

G1025

GRUNDIG SERVICE MANUAL

CD

Ⓛ Btx ★ 32700 #

Service Manual

Sach-Nr./Part No.
72010-745.90

Zusätzlich erforderliche Unterlagen für den Komplettservice:

Additionally required Service Manuals for the Complete Service:

Service Manual

Sicherheit
Safety

Sach-Nr./Part No.
72010-800.00

CDC 477

R5109

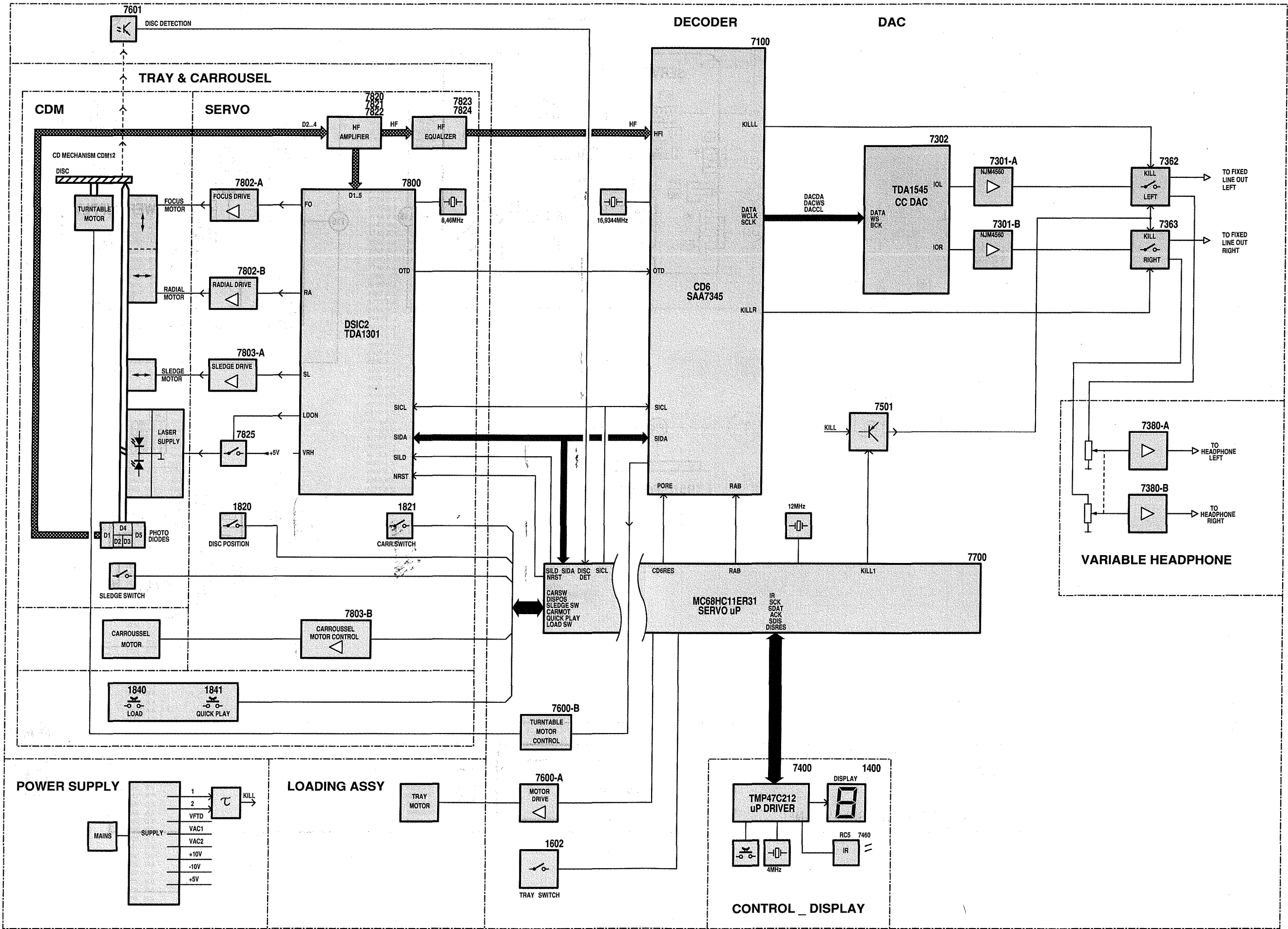


GRUNDIG

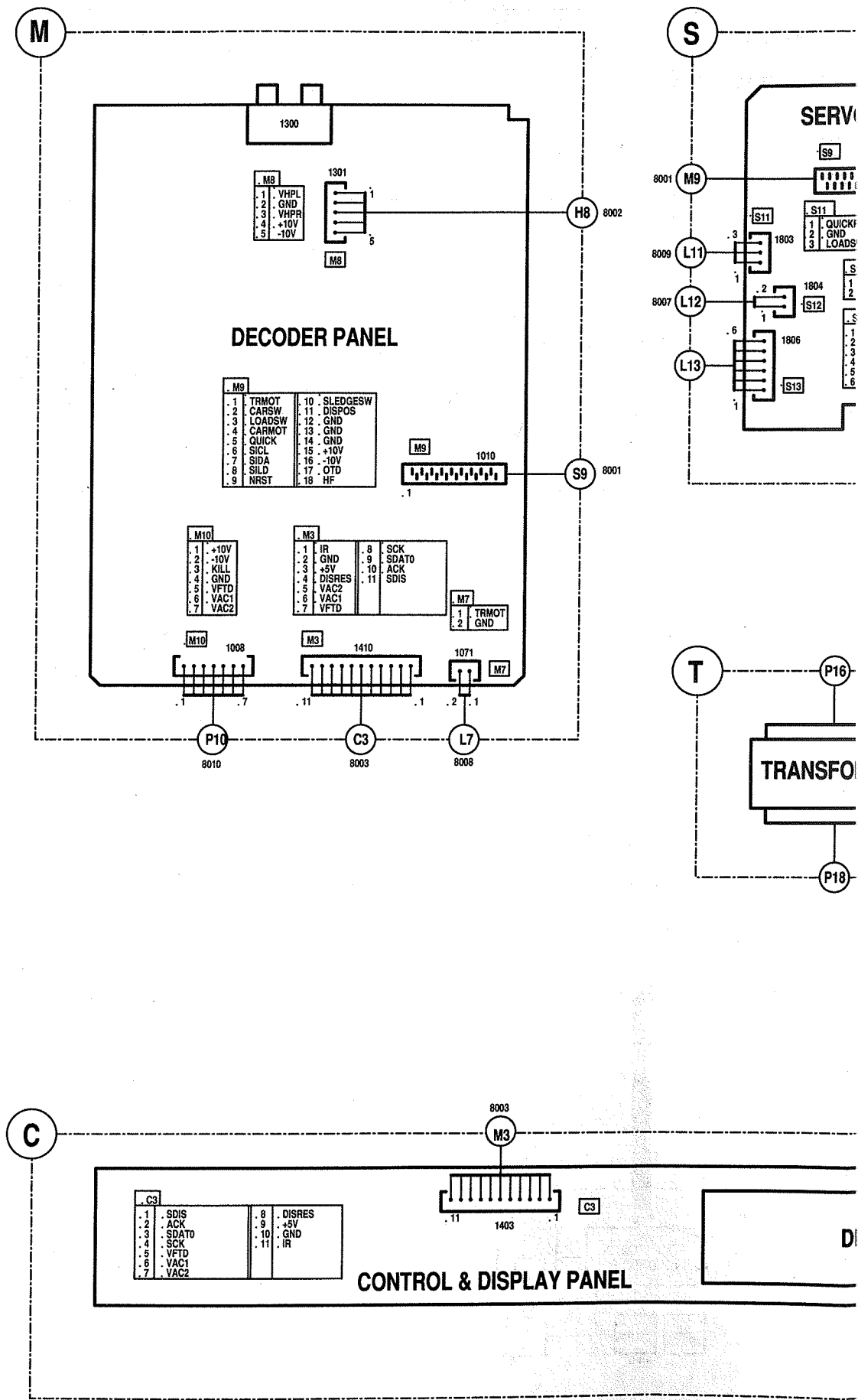
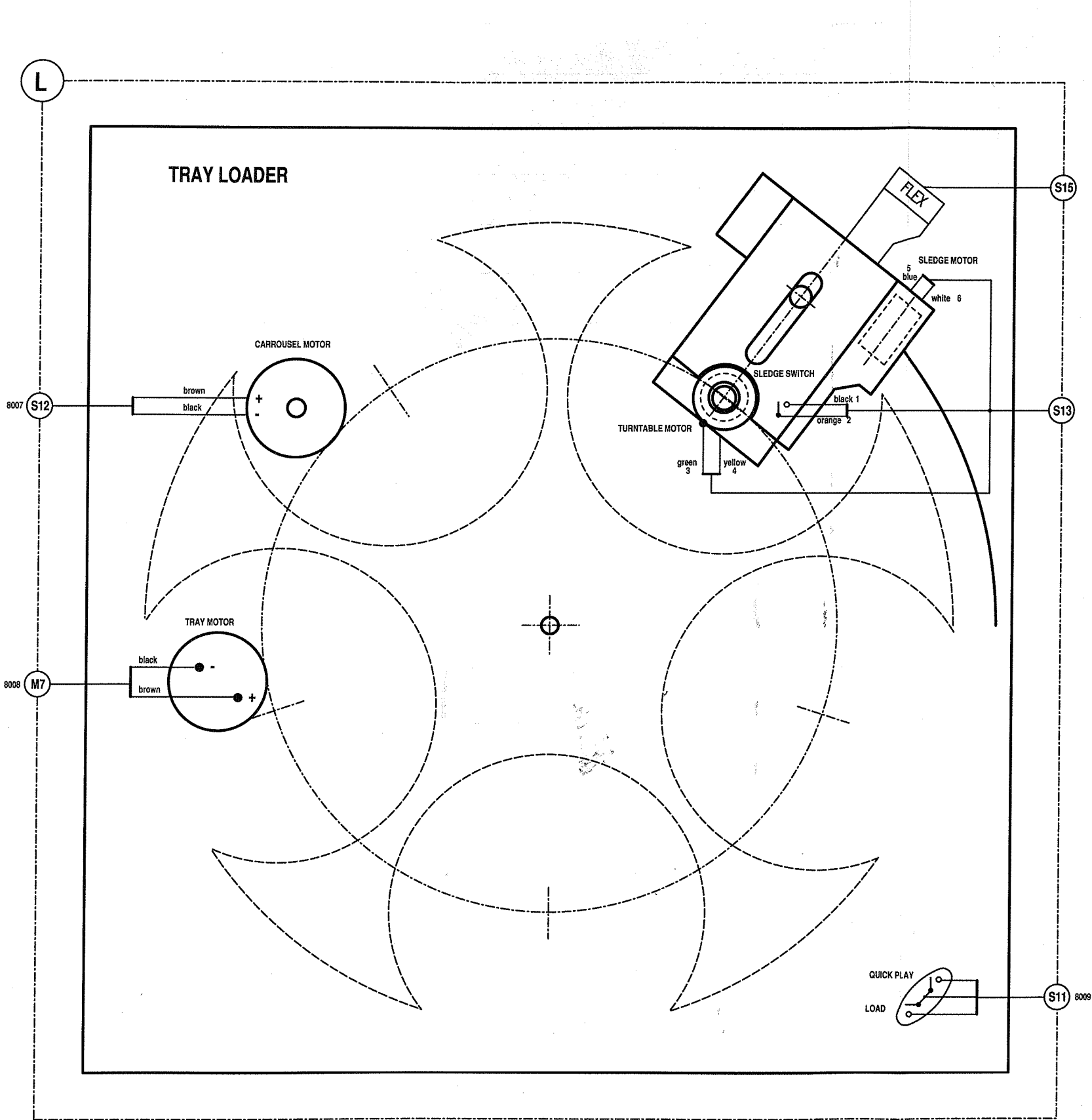
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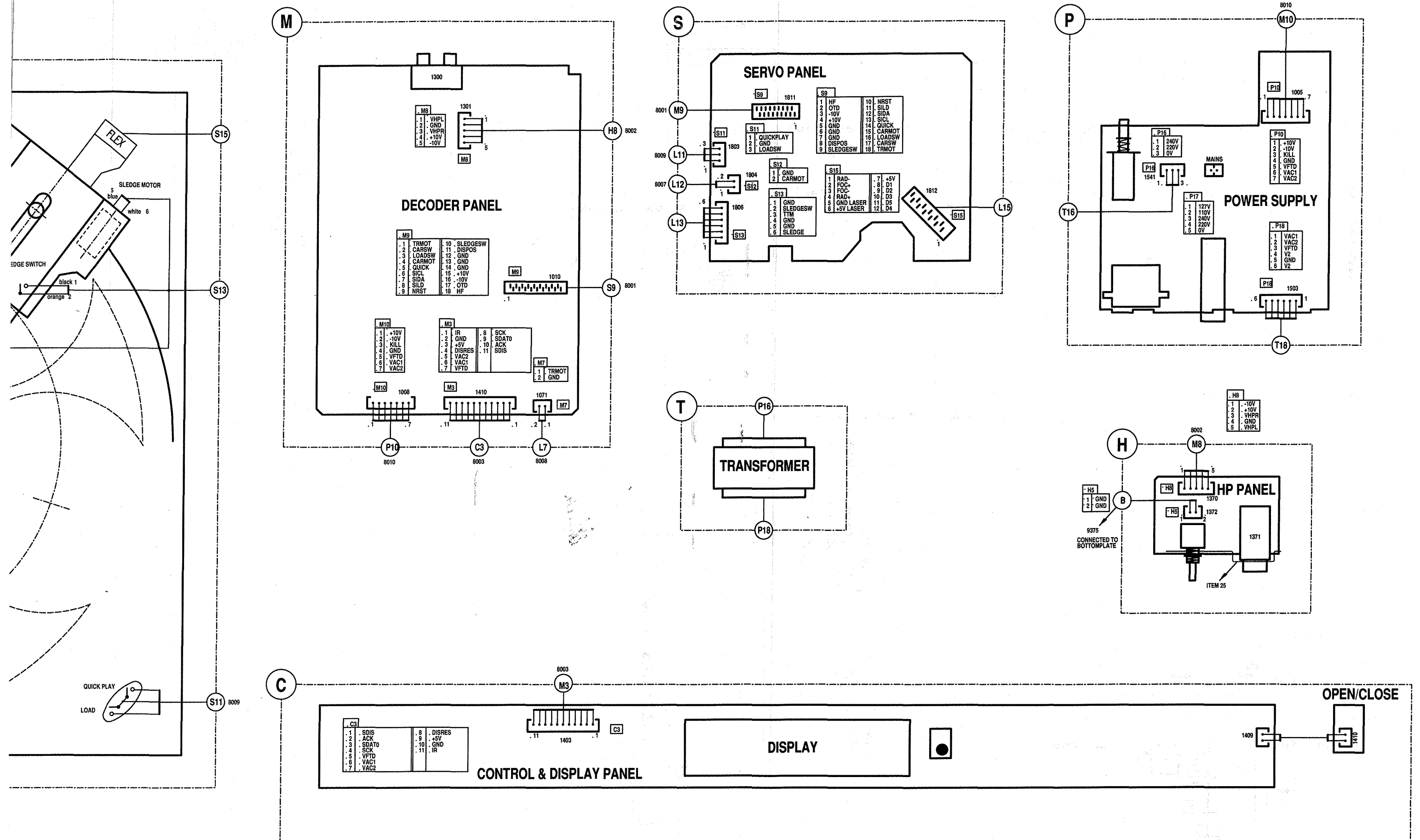
Schaltungs- und Druckplattenabbildungen / Circuit Diagrams and Layout of PCBs

Blockschaltbild / Block Diagram

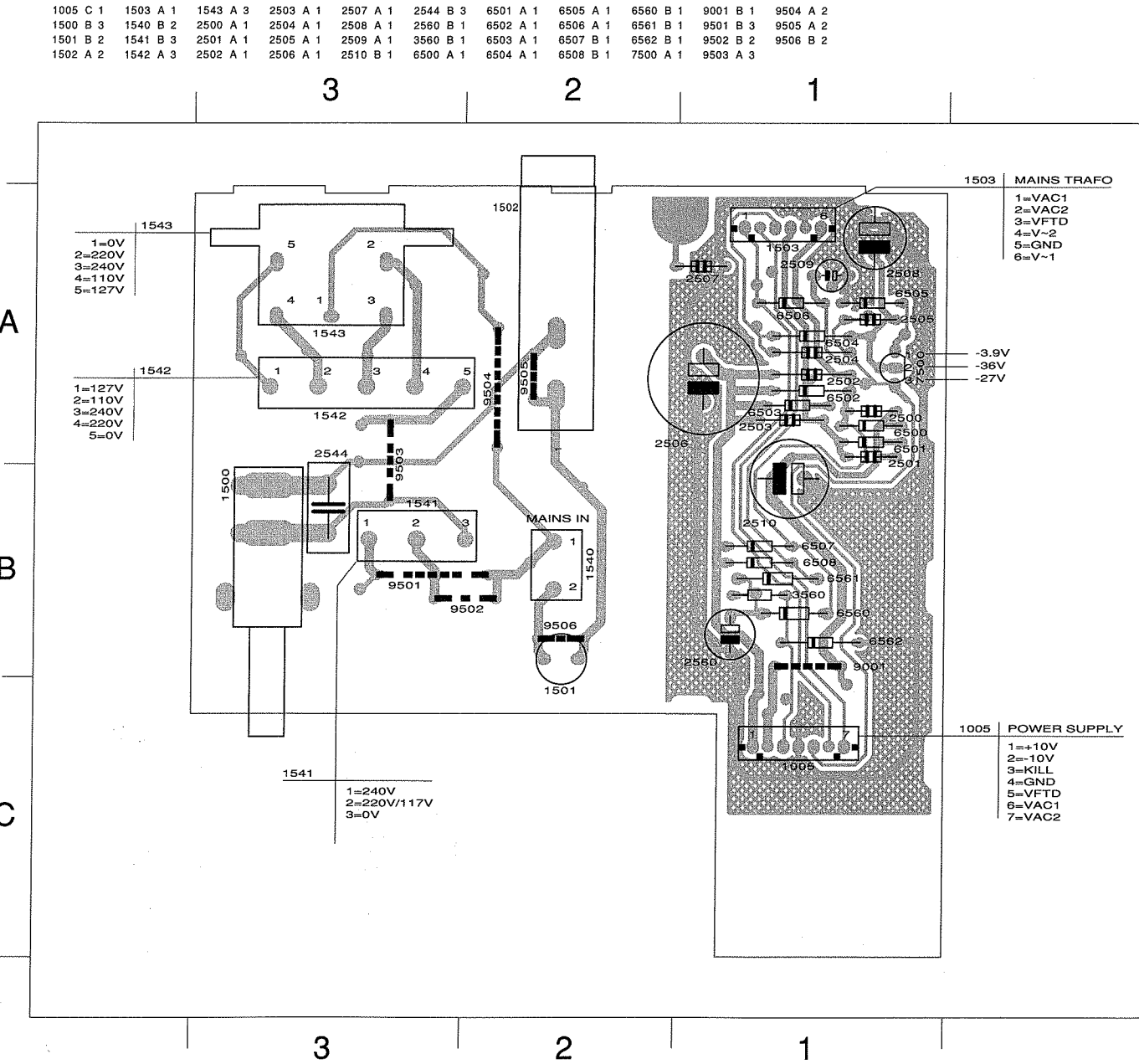
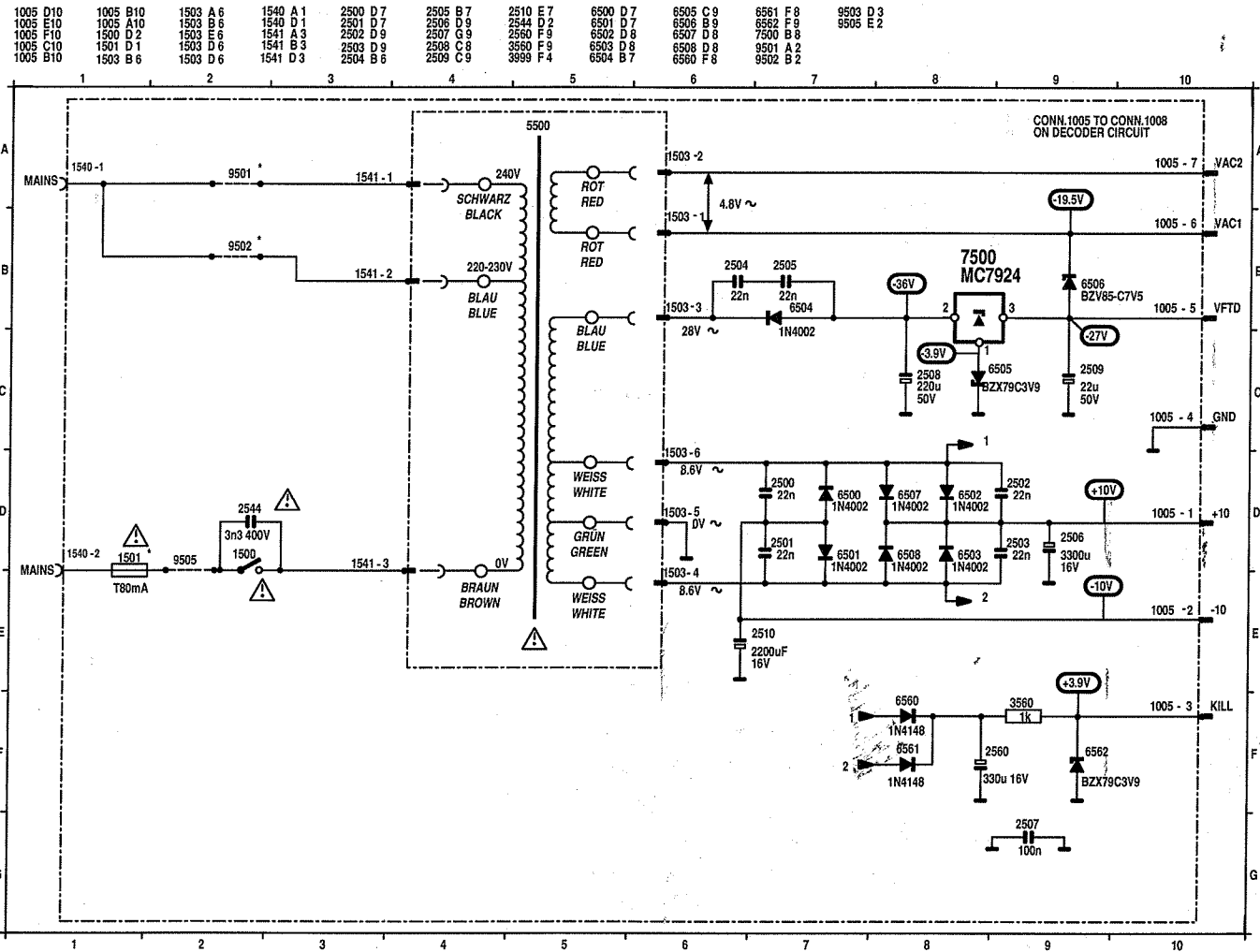


Verdrahtungsplan / Wiring Diagram

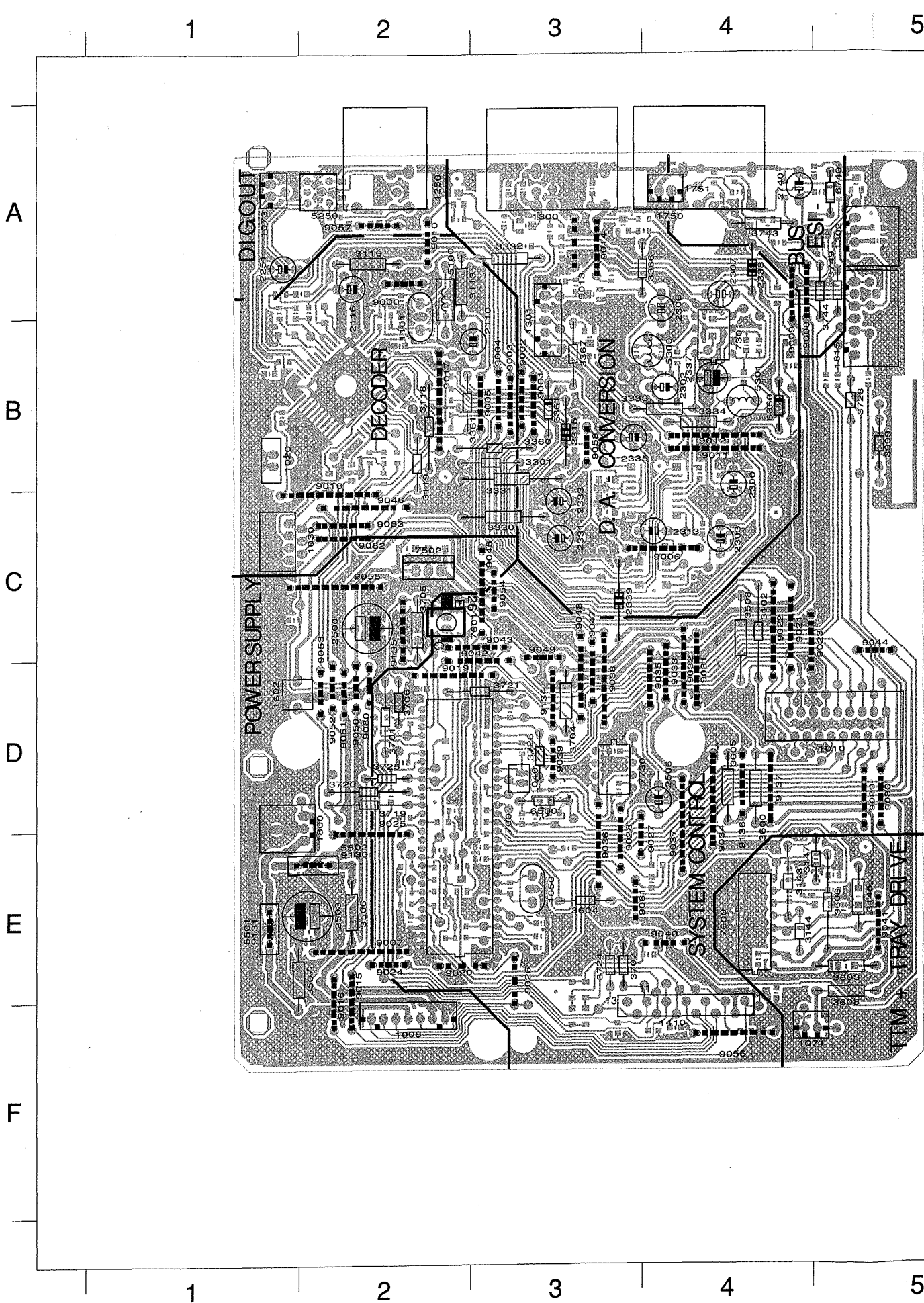




Stromversorgungsplatte / Power Supply Board



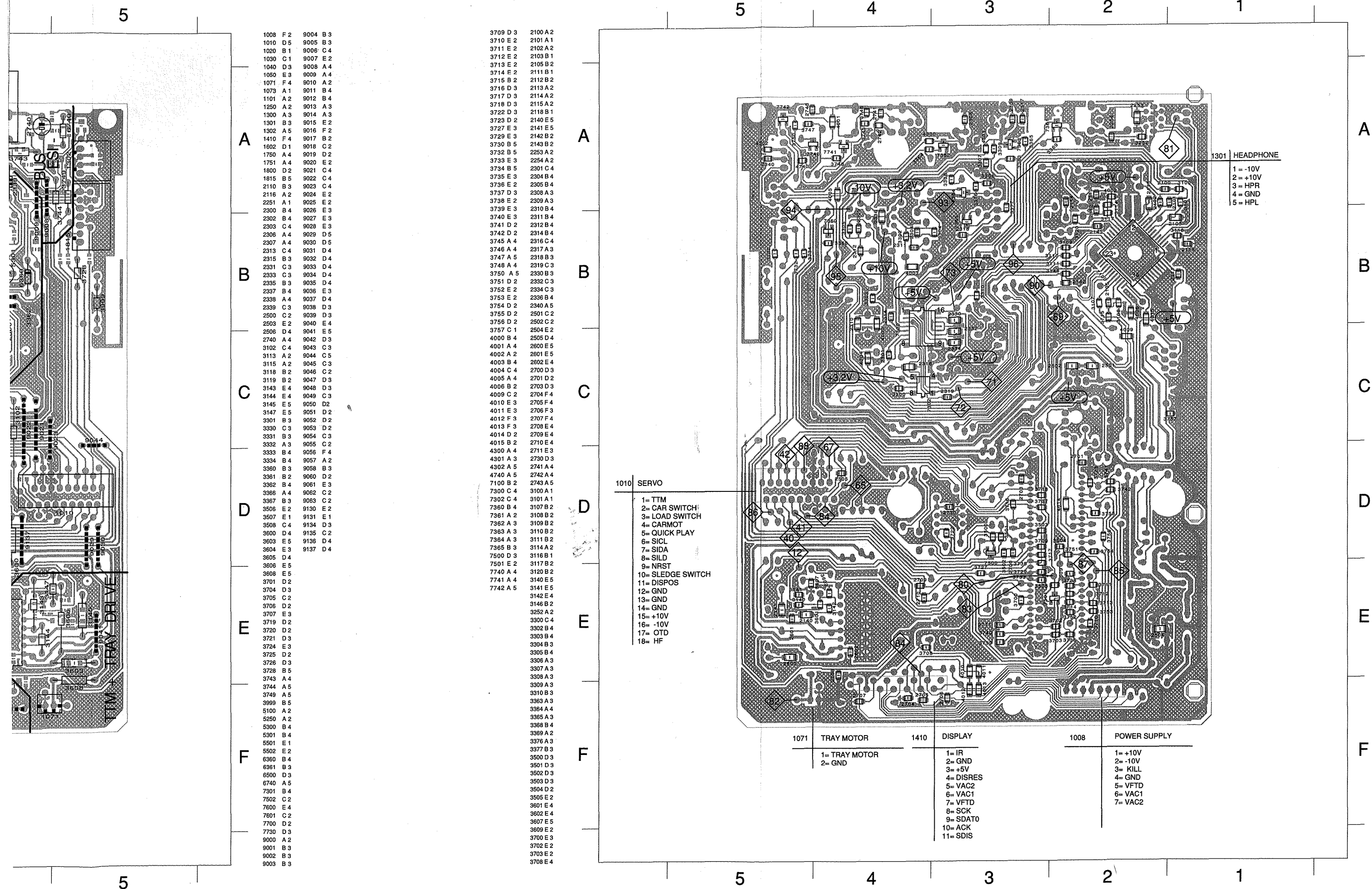
Dekoderplatte / Decoder Board



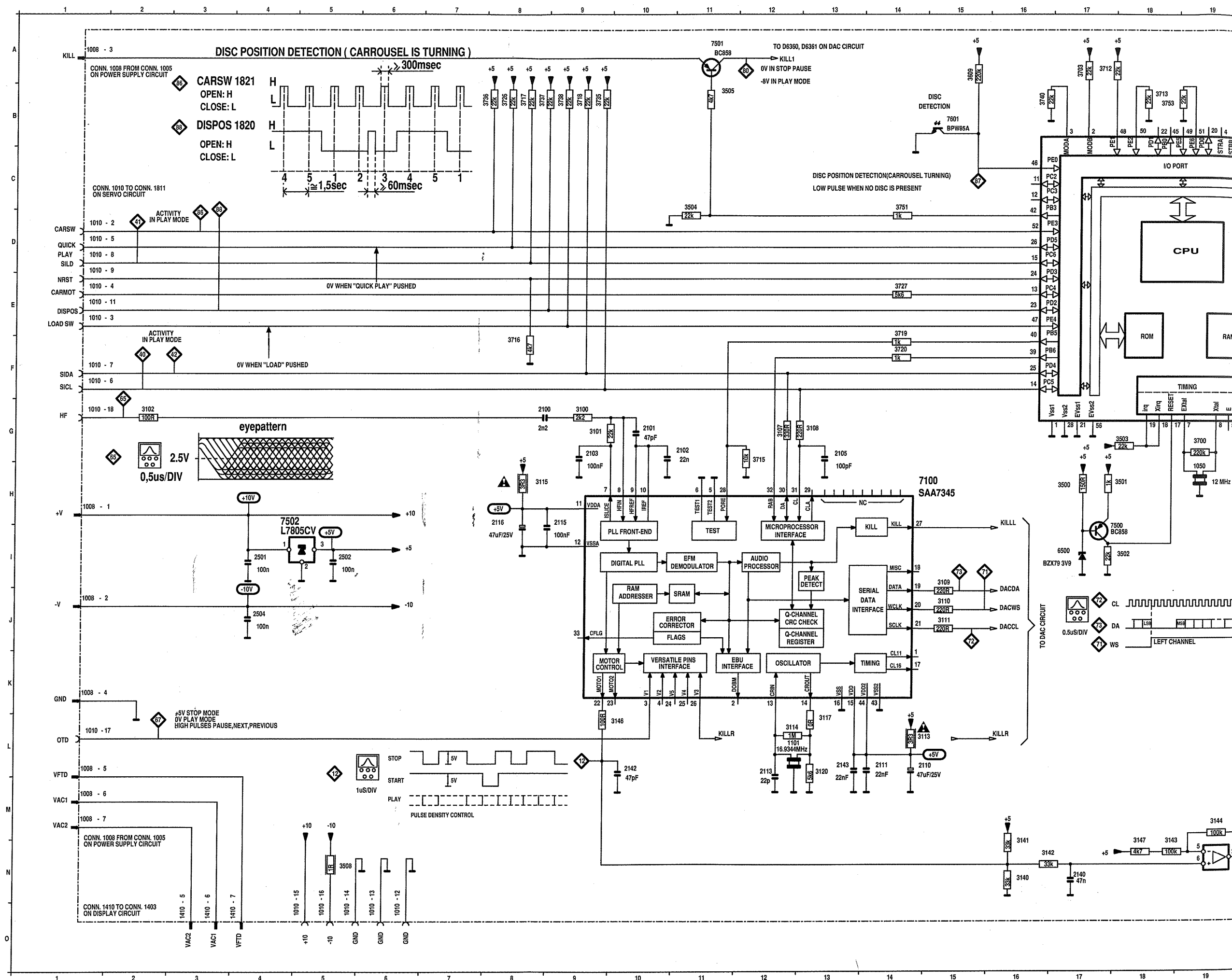
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1010	D 5	9005	B 3
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1050	E 3	9009	A 4
1071	F 4	9010	A 2
1073	A 1	9011	B 4
1101	A 2	9012	B 4
1250	A 2	9013	A 3
1300	A 3	9014	A 3
1301	B 3	9015	E 2
1302	A 5	9016	F 2
1410	F 4	9017	B 2
1602	D 1	9018	C 2
1750	A 4	9019	D 2
1751	A 4	9020	E 2
1800	D 2	9021	C 4
1815	B 5	9022	C 4
2110	B 3	9023	C 4
2116	A 2	9024	E 2
2251	A 1	9025	E 2
2300	B 4	9026	E 3
2302	B 4	9027	E 3
2303	C 4	9028	E 3
2306	A 4	9029	D 5
2307	A 4	9030	D 5
2313	C 4	9031	D 4
2315	B 3	9032	D 4
2331	C 3	9033	D 4
2333	C 3	9034	D 4
2335	B 3	9035	D 4
2337	B 4	9036	E 3
2338	A 4	9037	D 4
2339	C 3	9038	D 3
2500	C 2	9039	D 3
2503	E 2	9040	E 4
2508	D 4	9041	E 5
2740	A 4	9042	D 3
3102	C 4	9043	C 3
3113	A 2	9044	C 5
3115	A 2	9045	C 3
3118	B 2	9046	C 2
3119	B 2	9047	D 3
3143	E 4	9048	D 3
3144	E 4	9049	C 3
3145	E 5	9050	D 2
3147	E 5	9051	D 2
3301	B 3	9052	D 2
3330	C 3	9053	D 2
3331	B 3	9054	C 3
3332	A 3	9055	C 2
3333	B 4	9056	F 4
3334	B 4	9057	A 2
3360	B 3	9058	B 3
3361	B 2	9060	D 2
3362	B 4	9061	E 3
3366	A 4	9062	C 2
3367	B 3	9063	C 2
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3507	E 1	9131	E 1
3508	C 4	9134	D 3
3600	D 4	9135	C 2
3603	E 5	9136	D 4
3604	E 3	9137	D 4
3605	D 4		
3606	E 5		
3608	E 5		
3701	D 2		
3704	D 3		
3705	C 2		
3706	D 2		
3707	E 3		
3719	D 2		
3720	D 2		
3721	D 3		
3724	E 3		
3725	D 2		
3726	D 3		
3728	B 5		
3743	A 4		
3744	A 5		
3749	A 5		
3999	B 5		
5100	A 2		
5250	A 2		
5300	B 4		
5301	B 4		
5501	E 1		
5502	E 2		
6360	B 4		
6361	B 3		
6500	D 3		
6740	A 5		
7301	B 4		
7502	C 2		
7600	E 4		
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7700	D 2		
7730	D 3		
9000	A 2		
9001	B 3		
9002	B 3		
9003	B 3		

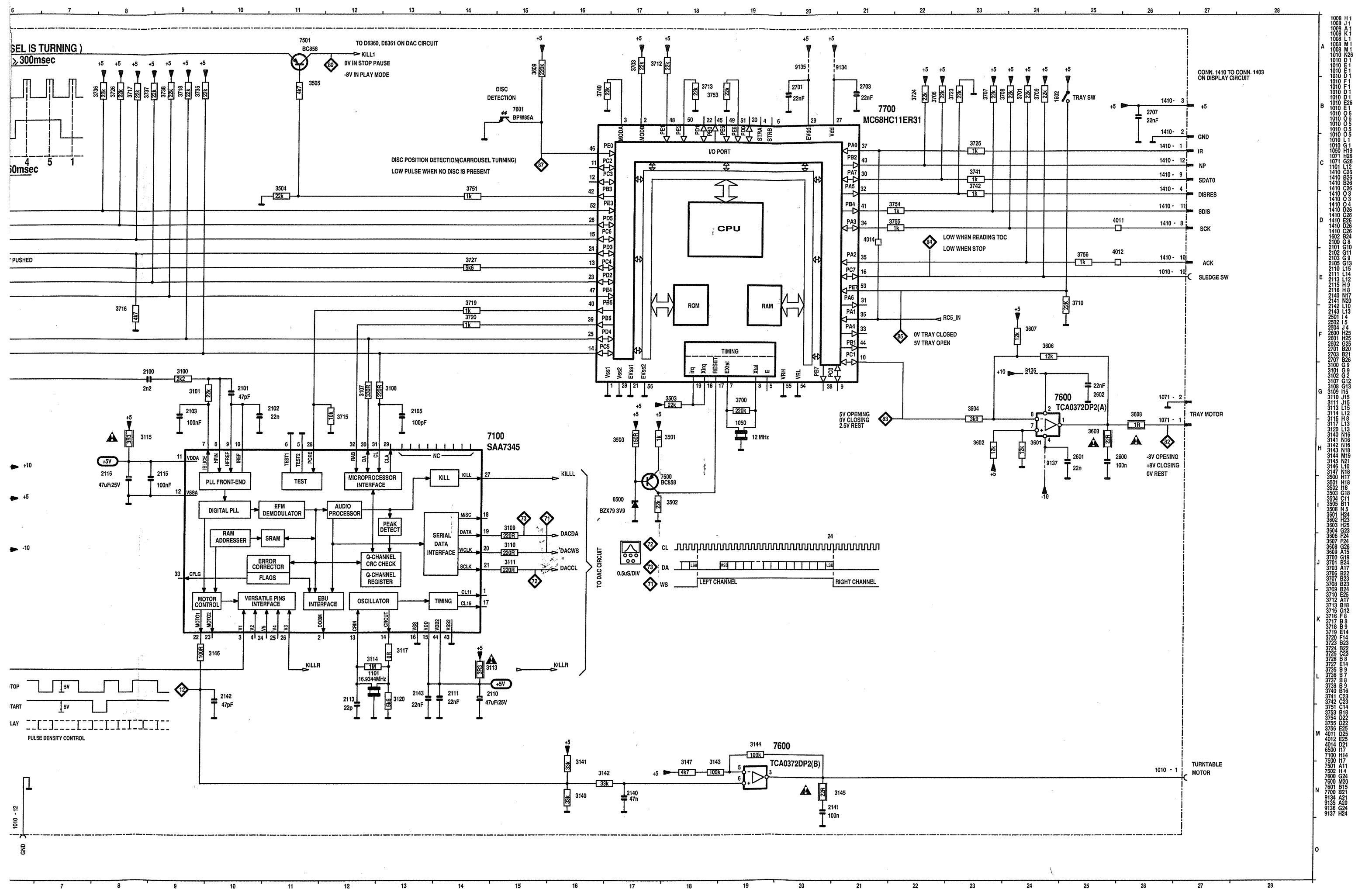
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3715	B 2	2112	B 2
3716	D 3	2113	A 2
3717	D 3	2114	A 2
3718	D 3	2115	A 2
3722	D 3	2118	B 1
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3729	E 3	2142	B 2
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3733	E 3	2254	A 2
3734	B 5	2301	C 4
3735	E 3	2304	B 4
3736	E 2	2305	B 4
3737	D 3	2308	A 3
3738	E 2	2309	A 3
3739	E 3	2310	B 4
3740	E 3	2311	B 4
3741	D 2	2312	B 4
3742	D 2	2314	B 4
3745	A 4	2316	C 4
3746	A 4	2317	A 3
3747	A 5	2318	B 3
3748	A 4	2319	C 3
3750	A 5	2330	B 3
3751	D 2	2332	C 3
3752	E 2	2334	C 3
3753	E 2	2336	B 4
3754	D 2	2340	A 5
3755	D 2	2501	C 2
3756	D 2	2502	C 2
3757	C 1	2504	E 2
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4002	A 2	2601	E 5
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4006	B 2	2703	D 3
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4740	A 5	2742	A 4
7100	B 2	2743	A 5
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7302	C 4	3101	A 1
7360	B 4	3107	B 2
7361	A 2	3108	B 2
7362	A 3	3109	B 2
7363	A 3	3110	B 2
7364	A 3	3111	B 2
7365	B 3	3114	A 2
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7501	E 2	3117	B 2
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7741	A 4	3140	E 5
7742	A 5	3141	E 5
		3142	E 4
		3146	B 2
		3252	A 2
		3300	C 4
		3302	B 4
		3303	B 4
		3304	B 3
		3305	B 4
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		3368	B 4
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		3601	E 4
		3602	E 4
		3607	E 5
		3609	E 2
		3700	E 3
		3702	E 2
		3703	E 2
		3708	E 4

- 1010 SERVO
- 1= TTM
 - 2= CAR SWITCH
 - 3= LOAD SWITCH
 - 4= CARMOT
 - 5= QUICK PLAY
 - 6= SICL
 - 7= SIDA
 - 8= SILD
 - 9= NRST
 - 10= SLEDGE SWITCH
 - 11= DISPOS
 - 12= GND
 - 13= GND
 - 14= GND
 - 15= +10V
 - 16= -10V
 - 17= OTD
 - 18= HF

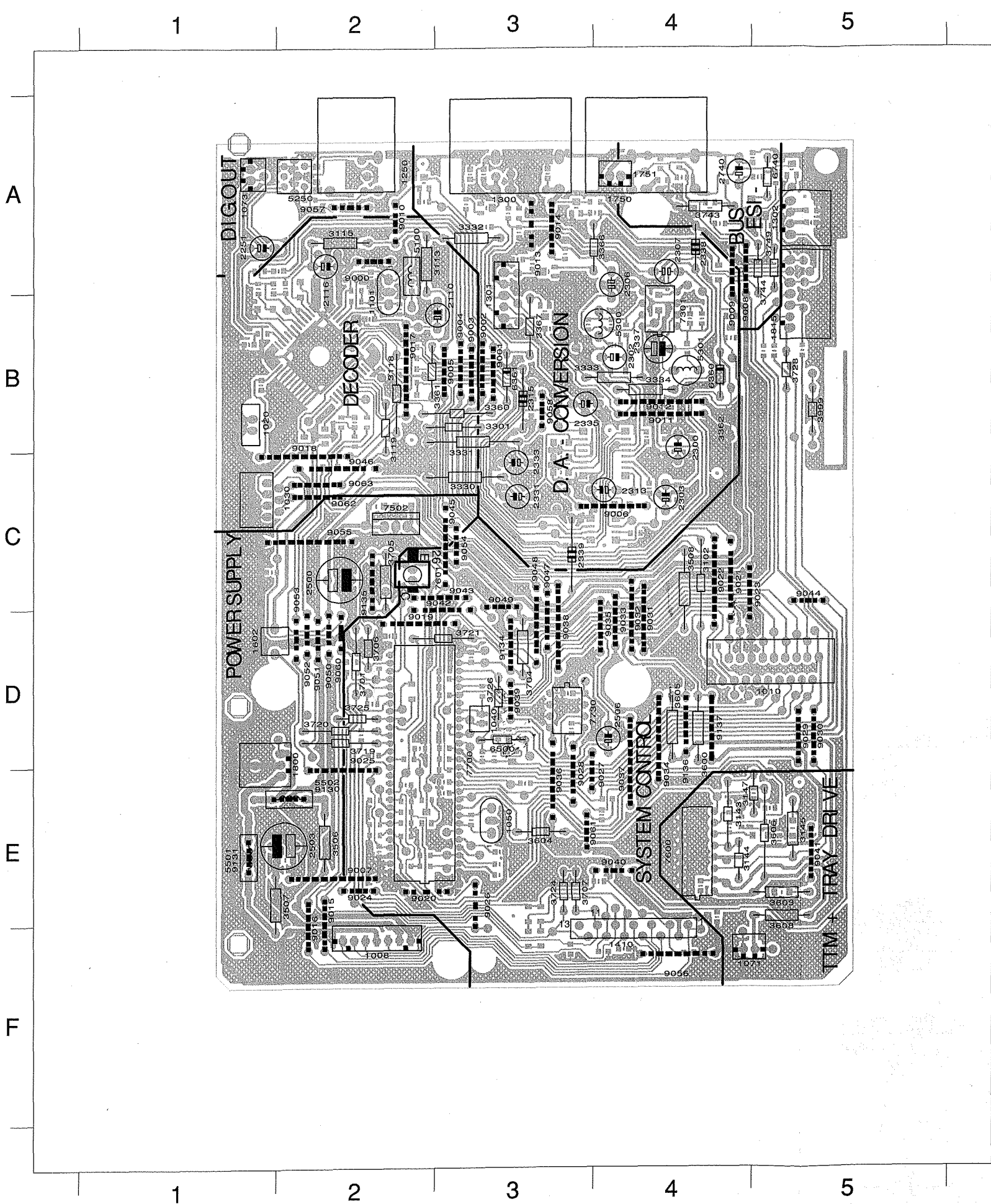


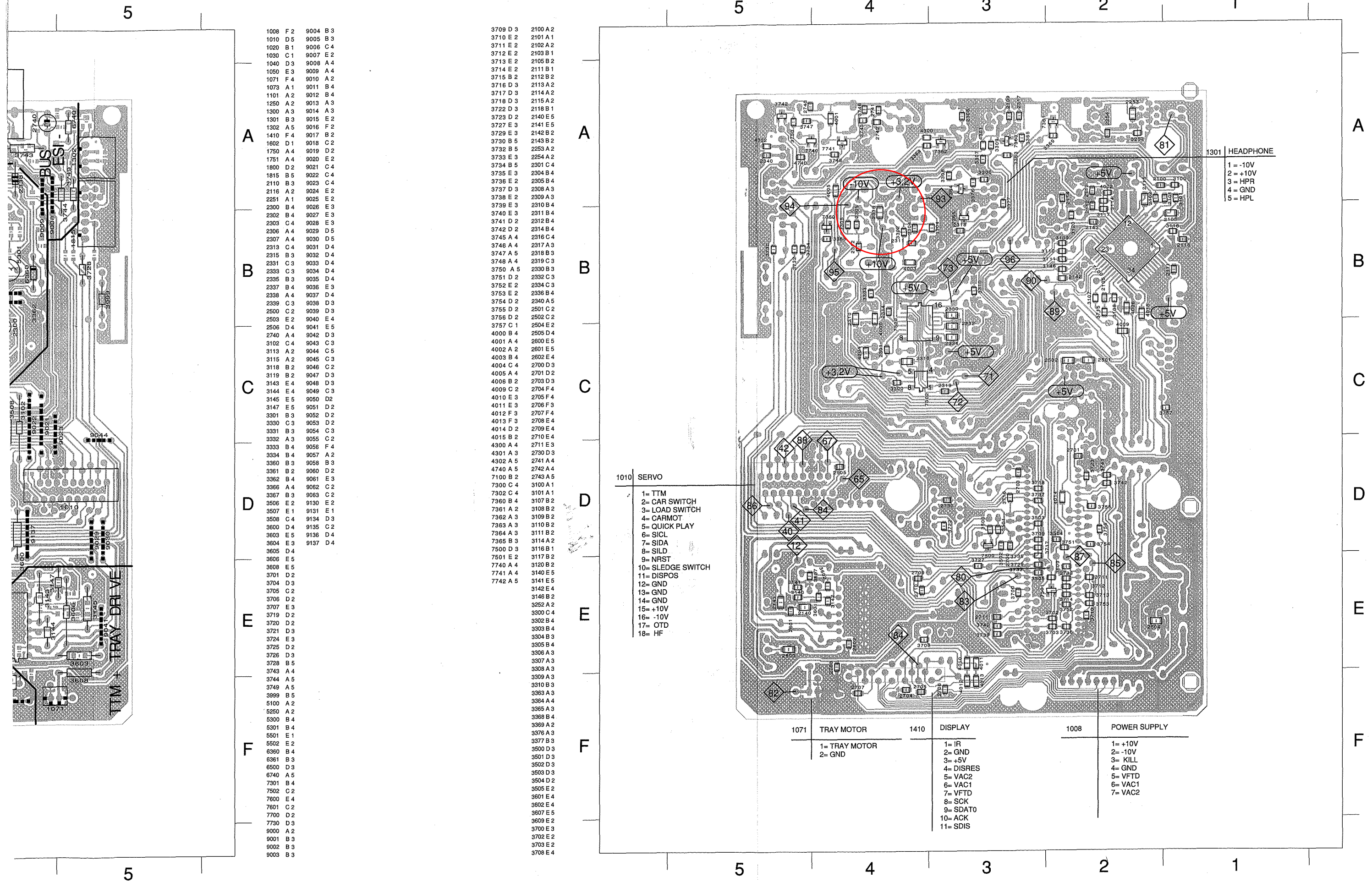
Dekoder / Decoder





Dekoderplatte / Decoder Board





1300 G17
1301 D17
1301 C17
1301 J17
1301 D17
1301 D17
1301 D17
1304 F10
2304 F12
2305 I2
2306 F13
2307 I13
2308 G16
2309 H16
2310 G9
2311 E12
2312 J12
2316 E6
2317 C5
2318 C17
2319 B15
2321 G11
2326 G12
2328 H13
2339 H11
3300 G9
3301 G9
3302 F10
3303 I10
3304 E12
3305 J12
3306 G13
3307 I13
3308 F14
3309 H14
3310 C5
3330 E5
3333 G11
3334 H11
3360 D9
3361 J9
3362 H11
3363 K11
3364 G14
3365 I14
3366 E14
3367 H14
3368 D10
3369 D10
3376 D14
3377 J14
5300 E12
5301 J12
6360 D11
6361 J11
7301 G12
7301 H12
7302 F7
7360 D10
7361 J10
7362 G15
7363 J15
7364 E15
7365 J15

1802 E 9
1803 M15
1803 L15
1803 M15
1804 L15
1804 L15
1808 N15
1808 J15
1808 J15
1808 N15
1808 N15
1808 M15
1811 O14
1811 O8
1811 O9
1811 O10
1811 A8
1811 O10
1811 O9
1811 O7
1811 O13
1811 O10
1811 O5
1811 O5
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1811 A4
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1812 D15
1812 H1
1812 F1
1812 G1
1812 J1
1812 F1
1812 I1
1821 N6
1821 N8
1840 M17
1841 M17
1842 M17
1842 M17
1842 M17
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2801 G4
2802 G4
2803 H4
2804 H4
2805 G6
2806 G6
2807 F6
2808 H6
2809 F6
2810 H6
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2812 C9
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2815 E7
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2836 E2
2837 E2
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2839 E3
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3008 H5
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3012 C10
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3027 G13
3028 G13
3029 G14
3030 H15
3031 H13
3032 H13
3033 I14
3034 J12
3035 J13
3036 K13
3037 K14
3038 J15
3039 A2
3040 B3
3041 B4
3042 B5
3043 B7
3044 B9
3045 C5
3046 C6
3047 C3
3048 C3
3050 C5
3051 C8
3052 D5
3053 D7
3054 D2
3055 D5
3056 J3
3057 K11
3058 K12
3059 L11
3060 L12
3061 L13
3062 L13
3063 L14
3064 N7
3065 J9

4891 N8
4892 J8
4893 J10
5801 D8
5802 D9
7801 E11
7801 I4
7802 D14
7803 F14
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9813 E14

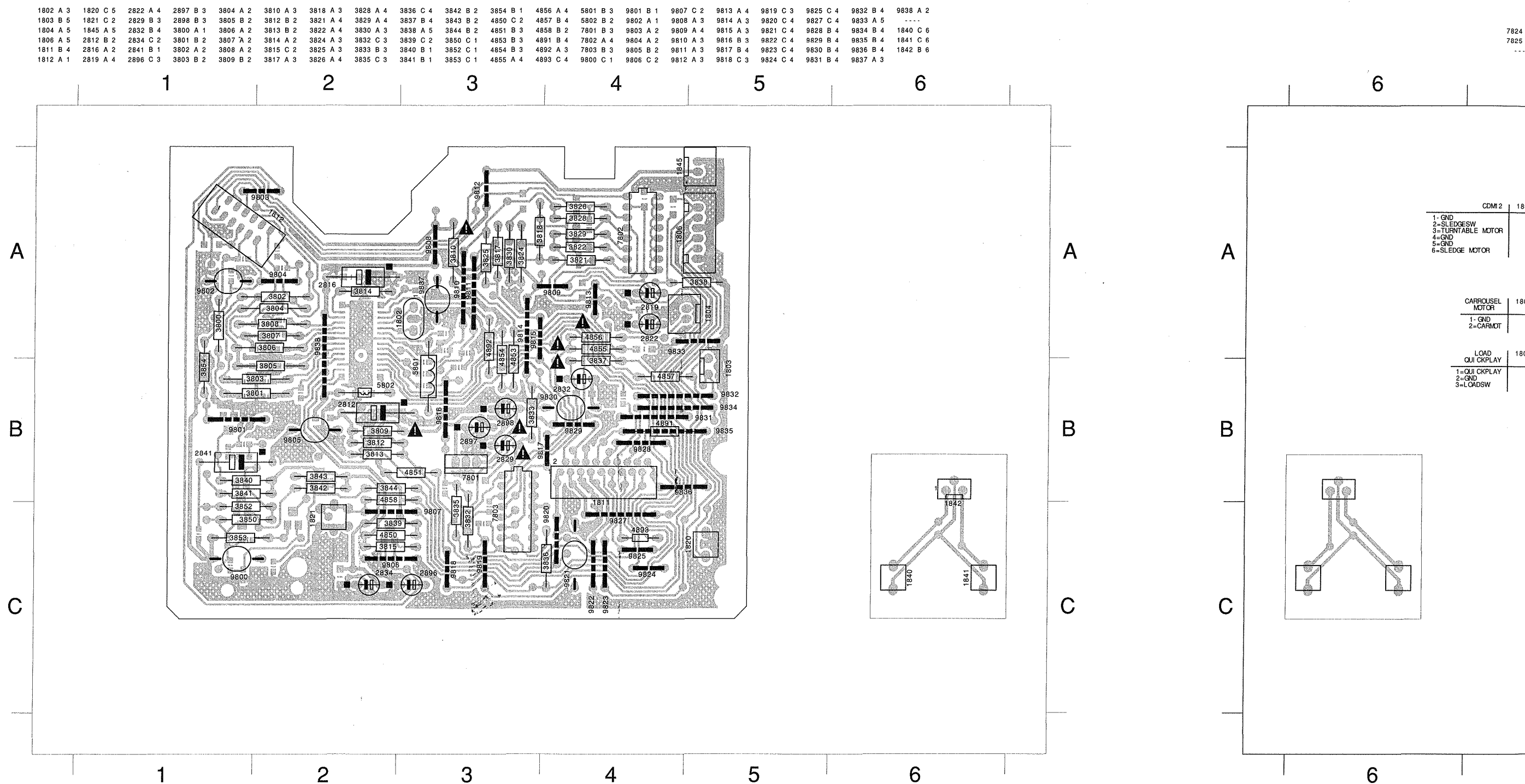
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0V FM not moving
0,5us/DIV
5V service mode 1
0V FM is moving

20 service mode 0
0V no tracking control
0,5us/DIV
5V service mode 3
0V tracking control

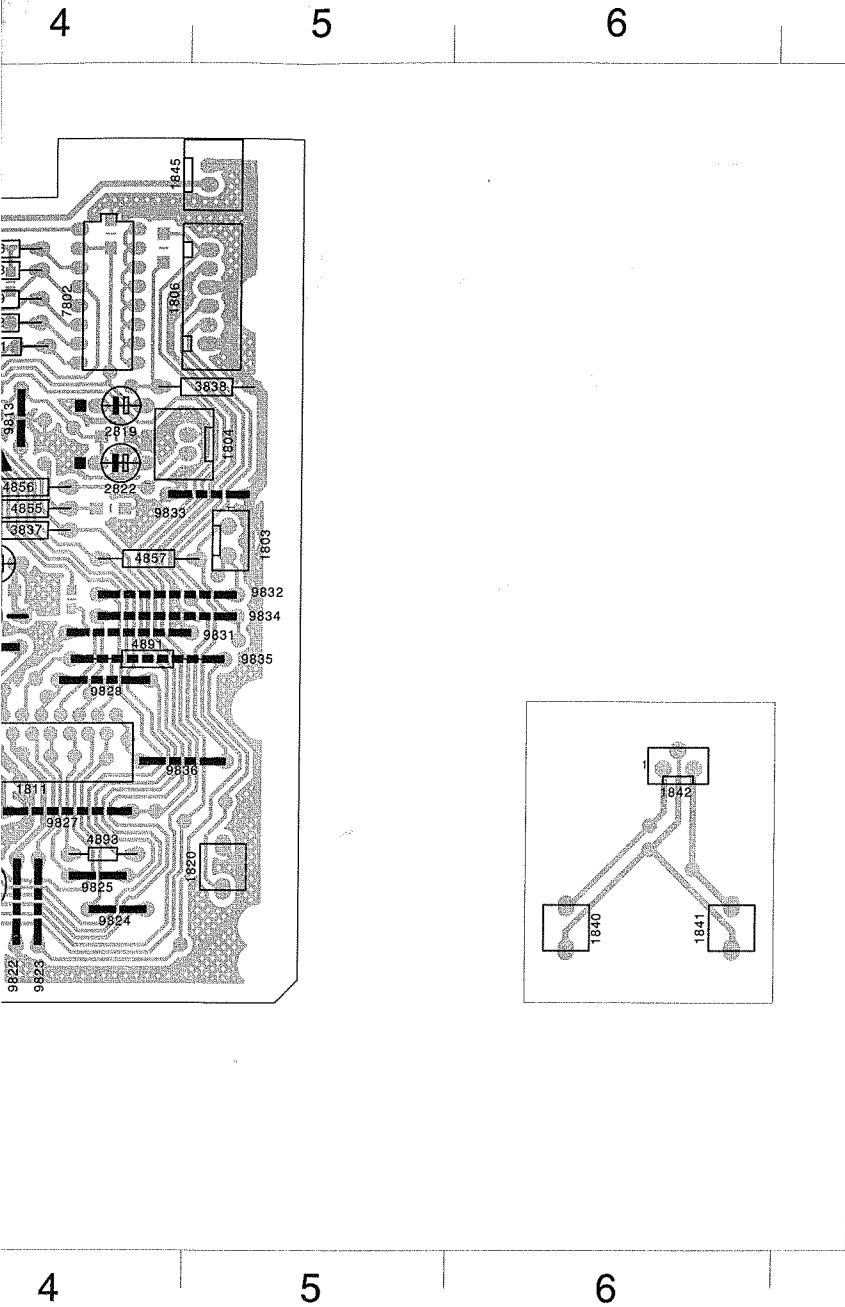
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0V sled not moving
0,5us/DIV
5V sled out
0V sled in

65 eyepattern
2.5V
0,5us/DIV

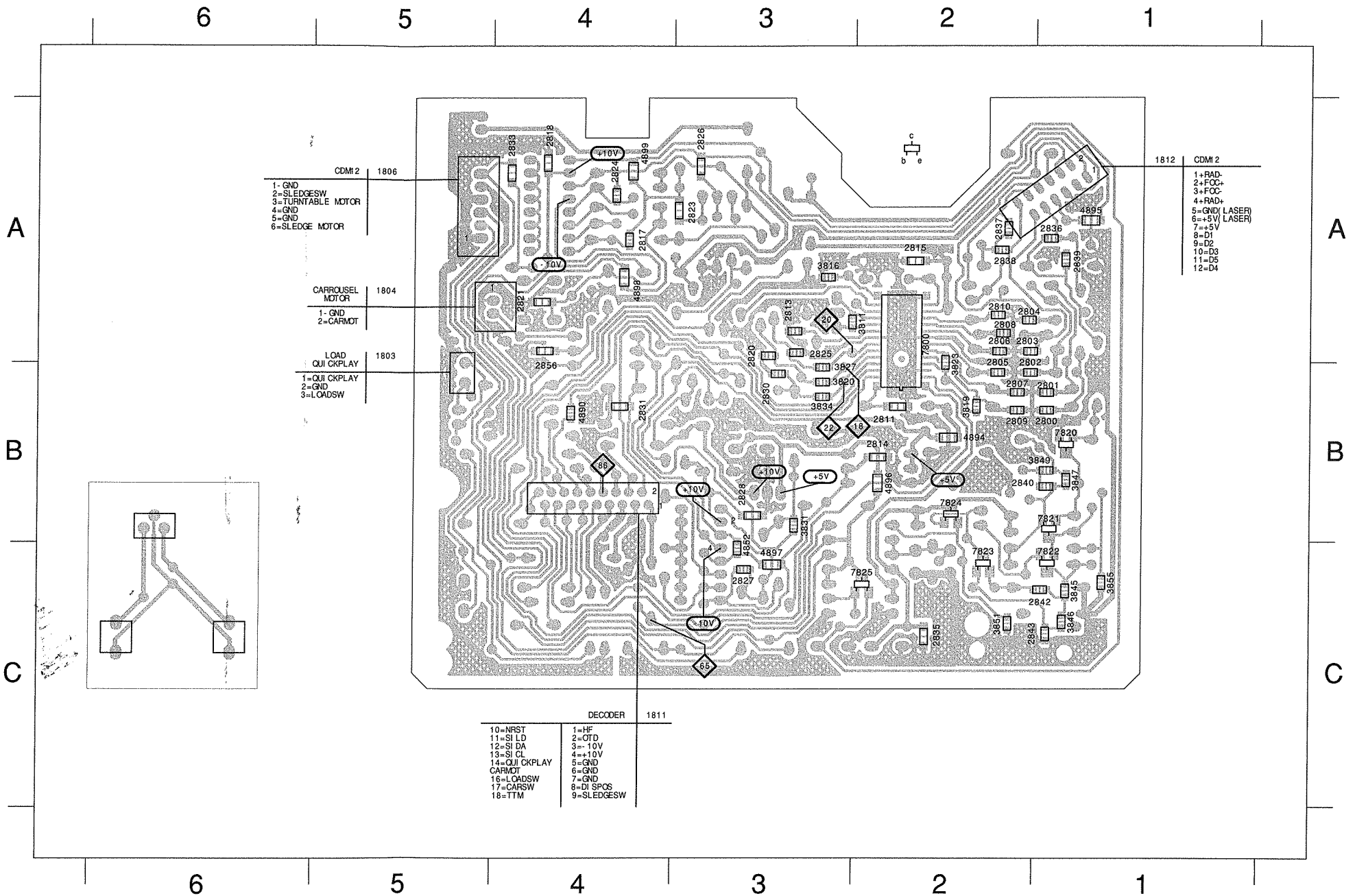
Servoplatte / Servo Board



9801 B 3 9801 B 1 9807 C 2 9813 A 4 9819 C 3 9825 C 4 9832 B 4 9838 A 2
9802 B 2 9802 A 1 9808 A 3 9814 A 3 9820 C 4 9827 C 4 9833 A 5
9801 B 3 9803 A 2 9809 A 4 9815 A 3 9821 C 4 9828 B 4 9834 B 4 1840 C 6
9802 A 4 9804 A 2 9810 A 3 9816 B 3 9822 C 4 9829 B 4 9835 B 4 1841 C 6
9803 B 3 9805 B 2 9811 A 3 9817 B 4 9823 C 4 9830 B 4 9836 B 4 1842 B 6
9800 C 1 9806 C 2 9812 A 3 9818 C 3 9824 C 4 9831 B 4 9837 A 3



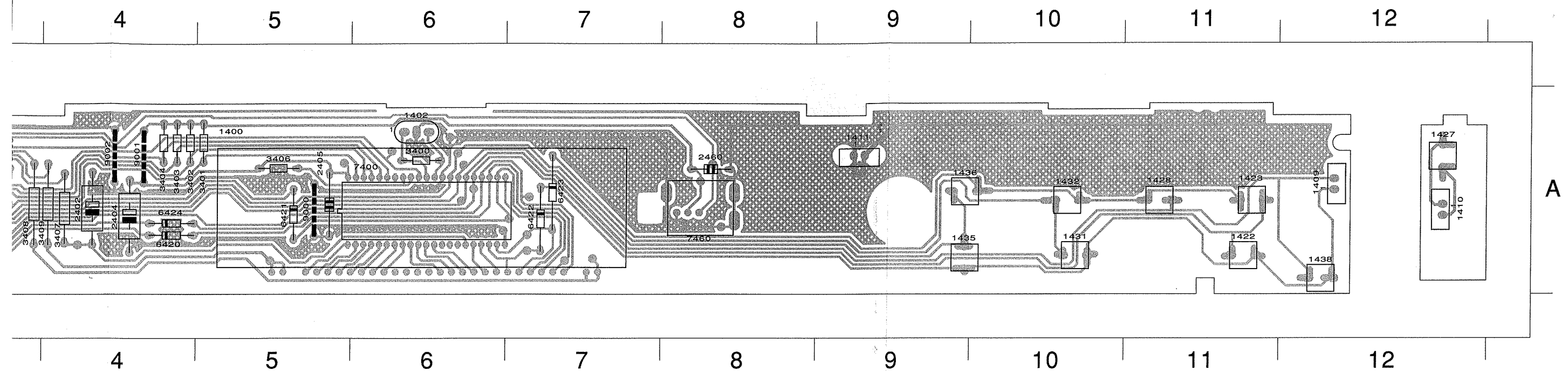
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7825 C 2 7821 B 1 4898 A 4 4894 B 2 3851 C 2 3845 C 1 3823 B 2 3811 A 3 2840 B 1 2836 A 1 2830 B 3 2825 A 3 2820 A 3 2814 B 2 2809 B 2 2805 B 2 2801 B 1
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7823 C 2 7800 A 2 4896 B 2 4852 C 3 3847 B 1 3831 B 3 3819 B 2 2843 C 1 2838 A 2 2833 A 4 2827 C 3 2823 A 3 2817 A 4 2811 B 2 2807 B 2 2803 A 2



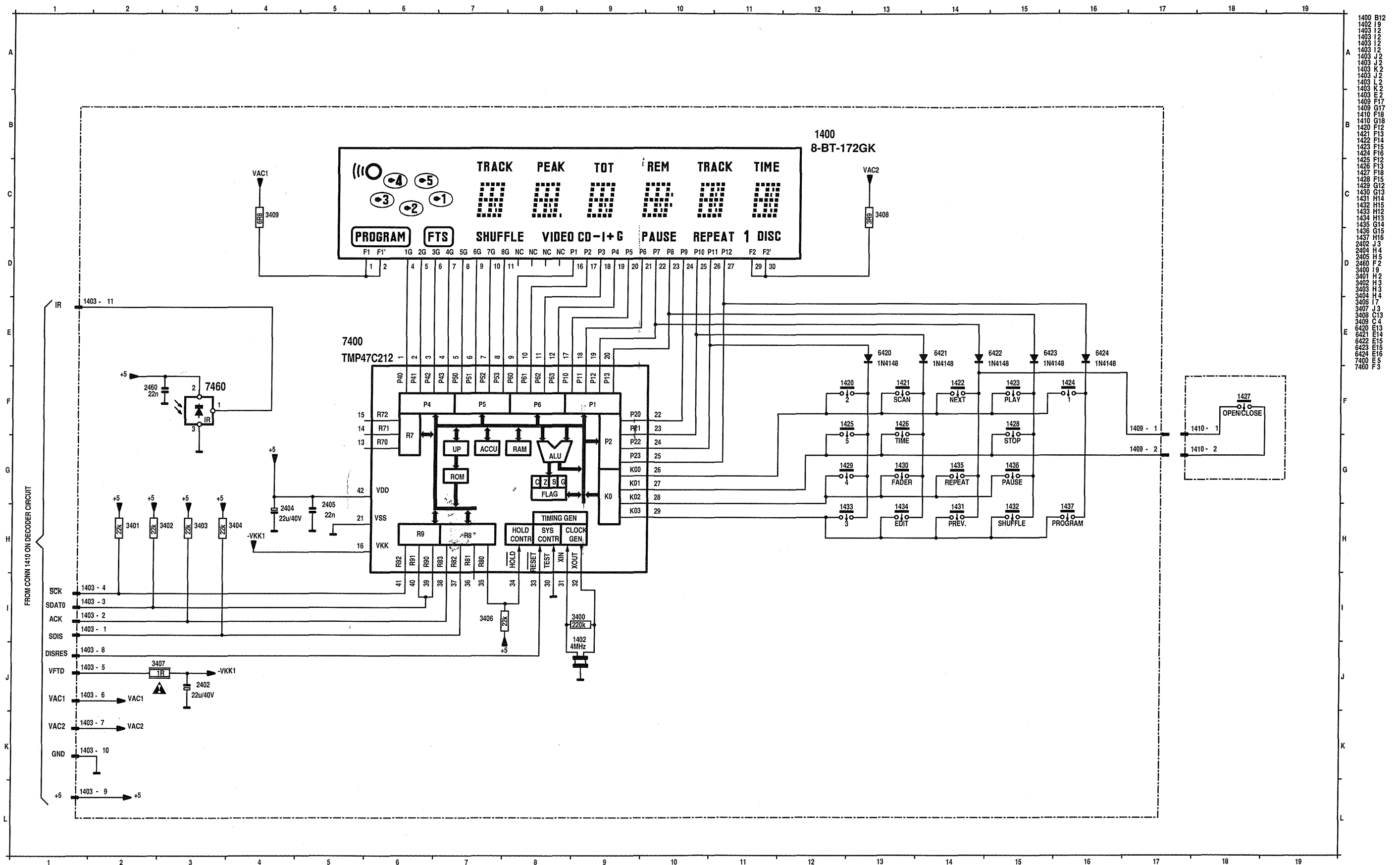
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1	A 10	1433 A 2	1435 A 9	1437 A 1	2402 A 4	2405 A 5	3400 A 6	3402 A 4	3404 A 4	3407 A 4	3409 A 4	6421 A 5	6423 A 7	7400 A 6	9000 A 5	9002 A 4	9006 A 3
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Bedienplatte / Control Board



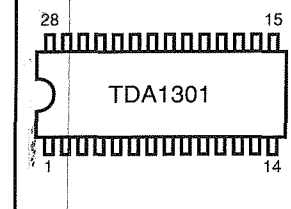
Abkürzungen von Signalen

Abbreviations of Signals

ACK	Acknowledge signal display (active LOW)
BCK	Bit clock input of DAC
CARMOT	Carrousel motor
CARSW	Carrousel switch
CFLG	correction flag output
CL	interface clock input line
CL11	11.2896 MHz clock output
CL16	16.9344 MHz system clock output
CLA	4.2336 MHz microprocessor clock output
CLO	Clock output
CRIN	crystal/resonator input
CROUT	crystal/resonator output
D1-D4	Central diode input of TDA1301
D1-D5	Photodiode signals from CDM12 mechanism
DA	Interface data I/O line
DACCL	Bit clock output of CD6 decoder SAA7345
DACDA	Data output of CD6 decoder SAA7345
DACWS	Word select output of CD6 decoder SAA7345
DATA	serial data output/Data input of DAC
DISPOS	Disc position
DISRES	RESET display
DOBM	Digital AUDIO output
ESI	Enhanced System Intelligence
FO	Focus actuator output
FOC+	+Connection of focus actuator
FOC-	Ground connection of focus actuator
HF	High-Frequency signal to decoder input
HFIN	comparator signal input
HFREF	comparator common-mode input
IOL	Left channel current output
IOR	Right channel current output
IR	Infrared receiver remote control
IREF	Reference current output
ISLICE	current feedback from data slicer
LDON	Laser drive on
LOAD SW	Load switch
MISC	general purpose DAC output
MOTO1,2	motor output 1,2
NRST	Reset input
OTD	Off track detector
PORE	power-on reset enable input (active low)
R1-R2	Satellite diode signal input
RA	Radial actuator output
RAB	interface R/W and acknowledge input
RAD+	+Connection of radial actuator
RAD -	Ground connection of radial actuator
SCK	CLOCK display
SCLK	serial bit clock output
SDAT	Serial data
SDAT0	DATA IN display
SDIS	Select display
SICL	Serial interface clock
SIDA	Serial interface data
SILD	Serial interface load
SL	Sledge output
SL OUT	+Connection of sledge motor
SLEDGE SW	Sledge switch of CDM12 mechanism
V1-5	Versatile input pins
WCLK	Word clock output
WS	Word select input of DAC
XTLI	Oscillator input
XTLO	Oscillator output
XTLR	Oscillator reference

TDA1301 – Digital Servo (DSIC2)

Pin	Name	Direction	Description
1	RESET	μ P → DSIC2	reset input
2	Laser On/Off	DSIC2 → 7825	switches laser supply on/off
3	Gnd	GND	ground (analog part)
4	VRH		reference input for A/D converter
5	D1	Photodiodes → DSIC2	unipolar current input (central diode signal input)
6	D2	Photodiodes → DSIC2	unipolar current input (central diode signal input)
7	D3	Photodiodes → DSIC2	unipolar current input (central diode signal input)
8	Vref	GND	reference input for A/D converter
9	D4	Photodiodes → DSIC2	unipolar current input (central diode signal input)
10	R1	Photodiodes → DSIC2	unipolar current input (satellite diode signal input)
11	R2	Photodiodes → DSIC2	unipolar current input (satellite diode signal input)
12	VDD	+5V	supply for DSIC2 (analog part)
13	XTLR		selection of oscillator gain
14	TS1	GND	test input 1
15	TS2	GND	test input 2
16	OTD	DSIC2 → μ P	off track detection
17	CLO	not connected	clock output
18	XTLO	X-TAL → signal processor	oscillator output
19	XTLI	signal processor → X-TAL	oscillator input
20	VDD	+5V	supply for DSIC2 (digital part)
21	GND	GND	ground (digital part)
22	Track	DSIC2 → Servo Driver	radial actuator output
23	Focus	DSIC2 → Servo Driver	focus actuator output
24	Slide	DSIC2 → Motor Driver	slide output
25	SILD	μ P → DSIC2	serial interface load
26	SICL	μ P → DSIC2	serial interface clock
27	SIDA	μ P → DSIC2	serial interface data
28	VDD	+5V	supply for DSIC2 (digital part)

MC68HC11ER31 - μ P

Pin	Name	Direction	Description	Pin	Name	Direction	Description
1	Vss	GND	supply voltage	29	EVdd	+5V	supply voltage
2	MODEB/VSTBY	+5V	Mode Select	30	PA7/PAI/OC1	→ Control- μ P	I/O Port
3	MODA/LIR	GND	Mode Select	31	PA6/OC2/OC1	not connected	I/O Port
4	STRA/AS	not connected	Strobe Input or Adress Strobe	32	PA5/OC3/OC1	→ Control- μ P	I/O Port
5	E	not connected	Master clock output	33	PA4/OC4/OC1	not connected	I/O Port
6	STRB/R/W	not connected	Strobe Output or Read/Write	34	PA3/OC5/IC4/OC1	→ Control- μ P	I/O Port
7	EXTAL	XTAL → μ P	Clock input	35	PA2/IC1	→ Control- μ P	I/O Port
8	XTAL	μ P → XTAL	Clock output	36	PA1/IC2	RC5_in	I/O Port
9	PC0/ADDR0/DATA0	not connected	I/O or Adress/Data	37	PA0/IC3	IR-Rec.	I/O Port
10	PC1/ADDR1/DATA1	μ P → Tray	I/O or Adress/Data	38	PB7/ADDR15	not connected	I/O or Adress/Data
11	PC2/ADDR2/DATA2	not connected	I/O or Adress/Data	39	PB6/ADDR14	→ Signal Proc.	I/O or Adress/Data
12	PC3/ADDR3/DATA3	not connected	I/O or Adress/Data	40	PB5/ADDR13	→ Signal Proc.	I/O or Adress/Data
13	PC4/ADDR4/DATA4	Carr. → μ P	I/O or Adress/Data	41	PB4/ADDR12	→ Control- μ P	I/O or Adress/Data
14	PC5/ADDR5/DATA5	→ Servo- μ P	I/O or Adress/Data	42	PB3/ADDR11	KILL (Power)	I/O or Adress/Data
15	PC6/ADDR6/DATA6	→ Servo- μ P	I/O or Adress/Data	43	PB2/ADDR10	+5V	I/O or Adress/Data
16	PC7/ADDR7/DATA7	SLEDGE-SW	I/O or Adress/Data	44	PB1/ADDR9	not connected	I/O or Adress/Data
17	RESET	→ μ P	Reset input	45	PB0/ADDR8	not connected	I/O or Adress/Data
18	XIRQ	→ μ P	Nonmaskable Interrupt Request	46	PE0/AN0	→ Discdetect	I/O or Analog Input
19	IRQ	→ μ P	Interrupt Request	47	PE4/AN4	LOAD-SW	I/O or Analog Input
20	PD0/RxD	not connected	I/O or Receive Data	48	PE1/AN1	+5V	I/O or Analog Input
21	EVss	GND	supply voltage	49	PE5/AN5	not connected	I/O or Analog Input
22	PD1/TxD	not connected	I/O or Transmit Data	50	PE2/AN2	GND	I/O or Analog Input
23	PD2/MISO	DISCPOS-SW	I/O or Master_In_Slave_Out	51	PE6/AN6	GND	I/O or Analog Input
24	PD3/MOSI	→ Servo- μ P	I/O or Master_Out_Slave_In	52	PE3/AN3	CAR-SW	I/O or Analog Input
25	PD4/SCK	→ Servo- μ P	I/O or Serial Clock	53	PE7/AN7	TRAY-SW	I/O or Analog Input
26	PD5/SS	QUICKPL.-SW	I/O or Slave_Select	54	VRL	GND	A/D low refrence voltage
27	Vdd	+5V	supply voltage	55	VRH	GND	A/D high refrence voltage
28	Vss	GND	supply voltage	56	EVss	GND	supply voltage

SAA7345 – Signal Processor

Pin	Name	Direction	Description
1	CL11	not connected	11.2896MHz clock output (3-state)
2	DOBM	not connected	digital bi-phase mark output (3-state)
3	V1	servo proc. → signal processor	versatile input pin of signal processor
4	V2	not connected	versatile input pin of signal processor
5	Test2	GND	test input of signal processor
6	Test1	GND	test input of signal processor
7	ISLICE	signal processor → data slicer	current feedback from internal data slicer
8	HFIN	HF-preamp → signal processor	comparator signal input
9	HFREF	HF-preamp → signal processor	comparator signal input
10	IREF	→ signal processor	reference current pin (nom. VDD/2)
11	VDDA	+5V	supply (analog) of signal processor
12	VSSA	GND	supply (analog) of signal processor
13	CRIN	X-Tal → signal processor	crystal/resonator input of signal processor
14	CROUT	signal processor → X-Tal	crystal/resonator output of signal processor
15	VDD1	+5V	supply for I/O-buffers of signal processor
16	VSS1	GND	supply for I/O-buffers of signal processor
17	CL16	not connected	16.9344MHz clock output of signal processor
18	MISC	not connected	general purpose DAC output (3-state)
19	DATA	signal processor → DAC	serial data output of signal processor (3-state)
20	WCLK	signal processor → DAC	word clock output of signal processor (3-state)
21	SCLK	signal processor → DAC	serial bit clock output of signal processor (3-state)
22	MOTOR1	signal processor → motor control	motor output1 of signal processor; versatile (3-state)
23	MOTOR2	not connected	motor output2 of signal processor; versatile (3-state)
24	V5	not connected	versatile output pin of signal processor
25	V4	not connected	versatile output pin of signal processor
26	V3	not connected	versatile output pin of signal processor (open drain)
27	KILL	signal processor → mute circuit	kill output; programmable (open drain)
28	PORE	μ P → signal processor	power-on reset enable input (active low)
29	CLA	not connected	4.2336MHz microprocessor clock output
30	DA	μ P → signal processor	interface data I/O-line
31	CL	μ P → signal processor	interface clock input line
32	RAB	μ P → signal processor	interface R/W and acknowledge input
33	CFLG	not connected	correction flag output (open drain)
34...42		connected to GND	
43	VSS2	GND	digital supply for internal logic of signal processor
44	VDD2	+5V	digital supply for internal logic of signal processor

