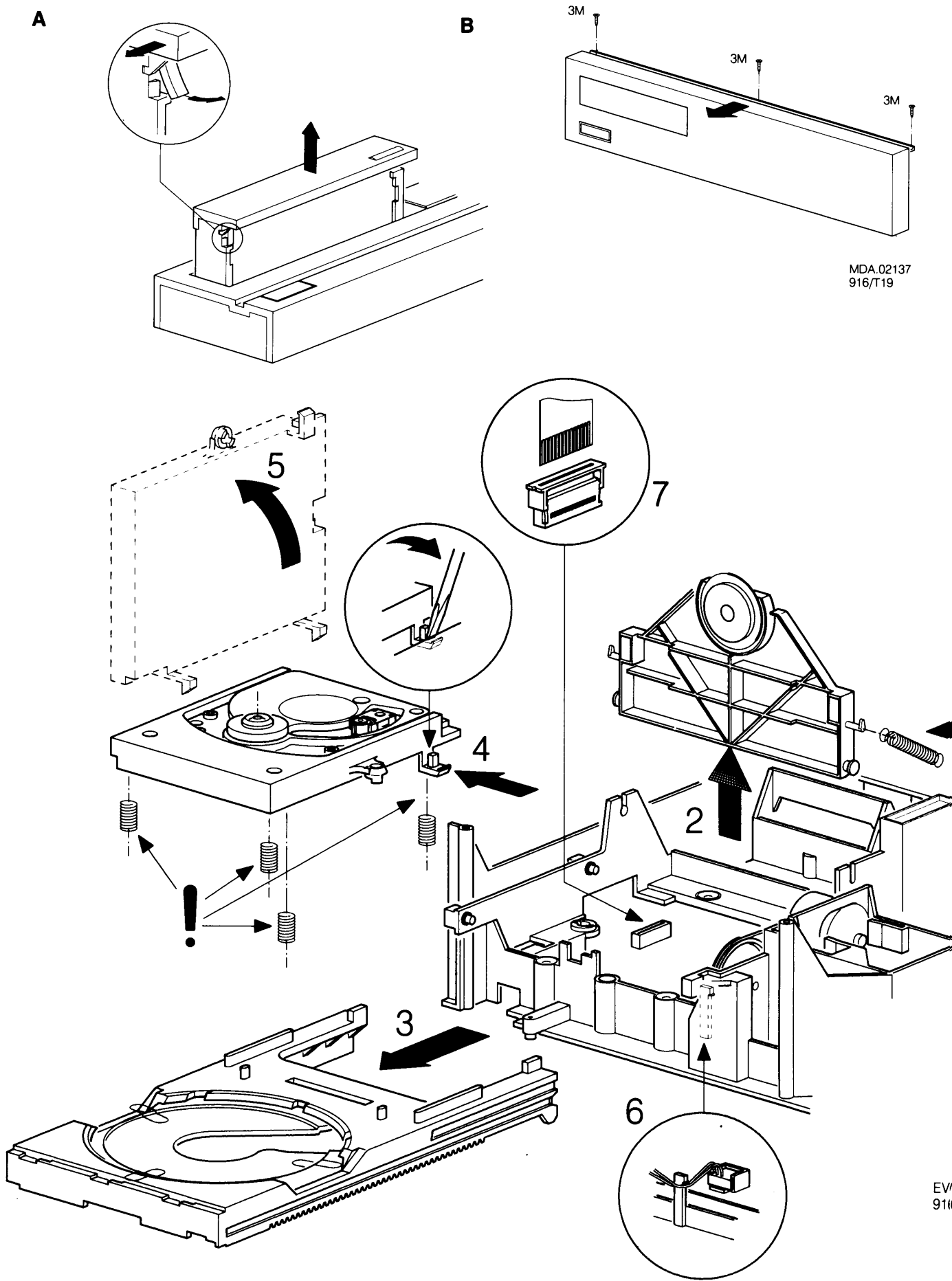
SERVICE HINTS



EVA.00941
19/938

DISASSEMBLY OF THE CABINET AND LOADING

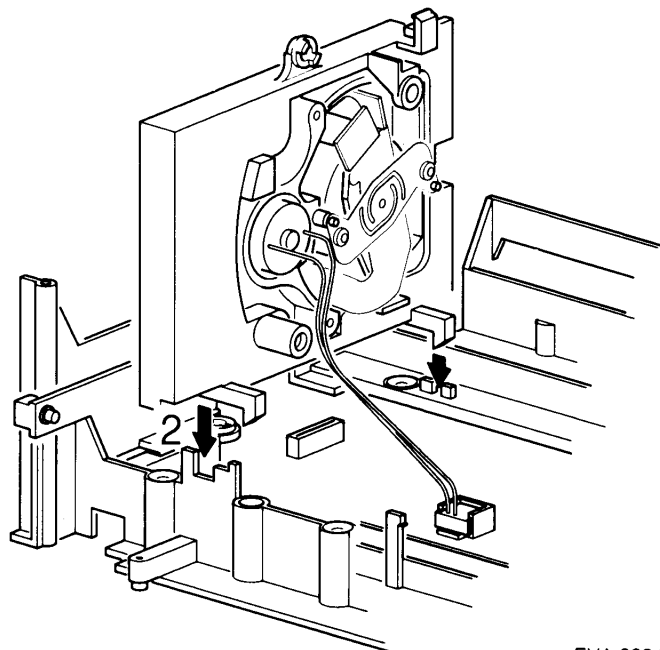
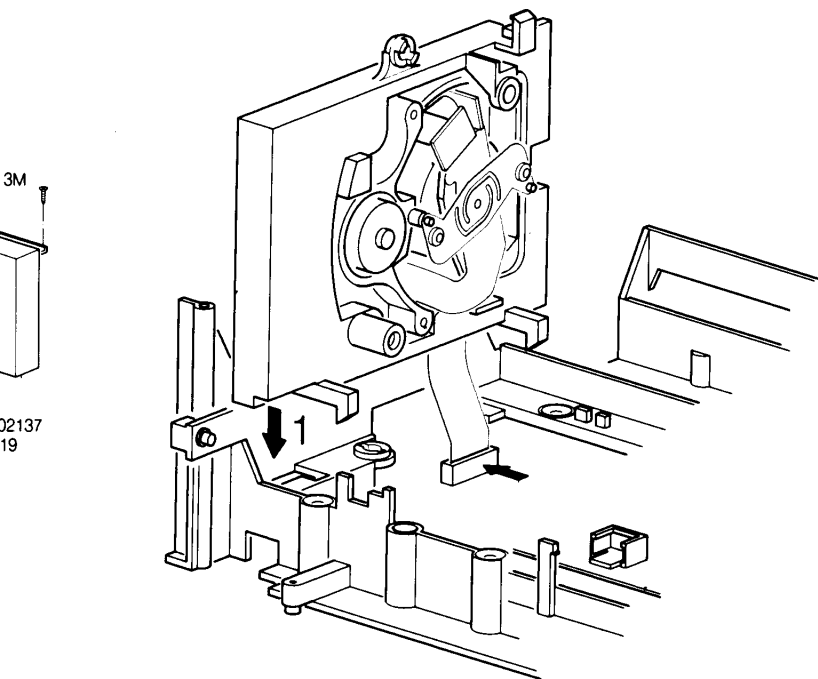
CABINET DISASSEMBLY HINTS



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

FOIL CONNECTION POSITION

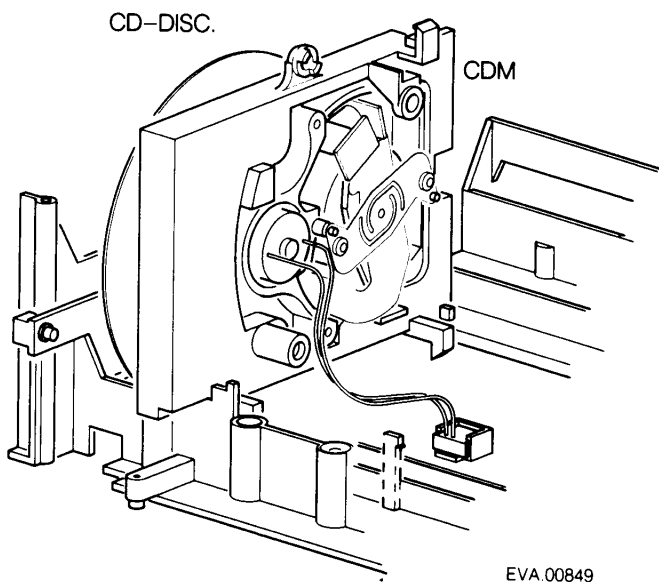
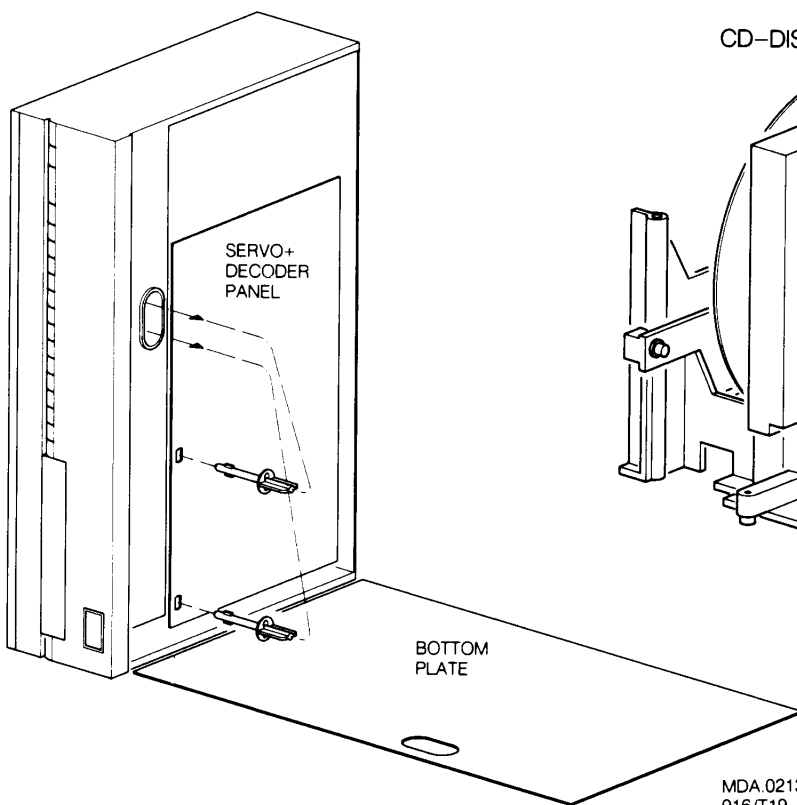
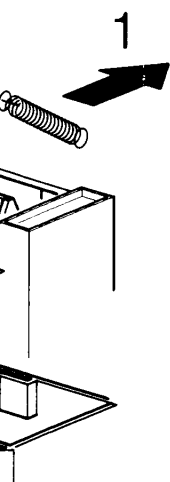
PLAY-SERVICE POSITION



EVA.00848
916/T19

MEASURING AND ADJUSTMENT POSITION

SERVICE POSITION PLAY

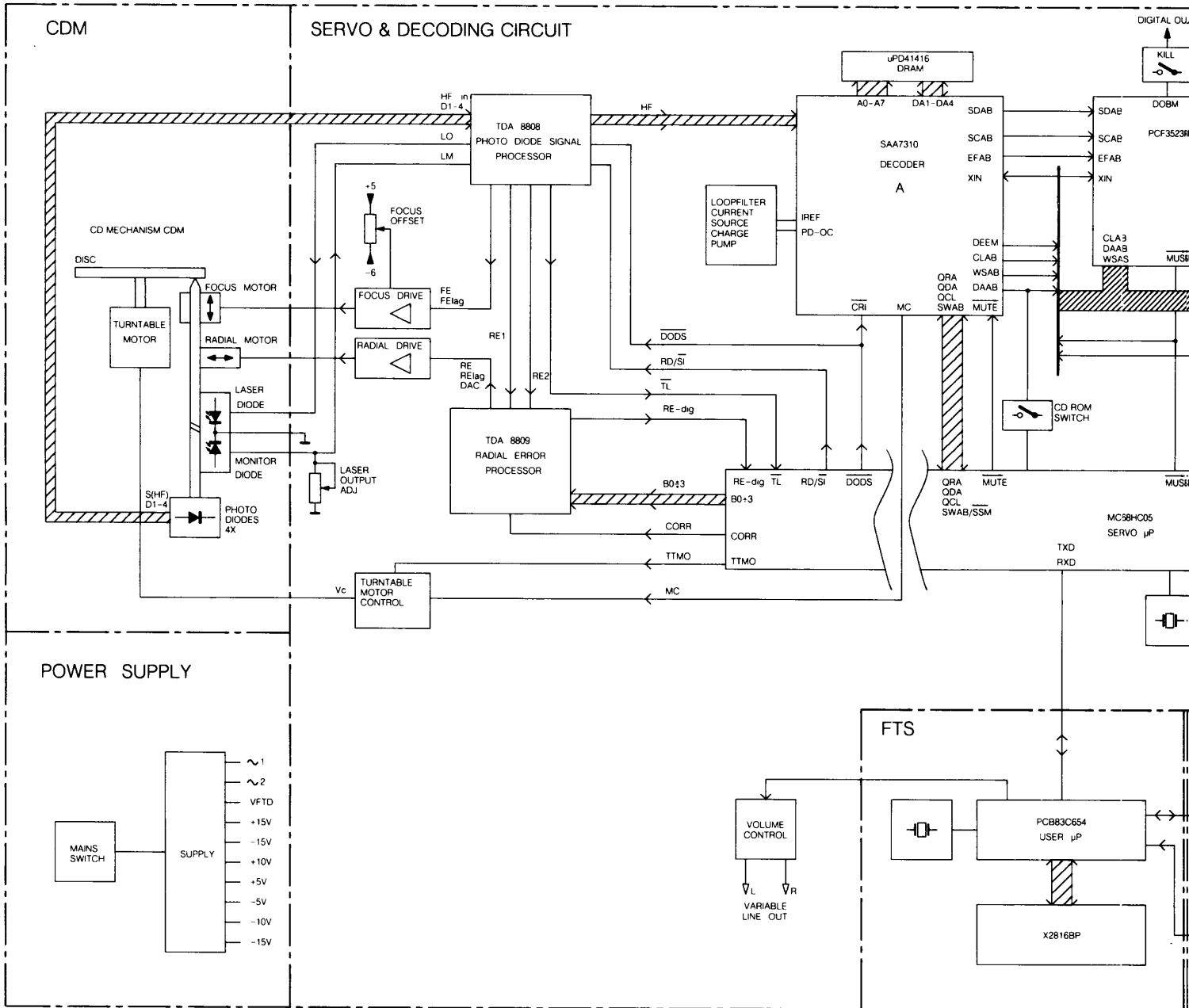


EVA.00849
916/T19

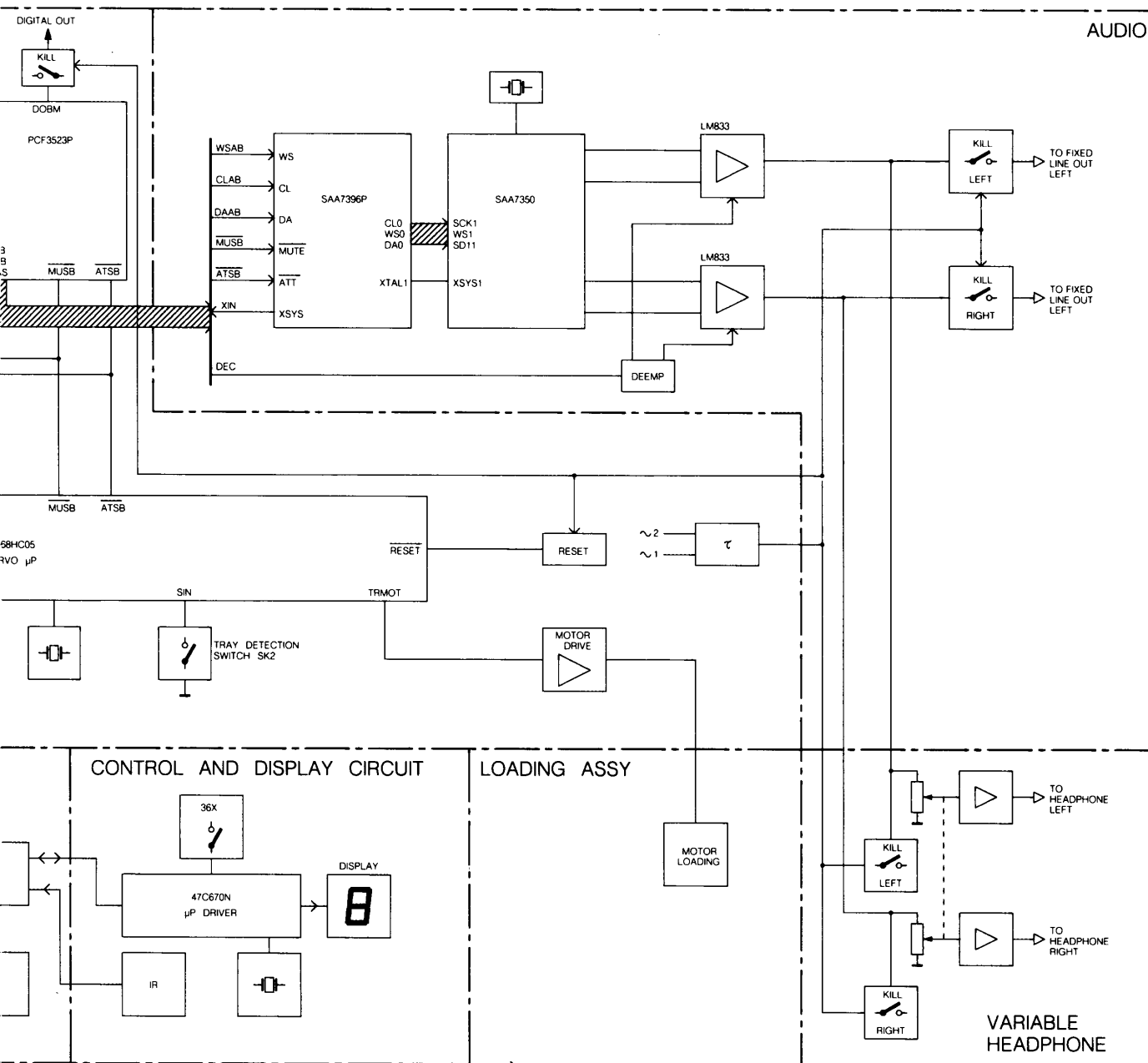
EVA.00346
916/T19

MDA.02138
916/T19

BLOCK DIAGRAM



- | | | | | | |
|--------|--|--------|---|--------|----------------------------------|
| AGC | - Automatic Gain Control | DIV4 | - Divide by 4 input | MUTE | - Mute signal |
| ATSB | - Attenuation of Audio level in Search position | DMUTE | - Digital mute | OALC | - Offset audio level control |
| ATT | - Attenuation | DOBM | - Digital out signal | OARC | - Offset audio reference current |
| B0-B3 | - Control bits for radial circuit | DODS | - Drop out detector suppression | Offset | - Offset signal |
| BEQ | - Equalizer reference current input | D1-4 | - Photodiode currents | PD/O | - Photo diode output |
| BGC | - DC and LF gain control reference input | EFAB | - Error flag Decoder-A to Filter-B | PLLHF | - PLL HF reference |
| BSW | - Bandwidth switch turntable motor circuit | FBL+ | - Feedback for left positive (negative) switched- capacitor integrator | QCL | - Quad clock |
| CD ROM | - Digital Data information in disc signal switch | FBR+ | - Feedback for right positive (negative) switched- capacitor integrator | QDA | - Quad data |
| CEFM | - Clock Eight-to-Fourteen Modulator | FE | - Focus error signal | QRA | - Quad reference audio |
| CLAB | - Clock signal Detector-A to Filter-B | FE lag | - Focus error signal for LAG network | RADc | - Radial error DAC |
| CLBD | - Clock signal Filter-B to DAC | HF | - HF output for DEMOD | RE | - Radial error signal |
| CLI | - IS serial bit clock input | HFD | - HF detector output for DEMOD | Rosc | - Radial error oscillator |
| CORR | - 1/2 bit DAC | HF-in | - HF current input to HF amplifier | Rwob | - Radial error wobble |
| Cosc1 | - Capacitor wobble oscillator | HF-out | - HF amplifier and equalizer voltage output | RE1 | - Radial error 1 |
| Cosc2 | - Capacitor wobble oscillator | IDF1-3 | - Input data format | RE2 | - Radial error 2 |
| CREF | - Reference current | INTL+ | - Output from left positive (negative) switched- capacitor integrator | RE di | - Radial error digital |
| CRI | - Counter Reset Inhibit | INTR+ | - Output from right positive (negative) switched- capacitor integrator | RE lag | - Radial error lag |
| DAAB | - Data signal Decoder-A to Filter-B | LM | - Laser monitor diode input | Sc | - Servo control |
| DABD | - Data signal Filter-B to DAC | LO | - Laser amplifier current output | SCAE | - Servo control audio error |
| DAI | - IS serial data input | MC | - Motor control signal | SCKI | - Servo control key input |
| DAO | - IS serial data output | MCES | - Motor speed control | SDAE | - Servo control data error |
| DEC | - Decoupling input internal bypass | MUSB | - Motor speed control | SDI1- | - Servo control data input 1 |
| DEEM | - Deemphasis | | | SIN | - Servo control input |
| DET | - HF detector voltage input | | | | |

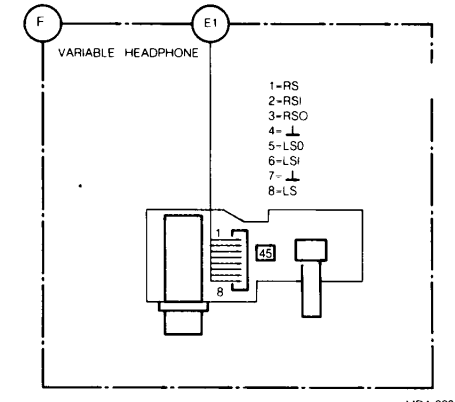
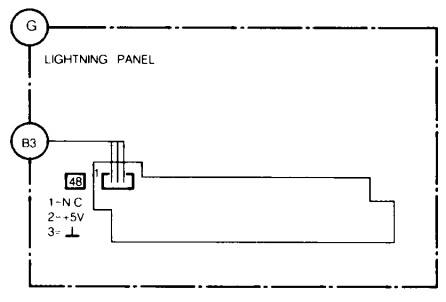
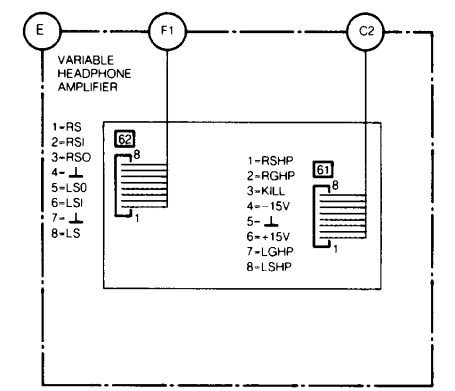
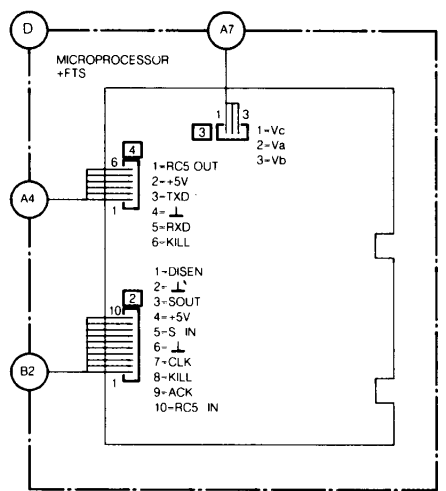
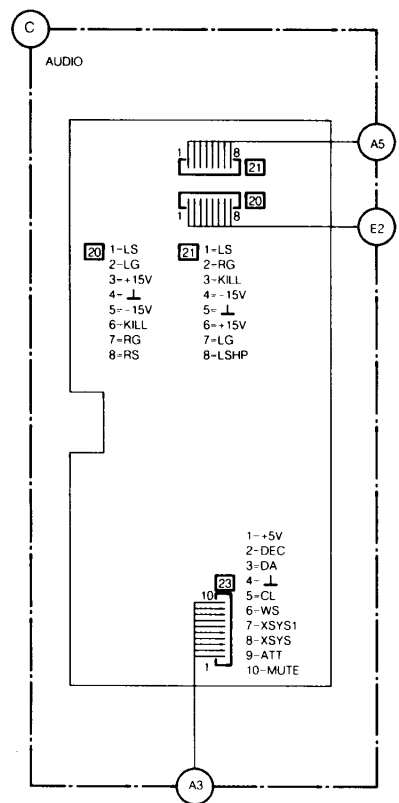
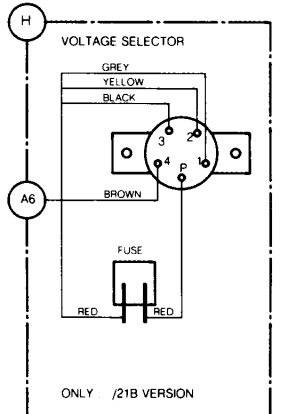
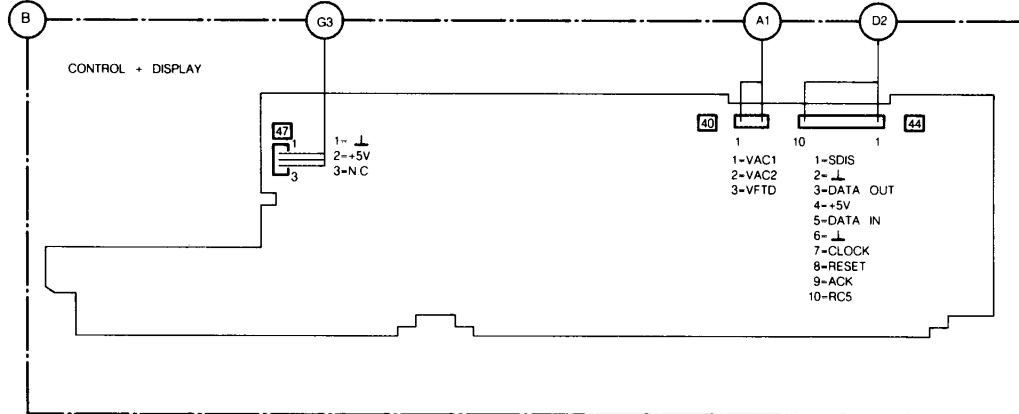
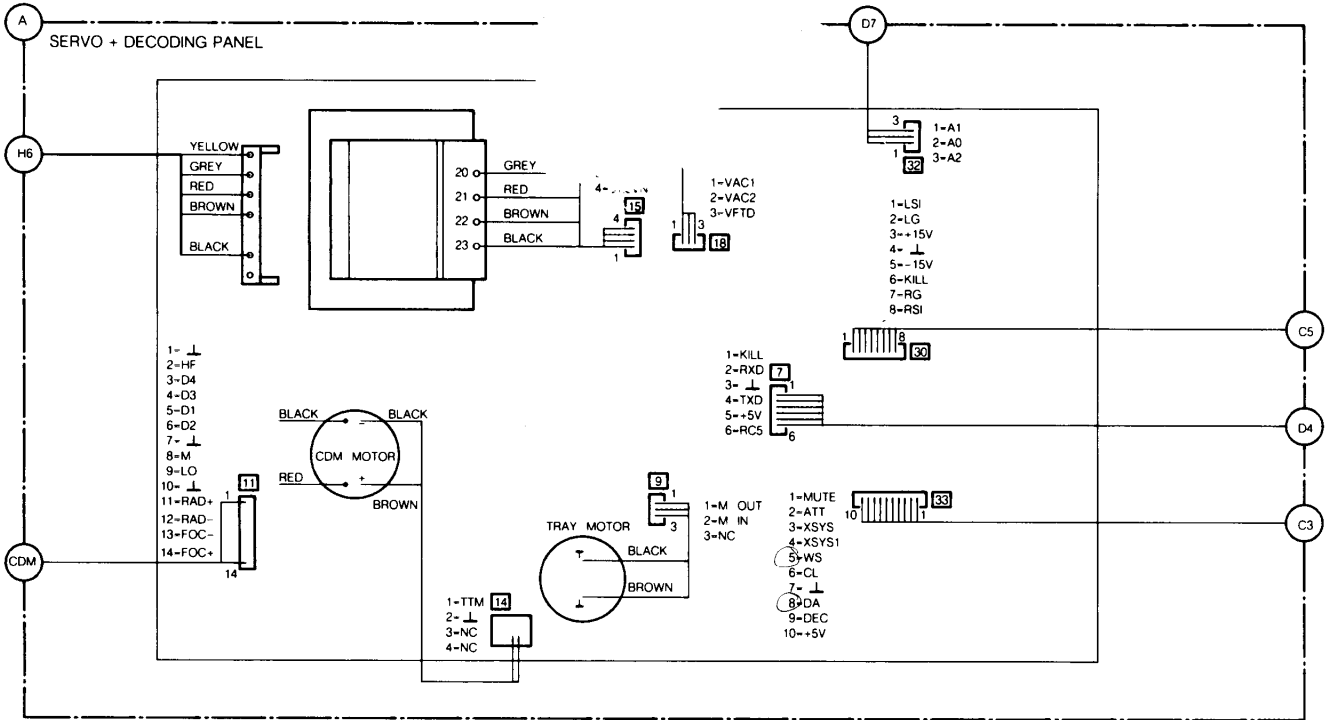


PRS 06942
T-08 111

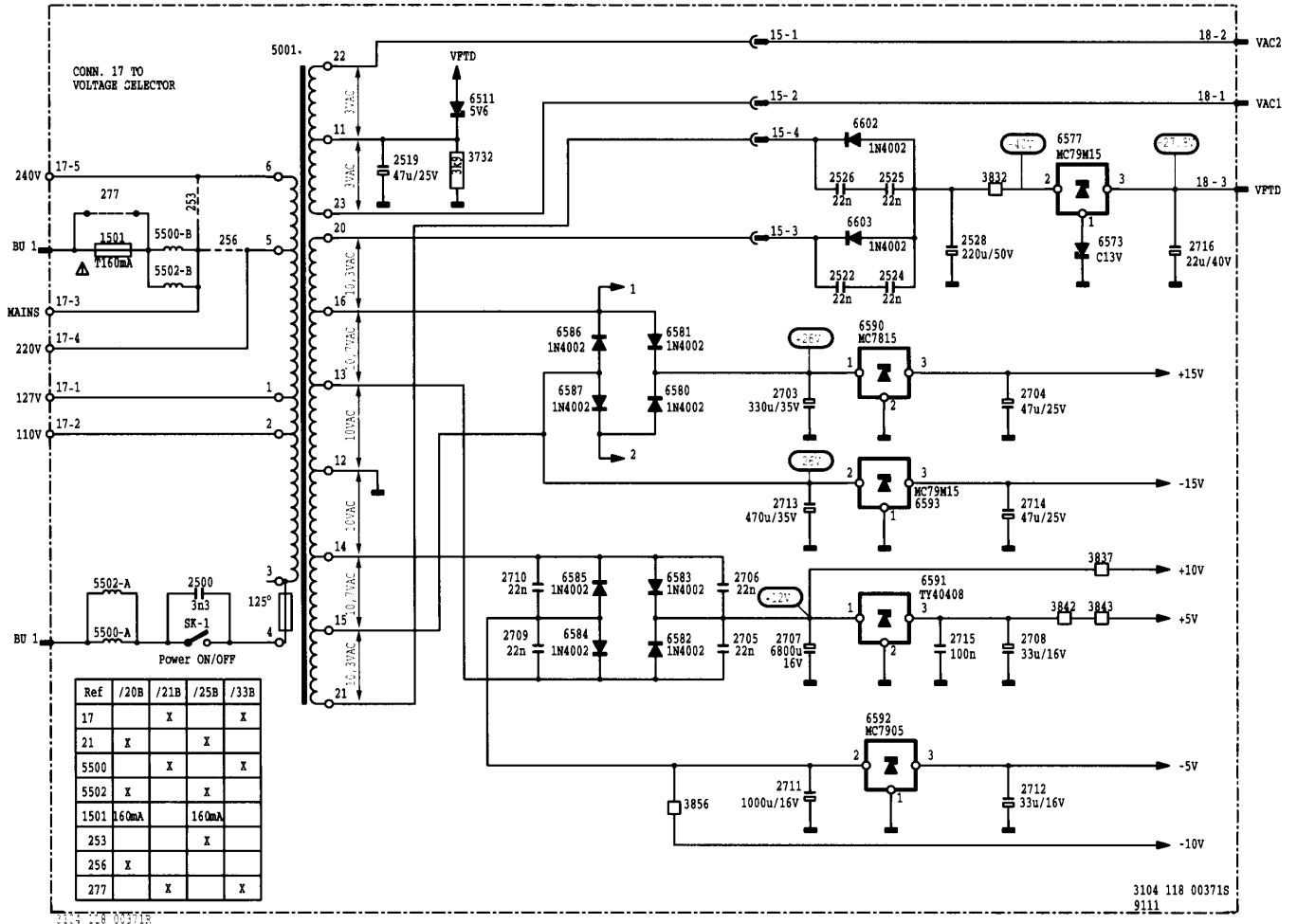
- MUTE - Mute signal
- OALO - Operational ampl. left output
- OARO - Operational ampl. right output
- Offset IN - Offset control input
- Offset OUT - Offset control output
- PD/OC - Phase detector - oscillator control
- PLLH - PLL on hold reset
- QCL - Q-channel clock signal
- QDA - Q-channel data signal
- QRA - Q-channel request acknowledge
- 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
- RE2 - Radial error signal 2
- RE dig - Radial error digital
- RE lag - Radial error signal for LAG network
- Sc - Starting up capacitor input
- SCAB - Subcode clock Decoder-A to Filter-B
- SCKI - Bit clock input for serial input interface
- SDAB - Subcode data Decoder-A to Filter-B
- SDI1-2 - Serial data input
- SIN - Tray switch

- Si/RD - On/off control for laser supply and focus circuit. Ready signal. Starting up procedure succesfull
- SWAB/SSM - Subcode word/start-stop motor signal
- TL - Track loss output signal
- TRMOT - Tray motor drive
- TTM+ - Control voltage for turntable motor
- TTM- - Control voltage for turntable motor
- TTMO - Motor offset and bandwidth switch
- VDACL-R - Reference voltage supply left(right) channel DAC
- Vext+ - Supply connection
- Vext - Supply connection
- VRCL-R - High impedance voltage refence for left (right) channel inputs
- VROL-R - Left (right) channel voltage reference output
- WSAB - Word select Decoder-A to Filter-B
- WSBD - Word select Filter-B to DAC
- WSI - IS word select input
- WSO - IS word select output
- XIN - Oscillator signal in Decoder-A
- XOUT - Oscillator output
- XSEL - Crystal frequency select
- XSYS - Oscillator signal

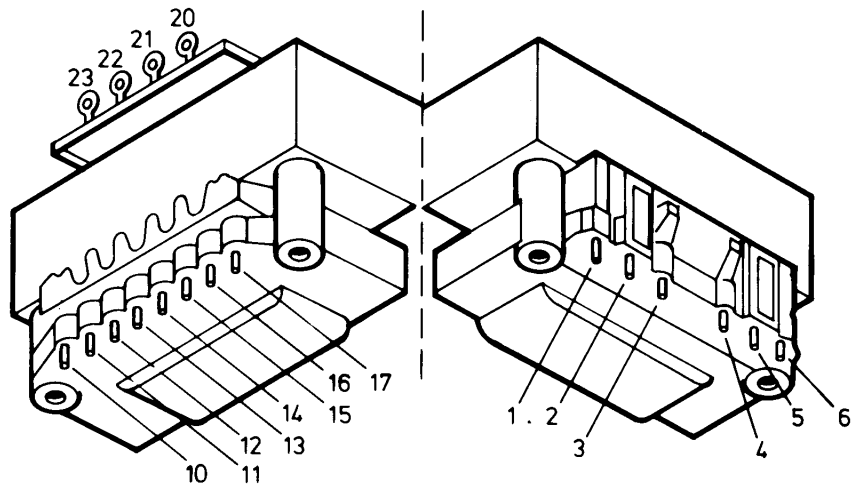
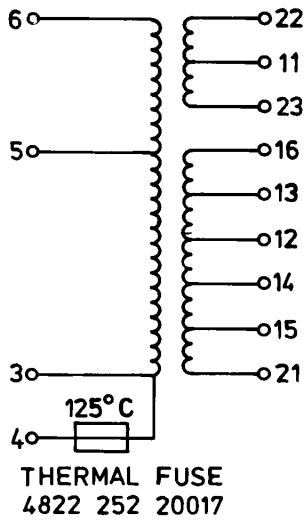
WIRING DIAGRAM



POWER SUPPLY

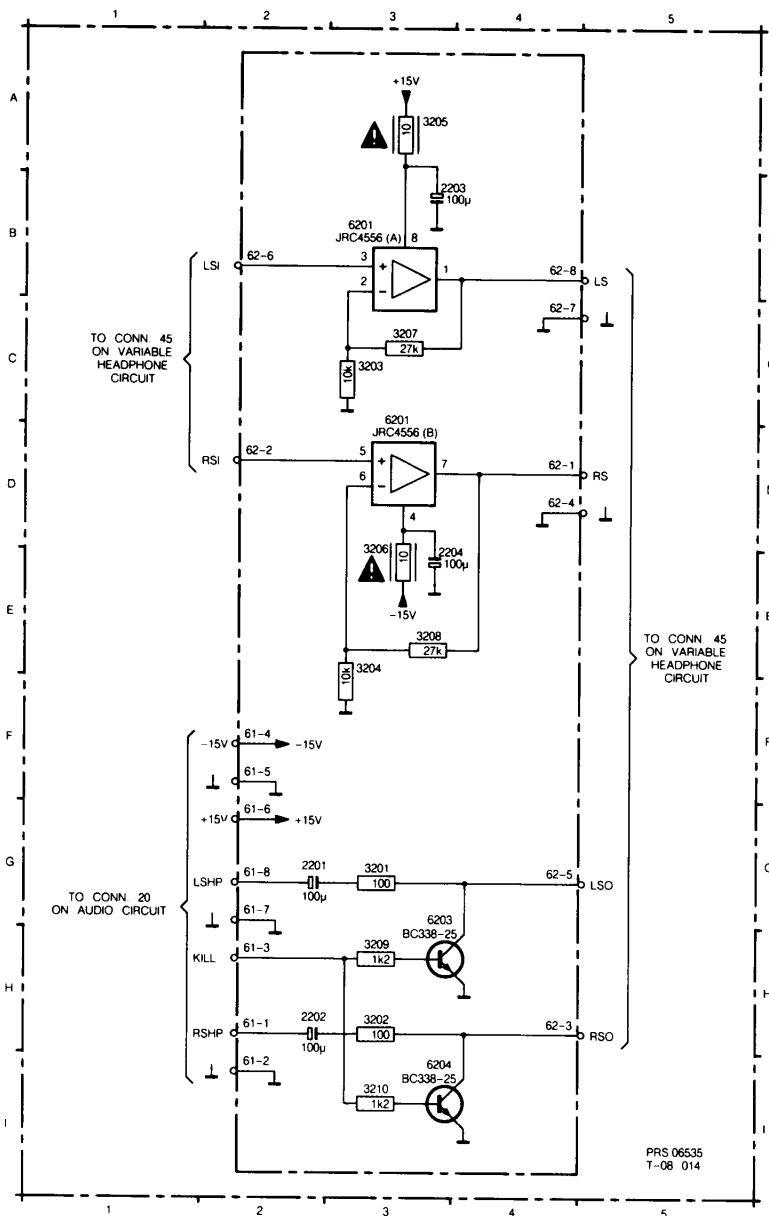
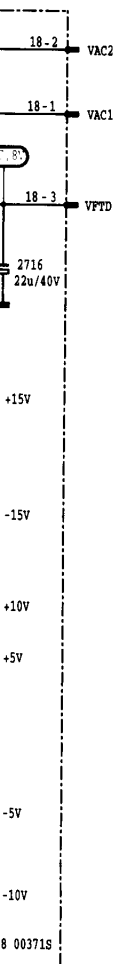


TRANSFORMER CONNECTIONS

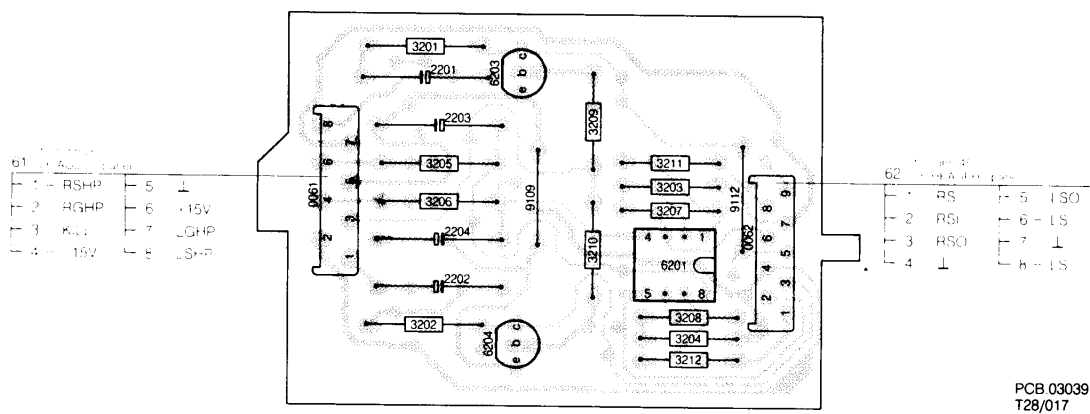


44 737 A11

VARIABLE HEADPHONE AMPLIFIER

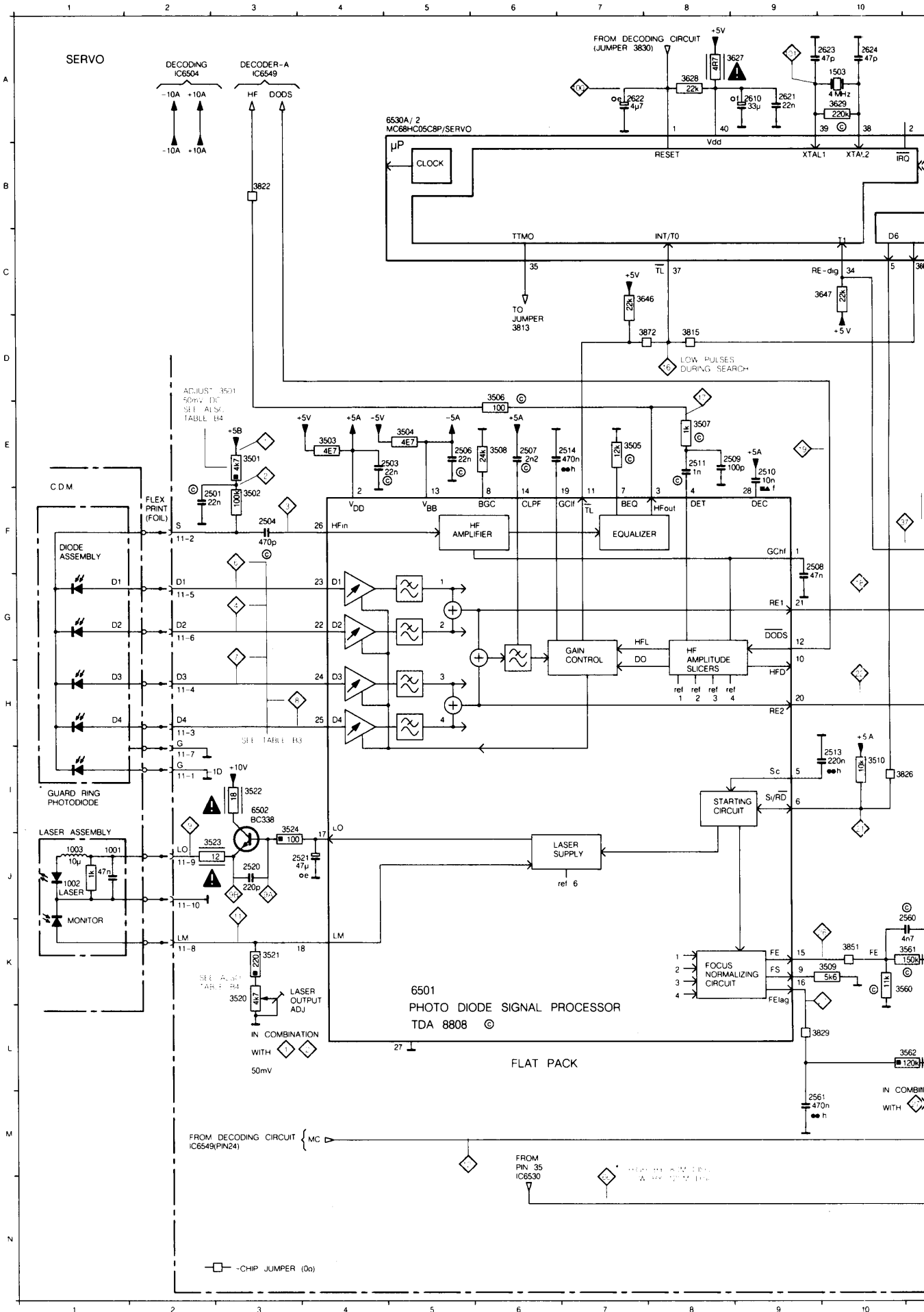


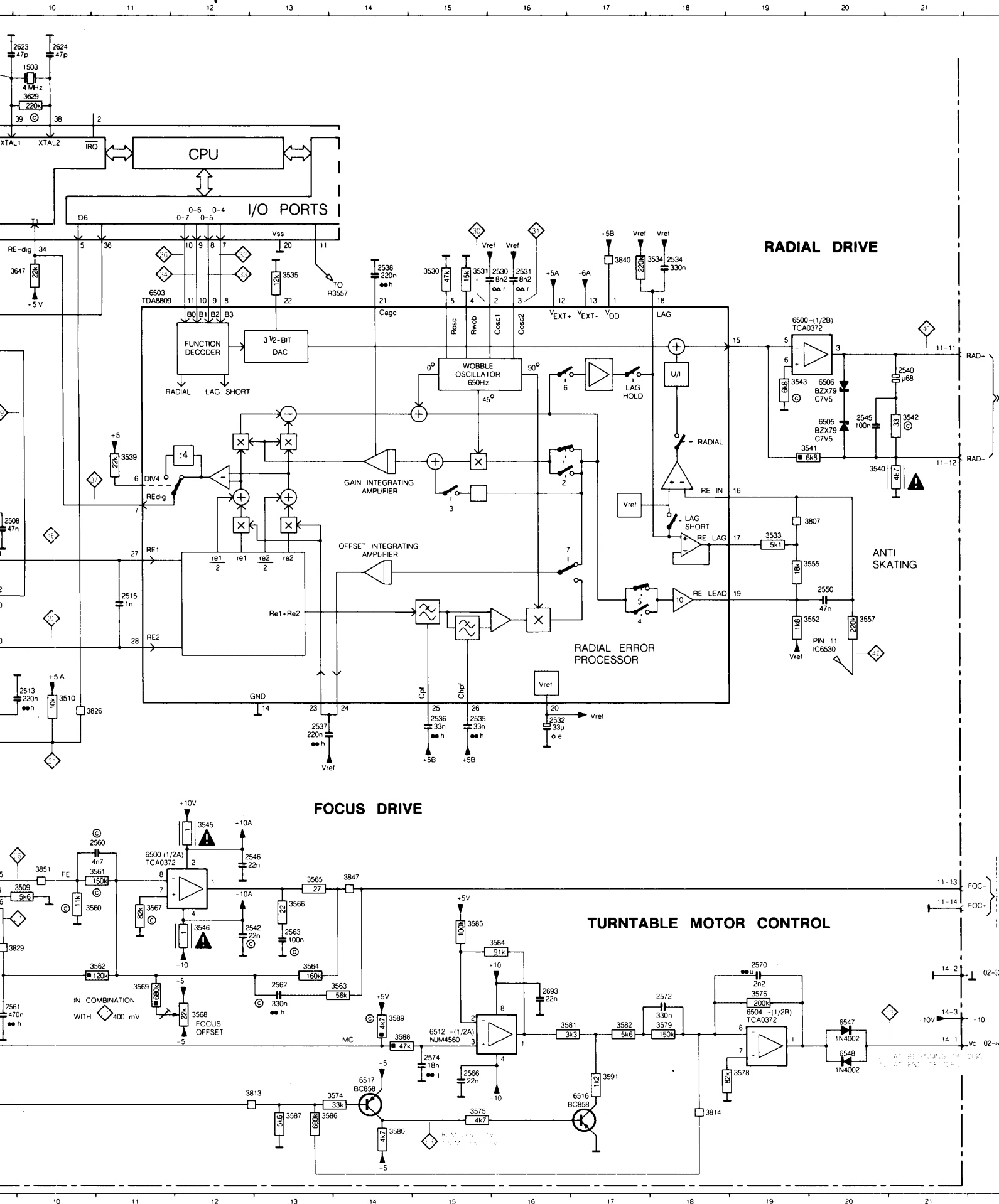
- 2201 G2
- 2202 H2
- 2203 B3
- 2204 E3
- 3201 G3
- 3202 H3
- 3203 C3
- 3204 E3
- 3205 A3
- 3206 E3
- 3207 C3
- 3208 E3
- 3209 H3
- 3210 I3
- 6201 B3
- 6201 D3
- 6203 G3
- 6204 I3

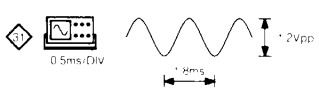
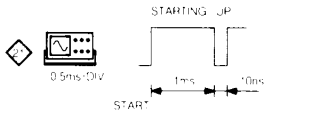
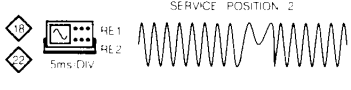
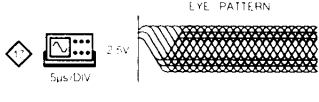
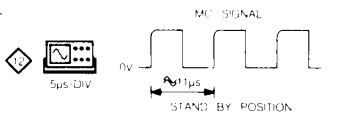


PCB 03039
T28/017

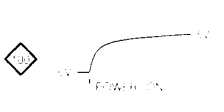
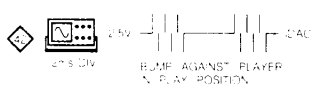
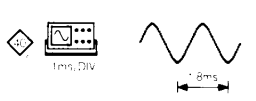
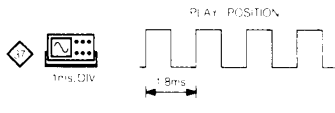
SERVO CIRCUIT DIAGRAM







SERVICE POSITION 0		PLAY MODE
SEARCH		SEARCH
<<	>>	ACTIVITY
HIGH	HIGH	ACTIVITY
HIGH	LOW	ACTIVITY
HIGH	HIGH	ACTIVITY
LOW	LOW	ACTIVITY



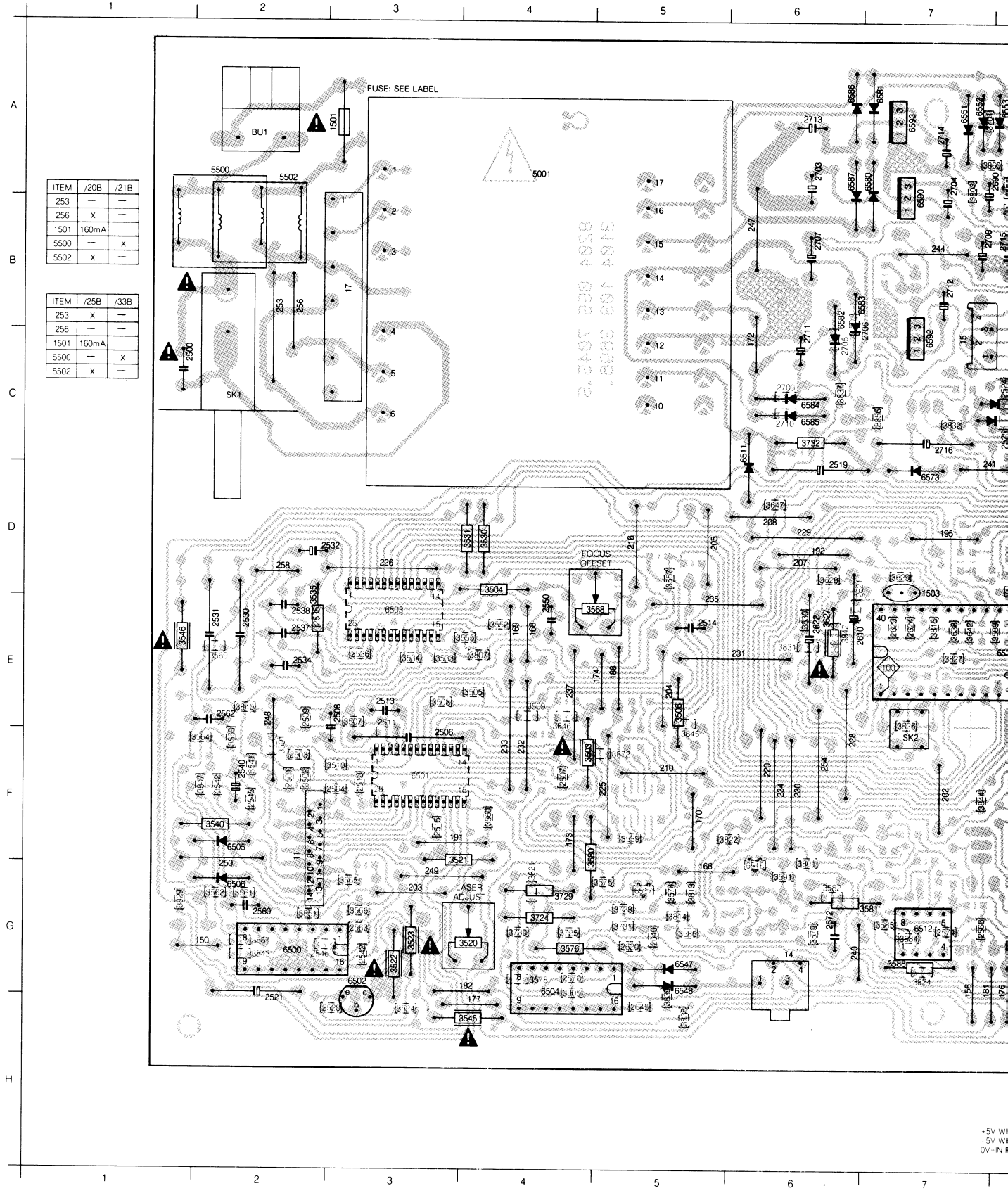
- 100
- 2501 F2
- 2503 E4
- 2504 F3
- 2506 E5
- 2507 E6
- 2508 F9
- 2509 E8
- 2510 E9
- 2511 E8
- 2513 I 10
- 2514 E7
- 2515 G11
- 2520 J3
- 2521 J3
- 2530 C16
- 2531 C16
- 2532 I 16
- 2534 C18
- 2535 I 15
- 2536 I 15
- 2537 I 13
- 2538 C14
- 2540 E21
- 2542 L12
- 2545 E20
- 2546 K12
- 2550 G20
- 2560 K11
- 2561 M9
- 2562 L13
- 2563 L13
- 2566 M15
- 2570 L19
- 2572 L18
- 2574 M15
- 2610 A9
- 2621 A9
- 2622 A7
- 2623 A10
- 2624 A10
- 2693 M16
- 3501 E3
- 3502 F3
- 3503 E4
- 3504 E5
- 3505 E7
- 3506 D6
- 3507 E8
- 3508 E6
- 3509 K10
- 3510 I 10
- 3520 K3
- 3521 K3
- 3522 I 3
- 3523 J2
- 3524 I 3
- 3530 C15
- 3531 C15
- 3533 G19
- 3534 C18
- 3535 C13
- 3539 F11
- 3540 F20
- 3541 F20
- 3542 E21
- 3543 E19
- 3545 J12
- 3546 L12
- 3552 H19
- 3555 G19
- 3557 H20
- 3560 K10
- 3561 K11
- 3562 L11
- 3563 L14
- 3564 L13
- 3565 K13
- 3566 K13
- 3567 K11
- 3568 M12
- 3569 L11
- 3574 N14
- 3575 N15
- 3576 L19
- 3578 M19
- 3579 M18
- 3580 N14
- 3581 M16
- 3582 M17
- 3584 L16
- 3585 L15
- 3586 N13
- 3587 N13
- 3588 M14
- 3589 M14
- 3591 N17
- 3627 A8
- 3628 A8
- 3629 A10
- 3646 C7
- 3647 C9
- 3807 F20
- 3813 N13
- 3814 N18
- 3815 D8
- 3822 B3
- 3826 I 11
- 3829 L10
- 3840 C17
- 3847 K14
- 3851 K10
- 3872 D8
- 6500 D19
- 6500 K11
- 6502 I 3
- 6503 D11
- 6504 M19
- 6505 E20
- 6506 E20
- 6512 M15
- 6516 N17
- 6517 N14
- 6530 A5
- 6547 M20
- 6548 M20

RAD+
TO RADIAL MOTOR
VIA FLEX-PRINT
RAD-

F0C+
TO FOCUS MOTOR
VIA FLEX-PRINT
F0C-

02-3
-10
Vc 02-4
TO TURNABLE MOTOR CIRCUIT

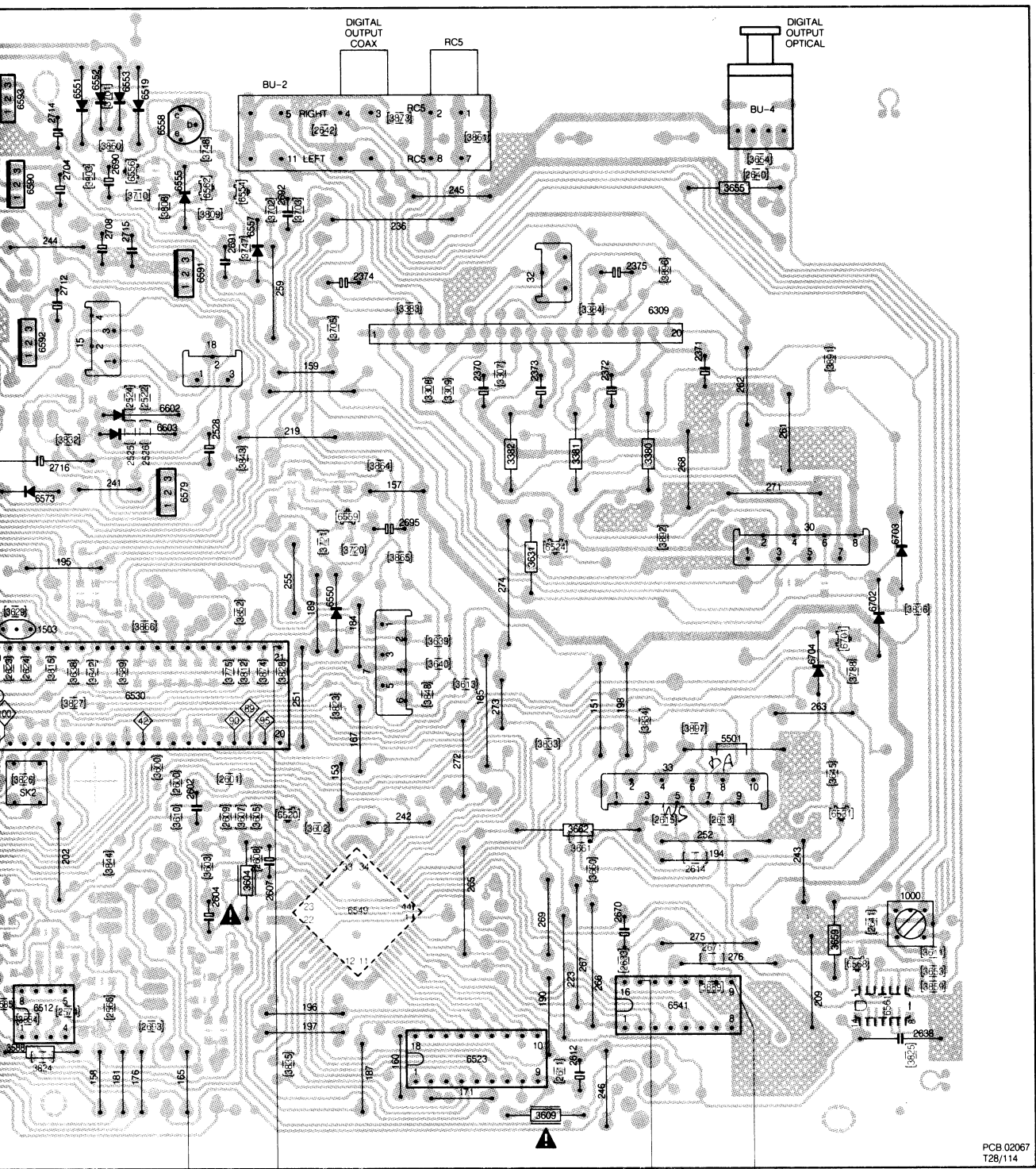
SERVO DECODER PANEL COMPONENT SIDE



ITEM	/20B	/21B
253	X	-
256	X	-
1501	160mA	-
5500	-	X
5502	X	-

ITEM	/25B	/33B
253	X	-
256	-	-
1501	160mA	-
5500	-	X
5502	X	-

-5V W
5V W
0V-N R



A
B
C
D
E
F
G
H

TRAY TRAY
-5V WHEN TRAY IS OPENING 0V - OPENING
-5V WHEN TRAY IS CLOSING 5V - CLOSING
0V - IN REST POS. 2.5V - IN REST POS.

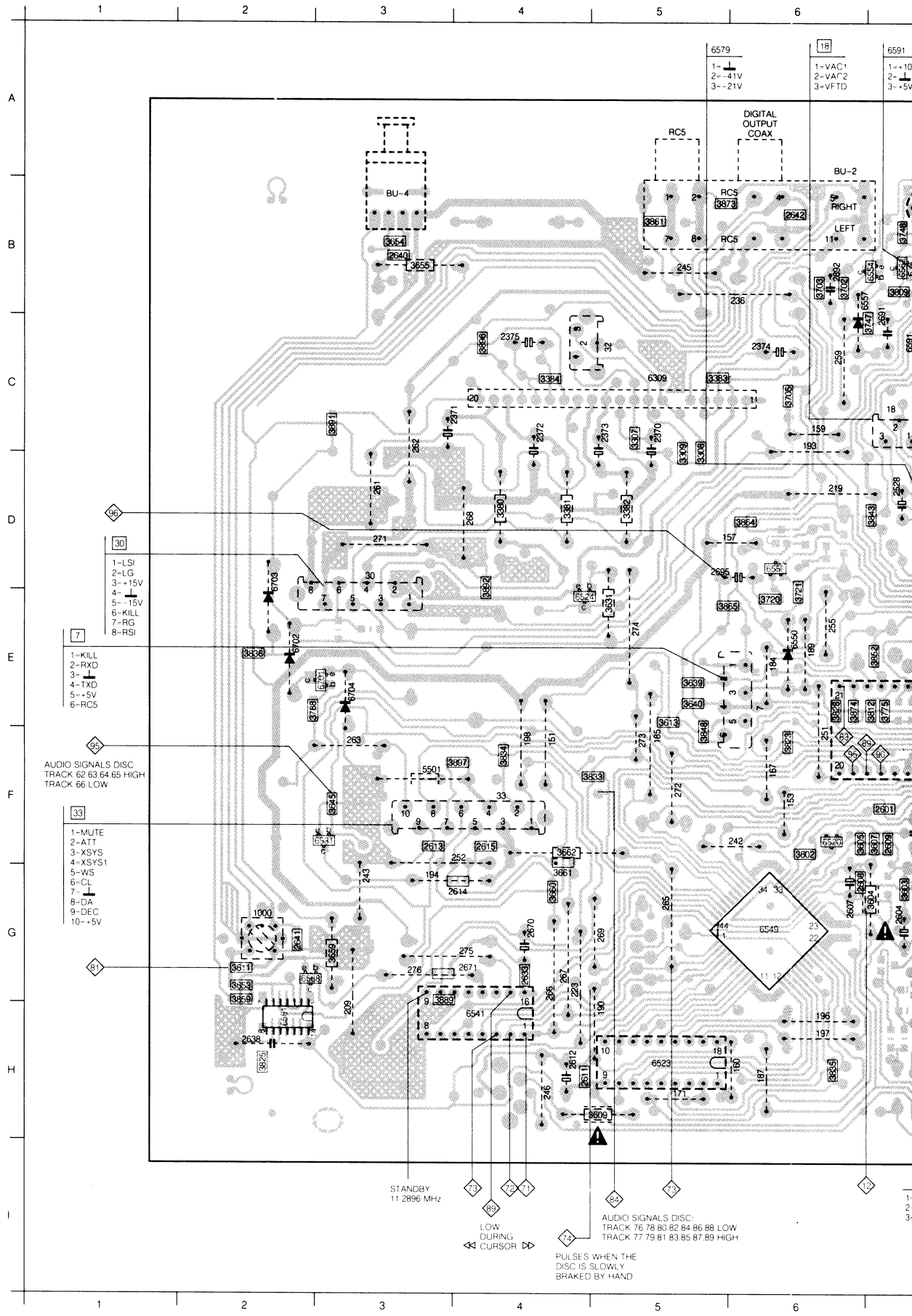
LOW DURING
<< CURSOR >>
STANDBY E3 2896MHZ

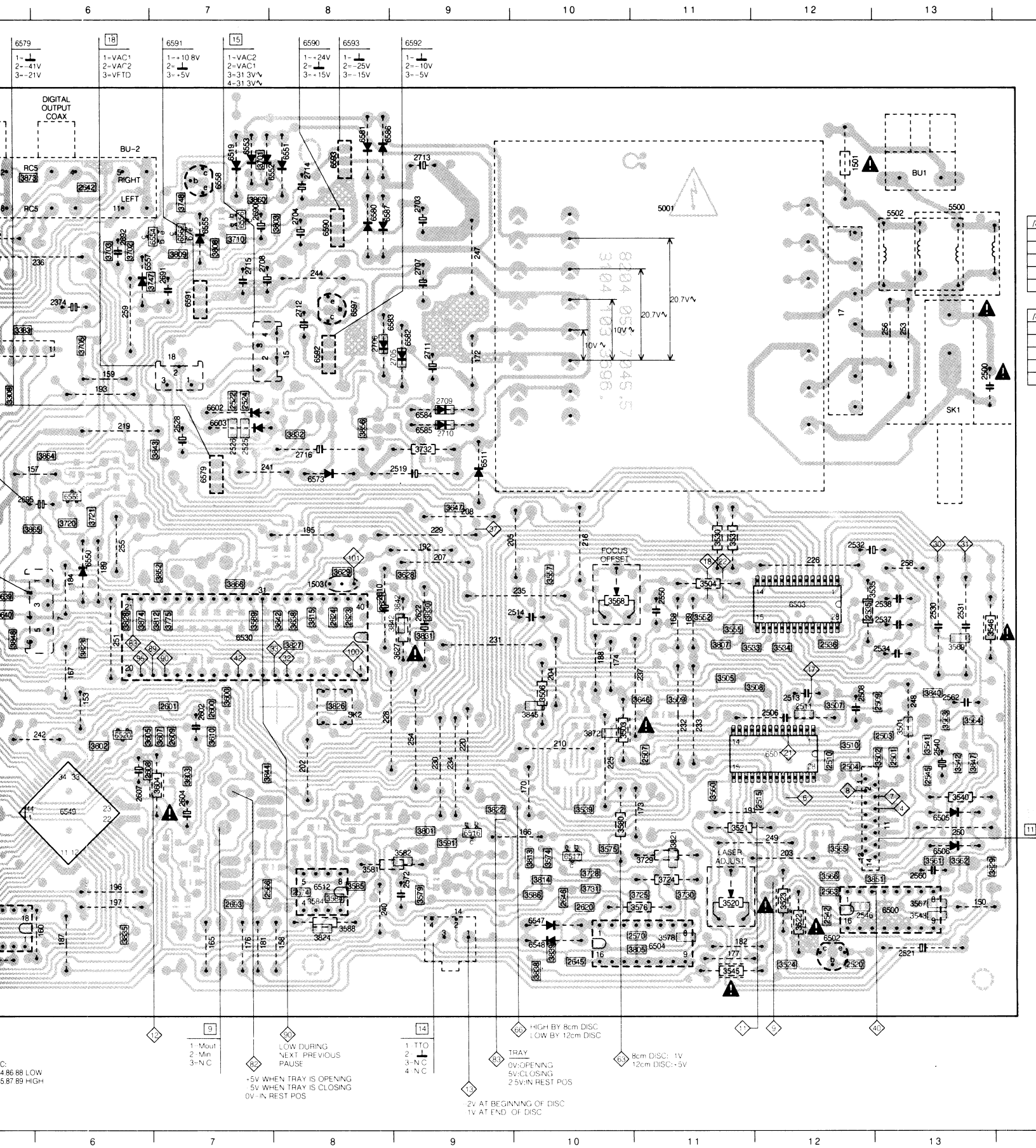
PCB 02067
T28/114

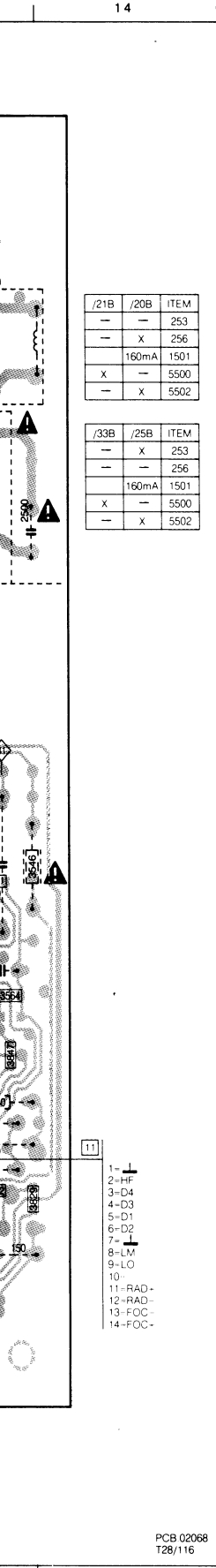
7	E9	2511	E3
11	F2	2512	E3
14	G6	2514	E5
15	C7	2515	F3
17	B3	2519	D6
18	C8	2520	H2
30	D12	2521	H2
32	B10	2522	C8
33	E11	2523	C8
150	G1	2525	C8
151	E11	2526	C8
153	F9	2528	C8
157	D9	2530	E2
158	H7	2531	E2
159	C9	2532	D2
160	G9	2534	E2
165	H8	2535	E2
166	G5	2536	E3
167	E9	2537	E2
168	E4	2538	E2
169	E4	2540	F2
170	F5	2542	G3
171	H10	2545	F2
172	C6	2546	G2
173	F4	2550	E4
174	E5	2560	G2
176	H8	2562	E2
177	H4	2563	G3
181	H7	2565	G7
182	G3	2570	G4
184	E9	2572	G6
185	E10	2574	G7
187	H9	2600	F8
188	E5	2601	F8
189	D9	2602	F8
190	G10	2604	F8
191	F3	2607	F9
192	D6	2608	F8
194	F11	2609	F8
195	D7	2610	E7
196	G9	2611	G10
197	C9	2612	G1
198	E11	2613	F11
202	F7	2614	F11
203	G3	2615	F11
204	E5	2620	G5
205	D5	2621	E7
207	D6	2622	E6
208	D6	2623	E7
209	G12	2624	E7
210	F5	2633	G11
216	D5	2638	G13
219	C9	2640	A12
220	F6	2641	F3
223	G11	2642	A8
225	F5	2645	H5
226	D3	2646	G5
228	F6	2670	F11
229	D6	2671	G11
230	F6	2690	A8
231	E5	2691	B8
232	F4	2692	B9
233	F4	2693	C8
234	F6	2695	D9
235	E5	2703	A6
236	B9	2704	A7
237	E4	2705	C6
240	G6	2706	C7
241	C7	2707	B5
242	F9	2708	B7
243	F12	2709	C6
244	B7	2710	C6
245	B10	2711	C6
246	H11	2712	B7
247	B6	2713	A6
248	F2	2714	A7
249	G3	2715	B8
250	G2	2716	C7
251	E9	3307	C10
252	F11	3308	C10
253	B2	3309	C10
254	F6	3310	C11
255	D9	3381	C11
256	B2	3382	C10
258	D2	3383	B9
259	B9	3384	B11
261	C12	3501	F2
262	C12	3502	F2
263	E12	3503	F4
265	F10	3504	D4
266	G11	3505	E4
267	G11	3506	E5
268	C11	3507	E3
269	F10	3508	E3
271	D12	3509	E4
272	E10	3510	F3
273	E10	3520	G4
274	D10	3521	G3
275	G11	3522	G3
276	G11	3523	G3
BU1	A2	3524	H3
SK1	G2	3530	D4
SK2	F7	3531	D4
1000	F13	3533	E3
1501	A3	3534	E3
1503	D7	3535	E2
2370	C10	3539	F5
2371	C11	3540	F2
2372	C11	3541	F2
2373	C10	3542	F2
2374	B9	3543	G2
2375	B11	3544	H4
2500	C1	3546	E1
2501	F2	3552	A4
2503	F2	3555	E3
2504	F3	3557	D5
2506	F3	3560	F4
2507	F4	3561	G2
2508	E3	3562	G2
2509	F2	3563	F2
2510	F3	3564	F1

7	E9	2511	E3	3565	G3	5502	A2
11	F2	2513	E3	3566	G3	6309	B11
14	G6	2514	E5	3567	G2	6500	G2
15	C7	2515	F3	3568	E4	6501	F3
17	B3	2519	D6	3569	E2	6502	G3
18	C8	2520	H2	3574	G5	6503	E3
30	D12	2521	H2	3575	G5	6504	G4
32	B10	2522	C8	3576	G4	6505	F2
33	E11	2524	C8	3578	G4	6506	G2
150	G1	2525	C8	3579	G6	6511	G6
151	E11	2526	C8	3580	G5	6512	G7
153	F9	2528	C8	3581	G6	6516	G6
157	D9	2530	E2	3582	G6	6517	G5
158	H7	2531	E2	3584	G7	6519	A8
159	C9	2532	D2	3585	G7	6520	F9
160	G8	2534	E2	3586	G5	6523	G10
165	H8	2535	E2	3588	G7	6524	D10
166	G5	2536	E3	3589	E8	6530	E8
167	E9	2537	E2	3591	G6	6531	F12
168	E4	2538	E2	3600	E8	6541	G11
169	E4	2540	F2	3602	F9	6547	G5
170	F5	2542	G3	3603	F8	6548	G5
171	H10	2545	F2	3604	F8	6549	F9
172	C6	2546	G2	3605	F8	6550	D9
173	F4	2550	E4	3607	F8	6551	A7
174	E5	2560	G2	3609	H10	6552	A7
176	H8	2562	E2	3610	F8	6553	A8
177	H4	2563	G3	3611	G13	6554	B8
181	H7	2566	G7	3613	E10	6555	B8
182	G3	2570	G4	3627	E6	6556	A8
184	E9	2572	G6	3628	D6	6557	B8
185	E10	2574	G7	3629	D7	6558	A8
187	H9	2600	F8	3631	D10	6559	D9
188	E5	2601	E8	3638	E7	6561	G13
189	D9	2602	F8	3639	E10	6562	B8
190	G10	2604	F8	3640	E10	6568	G12
191	F3	2607	F9	3642	E7	6573	D7
192	D6	2608	F8	3645	F12	6579	D8
194	F11	2609	F8	3646	F4	6580	A7
195	D7	2610	E7	3647	D6	6581	A7
196	G9	2611	G10	3653	G13	6582	B6
197	G9	2612	G11	3654	A12	6583	B7
198	E11	2613	F11	3655	B12	6584	C6
202	F7	2614	F11	3659	G12	6585	C6
203	G3	2615	F11	3660	F11	6586	A6
204	E5	2620	G5	3661	F11	6587	A6
205	D5	2621	E7	3662	F10	6590	B7
207	D6	2622	E6	3701	A7	6591	B8
208	D6	2623	E7	3702	B9	6592	C7
209	G12	2624	E7	3703	B9	6593	A7
210	F5	2633	G11	3705	C9	6602	C8
216	D5	2638	G13	3710	B8	6603	C8
219	C9	2640	A12	3720	D9	6701	E12
220	F6	2641	F13	3721	D9	6702	D13
223	G11	2642	A9	3724	G4	6703	D13
225	F5	2645	H5	3725	G4	6704	E12
226	D3	2646	G5	3728	G5	BU-2	A8
228	F6	2670	F11	3729	G4	BU-4	A12
229	D6	2671	G11	3730	G4		
230	F6	2690	A8	3731	G5		
231	E5	2691	B8	3732	C6		
232	F4	2692	B9	3747	B8		
233	F4	2693	G8	3748	A8		
234	F6	2695	D9	3775	E8		
235	E5	2703	A6	3788	E12		
236	B9	2704	A7	3801	G6		
237	E4	2705	C6	3803	B7		
240	G6	2706	C7	3805	H4		
241	C7	2707	B6	3807	E4		
242	F9	2708	B7	3808	B8		
243	F12	2709	C6	3809	B8		
244	B7	2710	C6	3812	E8		
245	B10	2711	C6	3813	G5		
246	H11	2712	B7	3814	G5		
247	B6	2713	A6	3815	E7		
248	F2	2714	A7	3821	G4		
249	G3	2715	B8	3822	F5		
250	G2	2716	C7	3823	E9		
251	E9	3307	C10	3824	G7		
252	F11	3308	C10	3825	G13		
253	B2	3309	C10	3826	E7		
254	F6	3380	C11	3827	E7		
255	B9	3381	C11	3828	E9		
256	B2	3382	C10	3829	G1		
258	D2	3383	B9	3830	E6		
259	B9	3384	B11	3831	E6		
261	C12	3501	F2	3832	C7		
262	C12	3502	F2	3833	E10		
263	E12	3503	F4	3834	F11		
265	I0	3504	D4	3835	G9		
266	G11	3505	E4	3836	D13		
267	G11	3506	E5	3837	C6		
268	C11	3507	E3	3838	H5		
269	F10	3508	E3	3839	H5		
271	D12	3509	E4	3840	E2		
272	E10	3510	F3	3842	E6		
273	E10	3520	G4	3843	C8		
274	D10	3521	G3	3844	F7		
275	G11	3522	G3	3845	F5		
276	G11	3523	G3	3847	F2		
BU1	A2	3524	H3	3848	E10		
SK1	G2	3530	D4	3851	G2		
SK2	F7	3531	D4	3852	D8		
1000	F13	3533	E3	3856	C7		
1501	A3	3534	E3	3859	G13		
1503	D7	3535	E2	3860	A7		
2370	C10	3539	F5	3861	A10		
2371	C11	3540	F2	3864	C9		
2372	C11	3541	F2	3865	D9		
2373	C10	3542	F2	3866	D8		
2374	B9	3543	G2	3872	F5		
2375	B11	3545	H4	3873	A9		
2500	C1	3546	E1	3874	E8		
2501	F2	3552	E4	3889	G11		
2503	F2	3555	E3	3891	C12		
2504	F3	3557	D5	3892	D11		
2506	F3	3560	F4	3896	B11		
2507	F4	3561	G2	3897	E11		
2508	E3	3562	G2	5001	A4		
2509	F2	3563	F2	5500	A2		
2510	F3	3564	F1	5501	E12		

SERVO DECODER PANEL SOLDER SIDE







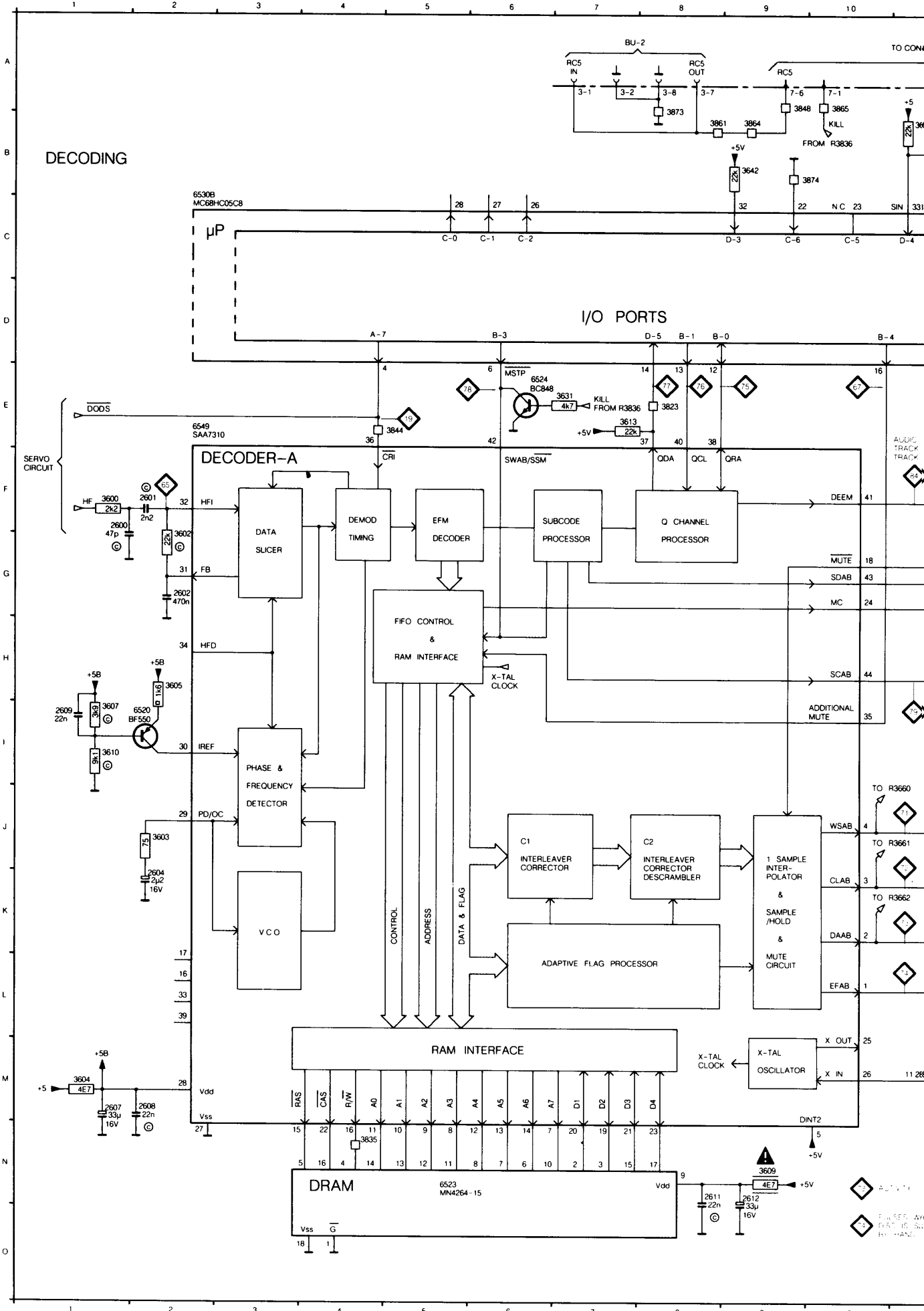
/21B	/20B	ITEM
--	--	253
--	X	256
X	--	1501
X	--	5500
--	X	5502

/33B	/25B	ITEM
--	X	253
--	--	256
X	--	1501
--	X	5502

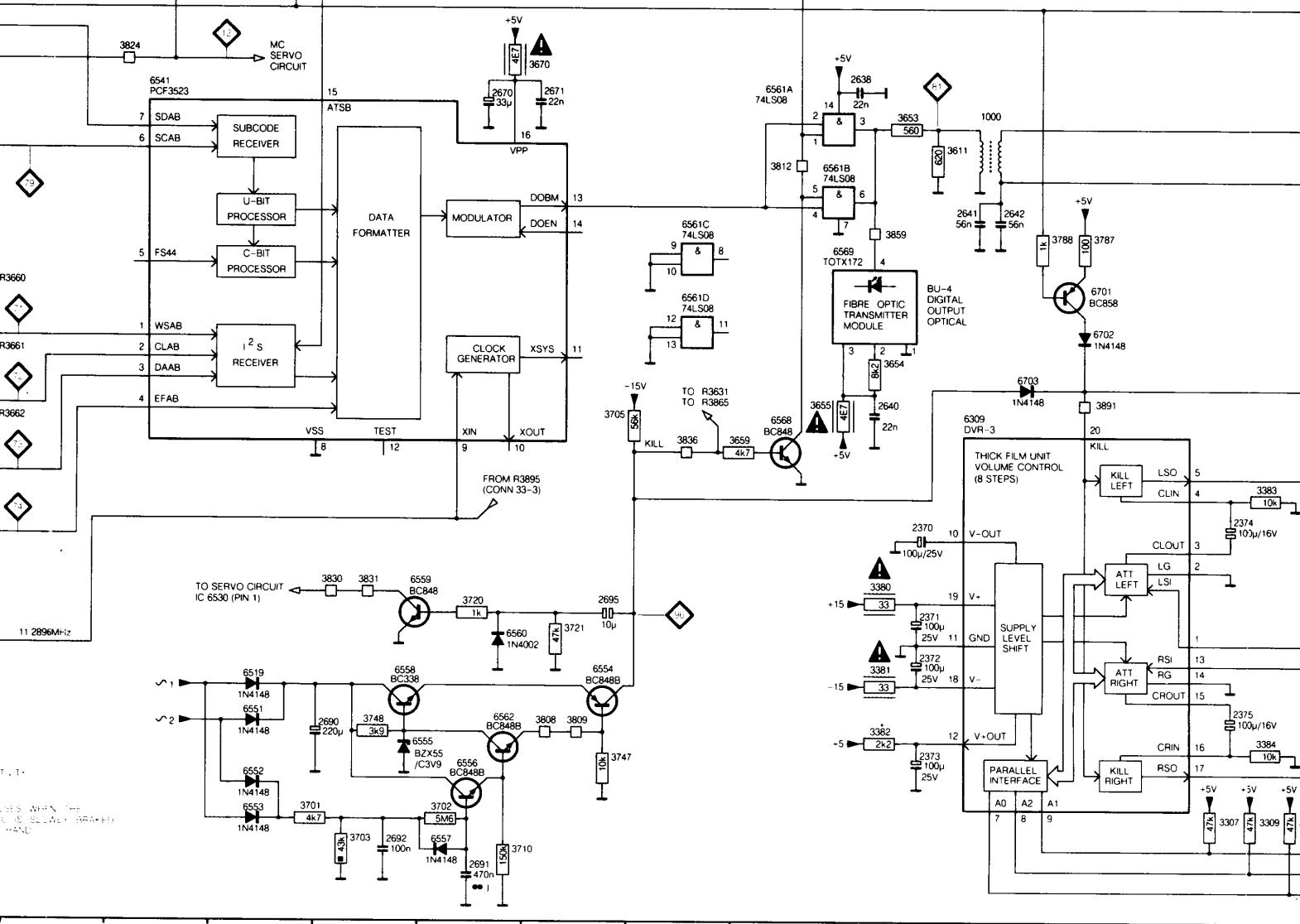
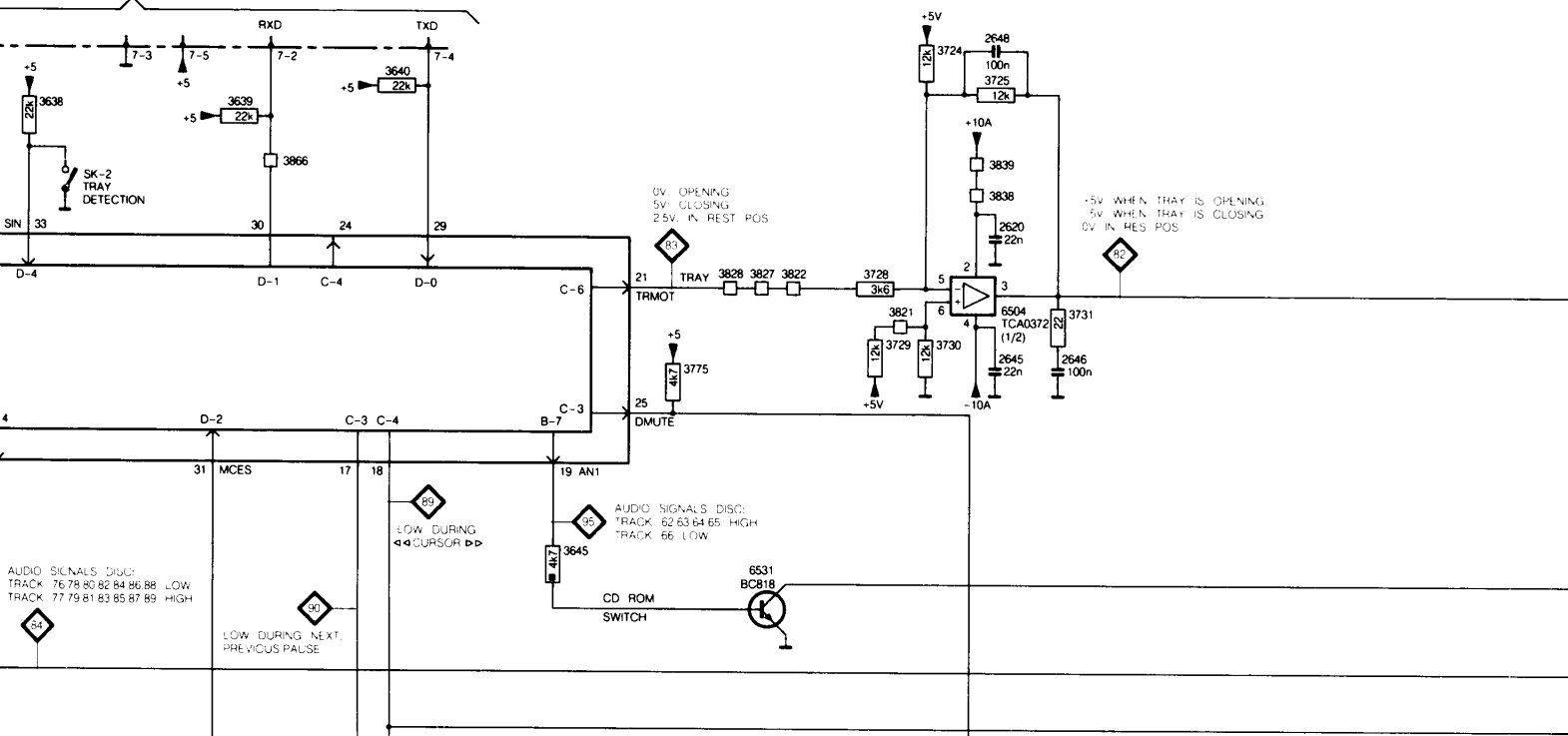
7 E6	2513 F12	3505 F11	3661 G4	3889 G3
11 G13	2514 E9	3505 F11	3661 G4	3889 G3
14 H9	2515 G12	3506 F10	3662 F4	3891 C3
15 C8	2515 G12	3507 F12	3701 B7	3892 E4
17 C12	2519 D8	3507 F12	3701 B7	3892 E4
18 C7	2520 H12	3508 F11	3702 B6	3896 C4
30 D3	2520 H12	3508 F11	3702 B6	3896 C4
32 C5	2521 H13	3509 F11	3703 B6	3897 F3
33 F4	2522 D7	3509 F11	3703 B6	3897 F3
150 H13	2522 D7	3510 F12	3705 C6	5001 B11
151 F4	2524 D7	3510 F12	3705 C6	5000 B13
153 F6	2524 D7	3520 H11	3710 B7	5501 F3
157 D5	2525 D7	3521 G11	3710 B7	5502 B13
158 H8	2526 D7	3522 H12	3720 E6	6309 C5
159 C6	2528 D7	3523 H12	3720 E6	6500 H13
160 H6	2530 E13	3524 H12	3721 E6	6501 G12
165 H7	2531 E13	3524 H12	3721 E6	6502 H12
166 G10	2532 E12	3530 E11	3724 H11	6503 E12
167 F6	2534 F13	3531 E11	3725 H10	6504 H11
168 E11	2535 E12	3533 F11	3725 H10	6505 G13
169 E11	2535 E12	3533 F11	3728 G10	6506 G13
170 G10	2536 F12	3534 F12	3728 G10	6511 D9
171 H5	2536 F12	3534 F12	3729 G11	6512 H8
172 C9	2537 E13	3535 E13	3730 H11	6516 G9
173 G11	2538 E13	3539 G10	3730 H11	6517 G10
174 F10	2540 F13	3539 G10	3731 H10	6519 B7
176 H7	2542 H12	3540 G13	3731 H10	6520 F6
177 H11	2542 H12	3541 F13	3732 D9	6523 H5
181 H7	2545 G13	3541 F13	3747 C7	6524 E4
182 H11	2545 G13	3542 G13	3747 C7	6530 F7
184 E6	2546 H12	3542 G13	3748 B7	6531 F2
185 F5	2546 H12	3543 H13	3748 B7	6541 H4
187 H6	2550 E11	3543 H13	3775 E7	6547 H10
188 F0	2560 H13	3545 H11	3775 E7	6548 H10
189 E6	2562 F13	3546 F13	3788 E3	6549 G6
190 H5	2563 H12	3552 E11	3788 E3	6550 E6
191 G11	2563 H12	3552 E11	3801 G9	6551 B8
192 E9	2566 H7	3555 E11	3801 G9	6552 B8
193 C6	2566 H7	3555 E11	3803 B8	6553 A7
194 G3	2570 H10	3557 E10	3803 B8	6554 B7
195 E8	2570 H10	3557 E10	3805 H10	6555 B7
196 H6	2572 H9	3560 G11	3805 H10	6556 B7
197 H6	2574 H8	3560 G11	3807 F11	6557 B7
198 F4	2574 H8	3561 G13	3807 F11	6558 B7
202 G8	2600 F7	3561 G13	3808 B7	6559 D6
203 G12	2600 F7	3562 G13	3808 B7	6561 H2
204 F10	2601 F7	3562 G13	3809 B7	6562 B7
205 E10	2603 F7	3563 F13	3809 B7	6568 G2
207 E9	2602 F7	3563 F13	3812 E7	6573 D8
208 D9	2604 G7	3564 F13	3812 E7	6579 D7
209 H3	2607 G6	3564 F13	3813 G10	6580 B8
210 F10	2608 G6	3565 G12	3813 G10	6581 A8
216 E10	2608 G6	3565 G12	3814 H10	6582 C9
219 D6	2609 F7	3566 H12	3814 H10	6583 C9
220 G9	2609 F7	3566 H12	3815 E9	6584 D9
223 H4	2610 E8	3567 H13	3815 E8	6585 D9
225 G10	2611 H4	3567 H13	3821 G11	6586 A9
226 E12	2611 H4	3568 E10	3821 G11	6587 B8
228 F8	2612 H4	3569 F13	3822 G9	6590 B8
229 E9	2613 F3	3569 F13	3822 G9	6591 C7
230 G9	2613 F3	3574 G10	3823 F6	6592 C8
231 G9	2613 F3	3574 G10	3823 F6	6593 B8
232 F11	2614 G3	3575 G10	3824 H8	6593 B8
233 F11	2615 F4	3575 G10	3824 H8	6597 C8
234 G9	2615 F4	3576 H10	3825 H2	6602 D7
235 E9	2620 H10	3578 H11	3825 H2	6603 D7
236 B5	2620 H10	3578 H11	3826 F8	6701 E3
237 F11	2621 F11	3579 H9	3826 F8	6702 E2
240 H8	2621 E8	3579 H9	3827 F8	6703 E2
241 D7	2622 E9	3580 G10	3827 F8	6704 E3
242 F5	2623 E8	3581 G8	3828 E6	BU-2 A6
243 G3	2623 E8	3582 G9	3828 E6	BU-4 B3
244 C8	2624 E8	3582 G9	3829 G13	
245 B5	2624 E8	3584 H8	3829 G13	
246 H4	2631 G4	3584 H8	3830 E9	
247 B9	2633 G4	3585 H8	3831 F9	
248 F13	2638 H2	3585 H8	3831 F9	
249 G12	2640 B3	3586 H10	3832 D8	
250 G13	2640 B3	3586 H10	3832 D8	
251 F6	2641 G2	3588 H8	3833 F4	
252 F3	2641 G2	3589 E7	3833 F4	
253 C13	2642 B6	3589 E7	3834 F4	
254 F9	2642 B6	3591 G9	3834 F4	
255 E6	2645 H10	3591 G9	3835 H6	
256 C13	2645 H10	3600 F7	3835 H6	
258 E13	2646 H10	3600 F7	3836 E2	
259 C6	2646 H10	3602 F6	3836 E2	
261 D3	2641 G4	3602 F6	3838 H10	
262 D3	2671 G4	3603 G7	3838 H10	
263 F3	2671 G4	3603 G7	3839 H10	
265 G5	2690 B7	3604 G7	3839 H10	
266 H4	2691 C7	3605 F6	3840 F13	
267 G4	2692 B6	3605 F6	3840 F13	
268 D4	2693 H7	3607 F7	3842 E9	
269 G5	2693 H7	3607 F7	3842 E9	
271 D3	2695 D5	3609 H4	3843 D7	
272 F5	2703 B9	3610 F7	3843 D7	
273 F5	2704 B8	3610 F7	3844 G7	
274 E5	2705 C9	3611 G2	3844 G7	
275 G4	2705 C9	3611 G2	3845 F10	
276 G3	2706 C9	3613 E5	3845 F10	
BU1 B13	2706 C8	3613 E5	3847 G13	
SK1 D13	2707 B9	3627 F9	3847 G13	
SK2 F8	2708 B7	3628 E9	3848 F5	
1000 G2	2709 D9	3628 E9	3848 F5	
1501 B12	2710 D9	3629 E8	3851 H12	
1503 E8	2711 D9	3629 E8	3851 H12	
2370 C5	2712 C9	3631 E5	3852 E7	
2371 C4	2713 B9	3638 E8	3852 E7	
2372 C4	2714 B8	3638 E8	3856 D8	
2373 C5	2715 B7	3639 E5	3856 D8	
2374 C6	2716 D8	3639 E5	3859 G2	
2375 C4	3307 C5	3640 E5	3859 G2	
2500 C13	3307 C5	3640 E5	3860 B7	
2501 G13	3308 D5	3642 E8	3860 B7	
2501 G13	3308 D5	3642 E8	3861 B5	
2503 F13	3309 D5	3645 F3	3861 B5	
2503 F13	3309 D5	3645 F3	3864 D6	
2504 G12	3380 D4	3646 F11	3864 D6	
2504 G12	3381 D4	3646 F11	3865 E5	
2506 F12	3382 D5	3647 D9	3865 E5	
2507 G11	3383 C5	3647 D9	3866 E7	
2507 G11	3383 C5	3653 G2	3866 E7	
2508 F12	3384 C4	3653 G2	3872 F10	
2509 F13	3384 C4	3654 B3	3872 F10	
2509 F13	3501 F13	3654 B3	3873 B5	
2510 G12	3501 F13	3655 B3	3873 B5	
2510 G12	3502 G13	3659 G3	3874 E6	
2511 F12	3503 F10	3660 G4	3874 E6	
2511 F12	3504 E11	3660 G4	3889 G3	

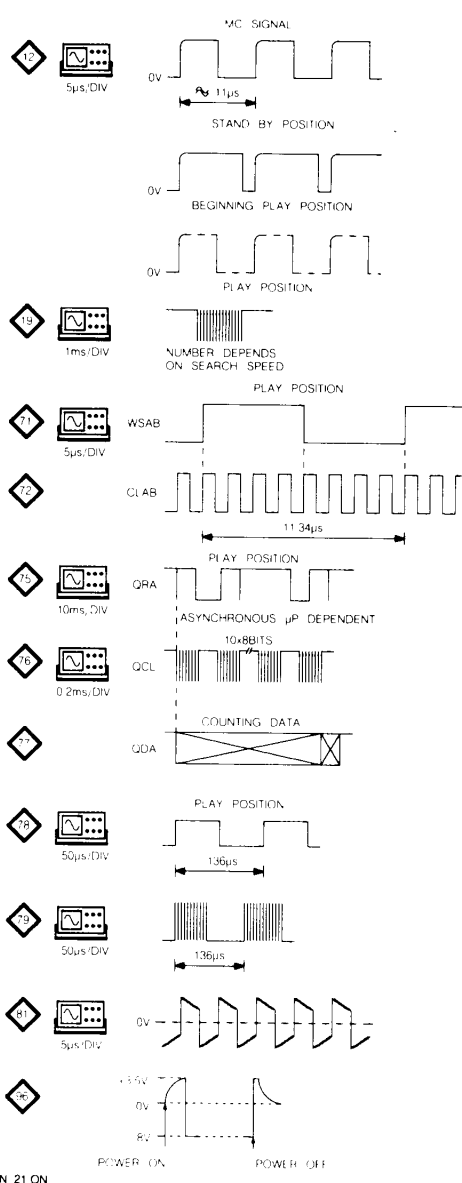
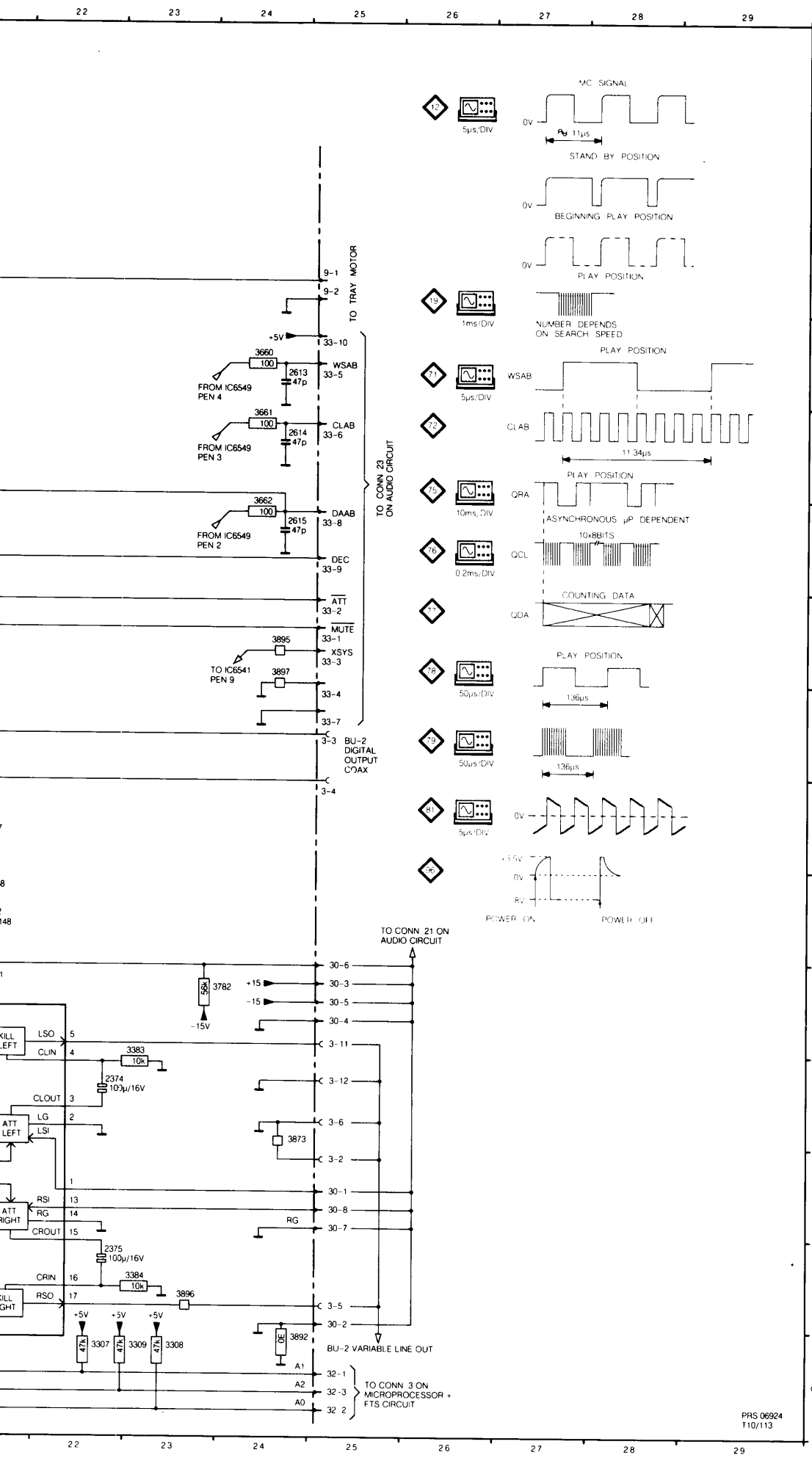
PCB 02068
T28/116

DECODING CIRCUIT DIAGRAM



TO CONN 4 ON MICROPROCESSOR + FTS CIRCUIT

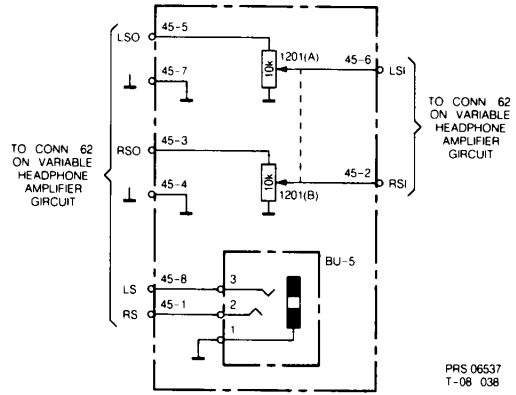
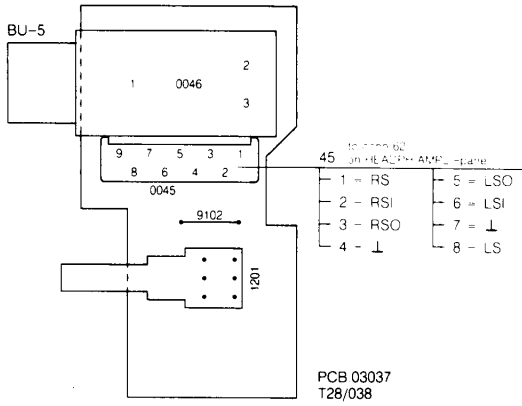




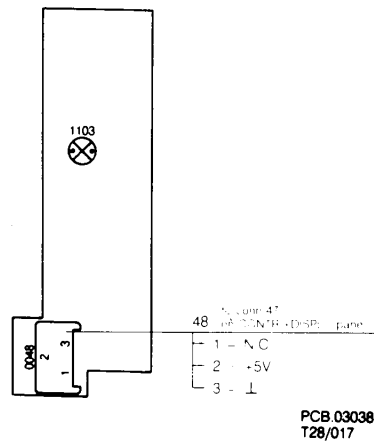
- 1000 H20
- 2370 L19
- 2371 M19
- 2372 M19
- 2373 M19
- 2374 L22
- 2375 N22
- 2600 F1
- 2601 F2
- 2602 G2
- 2604 K2
- 2607 M1
- 2608 M2
- 2609 I1
- 2611 N8
- 2612 N9
- 2613 D24
- 2614 E24
- 2615 F24
- 2620 C18
- 2638 H19
- 2640 K19
- 2641 I20
- 2642 I20
- 2645 D18
- 2646 D19
- 2648 A18
- 2670 H15
- 2671 H16
- 2690 N14
- 2691 O15
- 2692 O14
- 2695 M16
- 3307 O22
- 3308 O23
- 3309 O23
- 3380 L19
- 3381 M19
- 3382 N19
- 3383 K23
- 3384 N23
- 3600 F1
- 3602 G2
- 3603 J2
- 3604 M1
- 3605 H2
- 3607 I1
- 3609 N9
- 3610 I1
- 3611 H20
- 3613 E7
- 3631 E7
- 3638 B11
- 3639 B12
- 3640 A14
- 3642 B9
- 3645 E15
- 3653 H19
- 3654 J19
- 3655 K18
- 3659 K18
- 3660 D24
- 3661 E24
- 3662 F24
- 3670 G16
- 3701 O13
- 3702 O15
- 3703 O14
- 3705 K16
- 3710 O15
- 3720 M15
- 3721 M16
- 3724 A18
- 3725 A18
- 3728 C17
- 3729 D18
- 3730 D18
- 3731 C19
- 3747 N16
- 3748 N14
- 3775 D16
- 3782 K23
- 3787 I21
- 3788 I21
- 3808 N16
- 3809 N16
- 3812 H18
- 3821 C18
- 3822 C17
- 3823 E8
- 3824 G12
- 3827 C17
- 3828 C16
- 3830 L14
- 3831 L14
- 3835 N4
- 3836 K17
- 3838 B18
- 3839 B18
- 3844 E5
- 3848 A9
- 3859 I19
- 3861 B8
- 3864 B9
- 3865 A10
- 3866 B13
- 3873 B8
- 3873 L24
- 3874 B10
- 3891 K21
- 3892 O24
- 3895 G24
- 3896 H23
- 3897 G24
- 6309 K20
- 6519 M13
- 6520 I2
- 6523 N5
- 6524 E6
- 6531 E17
- 6541 H12
- 6549 E2
- 6551 N13
- 6552 N13
- 6553 O13
- 6554 M16
- 6555 N14
- 6556 N15
- 6557 O15
- 6558 M14
- 6559 L15
- 6560 M15
- 6562 N15
- 6568 K18
- 6569 I18
- 6701 J21
- 6702 J21
- 6703 J20
- SK 2 B11
- 6530B C2
- 6561A H18
- 6561B H18
- 6561C I17
- 6561D J17

PRS 06924
T10/113

VARIABLE HEADPHONE



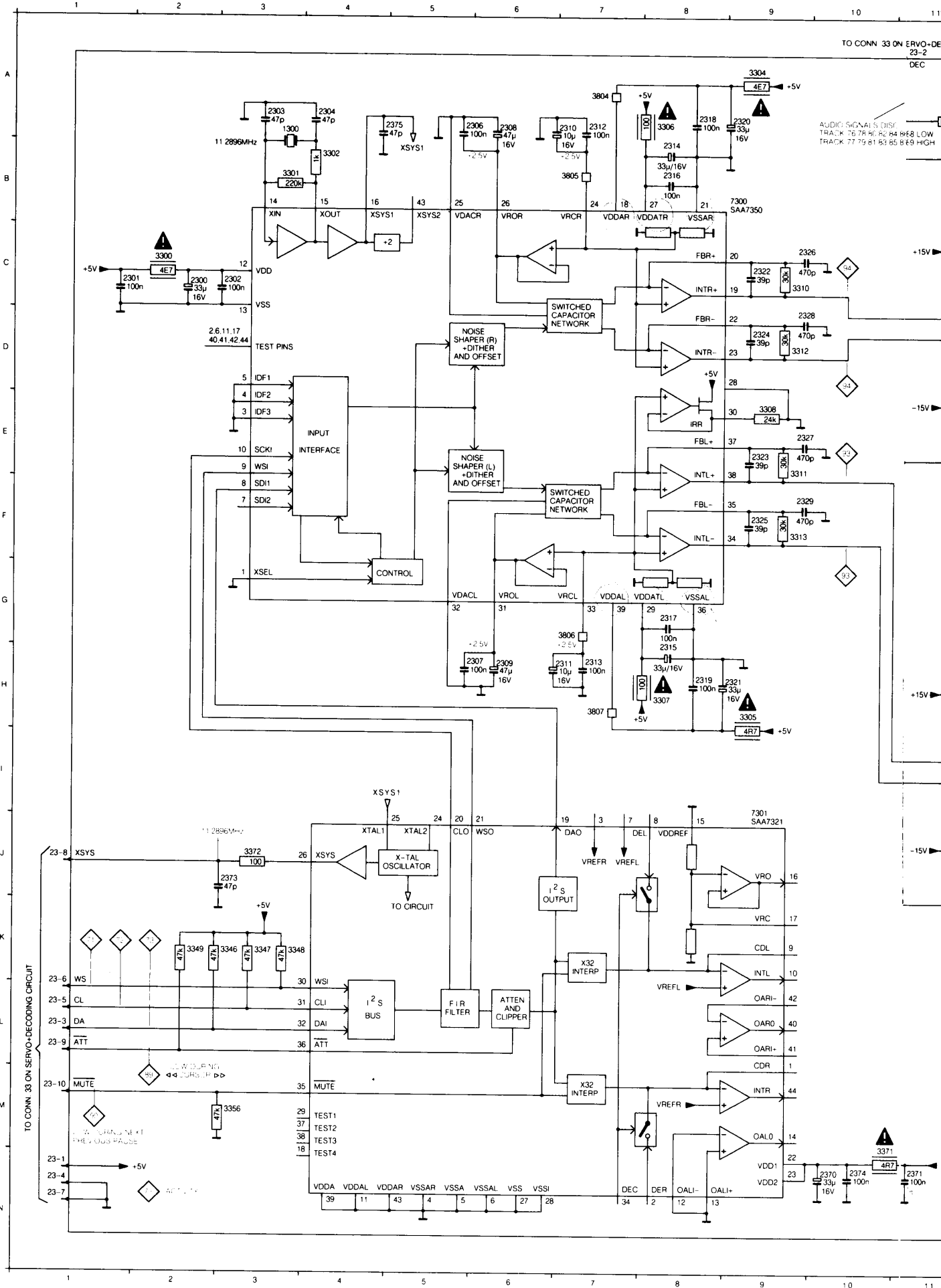
LIGHTING

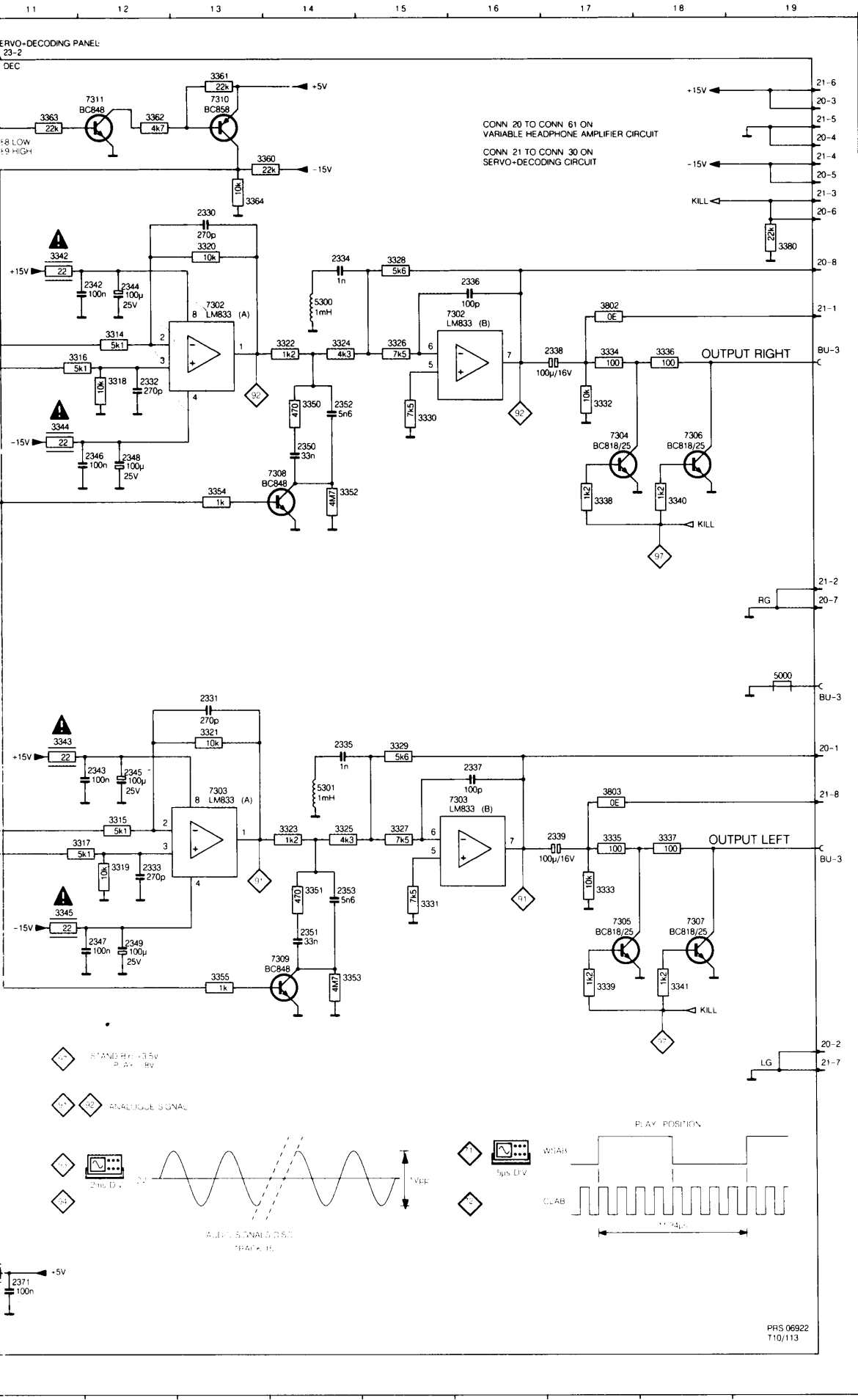


A
B
C
D
E
F
G
H
I
J
K
L
M
N

TO CONN 33 ON SERVO-DECODING CIRCUIT

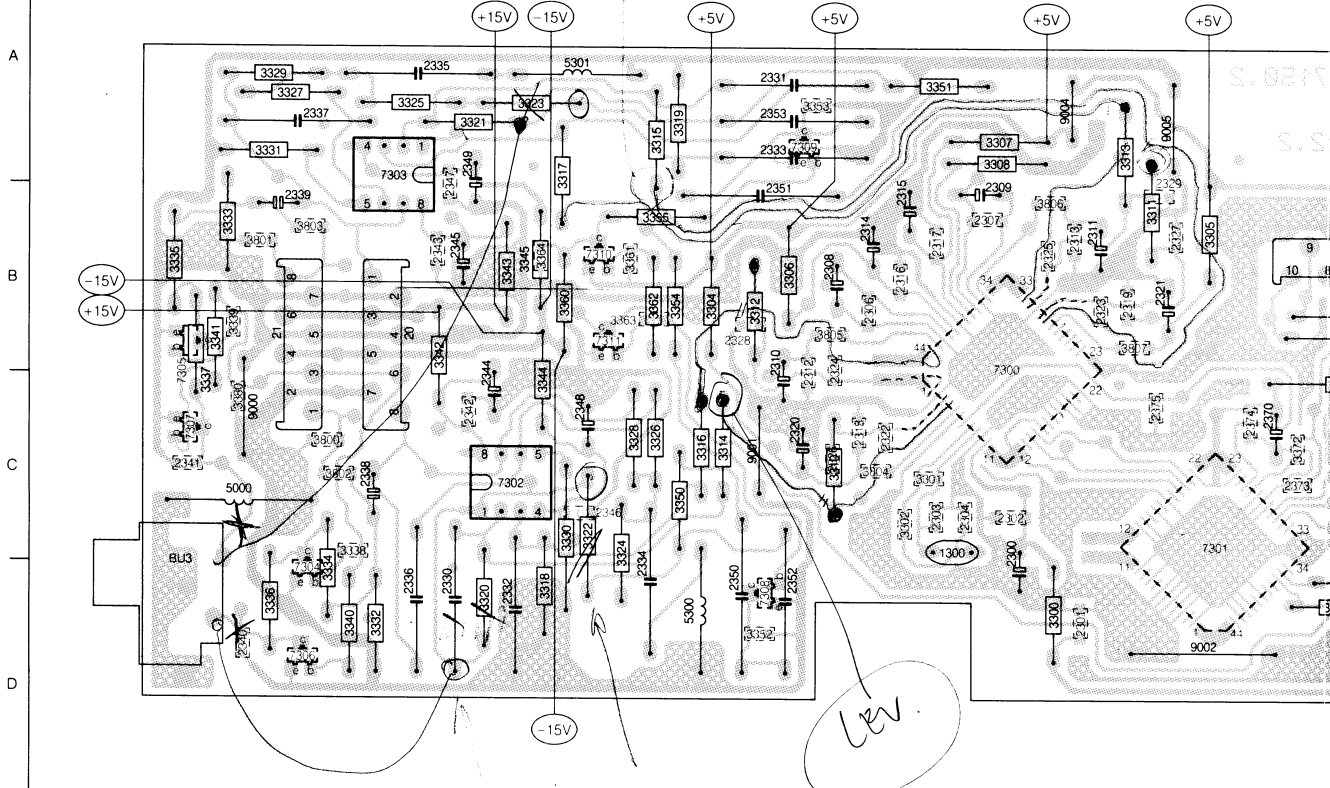
AUDIO CIRCUIT DIAGRAM





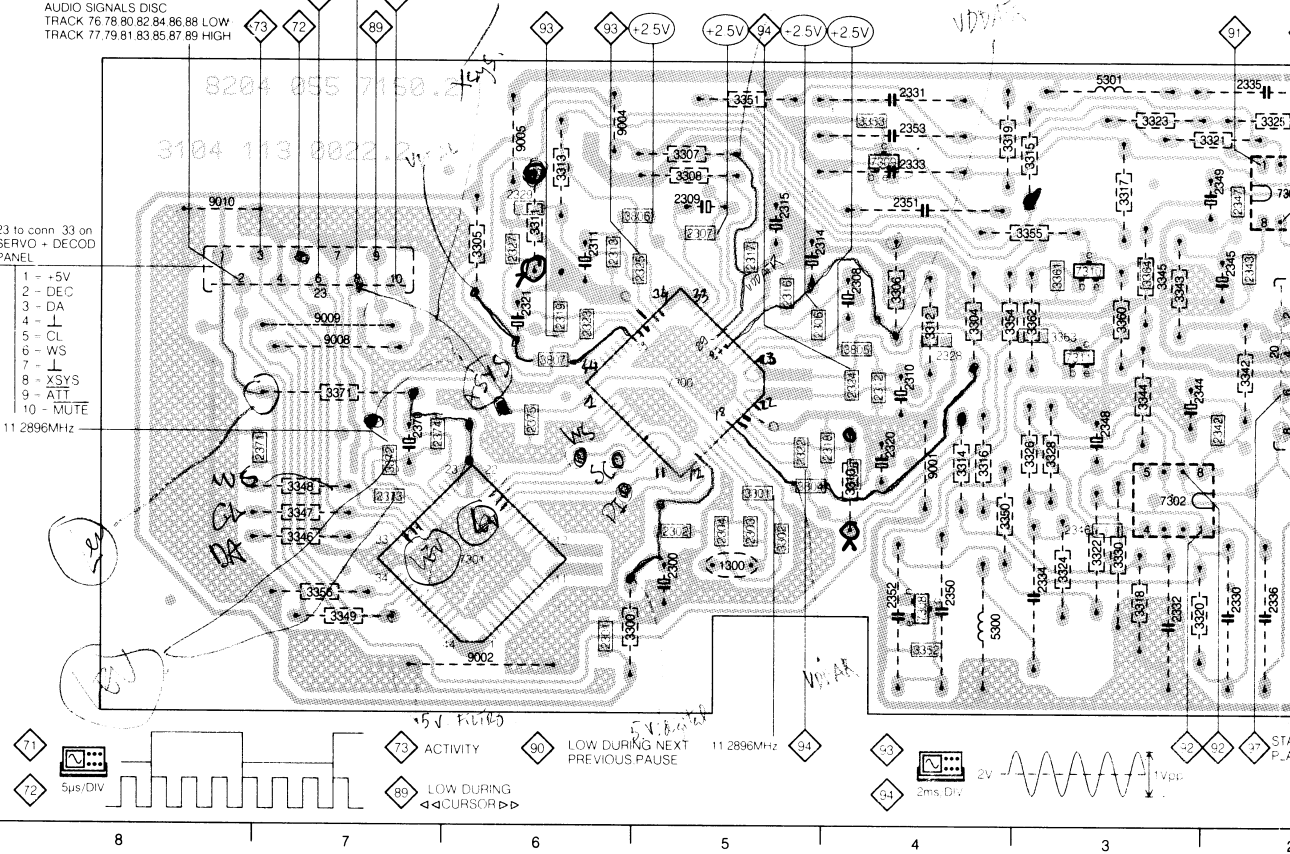
1300	A3
2300	C2
2301	C1
2302	C3
2303	A3
2304	A4
2306	A5
2307	H5
2308	A6
2309	H6
2310	A7
2311	H7
2312	A7
2313	H7
2314	B8
2315	H8
2316	B8
2317	B8
2318	A8
2319	H8
2320	A9
2321	H9
2322	C9
2323	E9
2324	D9
2325	F9
2326	C9
2327	E9
2328	D9
2329	F9
2330	B13
2331	G13
2332	D12
2333	I12
2334	C14
2335	H14
2336	C16
2337	H16
2338	D17
2339	I17
2342	C12
2343	H12
2344	C12
2345	H12
2346	E12
2347	J12
2348	E12
2349	J12
2350	E14
2351	J14
2352	D14
2353	J14
2370	N10
2371	N1
2373	J3
2374	N10
2375	A4
3300	C2
3301	G3
3302	B4
3304	A9
3305	H9
3306	A8
3307	H8
3308	E9
3311	E9
3312	D9
3313	F9
3314	C12
3315	I12
3316	D11
3317	I11
3318	D12
3319	I12
3320	C13
3321	H13
3322	D14
3323	I14
3324	D14
3325	I14
3326	D15
3327	I15
3328	C15
3329	H15
3330	D15
3331	J15
3332	D17
3333	J17
3334	D17
3335	I17
3336	D18
3337	I18
3338	E17
3339	K17
3340	E18
3341	K18
3342	C11
3343	H11
3344	D11
3345	J11
3346	K3
3347	K3
3348	K3
3349	K2
3350	D14
3351	J14
3352	E14
3353	J14
3354	E13
3355	J13
3356	M3
3360	B14
3361	A13
3362	A12
3363	A11
3364	B13
3371	M10
3372	J3
3380	C19
3802	C17
3803	H17
3804	A7
3805	B7
3806	G7
3807	H7
5000	G19
5300	C14
5301	H14
7300	B9
7301	I9
7302	C13
7302	C15
7303	H13
7303	I15
7304	E17
7305	J17
7306	E18
7307	J18
7308	E14
7309	J14
7310	A13
7311	A12

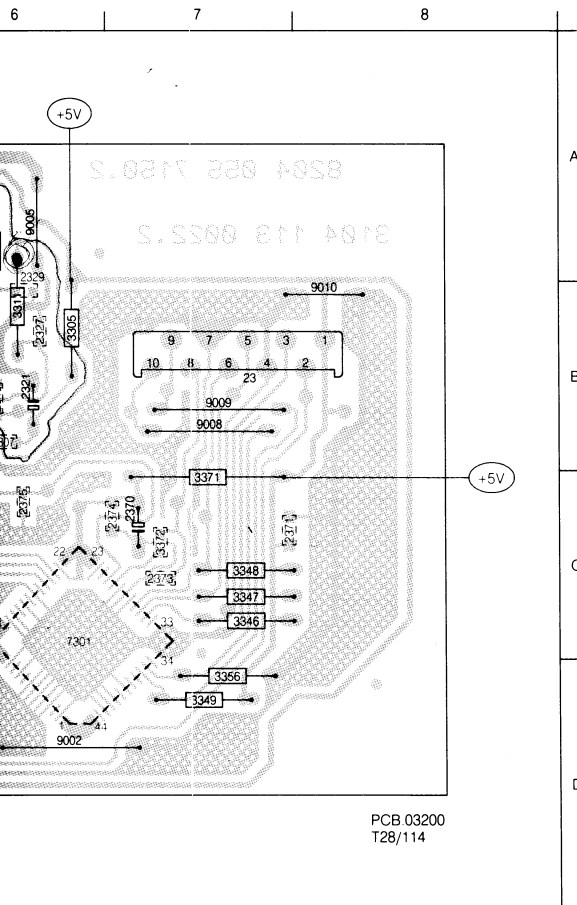
AUDIO PANEL COMPONENT SIDE



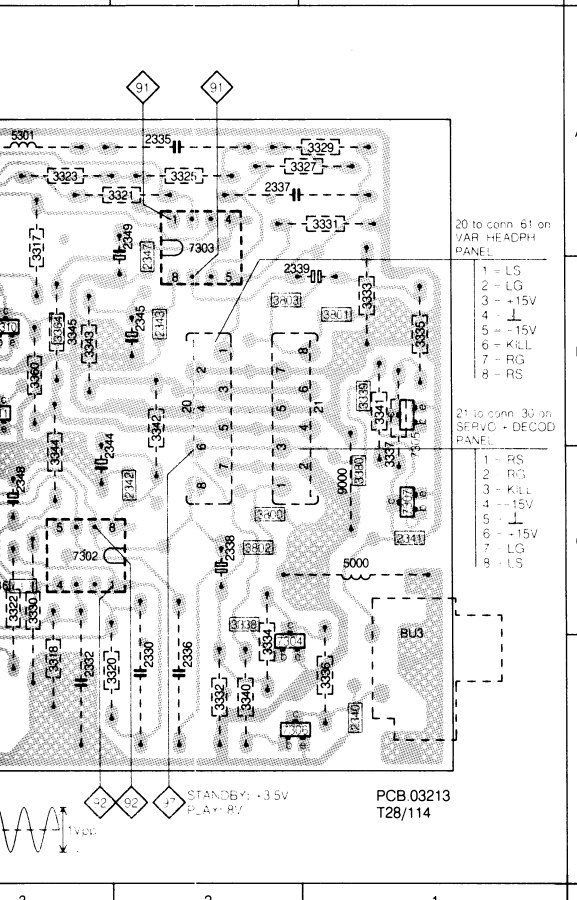
20 B2	1	2307 B5	2	2340 D1	3	2351 B4	4	3316 C4	5	3327 A1	6	3338 C2	7	3363 B3
21 B1	2	2308 B4	3	2341 C1	4	2352 D4	5	3317 B3	6	3328 C3	7	3339 B1	8	3364 B3
23 B7	3	2309 B5	4	2342 C2	5	2353 A4	6	3318 D3	7	3329 A1	8	3340 D2	9	3371 C7
BU3 D1	4	2310 C4	5	2343 B3	6	2370 C7	7	3319 A4	8	3330 C3	9	3341 B1	10	3372 C7
1300 C5	5	2311 B6	6	2344 C3	7	2371 D7	8	3320 B5	9	3331 A1	10	3342 B2	11	3380 C1
2300 D5	6	2312 C4	7	2345 B2	8	2372 C7	9	3321 A2	10	3332 D2	11	3343 C3	12	3381 B1
2301 D6	7	2313 B6	8	2346 C3	9	2373 C7	10	3322 C3	11	3333 B1	12	3344 C3	13	3382 C2
2302 C5	8	2314 B5	9	2347 B2	10	2374 C7	11	3323 A3	12	3334 D2	13	3345 B3	14	3383 C2
2303 C5	9	2315 B5	10	2348 C3	11	2375 C6	12	3324 D3	13	3335 B1	14	3346 C7	15	3380 C2
2304 C5	10	2316 B5	11	2349 A2	12	3301 C5	13	3325 A2	14	3336 D1	15	3347 C7	16	3380 C2
2306 B5	11	2317 B5	12	2350 D4	13	3302 C5	14	3326 C3	15	3337 C1	16	3348 C7	17	3805 B4

SOLDER SIDE



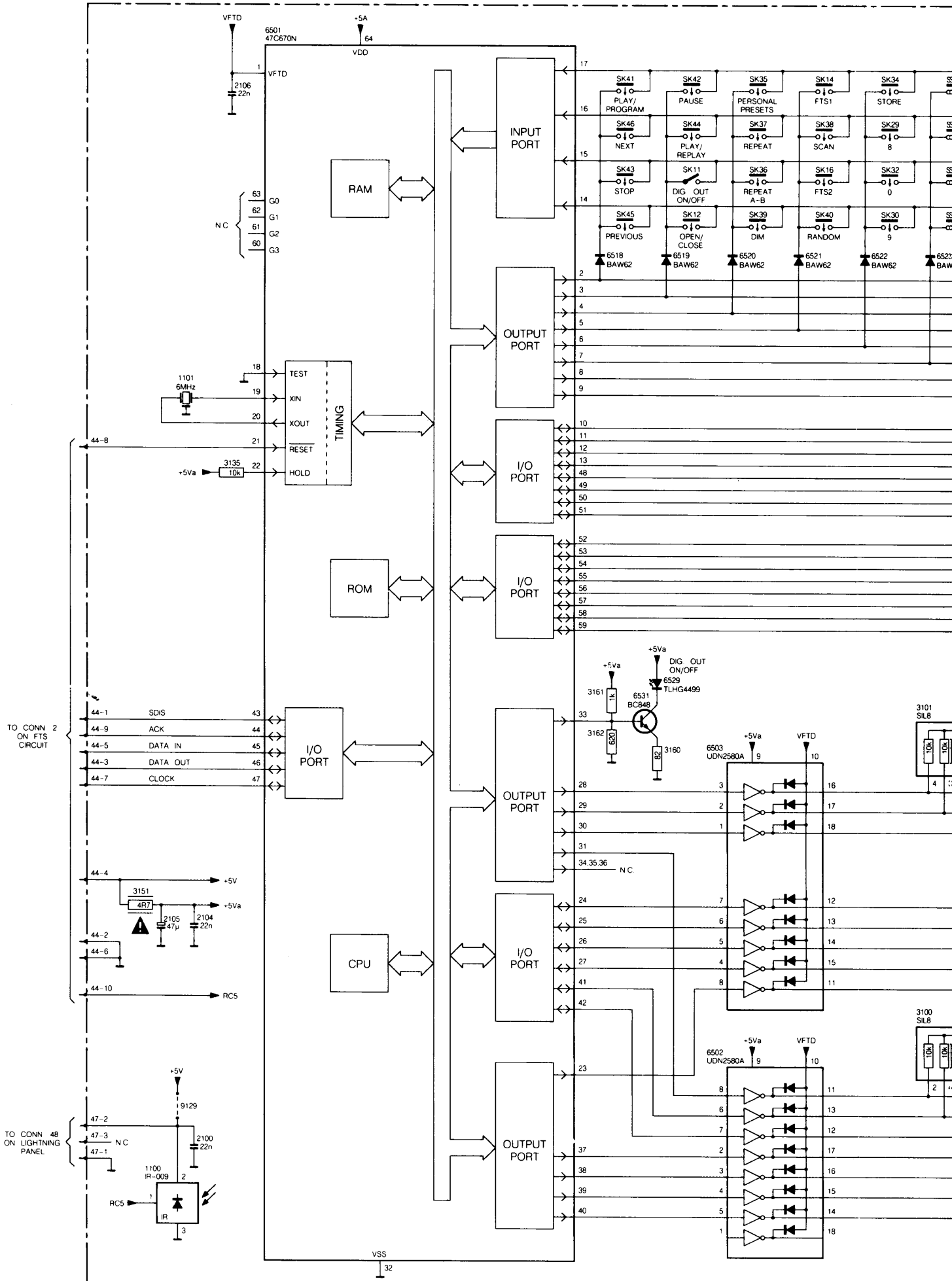


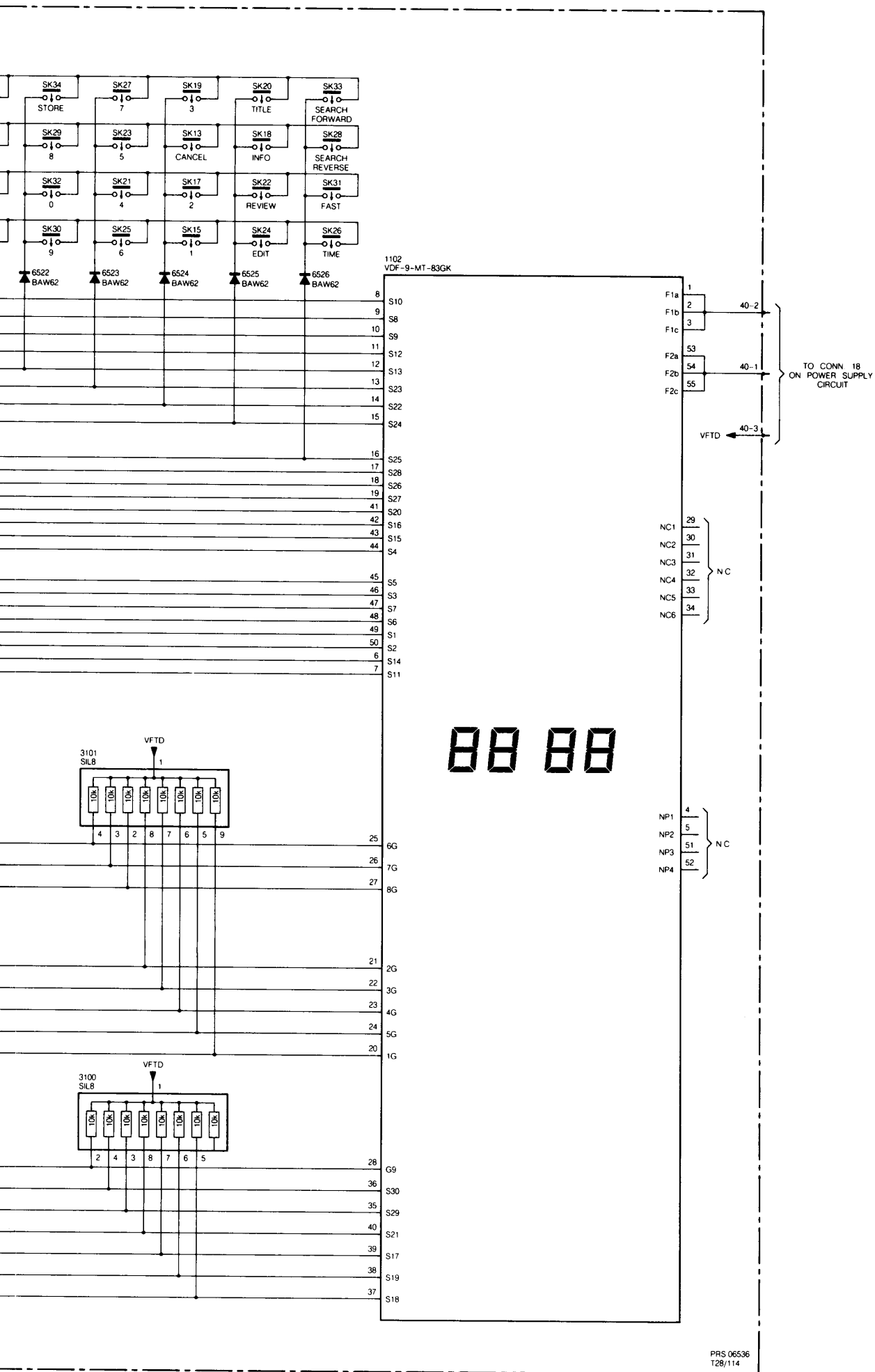
6	7	8	
3349 D7	3363 B3	3806 B5	7306 D1
3350 C4	3364 B3	3807 B6	7307 C1
3351 A5	3371 C7	5000 C1	7308 D4
3352 D4	3372 C7	5300 D4	7309 A4
3353 A4	3380 C1	5301 A3	7310 B3
3354 B4	3800 C2	7300 B5	7311 B3
3355 B3	3801 B1	7301 C6	9000 C1
3356 D7	3802 C2	7302 C3	9001 C4
3360 B3	3803 B2	7303 A2	9002 D6
3361 B3	3804 C4	7304 D1	9004 A6
3362 B3	3805 B4	7305 C1	9005 A6
3	2	1	



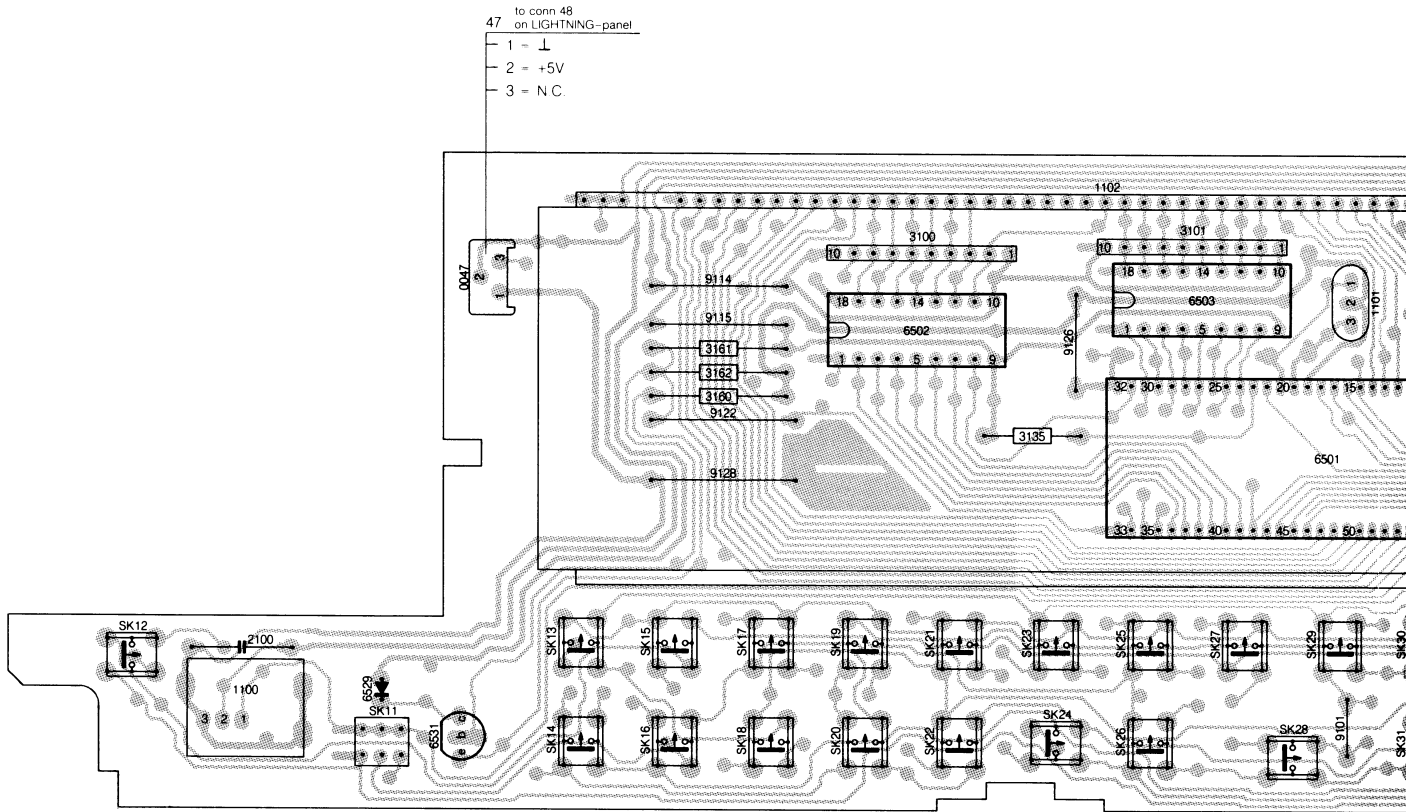
3	2	1
---	---	---

CONTROL AND DISPLAY CIRCUIT DIAGRAM

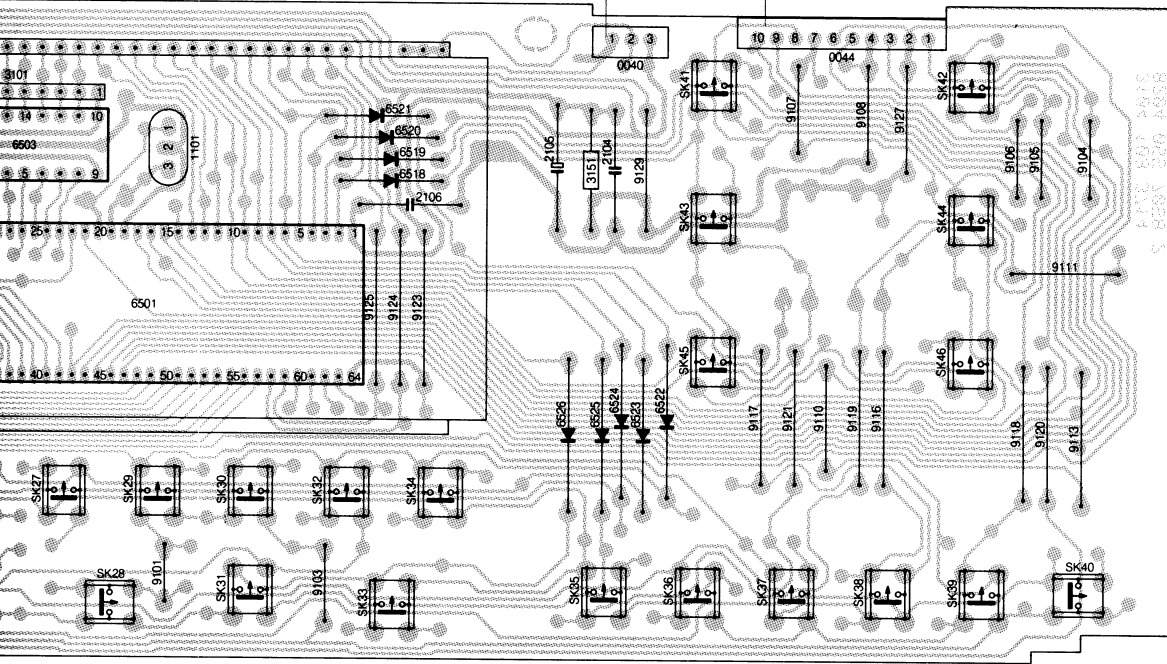




CONTROL AND DISPLAY PANEL

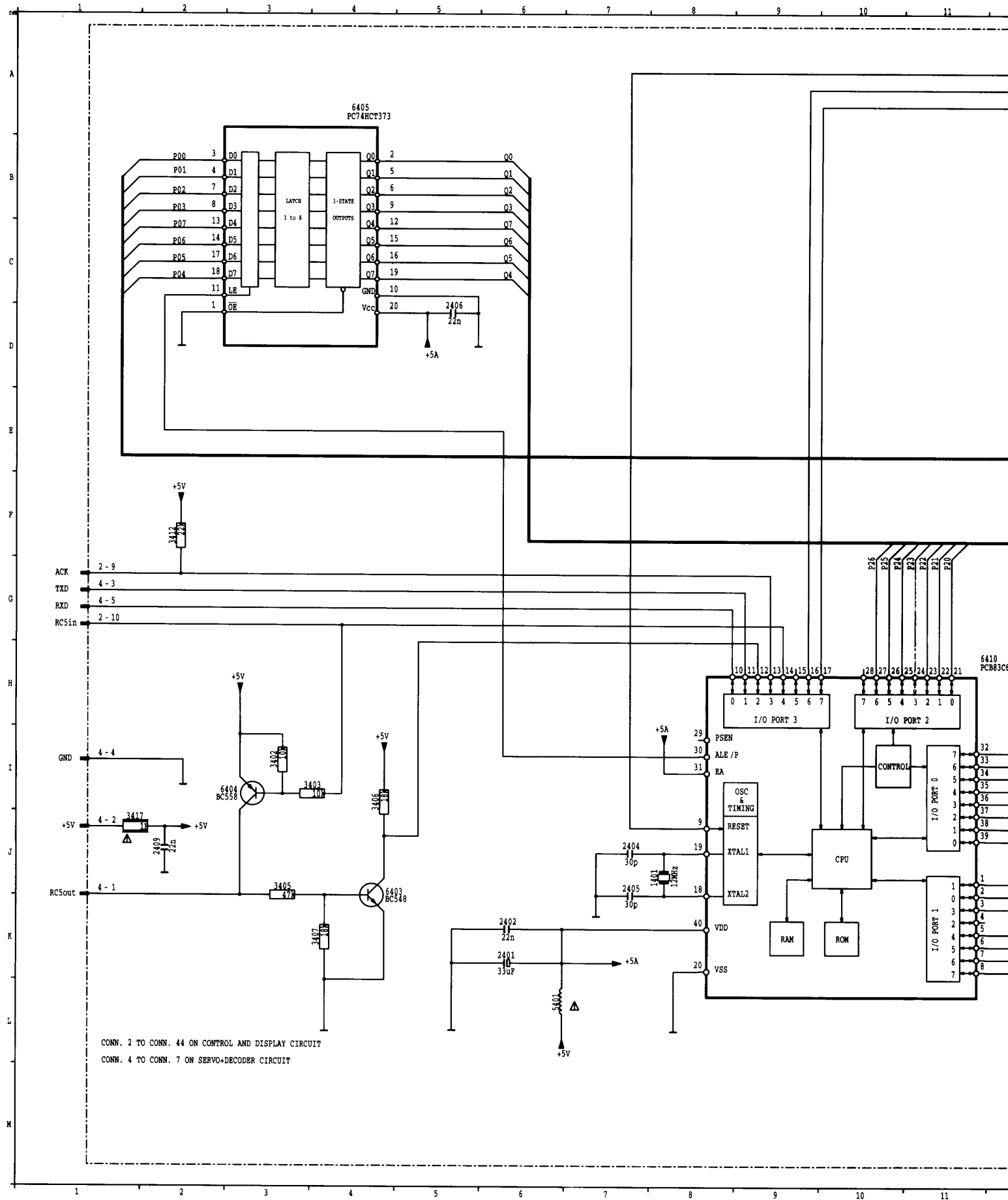


- | | | | | | | | | | | | |
|---|---|----------|-------|-------|-----------|--------------|-----------|---------|---------|-------------|----------|
| <p>to conn 18
on DECODER panel</p> <p>40</p> <ul style="list-style-type: none"> 1 = VAC1 2 = VAC2 3 = VFTD | <p>to conn 2
on FTS-panel</p> <p>44</p> <table border="0"> <tr> <td>1 = SDIS</td> <td>6 = ↓</td> </tr> <tr> <td>2 = ↓</td> <td>7 = CLOCK</td> </tr> <tr> <td>3 = DATA OUT</td> <td>8 = RESET</td> </tr> <tr> <td>4 = +5V</td> <td>9 = ACK</td> </tr> <tr> <td>5 = DATA IN</td> <td>10 = RC5</td> </tr> </table> | 1 = SDIS | 6 = ↓ | 2 = ↓ | 7 = CLOCK | 3 = DATA OUT | 8 = RESET | 4 = +5V | 9 = ACK | 5 = DATA IN | 10 = RC5 |
| 1 = SDIS | 6 = ↓ | | | | | | | | | | |
| 2 = ↓ | 7 = CLOCK | | | | | | | | | | |
| 3 = DATA OUT | 8 = RESET | | | | | | | | | | |
| 4 = +5V | 9 = ACK | | | | | | | | | | |
| 5 = DATA IN | 10 = RC5 | | | | | | | | | | |

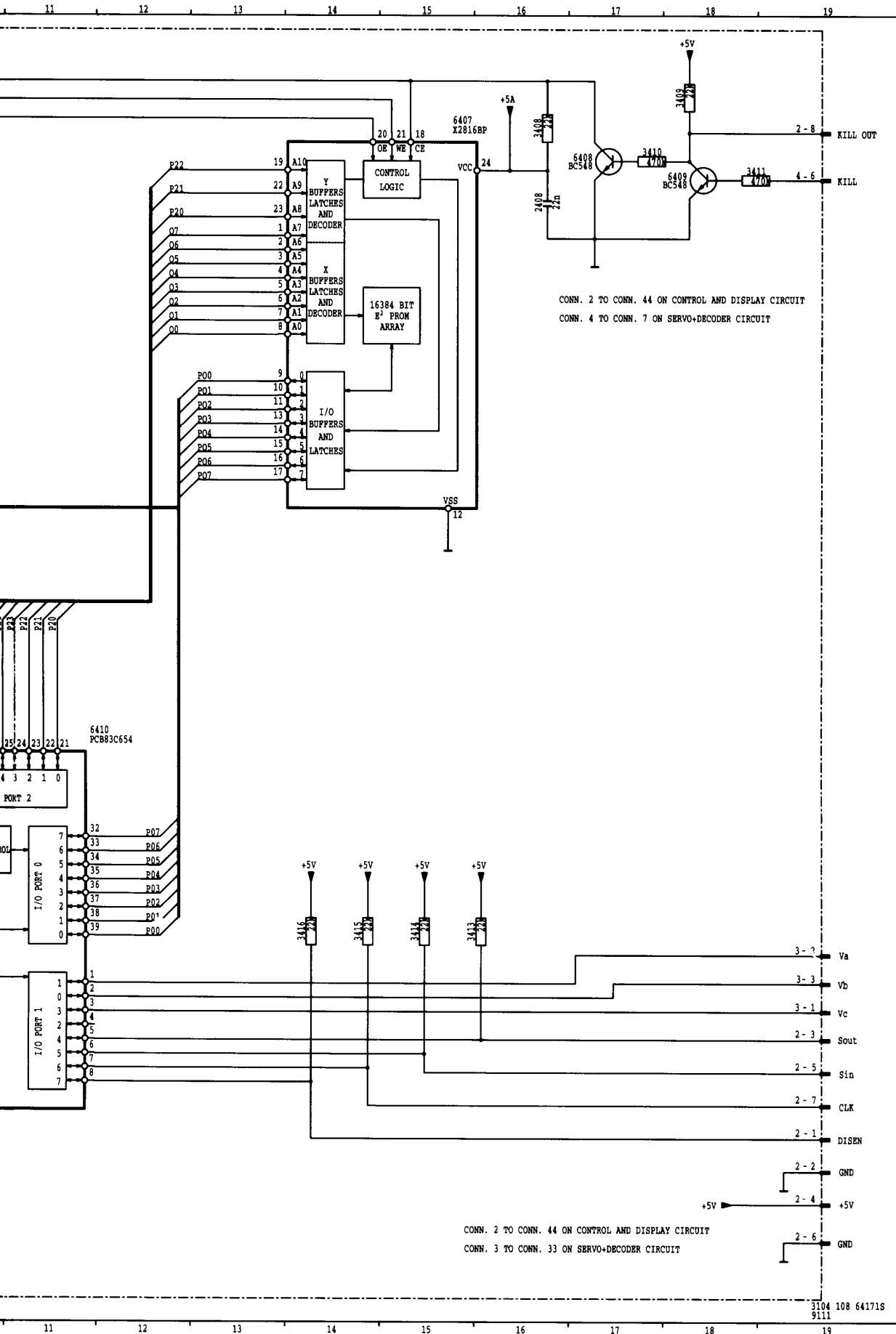


PCB 03040
T28/114

MICROPROCESSOR AND FTS CIRCUIT DIAGRAM

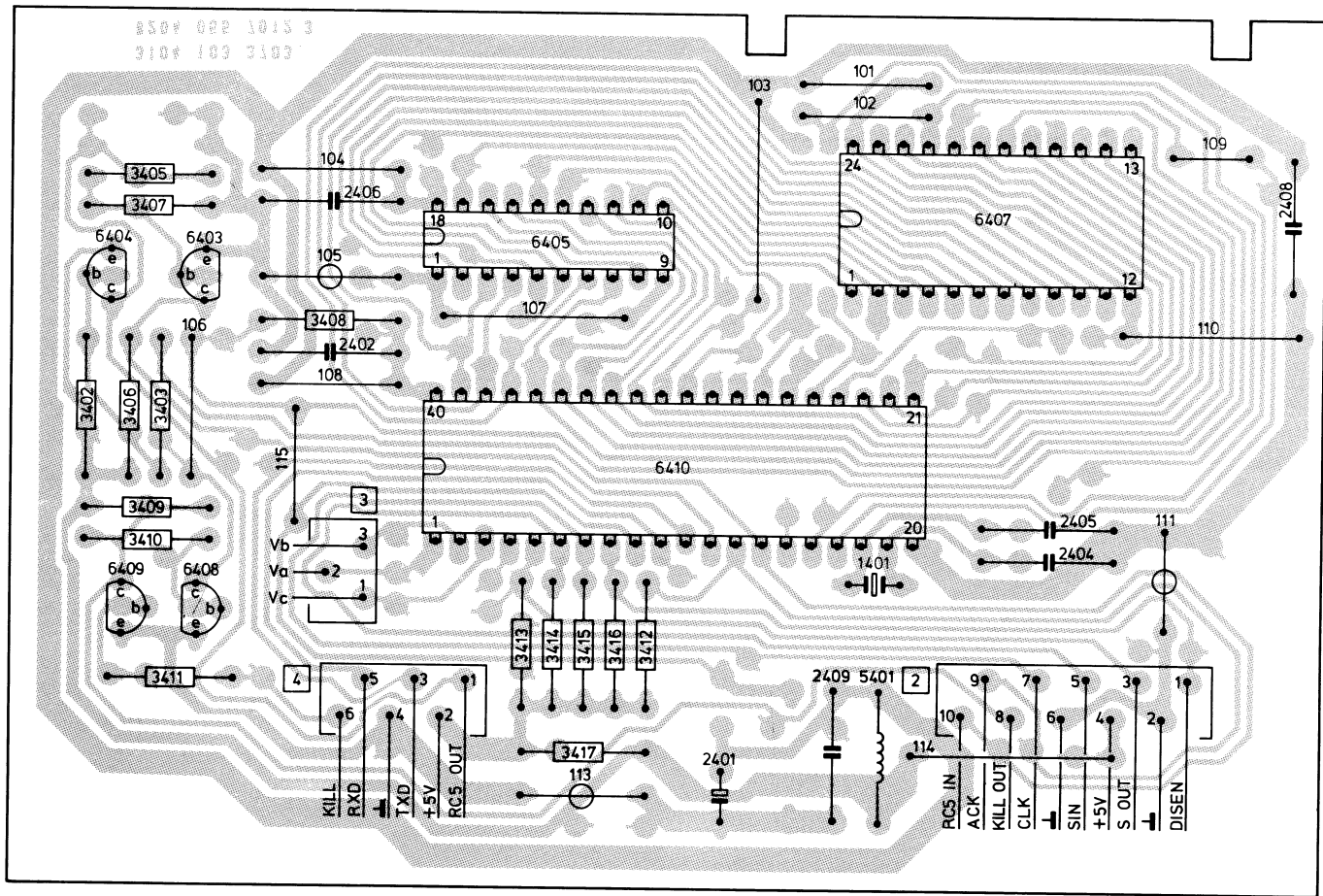


CONN. 2 TO CONN. 44 ON CONTROL AND DISPLAY CIRCUIT
CONN. 4 TO CONN. 7 ON SERVO-DECODER CIRCUIT



2	K19
3	M19
4	N19
5	L19
6	I19
7	J19
8	K19
9	G 1
10	H 1
11	J 1
12	I 1
13	J 1
14	G 1
15	H 1
16	G 8
17	2401 K 6
18	2402 K 6
19	2404 J 7
20	2405 J 7
21	2406 D 5
22	2408 B16
23	2409 J 2
24	3402 I 3
25	3403 I 4
26	3405 J 3
27	3406 I 4
28	3407 K 4
29	3408 A16
30	3409 A18
31	3410 B17
32	3411 B18
33	3412 F 2
34	3413 J16
35	3414 J15
36	3415 J14
37	3416 J14
38	3417 J 1
39	5401 L 6
40	6403 J 4
41	6404 J 4
42	6405 D 4
43	6407 E14
44	6408 B17
45	6409 B18
46	6410 K 9
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

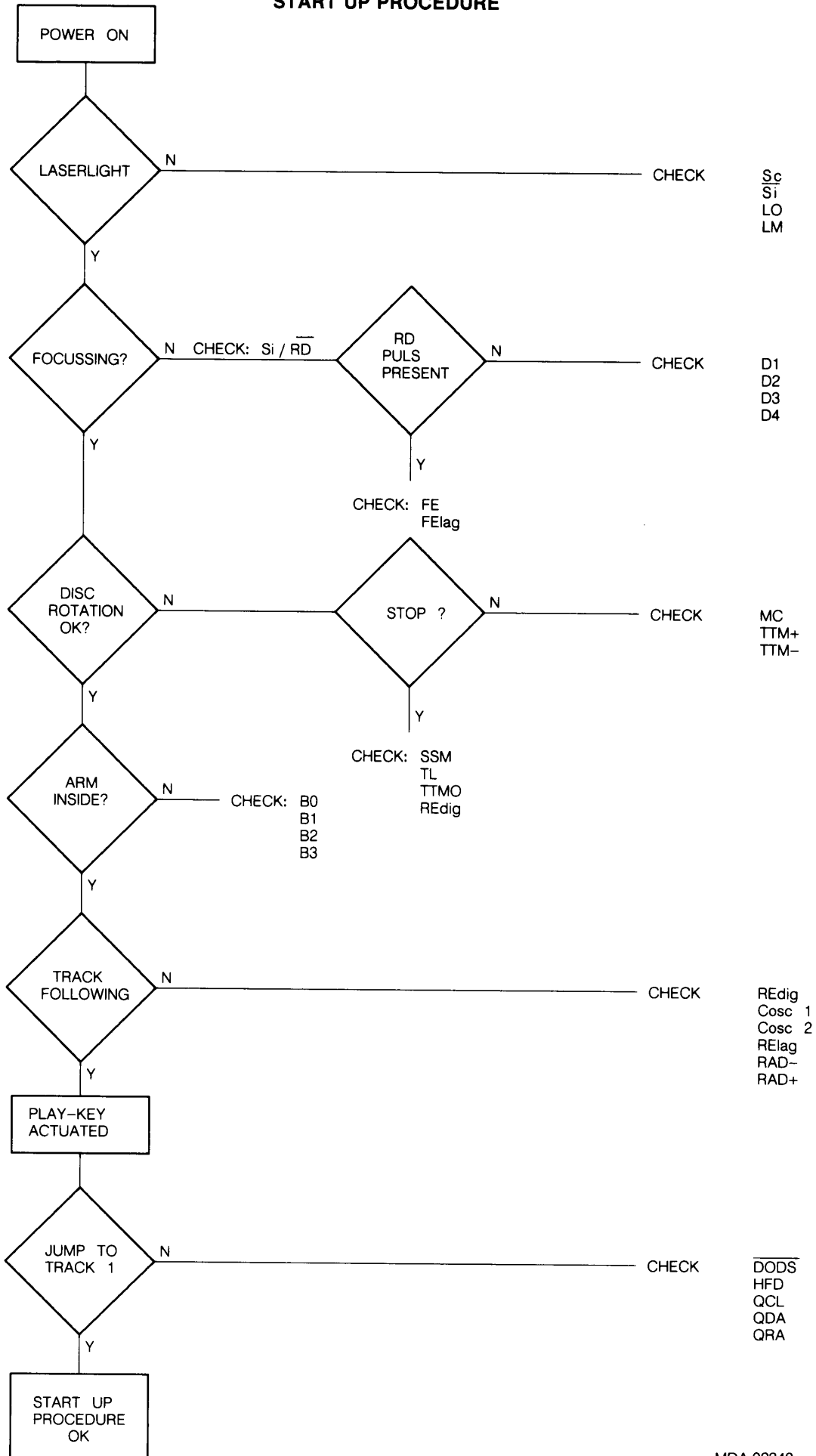
MICROPROCESSOR AND FTS PANEL



45 720 C14

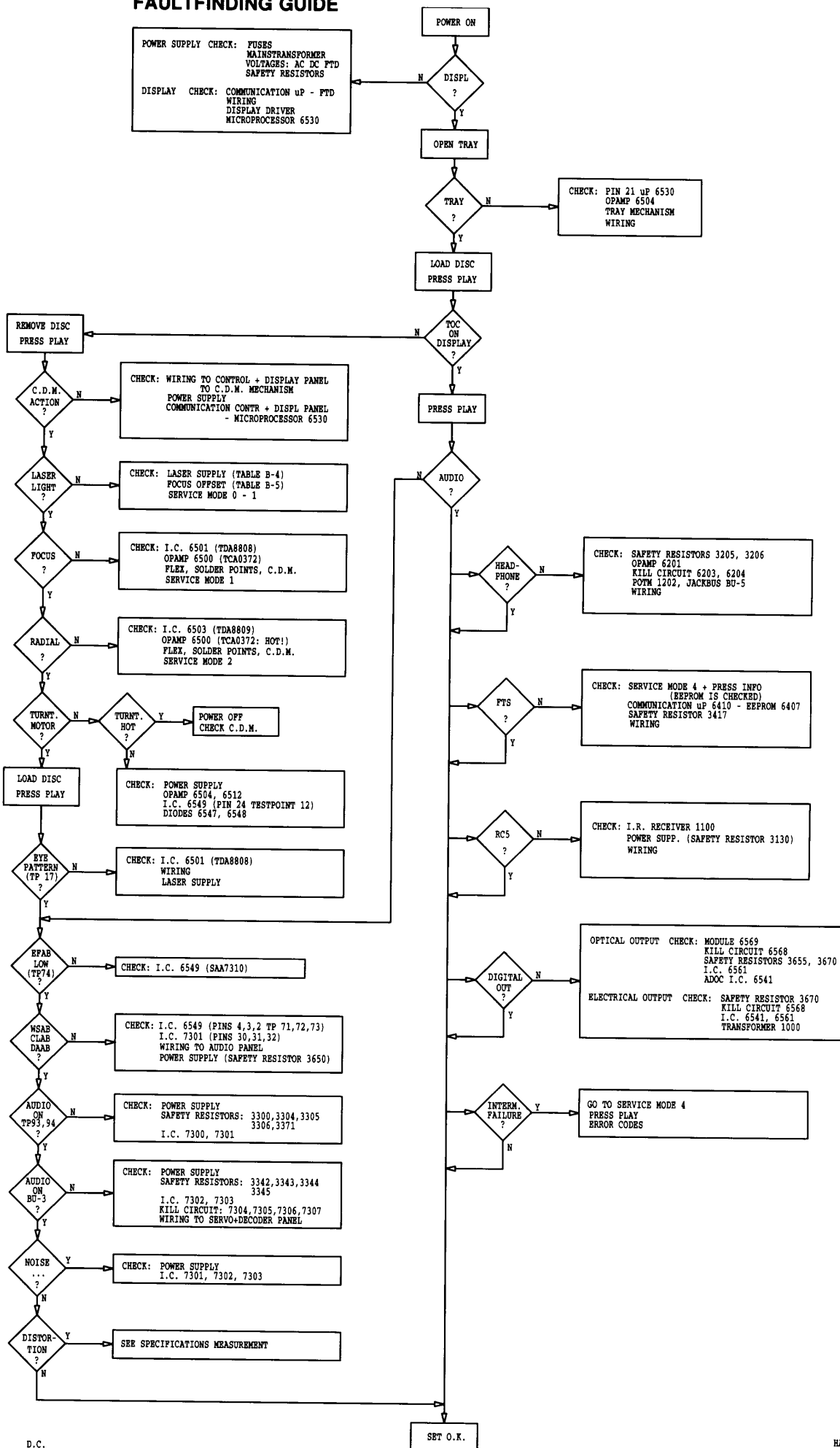
Conn. 2 to conn. 44 on Control and Display panel
Conn. 3 to conn. 32 on Servo and Decoding panel
Conn. 4 to conn. 7 on Servo and Decoding panel

START UP PROCEDURE

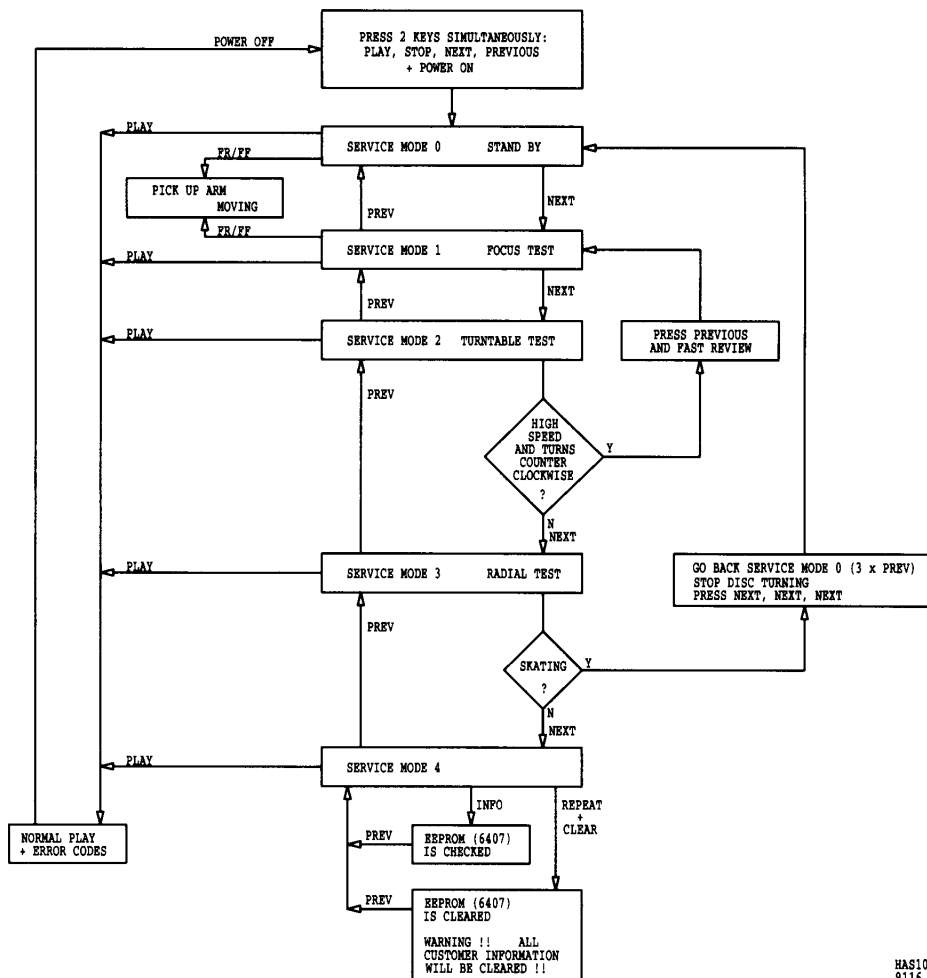


MDA.02340
T07-941

FAULTFINDING GUIDE



SERVICE TESTPROGRAM



HAS1002
9116

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

B-3 CHECK OF THE PHOTODIODES

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

B-4 CHECK OF LASER SUPPLY

T-22407A

The laser, the lasersupply plus the monitor diode form a feedback system.

A defect in the lasersupply may result in the destruction of the laser. If, in that case, the laser is replaced, (= complete D.C.M.-unit) the new laser will also become defective. However, it is impossible to check and repair a feedback system if a link is missing. For this reason the laser supply can be checked with teh replacement circuit for laser assembly.

Step	Signal	Mode			Remarks
1	LO	serv. pos. 2		1.8<V <2.3	PRS05539
	LM	SK		170<mV <220	
2	LO	serv. pos. 2		1.8<V <2.3	PRS05540
	LM	SK		170<mV <220	
3	LO	Power on		0V ± 0.2V	No light

D-6 SPI	Signal
	BU2-L
	BU2-R
	BU2-L
	BU2-R

Filter = 13th

B-4 LASER CURRENT ADJUSTMENT

T-22407B

STEP	SIGNAL	MODE					REMARKS
1	--	POWER OFF	--	--	--	--	CHECK IF FLEX-FOIL IS PROPERLY CONNECTED
2	--	POWER OFF		R3520	1kΩ +10% -0	--	PRE ADJUSTMENT OHMIC VALUE
3	--	POWER OFF	--	R3568	--	--	SET TO MID-POSITION
4	LASER CURRENT ≡ VOLTAGE ACROSS R3501	TEST DISC 5A PLAY		--	≥15mV	--	IF < 15mV THEN GO TO STEP 3 AND SET R3568 TO 1/4 OR 3/4. TRY AGAIN
5	LASER CURRENT ≡ VOLTAGE ACROSS R3501	TEST DISC 5A PLAY		R3520	50mV	--	--
6	FE-LAG	TEST DISC 5A TRACK 1 PLAY		R3568	400mV	--	FINE ADJUSTMENT




B-5 ADJUSTMENT OF FOCUS-OFFSET

MDA 02640
T 05 016

Step	Signal	Mode					Remarks
1	-	Power on no disc	-	R3568	-	-	adjust for optical mid-position of the focus motor
2	FE LAG	Play Test disc 5 Track 1	27	R3568	400mV ± 40 mV DC	-	fine adjustment

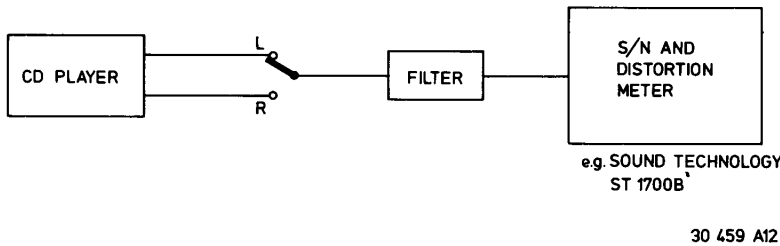
T-22407D

D-6 SPECIFICATIONS MEASUREMENT

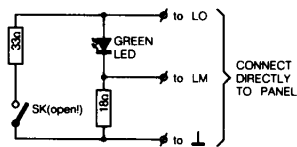
Signal	Mode				Remarks
BU2-L	Test disc 3, play, total harmonic distortion	filter output	See technical data		See drawing 30459A12
BU2-R	Test disc 3, play, total harmonic distortion	filter output	See technical data		See drawing 30459A12
BU2-L	Test disc 3, play signal-to-noise ratio	filter output	See technical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

T-22387M

Filter = 13th order filter 4822 395 30204



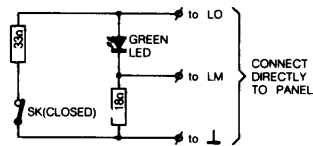
REPLACEMENT CIRCUIT FOR LASER ASSEMBLY



THE LED EMITS LITTLE LIGHT
LED GREEN e.g. CQY94 5322 130 32182

PRS.05539
T28/845

REPLACEMENT CIRCUIT FOR LASER ASSEMBLY

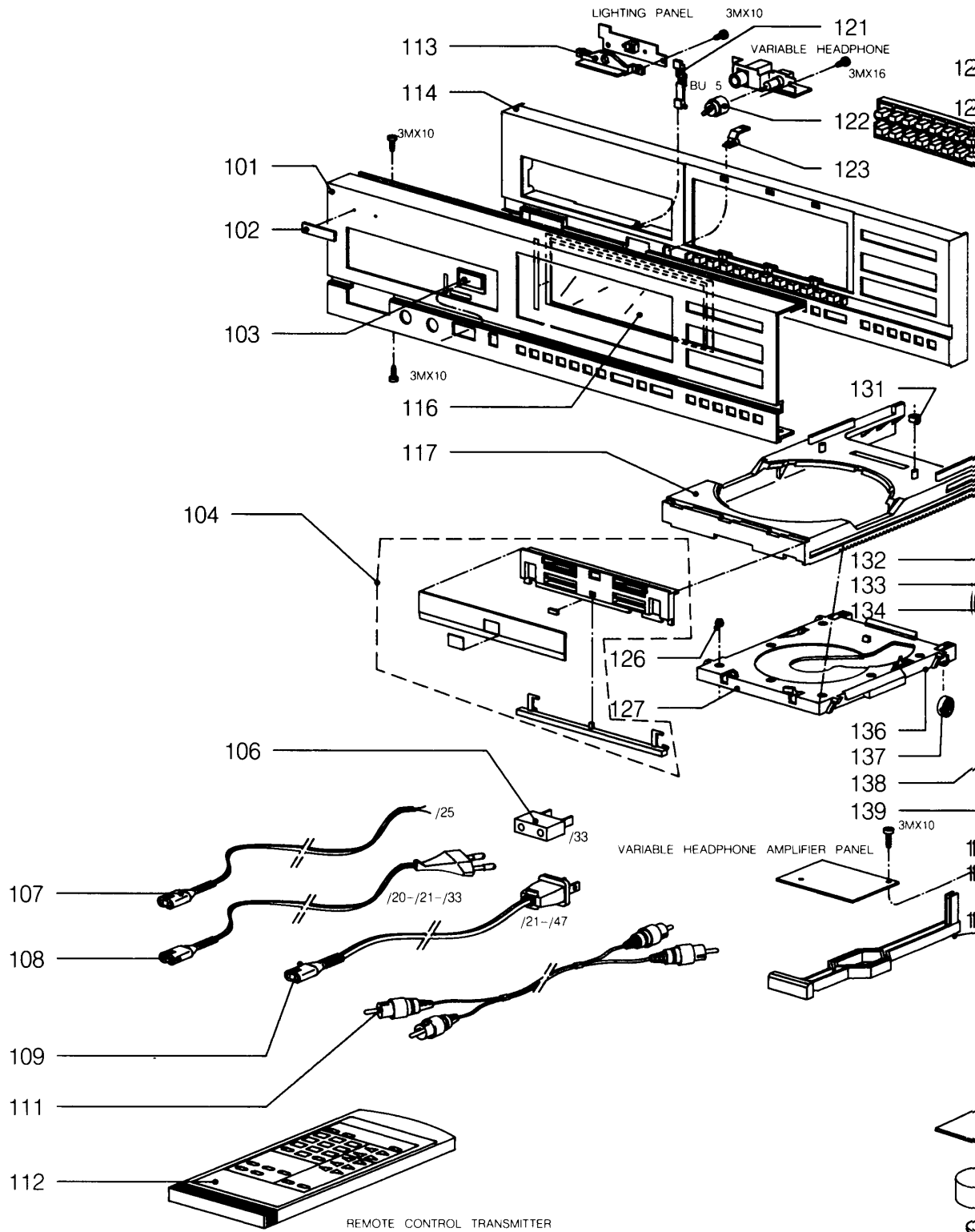


The feedback system sees to it that the same amount of current flows through the LED. When SK is open and when SK is closed the LED emits little light.

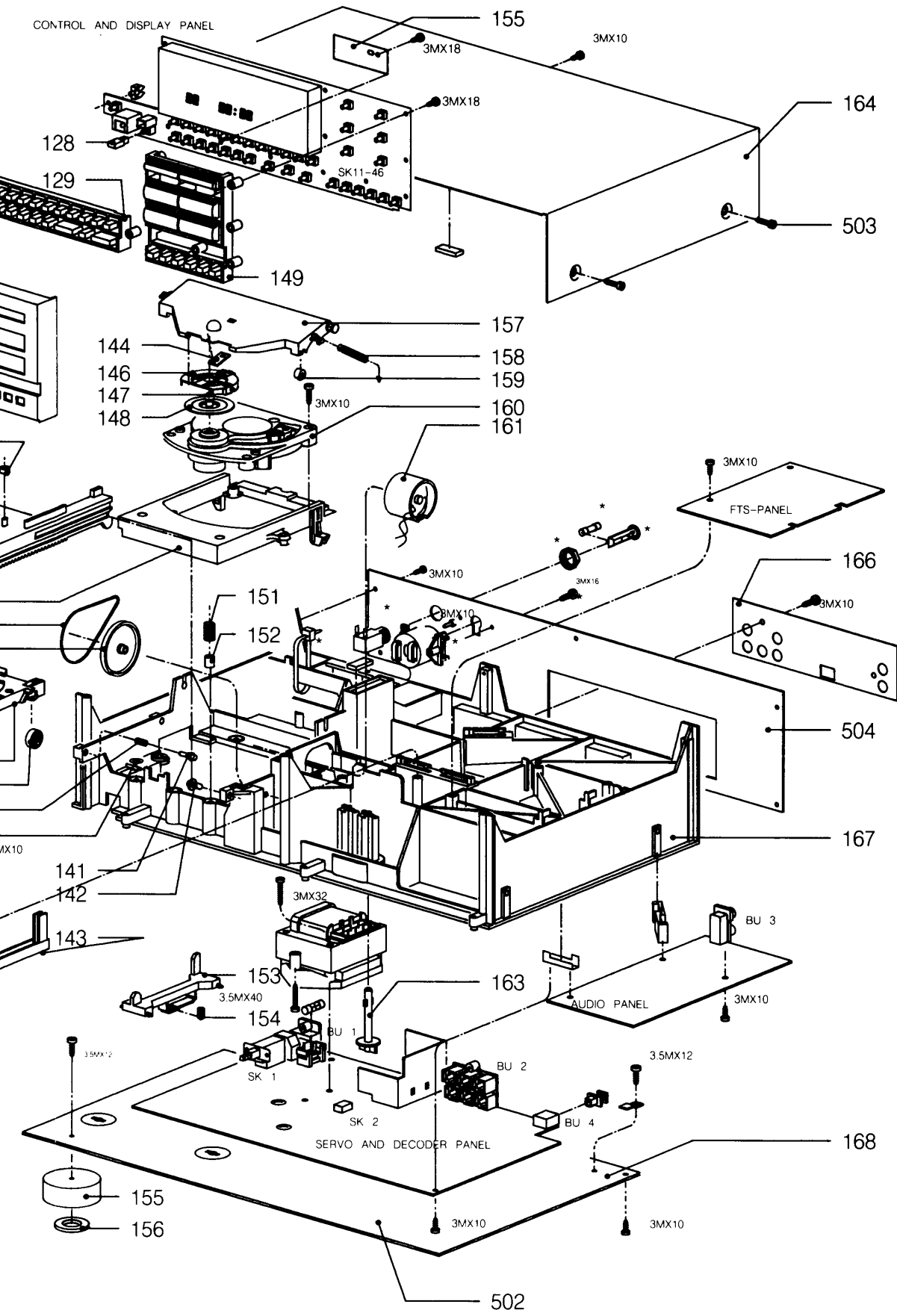
PRS.05540
T28/845

EXPLODED VIEW

CONT



* ONLY /21 /33 VERSION



EVA.01260
T28/113





HAS.CD850.20B

MECHANICAL PARTSLIST

101	4822 444 40458
102	4822 459 10887
103	4822 450 61311
104	4822 444 40459
106	4822 263 50179
107	4822 321 10719
108	4822 321 10249
109	4822 321 10677
111	4822 321 23116
112	4822 218 10404 RD5886/00
114	4822 444 40379
113	4822 466 61922
116	4822 450 61728
117	4822 444 50603
121	4822 402 61332
122	4822 411 61674
123	4822 381 11126
126	4822 325 60317
127	4822 466 92888
128	4822 410 60714
129	4822 410 60712
131	4822 532 51756
132	4822 402 61196
133	4822 358 10115
134	4822 528 81329
136	4822 466 92888
137	4822 528 90638
138	4822 492 52094
139	4822 466 92903
141	4822 402 61252
142	4822 402 61132
143	4822 535 93107
144	4822 466 92257
146	4822 402 61207
147	4822 520 40177
148	4822 532 52234
149	4822 410 60713
151	4822 492 51902
152	4822 466 61587
153	4822 402 50276
154	4822 492 52123
155	4822 462 41397
157	4822 444 60568
158	4822 492 32883
159	4822 528 90639
160	4822 691 30209
161	4822 361 21258
163	4822 535 92907
164	4822 444 60706
166	4822 444 60752
167	4822 444 50632
168	4822 444 50634

60

DB



HF-Transformer								
1000	4822 148 80281		2614	4822 122 31772	47pF 5% 50V	3540		
Crystal			2615	4822 122 31772	47pF 5% 50V	3541		
1503	4822 242 72579	4,00 MHz	2620	4822 122 32863	22nF 80% 50V	3542		
			2621	4822 122 32863	22nF 80% 50V	3543		
2370	4822 124 41525	100µF 20% 25V	2622	4822 124 22031	4,7µF 20% 63V	3545		
2371	4822 124 41525	100µF 20% 25V	2623	4822 122 31772	47pF 5% 50V	3546		
2372	4822 124 41525	100µF 20% 25V	2624	4822 122 31772	47pF 5% 50V	3552		
2373	4822 124 41525	100µF 20% 25V	2638	4822 122 10166	22nF 30% 16V	3555		
2374	4822 124 22339	100µF 20% 16V	2640	4822 122 32863	22nF 80% 50V	3557		
2375	4822 124 22339	100µF 20% 16V	2641	4822 122 33105	56nF 10% 63V	3560		
2500	4822 126 10454	3,3nF 20% 400V	2642	4822 122 33105	56nF 10% 63V	3561		
2501	4822 122 32863	22nF 80% 50V	2645	4822 122 32863	22nF 80% 50V	3562		
2503	4822 122 32863	22nF 80% 50V	2646	4822 122 33496	100nF 10% 63V	3563		
2504	4822 122 31727	470pF 5% 63V	2648	4822 122 33496	100nF 10% 63V	3564		
2506	4822 122 10166	22nF 30% 16V	2670	4822 124 40272	33µF 20% 16V	3565		
2507	4822 122 31644	2,2nF 10% 63V	2671	4822 122 32863	22nF 80% 50V	3566		
2508	4822 121 43526	47nF 5% 100V	2690	4822 124 41334	470µF 20% 35V	3567		
2509	4822 122 31765	100pF 5% 50V	2691	4822 121 51252	470nF 5% 63V	3568		
2510	4822 122 32442	10nF 10% 50V	2692	5322 121 42386	100nF 5% 63V	3569		
2511	4822 122 31746	1000pF 5% 50V	2693	4822 122 32863	22nF 80% 50V	3574		
2513	4822 121 42408	220nF 5% 63V	2695	4822 124 41558	10µF 20% 25V Bipolar	3575		
2514	4822 121 51252	470nF 5% 63V	2703	4822 124 41859	330µF 20% 35V	3576		
2515	4822 122 31746	1000pF 5% 50V	2704	4822 124 40433	47µF 20% 25V	3578		
2519	4822 124 22027	47µF 20% 25V	2705	4822 122 32863	22nF 80% 50V	3579		
2520	4822 122 31965	220pF 5% 63V	2706	4822 122 32863	22nF 80% 50V	3580		
2521	4822 124 22027	47µF 20% 25V	2707	4822 124 41591	6800µF 20% 16V	3581		
2522	4822 122 32863	22nF 80% 50V	2708	4822 124 40272	33µF 20% 16V	3582		
2524	4822 122 32863	22nF 80% 50V	2709	4822 122 32863	22nF 80% 50V	3584		
2525	4822 122 32863	22nF 80% 50V	2710	4822 122 32863	22nF 80% 50V	3585		
2526	4822 122 32863	22nF 80% 50V	2711	4822 124 41853	1000µF 20% 16V	3586		
2528	5322 124 22094	220µF 20% 50V	2712	4822 124 40272	33µF 20% 16V	3588		
2530	4822 121 51321	8,2µF 1% 63V	2713	4822 124 41334	470µF 20% 35V	3589		
2531	4822 121 51321	8,2µF 1% 63V	2714	4822 124 40433	47µF 20% 25V	3591		
2532	4822 124 40272	33µF 20% 16V	2715	5322 121 42386	100nF 5% 63V	3600		
2534	5322 121 42661	330nF 5% 63V	2716	5322 124 21643	22µF 20% 40V	3602		
2535	4822 122 31981	33nF 10% 50V				3603		
2536	4822 122 31981	33nF 10% 50V	3307	4822 051 10473	47k 2% 0,25W	3604		
2537	4822 121 42408	220nF 5% 63V	3308	4822 051 10473	47k 2% 0,25W	3605		
2538	4822 121 42408	220nF 5% 63V	3309	4822 051 10473	47k 2% 0,25W	3607		
2540	4822 124 41583	0,68µF 2% 50V Bipolar	3380	4822 052 10339	33Ω 5% 0,33W	3609		
2542	4822 122 32863	22nF 80% 50V	3381	4822 052 10339	33Ω 5% 0,33W	3610		
2545	4822 122 33496	100nF 10% 63V	3382	4822 050 22202	2k2 1% 0,6W	3611		
2546	4822 122 32863	22nF 80% 50V	3383	4822 051 10103	10k 2% 0,25W	3613		
2550	4822 121 43526	47nF 5% 100V	3384	4822 051 10103	10k 2% 0,25W	3616		
2560	4822 121 43901	4,7nF 5% 50V	3501	4822 051 10472	4k7 2% 0,25W	3618		
2561	4822 121 51252	470nF 5% 63V	3502	4822 051 10104	100k 2% 0,25W	3619		
2562	5322 121 42661	330nF 5% 63V	3503	4822 052 10478	4Ω7 5% 0,33W	3627		
2563	4822 122 33496	100nF 10% 63V	3504	4822 052 10478	4Ω7 5% 0,33W	3628		
2566	4822 122 32863	22nF 80% 50V	3505	4822 051 10123	12k 2% 0,25W	3629		
2570	4822 122 31644	2,2nF 10% 63V	3506	4822 051 10101	100Ω 2% 0,25W	3631		
2572	5322 121 42661	330nF 5% 63V	3507	4822 051 10102	1k 2% 0,25W	3633		
2574	4822 122 31759	18nF 10% 63V	3508	4822 051 10243	24k 2% 0,25W	3636		
2600	4822 122 31772	47pF 5% 50V	3509	4822 051 10562	5k6 2% 0,25W	3637		
2601	4822 122 31644	2,2nF 10% 63V	3510	4822 051 10103	10k 2% 0,25W	3638		
2602	4822 121 51252	470nF 5% 63V	3520	4822 101 10685	4k7 20%LIN 0.05W	3639		
2604	4822 124 41576	2,2µF 20% 50V	3521	4822 050 22201	220Ω 1% 0,6W	3640		
2607	4822 124 40272	33µF 20% 16V	3530	4822 050 24703	47k 1% 0,6W	3642		
2608	4822 122 32863	22nF 80% 50V	3531	4822 050 21503	15k 1% 0,6W	3645		
2609	4822 122 32863	22nF 80% 50V	3533	4822 051 10512	5k1 2% 0,25W	3646		
2610	4822 124 20688	33µF 50% 16V	3534	4822 051 10224	220k 2% 0,25W	3647		
2611	4822 122 32863	22nF 80% 50V	3522	4822 052 10189	18Ω 5% 0,33W	3653		
2612	4822 124 40272	33µF 20% 16V	3523	4822 052 10129	12Ω 5% 0,33W	3654		
2613	4822 122 31772	47pF 5% 50V	3524	4822 051 10101	100Ω 2% 0,25W	3655		
			3535	4822 050 21203	12k 1% 0,6W	3659		
			3539	4822 051 10223	22k 2% 0,25W	3660		
						3661		
						3662		
						3670		
						3701		
						3702		
						3703		
						3705		






3540	4822 052 10478	4Ω7 5% 0,33W
3541	4822 051 10682	6k8 2% 0,25W
3542	4822 051 10339	33Ω 2% 0,25W
3543	4822 051 10682	6k8 2% 0,25W
3545	4822 052 10108	1Ω 5% 0,33W
3546	4822 052 10108	1Ω 5% 0,33W
3552	4822 051 10182	1k8 2% 0,25W
3555	4822 051 20183	18k 5% 0,1W
3557	4822 051 10224	220k 2% 0,25W
3560	4822 111 91494	11k 2% 0,25W
3561	4822 051 10154	150k 2% 0,25W
3562	4822 051 10124	120k 2% 0,25W
3563	4822 051 10563	56k 2% 0,25W
3564	4822 111 91495	160k 2% 0,25W
3565	4822 051 10279	27Ω 2% 0,25W
3566	4822 051 10229	22Ω 2% 0,25W
3567	4822 051 10823	82k 2% 0,25W
3568	4822 100 11193	22k 20%LIN 0.05W
3569	4822 111 90368	680k 2% 0,125W
3574	4822 051 10333	33k 2% 0,25W
3575	4822 051 10472	4k7 2% 0,25W
3576	4822 050 22004	200k 1% 0,6W
3578	4822 051 10823	82k 2% 0,25W
3579	4822 051 10154	150k 2% 0,25W
3580	4822 050 24702	4k7 1% 0,6W
3581	4822 050 23302	3k3 1% 0,6W
3582	4822 051 10562	5k6 2% 0,25W
3584	4822 051 10913	91k 2% 0,25W
3585	4822 051 10104	100k 2% 0,25W
3586	4822 111 90368	680k 2% 0,125W
3588	4822 050 24703	47k 1% 0,6W
3589	4822 051 10472	4k7 2% 0,25W
3591	4822 051 10122	1k2 2% 0,25W
3600	4822 051 20222	2k2 5% 0,1W
3602	4822 051 10223	22k 2% 0,25W
3603	4822 051 10759	75Ω 2% 0,25W
3604	4822 052 10478	4Ω7 5% 0,33W
3605	4822 051 10162	1k6 2% 0,25W
3607	4822 051 10392	3k9 2% 0,25W
3609	4822 052 10478	4Ω7 5% 0,33W
3610	4822 051 10912	9k1 2% 0,25W
3611	4822 051 10621	620Ω 2% 0,25W
3613	4822 051 10223	22k 2% 0,25W
3627	4822 052 10478	4Ω7 5% 0,33W
3628	4822 051 10223	22k 2% 0,25W
3629	4822 051 10224	220k 2% 0,25W
3631	4822 050 24702	4k7 1% 0,6W
3638	4822 051 10223	22k 2% 0,25W
3639	4822 051 10223	22k 2% 0,25W
3640	4822 051 10223	22k 2% 0,25W
3642	4822 051 10223	22k 2% 0,25W
3645	4822 051 10472	4k7 2% 0,25W
3646	4822 051 10223	22k 2% 0,25W
3647	4822 051 10223	22k 2% 0,25W
3653	4822 051 10561	560Ω 2% 0,25W
3654	4822 051 10822	8k2 2% 0,25W
3655	4822 052 10478	4Ω7 5% 0,33W
3659	4822 050 24702	4k7 1% 0,6W
3660	4822 051 10101	100Ω 2% 0,25W
3661	4822 051 10101	100Ω 2% 0,25W
3662	4822 051 10101	100Ω 2% 0,25W
3670	4822 052 10478	4Ω7 5% 0,33W
3701	4822 051 10472	4k7 2% 0,25W
3702	4822 051 10565	5M6 5% 0,25W
3703	4822 051 10433	43k 2% 0,25W
3705	4822 051 10563	56k 2% 0,25W






3710	4822 051 10154	150k 2% 0,25W
3720	4822 051 10102	1k 2% 0,25W
3721	4822 051 10473	47k 2% 0,25W
3724	4822 050 21203	12k 1% 0,6W
3725	4822 051 10123	12k 2% 0,25W
3728	4822 051 10362	3k6 2% 0,25W
3729	4822 050 21203	12k 1% 0,6W
3730	4822 051 10123	12k 2% 0,25W
3731	4822 051 10229	22Ω 2% 0,25W
3732	4822 050 23902	3k9 1% 0,6W
3747	4822 051 10103	10k 2% 0,25W
3748	4822 051 10392	3k9 2% 0,25W
3775	4822 051 10472	4k7 2% 0,25W
3782	4822 051 10563	56k 2% 0,25W
3787	4822 051 10101	100Ω 2% 0,25W
3788	4822 051 10102	1k 2% 0,25W
3801	4822 051 10008	jumper
3803	4822 051 10008	jumper
3805	4822 051 10008	jumper
3807	4822 051 10008	jumper
3808	4822 051 10008	jumper
3809	4822 051 10008	jumper
3812	4822 051 10008	jumper
3813	4822 051 10008	jumper
3814	4822 051 10008	jumper
3815	4822 051 10008	jumper
3821	4822 051 10008	jumper
3822	4822 051 10008	jumper
3823	4822 051 10008	jumper
3824	4822 051 10008	jumper
3826	4822 051 10008	jumper
3827	4822 051 10008	jumper
3828	4822 051 10008	jumper
3829	4822 051 10008	jumper
3830	4822 051 10008	jumper
3831	4822 051 10008	jumper
3832	4822 051 10008	jumper
3833	4822 051 10008	jumper
3834	4822 051 10008	jumper
3835	4822 051 10008	jumper
3836	4822 051 10008	jumper
3837	4822 051 10008	jumper
3838	4822 051 10008	jumper
3839	4822 051 10008	jumper
3840	4822 051 10008	jumper
3842	4822 051 10008	jumper
3843	4822 051 10008	jumper
3844	4822 051 10008	jumper
3845	4822 051 10008	jumper
3847	4822 051 10008	jumper
3848	4822 051 10008	jumper
3851	4822 051 10008	jumper
3852	4822 051 10008	jumper
3856	4822 051 10008	jumper
3859	4822 051 10008	jumper
3860	4822 051 10008	jumper
3861	4822 051 10008	jumper
3864	4822 051 10008	jumper
3865	4822 051 10008	jumper
3866	4822 051 10008	jumper
3872	4822 051 10008	jumper
3873	4822 051 10008	jumper
3874	4822 051 10008	jumper
3891	4822 051 10008	jumper
3892	4822 051 10008	jumper
3896	4822 051 10008	jumper
3897	4822 051 10008	jumper



					
5500	4822 157 60309	ANTI INTERFERENCE COIL /21B /33B			
5502	4822 214 51841	MAINSFILTER /20B /25B			
					
6309	4822 214 51724	DVR-3			
6500	4822 209 72587	TCA0372DP2			
6501	4822 209 73234	TDA8808T/C3			
6502	4822 130 44121	BC338			
6503	4822 209 73235	TDA8809T/C2			
6504	4822 209 72587	TCA0372DP2			
6505	4822 130 30861	BZX79-C7V5			
6506	4822 130 30861	BZX79-C7V5			
6511	4822 130 34173	BZX79-C5V6			
6512	4822 209 83274	NJM4560D			
6516	5322 130 42012	BC858A			
6517	5322 130 42012	BC858A			
6519	5322 130 30684	1N4002			
6520	4822 130 42131	BF550			
6523	4822 209 70422	MN4264-15			
6524	4822 130 61207	BC848			
6530	4822 209 63362	MC68HC05C8P/ZC99827			
6531	4822 130 42675	BC818			
6541	4822 209 62588	PCF3523P			
6547	5322 130 30684	1N4002			
6548	5322 130 30684	1N4002			
6549	4822 209 61759	SAA7310GP/H5			
6550	5322 130 30684	1N4002			
6551	5322 130 30684	1N4002			
6552	4822 130 30621	1N4148			
6553	4822 130 30621	1N4148			
6554	4822 130 42513	BC858C			
6555	4822 130 31981	BZX79-C3V9			
6556	4822 130 61207	BC848			
6557	4822 130 30621	1N4148			
6558	4822 130 44121	BC338			
6559	4822 130 61207	BC848			
6561	4822 209 60803	SN74LS08D			
6562	4822 130 61207	BC848			
6568	4822 130 61207	BC848			
6573	4822 130 34195	BZX79-C13			
6577	5322 130 41899	MC7915CT			
6580	5322 130 30684	1N4002			
6581	5322 130 30684	1N4002			
6582	5322 130 30684	1N4002			
6583	5322 130 30684	1N4002			
6584	5322 130 30684	1N4002			
6585	5322 130 30684	1N4002			
6586	5322 130 30684	1N4002			
6587	5322 130 30684	1N4002			
6590	4822 209 80808	MC78M15CT			
6591	4822 209 71579	TY40408			
6592	5322 209 11222	MC7905CT			
6593	5322 130 41899	MC7915CT			
6602	5322 130 30684	1N4002			
6603	5322 130 30684	1N4002			
6701	5322 130 42012	BC858A			
6702	4822 130 30621	1N4148			
6703	4822 130 30621	1N4148			
			Miscellaneous		
			BU-1	4822 265 20291	MAINS INLET
			BU-2	4822 267 20368	CINCH 5P
			BU-4	4822 218 20752	TOTX172
			SK-1	4822 276 11309	MAINS SWITCH
			SK-2	4822 276 12523	
				4822 492 63076	CLAMPING SPRING

CONTROL AND DISPLAY PANEL





Switch			Miscellaneous		
SK11	4822 276 20463	DIGITAL OUT ON/OFF	4822 255 30203	LAMP HOLDER	
SK..	4822 276 12276	CONTROL SWITCHES	4822 256 91644	LED HOLDER	
			4822 256 91643	FTD HOLDER	
2100	4822 122 10166	22nF 30% 16V	BU-5	4822 267 31065	
2104	4822 122 10166	22nF 30% 16V	1100	4822 214 51772	IR RECEIVER GP1U521X
2105	4822 124 22027	47µF 20% 25V	1101	4822 242 73654	CST6.00MGW
2106	4822 122 10166	22nF 30% 16V	1102	4822 130 90858	DISPLAY 9-MT-83GK
2201	5322 124 21711	100µF 20% 25V	1103	4822 134 40909	LAMP 5V 60mA
2202	5322 124 21711	100µF 20% 25V	1201	4822 102 10398	10K LOG POTMETER
2203	5322 124 21711	100µF 20% 25V			
2204	5322 124 21711	100µF 20% 25V			
					
3100	5322 111 90473	8x10k 2% NETWORK			
3101	5322 111 90473	8x10k 2% NETWORK			
3135	4822 050 21003	10k 1% 0,6W			
3151	4822 052 10478	4Ω 5% 0,33W			
3160	4822 050 28209	82Ω 1% 0,6W			
3161	4822 050 21002	1k 1% 0,6W			
3162	4822 050 26201	620Ω 1% 0,6W			
3201	4822 051 10101	100Ω 2% 0,25W			
3202	4822 051 10101	100Ω 2% 0,25W			
3203	4822 050 21003	10k 1% 0,6W			
3204	4822 050 21003	10k 1% 0,6W			
3205	4822 052 10109	10Ω 5% 0,33W			
3206	4822 052 10109	10Ω 5% 0,33W			
3207	4822 116 52264	27k 5% 0,5W			
3208	4822 116 52264	27k 5% 0,5W			
3209	4822 051 10122	1k2 2% 0,25W			
3210	4822 051 10122	1k2 2% 0,25W			
3211	4822 050 21501	150Ω 1% 0,6W			
3212	4822 050 21501	150Ω 1% 0,6W			
					
6201	4822 209 82362	NJM4556D			
6203	4822 130 44121	BC338			
6204	4822 130 44121	BC338			
6501	4822 209 61191	TMP47C670N-1364			
6502	4822 209 60886	UDN-2580A			
6503	4822 209 60886	UDN-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			
6529	4822 130 80849	TLHR4499			
6531	4822 130 40938	BC548			

AUDIO PANEL

Crystal					
1300	4822 242 71349	11,2896 MHz	3305	4822 052 10478	4Ω7 5% 0,33W
			3306	4822 052 10101	100Ω 5% 0,33W
2300	4822 124 40272	33μF 20% 16V	3307	4822 052 10101	100Ω 5% 0,33W
2301	4822 122 33496	100nF 10% 63V	3308	4822 050 22403	24k 1% 0,6W
2302	4822 122 33496	100nF 10% 63V	3310	4822 050 23003	30k 1% 0,6W
2303	5322 122 32452	47pF 5% 50V	3311	4822 050 23003	30k 1% 0,6W
2304	5322 122 32452	47pF 5% 50V	3312	4822 050 23003	30k 1% 0,6W
2306	4822 122 33496	100nF 10% 63V	3313	4822 050 23003	30k 1% 0,6W
2307	4822 122 33496	100nF 10% 63V	3314	4822 050 25102	5k1 1% 0,6W
2308	4822 124 40433	47μF 20% 25V	3315	4822 050 25102	5k1 1% 0,6W
2309	4822 124 40433	47μF 20% 25V	3316	4822 050 25102	5k1 1% 0,6W
2310	4822 124 40435	10μF 20% 50V	3317	4822 050 25102	5k1 1% 0,6W
2311	4822 124 40435	10μF 20% 50V	3318	4822 050 21003	10k 1% 0,6W
2312	4822 122 33496	100nF 10% 63V	3319	4822 050 21003	10k 1% 0,6W
2313	4822 122 33496	100nF 10% 63V	3320	4822 050 21003	10k 1% 0,6W
2314	4822 124 40272	33μF 20% 16V	3321	4822 050 21003	10k 1% 0,6W
2315	4822 124 40272	33μF 20% 16V	3322	4822 050 21202	1k2 1% 0,6W
2316	4822 122 33496	100nF 10% 63V	3323	4822 050 21202	1k2 1% 0,6W
2317	4822 122 33496	100nF 10% 63V	3324	4822 050 24302	4k3 1% 0,6W
2318	4822 122 33496	100nF 10% 63V	3325	4822 050 24302	4k3 1% 0,6W
2319	4822 122 33496	100nF 10% 63V	3326	4822 050 27502	7k5 1% 0,6W
2320	4822 124 40272	33μF 20% 16V	3327	4822 050 27502	7k5 1% 0,6W
2321	4822 124 40272	33μF 20% 16V	3328	4822 050 25602	5k6 1% 0,6W
2322	5322 122 32966	39pF 5% 50V	3329	4822 050 25602	5k6 1% 0,6W
2323	5322 122 32966	39pF 5% 50V	3330	4822 050 27502	7k5 1% 0,6W
2324	5322 122 32966	39pF 5% 50V	3331	4822 050 27502	7k5 1% 0,6W
2325	5322 122 32966	39pF 5% 50V	3332	4822 050 21003	10k 1% 0,6W
2326	5322 122 32268	470pF 10% 50V	3333	4822 050 21003	10k 1% 0,6W
2327	5322 122 32268	470pF 10% 50V	3334	4822 051 10101	100Ω 2% 0,25W
2328	5322 122 32268	470pF 10% 50V	3335	4822 051 10101	100Ω 2% 0,25W
2329	5322 122 32268	470pF 10% 50V	3336	4822 051 10101	100Ω 2% 0,25W
2330	4822 121 51569	270pF 1% 400V	3337	4822 051 10101	100Ω 2% 0,25W
2331	4822 121 51569	270pF 1% 400V	3338	4822 051 20122	1k2 5% 0,1W
2332	4822 121 51569	270pF 1% 400V	3339	4822 051 20122	1k2 5% 0,1W
2333	4822 121 51569	270pF 1% 400V	3340	4822 051 10122	1k2 2% 0,25W
2334	4822 121 50591	1nF 1% 630V	3341	4822 051 10122	1k2 2% 0,25W
2335	4822 121 50591	1nF 1% 630V	3342	4822 052 10229	22Ω 5% 0,33W
2336	4822 121 51288	100pF 1% 630V	3343	4822 052 10229	22Ω 5% 0,33W
2337	4822 121 51288	100pF 1% 630V	3344	4822 052 10229	22Ω 5% 0,33W
2338	4822 124 22339	100μF 20% 16V	3345	4822 052 10229	22Ω 5% 0,33W
2339	4822 124 22339	100μF 20% 16V	3346	4822 050 24703	47k 1% 0,6W
2342	4822 122 33496	100nF 10% 63V	3347	4822 050 24703	47k 1% 0,6W
2343	4822 122 33496	100nF 10% 63V	3348	4822 050 24703	47k 1% 0,6W
2344	4822 124 41525	100μF 20% 25V	3349	4822 050 24703	47k 1% 0,6W
2345	4822 124 41525	100μF 20% 25V	3350	4822 116 52224	470Ω 5% 0,5W
2346	4822 122 33496	100nF 10% 63V	3351	4822 116 52224	470Ω 5% 0,5W
2347	4822 122 33496	100nF 10% 63V	3352	4822 051 20135	1M 5% 0,1W
2348	4822 124 41525	100μF 20% 25V	3353	4822 051 20135	1M 5% 0,1W
2349	4822 124 41525	100μF 20% 25V	3354	4822 050 21002	1k 1% 0,6W
2350	4822 121 51147	33nF 2% 63V	3355	4822 050 21002	1k 1% 0,6W
2351	4822 121 51147	33nF 2% 63V	3356	4822 050 24703	47k 1% 0,6W
2352	4822 121 51079	5600pF 1% 160V	3360	4822 050 22203	22k 1% 0,6W
2353	4822 121 51079	5600pF 1% 160V	3361	4822 051 20223	22k 5% 0,1W
2370	4822 124 40272	33μF 20% 16V	3362	4822 050 24702	4k7 1% 0,6W
2371	4822 122 33496	100nF 10% 63V	3363	4822 051 20223	22k 5% 0,1W
2373	5322 122 32452	47pF 5% 50V	3364	4822 051 20103	10k 5% 0,1W
2374	4822 122 33496	100nF 10% 63V	3371	4822 052 10478	4Ω7 5% 0,33W
2375	5322 122 32452	47pF 5% 50V	3372	4822 051 20101	100Ω 5% 0,1W
			3380	4822 051 20223	22k 5% 0,1W
3300	4822 052 10478	4Ω7 5% 0,33W	3802	4822 051 10008	jumper
3301	4822 051 20224	220k 5% 0,1W	3803	4822 051 10008	jumper
3302	4822 051 10102	1k 2% 0,25W	3804	4822 051 10008	jumper
3304	4822 052 10478	4Ω7 5% 0,33W	3805	4822 051 10008	jumper
			3806	4822 051 10008	jumper
			3807	4822 051 10008	jumper

		
5000	4822 157 60363	Anti interference coil
5300	4822 157 50975	1 mH 10%
5301	4822 157 50975	1 mH 10%
		
7300	4822 701 11933	SAA7350
7301	4822 209 30008	SAA7322GP
7302	4822 209 83163	LM833N
7303	4822 209 83163	LM833N
7304	4822 130 42696	BC818-25
7305	4822 130 42696	BC818-25
7306	4822 130 42696	BC818-25
7307	4822 130 42696	BC818-25
7308	4822 130 61207	BC848
7309	4822 130 61207	BC848
7310	5322 130 42012	BC858
7311	4822 130 61207	BC848
Miscellaneous		
BU-3	4822 267 30878	

MICROPROCESSOR AND FTS PANEL

Crystal		
1401	4822 242 73759	12 MHZ
		
2401	4822 124 40272	33µF 20% 16V
2402	4822 122 10166	22nF 30% 16V
2404	4822 122 10179	33pF 5% 50V
2405	4822 122 10179	33pF 5% 50V
2406	4822 122 10166	22nF 30% 16V
2408	4822 122 10166	22nF 30% 16V
2409	4822 122 10166	22nF 30% 16V
		
3402	4822 050 21003	10k 1% 0,6W
3403	4822 050 21003	10k 1% 0,6W
3405	4822 050 24703	47k 1% 0,6W
3406	4822 050 21803	18k 1% 0,6W
3407	4822 050 21803	18k 1% 0,6W
3408	4822 050 22203	22k 1% 0,6W
3409	4822 050 22203	22k 1% 0,6W
3410	4822 050 24704	470k 1% 0,6W
3411	4822 050 24704	470k 1% 0,6W
3412	4822 050 22203	22k 1% 0,6W
3413	4822 050 22203	22k 1% 0,6W
3414	4822 050 22203	22k 1% 0,6W
3415	4822 050 22203	22k 1% 0,6W
3416	4822 050 22203	22k 1% 0,6W
3417	4822 052 10108	1Ω 5% 0,33W
		
5401	4822 157 51235	4,7µH 10%
		
6403	4822 130 40938	BC548
6404	4822 130 40941	BC558
6405	5322 209 11118	PC74HCT373P
6407	4822 209 72102	X2816BP
6408	4822 130 40938	BC548
6409	4822 130 40938	BC548
6410	4822 209 30004	PCB83C654P/AC026
MISCELLANEOUS		
	4822 256 30274	FUSE HOLDER
1010	4822 263 40054	VOLTAGE SELECTOR
1501	4822 070 31601	FUSE 160mA
5001	4822 146 30988	MAINSTRANSFORMER /20B /25B
5001	4822 146 30948	MAINSTRANSFORMER /21B /33B