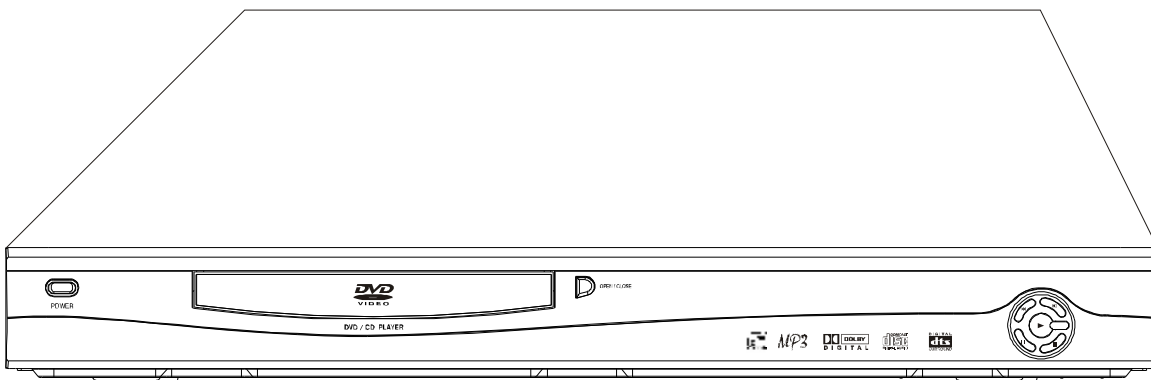

DVD LASER DISC PLAYER

D 1045 VNP

Maintenance Manual



*Use the book with instruction. Read the manual and
O/I carefully before maintain the unit*

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SAFETY INFORMATION

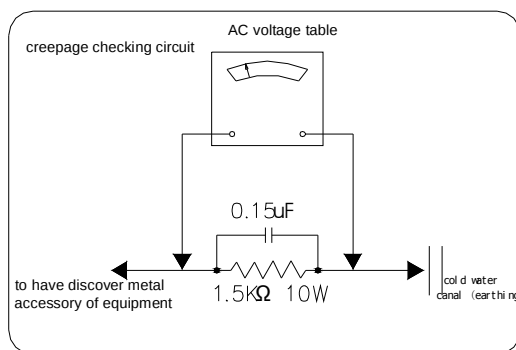
Influence of ESD (Electric Susceptible Discharge)

General guide

1. Observe the original circuit during maintenance. If short circuit occurs, change the over-hot or damaged components.
2. Observe all the protective device after maintenance, such as whether the shielding cover or paper is assembled well.
3. To avoid electric shock, please inspect electricity leakage after maintenance.

Low zeta potential leaking inspection

1. Take out AC cord and connect a piece of wire between two legs of the outlet.
2. Use Gear R x 10K of the voltmeter to measure the spaces on AC outlet and exposed metallic part with short circuit. The resistance between screw cap, control shaft should be unlimited.



picture 1

High zeta potential leakage inspection

- As illustrated 1, Connect Resistor with 1.5K, 10W and capacitor 0.15 between exposed metallic part and device of fine connection to the earth (water pipe etc.).
2. Plug-in AC cord directly to AC outlet. Do not inspect with shield adaptor.
 3. Utilize 1000 or more sensitive voltmeter to measure alternating voltage.
 4. Turn back the AC plug-in from AC outlet then iterate the inspection as above.
 5. Inspect the voltage of the resistor between other exposed metallic parts and the earth with the same way.
 6. The voltage must not be over than 0.75Vrms at any points on the resistor. Electric leakage should not be over 0.5mA when processing high voltage leakage testing through

Device avoiding ES(Electric Susceptible)

exceeded the restrained figure, electric shock should be possibly suffered. Do maintain the unit and inspect once more before return to the user.

Device avoiding ES influence of ESD.

Some solid semi-conductor devices are easy to be damaged by static electricity. These devices are generally called ES device. The typical devices are IC, field effect component and semi-conductor laser diode.

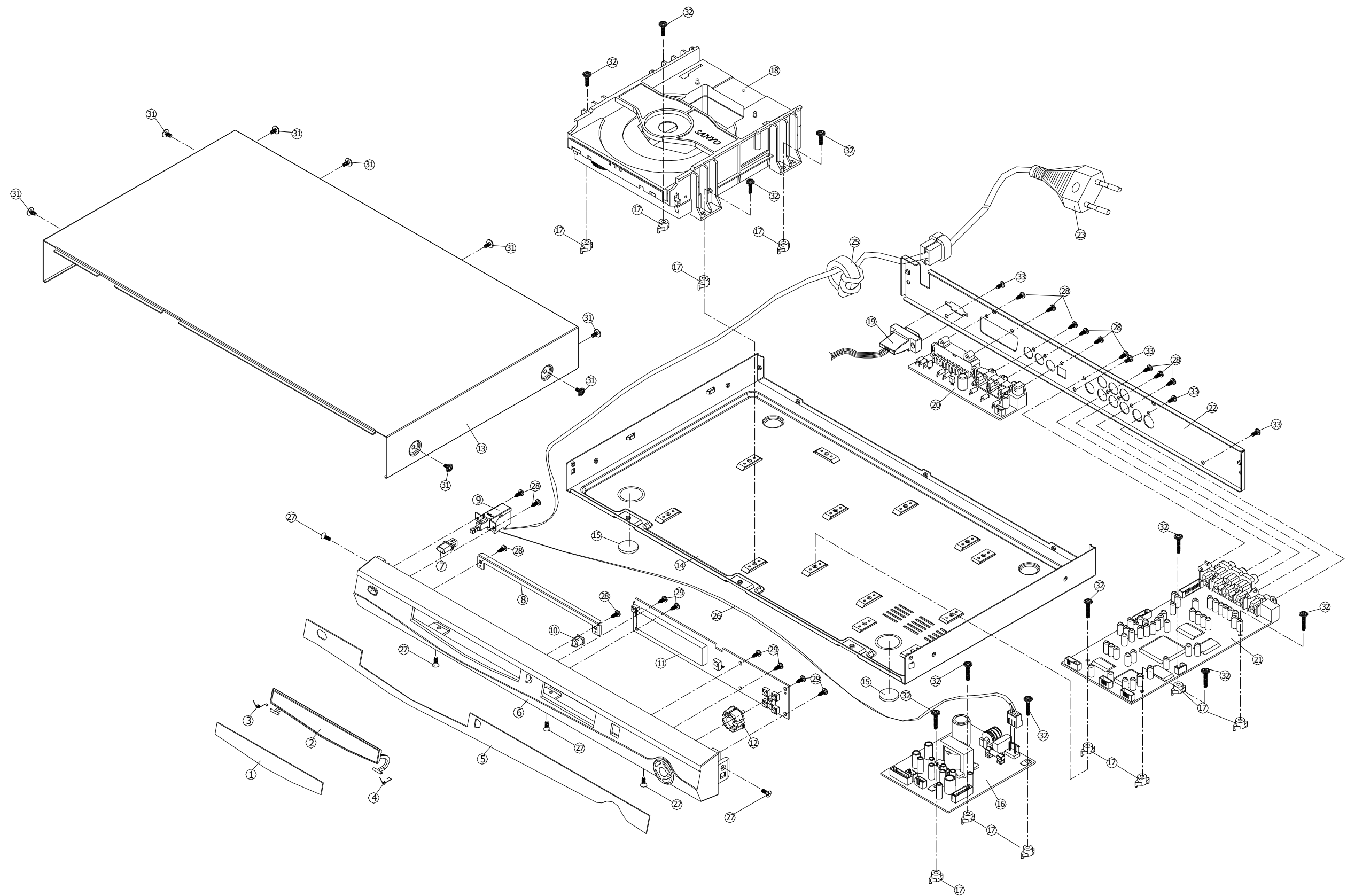
The following technology helps to abate the danger of ESD on body before handle any semi-conductor or semi-conductor component. Or wear the ESD bangle availed from the market to eliminate the threaten of static electricity on human body.

2. Put the electronic parts with ES device on the surface of conductor such as aluminum foil after take them out in order to protect static electricity from accumulation and explosion.
 3. Solder or disassemble ES device through iron connecting the earth.
 4. Utilize device only anti-static electricity to disassemble soldering tin. Non-anti static electricity device (ESC protection) will release ES that damage ES device.
 5. Do not use chemical volatile releasing static electricity that leads to damage ES device
 6. Unless preparation for pre-assembling has been made, do not take out the ES device to be changed from the protective packing (most of the changed ES devices are packed together with anti-static electrical foam or similar electric material, besides, countermeasures for down-lead short circuit are taken.).
 7. Protective material should connect the model or the circuit component to be assembled in it before taking out the protective material from the ES device.
- Note: do not bear electricity to the model or the circuit, and pay attention to all the other safety information.
8. When disassembling and replacing the ES device, try to reduce body movement (Or, the movement of legs, the friction of fibrous of clothes, or elevating the legs from the floor will generate static electricity ESD, causing damage to the ES device.).

A Audio parts (front R. L channel output)							
NO.	ITEMS			UNITS	LIMITED	TEST CONDITION	
1	Level output (1KHz, 0dB)			Vrms	1.8+0.2/-0.8	DVD(LPCM)、 CD	
2	Frequency Range	Fs=48KHz		dB	±1	DVD(LPCM) 20Hz~20KHz	
		CD		dB	±1	CD 20Hz~20KHz	
3	Distortion + Noise (1KHz, 0dB)			dB	≤-65	CD DVD(LPCM) A power	
4	S/N Ratio : (S/N)			dB	≥90	CD A account power	
5	Path Separation			dB	≥80	DVD(LPCM)、CD、R—L、A account power	
6	Channel Imbalance			dB	≤1.5	DVD(LPCM)、CD	
B Digital audio parts							
1	Coaxial output	range		Vp-p	0.5±20%	75Ω± 1% loads	
		impedance		Ω	75± 30%		
2	Optical output	wavelength(λ p)		nm	660±30		
		power(Pc)		dBm	-27≤Pc≤-18		
C Video parts							
1	Output range	video		Vp-p	1.0±0.2	Loads 75Ω± 1%	
		S-video	Y		Vp-p		0.700±0.140
			C	chroma			0.880±0.176
				In-phase			0.300±0.060
		Y. CR. CB		Vp-p	0.700±0.140		
		R G B			0.700±0.140		
2	Level exculpate rate			lines	≥500		
3	bandwidth(+3/-6dB 时)			MHz	≥5.5	100KHz 0 dB	
4	S/N	Y		dB	≥56 (account power)	75Ω loads	
		C	U channel	dB	≥50	75Ω loads	
			V channel		≥50		
5	R、G、B S/N Ratio	R channel		dB	≥50	75Ω loads	
		G channel			≥50		
		B channel			≥50		
6	Differential coefficient gain (DG)			%	≤2	75Ω loads	
7	Differential coefficient bit (DP)			degree	≤2	75Ω loads	
8	Lum blame non line of distortion			%	≤5	75Ω loads	
D Power							
1	Input power voltage			~90/240V	60Hz/50Hz		
2	Power Consumption			≤15 W	Normal works		

NOTE: DVD test type: TVD-540A

CD test type: TCD-784



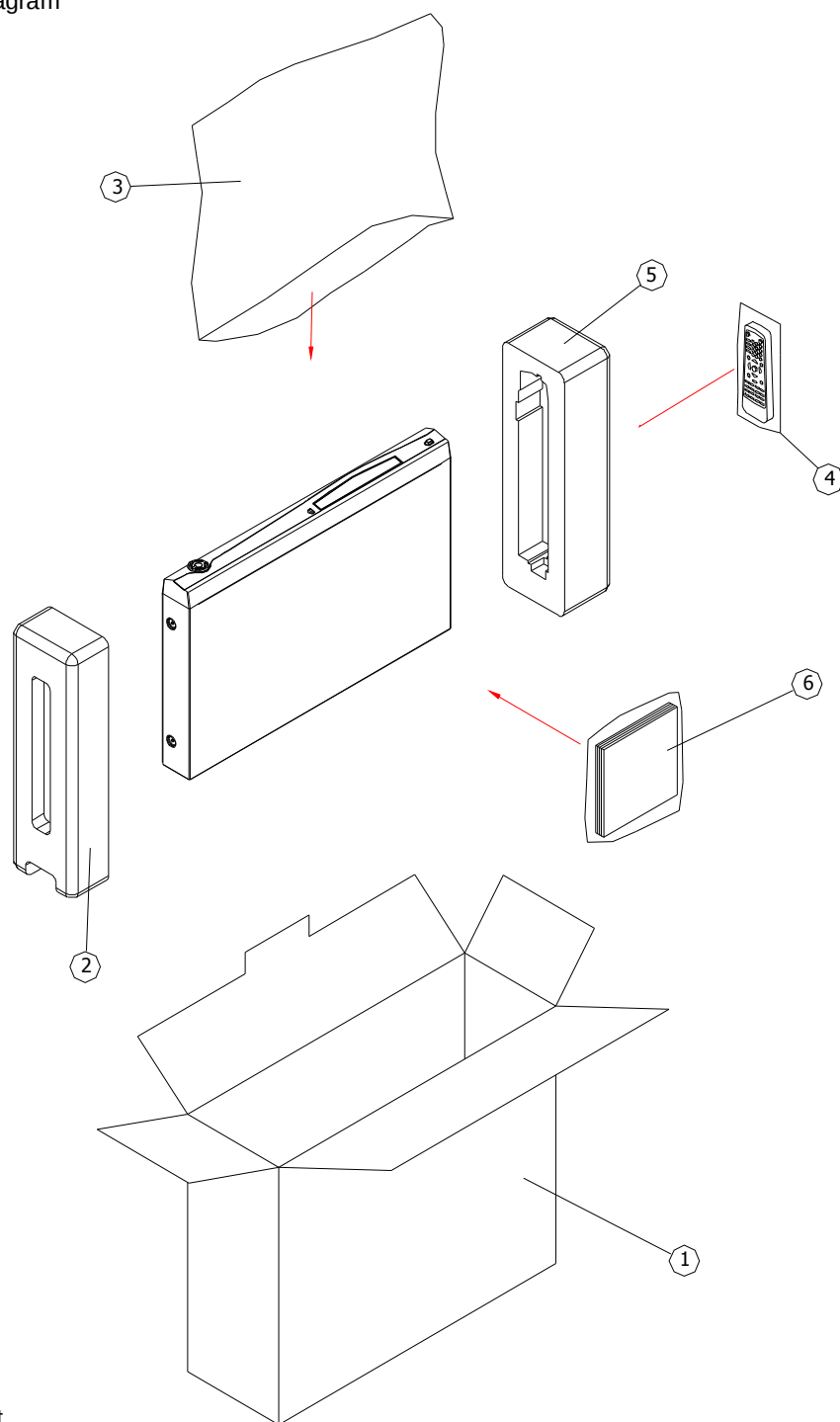
Mechanic parts of decompose diagram

MECHAINC PARTS OF COMPONENT LIST

Serial No.	Material No.	Name	QTY	REMARK
1	Y9- 250121- 30	lens	1	
2	Q1- 2501E3- 10	DVD tray	1	ABS
3	N4- 060201- L0	tray spring(left)	1	carbon wire
4	N4- 060201- R0	tray spring(right)	1	carbon wire
5	Y9- 250120- 30	big lens	1	
6	Q1- 250103- 10	surface	1	ABS
7	Y1- 210111- 00	power button	1	ABS
8	Y3- 180160- 10	upper cover plank	1	cool roll board
9	S1- 404000- 00	power switchs PS4E-A-040 (VDE attestation)	1	
10	Y1- 250151- 00	buttons	1	ABS
11	A5- 250200- 40	control board	1	
12	Y1- 250111- 00	key combination	1	ABS
13	Q3- 200100- 00	upper cover	1	electrolyse board
14	Q4- 250201- 00	motherboard	1	electrolyse board
15	Y3- 017003- 10	feet mat	2	
16	A5- 250200- 30	switchs power board	1	
17	Y3- 030260- 20	PCB stanchion	9	
18	A6- 898000- 40	KDA-898SP SANYO chips	1	
19	VQ- 201066- 10	VGA lines(6P/2.0mm pin+15P VGA jack)	1	
20	A5- 200100- 20	AV board	1	
21	A5- 250300- 10	decode board	1	
22	Q2- 250201- 10	rear board	1	
23	VD- 252232- 00	power cord 2.5M 250V6A VDE attestation	1	
24				
25	L4- 150250- 30	magnetic annulusT25X15X12mm	1	
26	VD- 651202- 00	power cord length320mm VDE attestation	1	
27	N2- 300614- 54	KTT3X6 (sinking) plating nickel	5	surface and motherboard
28	N2- 300812- 19	ST3X8PANi plating nickel	13	power switchs,upper cover panel , rear board
29	N2- 300612- 19	ST3X6PANi plating nickel	6	control board and panel board
30	N2- 300815- 54	ST3X8PWTTNiH triangle tooth supply plating nickel	4	chips and motherboard
31	N2- 300614- 54	ST3X6PWTTNiH plating nickel	8	upper cover and motherboard
32	N2- 301215- 54	ST3X12PWTTNiH (over forcedly) plating nickel	7	decode board,power board,motherboard
33	N2- 300612- 54	roundhead triangle tooth supply plating nickel	4	S-video、 motherboard and rear board

PACKING AND ACCESSORY

1.Decompose diagram



2.Material List

Serial No.	Part No.	Descrption and Specification	QTY
1	06- 250101- 00	color box	1
2	07- 250101- L0	froth glue (left)	1
3	01- 500600- 10	machine bags 500*600mm	1
4	A1- 310100- 10	remote control	1
5	07- 250101- R0	froth glue(right)	1
6	05- 250201- 10	instruction booklet	1

DISASSEMBLE AND ASSEMBLE

The unit comprises mechanical and electric part,including: front panel,base panel,top panel,rear panel and loader,AV output board,decode board,etc.

■ Take out disc of method from a trouble machine

If you cannot take out disc even press OPEN/CLOSE button,please pull power cord from the socket and follow as below:

1.Wring 8 screws out then pull left and right side to take away top panel that rear part of upper (Diagram A)

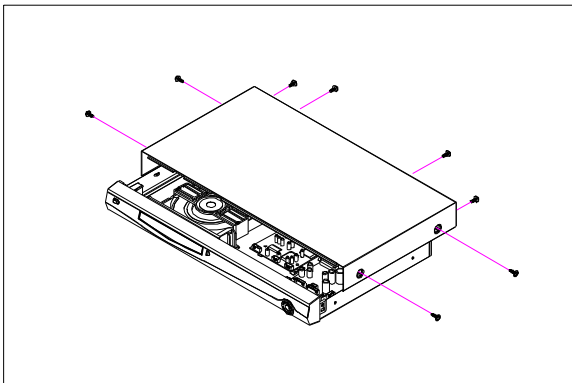


Diagram A Dipart cabinet

2.Wring 3 screws out connected base panel with bottom board then wrest 4 screws connected loader ewith bottom board (Diagram B)

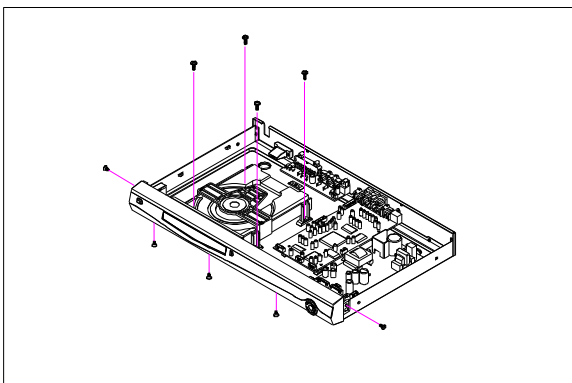


Diagram B Panel,chip disassemble

3.Take out front panel and loaderd carefully,there is a white plastic gear under the loader,Rotate the rear as diagram C to stretch DVD tray and door(diagram D),you can take disc out carefully.

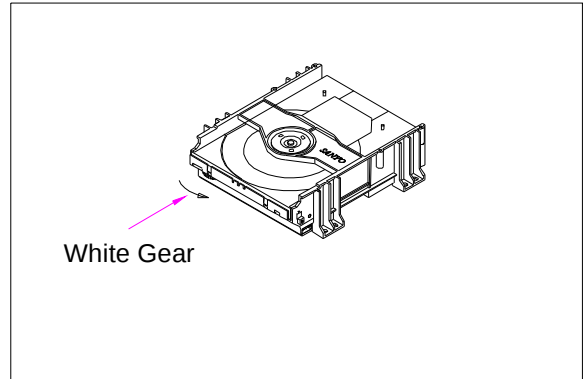


Diagram C Rotate white gear

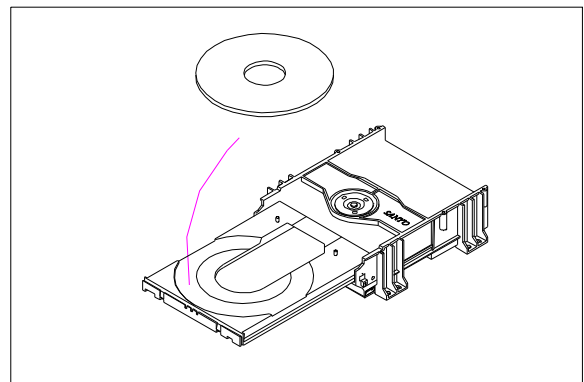


Diagram D Take out disc

■ PCB position

Per PCB assemblies locate as(see diagram H)

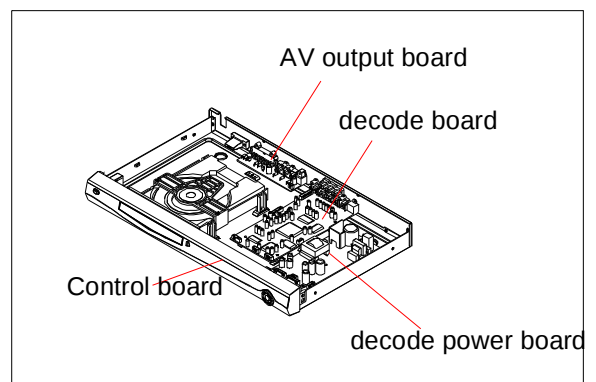


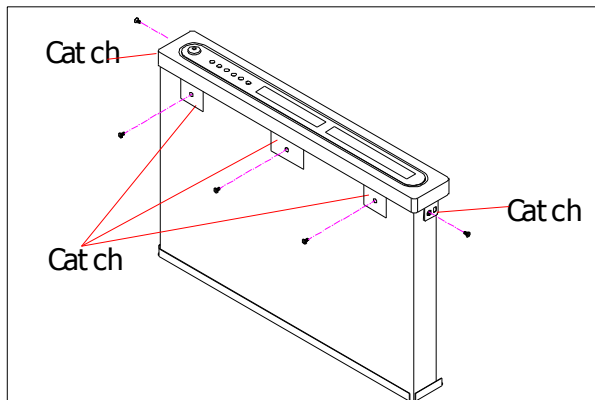
Diagram H boards Location

1. Take down top panel see as illustrate A
2. Take down front panel



Can open the tray by electricity

1. Operate after completely take out top panel
 2. Press OPEN/CLOSE button to open disc tray.
- Be careful not to damage disc when take it out if it is in the tray .
Then take away DVD door (as illustrated E)?



Graph E Catch position on the front panel



Can not open tray by electricity

Unable to open disc tray when press OPEN/CLOSE button

1. Take down disc as illustrated A,B,C,D
2. Take down DVD front panel



Assemble the unit

Assemble the case by reversing disassembly
After maintenance, switching on power on the
condition that assembly and connection have
no mistake then loader and electric circuit return
to original place automatically .The unit works normally.

Attachment 1: Block diagram、Circuit diagram

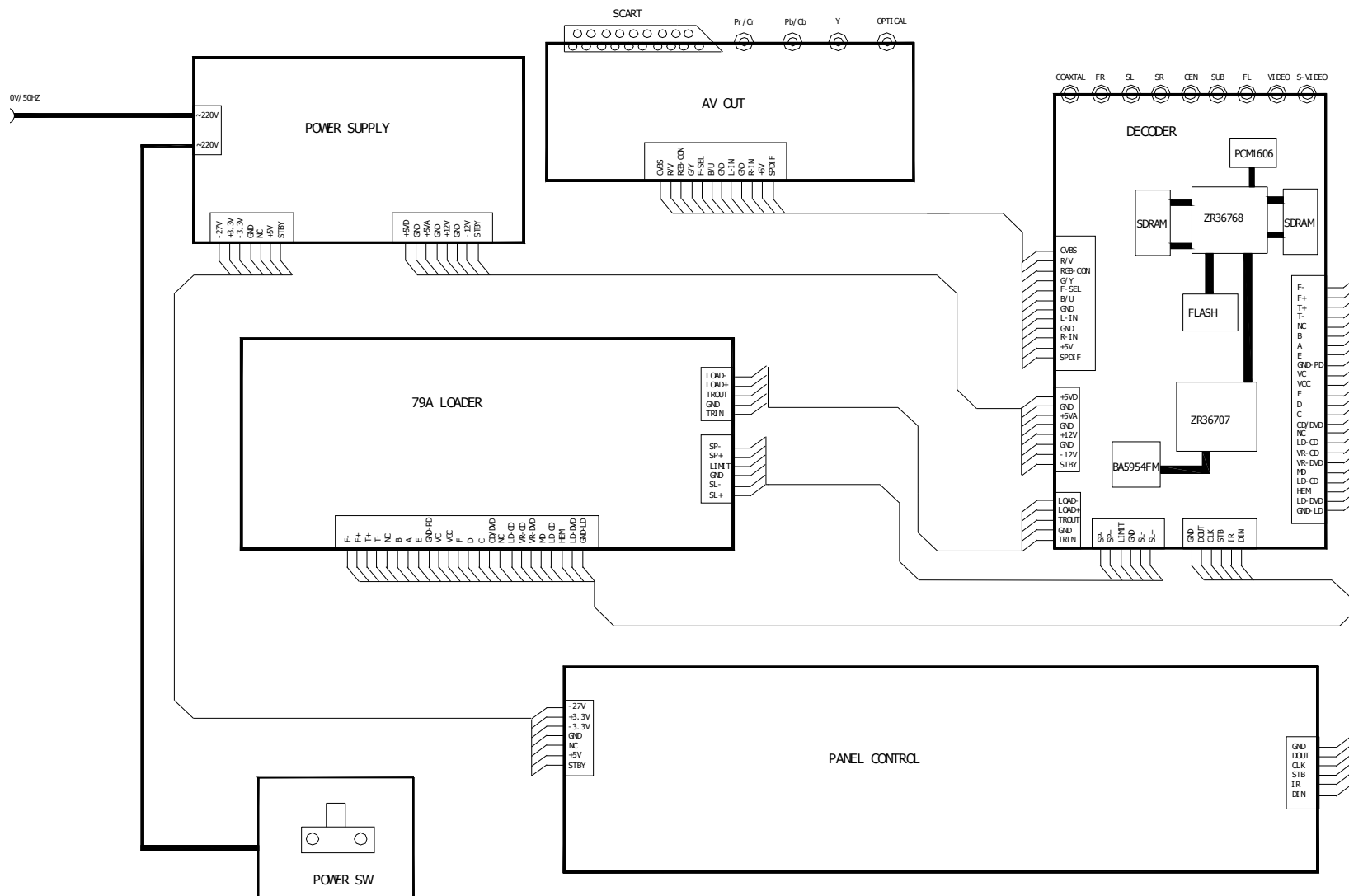
Block diagram

Decoder board circuit diagram

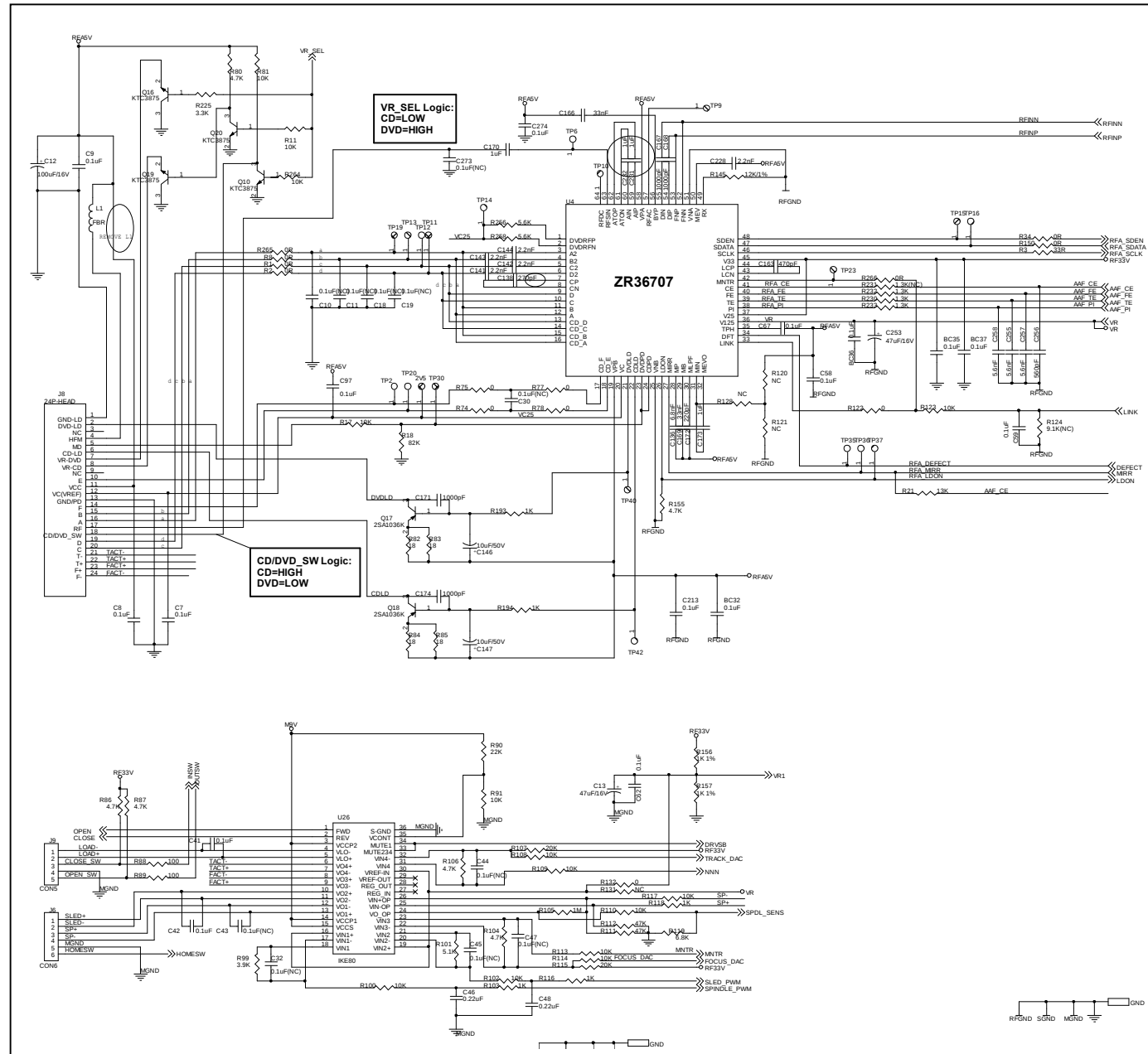
AV Output board circuit diagram

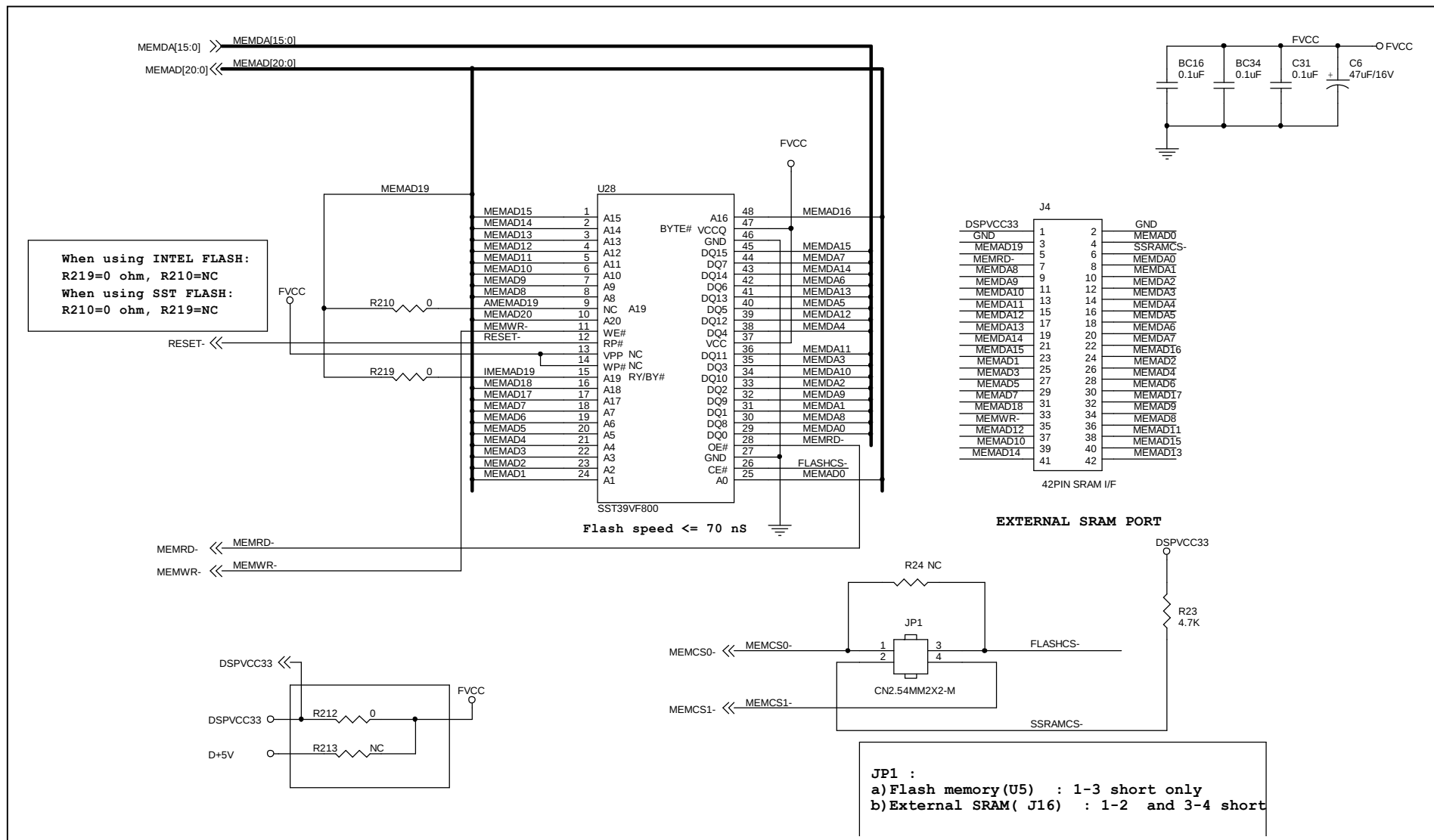
Power board circuit diagram

Control board circuit diagram

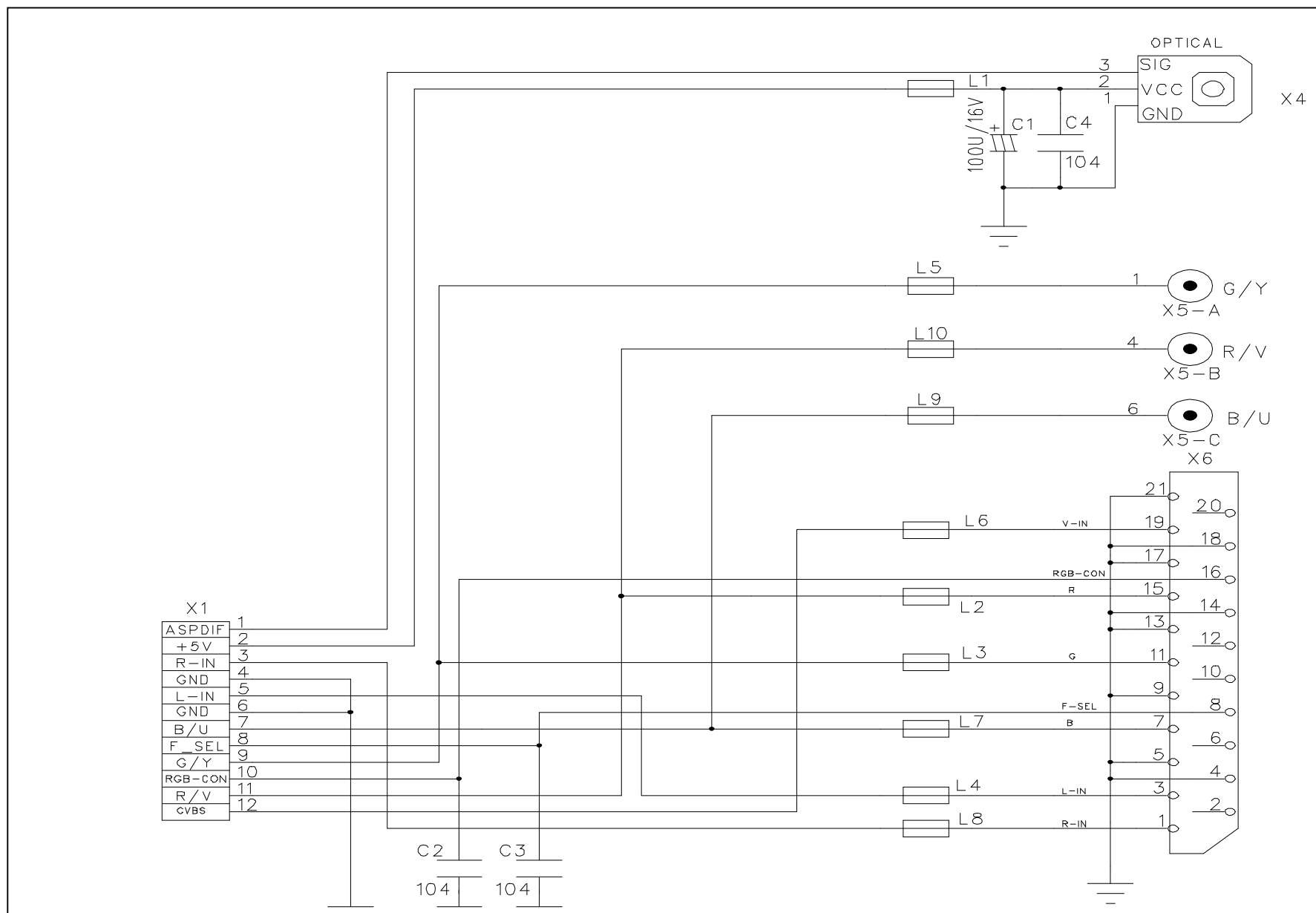


Block diagram

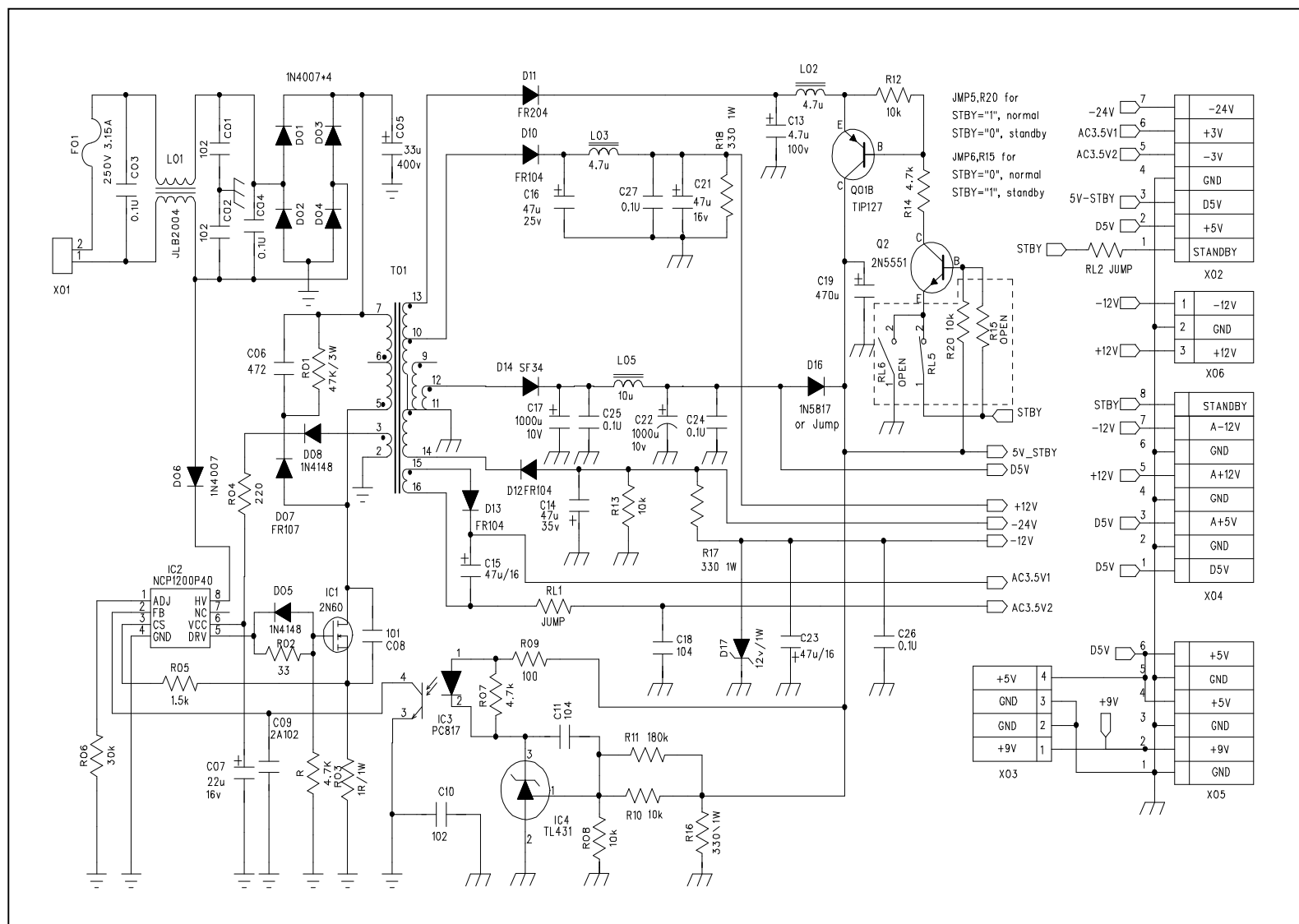


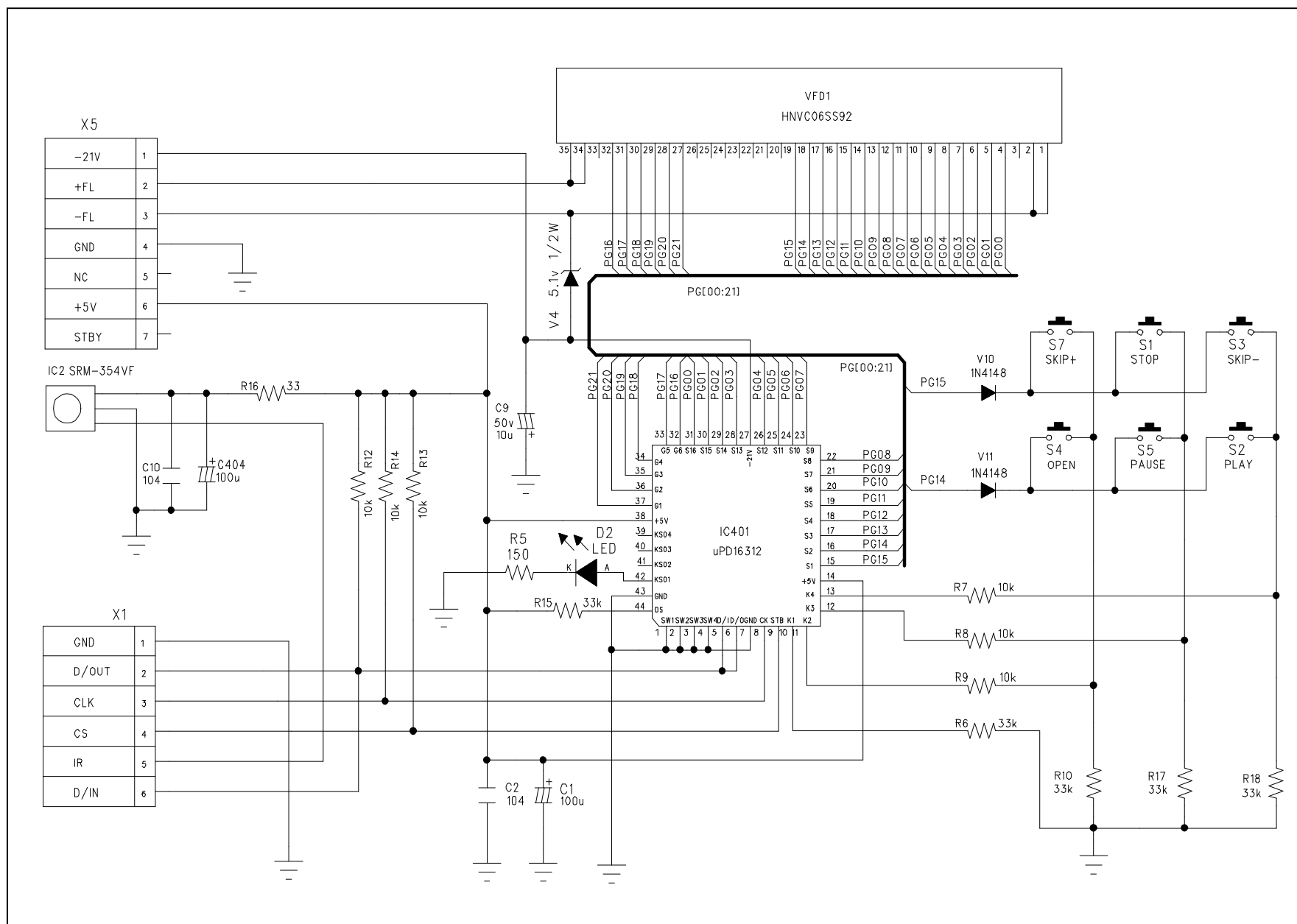


Decode board elements diagram 4



Decode board elements diagram 5





Power board elements diagram

Attachment 2: PCB Diagram

Upper Decode Board PCB Diagram

Upper Decode Board Silk-screen Diagram

Lower Decode Board PCB Diagram

AV Output Board PCB Diagram

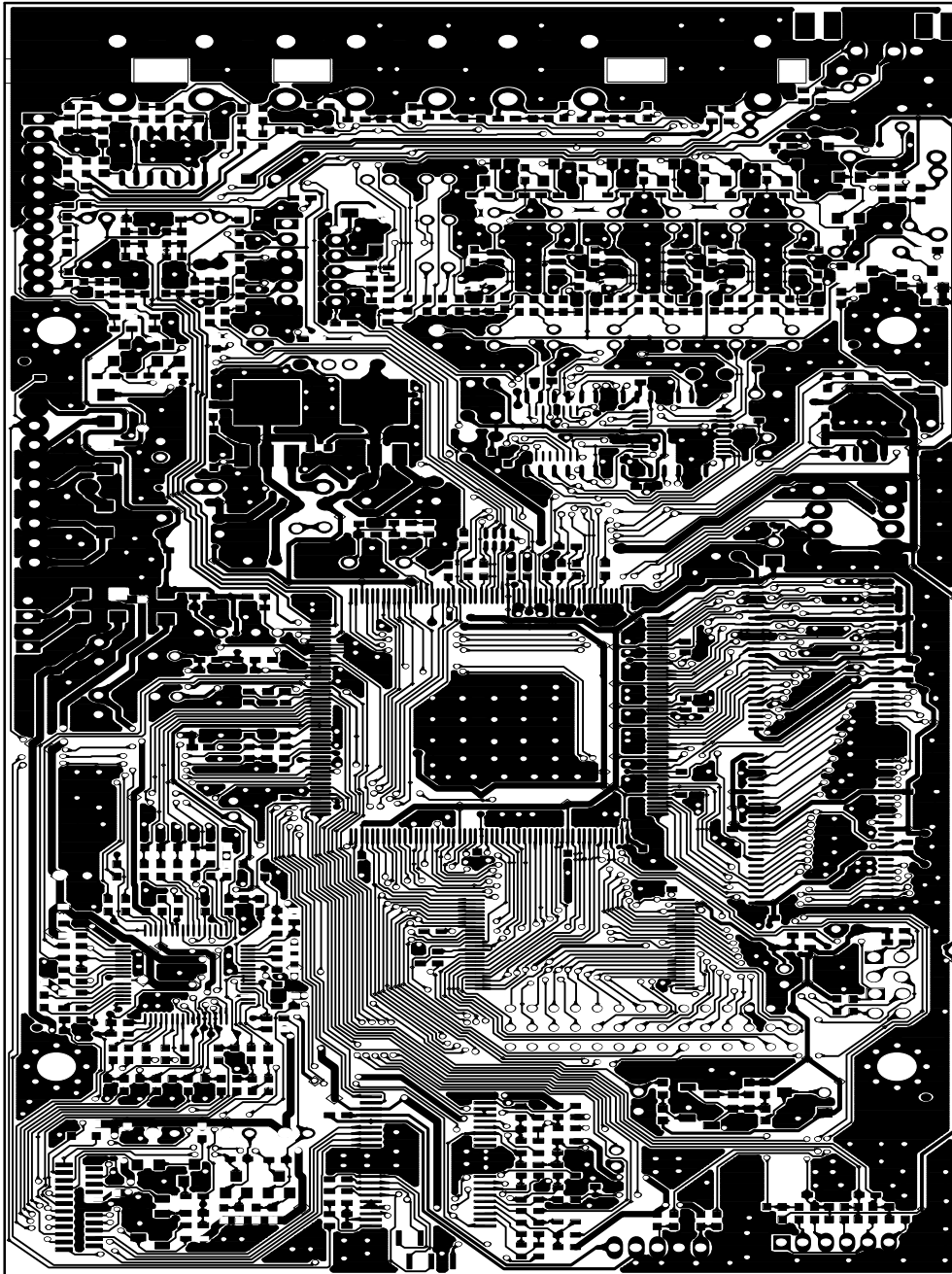
AV Output Board Silk-screen Diagram

Power Board PCB Diagram

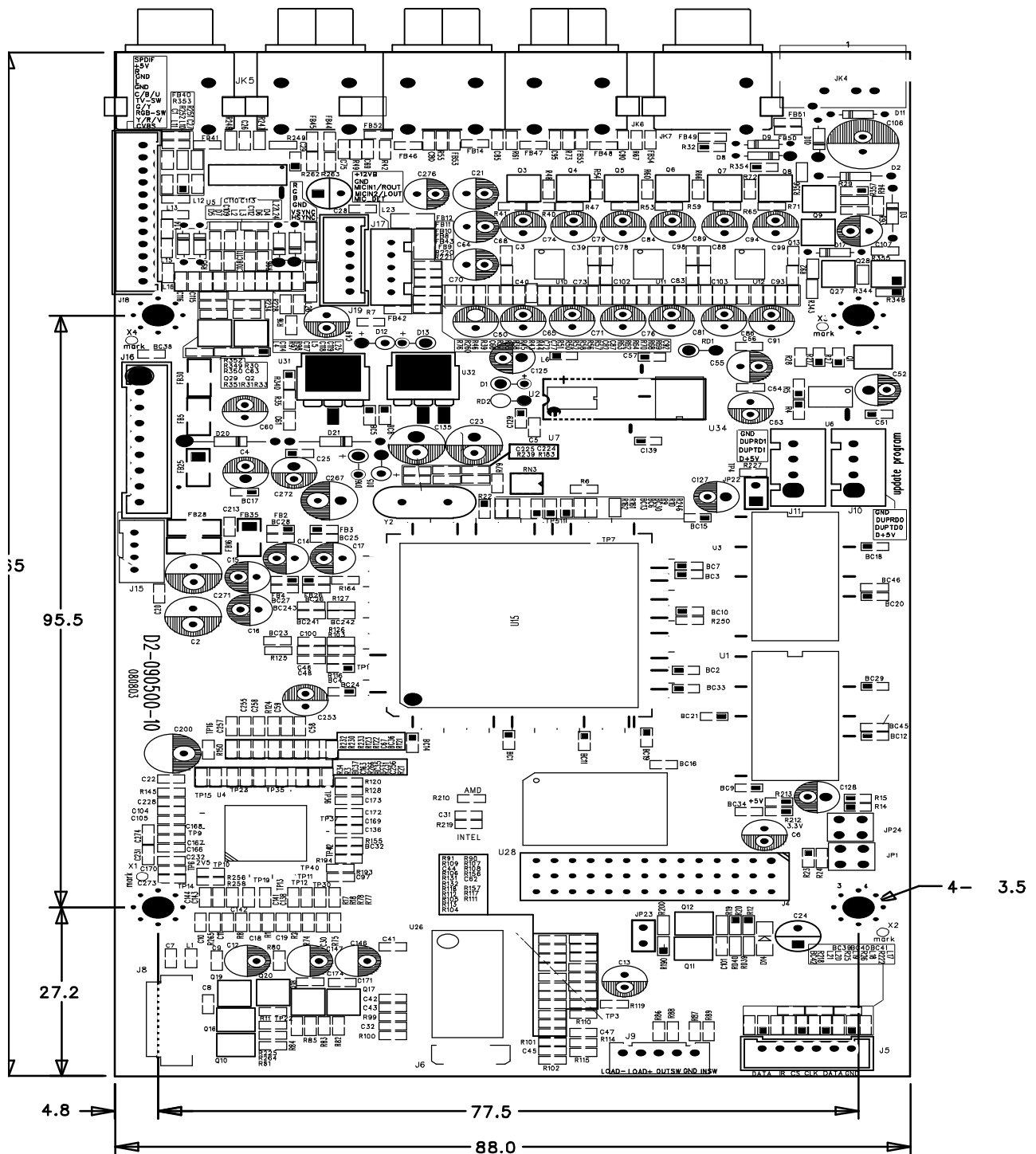
Power Board Silk-screen Diagram

Control Board PCB Diagram

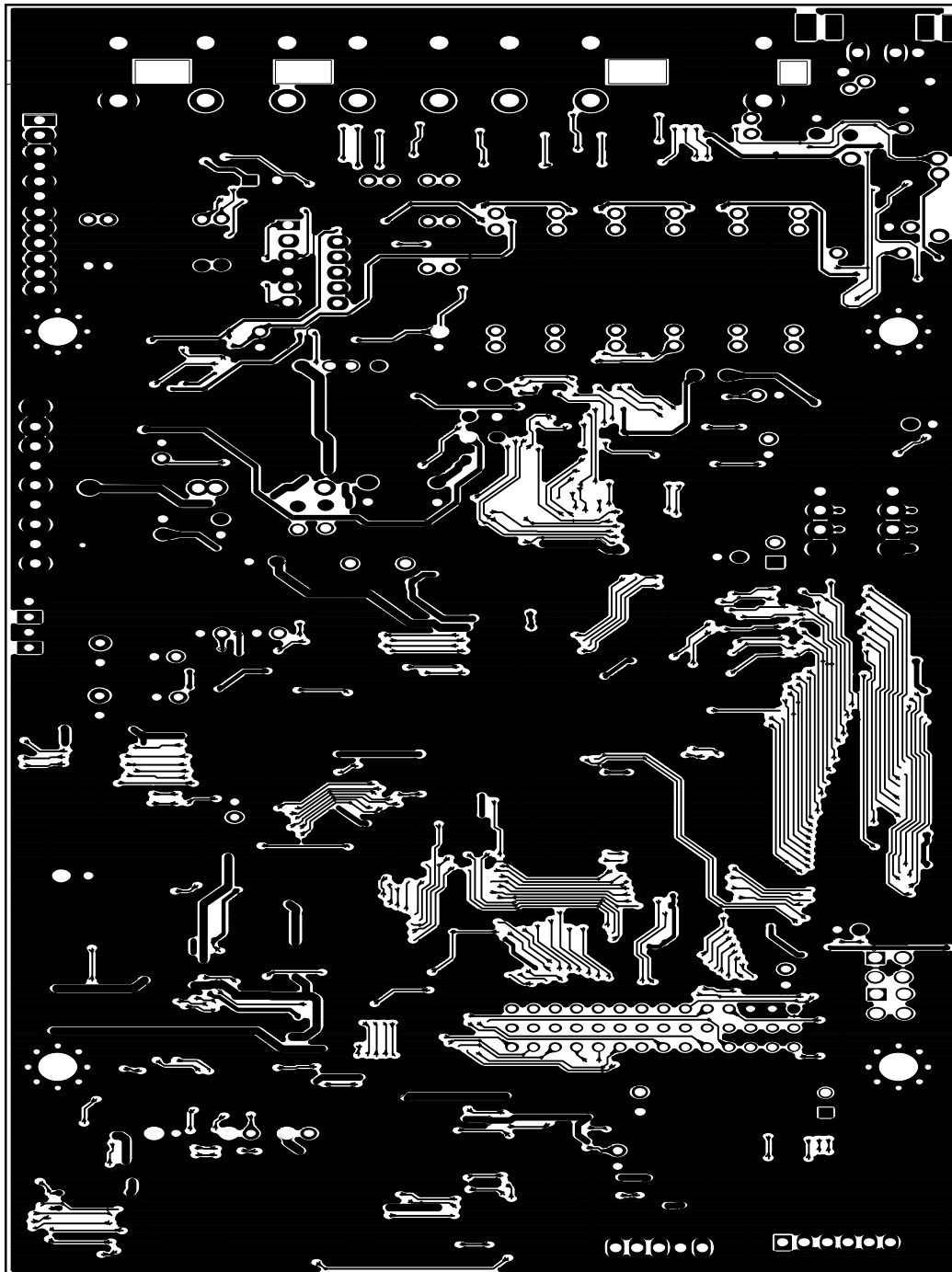
Control Board Silk-screen Diagram



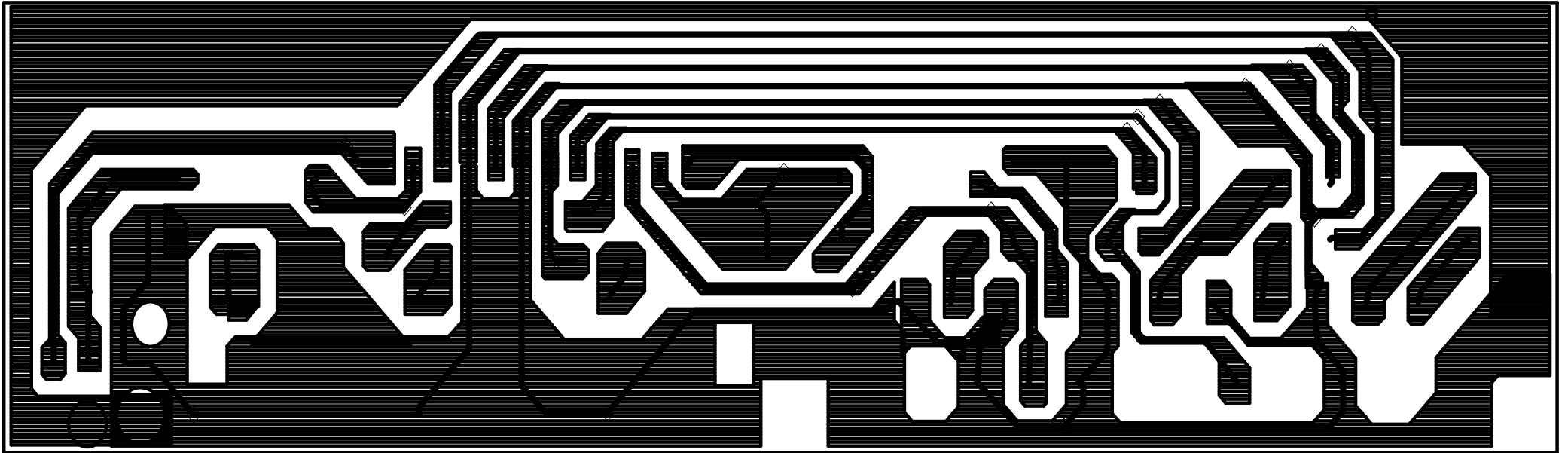
Upper decode board PCB diagram



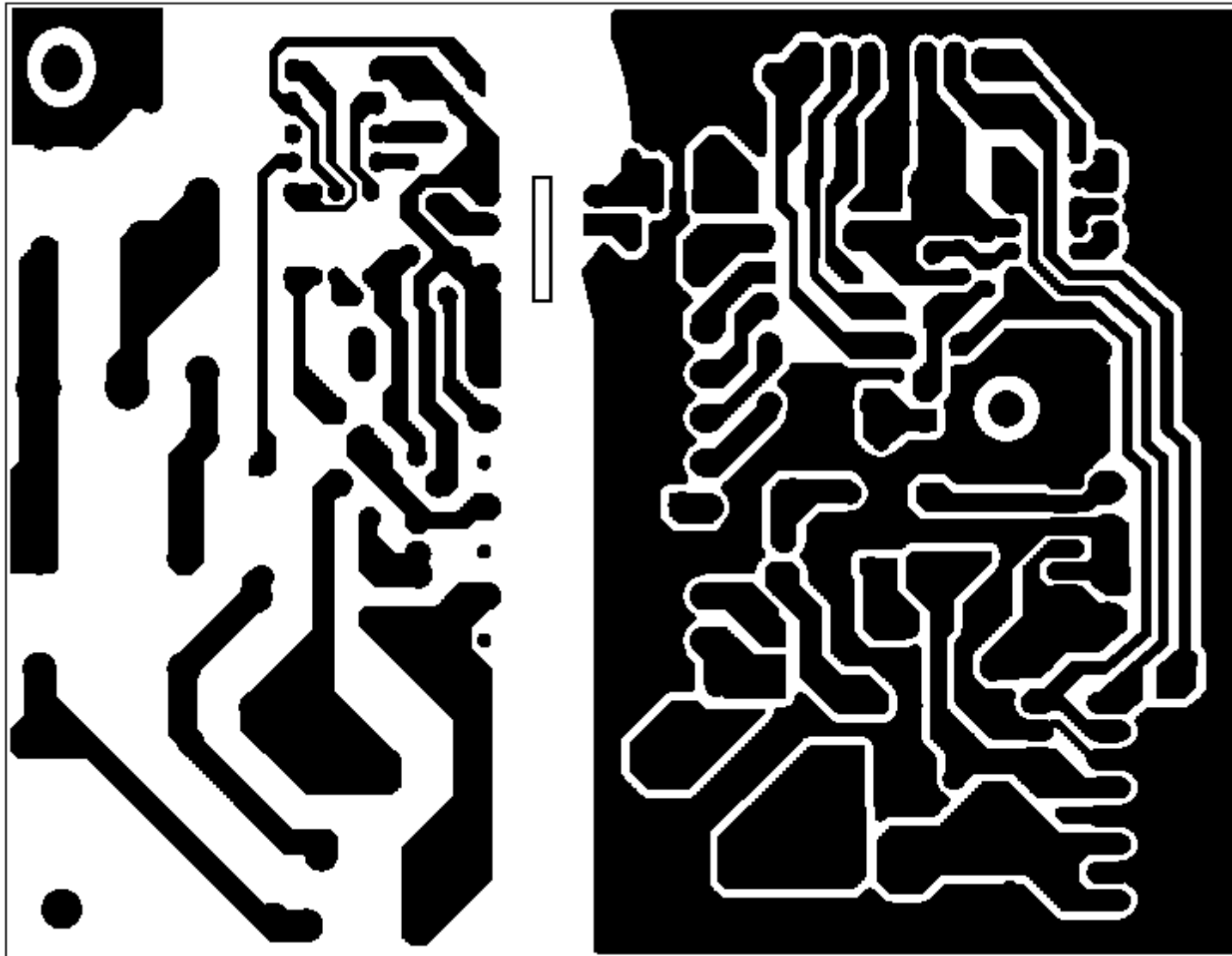
Upper decode silk-screen diagram



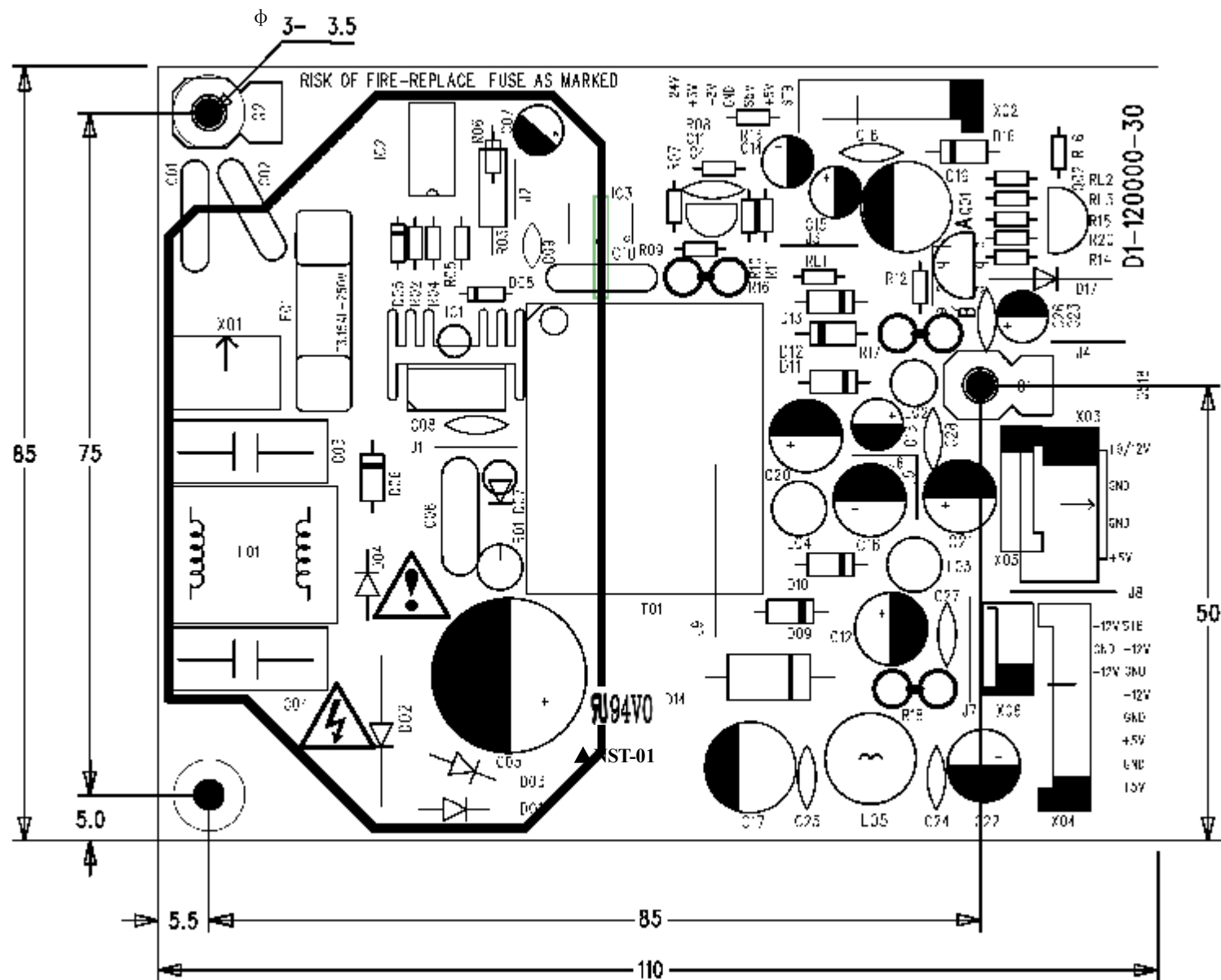
Lower decode board PCB diagram



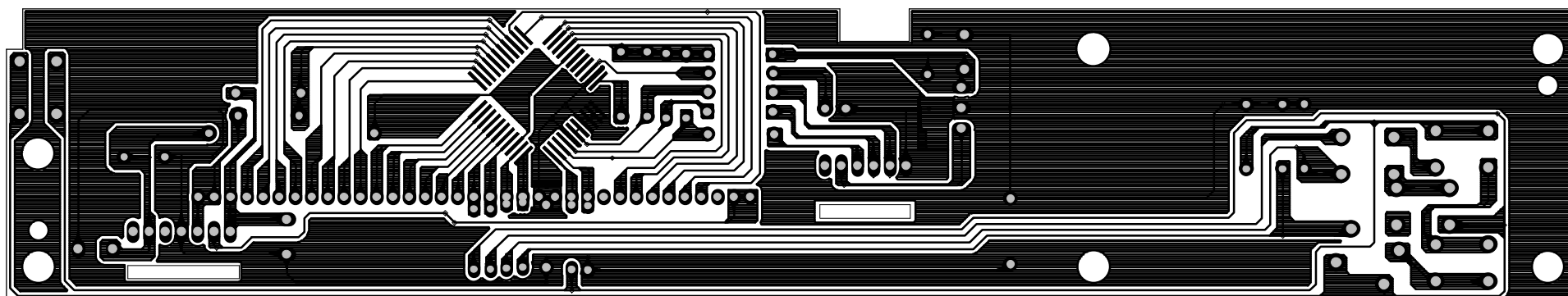
AV output board PCB diagram



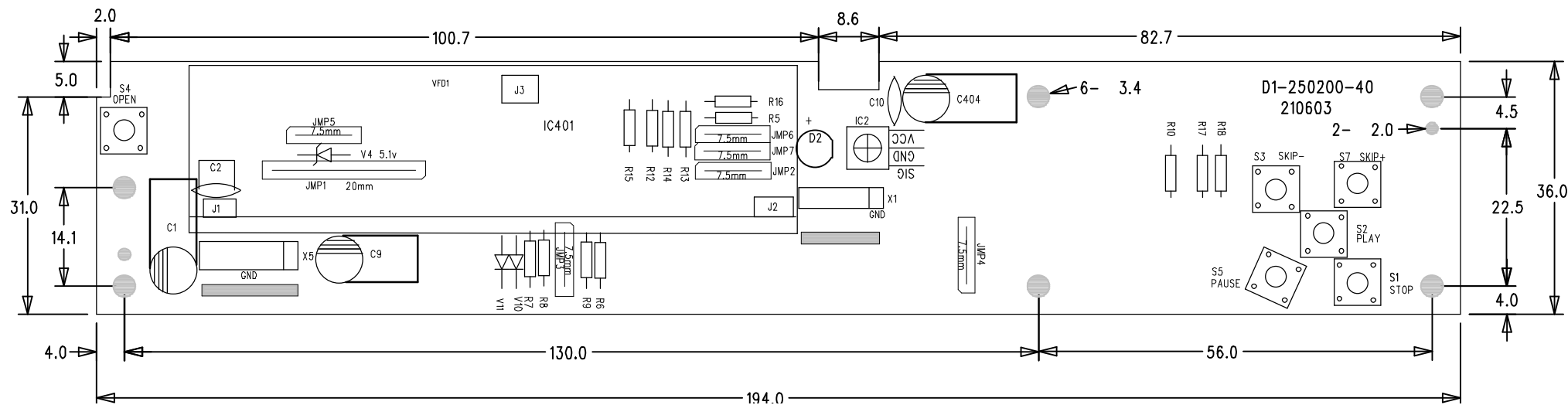
Power board silk-screen diagram



Power board PCB diagram



Control board PCB diagram



Control board silk-screen diagram

Attachment 3: Component List

Power Board Component List

Decode Board Component List

Output Board Component List

Control Board Component List

COMPONENT LIST

<i>POWER BOARD COMPONENT LIST</i>				
<i>NO.</i>	<i>Material No.</i>	<i>Description</i>	<i>Encase No.</i>	<i>QTY</i>
1	D1-120000-30	Switchs power board $\frac{1}{2}$ -94V0		1
2	N0-300051-10	Seal piece	G1 G2	1
3	R1-101008-J1	Carbon resistance 100 $\Omega \pm 5\%$ 1/8W	R09	1
4	R1-221008-J1	Carbon resistance 220 $\Omega \pm 5\%$ 1/8W	R04	1
5	R1-330008-J1	Carbon resistance 33 $\Omega \pm 5\%$ 1/8W	R02	1
6	R1-152008-J1	Carbon resistance 1.5K $\Omega \pm 5\%$ 1/8W	R05	1
7	R1-472008-J1	Carbon resistance 4.7K $\Omega \pm 5\%$ 1/8W	R07、14	2
8	R1-103008-J1	Carbon resistance 10K $\Omega \pm 5\%$ 1/8W	R8、10、12、13、15	5
9	R1-303008-J1	Carbon resistance 30K $\Omega \pm 5\%$ 1/8W	R06	1
10	R1-33101-J1	Carbon resistance 330 $\Omega \pm 5\%$ 1W	R16、17、18	3
11	R1-473103-J1	Carbon resistance 47K $\Omega \pm 5\%$ 3W	R01	1
12	R3-1S0002-J1	Metal resistance 1 $\Omega \pm 5\%$ 1/2W	R03	1
13	C1-104500-M2	Porcelain piece capacitor 104 $\pm 20\%$ 50V	C11、18、24-27	6
14	C1-104500-M2	Porcelain piece capacitor 104 $\pm 20\%$ 50V	C28	1
15	C1-101102-K2	Porcelain piece capacitor 101 $\pm 10\%$ 1000V	C08	1
16	C1-472102-K2	Porcelain piece capacitor 472 $\pm 10\%$ 1000V	C06	1
17	C1-102401-M5	High-handed capacitor 102 $\pm 20\%$ AC400V	C10、C02	2
18	C4-102101-K0	Terylene capacitor 100V 102 $\pm 5\%$	C09	1
19	C2-475101-M0	Polypropylene capacitor 4.7uF $\pm 20\%$ 100V	C13	1
20	C2-106160-M0	Electrolyte capacitor 10uF $\pm 20\%$ 16V	C07	1
21	C2-336401-Z0	Electrolyte capacitor 33uF $\pm 80-20\%$ 400V	C05	1
22	C2-476160-M0	Electrolyte capacitor 47uF $\pm 20\%$ 16V	C15、21、23	3
23	C2-476250-M0	Electrolyte capacitor 47uF $\pm 20\%$ 25V	C16	1
24	C2-476350-M0	Electrolyte capacitor 47uF $\pm 20\%$ 35V	C14	1
25	C2-227160-M0	Electrolyte capacitor 220uF $\pm 20\%$ 16V	C20	1
26	C2-477160-M0	Electrolyte capacitor 470uF $\pm 20\%$ 16V	C12	1
27	C2-108100-M0	Electrolyte capacitor 1000uF $\pm 20\%$ 10V	C17、22	2
28	C2-477100-M0	Electrolyte capacitor 470uF $\pm 20\%$ 10V	C19	1
29	L1-100101-K0	inductance 10uH standing $\Phi 6 \times 8$ 2A	L05	1
30	L1-4S7101-K0	inductance 4.7uH standing $\Phi 6 \times 8$ 1A	L02、03、04	3
31	T3-303K20-00	inductance JLB2004 30mH	L01	1
32	T1-280273-01	Switchs transformer BCK-28-0273	T01	1
33	V1-140070-10	diode 1N4007	D01-04、06	5
34	V1-141480-10	diode 1N4148	D05、08	2
35	V1-104000-10	diode FR104	D10、12、13	3
36	V1-104000-10	diode FR104	D09	1
37	V1-107000-10	diode FR107	D07	1
38	V1-204000-10	diode FR204	D11	1

COMPONENT LIST

POWER BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	V1-340000-10	diode SF34	D14	1
2	V1-120101-20	Push down diode 12V 1W	D17	1
3	V2-127000-10	dynatron TIP127 (ECB)	Q01b	1
4	V2-255510-10	dynatron 2N5551 (EBC)	Q02	1
5	V3-260000-60	Field domino effective 2N60 2A 600V	IC1	1
6	IC-120040-10	IC NCP1200P40	IC2	1
7	IC-817000-10	Photoelectricity coupling PC817	IC3	1
8	IC-431000-10	Control regulator SD431 (TL431)	IC4	1
9	F1-3S1512-00	fuse T3. 15AL250V 5×20mm	F01	1
10	F2-010000-00	Fuse jack	F01 (two sides)	2
11	X4-040003-10	Rank jack (take lock) 3PIN/3.96 180°	X01	1
12	X4-020004-10	Rank jack 4PIN/2.0 180°	X05 (insert middle 4 feet)	1
13	X4-025007-10	Rank jack 7PIN/2.5 180°	X02	1
14	X4-025008-10	Rank jack 8PIN/2.5 180°	X04	1
15	Y7-010010-40	Wax bushing $\Phi 1.0 \times 10\text{mm}$	D11、R03	4
16	Y7-010010-40	Wax bushing $\Phi 1.0 \times 10\text{mm}$	D09	2
17	Y7-010015-40	Wax bushing $\Phi 1.0 \times 15\text{mm}$	D14	2
18	J1-0606S0-00	Jump lines $\Phi 0.6 \times 6\text{mm}$	RL6	1
19	J1-0606S5-00	Jump lines $\Phi 0.6 \times 6.5\text{mm}$	J2	1
20	J1-0607S0-00	Jump lines $\Phi 0.6 \times 7\text{mm}$	J6	1
21	J1-0607S5-00	Jump lines $\Phi 0.6 \times 7.5\text{mm}$	RL1	1
24	J1-0608S0-00	Jump lines $\Phi 0.6 \times 8\text{mm}$	J4	1
25	J1-0608S5-00	Jump lines $\Phi 0.6 \times 8.5\text{mm}$	J3	1
26	J1-0609S0-00	Jump lines $\Phi 0.6 \times 9\text{mm}$	J1	1
27	J1-060100-00	Jump lines $\Phi 0.6 \times 10\text{mm}$	D16	1
28	J1-060115-00	Jump lines $\Phi 0.6 \times 11.5\text{mm}$	J7、J8	2
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				

COMPONENT LIST

DECODE BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	D2-090500-10	Decode PCB board		1
2	C1-104500-MA	SMD capacitor 0603 104 $\pm$ 20% 50V	BC1~BC21, BC23~BC30,	
3			BC32~BC38, C7~C9,	
4			C20, C22, C25~C27, C29	
5			C31, C39~C42, C51, C54	
6			C57~C58, C62~C63, C67	
7			C97~C100, C102, C103,	
8			C139, C213, C274	66
9	C1-110500-JA	SMD capacitor 0603 11p $\pm$ 5% 50V	C109, C112, C115, C118	4
10	C1-220500-JA	SMD capacitor 0603 22p $\pm$ 5% 50V	C224, C225	2
11				
12	C1-101500-JA	SMD capacitor 0603 100p $\pm$ 5% 50V	C1, BC39~BC42	5
13	C1-121500-JA	SMD capacitor 0603 120p $\pm$ 5% 50V	C3, C73, C78, C83, C88, C93	6
14	C1-151500-JA	SMD capacitor 0603 150p $\pm$ 5% 50V	C108, C111, C114, C117	4
15	C1-161500-JA	SMD capacitor 0603 160p $\pm$ 5% 50V	C110, C113, C116, C119	4
16	C1-221500-JA	SMD capacitor 0603 220p $\pm$ 5% 50V	C172	1
17	C1-471500-JA	SMD capacitor 0603 470p $\pm$ 5% 50V	C163	1
18	C1-561500-JA	SMD capacitor 0603 560p $\pm$ 5% 50V	C256	1
19	C1-102500-KA	SMD capacitor 0603 102 $\pm$ 10% 50V	C167, C168, C171, C174,	
20			C69, C75, C80, C85, C90, C95	
21			C66, C72, C77, C82, C87, C92	16
22	C1-271500-JA	SMD capacitor 0603 270p $\pm$ 5% 50V	C138	1
23	C1-331500-JA	SMD capacitor 0603 330p $\pm$ 5% 50V	C104, C105	2
24				
25	C1-222500-KA	SMD capacitor 0603 222 $\pm$ 10% 50V	C141, C142, C143, C144, C228	5
26	C1-562500-KA	SMD capacitor 0603 562 $\pm$ 10% 50V	C255, C257, C258	3
27	C1-682500-KA	SMD capacitor 0603 682 $\pm$ 10% 50V	C136	1
28	C1-103500-KA	SMD capacitor 0603 103 $\pm$ 10% 50V	BC241, BC242, BC243, C59	4
29	C1-333500-KA	SMD capacitor 0603 333 $\pm$ 10% 50V	C166, C169	2
30	C1-224500-MA	SMD capacitor 0603 224 $\pm$ 20% 50V	C46, C48	2
31	C1-105160-MA	SMD capacitor 0603 1u $\pm$ 20% 16V	C170, C173, C231, C232	4
32				
33	C2-106250-M0	Electrolyte capacitor 10u $\pm$ 20% 25V	C65, C68, C71, C74, C76, C79	
34			C81, C84, C86, C89, C91, C94	12
35	C2-106500-M0	Electrolyte capacitor 10u $\pm$ 20% 50V	C146, C147	2
36	C2-476160-M0	Electrolyte capacitor 47u $\pm$ 20% 16V	C4, C6, C52, C53, C107,	
37			C127, C128, C253, C13	9
38	C2-107160-M0	Electrolyte capacitor 100u $\pm$ 20% 16V	C12, C14, C15, C16, C17, C28	6

COMPONENT LIST

DECODE BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	C2-227160-M0	Electrolyte capacitor 220u $\pm$ 20%	C2, C23, C49, C50, C135,	
2			C200, C267, C271, C272	9
3	C2-337100-M0	Electrolyte capacitor 330u $\pm$ 20%	C106	1
4	C2-477100-M0	Electrolyte capacitor 470u $\pm$ 20%	C125	1
5	R4-0S0016-J3	SMD resistor 0603 0 Ω $\pm$ 5% 1/16w	R1, R2, R8, R34, R127, R150,	
6			R74, R265, R352, R132, R24	
7			R213, R219, R355, R75, R77	
8			R78, R79, R122, R200, R266	21
9				
10	R4-180016-J3	SMD resistor 0603 18 Ω $\pm$ 5% 1/16w	R82, R83, R84, R85	4
11	R4-330008-J4	SMD resistor 0805 33 Ω $\pm$ 5% 1/10W	FB12	1
12	R4-330016-J3	SMD resistor 0603 33 Ω $\pm$ 5% 1/16w	R6, R9, R10, R228, R234,	
13			R353, R246, R161, R162, R3	10
14	R4-680016-J3	SMD resistor 0603 68 Ω $\pm$ 5% 1/16w	R248	1
15	R4-750016-J3	SMD resistor 0603 75 Ω $\pm$ 5% 1/16w	R250, R33	2
16	R4-750016-F3	SMD resistor 0603 75 Ω $\pm$ 1% 1/16w	R95, R96, R97, R98	4
17	R4-910016-J3	SMD resistor 0603 91 Ω $\pm$ 5% 1/16w	R252	1
18	R1-101002-J1	Carbon resistor 100 Ω $\pm$ 5% 1/2W	RD2	1
19	R4-101016-J3	SMD resistor 0603 100 Ω $\pm$ 5% 1/16w	R88, R89	2
20	R4-151016-J3	SMD resistor 0603 150 Ω $\pm$ 5% 1/16w	R239	1
21	R4-221016-J3	SMD resistor 0603 220 Ω $\pm$ 5% 1/16w	R7, R16	2
22	R4-331016-J3	SMD resistor 0603 330 Ω $\pm$ 5% 1/16w	R190, R251	2
23	R4-391016-F9	SMD resistor 0603 392 Ω $\pm$ 1% 1/16w	R164	1
24	R4-471016-J3	SMD resistor 0603 470 Ω $\pm$ 5% 1/16w	R94	1
25	R4-511016-J3	SMD resistor 0603 510 Ω $\pm$ 5% 1/16w	R41, R48, R54, R60, R66, R72	6
26	R4-911016-J3	SMD resistor 0603 910 Ω $\pm$ 5% 1/16w	R35	1
27	R4-102016-J3	SMD resistor 0603 1k Ω $\pm$ 5% 1/16w	R40, R47, R53, R59, R65,	
28			R71, R262, R263, R349, R103	
29			R116, R118, R193, R194	
30			R4, R5	16
31	R4-102016-F3	SMD resistor 0603 1K Ω $\pm$ 1% 1/16w	R156, R157	2
32	R4-132016-J3	SMD resistor 0603 1.3K Ω $\pm$ 5% 1/16w	R230, R232, R233	3
33	R4-182016-J3	SMD resistor 0603 1.8K Ω $\pm$ 5% 1/16w	R350, R30	2
34	R4-202016-J3	SMD resistor 0603 2K Ω $\pm$ 5% 1/16w	R19	1
35	R4-222016-J3	SMD resistor 0603 2.2K Ω $\pm$ 5% 1/16w	R249, R340, R351	3
36	R4-332016-J3	SMD resistor 0603 3.3K Ω $\pm$ 5% 1/16w	R225	1
37	R4-392016-J3	SMD resistor 0603 3.9K Ω $\pm$ 5% 1/16w	R37, R44, R51, R57, R63, R69	
38			R99	7

COMPONENT LIST

DECODE BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	R4-472016-J3	SMD resistor 0603 4.7k Ω $\pm$ 5% 1/16w	R12, R14, R15, R20, R22, R23	
2			R25, R26, R31, R80, R86,	
3			R87, R104, R106, R155	
4			R218, R222, R227, R343,	19
5	R4-512016-J3	SMD resistor 0603 5.1K Ω $\pm$ 5% 1/16w	R101, R126	2
6	R4-562016-J3	SMD resistor 0603 5.6K Ω $\pm$ 5% 1/16w	R256, R258	2
7	R4-682016-J3	SMD resistor 0603 6.8K Ω $\pm$ 5% 1/16w	R119	1
8	R4-103016-J3	SMD resistor 0603 10K Ω $\pm$ 5% 1/16w	R11, R17, R81, R91, R100,	
9			R102, R108, R109, R110,	
10			R113, R114, R117, R125,	
11			R264, R344, R123	16
12	R4-113016-J3	SMD resistor 0603 11K Ω $\pm$ 5% 1/16w	R38, R45, R52, R58, R64, R70	6
13				
14	R4-123016-F3	SMD resistor 0603 12K Ω $\pm$ 1% 1/16w	R145	1
15	R4-133016-J3	SMD resistor 0603 13K Ω $\pm$ 5% 1/16w	R21	1
16	R4-203016-J3	SMD resistor 0603 20K Ω $\pm$ 5% 1/16w	R36, R43, R50, R56, R62	
17			R68, R107, R115	8
18	R4-223016-J3	SMD resistor 0603 22K Ω $\pm$ 5% 1/16w	R42, R49, R55, R61, R67	
19			R73, R90	7
20	R4-473016-J3	SMD resistor 0603 47K Ω $\pm$ 5% 1/16w	R111, R112	2
21	R4-823016-J3	SMD resistor 0603 82K Ω $\pm$ 5% 1/16w	R18	1
22	R4-913016-J3	SMD resistor 0603 91K Ω $\pm$ 5% 1/16w	R93	1
23	R4-104016-J3	SMD resistor 0603 100K Ω $\pm$ 5% 1/16w	R92, R183, R348, R356	4
24				
25	R4-474016-J3	SMD resistor 0603 470k Ω $\pm$ 5% 1/16w	R247	1
26	R4-105016-J3	SMD resistor 0603 1M Ω $\pm$ 5% 1/16w	R105	1
27	R6-33004J-30	SMD rank jack 0603 4*33 Ω $\pm$ 5%	RN3	1
28	L4-016008-60	SMD magnetism beads 0603	FB2~FB4, FB14, FB26,	
29			FB40, FB41, FB44~FB51,	
30			L1, L10~L21	28
31	L4-020012-60	SMD magnetism beads 0805	FB11	1
32	L1-120006-60	SMD magnetism beads 1206	FB5, FB16, FB25, FB28,	
33			FB30, FB35	6
34	L1-1S1301-J0	SMD inductance 1.1uH 0603	L2, L3, L4, L5	4
35				
36	VB-222200-10	SMD dynatron MMBT2222 (ft $\geq$ 100MHz)	Q3~Q8	6
37	VB-239040-10	SMD dynatron SST3904	Q11, 12, 27, Q29	4
38	VB-239040-10	SMD dynatron 2N3904 SOT23	Q11, 12, 27, Q29	

COMPONENT LIST

DECODE BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	VB-239060-10	SMD dynatron SST3906	Q2, Q13, Q28	3
2	VB-239060-10	SMD dynatron 2N3906 SOT23	Q2, Q13, Q28	
3	V1-140020-10	Vertical insert diode 1N4002	D2	1
4	VB-238750-10	SMD dynatron KTC3875	Q10, 16, Q19, Q20	4
5	VB-210360-10	SMD dynatron 2SA1036K SOT23	Q17, Q18	2
6	V1-5S1002-20	Push down diode 5.1V 1/2W	D1	1
7	V1-141480-10	Vertical insert diode 1N4148	D3~D11, D17	10
8	V1-140010-10	Vertical insert diode 1N4001	D20, D21	2
9	Z1-27S006-00	wave 49S型 transistor 27MHz	Y2	1
10	IC-740400-25	SMD IC SN74HC04	U5	1
11	IC-111733-20	SMD IC B1117N-33M142 3.3V	U32	1
12	IC-111700-20	SMD IC AS1117M 3.3V	U32	
13	IC-111718-20	SMD IC B1117N-18M148 (non-fixed)	U31	1
14	IC-111700-21	SMD IC AS1117M3/AK174J	U31	
15	IC-240200-20	SMD IC AT24C02	U6	1
16	IC-800000-20	SMD IC IKE80	U26	1
17	IC-29800F-27	SMD IC MX29F800BTC-70 (8Mbits)	U28	1
18	IC-29800M-27	SMD IC 29LV800BBA-70 (8Mbits)	U28	
19	IC-458000-20	SMD IC 4580	U10, U11, U12	3
20	IC-455800-20	SMD IC RC4558	U10, U11, U12	
21	IC-416162-20	SMD IC K4S161622D (16Mbits)	U1, U3	2
22	IC-121616-280	SMD IC M12L1616161A-7	U1, U3	
23	IC-367070-20	SMD IC ZR36707	U4	1
24	IC-367680-20	SMD IC ZR36768	U15	1
25	IC-160600-20	SMD IC PCM1606	U34	1
26	X4-020012-10	Rank jack 12PIN /2.0mm	J18	1
27	X4-020005-10	Rank jack 5PIN/2.0mm	J9	1
28	X4-020006-10	Rank jack 6PIN/2.0mm	J5	1
29	X4-025008-10	Rank jack 8PIN/2.5mm	J16	1
30	X4-005024-30	SMD rank jack 24PIN/0.5mm 180°	J8	1
31	X4-010006-30	SMD rank jack 6PIN/1.0mm 180°	J6	1
32	X1-120000-30	S-video DSW-12	JK4	1
33	X7-184130-30	Chips jack AV1-8.4-8A grounding piece yellow	JK7	1
34	X7-848000-30	Chips rank jack AV-8.4-8A grounding piece black	JK5	1
35	X7-684130-31	Chips rank jack AV6-8.4-13A grounding piece	JK6	1
36		Up to black white white, Down to black red red .		
37	X4-020004-10	Rank jack 4PIN/2.0mm	J15	1
38				

COMPONENT LIST

AV OUTPUT BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1	C1-104500-Z2	Porcelain piece capacitor 104+80-20% 50V	C2、C3、C4	3
2	C2-107160-Z0	Electrolyte capacitor 100uF+80-20% 16V	C1	1
3	L4-035060-40	Through magnetism beads $\Phi 3.5 \times 6\text{mm}$	L1-10	10
4	X1-550000-00	Optical port GPIFA550TZ	X4	1
5	X1-105000-00	21PIN CS105	X6	1
6	X7-384140-31	Chips rank jack AV3-8.4-14 (three colors)	X5 crust grounding	1
7	J1-060100-00	Jump lines $\Phi 0.6 \times 10\text{mm}$	JMP1	1
8	N5-049010-10	KL7.750.003grounding piece	X6 up	1
9	X4-020012-10	Rank jack 12PIN/2.0mm	X1	1
10	D1-020500-21	Output board PCB board		1
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COMPONENT LIST

CONTROL BOARD COMPONENT LIST				
NO.	Material No.	Description	Encase No.	QTY
1		Control board PCB board		1
2	O8-070705-10	Double sides glue Sponge mats 7×7×5mm	J1、J2、J3、IC2	4
3	W3-251066-10	Single insert rank jack 6PIN/2.0 L=250mm	X1	1
4	W3-281076-20	Single insert rank jack 7PIN/2.5 L=280mm	X5	1
5	C1-104500-Z2	Porcelain piece capacitor 50V 104-20%+80%	C2、10	2
6	C2-106500-M0	Electrolyte capacitor 50V 10uF±20%	C9	1
7	C2-107100-M0	Electrolyte capacitor 10V 100uF±20%	C1、404	2
8	IC-163120-20	SMD IC uPD16312 or CS16312	IC401	1
9	IC-354000-10	Receiving nob SRM-354VF	IC2	1
10	P3-069200-00	Display screen HNVCO6SS92	VFD1	1
11	R1-330008-J1	Carbon resistance 1/8W 33Ω±5%	R16	2
12	R1-151008-J1	Carbon resistance 1/8W 150Ω±5%	R5	1
13	R1-103008-J1	Carbon resistance 1/8W 10K±5%	R7-9、12-14	6
14	R1-333008-J1	Carbon resistance 1/8W 33K±5%	R6、10、15、17、18	5
15	S3-665000-00	Touch switchs 6×6×5	S1-5、7	6
16	V1-141480-10	diode 1N4148	V10、11	2
17	V1-5S1002-20	Push down diode 5.1V 1/2W	V4	1
18	V1-253021-30	Luminescence diode Φ3 red	D2	1
19	Y7-0103S7-40	wax bushing Φ1.0×3.7mm	D2	2
20	L4-120160-30	Magnetism annulus: K5BT16×12×8	6P rank line on magnetism round 3.5T	1
21	J1-0607S5-00	Jump lines Φ0.6×7.5mm	JMP2-7	6
22	J1-060200-00	Jump lines Φ0.6×20mm	JMP1	1
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