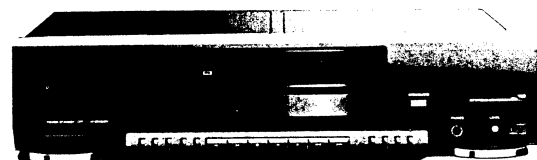


Service



Service Manual

For the apparatus CD951/00S/01S/06S/13S, we refer to Service Manual 4822 725 24007 of CD950/00S.
 Differences: IR SENSOR switch SK-2 has been integrated in ESI BUS sockets 1704 and 1705.
 Fast search has been added, Audio specifications have been improved and lay-out of main panel has been changed.

The following mechanical parts are different:

ITEM 1	4822 444 40551	ALU FRONT /00S/01S/06S
	4822 444 40629	ALU FRONT /13S
ITEM 13	4822 444 40549	FRONT /00S/01S/06S
	4822 444 40739	FRONT /13S
ITEM 71	4822 444 30482	TRAY FRONT
ITEM 283	4822 532 60948	CORD BUSHING /00S
	4822 325 60329	CORD BUSHING /01S/06S/13S
ITEM 300	4822 321 10809	MAINS CORD /00S
	4822 321 10845	MAINS CORD /01S
ITEM 304	4822 321 10917	MAINS CORD /13S
ITEM 305	4822 321 10919	MAINS CORD /06S
ITEM 306	4822 263 50179	SOCKET ADAPTER MAINS /13S
ITEM 340	4822 736 21961	INSTRUCTIONS FOR USE /00S
	4822 736 22031	INSTRUCTIONS FOR USE /01S
	4822 736 22029	INSTRUCTIONS FOR USE /06S
	4822 736 21961	INSTRUCTIONS FOR USE /13S

For difference of electrical parts, see modified circuit diagrams, Main Panel drawing and electrical parts list.

- Power supply:** changed: D6543, D6544.
Servo: added: R3069,3070,3071; IC7005; T7088.(fast search)
Decoder: R3110,3111,3112,3113,3114,3115,3221,3222,3223,3224,3225 changed into wire bridge.
 added: C2205,2216,2217; R3217,3226,3227.
 changed: IC7202,7203,7204,7211.
Audio: deleted: SK-2.
 added: C2256; R3253,3732; socket 1705(BU-3).
 changed: sockets 1201(BU-4),1301(BU-2),1704(BU-3), IC 7302,7303.
General: All elcaps of 33 μ F 16V are changed into 47 μ F.

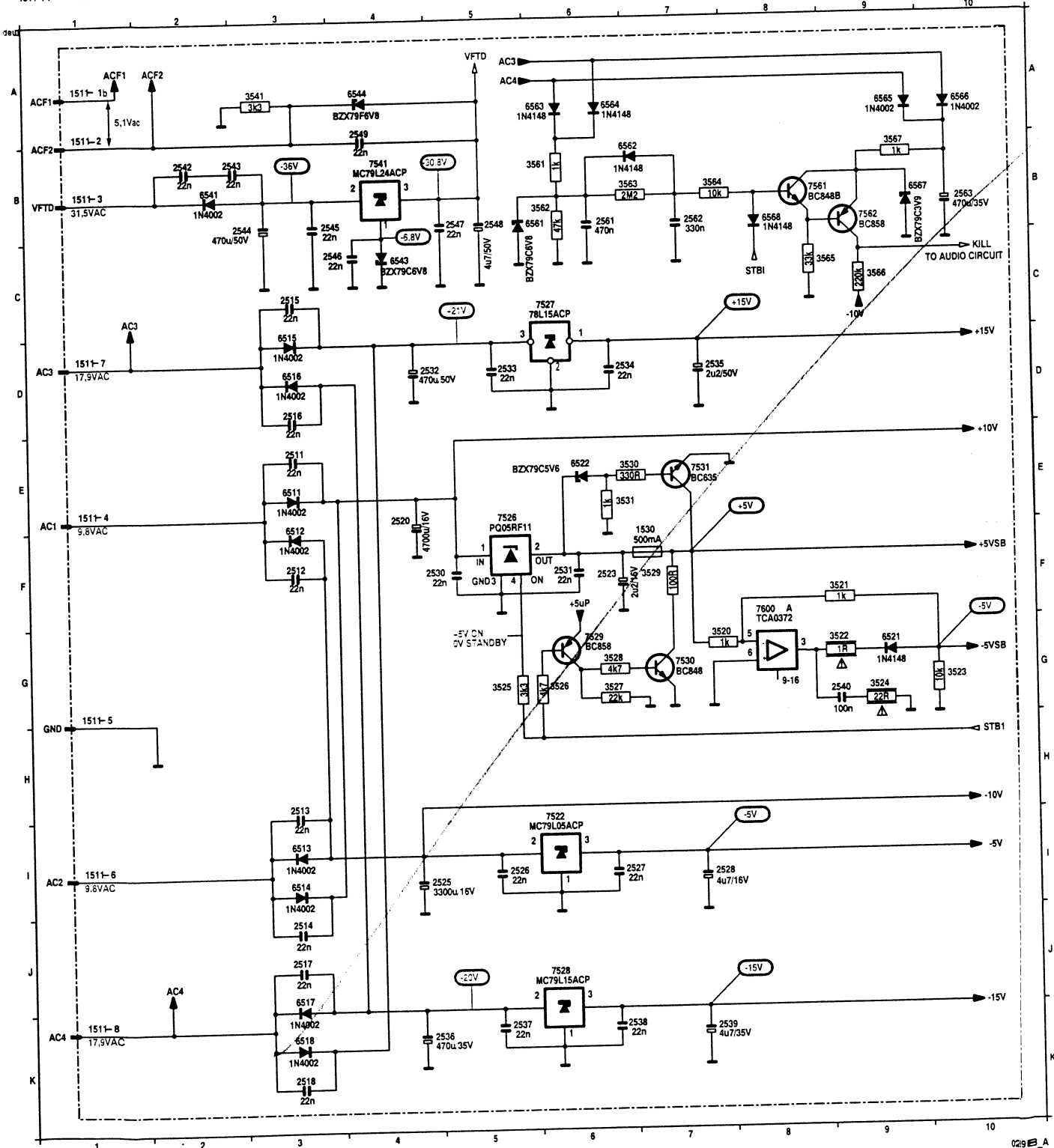
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PHILIPS

POWER SUPPLY CD951

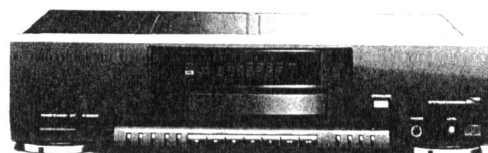
1511 K 1	1511 G 1	2516 D 3	2527 I 7	2535 D 7	2543 B 3	2561 B 6	3524 G 9	3531 E 6	3566 C 9	6516 D 3	6544 A 4	6567 B 10	7530 G 7
1511 E 1	1530 F 7	2517 J 3	2528 I 7	2536 K 5	2544 B 3	2562 B 7	3525 G 5	3541 A 3	3567 B 9	6517 J 3	6561 B 6	6568 B 8	7531 E 7
1511 D 1	2511 E 3	2518 K 3	2530 F 5	2537 K 5	2545 B 4	2563 B 10	3526 G 6	3561 B 6	6511 E 3	6518 K 3	6562 B 7	7522 I 6	7541 B 4
1511 B 1	2512 F 3	2520 E 4	2531 F 6	2538 K 7	2546 C 4	2564 C 4	3527 G 6	3562 B 6	6512 F 3	6521 B 9	6563 A 6	7526 E 5	7561 B 8
1511 A 1	2513 H 3	2523 F 6	2532 D 5	2539 K 7	2547 B 5	2565 G 9	3528 G 6	3563 B 7	6513 I 3	6522 E 6	6564 A 6	7527 C 6	7562 B 9
1511 A 1	2514 J 3	2525 I 5	2533 D 5	2540 G 9	2548 B 5	2566 G 9	3529 G 6	3564 B 7	6514 I 3	6541 B 2	6565 A 9	7528 J 6	7600 F 8
1511 I 1	2515 C 3	2526 I 5	2534 D 7	2542 B 2	2549 A 4	2567 G 10	3530 E 7	3565 C 9	6515 D 3	6543 C 4	6566 A 10	7529 G 6	



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Service
Service
Service



Service Manual

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4822 725 24007



PHILIPS

PCS 60 130

TECHNICAL SPECIFICATIONS**General**

1. Mains voltage	/00S	:	230V (+6 -10%)
	/05S/10S	:	240V ($\pm 10\%$)
	/17S	:	117V ($\pm 10\%$)
2. Mains frequency		:	50-60 Hz
3. Mains voltage selection		:	See circuit diagram Power Supply
4. Power consumption mains, operated		:	10W

External RC-5 connection

Specification: V-in Low	:	from -2,0V to +1.6V
V-in High	:	from +3V to +7,5V
R-in	:	from 47k Ω to 68k Ω

Line output

1. Number of channels	:	2
2. Output voltage	:	2 V _{rms} \pm 1,5dB
3. Unbalance left-right	:	max. 0,2dB
4. Output resistance	:	200 Ω
5. Amplitude linearity	:	max. \pm 0,2dB from 20 Hz to 20 kHz
6. Phase non-linearity	:	max. \pm 1,5° from 20 Hz to 20 kHz
7. Signal to noise ratio	:	min. 105dB from 20 Hz to 20 kHz
8. Dynamic range (-60dB)	:	min. 92dB from 20 Hz to 20 kHz
9. Total harmonic distortion + noise	:	min. 90dB from 20 Hz to 20 kHz
10. Intermodulation distortion	:	min. 90dB from 20 Hz to 20 kHz
11. Out-band attenuation	:	min. 55dB (above 24,2 kHz)
12. Channel separation	:	min. 105dB (1 kHz)
13. Automatic switched de-emphasis with time constants	:	15/50 μ s
14. Non-linearity on -90dB	:	\pm 1dB

Variable headphone

1. Output voltage	:	max. 5 V _{rms} \pm 2dB
2. Unbalance left-right	:	max. \pm 0,6dB
3. Output resistance	:	120 Ω
4. Load impedance range	:	32 Ω to 600 Ω load
5. Output power	:	0 to 50 mW into 30 Ω load
	:	0 to 90 mW into 120 Ω load
	:	0 to 50 mW into 600 Ω load

Audio specs in case of 600 Ω load at 4 V_{rms} voltage output

6. Signal to noise ratio	:	min 95 dB
7. Dynamic range	:	min 90 dB (20 Hz -20 kHz)
8. Total harmonic distortion	:	min 88 dB (20 Hz - 20 kHz)
9. Intermodulation distortion	:	min 88 dB (20 Hz - 20 kHz)
10. Channel separation	:	min 70 dB (1 kHz)
	:	min 65 dB (31,5 Hz - 16 kHz)

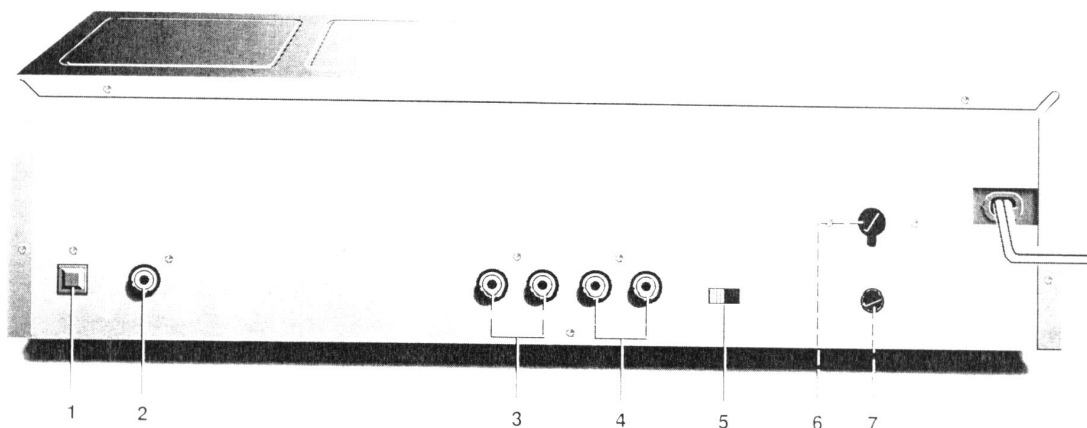
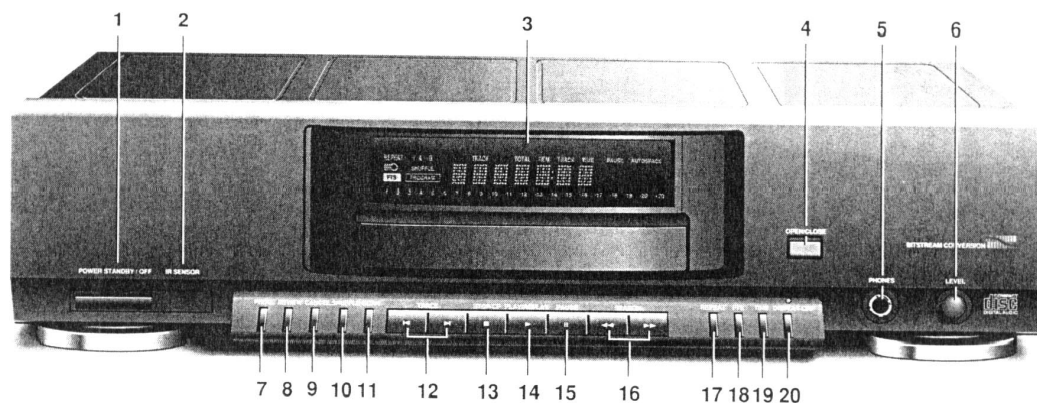
Dimensions and weight

1. Apparatus tray closed	:	WxDxH 435 x 300 x 90/106 mm
2. Apparatus tray open	:	WxDxH 435 x 445 x 90/106 mm
3. Weight	:	4 kg

Optical read-out system

1. Laser type	:	Semiconductor AlGaAs
2. Wavelength	:	780 nm \pm 20 nm
3. Light output (c.w.)	:	max. 0,5 mW

CONTROLS & CONNECTIONS



CONTROLS

Indication on App.	Indication in diagram
1. POWER STANDBY/OFF	SK-1
2. I(nfra)R(ed)SENSOR	1451
3. Display	1402
3. OPEN/CLOSE	1426
5. PHONES	BU-5
6. LEVEL	3381
7. PROG(ram)	1413
8. REVIEW	1411
9. CANCEL	1410
10. SHUFFLE	1412
11. SCAN	1416
12. < TRACK >	1414 1415
13. STOP/CP	1417
14. PLAY/REPLAY	1421
15. PAUSE	1420
16. << SEARCH >>	1419 1418
17. REPEAT	1422
18. FTS	1425
19. TIME	1424
20. DISPLAY OFF	1423

CONNECTIONS

Indication on App.	Indication in diagram
1. DIGITAL OUT OPTICAL	BU-6
2. DIGITAL OUT	BU-4
3. ANALOG OUT	BU-2
4. ESI BUS	BU-3
5. IR SENSOR OFF ON	SK-2
6. Voltage selector(not all versions)	
7. Mains fuse holder(not all versions)	

(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 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.

(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.

(GB)

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

(NL)

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

(D)

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

(I)

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

(F)

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

S Varning!

Osynlig laserstrålning när apparaten är öppnad och spärrenär urkopplad. Betrakta ej strålen.

SF Varo!

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Adverse!!

Usynlig laserstrålning ved åbning. Undgå uansættelse for stråling.

DANGER

Invisible laser radiation when open.
Avoid direct exposure to beam

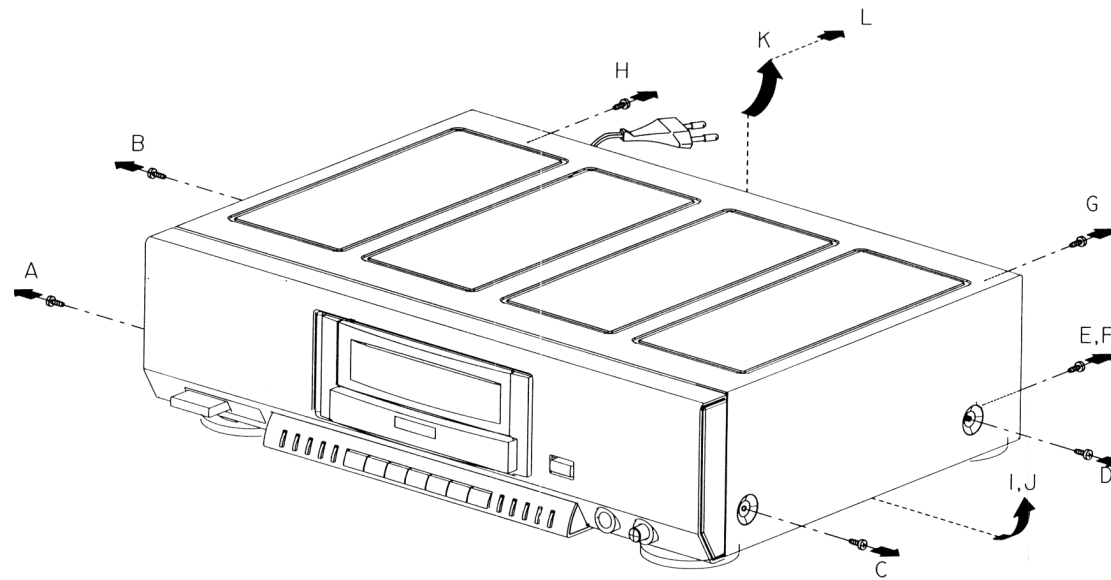
CAUTION

Invisible laser radiation when open.
Avoid exposure to beam.

DISMANTLING INSTRUCTIONS
DEMOUNTING OF COVER

5

6

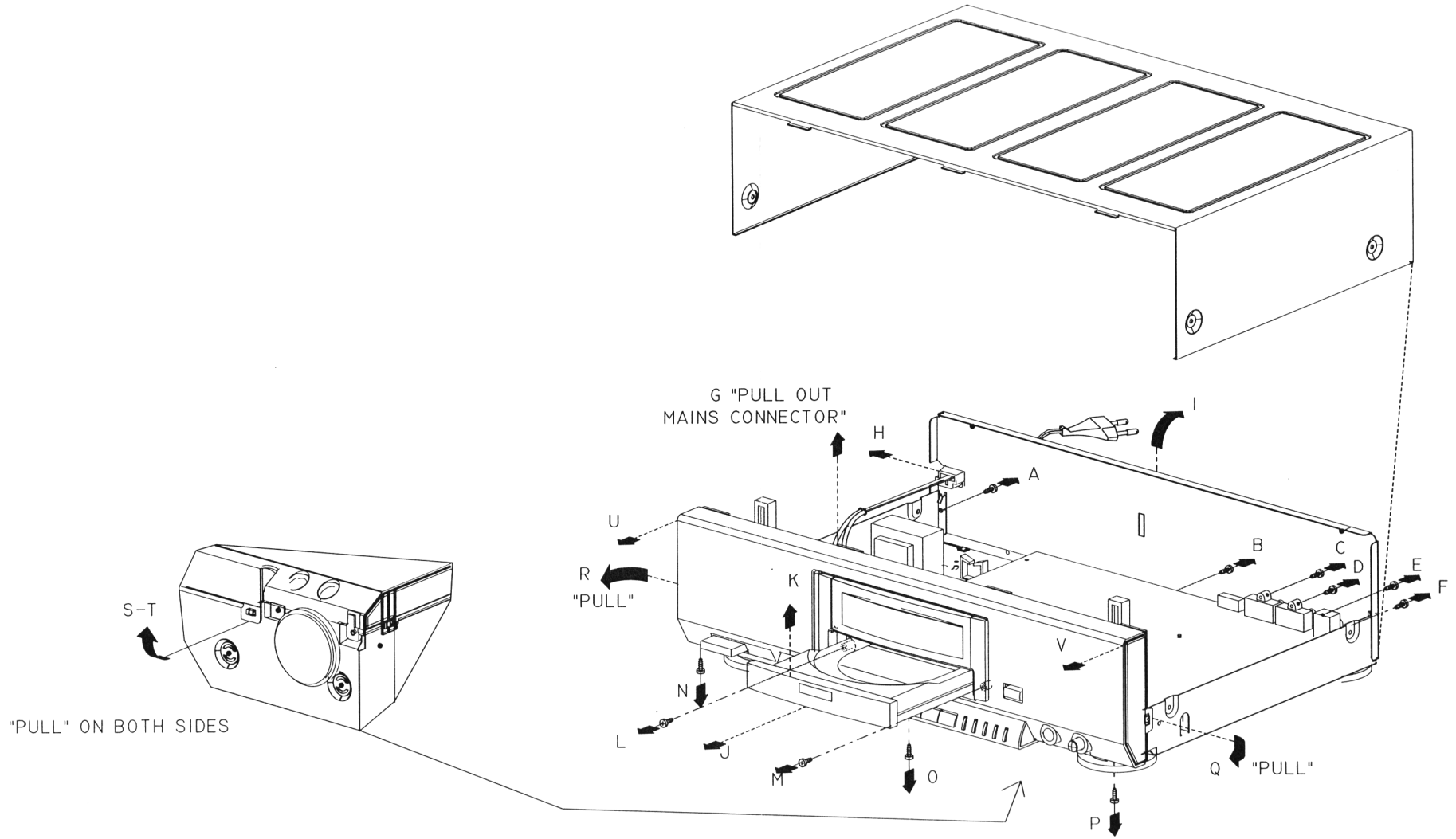


HAS 1050

DEMOUNTING OF BACKPLATE AND FRONT

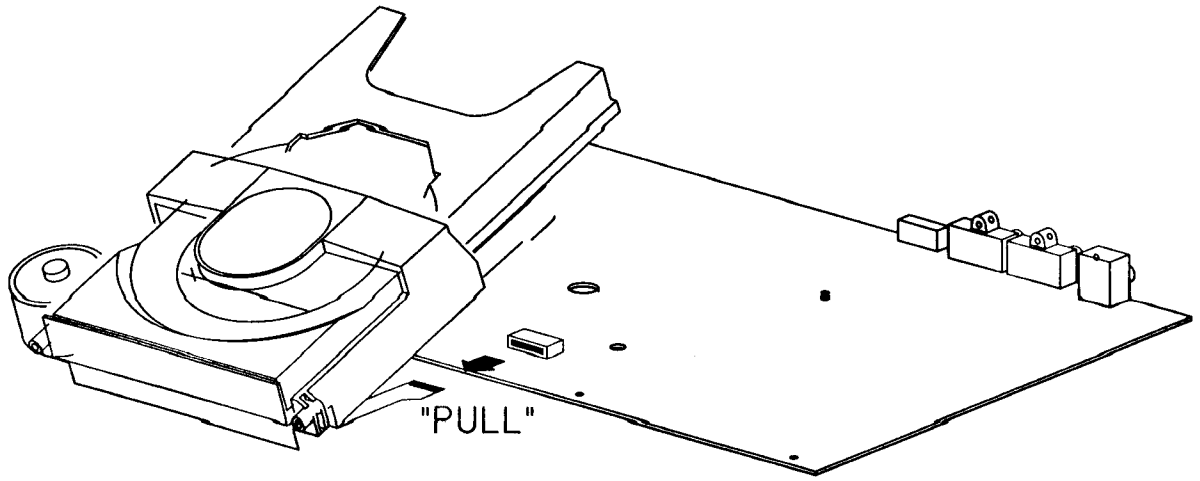
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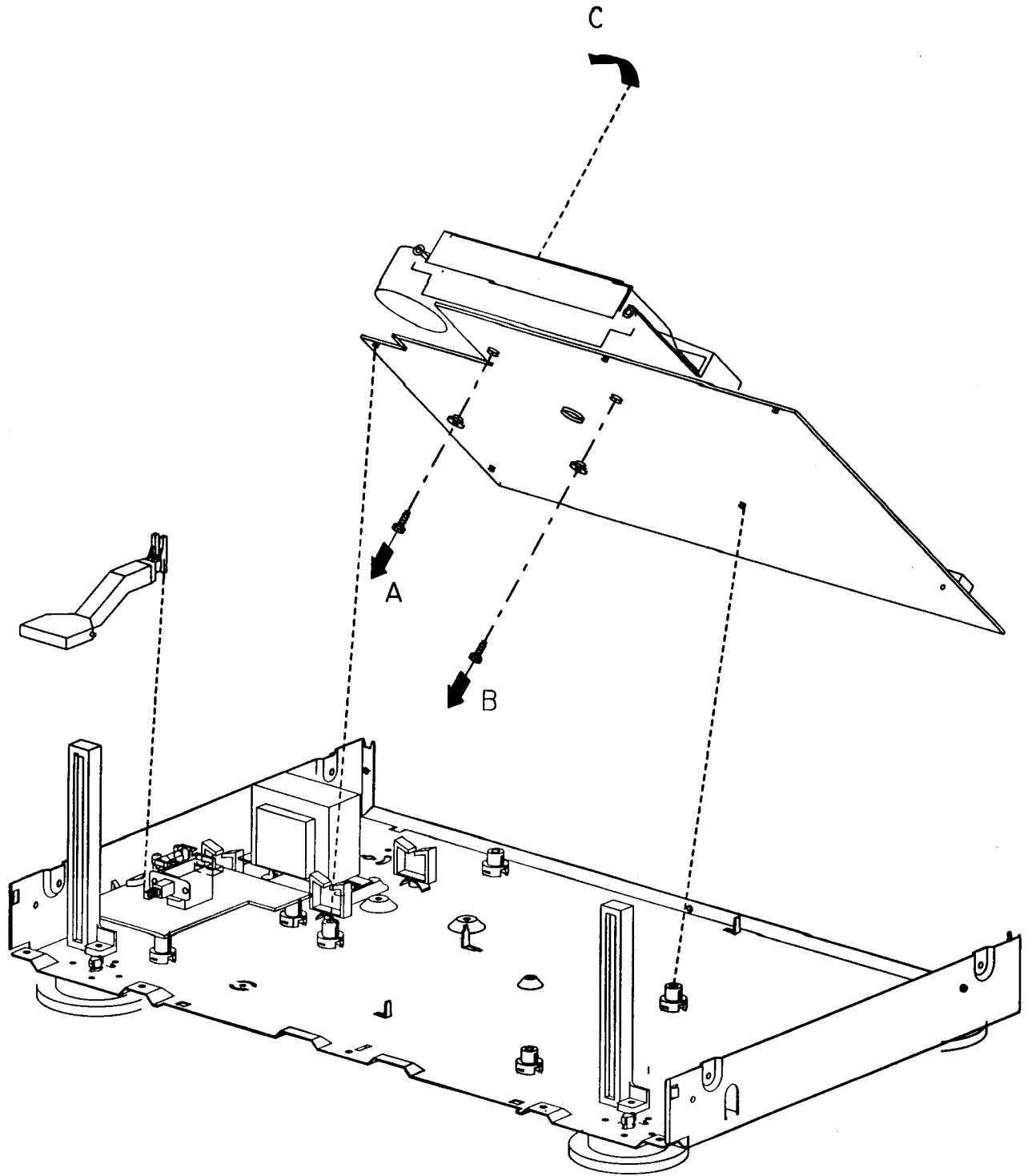
HAS 1051

REMOVING FLEX FROM CONNECTOR



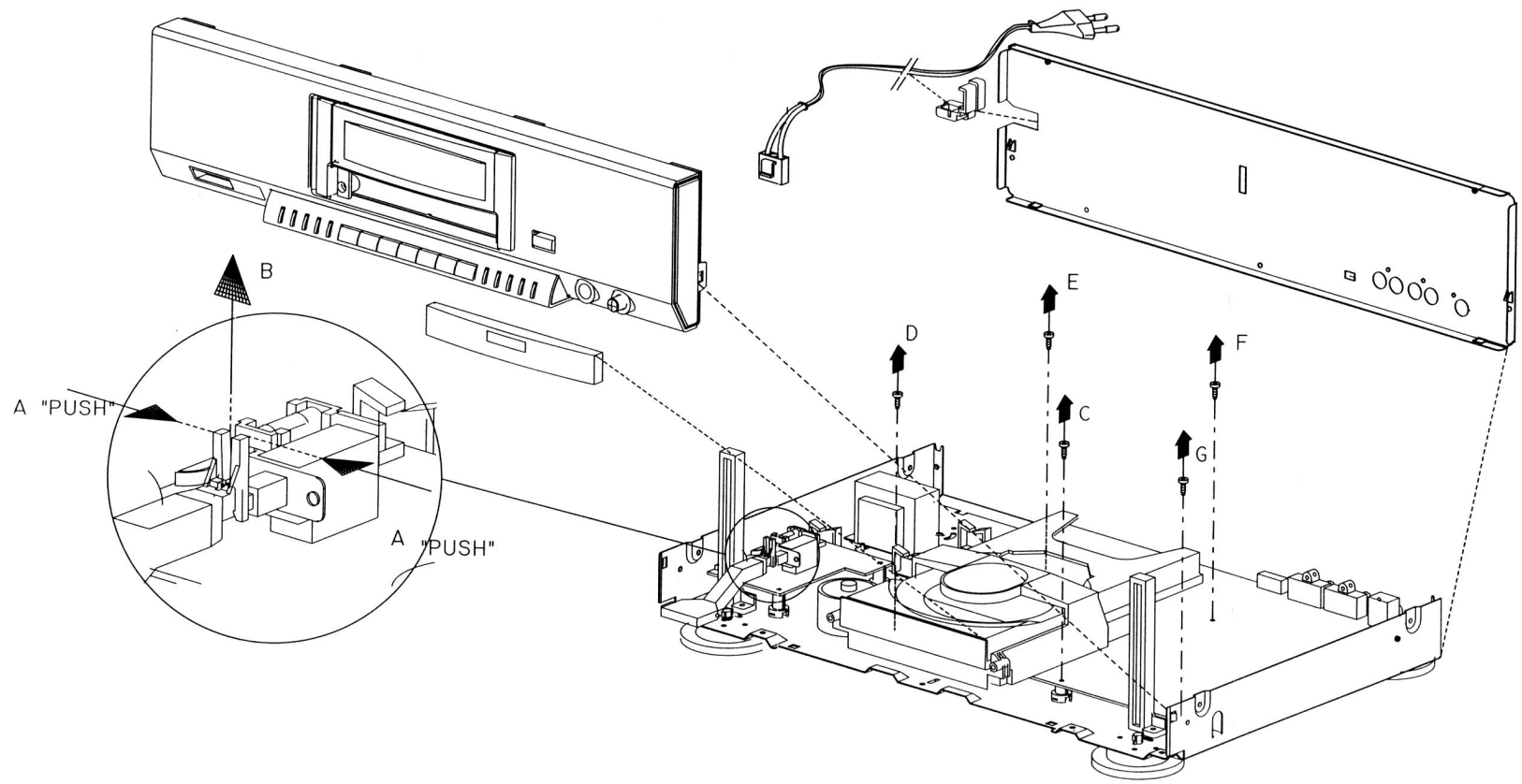
HAS.1054

DEMOUNTING OF LOADER



HAS.1053

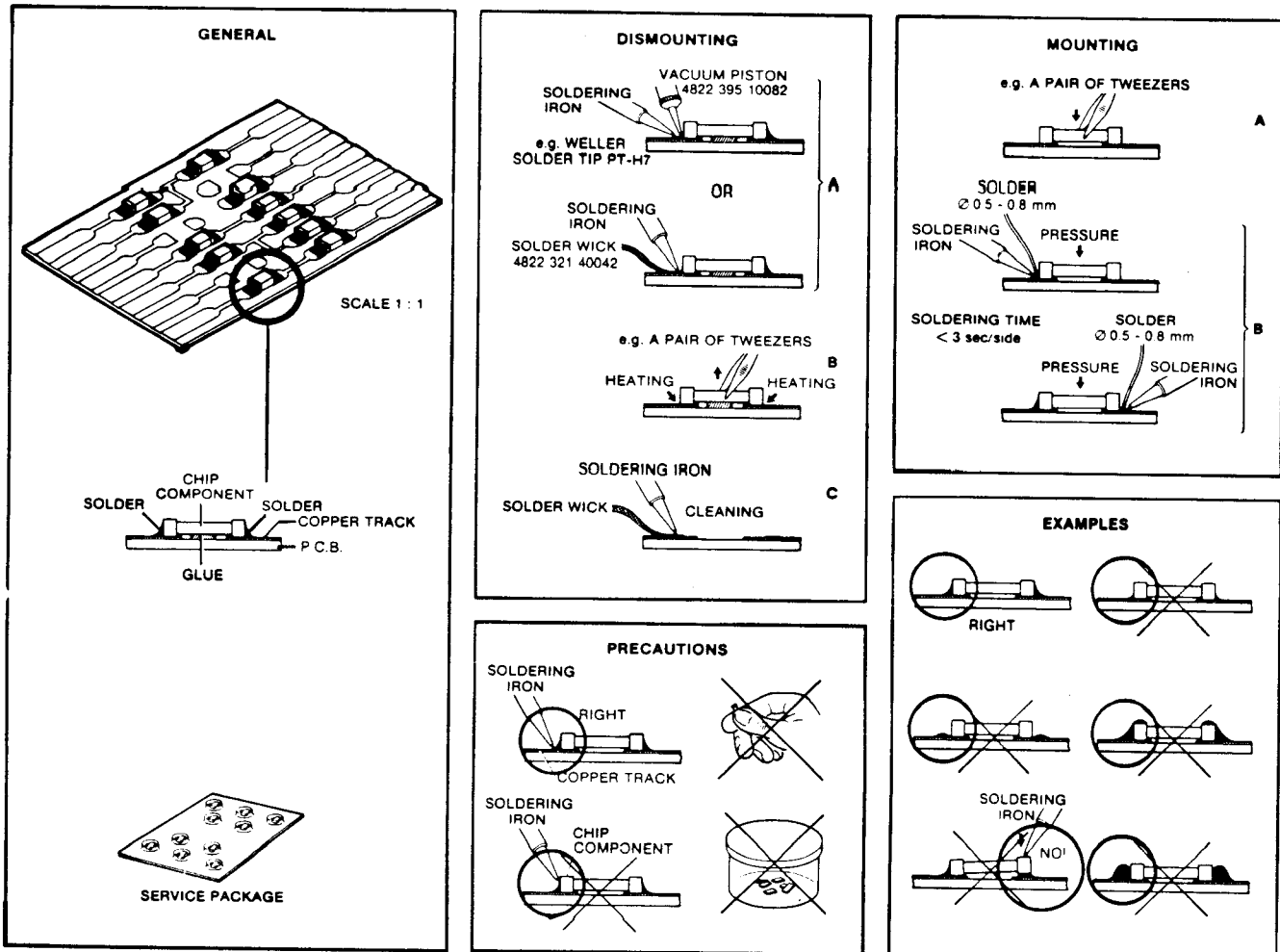
DEMOUNTING OF POWERROD AND MONOBOARD



HAS.1052

SERVICING HINTS

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

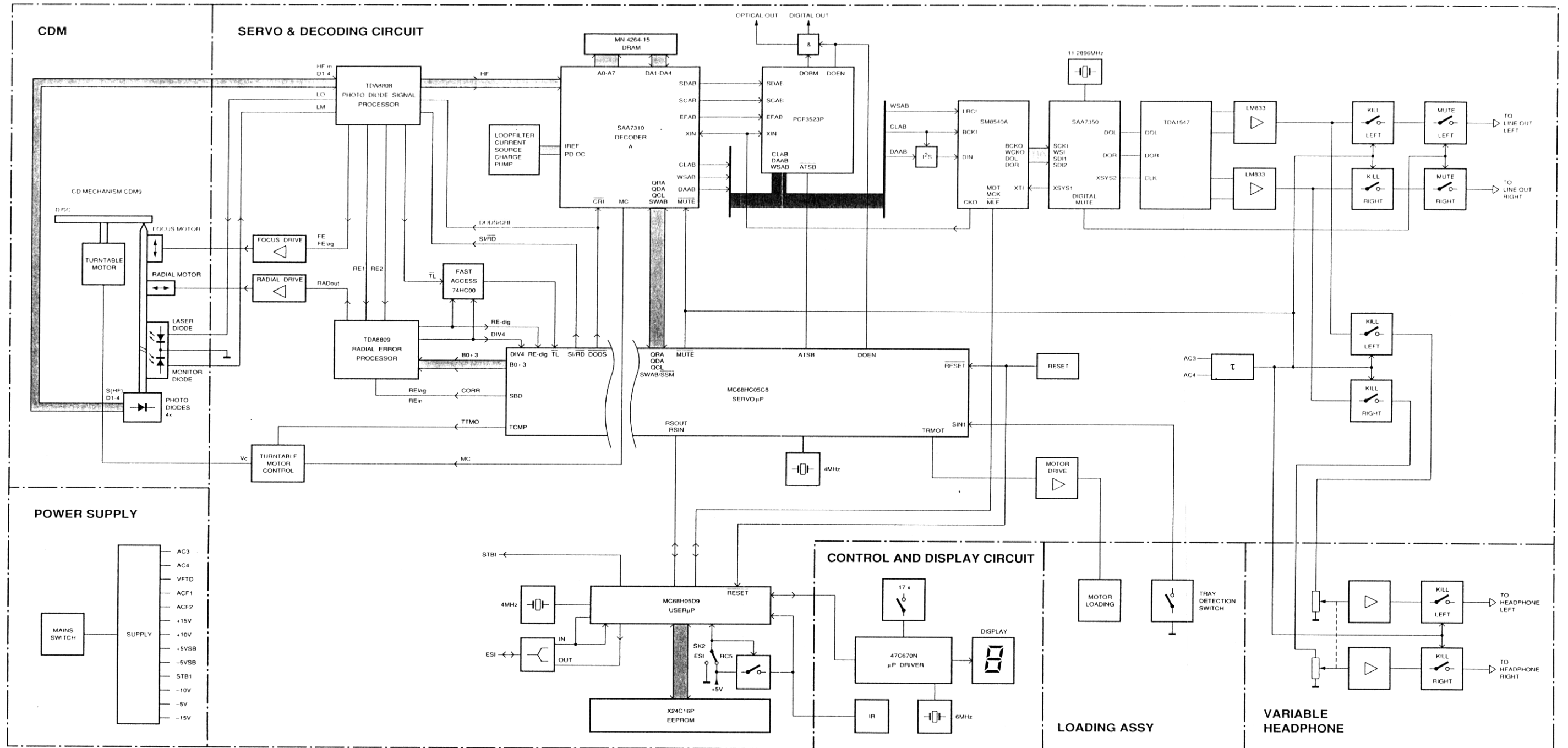


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SERVICE TOOLS

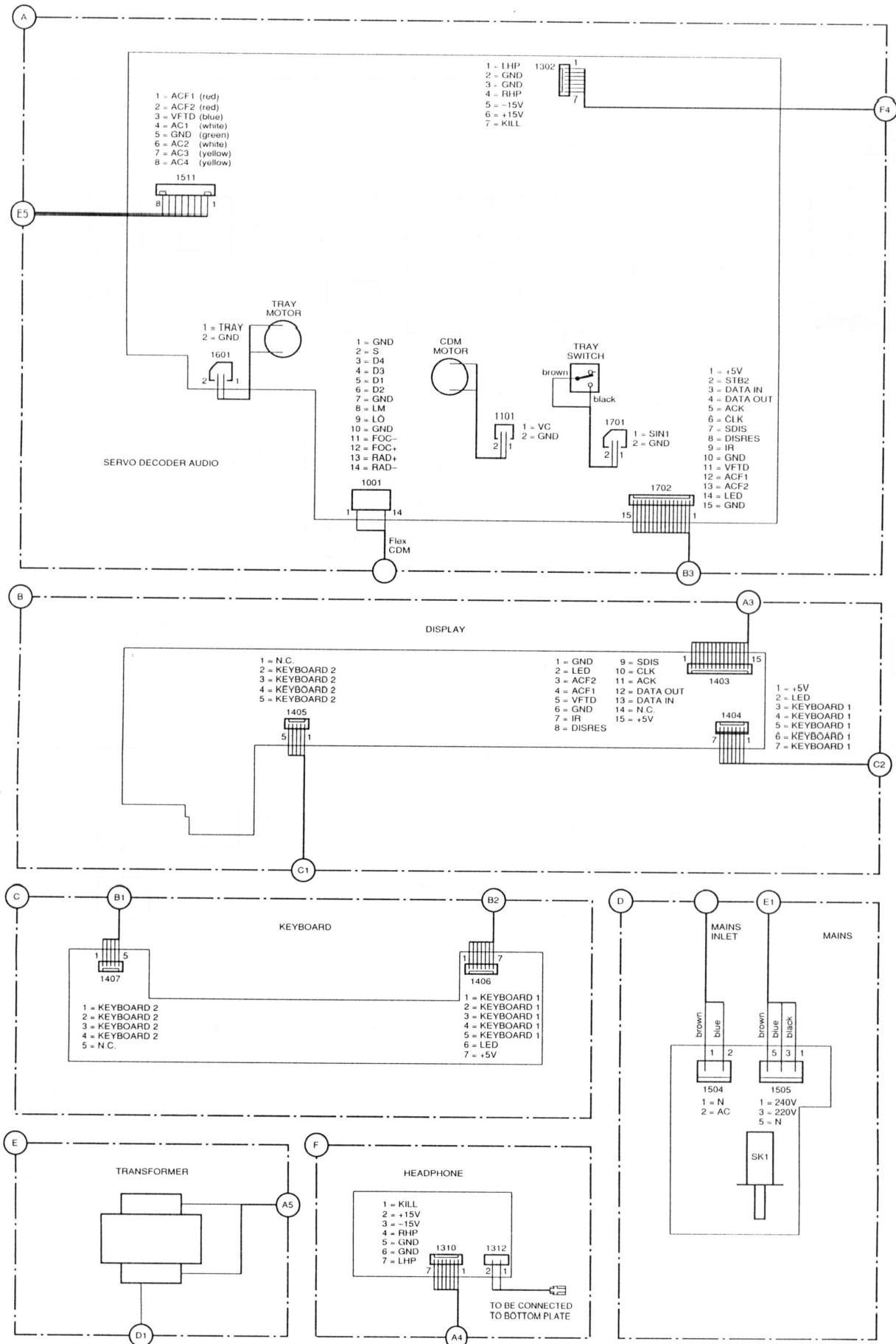
Audio signal disc	4822 397 30184
Disc without errors (test disc 5) + disc with DO errors, black spots and fingerprints (test disc 5A)	4822 397 30096
Disc (65 min 1kHz) without pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	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 10324

AGC	- Automatic Gain Control	OUTDL	- Output from the left positive switched capacitor DAC;feedback connection for the left positive OPAMP
AM	- Additional mute	OUTDNL	- Output from the left negative switched capacitor DAC;feedback connection for the left negative OPAMP
ATSB	- Attenuation of Audio level in Search position	OUTDR	- Output from the right positive switched capacitor DAC;feedback connection for the right positive OPAMP
ATT	- Attenuation	OUTDNR	- Output from the right negative switched capacitor DAC;feedback connection for the right negative OPAMP
B0-B3	- Control bits for radial circuit	OUTOPAL	- +Output of the switched capacitor OPAMP
BEQ	- Equalizer reference current input	OUTNOPAL	- -Output of the switched capacitor OPAMP
BCKI	- Input data bit clock	OUTOPAR	- +Output of the switched capacitor OPAMP
BCKO	- Output data bit clock	OUTNOPAR	- -Output of the switched capacitor OPAMP
BGC	- DC and LF gain control reference input	PD/OC	- Phase detector - oscillator control
BSW	- Bandwidth switch turntable motor circuit	PLLH	- PLL on hold reset
CD ROM	- Digital Data information in disc signal switch	QCL	- Q-channel clock signal
CEFM	- Clock Eight-to-Fourteen Modulator	QQDA	- Q-channel data signal
CKO	- Oscillator output clock	QRA	- Q-channel request acknowledge
CKSL	- Clock frequency	RADout	- Output of RE2-RE1 input
CLAB	- Clock signal Detector-A to Filter-B	RE	- Radial error signal (Amplified RE2-RE1 currents)
CLBD	- Clock signal Filter-B to DAC	Rosc	- Resistor wobble oscillator
CLI	- I ² S serial bit clock input	Rwob	- Wobble generator input
CORR	- 1/2 bit DAC	RE1	- Radial error signal 1
Cosc1	- Capacitor wobble oscillator	RE2	- Radial error signal 2
Cosc2	- Capacitor wobble oscillator	RE dig	- Radial error digital
CREF	- Reference current	RE lag	- Radial error signal for LAG network
CRI	- Counter Reset Inhibit	RST	- Device reset
DAAB	- Data signal Decoder-A to Filter-B	SBD	- Single Bit Deviation correction
DABD	- Data signal Filter-B to DAC	Sc	- Starting up capacitor input
DAI	- I ² S serial data input	SCAB	- Subcode clock Decoder-A to Filter-B
DAO	- I ² S serial data output	SCKI	- Bit clock input for serial input interface
DEC	- Decoupling input internal bypass	SDAB	- Subcode data Decoder-A to Filter-B
DEEM	- Deemphasis	SDI1-2	- Serial data input
DET	- HF detector voltage input	SIN	- Tray switch
DIN	- Input data	Si/RD	- On/off control for laser supply and focus circuit. Ready signal. Starting up procedure succesfull
DIV4	- Divide by 4 input	SWAB/SSM	- Subcode word/start-stop motor signal
DMUTE	- Digital mute	TL	- Track loss output signal
DOBM	- Digital out signal	TRMOT	- Tray motor drive
DOEN	- Digital out enable	TTM+	- Control voltage for turntable motor
DODS	- Drop out detector suppression	TTM-	- Control voltage for turntable motor
D1-4	- Photodiode currents	TTMO	- Motor offset and bandwidth switch
DOL	- Left channel data output	VDACL-R	- Reference voltage supply left(right) channel DAC
DOR	- Right channel data output	Vext+	- Supply connection
EFAB	- Error flag Decoder-A to Filter-B	Vext-	- Supply connection
FBL+ -	- Feedback for left positive (negative) switched capacitor integrator	VRCL-R	- High impedance voltage refence for left (right) channel inputs
FBR+ -	- Feedback for right positive (negative) switched capacitor integrator	VROL-R	- Left (right) channel voltage reference output
FE	- Focus error signal	WCKO	- Output word clock
FE lag	- Focus error signal for LAG network	WSAB	- Word select Decoder-A to Filter-B
HF	- HF output for DEMOD	WSBD	- Word select Filter-B to DAC
HFD	- HF detector output for DEMOD	WSI	- I ² S word select input
HF-in	- HF current input to HF amplifier	WSO	- I ² S word select output
HF-out	- HF amplifier and equalizer voltage output	XIN	- Oscillator signal input
IDF1-3	- Input data format	XOUT	- Oscillator output
INTL+ -	- Output from left positive (negative) switched capacitor integrator	XSEL	- Crystal frequency select
INTR+ -	- Output from right positive (negative) switched capacitor integrator	XSYS	- Oscillator signal
LM	- Laser monitor diode input	XTI	- Crystal oscillator input
LO	- Laser amplifier current output	XTO	- Crystal oscillator output
LRCI	- Input data word clock		
MC	- Motor control signal		
MCES	- Motor speed control		
MCK	- Mode set bit clock		
MDT	- Mode set serial data input		
MLE	- Mode set latch enable		
MUSB	- Soft mute signal		
MUTE	- Mute signal		

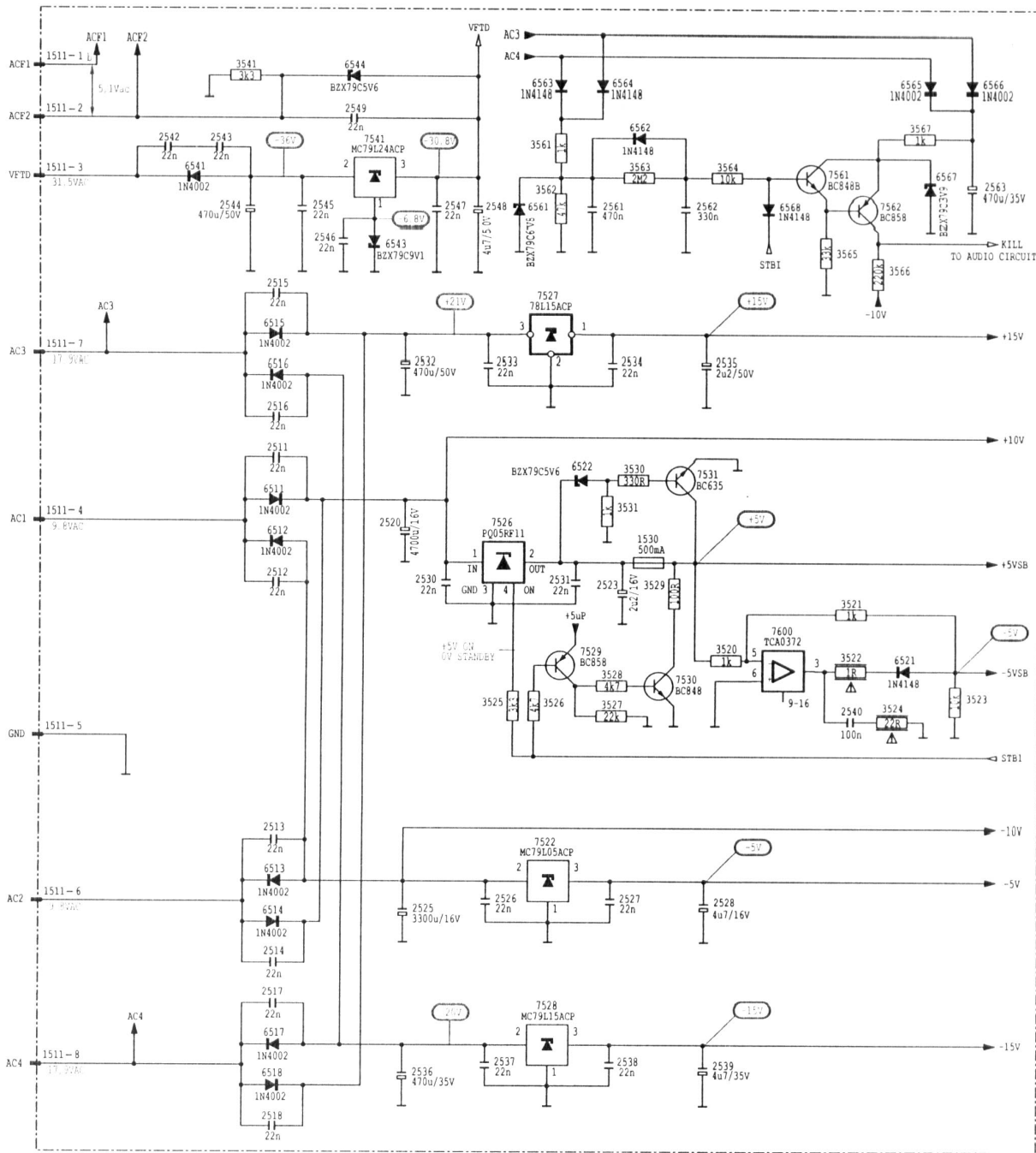


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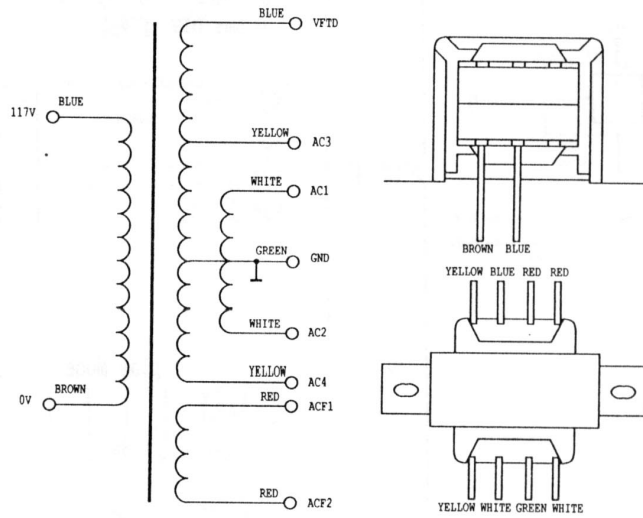
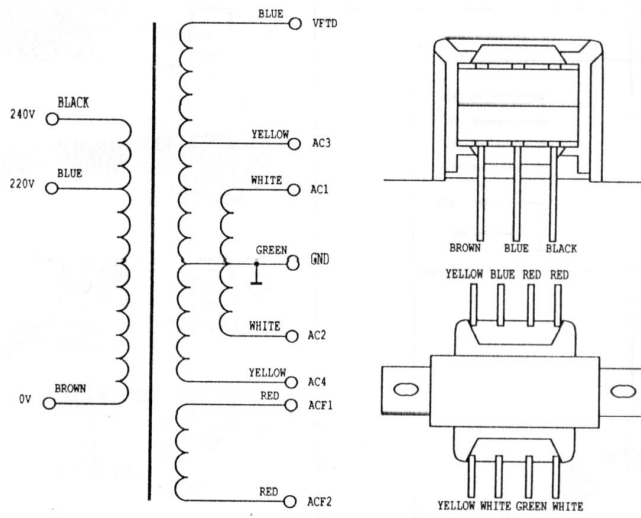
WIRING DIAGRAM



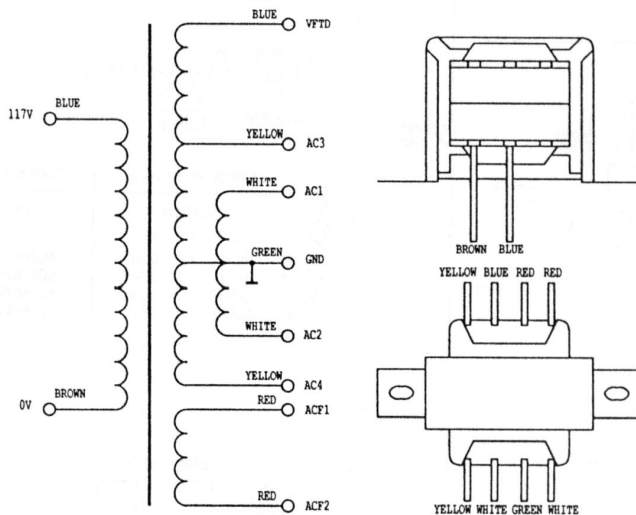
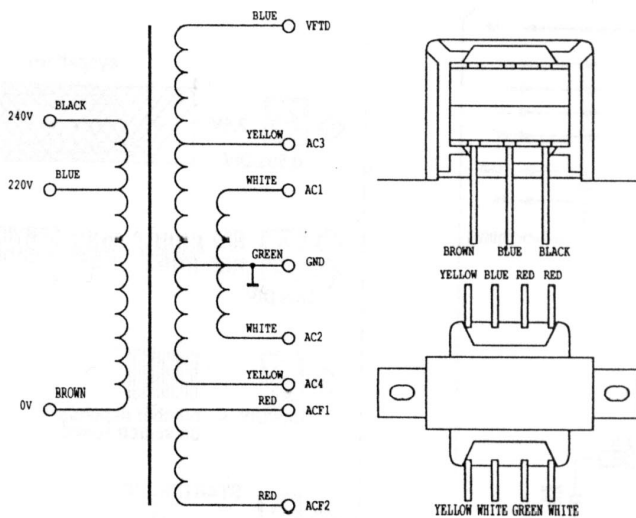
POWER SUPPLY



TRANSFORMER CONNECTIONS

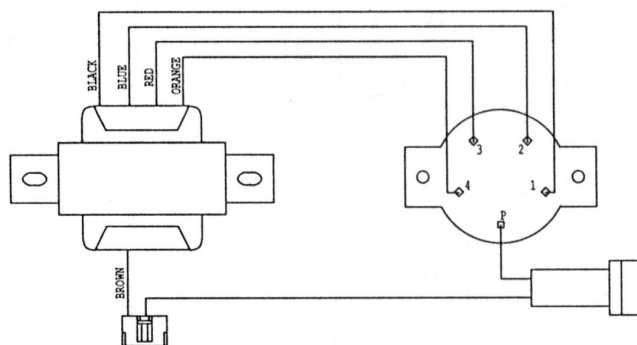
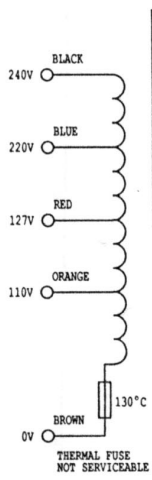


TRANSFORMER CONNECTIONS



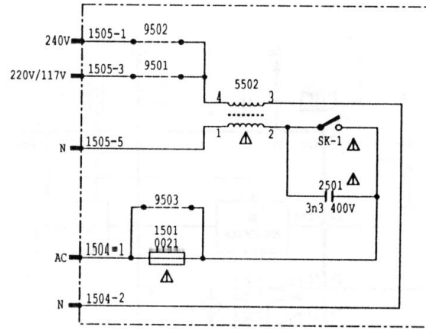
HAS1040
9212

VOLTAGE SELECTOR



HAS1055
9234

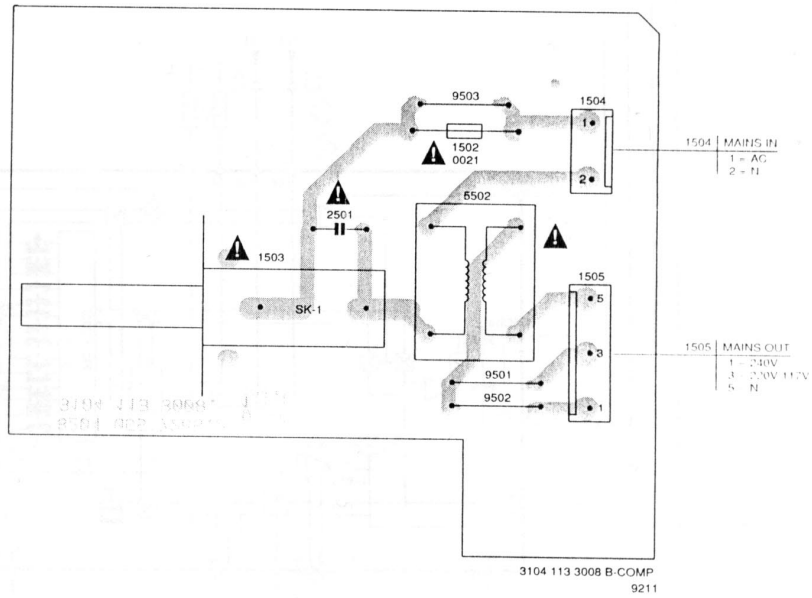
MAINS SWITCH DIAGRAM



CD950/	00S	01S	05S	10S	17S
0021	X		X	X	X
1501	125mA	var.	125mA	125mA	200mA
9501	X	X			X
9502			X	X	
9503		X			

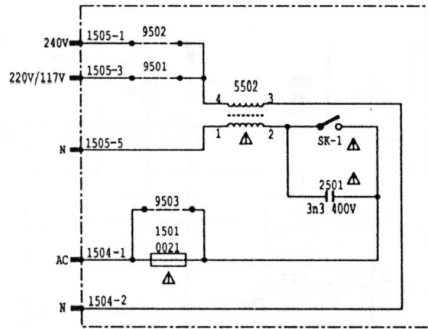
3104 118 00641S-E
9212

MAINS SWITCH PANEL



3104 113 3008 B COMP
9211

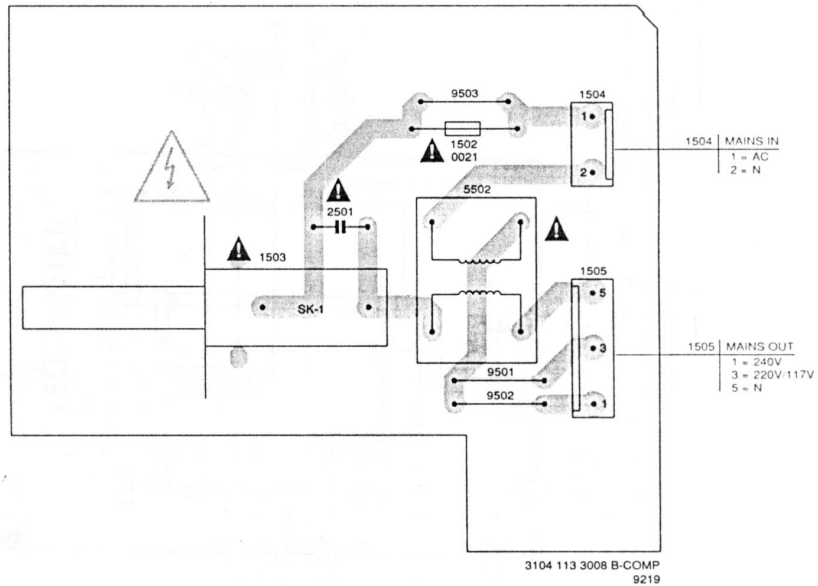
MAINS SWITCH DIAGRAM



CD950/	00S	01S	05S	10S	17S
0021	X		X	X	X
1501	125mA	var.	125mA	125mA	200mA
9501	X	X			X
9502			X	X	
9503		X			

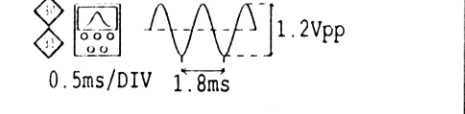
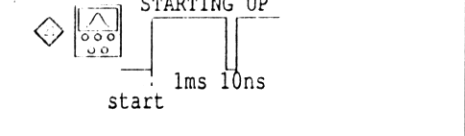
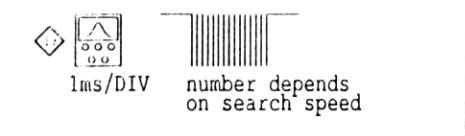
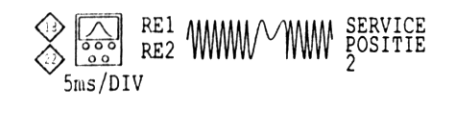
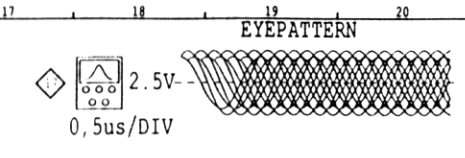
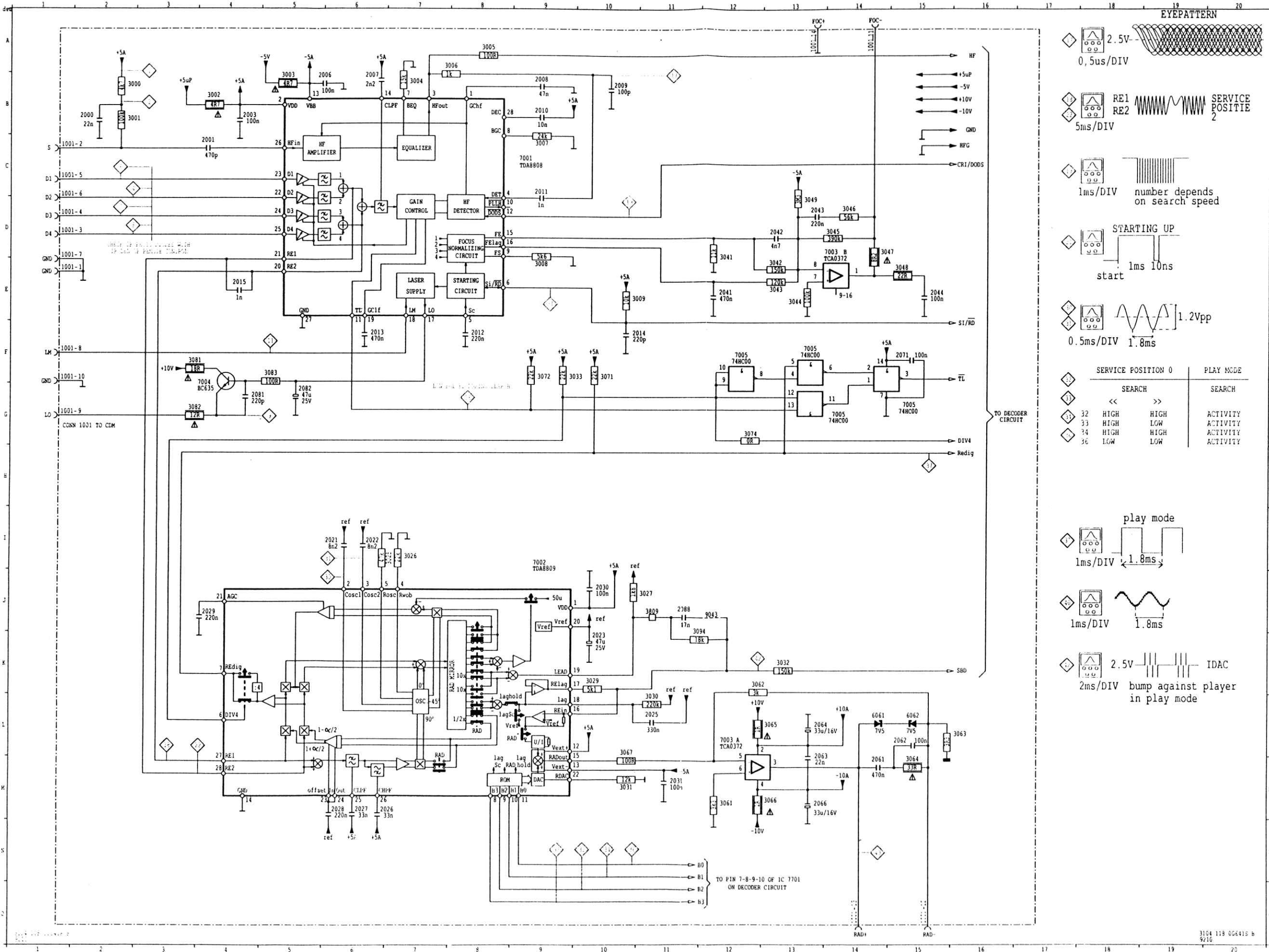
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MAINS SWITCH PANEL

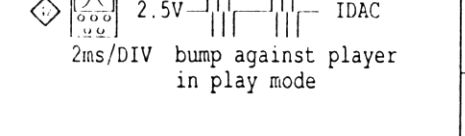
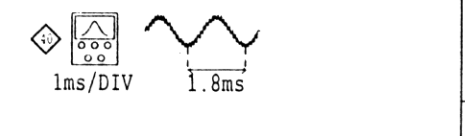
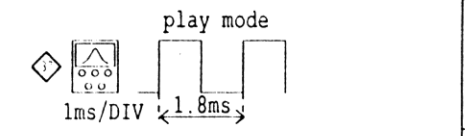


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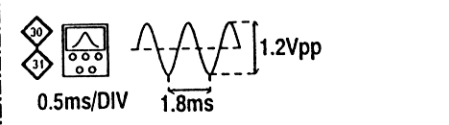
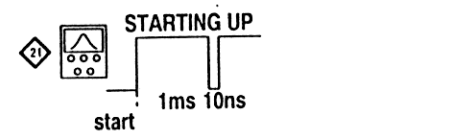
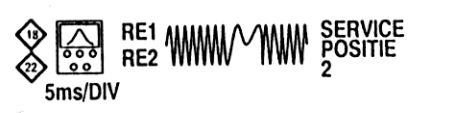
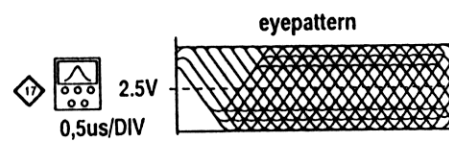
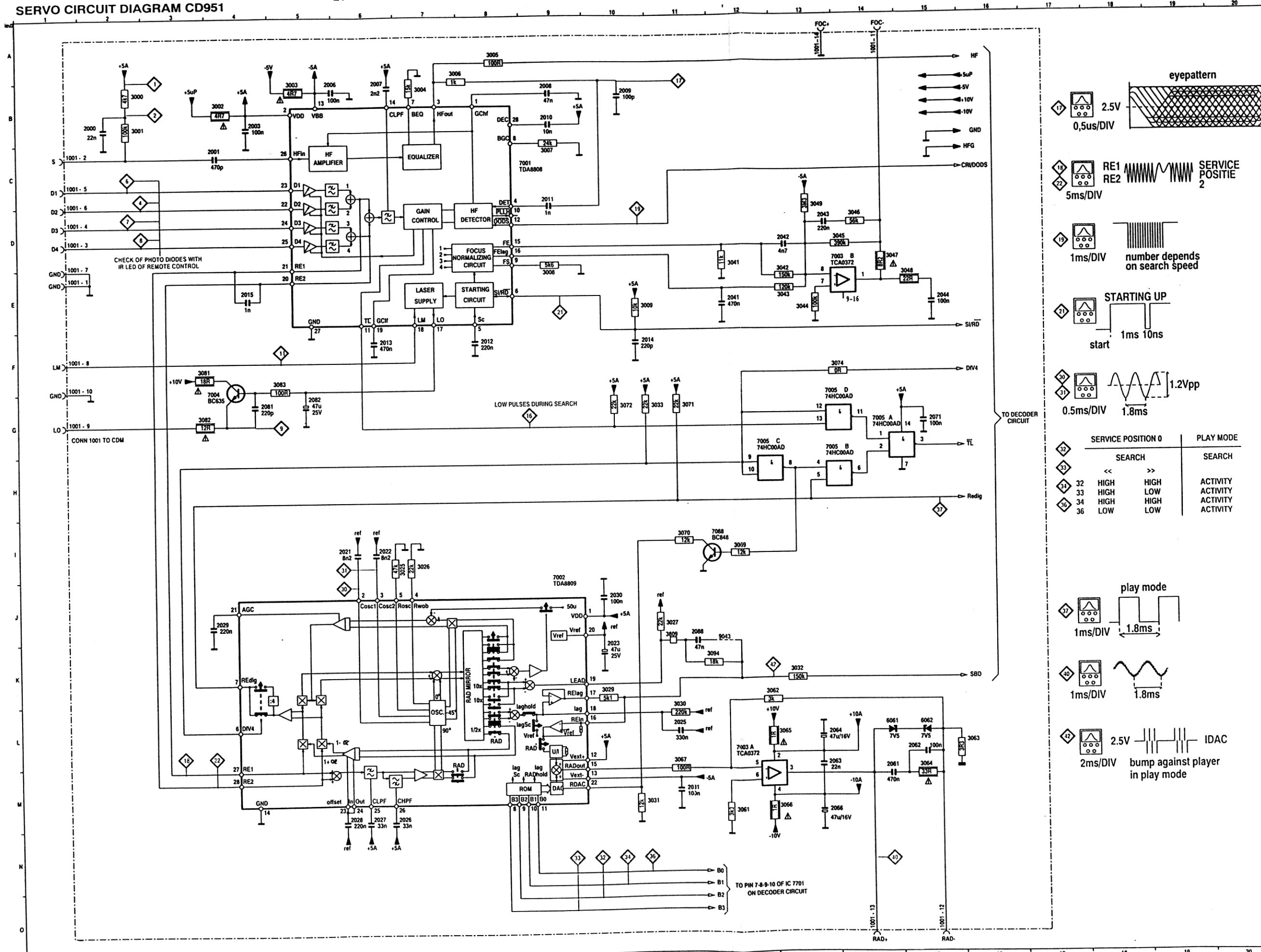
SERVO CIRCUIT DIAGRAM



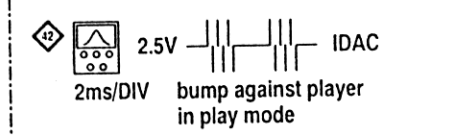
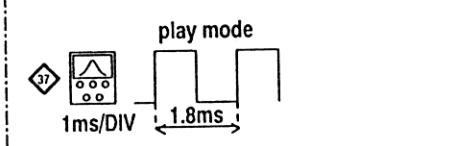
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33	HIGH	LOW
34	HIGH	HIGH
36	LOW	LOW
		ACTIVITY



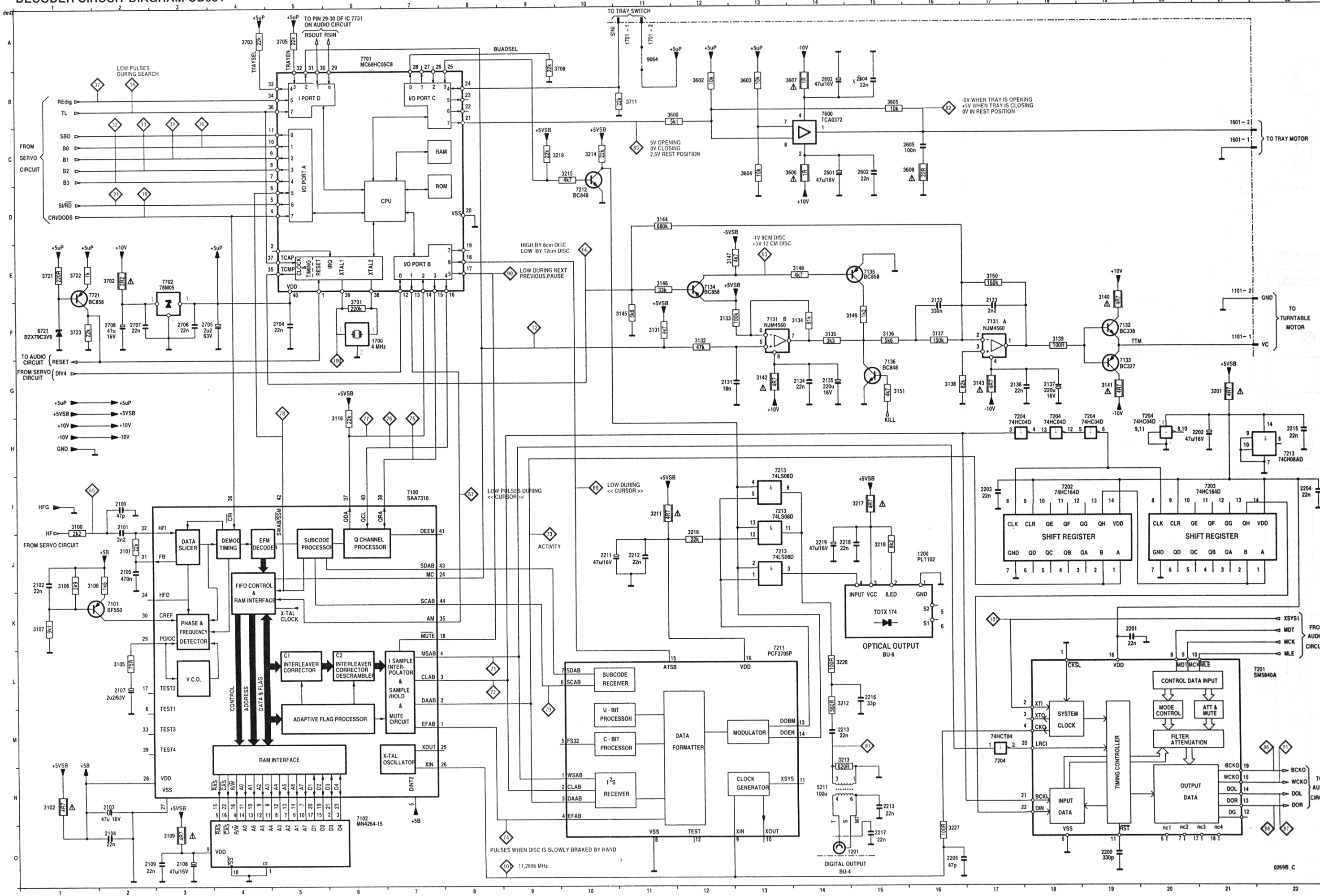
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1013 F6
1014 F5
1015 F4
1016 M6
1017 M5
1018 M4
1019 M3
1020 M2
1021 M1
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1024 J2
1025 J1
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1027 M5
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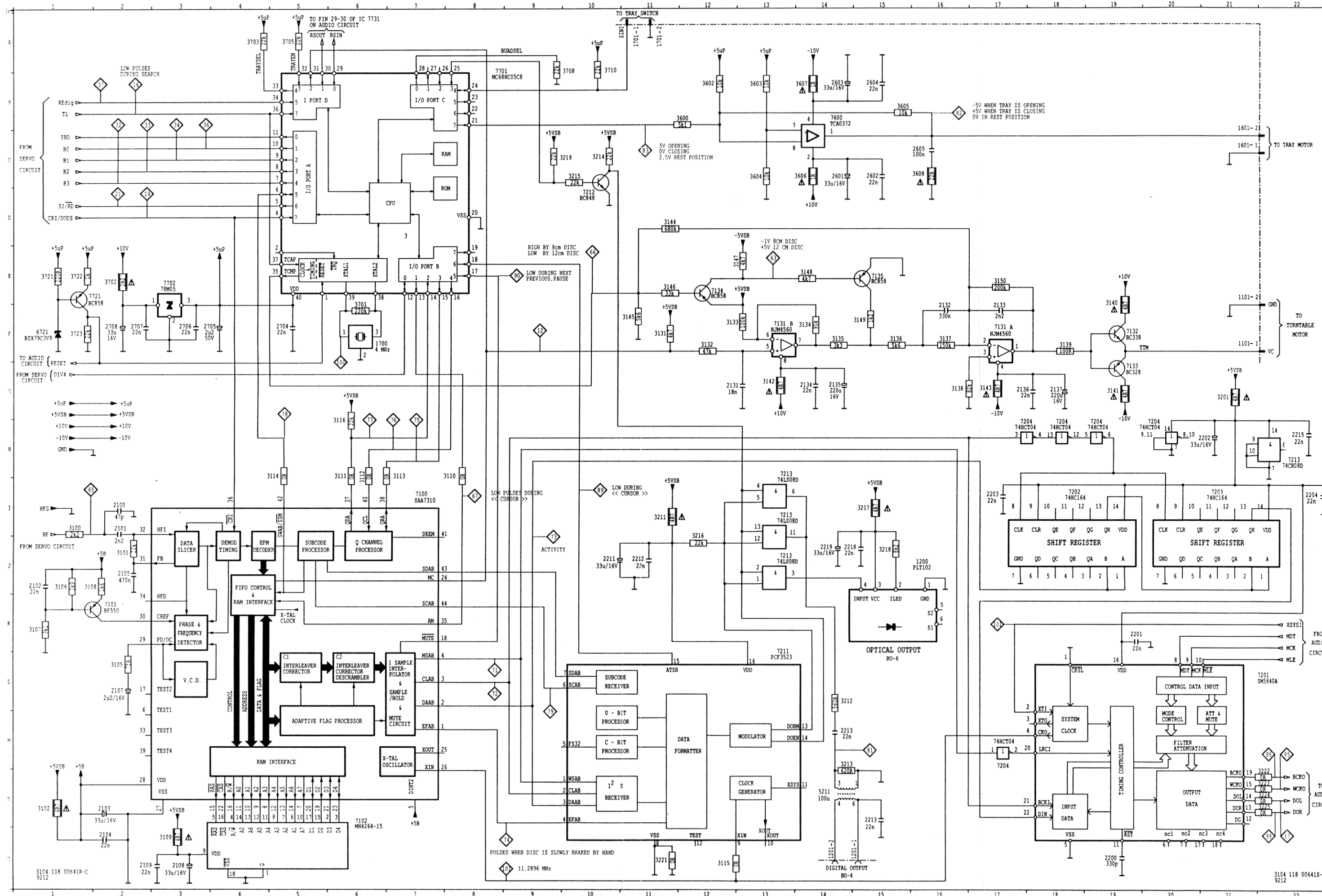
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SEARCH	>>	SEARCH	
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33	HIGH	LOW	ACTIVITY
34	HIGH	HIGH	ACTIVITY
36	LOW	LOW	ACTIVITY

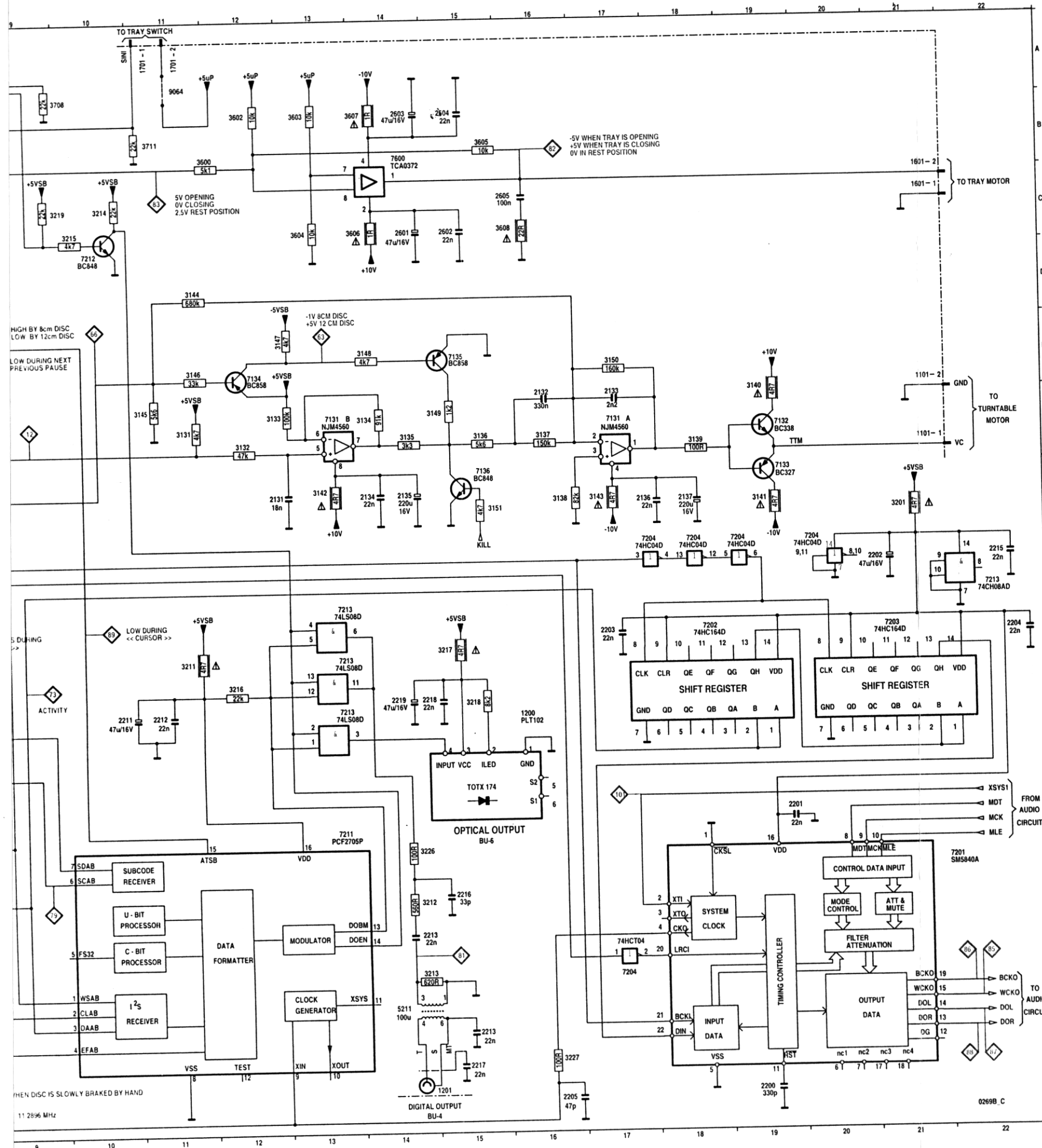


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- 1001 D1
- 1001 A13
- 1001 D1
- 1001 C1
- 1001 C1
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- 1001 G1
- 1001 F1
- 1001 E1
- 1001 E1
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- 2001 C4
- 2003 B4
- 2006 B5
- 2007 B6
- 2008 B9
- 2009 B10
- 2010 B9
- 2011 C9
- 2012 F8
- 2013 F6
- 2014 F11
- 2015 E4
- 2021 I6
- 2022 I6
- 2023 K10
- 2025 L11
- 2026 M6
- 2027 M6
- 2028 M6
- 2029 J4
- 2030 J10
- 2031 M11
- 2041 E12
- 2042 D13
- 2043 D13
- 2044 E15
- 2061 M14
- 2062 L15
- 2063 M14
- 2064 L13
- 2066 M13
- 2071 G15
- 2081 G4
- 2082 G5
- 2088 J11
- 3000 B2
- 3001 B2
- 3002 B4
- 3003 B5
- 3004 B7
- 3005 A8
- 3006 A7
- 3007 C9
- 3008 E9
- 3009 E10
- 3025 I7
- 3028 I7
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- 3030 L11
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- 3042 E13
- 3043 E13
- 3044 E13
- 3045 D13
- 3046 D14
- 3047 D14
- 3048 E15
- 3049 D13
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- 3069 I12
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- 3071 G11
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- 3082 G3
- 3083 F5
- 3094 K11
- 3809 J11
- 6061 L14
- 6062 L15
- 7001 C9
- 7002 I9
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- 9043 K12

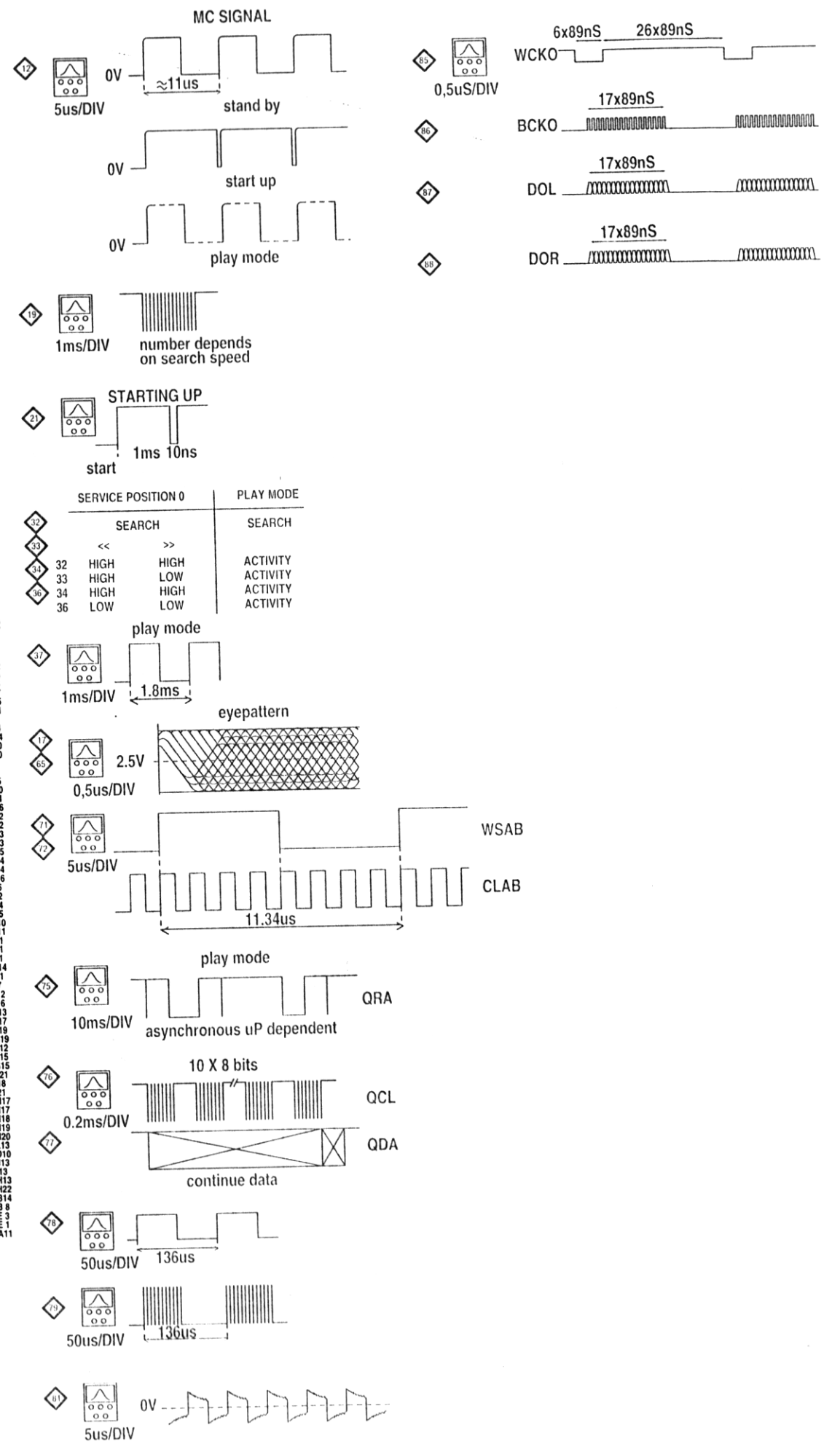


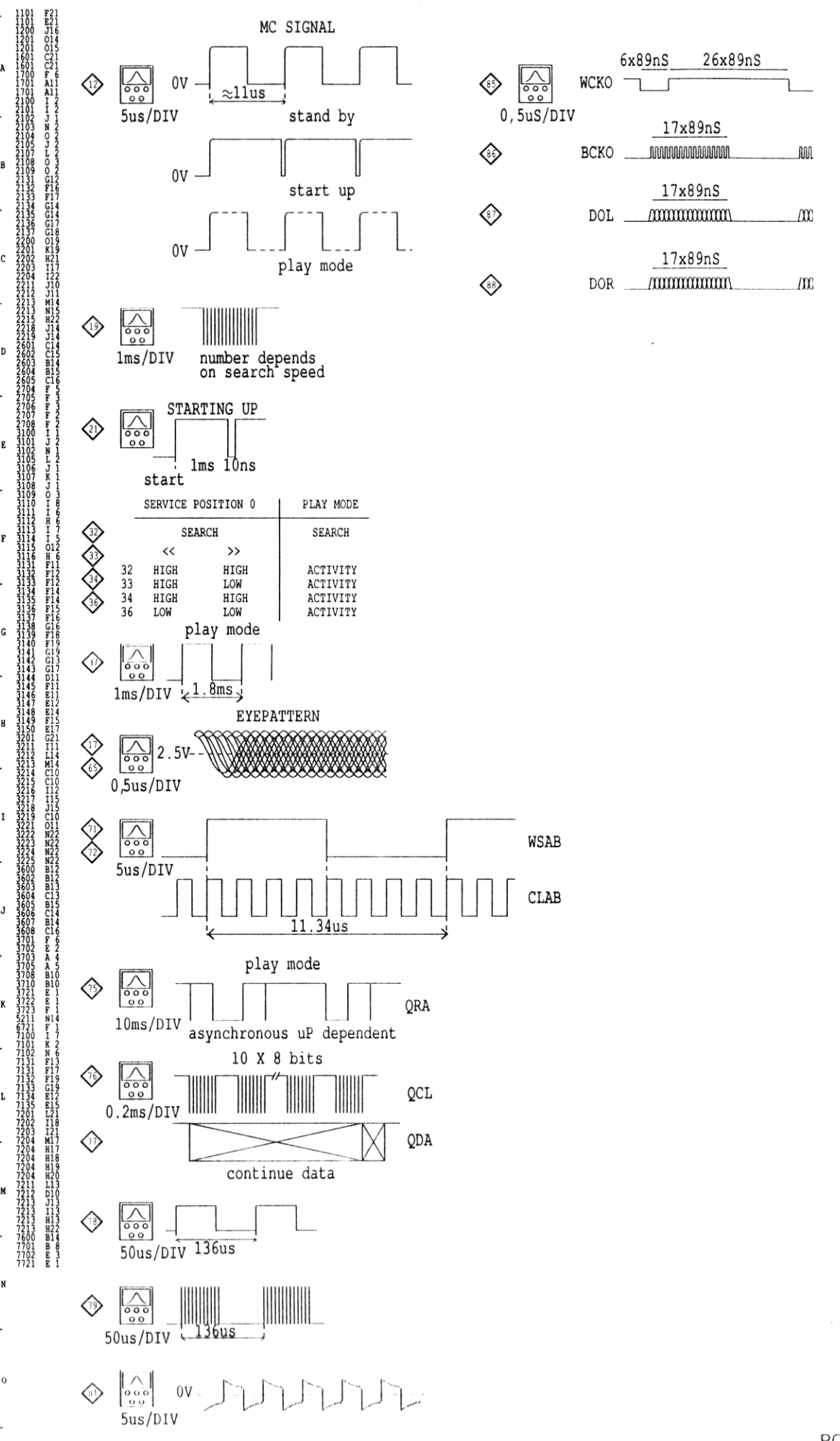
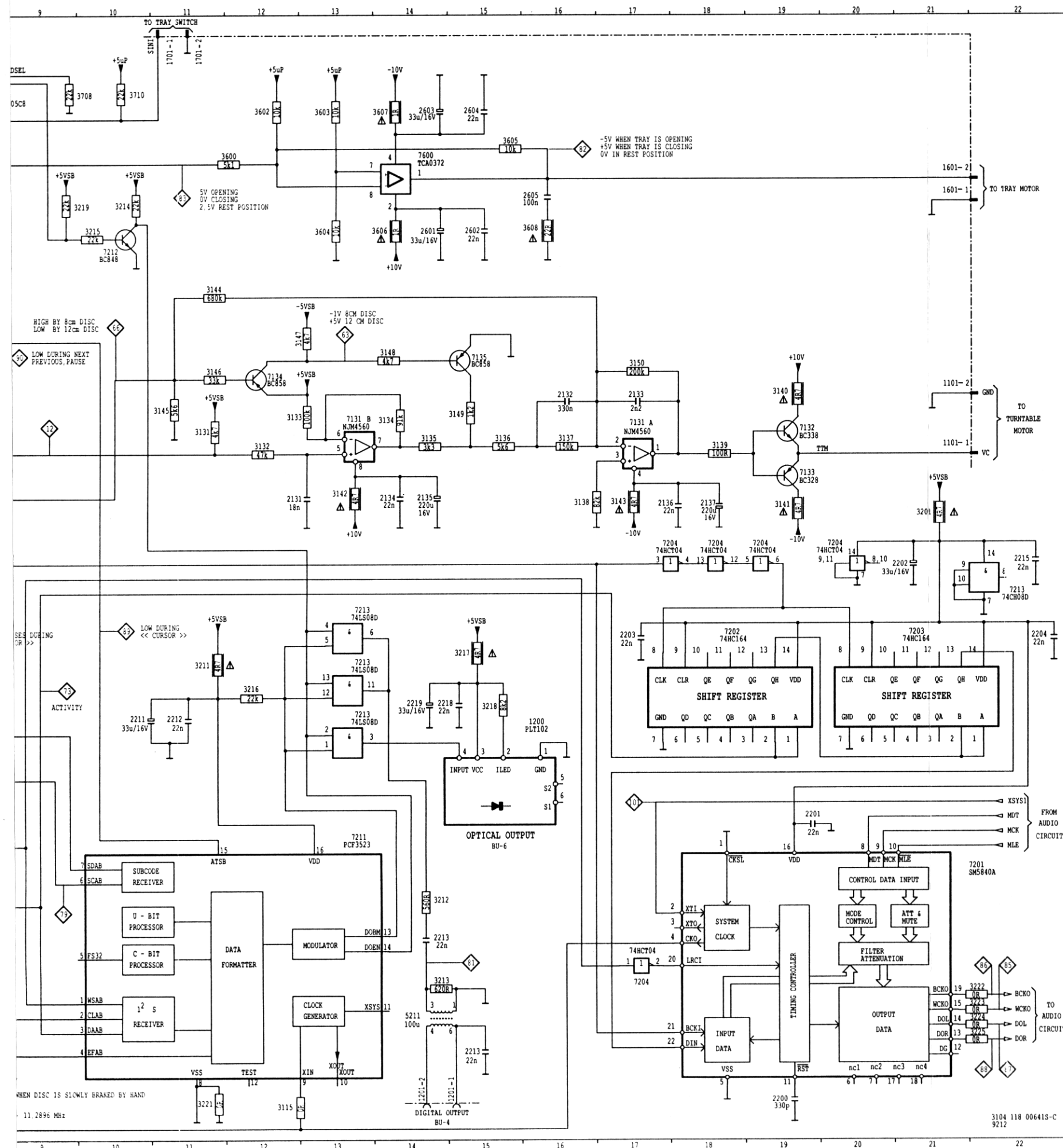
DECODER CIRCUIT DIAGRAM

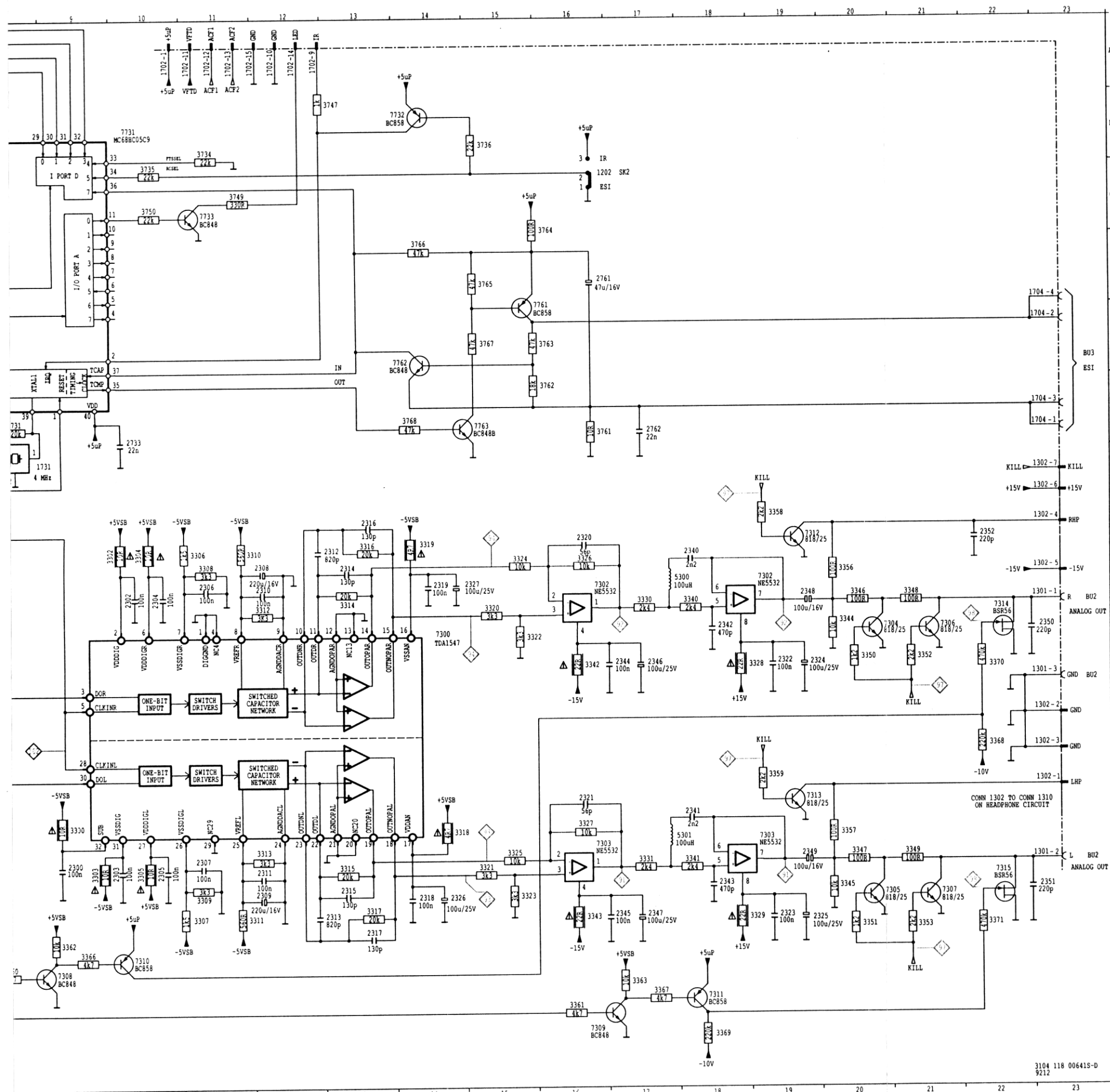




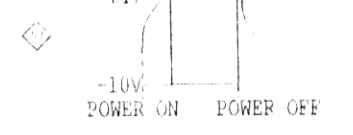
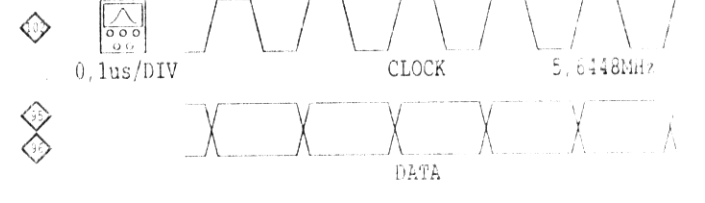
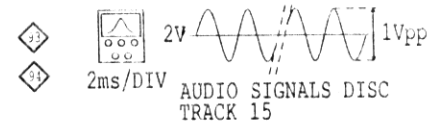
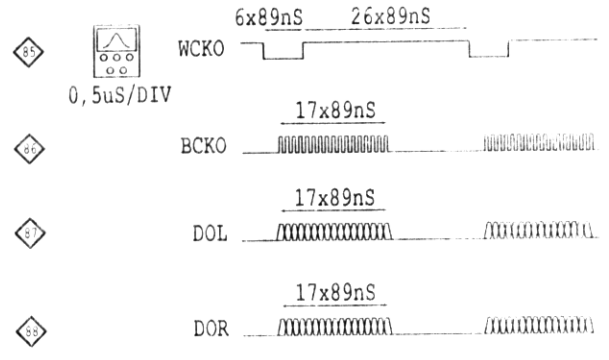
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1701 A11
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2101 I 2
2102 J 1
2103 N 2
2104 O 2
2105 J 2
2107 L 2
2108 O 3
2109 O 2
2131 G12
2132 F16
2133 F17
2134 G14
2135 G14
2136 G17
2137 G18
2200 O19
2201 K19
2202 H21
2203 I17
2204 I22
2205 O16
2211 J10
2212 J11
2213 M14
2219 M15
2215 H22
2216 L15
2217 O15
2218 J14
2219 J14
2601 C14
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2603 B14
2604 B15
2605 C16
2704 F 5
2705 F 3
2706 F 3
2707 F 2
2708 F 2
3100 J 1
3101 J 2
3102 J 1
3105 L 2
3106 J 1
3107 K 1
3108 J 1
3109 O 3
3116 H 5
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3136 F15
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3142 G13
3143 G17
3144 D11
3145 F11
3146 E11
3147 E12
3148 E14
3149 F15
3150 E17
3151 G15
3201 G21
3211 I11
3212 L14
3213 M14
3214 C10
3215 C10
3216 I12
3217 I15
3218 J15
3219 C10
3226 L14
3227 O16
3600 B12
3602 B12
3603 B13
3604 C13
3605 B15
3606 C14
3607 B14
3608 C16
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3702 E 2
3703 A 4
3705 A 5
3708 B10
3711 B11
3721 E 1
3722 E 1
3723 E 1
5211 N14
6721 F 1
7100 L 7
7101 K 2
7102 N 6
7131 F17
7132 F19
7133 G19
7134 E12
7135 E15
7136 G15
7201 L21
7202 I18
7203 I21
7204 M17
7204 H18
7204 H19
7204 H20
7211 L13
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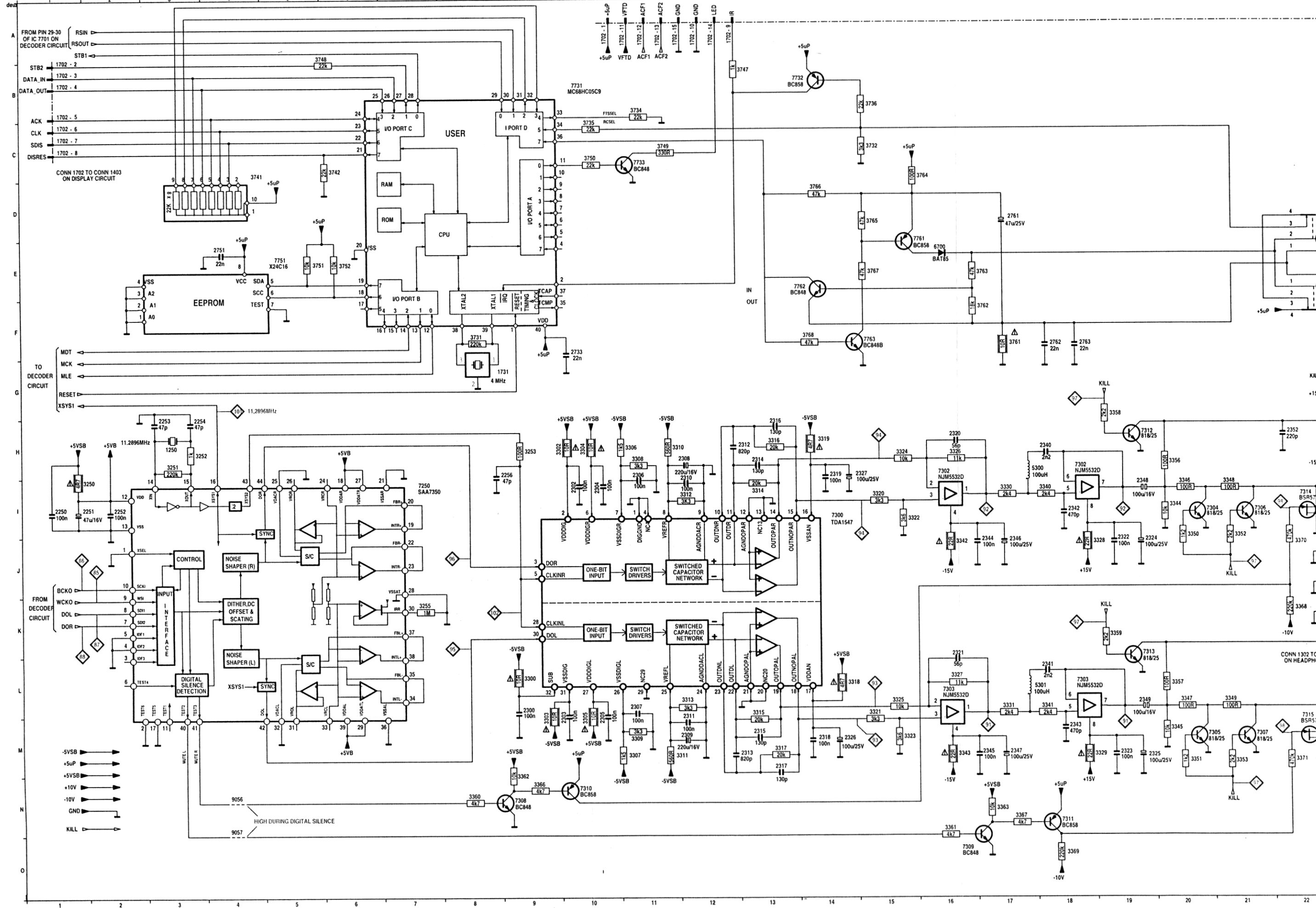


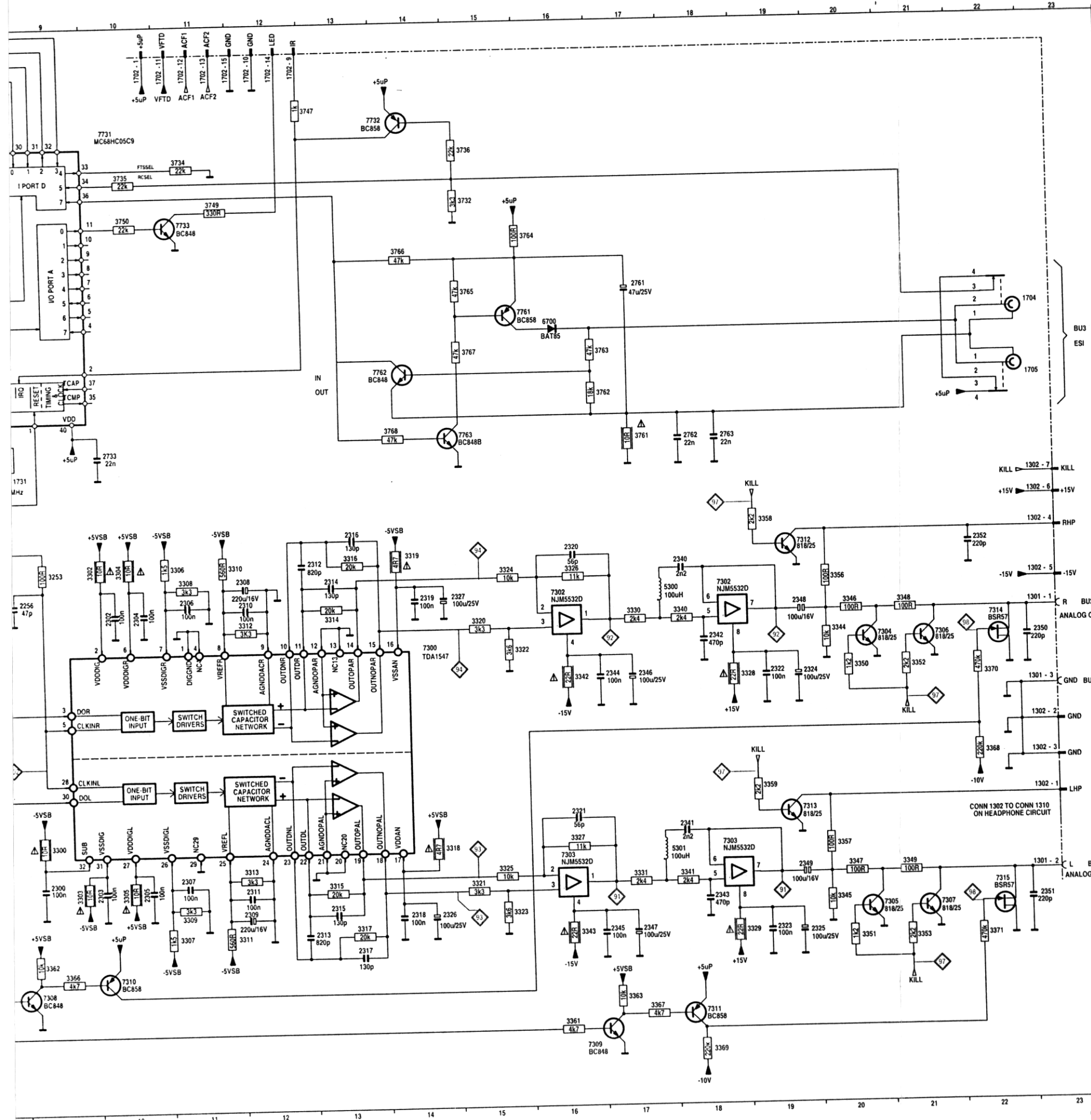


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1301	J22	3746	H
1301	L24	3747	B15
1301	L25	3748	F14
1302	H23	3749	O16
1302	H23	3750	H18
1302	K23	3751	L18
1302	J23	3752	I14
1302	H23	3753	H16
1302	H23	3754	H19
1302	K23	3755	I19
1302	C1	3756	M21
1302	B1	3757	M21
1302	B1	3758	M9
1302	C1	3759	B10
1302	C1	3760	M20
1302	B1	3761	M10
1302	A10	3762	N10
1302	A11	3763	M18
1302	A11	3764	H19
1302	A12	3765	K19
1302	A12	3766	I22
1302	A12	3767	M22
1302	A15	3768	I7
1302	A15	3769	B14
1302	D22	3770	C11
1302	E22	3771	E5
1302	F22	3772	E5
1302	G9	3773	F15
1302	I1	3774	N4
1302	I2	3775	N4
1302	I2	3776	N4
1302	H3	3777	N4
1302	H3	3778	N4
1302	H3	3779	N4
1302	H3	3780	N4
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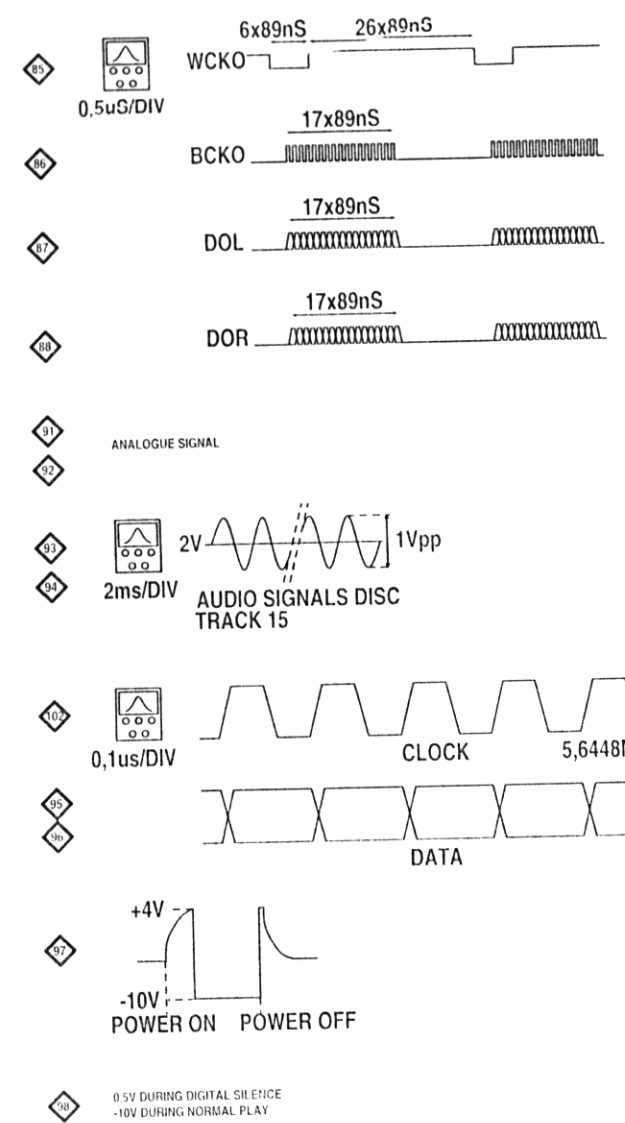


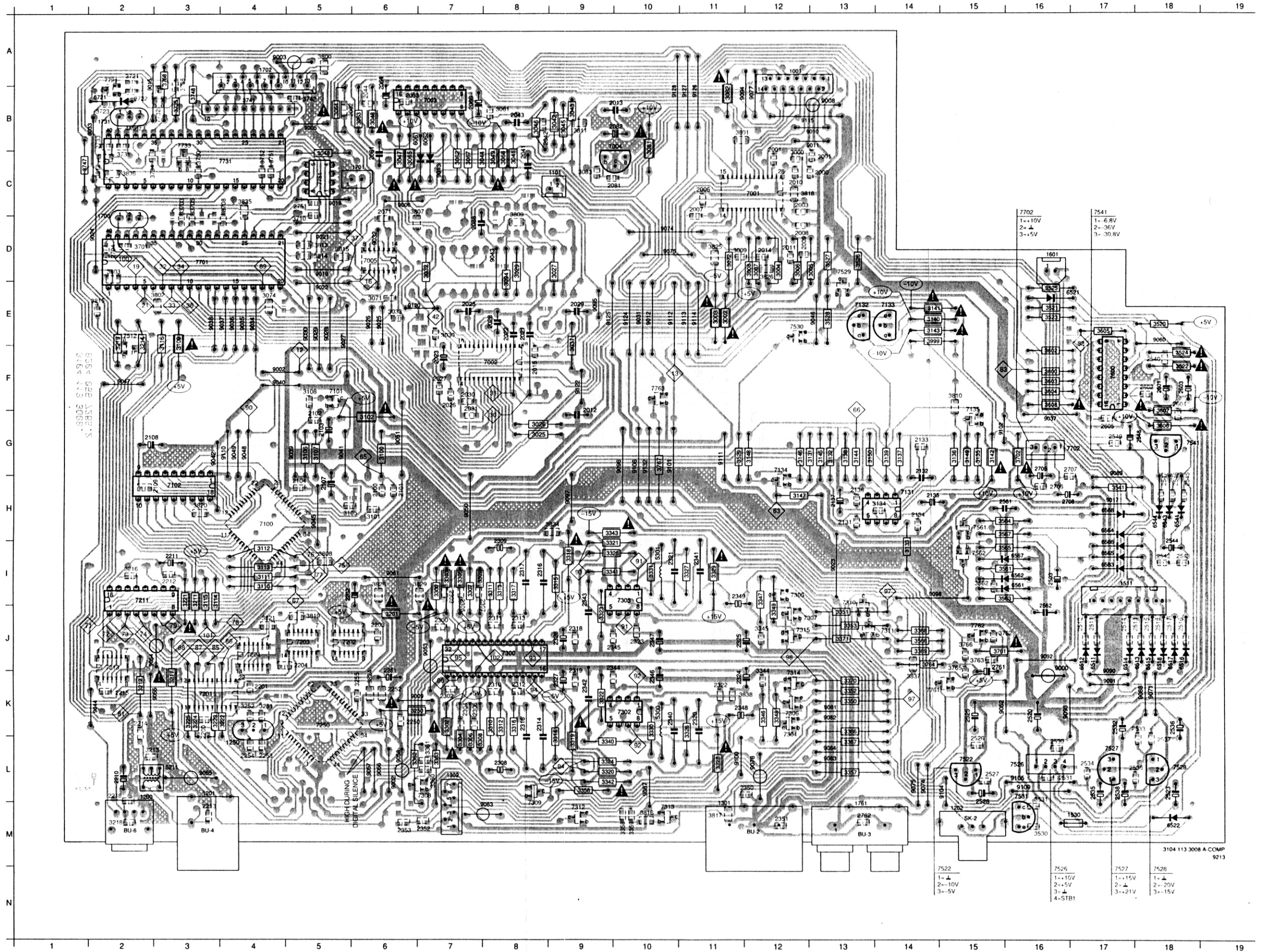
AUDIO CIRCUIT DIAGRAM CD951





1250 H 3	3765 D15
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1301 L22	3767 E15
1301 J22	3768 F14
1302 H23	3300 H16
1302 G23	3301 L18
1302 K23	6700 E16
1302 C23	7250 I 7
1302 J23	7300 H14
1302 H23	7302 H16
1302 K23	7302 H19
1702 B	7303 L16
1702 C 1	7303 L19
1702 C 1	7304 L20
1702 C 1	7305 M20
1702 B 1	7306 I21
1702 B 1	7307 M21
1702 B 1	7308 H 9
1702 A10	7309 O16
1702 A11	7310 N10
1702 A11	7311 H18
1702 A12	7312 H19
1702 A12	7313 K19
1702 A12	7314 I22
1704 D23	7315 M22
1705 E23	7733 C11
1731 G 9	7751 E 5
2250 I 1	7761 E15
2251 I 2	7762 E14
2252 I 2	7763 F15
2253 H 3	9056 N 4
2254 H 3	9057 N 4
2256 H 9	
2300 L 9	
2302 I10	
2303 L10	
2304 I10	
2305 L10	
2306 H11	
2307 L11	
2308 H12	
2309 M12	
2310 I12	
2311 L12	
2312 H13	
2313 M13	
2314 H13	
2315 M13	
2316 H13	
2317 M13	
2318 H14	
2319 H14	
2320 H16	
2321 K16	
2322 M19	
2323 M19	
2324 J19	
2325 M19	
2326 H14	
2327 H15	
2340 H18	
2341 L18	
2342 I19	
2343 M18	
2344 J17	
2345 M17	
2346 J17	
2347 M17	
2348 I19	
2349 L19	
2350 I23	
2351 M23	
2352 H22	
2733 F10	
2751 E 4	
2751 D17	
2751 F18	
2753 F18	
3250 I 2	
3251 H 3	
3252 H 3	
3253 H 9	
3255 I 7	
3300 L 9	
3302 H10	
3303 L 9	
3304 H10	
3305 L10	
3306 H11	
3307 M11	
3308 H11	
3309 M11	
3310 H12	
3311 M12	
3312 I12	
3313 L12	
3314 I13	
3315 L13	
3316 H13	
3317 M13	
3318 L14	
3319 H14	
3320 H15	
3321 L15	
3322 I15	
3323 M15	
3324 H15	
3325 L15	
3326 H16	
3327 L16	
3328 J19	
3329 M19	
3330 I17	
3331 L17	
3340 H18	
3341 L18	
3342 J16	
3343 M16	
3344 I20	
3345 M20	
3346 I20	
3347 L20	
3348 I21	
3349 L21	
3350 J20	
3351 M20	
3352 J21	
3353 M21	
3356 H20	
3357 L20	
3358 G19	
3359 K19	
3360 N 4	
3361 N16	
3362 N 9	
3363 N 7	
3366 N 9	
3367 N17	
3368 K22	
3369 O18	
3370 J22	
3371 M22	
3731 F 8	
3732 C15	
3734 B11	
3735 C10	
3736 B15	
3741 C 4	
3742 C 6	
3747 B13	
3748 A 6	
3749 C11	
3750 C10	
3751 E 5	
3752 E 6	
3761 F17	
3762 F17	
3763 E17	
3764 C16	

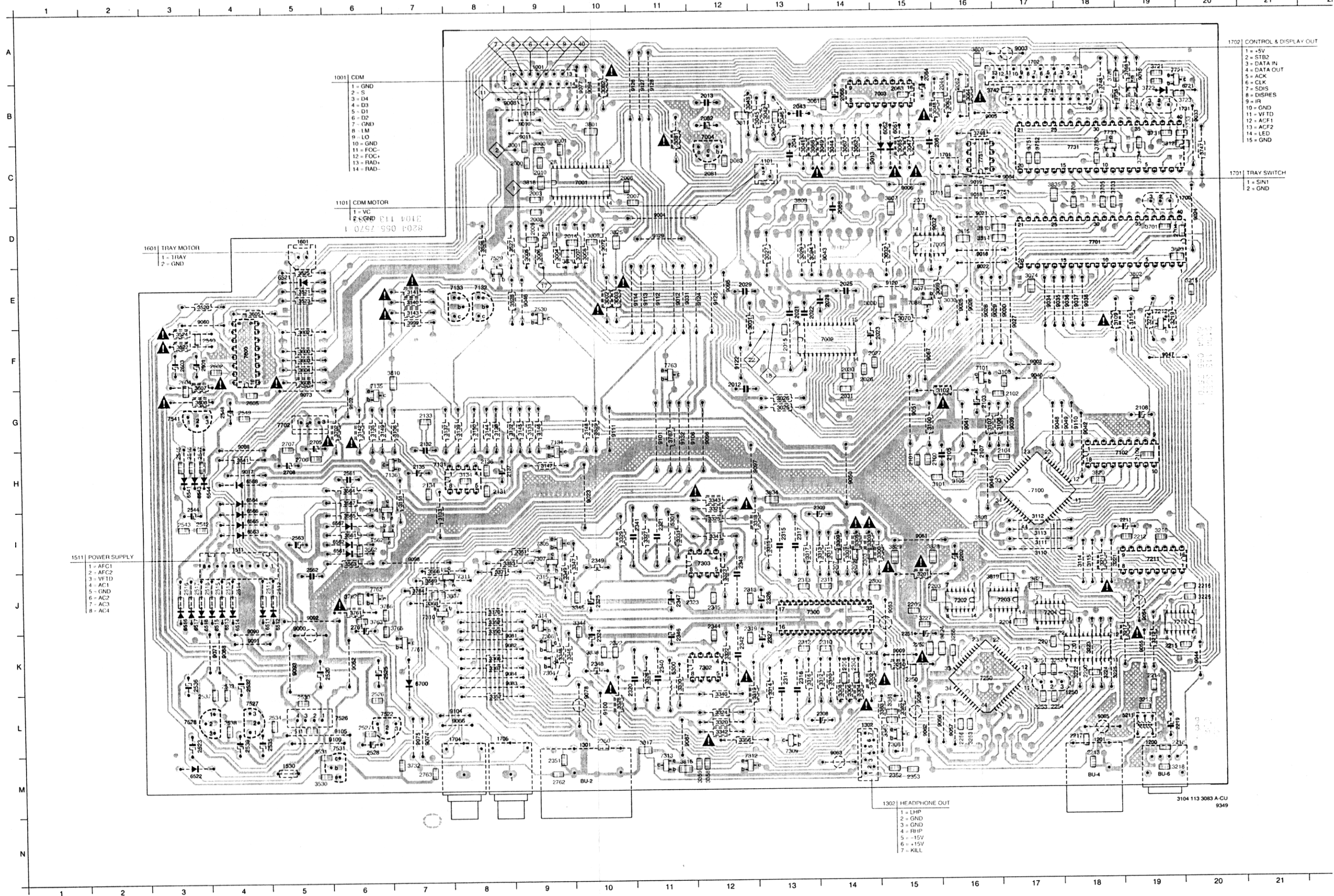




7702
1--10V
2--
3--5V

7541
1-- 6.8V
2-- 36V
3-- 30.8V

7522	7526	7527	7528
1--	1--10V	1--15V	1--
2--	2--5V	2--20V	2--
3--	3--5V	3--21V	3--15V
	4--STB1		



- 1001 CDM
- 1 - GND
 - 2 - S
 - 3 - D4
 - 4 - D3
 - 5 - D1
 - 6 - D2
 - 7 - GND
 - 8 - LM
 - 9 - LO
 - 10 - GND
 - 11 - FOC
 - 12 - FOC
 - 13 - RAD
 - 14 - RAD

- 1101 CDM MOTOR
- 1 - VC
 - 2 - GND
 - 3 - GND
 - 4 - GND
 - 5 - GND
 - 6 - GND
 - 7 - GND
 - 8 - GND
 - 9 - GND
 - 10 - GND
 - 11 - GND
 - 12 - GND
 - 13 - GND
 - 14 - GND
 - 15 - GND
 - 16 - GND
 - 17 - GND
 - 18 - GND
 - 19 - GND
 - 20 - GND
 - 21 - GND

- 1601 TRAY MOTOR
- 1 - TRAY
 - 2 - GND

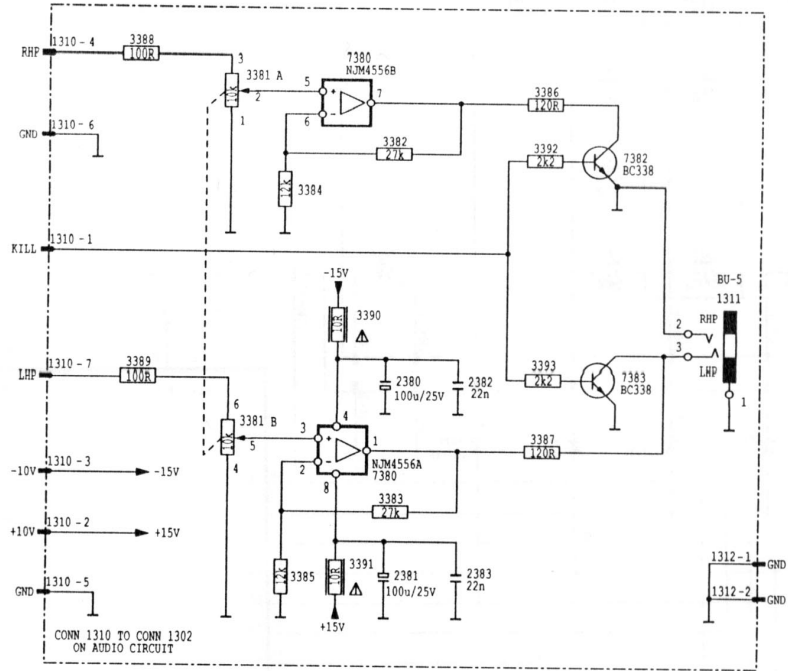
- 1511 POWER SUPPLY
- 1 - AFC1
 - 2 - AFC2
 - 3 - VFTD
 - 4 - AC1
 - 5 - GND
 - 6 - AC2
 - 7 - AC3
 - 8 - AC4

- 1701 CONTROL & DISPLAY OUT
- 1 - +5V
 - 2 - STB2
 - 3 - DATA IN
 - 4 - DATA OUT
 - 5 - ACK
 - 6 - CLK
 - 7 - SDIS
 - 8 - DISRES
 - 9 - IR
 - 10 - GND
 - 11 - VFTD
 - 12 - AC1
 - 13 - AC2
 - 14 - LED
 - 15 - GND

- 1701 TRAY SWITCH
- 1 - SIN1
 - 2 - GND

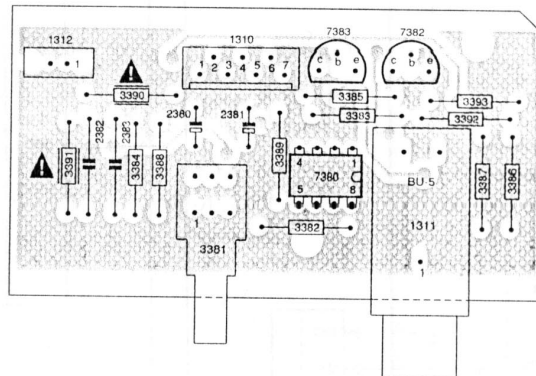
- 1302 HEADPHONE OUT
- 1 - LHP
 - 2 - GND
 - 3 - GND
 - 4 - RHP
 - 5 - -15V
 - 6 - +15V
 - 7 - KILL

VARIABLE HEADPHONE CIRCUIT DIAGRAM

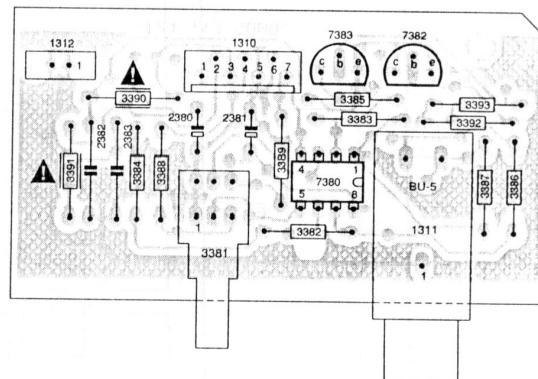


3104 118 00651S-B
9210

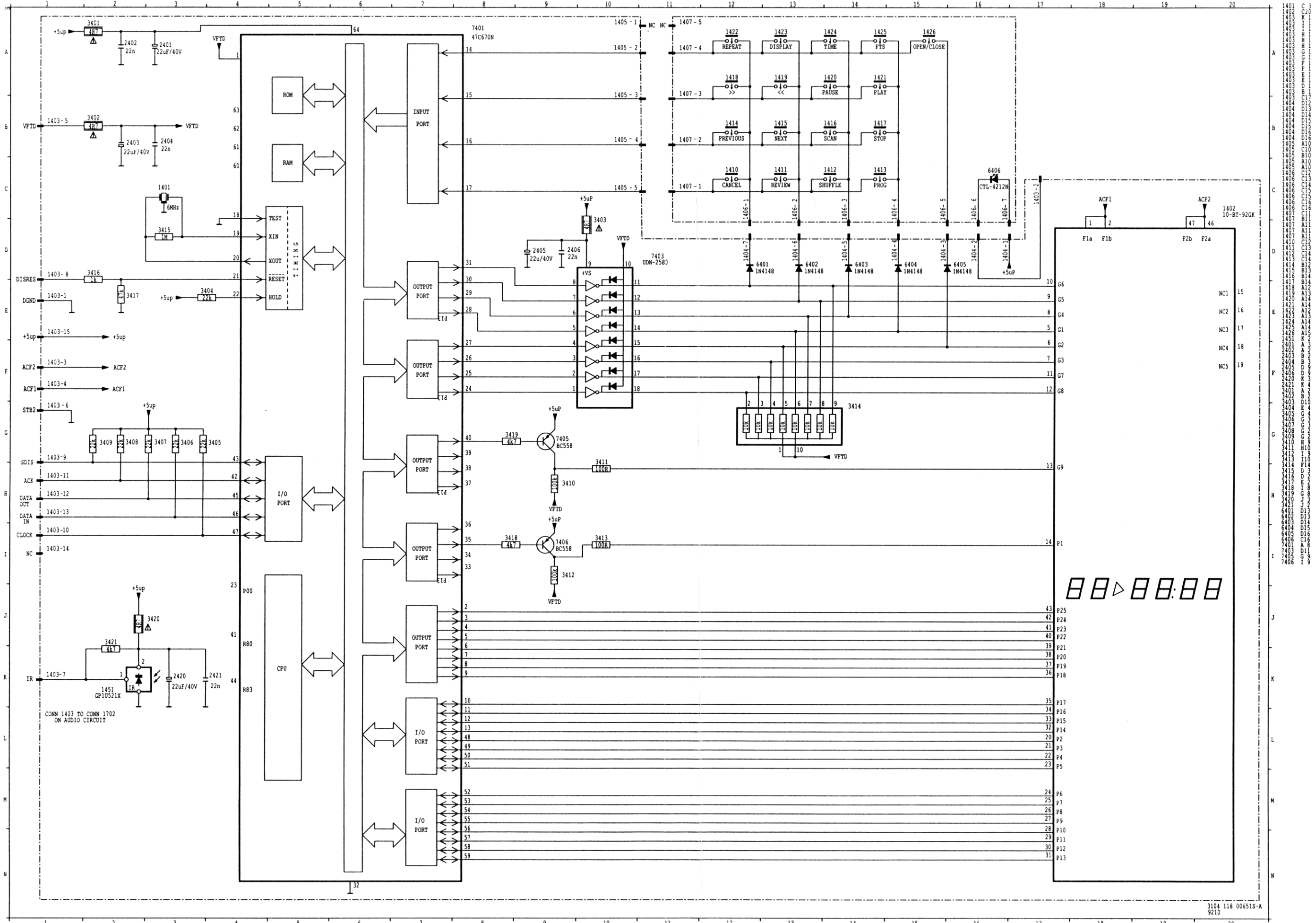
VARIABLE HEADPHONE PANEL



3104 113 3009 C COMP
9211

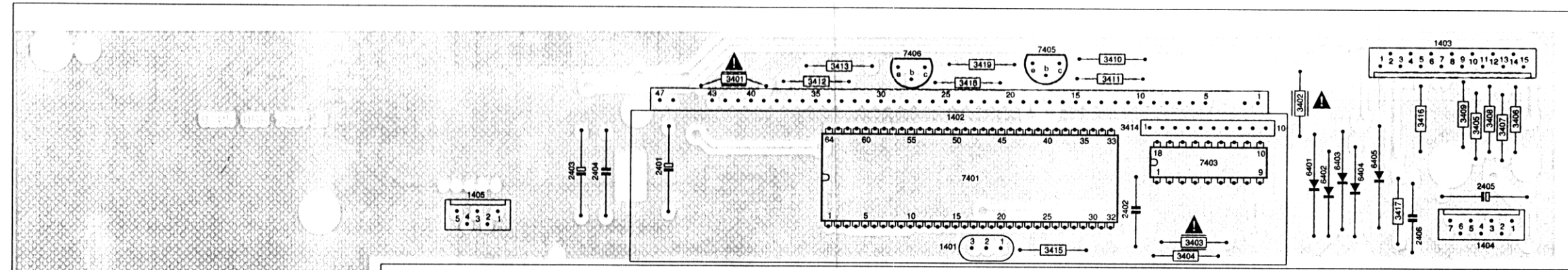


3104 113 3009 C COMP
9211

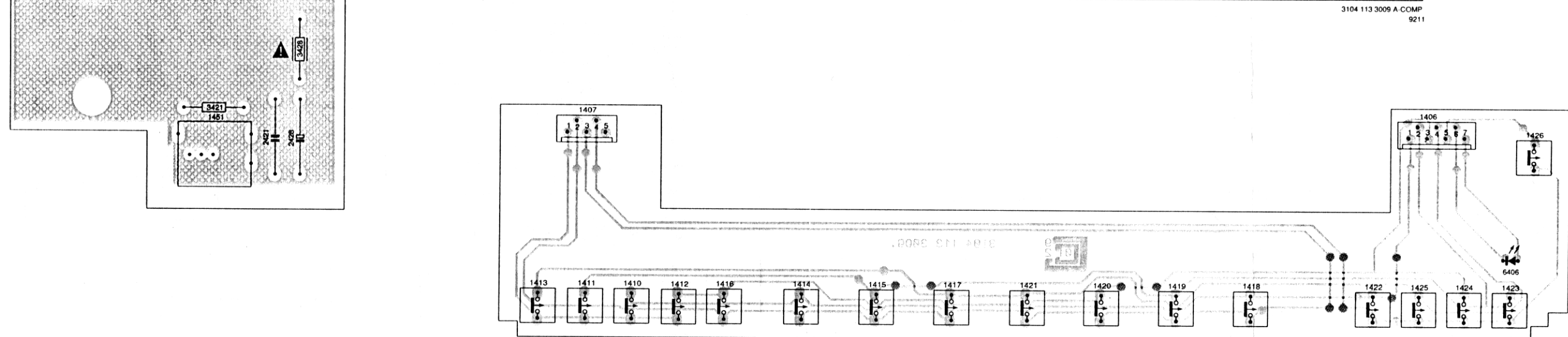


- 1401
- 1402
- 1403
- 1404
- 1405
- 1406
- 1407
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- 1413
- 1414
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- 1488
- 1489
- 1490
- 1491
- 1492
- 1493
- 1494
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- 1496
- 1497
- 1498
- 1499
- 1500

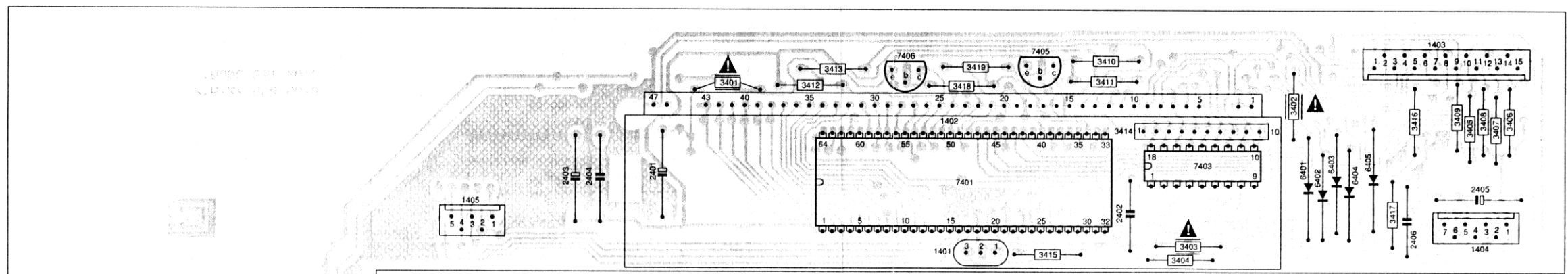
DISPLAY PANEL KEYBOARD PANEL



3104 113 3009 A COMP
9211

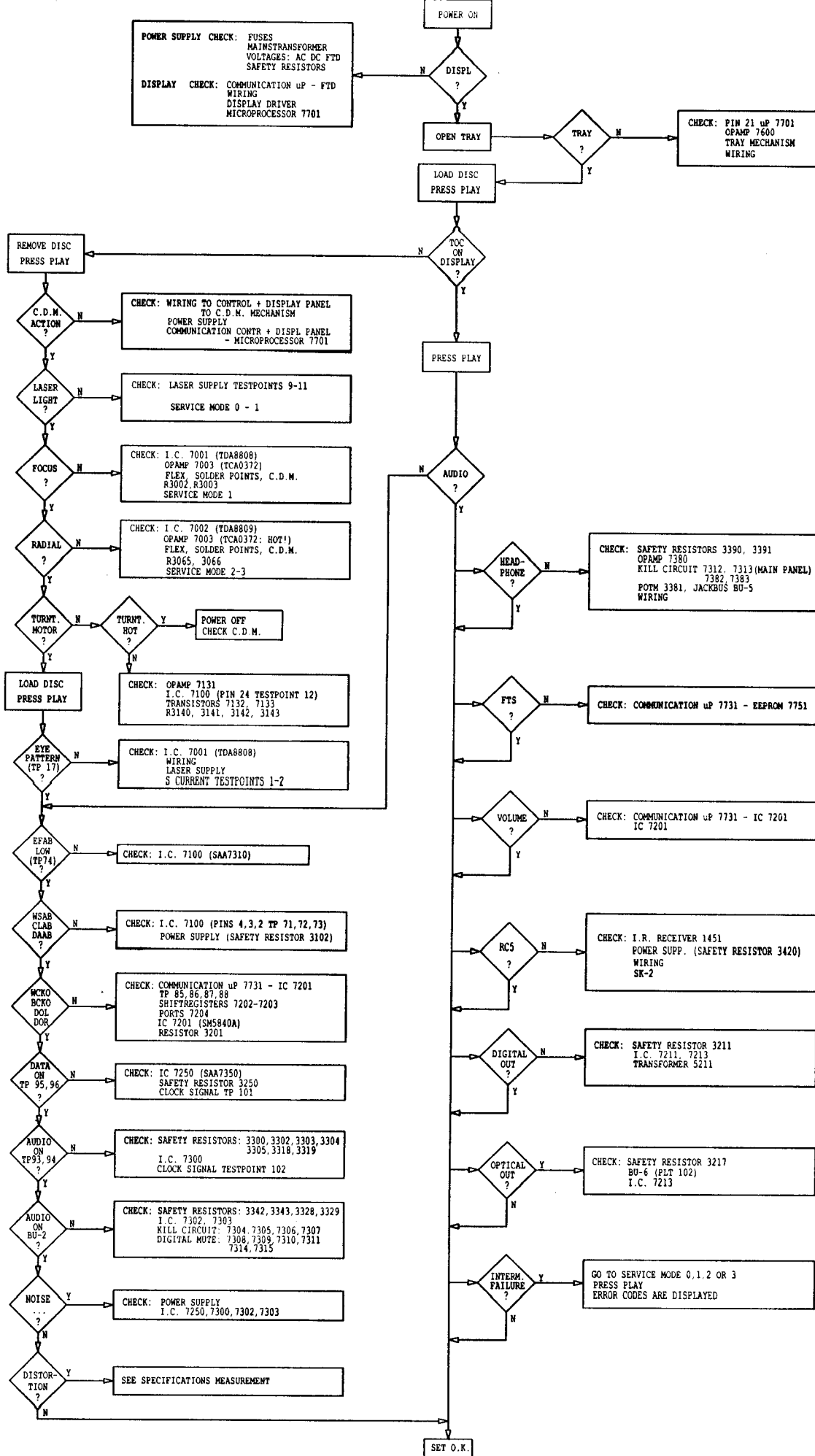


3104 113 3009 B COMP
9211

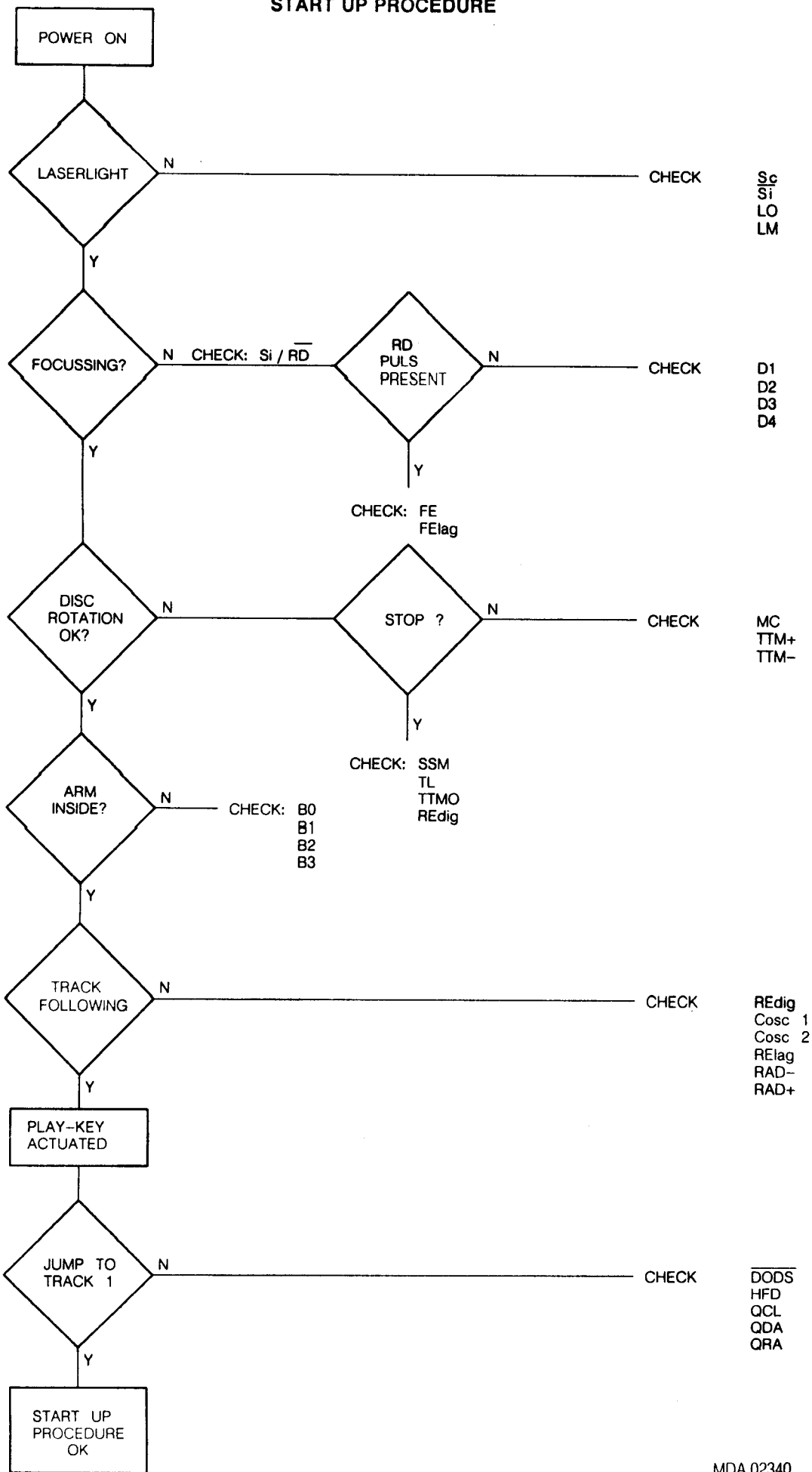


3104 113 3009 A COMP
9211

FAULT FINDING GUIDE

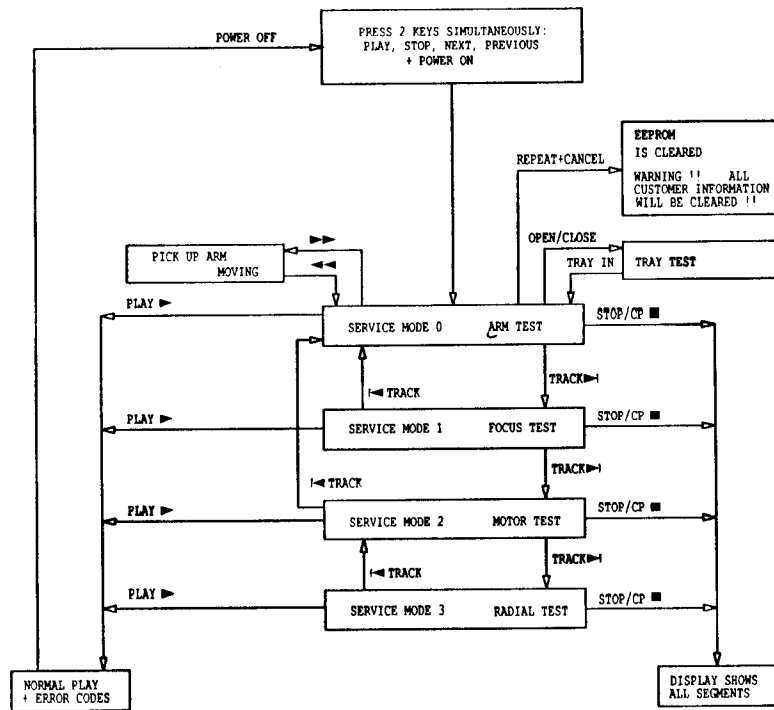


START UP PROCEDURE



MDA.02340
T07-941

SERVICE TEST PROGRAM

HAS1020
9143

ERROR CODE TABLE

SYSTEM ERRORS

ER02	Focus error
ER03	Radial error
ER04	Too many TL
ER05	TL low to long
ER06	Jump error
ER07	Subcode error
ER08	TOC error
ER60	EEPROM error during initialisation
ER61	EEPROM error during read or write
ER67	No or bad communication between SERVO and USER μ P

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

T-23366A

CHECK OF LASER SUPPLY

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 C.D.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 SK		1.8<V<2.3	<p>REPLACEMENT CIRCUIT FOR LASER ASSEMBLY</p> <p>PRIS 06615 102/9020</p> <p>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.</p>
	LM	SK		170<mV<220	
2	LO	serv. pos. 2 SK		1.8<V<2.3	
	LM	SK		170<mV<220	
3	LO	Power on		0V ± 0.2V	No light

After opening SK, the led will emit more light for a short moment.

T-23366B




CHECK OF CDM9

Step	Signal	Mode		
1	S current = voltage across R3000	Test disc 5A play	 	56<mV<76 mV DC

WARNINGS

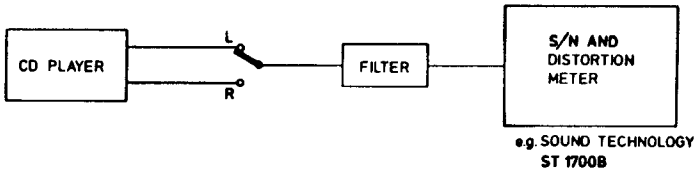
1. Never disconnect flex when power is on.
2. Laser power is adjusted during the production process and may not be readjusted.

SPECIFICATIONS MEASUREMENT

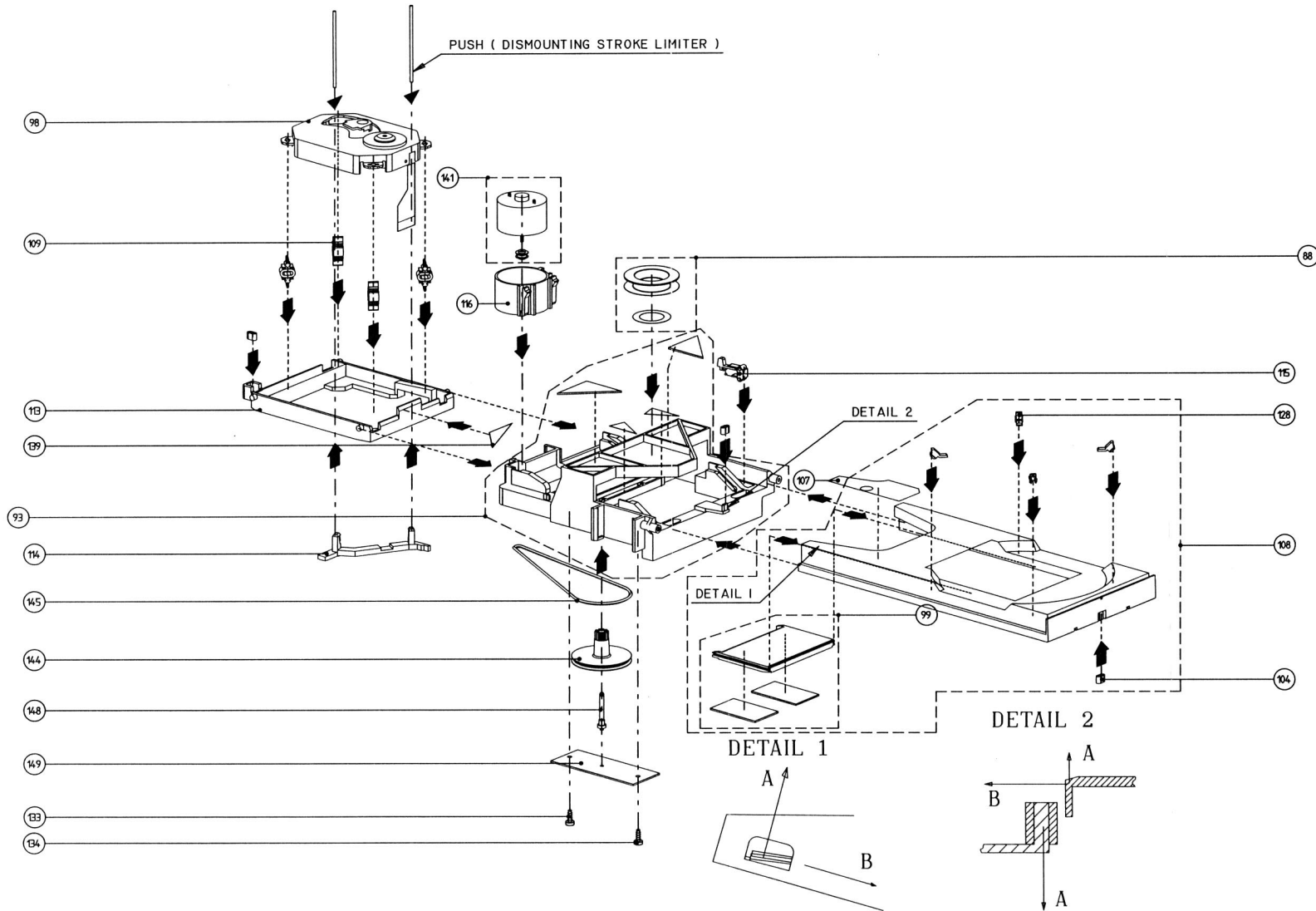
Signal	Mode				Remarks
BU2-L	Test disc 3, play, total harmonic distortion	filter output	See technical data		See drawing 30459A12
BU2-R	Test disc 3, play, total harmonic distortion	filter output	See technical data		See drawing 30459A12
BU2-L	Test disc 3, play signal-to-noise ratio	filter output	See technical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

T-23366M

Filter = 13th order filter 4822 395 30204



30 459 A12



MECHANICAL PARTSLIST**Cabinet**

1▲	4822 444 40551	ALU FRONT
13▲	4822 444 40549	FRONT
15	4822 410 61885	KNOB UNIT(NOSE)
23	4822 450 61891	IR-WINDOW
24	4822 380 20425	REFLECTOR
52	4822 535 93283	POWER ROD
53	4822 410 61705	KNOB
54	4822 462 71808	CAP
57	4822 454 12828	BITSTREAM LOGO
60	4822 444 60815	COVER PLATE
71	4822 444 40552	ALU TRAY FRONT
151	4822 444 60837	COVER
251	4822 462 41888	FOOT
255	4822 462 41887	FELT
283▲	4822 532 60948	BUSHING
300▲	4822 321 10791	MAINS FLEX /00S
301▲	4822 321 10823	MAINS FLEX /05S
302▲	4822 321 10825	MAINS FLEX /17S
303▲	4822 321 10828	MAINS FLEX /10S
308	4822 321 23116	CINCH CABLE
314	4822 321 61452	CABLE DIGITAL OUT
340	4822 736 21416	INSTRUCTION FOR USE CD950/17S
340	4822 736 21413	INSTRUCTION FOR USE CD950
365	4822 218 10459	REMOTE CONTROL RD6910/00

Loader

88	4822 402 61406	CLAMPING PIECE
93	4822 464 50886	FRAME
98	4822 691 30275	CDM-9
99	4822 444 60808	COVER PLATE
104	4822 325 60379	DAMPING GROMMET
108	4822 444 30441	TRAY
109	4822 466 93065	SUSPENSION
113	4822 464 50884	CHASSIS
114	4822 466 93066	STROKE LIMITER
115	4822 276 13222	SWITCH
116	4822 464 50885	MOTOR FRAME
128	4822 460 20801	ORNAMENTAL PROFILE
141	4822 361 21423	MOTOR
144	4822 522 33192	GEAR WHEEL
145	4822 358 10115	BELT

The following parts are only available during production period on special request.

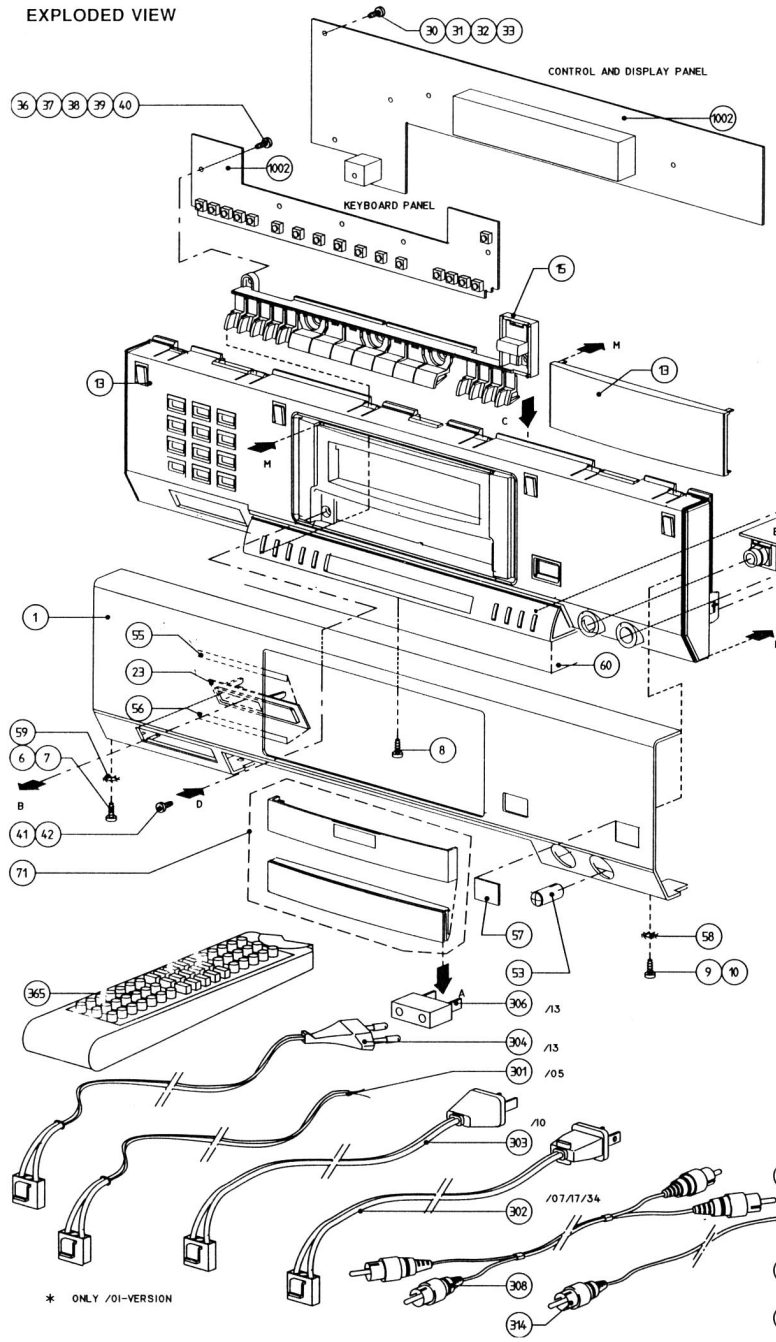
181	Frame
189,190	Support bracket
266	Back plate

SCREWS

		Plastite M3x10: 30,31,32,33
		34,35
Taptite M3x6: 83		36,37,38,39,40
	211,212	41,42
Taptite M3x10: 6,7,8,9,10		209,210
	171,172,173,174	268
	175,176	272
	200,201	273
	204,205,206,207,208	274
	259,260,261,262	Plastite M3x16: 30,31,32,33
	269,270,271	43
Taptite M3x15: 202,203		

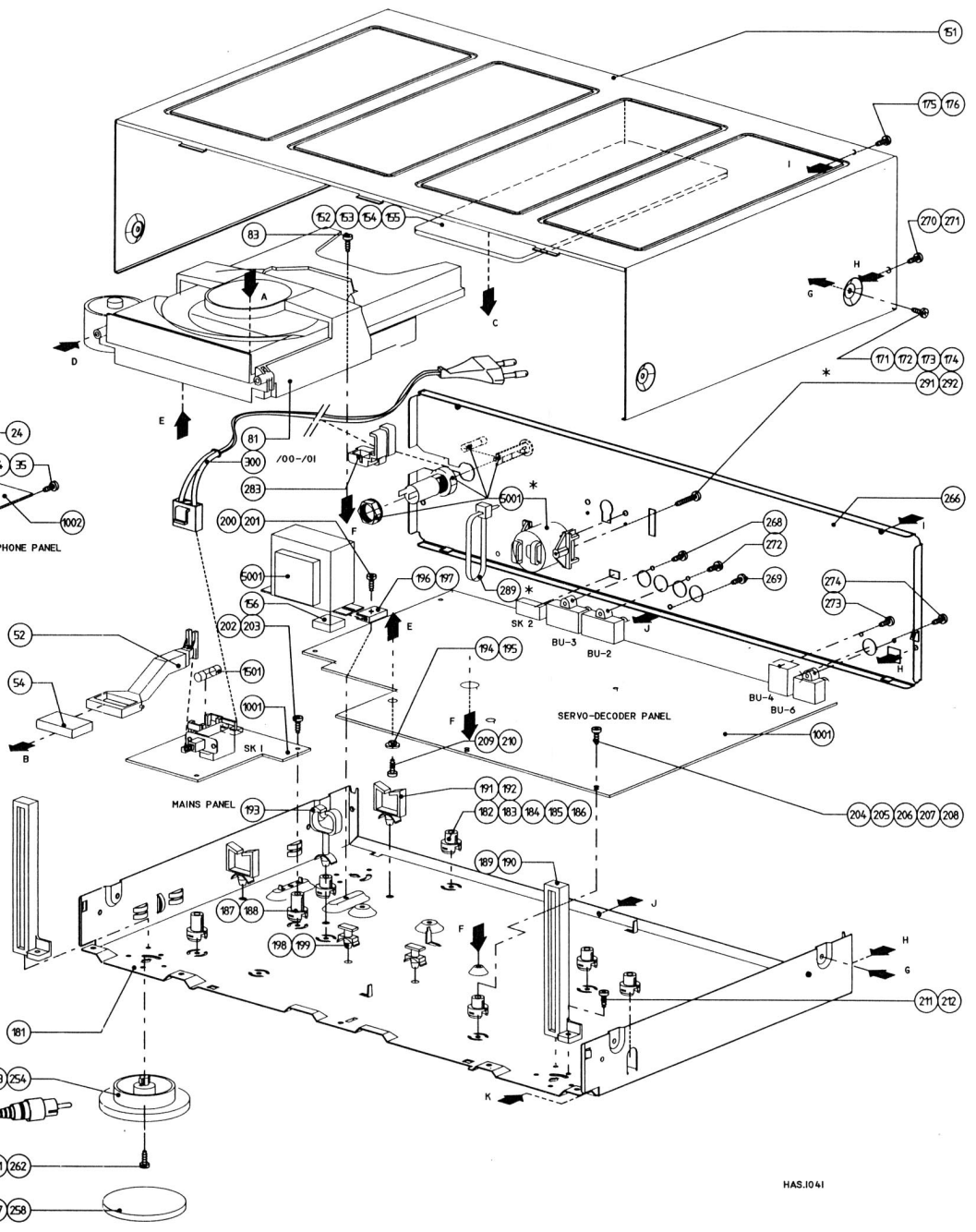
EXPLODED VIEW

49



* ONLY /01-VERSION

50



HAS.1041

MAIN PANEL					
MISCELLANEOUS			2063	4822 122 33809	22nF 20% 50V
			2064	4822 124 40272	33 μ F 20% 16V
			2066	4822 124 40272	33 μ F 20% 16V
			2071	4822 122 33496	100nF 10% 63V
			2081	4822 122 32575	220pF 10% 500V
A	4822 492 63076	CLAMPING SPRING	2082	4822 124 40433	47 μ F 20% 25V
BU-2	4822 267 31485	ANALOG OUT SOCKET	2088	4822 121 43526	47nF 5% 100V
BU-3	4822 267 31455	ESI IN/OUT SOCKET	2100	5322 122 32452	47pF 5% 63V
BU-4	4822 267 31457	DIGITAL OUT SOCKET	2101	4822 122 33175	2,2nF 20% 50V
BU-6	4822 218 21019	OPTICAL OUT	2102	4822 122 33809	22nF 20% 50V
SK-2	4822 276 12339	SWITCH ESI ON/OFF	2103	4822 124 40272	33 μ F 20% 16V
1101	4822 265 30525	RFK5 CONNECTOR	2104	4822 122 33809	22nF 20% 50V
1302	4822 267 50621	CONNECTOR 7P	2105	4822 121 51252	470nF 5% 63V
1702	4822 265 41115	CONNECTOR 15P	2107	4822 124 41576	2,2 μ F 20% 50V
1530	4822 071 55001	FUSE 500MA	2108	4822 124 40272	33 μ F 20% 16V
CRYSTAL			2109	4822 122 33809	22nF 20% 50V
1250	4822 242 71349	CRYSTAL 11,2896 MHz	2131	4822 122 33893	18nF 10% 63V
1700	4822 242 72527	RESONATOR 4 MHz	2132	5322 121 42661	330nF 5% 63V
1731	4822 242 72527	RESONATOR 4 MHz	2133	4822 122 33175	2,2nF 20% 50V
CAPACITORS			2134	4822 122 33809	22nF 20% 50V
2000	4822 122 33809	22nF 20% 50V	2135	4822 124 40196	220 μ F 20% 16V
2001	5322 122 32268	470pF 10% 50V	2136	4822 122 33809	22nF 20% 50V
2003	4822 122 33496	100nF 10% 63V	2137	4822 124 40196	220 μ F 20% 16V
2006	4822 122 33496	100nF 10% 63V	2200	5322 122 31863	330pF 5% 50V
2007	4822 122 33175	2,2nF 20% 50V	2201	4822 122 33809	22nF 20% 50V
2008	4822 122 32542	47nF 10% 63V	2202	4822 124 40272	33 μ F 20% 16V
2009	5322 122 32531	100pF 5% 50V	2203	4822 122 33809	22nF 20% 50V
2010	4822 122 33177	10nF 20% 50V	2204	4822 122 33809	22nF 20% 50V
2011	5322 122 34123	1nF 10% 50V	2211	4822 124 40272	33 μ F 20% 16V
2012	4822 121 42408	220nF 5% 63V	2212	4822 122 33809	22nF 20% 50V
2013	4822 121 51252	470nF 5% 63V	2213	4822 122 33809	22nF 20% 50V
2014	4822 122 32575	220pF 10% 500V	2214	4822 122 33496	100nF 10% 63V
2015	5322 122 34123	1nF 10% 50V	2215	4822 122 33809	22nF 20% 50V
2021	4822 121 51321	8,2 μ F 1% 63V	2218	4822 122 33809	22nF 20% 50V
2022	4822 121 51321	8,2 μ F 1% 63V	2219	4822 124 40272	33 μ F 20% 16V
2023	4822 124 40433	47 μ F 20% 25V	2250	4822 122 33496	100nF 10% 63V
2025	5322 121 42661	330nF 5% 63V	2251	4822 124 40272	33 μ F 20% 16V
2026	4822 122 33342	33nF 10% 63V	2252	4822 122 33496	100nF 10% 63V
2027	4822 122 33342	33nF 10% 63V	2253	5322 122 32452	47pF 5% 63V
2028	4822 121 42408	220nF 5% 63V	2254	5322 122 32452	47pF 5% 63V
2029	4822 121 42408	220nF 5% 63V	2300	4822 122 33496	100nF 10% 63V
2030	4822 122 33496	100nF 10% 63V	2302	4822 122 33496	100nF 10% 63V
2031	4822 122 33496	100nF 10% 63V	2303	4822 122 33496	100nF 10% 63V
2041	4822 121 51252	470nF 5% 63V	2304	4822 122 33496	100nF 10% 63V
2042	5322 126 10223	4,7nF 10% 63V	2305	4822 122 33496	100nF 10% 63V
2043	4822 121 42408	220nF 5% 63V	2306	4822 122 33496	100nF 10% 63V
2044	4822 122 33496	100nF 10% 63V	2307	4822 122 33496	100nF 10% 63V
2061	4822 121 51252	470nF 5% 63V	2308	4822 124 40196	220 μ F 20% 16V
2062	4822 122 33496	100nF 10% 63V	2309	4822 124 40196	220 μ F 20% 16V
			2310	4822 122 33496	100nF 10% 63V
			2311	4822 122 33496	100nF 10% 63V
			2312	4822 122 33806	820pF 10% 63V
			2313	4822 122 33806	820pF 10% 63V
			2314	5322 121 70125	130pF 630V

2315	5322 121 70125	130pF 630V
2316	5322 121 70125	130pF 630V
2317	5322 121 70125	130pF 630V
2318	4822 122 33496	100nF 10% 63V
2319	4822 122 33496	100nF 10% 63V
2320	4822 121 43861	56pF 1% 630V
2321	4822 121 43861	56pF 1% 630V
2322	4822 122 33496	100nF 10% 63V
2323	4822 122 33496	100nF 10% 63V
2324	4822 124 22473	100μF 25V
2325	4822 124 22473	100μF 25V
2326	4822 124 22473	100μF 25V
2327	4822 124 22473	100μF 25V
2340	4822 121 42783	2.2nF 1% 250V
2341	4822 121 42783	2.2nF 1% 250V
2342	5322 121 50999	470pF 1% 400V
2343	5322 121 50999	470pF 1% 400V
2344	4822 122 33496	100nF 10% 63V
2345	4822 122 33496	100nF 10% 63V
2346	4822 124 22473	100μF 25V
2347	4822 124 22473	100μF 25V
2348	4822 124 22339	100μF 16V
2349	4822 124 22339	100μF 16V
2350	4822 122 32575	220pF 10% 500V
2351	4822 122 32575	220pF 10% 500V
2352	4822 122 32575	220pF 10% 500V
2353	4822 122 32575	220pF 10% 500V
2501▲	4822 126 10454	3,3nF 20% 400V
2511	4822 122 33809	22nF 20% 50V
2512	4822 122 33809	22nF 20% 50V
2513	4822 122 33809	22nF 20% 50V
2514	4822 122 33809	22nF 20% 50V
2515	4822 122 33809	22nF 20% 50V
2516	4822 122 33809	22nF 20% 50V
2517	4822 122 33809	22nF 20% 50V
2518	4822 122 33809	22nF 20% 50V
2520	4822 124 23183	4700μF 20% 16V
2523	4822 124 41576	2,2μF 20% 50V
2525	4822 124 23268	3300μF 20% 16V
2526	4822 122 33809	22nF 20% 50V
2527	4822 122 33809	22nF 20% 50V
2528	4822 124 41577	4,7μF 20% 50V
2530	4822 122 33809	22nF 20% 50V
2531	4822 122 33809	22nF 20% 50V
2532	4822 124 23172	470μF 20% 50V
2533	4822 122 33809	22nF 20% 50V
2534	4822 122 33809	22nF 20% 50V
2535	4822 124 41576	2,2μF 20% 50V
2536	4822 124 23172	470μF 20% 50V
2537	4822 122 33809	22nF 20% 50V
2538	4822 122 33809	22nF 20% 50V
2539	4822 124 41577	4,7μF 20% 50V
2540	4822 122 33496	100nF 10% 63V
2542	4822 122 33809	22nF 20% 50V

2543	4822 122 33809	22nF 20% 50V
2544	4822 124 23172	470μF 20% 50V
2545	4822 122 33809	22nF 20% 50V
2546	4822 122 33809	22nF 20% 50V
2547	4822 122 33809	22nF 20% 50V
2548	4822 124 41577	4,7μF 20% 50V
2549	4822 122 33809	22nF 20% 50V
2561	4822 121 51252	470nF 5% 63V
2562	5322 121 42661	330nF 5% 63V
2563	4822 124 23172	470μF 20% 50V
2601	4822 124 40272	33μF 20% 16V
2602	4822 122 33809	22nF 20% 50V
2603	4822 124 40272	33μF 20% 16V
2604	4822 122 33809	22nF 20% 50V
2605	4822 122 33496	100nF 10% 63V
2704	4822 122 33809	22nF 20% 50V
2705	4822 124 41576	2,2μF 20% 50V
2706	4822 122 33809	22nF 20% 50V
2707	4822 122 33809	22nF 20% 50V
2708	4822 124 40272	33μF 20% 16V
2733	4822 122 33809	22nF 20% 50V
2751	4822 122 33809	22nF 20% 50V
2761	4822 124 40433	47μF 20% 25V
2762	4822 122 33809	22nF 20% 50V

RESISTORS

3000	4822 051 20472	4k7 5% 0,1W
3001	4822 051 20104	100k 5% 0,1W
3002▲	4822 052 10478	4Ω7 5% 0,33W
3003▲	4822 052 10478	4Ω7 5% 0,33W
3004	4822 050 21503	15k 1% 0,6W
3005	4822 051 10101	100Ω 2% 0,25W
3006	4822 050 21002	1k 1% 0,6W
3007	4822 050 22403	24k 1% 0,6W
3008	4822 050 25602	5k6 1% 0,6W
3009	4822 051 20103	10k 5% 0,1W
3025	4822 050 24703	47k 1% 0,6W
3026	4822 050 22203	22k 1% 0,6W
3027	4822 050 21802	1k8 1% 0,6W
3029	4822 050 25102	5k1 1% 0,6W
3030	4822 051 20224	220k 5% 0,1W
3031	4822 050 21203	12k 1% 0,6W
3032	4822 050 21504	150k 1% 0,6W
3033	4822 051 20223	22k 5% 0,1W
3041	4822 050 21103	11k 1% 0,6W
3042	4822 050 21504	150k 1% 0,6W
3043	4822 050 21204	120k 1% 0,6W
3044	4822 116 52234	100k 5% 0,5W
3045	4822 050 23904	390k 1% 0,6W
3046	4822 050 25603	56k 1% 0,6W
3047▲	4822 052 10828	8Ω2 5% 0,33W

MAIN PANEL						
MISCELLANEOUS			2064	4822 124 40433	47 μ F 20% 25V	
			2066	4822 124 40433	47 μ F 20% 25V	
			2071	4822 122 33496	100nF 10% 63V	
			2081	4822 122 33575	220pF 5%NPO 50V	
			2082	4822 124 40433	47 μ F 20% 25V	
21	▲	4822 256 30274	FUSE HOLDER	2088	4822 121 43526	47nF 5% 250V
	▲	4822 492 63076	CLAMPING SPRING	2100	5322 122 32452	47pF 5% 63V
1101		4822 265 30525	CONNECTOR 2P	2101	4822 122 33175	2,2nF 20% 50V
1200		4822 218 21019	OPTICAL OUT	2102	4822 122 33809	22nF 20% 50V
1201		4822 267 31626	DIGITAL OUT SOCKET	2103	4822 124 40433	47 μ F 20% 25V
1250		4822 242 71349	CRYSTAL 11.2896MHZ	2104	4822 122 33809	22nF 20% 50V
1301		4822 267 31755	ANALOG OUT SOCKET	2105	4822 121 51252	470nF 5% 63V
1302		4822 267 50621	CONNECTOR 7P	2107	4822 124 40244	2,2 μ F 20% 63V
1503	▲	4822 276 13216	MAINS SWITCH	2108	4822 124 40433	47 μ F 20% 25V
1530	▲	4822 071 55001	FUSE 500mA	2109	4822 122 33809	22nF 20% 50V
1700		4822 242 72527	RESONATOR 4MHZ	2131	4822 122 33893	18nF 10% 63V
1702		4822 265 41115	CONNECTOR 15P	2132	5322 121 42661	330nF 5% 63V
1704		4822 267 31728	ESI BUS SOCKET	2133	4822 122 33175	2,2nF 20% 50V
1705		4822 267 31728	ESI BUS SOCKET	2134	4822 122 33809	22nF 20% 50V
1731		4822 242 72527	RESONATOR 4MHZ	2135	4822 124 40196	220 μ F 20% 16V
CAPACITORS			2136	4822 122 33809	22nF 20% 50V	
2000		4822 122 33809	22nF 20% 50V	2137	4822 124 40196	220 μ F 20% 16V
2001		5322 122 32268	470pF 10% 50V	2200	5322 122 31863	330pF 5% 50V
2003		4822 122 33496	100nF 10% 63V	2201	4822 122 33809	22nF 20% 50V
2006		4822 122 33496	100nF 10% 63V	2202	4822 124 40433	47 μ F 20% 25V
2007		4822 122 33175	2,2nF 20% 50V	2203	4822 122 33809	22nF 20% 50V
2008		4822 122 32542	47nF 10% 63V	2204	4822 122 33809	22nF 20% 50V
2009		5322 122 32531	100pF 5% 50V	2205	5322 122 32452	47pF 5% 63V
2010		4822 122 33177	10nF 20% 50V	2211	4822 124 40433	47 μ F 20% 25V
2011		5322 122 34123	1nF 10% 50V	2212	4822 122 33809	22nF 20% 50V
2012		4822 121 42408	220nF 5% 63V	2213	4822 122 33809	22nF 20% 50V
2013		4822 121 51252	470nF 5% 63V	2214	4822 122 33496	100nF 10% 63V
2014		4822 122 33575	220pF 5%NPO 50V	2215	4822 122 33809	22nF 20% 50V
2015		5322 122 34123	1nF 10% 50V	2216	5322 122 32452	47pF 5% 63V
2021		4822 121 51321	8,2nF 1% 63V	2217	4822 122 33809	22nF 20% 50V
2022		4822 121 51321	8,2nF 1% 63V	2218	4822 122 33809	22nF 20% 50V
2023		4822 124 40433	47 μ F 20% 25V	2219	4822 124 40433	47 μ F 20% 25V
2025		5322 121 42661	330nF 5% 63V	2250	4822 122 33496	100nF 10% 63V
2026		4822 122 33342	33nF 10% 63V	2251	4822 124 40433	47 μ F 20% 25V
2027		4822 122 33342	33nF 10% 63V	2252	4822 122 33496	100nF 10% 63V
2028		4822 121 42408	220nF 5% 63V	2253	5322 122 32452	47pF 5% 63V
2029		4822 121 42408	220nF 5% 63V	2254	5322 122 32452	47pF 5% 63V
2030		4822 122 33496	100nF 10% 63V	2256	5322 122 32452	47pF 5% 63V
2031		4822 122 33496	100nF 10% 63V	2300	4822 122 33496	100nF 10% 63V
2041		4822 121 51252	470nF 5% 63V	2302	4822 122 33496	100nF 10% 63V
2042		5322 126 10223	4,7nF 10% 63V	2303	4822 122 33496	100nF 10% 63V
2043		4822 121 42408	220nF 5% 63V	2304	4822 122 33496	100nF 10% 63V
2044		4822 122 33496	100nF 10% 63V	2305	4822 122 33496	100nF 10% 63V
2061		4822 121 51252	470nF 5% 63V	2306	4822 122 33496	100nF 10% 63V
2062		4822 122 33496	100nF 10% 63V	2307	4822 122 33496	100nF 10% 63V
2063		4822 122 33809	22nF 20% 50V	2308	4822 124 40196	220 μ F 20% 16V
				2309	4822 124 40196	220 μ F 20% 16V
				2310	4822 122 33496	100nF 10% 63V
				2311	4822 122 33496	100nF 10% 63V

2312	4822 122 33806	820pF 10% 63V
2313	4822 122 33806	820pF 10% 63V
2314	5322 121 70125	130pF 630V
2315	5322 121 70125	130pF 630V
2316	5322 121 70125	130pF 630V
2317	5322 121 70125	130pF 630V
2318	4822 122 33496	100nF 10% 63V
2319	4822 122 33496	100nF 10% 63V
2320	4822 121 43861	56pF 1% 630V
2321	4822 121 43861	56pF 1% 630V
2322	4822 122 33496	100nF 10% 63V
2323	4822 122 33496	100nF 10% 63V
2324	4822 124 22473	100μF 25V
2325	4822 124 22473	100μF 25V
2326	4822 124 22473	100μF 25V
2327	4822 124 22473	100μF 25V
2340	4822 121 42783	2.2nF 1% 250V
2341	4822 121 42783	2.2nF 1% 250V
2342	5322 121 50999	470pF 1% 400V
2343	5322 121 50999	470pF 1% 400V
2344	4822 122 33496	100nF 10% 63V
2345	4822 122 33496	100nF 10% 63V
2346	4822 124 22473	100μF 25V
2347	4822 124 22473	100μF 25V
2348	4822 124 22339	100μF 16V
2349	4822 124 22339	100μF 16V
2350	4822 122 33575	220pF 5%NPO 50V
2351	4822 122 33575	220pF 5%NPO 50V
2352	4822 122 33575	220pF 5%NPO 50V
2353	4822 122 33575	220pF 5%NPO 50V
2501	4822 126 10454	3,3nF 20% 400V
2511	4822 122 33809	22nF 20% 50V
2512	4822 122 33809	22nF 20% 50V
2513	4822 122 33809	22nF 20% 50V
2514	4822 122 33809	22nF 20% 50V
2515	4822 122 33809	22nF 20% 50V
2516	4822 122 33809	22nF 20% 50V
2517	4822 122 33809	22nF 20% 50V
2518	4822 122 33809	22nF 20% 50V
2520	4822 124 41458	4700μF 20% 16V
2523	4822 124 40244	2,2μF 20% 63V
2525	4822 124 80294	3300μF 20% 16V
2526	4822 122 33809	22nF 20% 50V
2527	4822 122 33809	22nF 20% 50V
2528	4822 124 40246	4,7μF 20% 63V
2530	4822 122 33809	22nF 20% 50V
2531	4822 122 33809	22nF 20% 50V
2532	4822 124 41184	470μF 20% 63V
2533	4822 122 33809	22nF 20% 50V
2534	4822 122 33809	22nF 20% 50V
2535	4822 124 40244	2U2 20% 50V
2536	4822 124 41184	470U 20% 50V
2537	4822 122 33809	22nF 20% 50V

2538	4822 122 33809	22nF 20% 50V
2539	4822 124 40246	4,7μF 20% 63V
2540	4822 122 33496	100nF 10% 63V
2542	4822 122 33809	22nF 20% 50V
2543	4822 122 33809	22nF 20% 50V
2544	4822 124 42392	470μF 20% 50V
2545	4822 122 33809	22nF 20% 50V
2546	4822 122 33809	22nF 20% 50V
2547	4822 122 33809	22nF 20% 50V
2548	4822 124 40246	4,7μF 20% 63V
2549	4822 122 33809	22nF 20% 50V
2561	4822 121 51252	470nF 5% 63V
2562	5322 121 42661	330nF 5% 63V
2563	4822 124 42392	470μF 20% 50V
2601	4822 124 40433	47μF 20% 25V
2602	4822 122 33809	22nF 20% 50V
2603	4822 124 40433	47μF 20% 25V
2604	4822 122 33809	22nF 20% 50V
2605	4822 122 33496	100nF 10% 63V
2704	4822 122 33809	22nF 20% 50V
2705	4822 124 40244	2,2μF 20% 63V
2706	4822 122 33809	22nF 20% 50V
2707	4822 122 33809	22nF 20% 50V
2708	4822 124 40433	47μF 20% 25V
2733	4822 122 33809	22nF 20% 50V
2751	4822 122 33809	22nF 20% 50V
2761	4822 124 40433	47μF 20% 25V
2762	4822 122 33809	22nF 20% 50V
2763	4822 122 33809	22nF 20% 50V

RESISTORS

3000	4822 051 20472	4k7 5% 0,1W
3001	4822 051 20104	100k 5% 0,1W
3002 ▲	4822 052 10478	4Ω 5% 0,33W
3003 ▲	4822 052 10478	4Ω 5% 0,33W
3004	4822 050 21503	15k 1% 0,6W
3005	4822 116 52175	100Ω 5% 0,5W
3006	4822 050 11002	1k 1% 0,4W
3007	4822 050 22403	24k 1% 0,6W
3008	4822 050 25602	5k6 1% 0,6W
3009	4822 117 10833	10k 1% 0,1W
3025	4822 050 24703	47k 1% 0,6W
3026	4822 050 22203	22k 1% 0,6W
3027	4822 050 21802	1k8 1% 0,6W
3029	4822 050 25102	5k1 1% 0,6W
3030	4822 051 20224	220k 5% 0,1W
3031	4822 116 52238	12k 5% 0,5W
3032	4822 116 52245	150k 5% 0,5W
3033	4822 051 20223	22k 5% 0,1W
3041	4822 050 21103	11k 1% 0,6W
3042	4822 050 21504	150k 1% 0,6W

3043	4822 050 21204	120k	1%	0,6W			
3044	4822 116 52234	100k	5%	0,5W			
3045	4822 050 23904	390k	1%	0,6W			
3046	4822 050 25603	56k	1%	0,6W			
3047 ▲	4822 052 10828	8Ω	5%	0,33W			
3048 ▲	4822 052 10229	22Ω	5%	0,33W			
3049	4822 050 23305	3M3	1%	0,6W			
3061	4822 051 20332	3k3	5%	0,1W			
3062	4822 050 23002	3k	1%	0,6W			
3063	4822 050 23308	3Ω	1%	0,6W			
3064 ▲	4822 052 10339	33Ω	5%	0,33W			
3065 ▲	4822 052 10108	1Ω	5%	0,33W			
3066 ▲	4822 052 10108	1Ω	5%	0,33W			
3067	4822 116 52175	100Ω	5%	0,5W			
3069	4822 116 52238	12k	5%	0,5W			
3070	4822 116 52238	12k	5%	0,5W			
3071	4822 051 20223	22k	5%	0,1W			
3072	4822 116 52257	22k	5%	0,5W			
3074	4822 051 10008	0Ω	5%	0,25W			
3081 ▲	4822 052 10189	18Ω	5%	0,33W			
3082 ▲	4822 052 10129	12Ω	5%	0,33W			
3083	4822 051 20101	100Ω	5%	0,1W			
3094	4822 116 52251	18k	5%	0,5W			
3100	4822 116 52256	2k2	5%	0,5W			
3101	4822 051 20223	22k	5%	0,1W			
3102 ▲	4822 052 10478	4Ω	5%	0,33W			
3105	4822 051 20759	75Ω	5%	0,1W			
3106	4822 116 52276	3k9	5%	0,5W			
3107	4822 116 52306	9k1	5%	0,5W			
3108	4822 051 20162	1k6	5%	0,1W			
3109 ▲	4822 052 10478	4Ω	5%	0,33W			
3116	4822 116 52257	22k	5%	0,5W			
3131	4822 116 52283	4k7	5%	0,5W			
3132	4822 116 52284	47k	5%	0,5W			
3133	4822 116 52234	100k	5%	0,5W			
3134	4822 051 20913	91k	5%	0,1W			
3135	4822 116 52269	3k3	5%	0,5W			
3136	4822 116 52289	5k6	5%	0,5W			
3137	4822 116 52245	150k	5%	0,5W			
3138	4822 116 52304	82k	5%	0,5W			
3139	4822 116 52175	100Ω	5%	0,5W			
3140 ▲	4822 052 10478	4Ω	5%	0,33W			
3141 ▲	4822 052 10478	4Ω	5%	0,33W			
3142 ▲	4822 052 10478	4Ω	5%	0,33W			
3143 ▲	4822 052 10478	4Ω	5%	0,33W			
3144	4822 116 52298	680k	5%	0,5W			
3145	4822 116 52289	5k6	5%	0,5W			
3146	4822 116 52271	33k	5%	0,5W			
3147	4822 116 52283	4k7	5%	0,5W			
3148	4822 116 52283	4k7	5%	0,5W			
3149	4822 116 52207	1k2	5%	0,5W			
3150	4822 116 52248	160k	5%	0,5W			
3151	4822 116 52283	4k7	5%	0,5W			
3201 ▲	4822 052 10478	4Ω	5%	0,33W			
3211 ▲	4822 052 10478	4Ω	5%	0,33W			
3212	4822 116 52226	560Ω	5%	0,5W			
3213	4822 051 20621	620Ω	5%	0,1W			
3214	4822 116 52257	22k	5%	0,5W			
3215	4822 051 20472	4k7	5%	0,1W			
3216	4822 051 20223	22k	5%	0,1W			
3217 ▲	4822 052 10478	4Ω	5%	0,33W			
3218	4822 051 20822	8k2	5%	0,1W			
3219	4822 116 52257	22k	5%	0,5W			
3226	4822 051 20101	100Ω	5%	0,1W			
3227	4822 051 20101	100Ω	5%	0,1W			
3250 ▲	4822 052 10478	4Ω	5%	0,33W			
3251	4822 051 20224	220k	5%	0,1W			
3252	4822 051 10102	1k	2%	0,25W			
3253	4822 051 20101	100Ω	5%	0,1W			
3255	4822 051 20105	1M	5%	0,1W			
3300 ▲	4822 052 10109	10Ω	5%	0,33W			
3302 ▲	4822 052 10109	10Ω	5%	0,33W			
3303 ▲	4822 052 10109	10Ω	5%	0,33W			
3304 ▲	4822 052 10109	10Ω	5%	0,33W			
3305 ▲	4822 052 10109	10Ω	5%	0,33W			
3306	4822 116 52243	1k5	5%	0,5W			
3307	4822 116 52243	1k5	5%	0,5W			
3308	4822 116 52269	3k3	5%	0,5W			
3309	4822 116 52269	3k3	5%	0,5W			
3310	4822 050 25601	560Ω	1%	0,6W			
3311	4822 050 25601	560Ω	1%	0,6W			
3312	4822 050 23302	3k3	1%	0,6W			
3313	4822 050 23302	3k3	1%	0,6W			
3314	4822 050 22003	20k	1%	0,6W			
3315	4822 050 22003	20k	1%	0,6W			
3316	4822 050 22003	20k	1%	0,6W			
3317	4822 050 22003	20k	1%	0,6W			
3318 ▲	4822 052 10478	4Ω	5%	0,33W			
3319 ▲	4822 052 10478	4Ω	5%	0,33W			
3320	4822 050 23302	3k3	1%	0,6W			
3321	4822 050 23302	3k3	1%	0,6W			
3322	4822 050 23602	3k6	1%	0,6W			
3323	4822 050 23602	3k6	1%	0,6W			
3324	4822 050 21003	10k	1%	0,6W			
3325	4822 050 21003	10k	1%	0,6W			
3326	4822 050 21103	11k	1%	0,6W			
3327	4822 050 21103	11k	1%	0,6W			
3328 ▲	4822 052 10229	22Ω	5%	0,33W			
3329 ▲	4822 052 10229	22Ω	5%	0,33W			
3330	4822 050 22402	2k4	1%	0,6W			
3331	4822 050 22402	2k4	1%	0,6W			
3340	4822 050 22402	2k4	1%	0,6W			
3341	4822 050 22402	2k4	1%	0,6W			
3342 ▲	4822 052 10229	22Ω	5%	0,33W			
3343 ▲	4822 052 10229	22Ω	5%	0,33W			
3344	4822 117 10833	10k	1%	0,1W			
3345	4822 117 10833	10k	1%	0,1W			

3346	4822 116 52175	100Ω 5% 0,5W	3705	4822 051 20223	22k 5% 0,1W
3347	4822 116 52175	100Ω 5% 0,5W	3708	4822 051 20223	22k 5% 0,1W
3348	4822 116 52175	100Ω 5% 0,5W	3711	4822 051 20223	22k 5% 0,1W
3349	4822 116 52175	100Ω 5% 0,5W	3721	4822 051 20221	220Ω 5% 0,1W
3350	4822 116 52207	1k2 5% 0,5W	3722	4822 051 10102	1k 2% 0,25W
3351	4822 116 52207	1k2 5% 0,5W	3723	4822 051 20223	22k 5% 0,1W
3352	4822 116 52256	2k2 5% 0,5W	3731	4822 051 20224	220k 5% 0,1W
3353	4822 116 52256	2k2 5% 0,5W	3732	4822 051 20332	3k3 5% 0,1W
3356	4822 116 52175	100Ω 5% 0,5W	3734	4822 051 20223	22k 5% 0,1W
3357	4822 116 52175	100Ω 5% 0,5W	3735	4822 116 52257	22k 5% 0,5W
3358	4822 051 20222	2k2 5% 0,1W	3736	4822 051 20223	22k 5% 0,1W
3359	4822 051 20222	2k2 5% 0,1W	3741	5322 111 90473	RES.NETWORK
3360	4822 051 20472	4k7 5% 0,1W	3742	4822 051 20223	22k 5% 0,1W
3361	4822 051 20472	4k7 5% 0,1W	3747	4822 050 11002	1k 1% 0,4W
3362	4822 116 52233	10k 5% 0,5W	3748	4822 116 52257	22k 5% 0,5W
3363	4822 116 52233	10k 5% 0,5W	3749	4822 116 52219	330Ω 5% 0,5W
3366	4822 116 52283	4k7 5% 0,5W	3750	4822 051 20223	22k 5% 0,1W
3367	4822 116 52283	4k7 5% 0,5W	3751	4822 117 10833	10k 1% 0,1W
3368	4822 116 52258	220k 5% 0,5W	3752	4822 117 10833	10k 1% 0,1W
3369	4822 116 52258	220k 5% 0,5W	3761 ▲	4822 052 10109	10Ω 5% 0,33W
3370	4822 116 52285	470k 5% 0,5W	3762	4822 051 20183	18k 5% 0,1W
3371	4822 116 52285	470k 5% 0,5W	3763	4822 117 10834	47k 1% 0,1W
3520	4822 050 11002	1k 1% 0,4W	3764	4822 116 52175	100Ω 5% 0,5W
3521	4822 050 11002	1k 1% 0,4W	3765	4822 117 10834	47k 1% 0,1W
3522 ▲	4822 052 10108	1Ω 5% 0,33W	3766	4822 117 10834	47k 1% 0,1W
3523	4822 116 52233	10k 5% 0,5W	3767	4822 116 52284	47k 5% 0,5W
3524 ▲	4822 052 10229	22Ω 5% 0,33W	3768	4822 116 52284	47k 5% 0,5W
3525	4822 116 52269	3k3 5% 0,5W	3800	4822 051 10008	0Ω 5% 0,25W
3526	4822 116 52283	4k7 5% 0,5W
3527	4822 116 52257	22k 5% 0,5W	3838	4822 051 10008	0Ω 5% 0,25W
3528	4822 116 52283	4k7 5% 0,5W			
3529	4822 116 52175	100Ω 5% 0,5W			
3530	4822 051 20331	330Ω 5% 0,1W			
3531	4822 051 10102	1k 2% 0,25W			
3541	4822 116 52269	3k3 5% 0,5W			
3561	4822 050 11002	1k 1% 0,4W			
3562	4822 117 10834	47k 1% 0,1W			
3563	4822 050 22205	2M2 1% 0,6W			
3564	4822 116 52233	10k 5% 0,5W			
3565	4822 116 52271	33k 5% 0,5W			
3566	4822 116 52258	220k 5% 0,5W			
3567	4822 050 11002	1k 1% 0,4W			
3600	4822 050 25102	5k1 1% 0,6W			
3602	4822 116 52233	10k 5% 0,5W			
3603	4822 116 52233	10k 5% 0,5W			
3604	4822 116 52233	10k 5% 0,5W			
3605	4822 116 52233	10k 5% 0,5W			
3606 ▲	4822 052 10108	1Ω 5% 0,33W			
3607 ▲	4822 052 10108	1Ω 5% 0,33W			
3608 ▲	4822 052 10229	22Ω 5% 0,33W			
3701	4822 051 20224	220k 5% 0,1W			
3702 ▲	4822 052 10228	2Ω2 5% 0,33W			
3703	4822 051 20223	22k 5% 0,1W			
COILS					
5211	4822 148 80281	DIG.OUT TRANSFORMER			
5300	4822 157 50964	100μH			
5301	4822 157 50964	100μH			
5502 ▲	4822 214 51841	MAINS FILTER			

3048▲	4822 052 10229	22Ω	5%	0,33W
3049	4822 050 23305	3M3	1%	0,6W
3061	4822 051 20332	3k3	5%	0,1W
3062	4822 050 23002	3k	1%	0,6W
3063	4822 050 23308	3Ω3	1%	0,6W
3064▲	4822 052 10339	33Ω	5%	0,33W
3065▲	4822 052 10108	1Ω	5%	0,33W
3066▲	4822 052 10108	1Ω	5%	0,33W
3067	4822 051 10101	100Ω	2%	0,25W
3071	4822 051 20223	22k	5%	0,1W
3072	4822 050 22203	22k	1%	0,6W
3074	4822 051 10008	chip jumper	0Ω	
3081▲	4822 052 10189	18Ω	5%	0,33W
3082▲	4822 052 10129	12Ω	5%	0,33W
3083	4822 051 20101	100Ω	5%	0,1W
3094	4822 050 21803	18k	1%	0,6W
3100	4822 050 22202	2k2	1%	0,6W
3101	4822 051 20223	22k	5%	0,1W
3102▲	4822 052 10478	4Ω7	5%	0,33W
3105	4822 051 20759	75Ω	5%	0,1W
3106	4822 050 23902	3k9	1%	0,6W
3107	4822 050 29102	9k1	1%	0,6W
3108	4822 051 20162	1k6	5%	0,1W
3109▲	4822 052 10478	4Ω7	5%	0,33W
3110	5322 116 51882	0Ω		
3111	5322 116 51882	0Ω		
3112	5322 116 51882	0Ω		
3113	5322 116 51882	0Ω		
3114	5322 116 51882	0Ω		
3115	5322 116 51882	0Ω		
3116	4822 050 22203	22k	1%	0,6W
3131	4822 050 24702	4k7	1%	0,6W
3132	4822 050 24703	47k	1%	0,6W
3133	4822 116 52234	100k	5%	0,5W
3134	4822 051 20913	91k	5%	0,1W
3135	4822 050 23302	3k3	1%	0,6W
3136	4822 050 15602	5k6	1%	0,4W
3137	4822 050 21504	150k	1%	0,6W
3138	4822 050 28203	82k	1%	0,6W
3139	4822 051 10101	100Ω	2%	0,25W
3140▲	4822 052 10478	4Ω7	5%	0,33W
3141▲	4822 052 10478	4Ω7	5%	0,33W
3142▲	4822 052 10478	4Ω7	5%	0,33W
3143▲	4822 052 10478	4Ω7	5%	0,33W
3144	4822 050 26804	680k	1%	0,6W
3145	4822 050 15602	5k6	1%	0,4W
3146	4822 050 13303	33k	1%	0,4W
3147	4822 050 24702	4k7	1%	0,6W
3148	4822 050 24702	4k7	1%	0,6W
3149	4822 051 10122	1k2	2%	0,25W
3150	4822 050 22004	200k	1%	0,6W
3201▲	4822 052 10478	4Ω7	5%	0,33W
3211▲	4822 052 10478	4Ω7	5%	0,33W
3212	4822 051 10561	560Ω	2%	0,25W
3213	4822 051 20621	620Ω	5%	0,1W
3214	4822 050 22203	22k	1%	0,6W
3215	4822 051 20223	22k	5%	0,1W
3216	4822 051 20223	22k	5%	0,1W
3217▲	4822 052 10478	4Ω7	5%	0,33W
3218	4822 051 20822	8k2	5%	0,1W
3219	4822 050 22203	22k	1%	0,6W
3221	5322 116 51882	0Ω		
3222	5322 116 51882	0Ω		
3223	5322 116 51882	0Ω		
3224	5322 116 51882	0Ω		
3225	5322 116 51882	0Ω		
3250▲	4822 052 10478	4Ω7	5%	0,33W
3251	4822 051 20224	220k	5%	0,1W
3252	4822 051 10102	1k	2%	0,25W
3255	4822 051 20105	1M	5%	0,1W
3300▲	4822 052 10109	10Ω	5%	0,33W
3302▲	4822 052 10109	10Ω	5%	0,33W
3303▲	4822 052 10109	10Ω	5%	0,33W
3304▲	4822 052 10109	10Ω	5%	0,33W
3305▲	4822 052 10109	10Ω	5%	0,33W
3306	4822 050 21502	1k5	1%	0,6W
3307	4822 050 21502	1k5	1%	0,6W
3308	4822 050 23302	3k3	1%	0,6W
3309	4822 050 23302	3k3	1%	0,6W
3310	4822 050 25601	560Ω	1%	0,6W
3311	4822 050 25601	560Ω	1%	0,6W
3312	4822 050 23302	3k3	1%	0,6W
3313	4822 050 23302	3k3	1%	0,6W
3314	4822 050 22003	20k	1%	0,6W
3315	4822 050 22003	20k	1%	0,6W
3316	4822 050 22003	20k	1%	0,6W
3317	4822 050 22003	20k	1%	0,6W
3318▲	4822 052 10478	4Ω7	5%	0,33W
3319▲	4822 052 10478	4Ω7	5%	0,33W
3320	4822 050 23302	3k3	1%	0,6W
3321	4822 050 23302	3k3	1%	0,6W
3322	4822 050 23302	3k3	1%	0,6W
3323	4822 050 23302	3k3	1%	0,6W
3324	4822 050 21003	10k	1%	0,6W
3325	4822 050 21003	10k	1%	0,6W
3326	4822 050 21003	10k	1%	0,6W
3327	4822 050 21003	10k	1%	0,6W
3328▲	4822 052 10229	22Ω	5%	0,33W
3329▲	4822 052 10229	22Ω	5%	0,33W
3330	4822 050 22402	2k4	1%	0,6W

COILS			7203	5322 209 12099	MC74HC164D
			7204	4822 209 30739	MC74HC04AD
			7211	4822 209 62588	PCF3523P
			7212	4822 130 61207	BC848
			7213	4822 209 31284	MC74HC08ADR2
5211	4822 148 80281	DIG.OUT TRANSFORMER	7250	4822 209 31356	SAA7350
5300	4822 156 21452	100 μ H	7300	4822 209 31355	TDA1547
5301	4822 156 21452	100 μ H	7302	5322 209 86234	NE5532N
DIODES			7303	5322 209 86234	NE5532N
			7304	4822 130 42696	BC818-25
6061	4822 130 30861	BZX79-C7V5	7305	4822 130 42696	BC818-25
6062	4822 130 30861	BZX79-C7V5	7306	4822 130 42696	BC818-25
6511	5322 130 30684	1N4002	7307	4822 130 42696	BC818-25
6512	5322 130 30684	1N4002	7308	4822 130 61207	BC848
6513	5322 130 30684	1N4002	7309	4822 130 61207	BC848
6514	5322 130 30684	1N4002	7310	5322 130 42012	BC858
6515	5322 130 30684	1N4002	7311	5322 130 42012	BC858
6516	5322 130 30684	1N4002	7312	4822 130 42696	BC818-25
6517	5322 130 30684	1N4002	7313	4822 130 42696	BC818-25
6518	5322 130 30684	1N4002	7314	4822 130 42633	BSR56
6521	5322 130 30684	1N4002	7315	4822 130 42633	BSR56
6522	4822 130 34173	BZX79-C5V6	7522▲	4822 209 73233	MC79L05ACP
6541	5322 130 30684	1N4002	7526	4822 209 31354	PQ05 Ω F11
6543	4822 130 34278	BZX79-F6V8	7527	4822 209 80889	MC78L15ACP
6544	4822 130 34173	BZX79-C5V6	7528	5322 209 62115	MC79L15AC
6561	4822 130 34278	BZX79-F6V8	7529	5322 130 42012	BC858
6562	4822 130 30621	1N4148	7530	4822 130 61207	BC848
6563	4822 130 30621	1N4148	7531	5322 130 44349	BC635
6564	4822 130 30621	1N4148	7541	4822 209 31257	MC79L24ACP
6565	5322 130 30684	1N4002	7561▲	5322 130 41982	BC848B
6566	5322 130 30684	1N4002	7562	5322 130 42012	BC858
6567	4822 130 31981	BZX79-C3V9	7600	4822 209 72587	TCA0372DP2-
6568	4822 130 30621	1N4148	7701	4822 209 30938	MC68HC05C8P-ZC405027
6721	4822 130 31981	BZX79-C3V9	7702	4822 209 80891	MC78M05CT
TRANSISTORS & IC's			7721	5322 130 42012	BC858
7001	4822 209 73234	TDA8808T/C3	7731	4822 209 31351	MC68HC05D9P-P138
7002	4822 209 73235	TDA8809T/C2	7732	5322 130 42012	BC858
7003	4822 209 72587	TCA0372DP2-	7733	4822 130 61207	BC848
7004	5322 130 44349	BC635	7751	4822 209 62524	X24C16P
7005	4822 209 30719	MC74HC00AD	7761	5322 130 42012	BC858
7100	4822 209 61759	SAA7310GP/H5	7762	4822 130 61207	BC848
7101	4822 130 42131	BF550	7763	4822 130 61207	BC848
7102▲	4822 209 70422	MN4264-15			
7131	4822 209 83274	NJM4560D			
7132	4822 130 44121	BC338			
7133	4822 130 44104	BC328			
7134	5322 130 42012	BC858A			
7135	5322 130 42012	BC858A			
7201	4822 209 30939	SM5840AS			
7202	5322 209 12099	MC74HC164D			

DISPLAY & KEYBOARD PANEL					
MISCELLANEOUS			3406	4822 050 22203	22k 1% 0.6W
			3407	4822 050 22203	22k 1% 0.6W
			3408	4822 050 22203	22k 1% 0.6W
			3409	4822 050 22203	22k 1% 0.6W
			3410	4822 116 52234	100k 5% 0.5W
1310	4822 256 91848	DISPLAY HOLDER	3411	4822 051 10101	100Ω 2% 0.25W
BU-5	4822 267 50621	CONNECTOR 7P	3412	4822 116 52234	100k 5% 0.5W
1401	4822 267 31453	HEADPHONE SOCKET	3413	4822 051 10101	100Ω 2% 0.25W
1402	4822 242 81002	RESONATOR 6MHz	3414	5322 111 90473	8x10k 2% NETWORK
1402	4822 130 91115	DISPLAY	3415	4822 116 52235	1M 5% 0.5W
1403	4822 265 41115	CONNECTOR 15P	3416	4822 050 21002	1k 1% 0.6W
1404	4822 267 50621	CONNECTOR 7P	3417	4822 050 24703	47k 1% 0.6W
1405	4822 267 40624	CONNECTOR 5P	3418	4822 050 24702	4k7 1% 0.6W
1406	4822 267 50621	CONNECTOR 7P	3419	4822 050 24702	4k7 1% 0.6W
1407	4822 267 40624	CONNECTOR 5P	3420▲	4822 052 10478	4Ω7 5% 0.33W
1410	4822 276 13114	TACT SWITCH	3421	4822 050 24702	4k7 1% 0.6W
1411	4822 276 13114	TACT SWITCH	DIODES		
1412	4822 276 13114	TACT SWITCH	6401	4822 130 30621	1N4148
1413	4822 276 13114	TACT SWITCH	6402	4822 130 30621	1N4148
1414	4822 276 13213	TACT SWITCH	6403	4822 130 30621	1N4148
1415	4822 276 13213	TACT SWITCH	6404	4822 130 30621	1N4148
1416	4822 276 13114	TACT SWITCH	6405	4822 130 30621	1N4148
1417	4822 276 13213	TACT SWITCH	6406	4822 130 83029	LED CTL-4212N
1418	4822 276 13213	TACT SWITCH	TRANSISTORS & IC'S		
1419	4822 276 13213	TACT SWITCH	7401	4822 209 31251	TMP47C670P-FTDD007
1420	4822 276 13213	TACT SWITCH	7403	4822 209 60886	UDN-2580A
1421	4822 276 13213	TACT SWITCH	7405	4822 130 40941	BC558
1422	4822 276 13114	TACT SWITCH	7406	4822 130 40941	BC558
1423	4822 276 13114	TACT SWITCH			
1424	4822 276 13114	TACT SWITCH			
1425	4822 276 13114	TACT SWITCH			
1426	4822 276 13114	TACT SWITCH			
1451	4822 214 51772	TACT SWITCH			
CAPACITORS					
2401	5322 124 21643	22μF 20% 40V			
2402	4822 122 10166	22nF 30% 16V			
2403	5322 124 21643	22μF 20% 40V			
2404	4822 122 10166	22nF 30% 16V			
2405	5322 124 21643	22μF 20% 40V			
2406	4822 122 10166	22nF 30% 16V			
2420	5322 124 21643	22μF 20% 40V			
2421	4822 122 10166	22nF 30% 16V			
RESISTORS					
3401▲	4822 052 10478	4Ω7 5% 0.33W			
3402▲	4822 052 10478	4Ω7 5% 0.33W			
3403▲	4822 052 10478	4Ω7 5% 0.33W			
3404	4822 050 22203	22k 1% 0.6W			
3405	4822 050 22203	22k 1% 0.6W			

HEADPHONE PANEL			MISCELLANEOUS	
MISCELLANEOUS			SK-1▲ 4822 276 13216	MAINS SWITCH
			21▲ 4822 256 30274	FUSE HOLDER
1310	4822 267 50621	CONNECTOR 7P	1501▲ 4822 070 31251	FUSE 125mA
BU-5	4822 267 31453	HEADPHONE SOCKET	1501▲ 4822 253 30322	FUSE 200mA
CAPACITORS			5001▲ 4822 146 31101	MAINS TRANSFORMER
			5001▲ 4822 146 31103	MAINS TRAFO /17S
			5502▲ 4822 214 51841	MAINS FILTER
2380	4822 124 41525	100μF 20% 25V		
2381	4822 124 41525	100μF 20% 25V		
2382	4822 122 10166	22nF 30% 16V		
2383	4822 122 10166	22nF 30% 16V		
RESISTORS				
3381	4822 101 21199	10k LOG POTMETER		
3382	4822 116 52264	27k 5% 0,5W		
3383	4822 116 52264	27k 5% 0,5W		
3384	4822 050 21203	12k 1% 0,6W		
3385	4822 050 21203	12k 1% 0,6W		
3386	4822 050 21201	120Ω 1% 0,6W		
3387	4822 050 21201	120Ω 1% 0,6W		
3388	4822 051 10101	100Ω 2% 0,25W		
3389	4822 051 10101	100Ω 2% 0,25W		
3390▲	4822 052 10109	10Ω 5% 0,33W		
3391▲	4822 052 10109	10Ω 5% 0,33W		
3392	4822 050 22202	2k2 1% 0,6W		
3393	4822 050 22202	2k2 1% 0,6W		
TRANSISTORS & IC				
7380	4822 209 82362	NJM4556D		
7382	4822 130 44121	BC338		
7383	4822 130 44121	BC338		