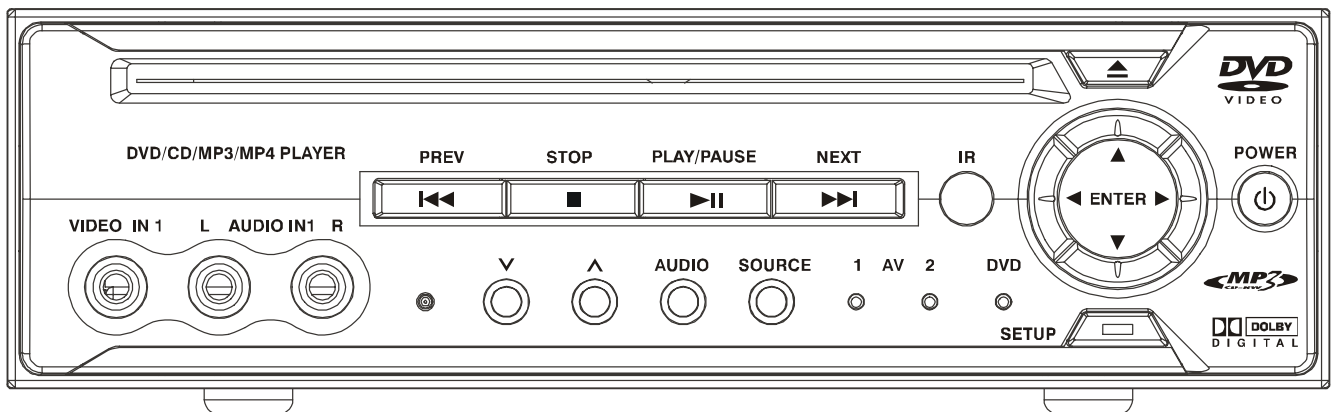


AKAI

Service Manual

MOBILE VIDEO SYSTEM



MODEL: ADV-85DR

Note:

- Digital Audio Out-Coaxial**
- Multi-subtitle Languages Function**
- Multi-audio Languages Function**
- Multi-angle Function**
- Parental Control**

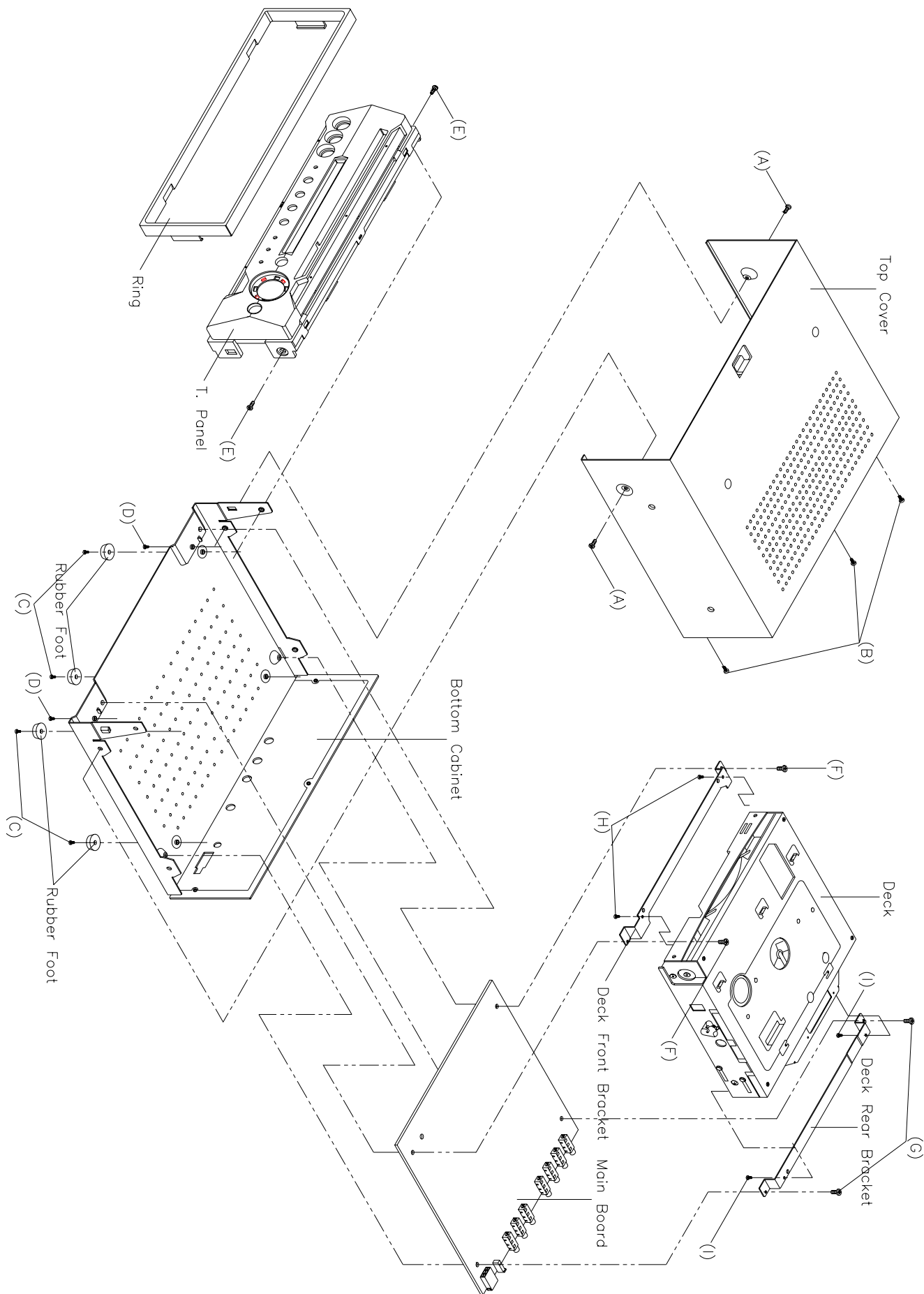
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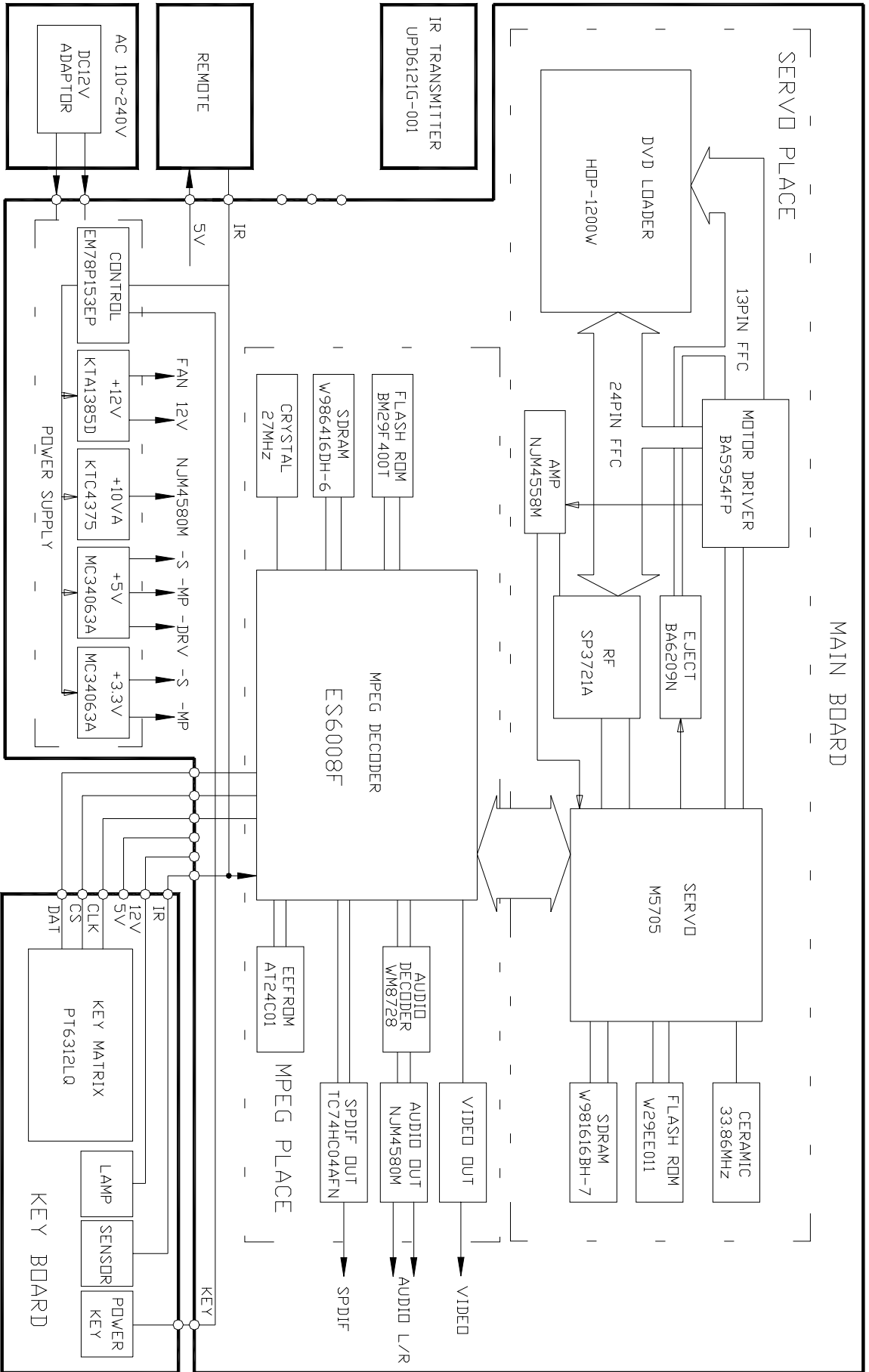
DISASSEMBLY INSTRUCTIONS

1. Remove two screws (A) from each side of the top cabinet and remove three screws (B) located on the rear of the top cabinet then remove the Top Cabinet.
2. Remove four screws (C) located on the under the bottom cabinet then remove four Rubber Foot DVD171.
4. Remove two screws (D) located on the under the bottom cabinet and remove two screws (E) from each side of the top panel then remove the Top Panel.
5. Remove two screws (F) from the deck front bracket and remove two screws (G) from the deck rear bracket then remove the Main Board and the Bottom Cabinet.
6. Remove two screws (H) from the deck front bracket then remove the Deck Front Bracket.
7. Remove two screws (I) from the deck rear bracket then remove the Deck and the Deck Rear Bracket.

DISASSEMBLY DIAGRAM

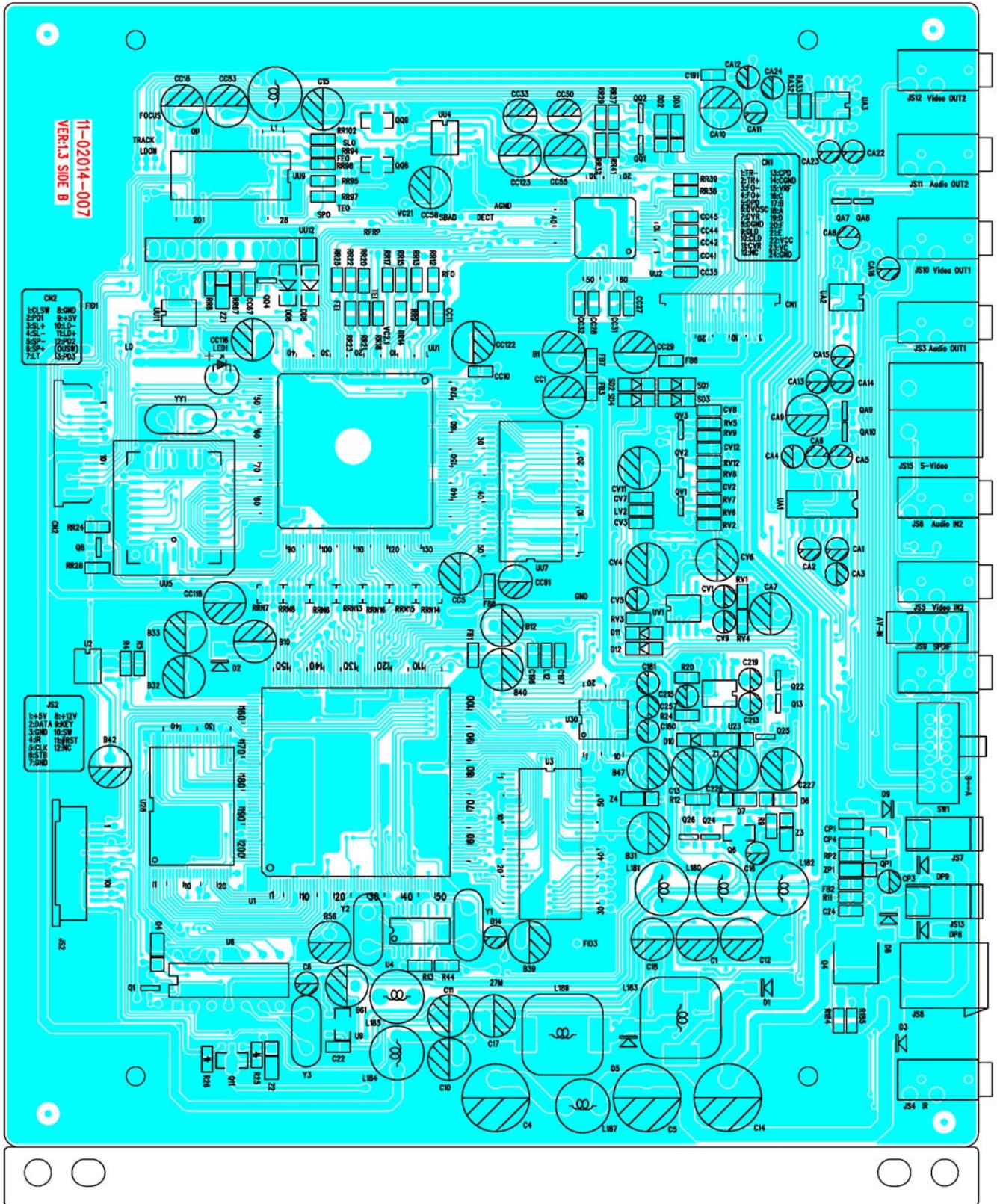


BLOCK DIAGRAM



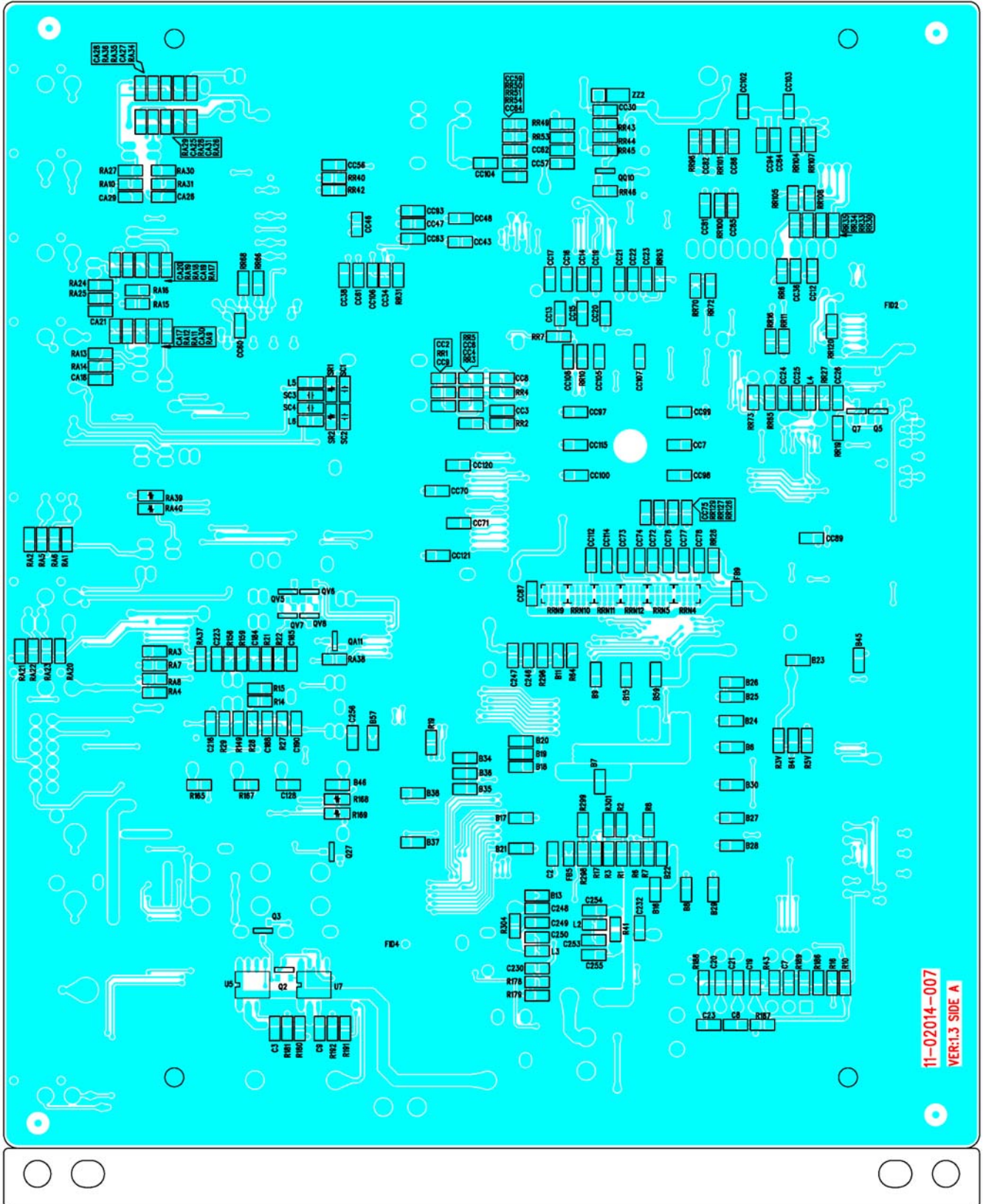
PRINTED CIRCUIT BOARDS

MAIN BOARD



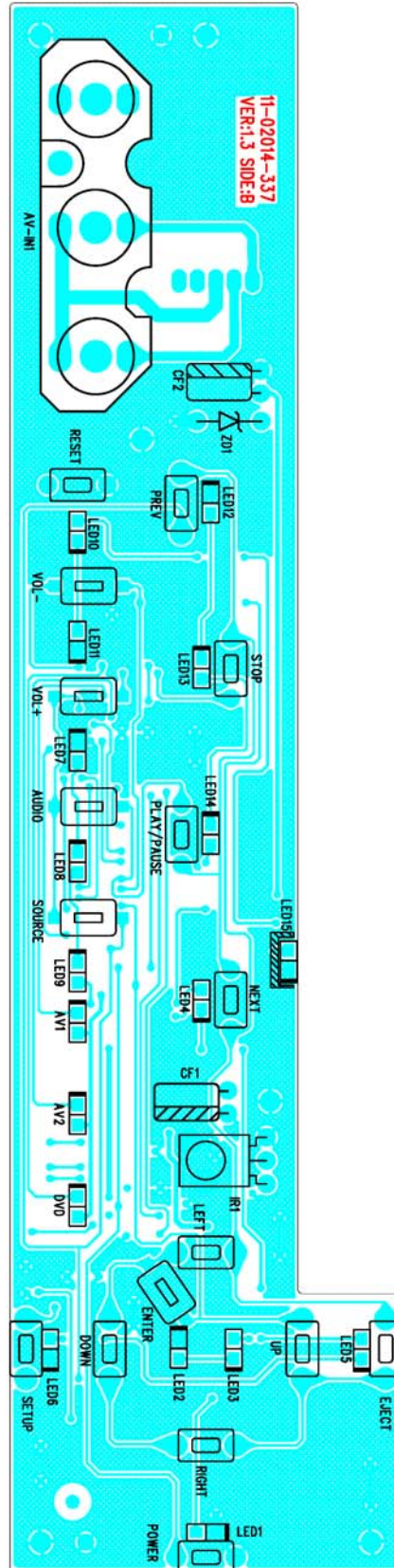
TOP VIEW

MAIN BOARD



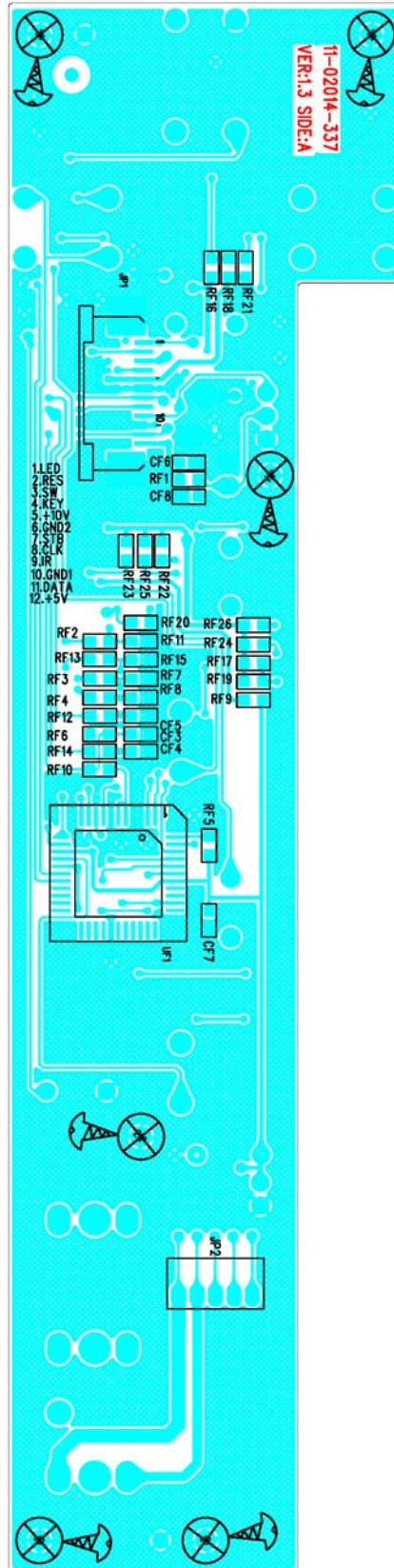
BOTTOM VIEW

KEY BOARD



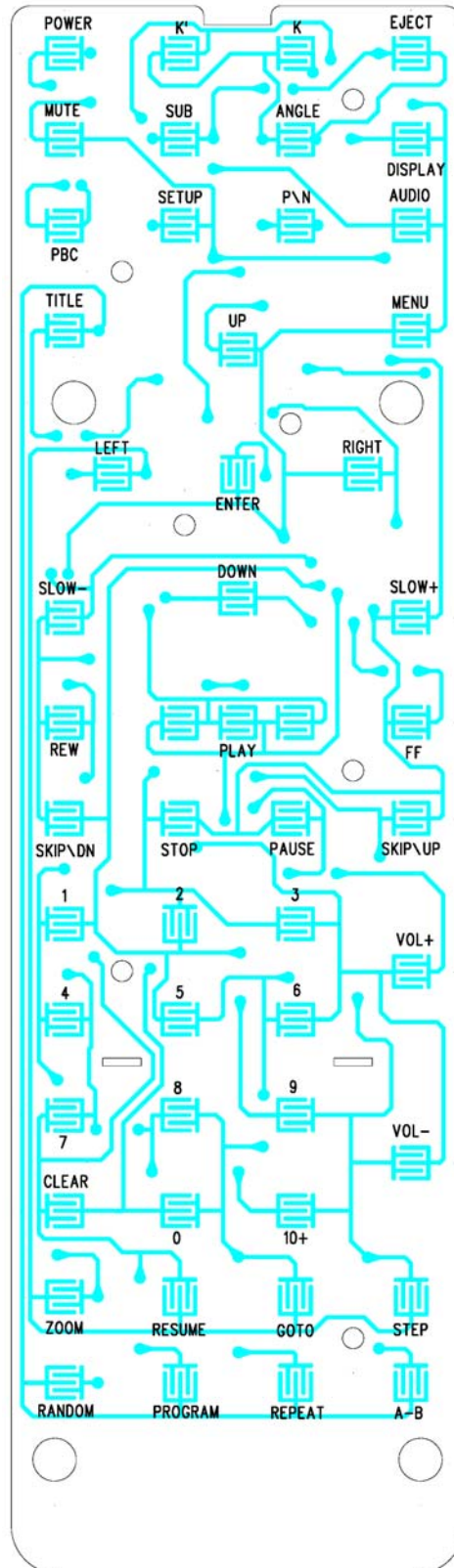
TOP VIEW

KEY BOARD



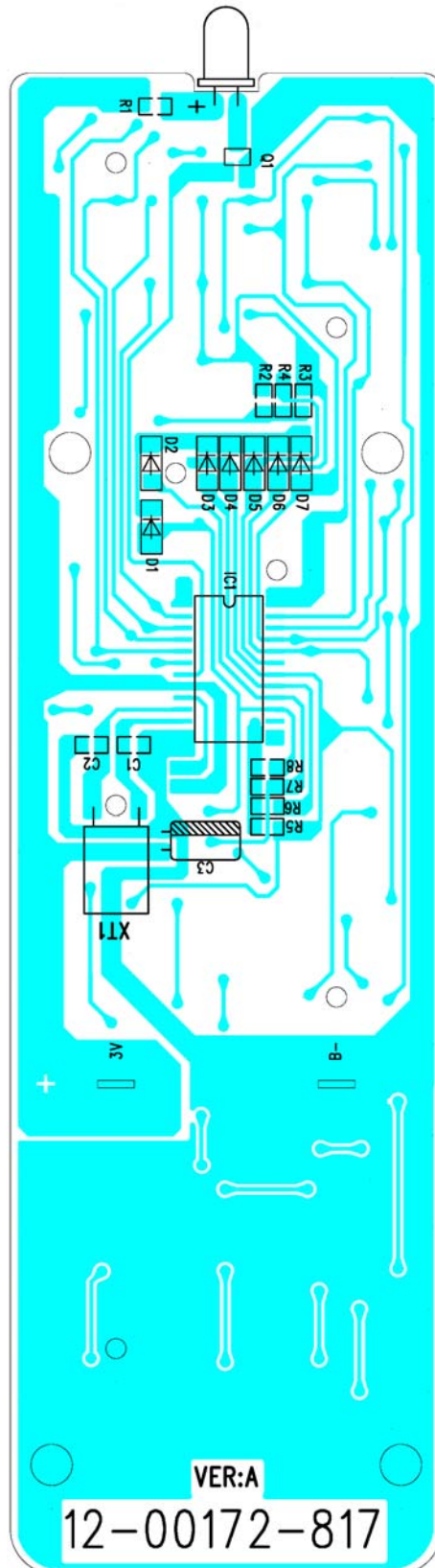
BOTTOM VIEW

REMOTE BOARD



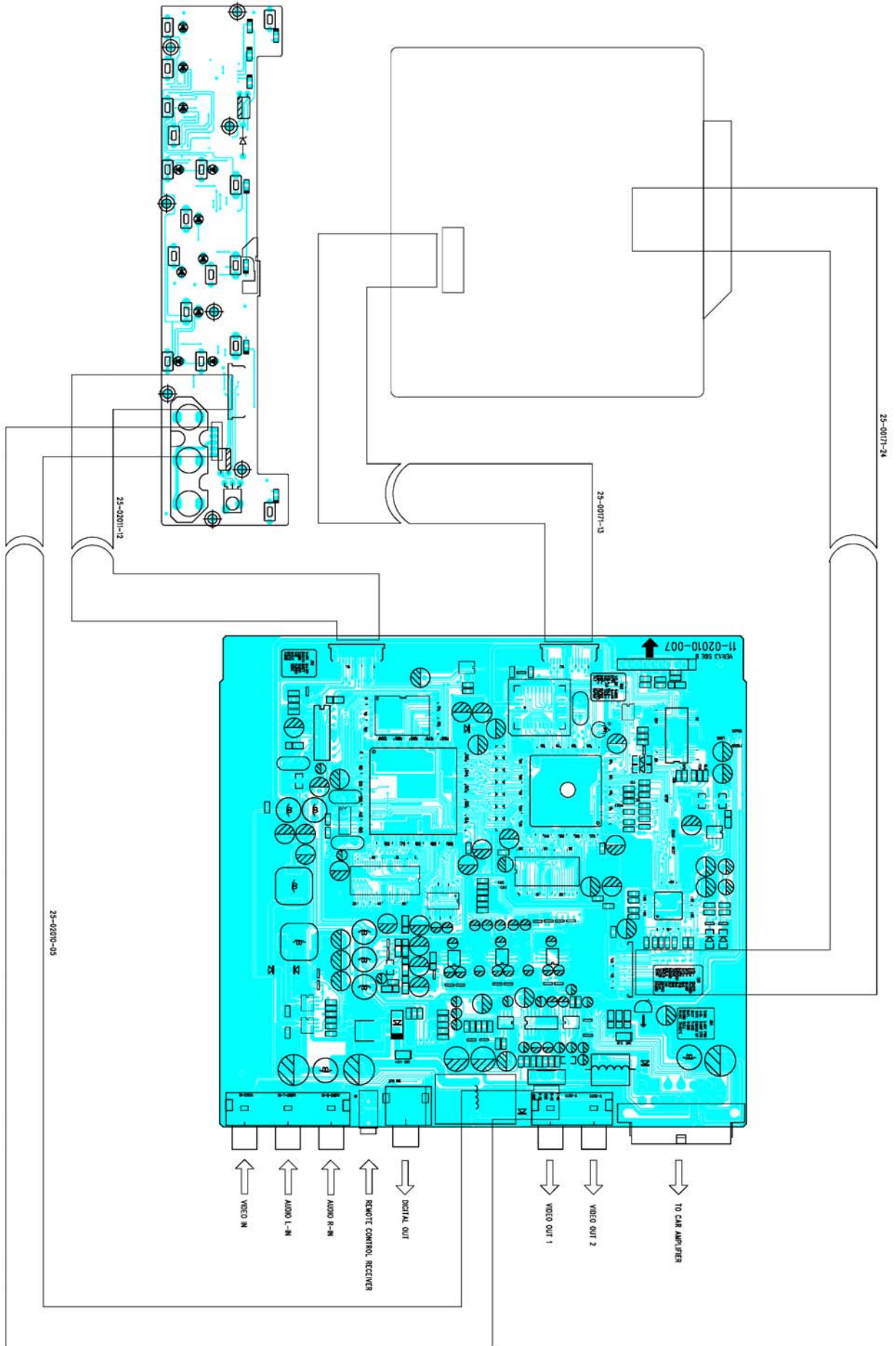
TOP VIEW

REMOTE BOARD

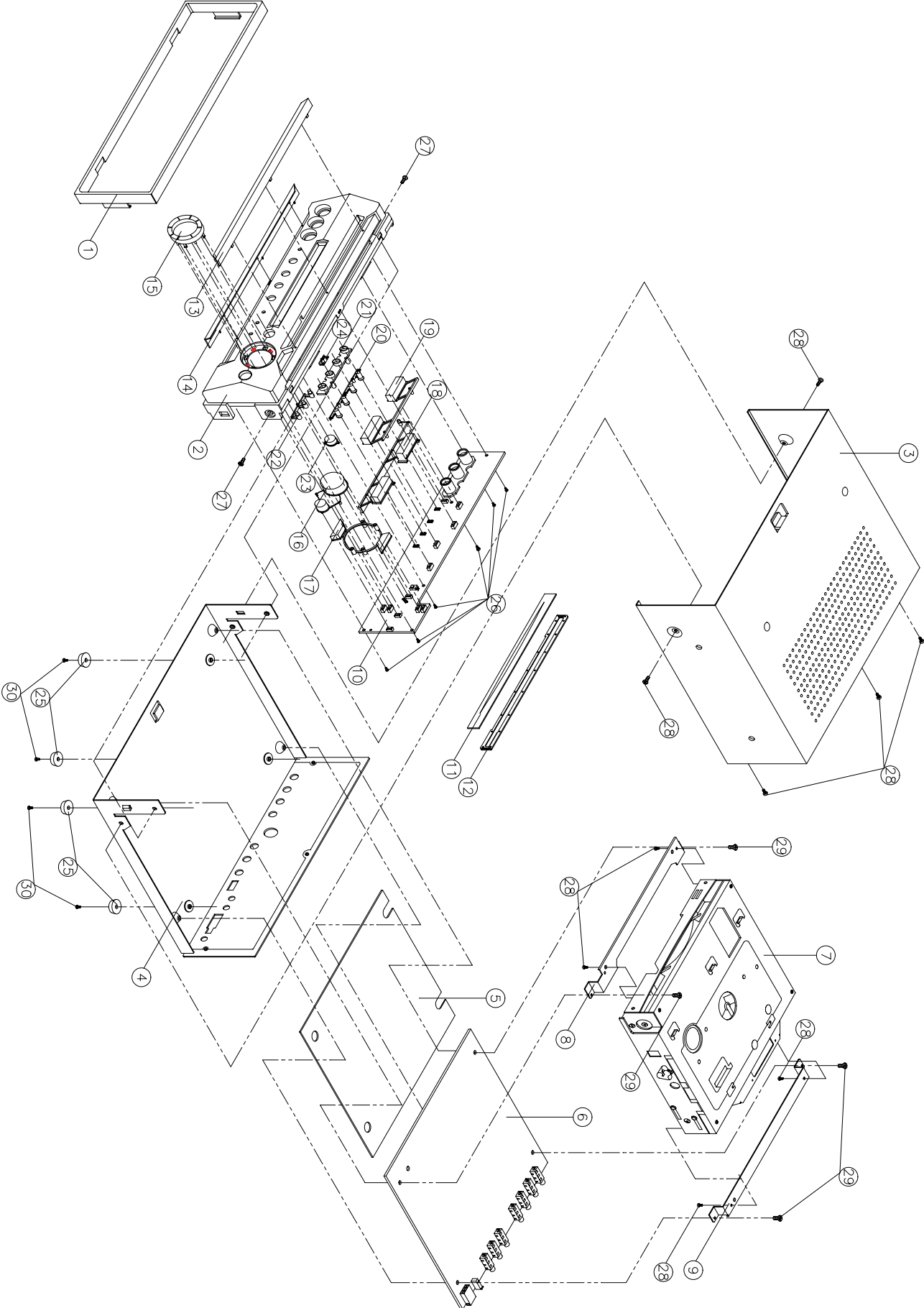


BOTTOM VIEW

WIRING DIAGRAM



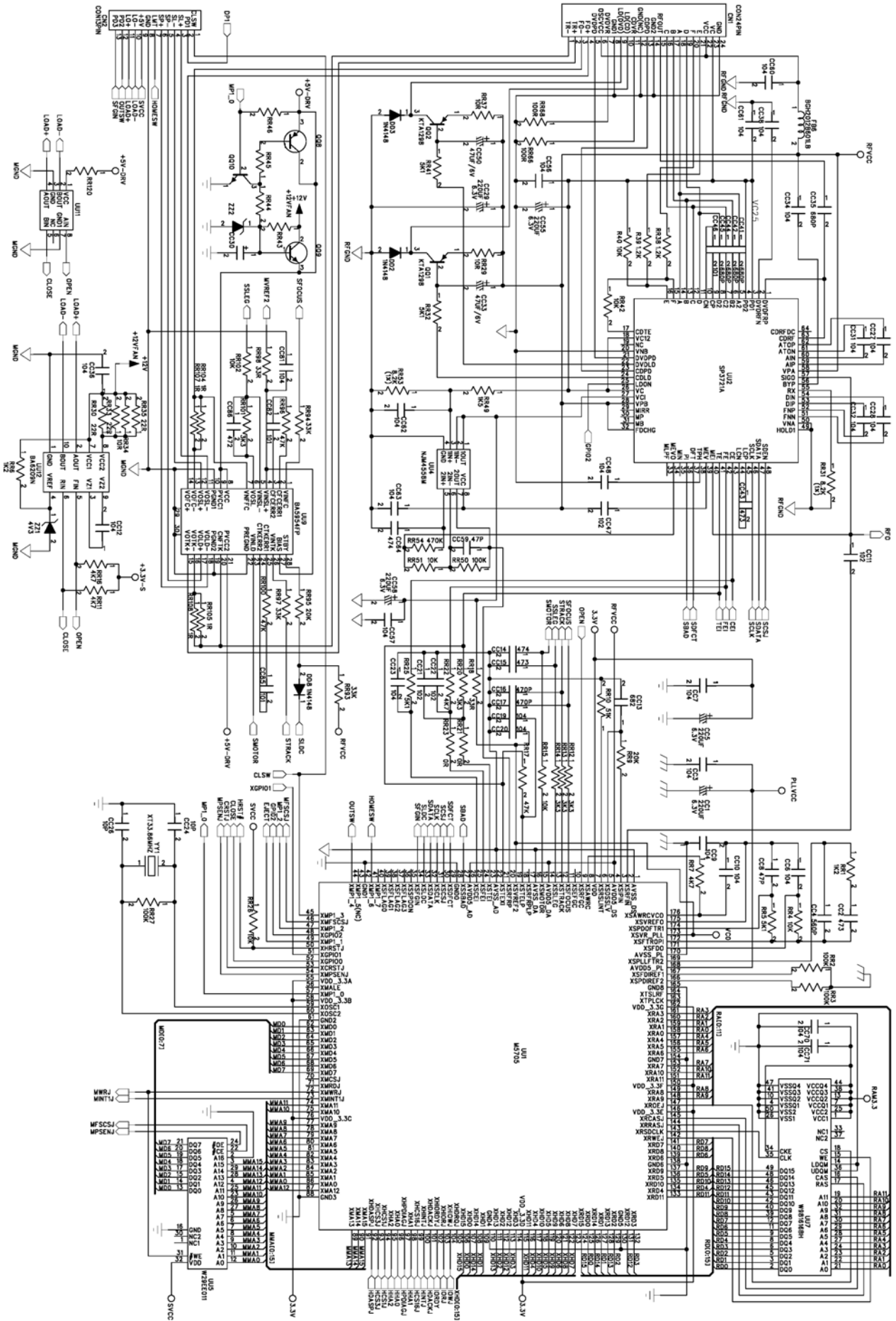
EXPLODED VIEW



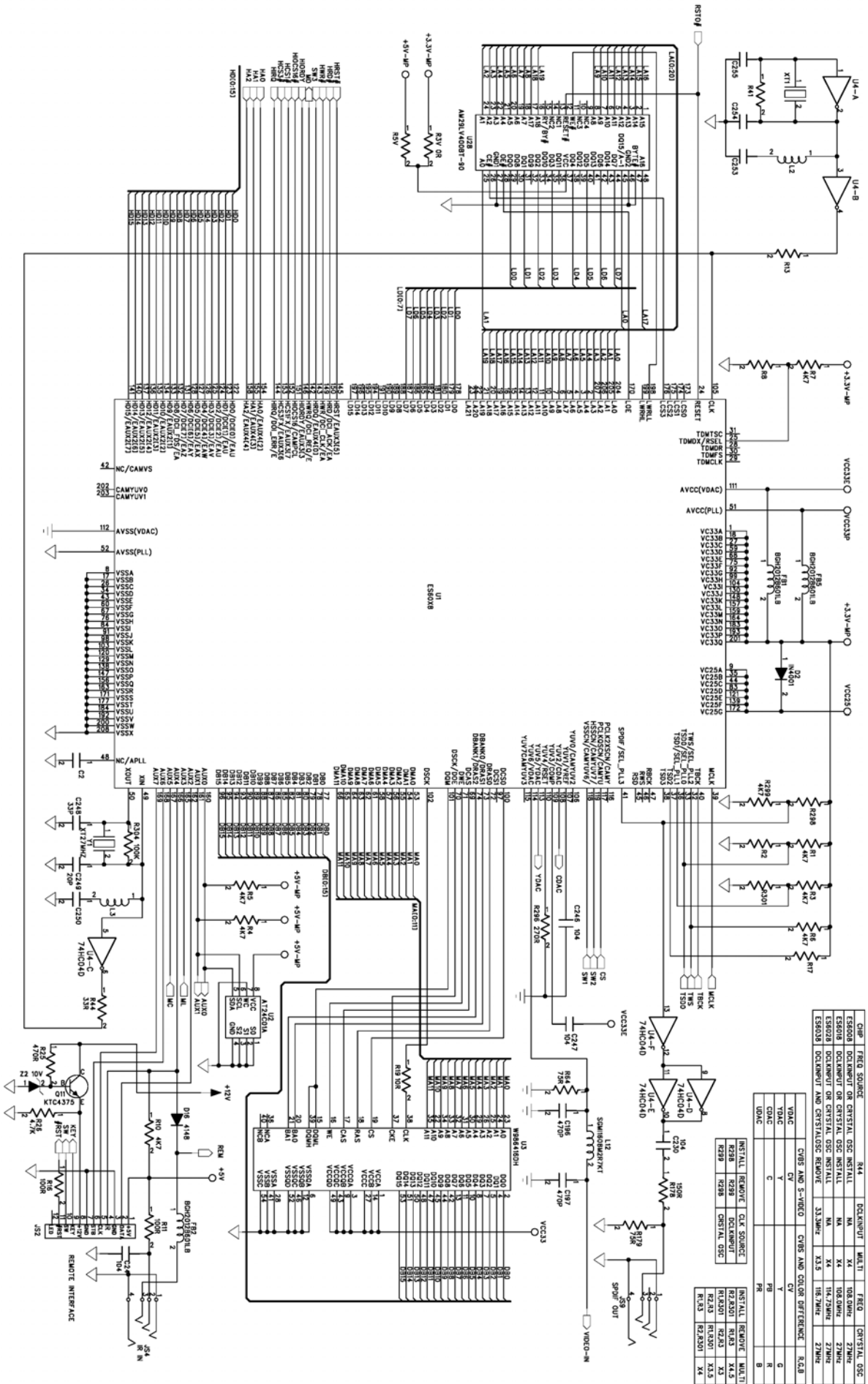
EXPLODED VIEW PARTS LIST

Ref. No.	Description	RS Part No.	Mfr's Part No.
1	Ring (S. OPC1202)		51-H2020-80A
2	Panel Top W/O TV (S. OPC1202)		51-K2020-84Y
3	Top Cover (S. OPC1202)		61-H2002-80
4	Bottom Cabinet W/O TV (S. OPC1202)		61-K2001-81B
5	Main PCB Paper		43-H2001-00
6	Main Board		11-02014-007
7	DVD MECH. Slot Type (Hop-1200W)		94-02682-00
8	Deck Front Bracket		39-B2001-01
9	Deck Rear Bracket		39-B2002-01
10	Key Board		11-02014-337
11	Shade		81-69005-02
12	CD Windows Sheet		43-A3101-00
13	Panel Top Decoration (EA-Silver)		52-K2022-90E
14	Panel Top Decoration (EA-Silver)		52-K2023-90E
15	Function Key (E-Silver)		52-K2027-90E
16	MENU/Power Key (L-Up) (S. OPC0000)		52-K2026-01
17	EJ/SEL Knob (L-Up) (E-Silver)		52-K2028-91E
18	Stop/Next Knob (L-Up) (E-Silver)		52-K2029-91E
19	Play/Pause/PREV Knob (L-Up) (E-Silver)		52-K2030-91E
20	SEL/Source Knob (L-Up) (E-Silver)		52-K2024-90E
21	INDEX Light		52-K2031-00
22	1AVIN2/DVD Light		52-K2032-00
23	IR Lens		52-K2025-50R
24	Lighting Sleeve		52-K2021-00
25	Rubber Foot (Clear)		81-D1701-01
26	Screw Ø2 X 5 BH/ST Black		40-12005-06
27	Screw Ø2.6 X 4 KH/MS		40-02604-02
28	Screw Ø2.6 X4 BH/MS		40-02604-01
29	Screw Ø2.6 X 5 BH/TAPTITE		40-02605-03
30	Bracket Screw M2.0		40-A1516-00

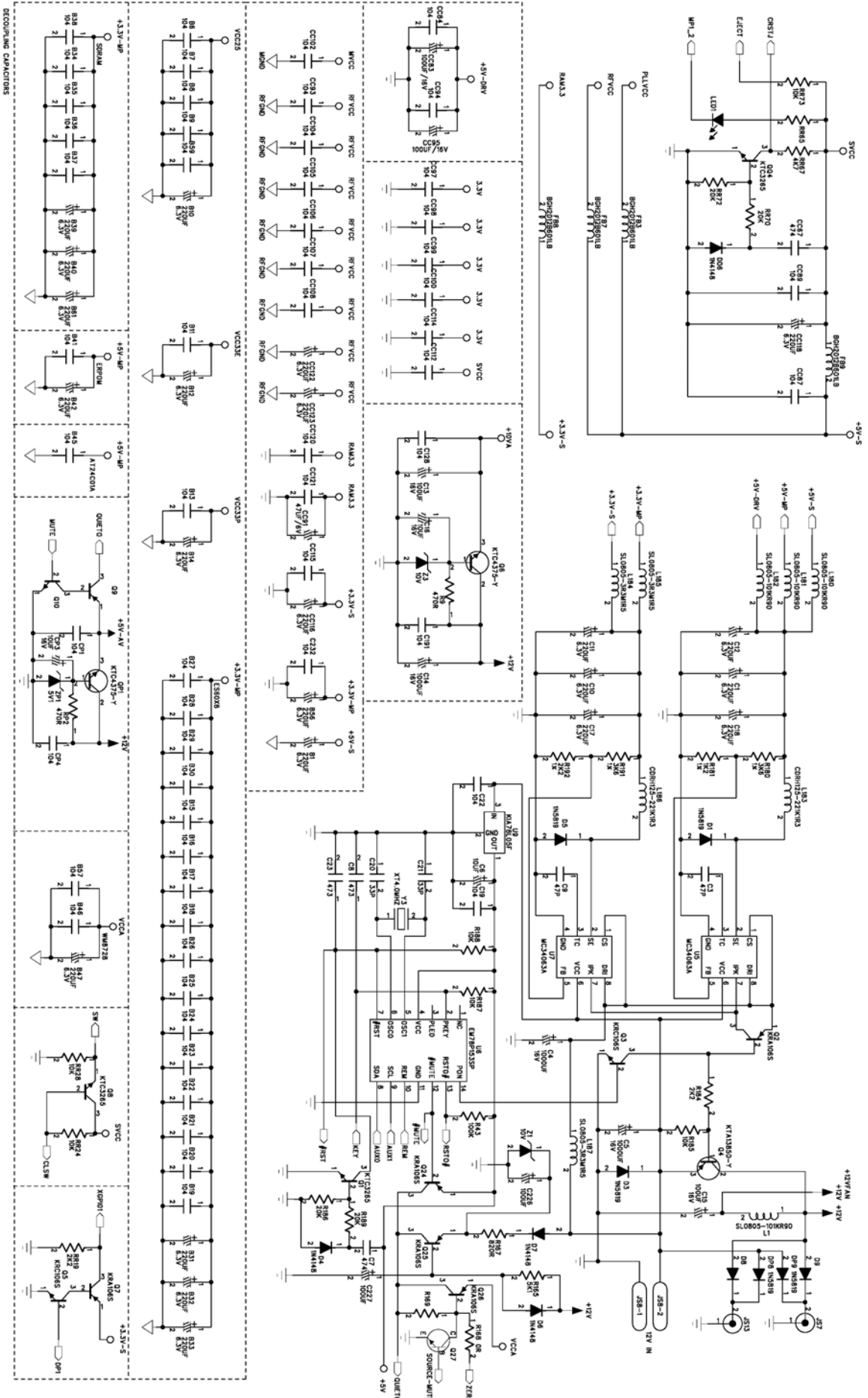
SCHEMATIC DIAGRAM (SERVO)



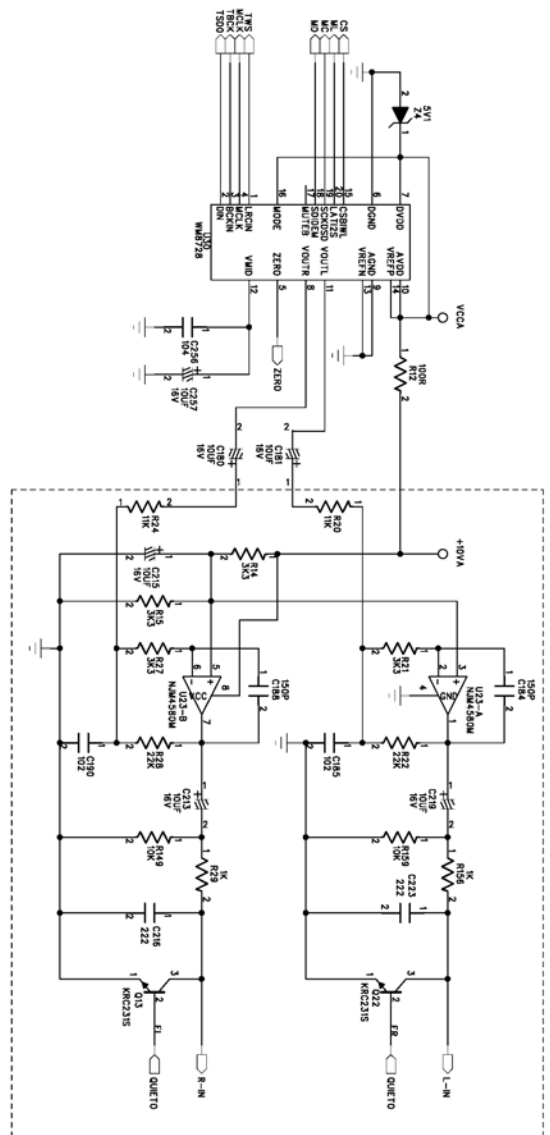
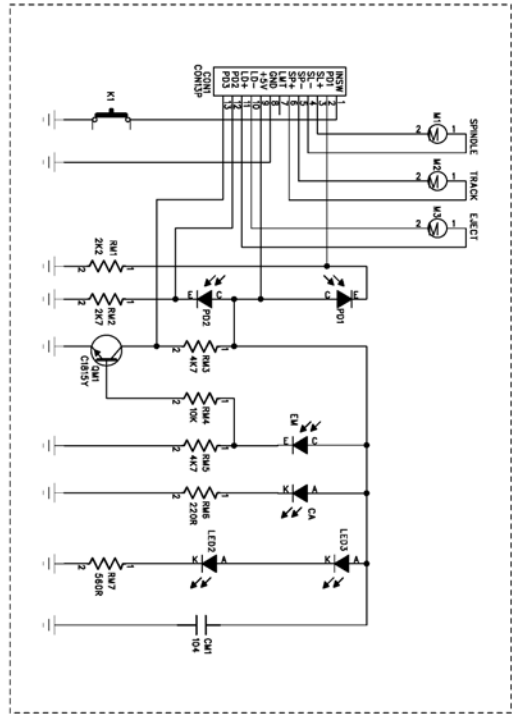
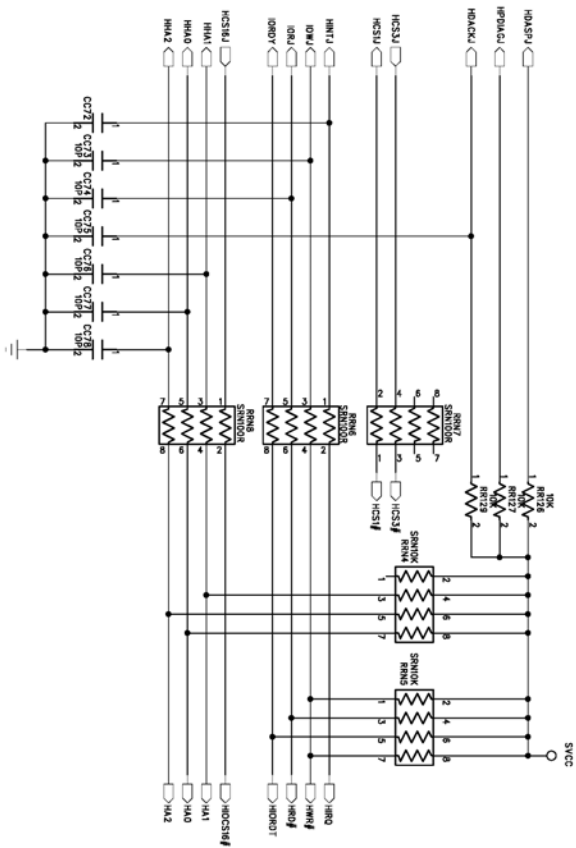
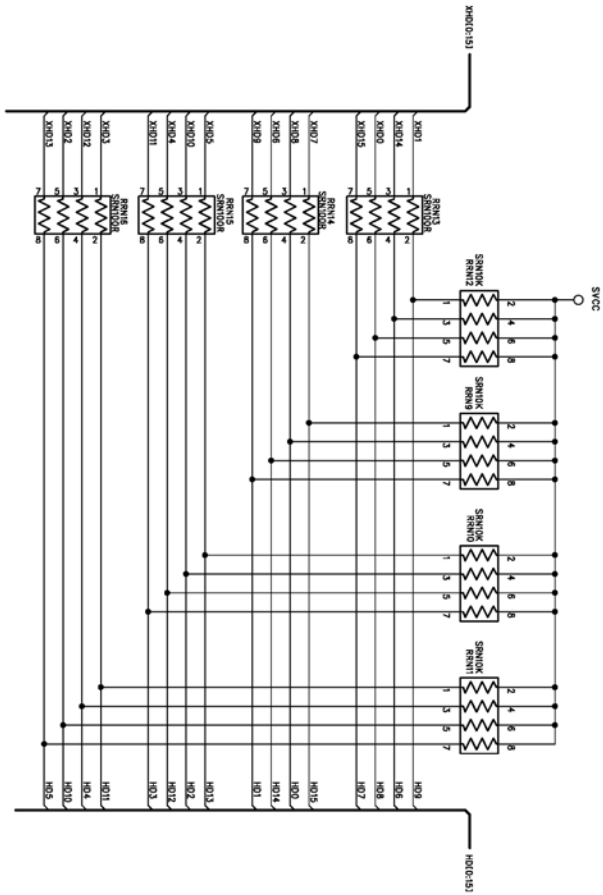
SCHEMATIC DIAGRAM (MPEG)



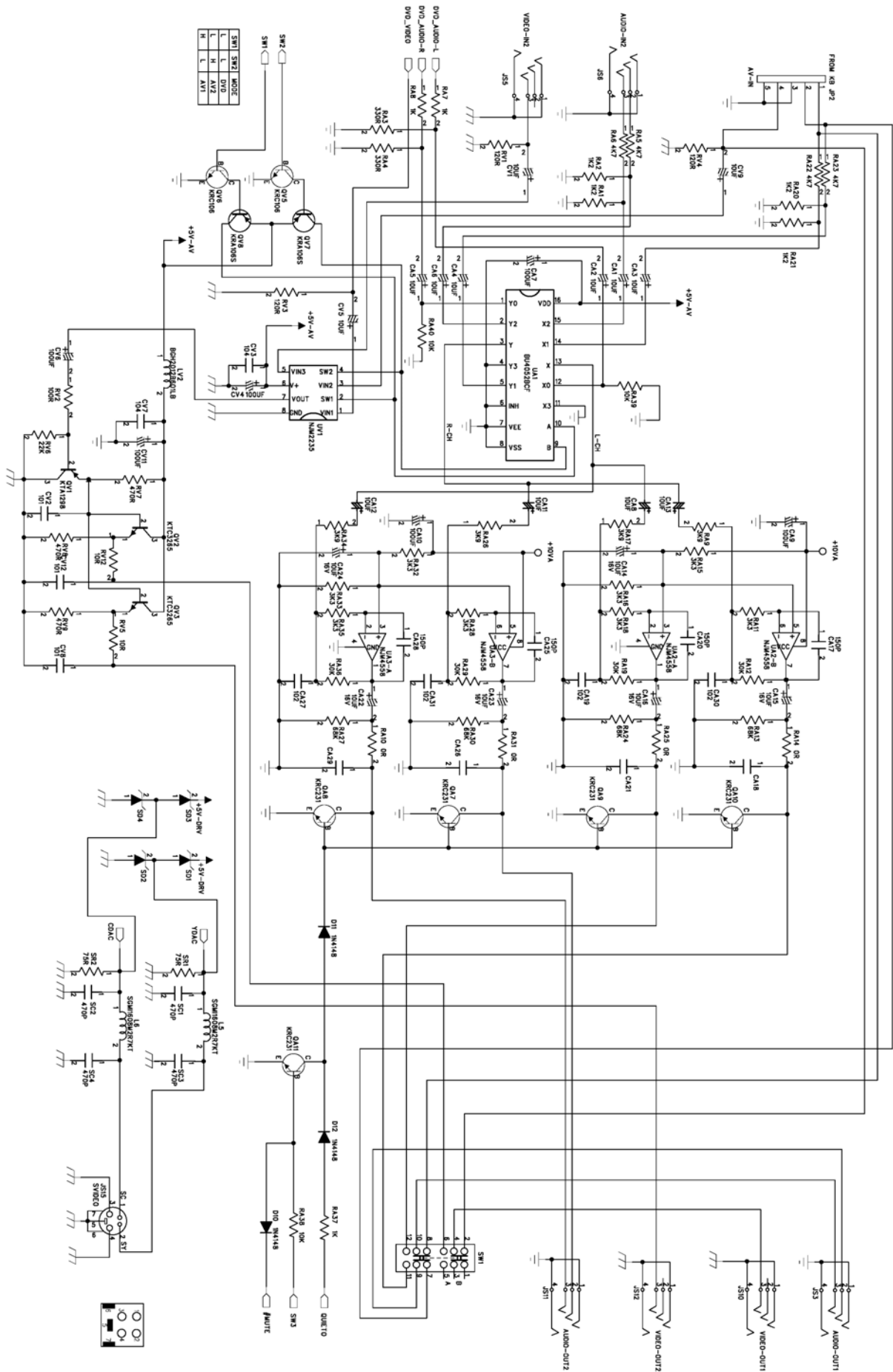
SCHEMATIC DIAGRAM (POWER)



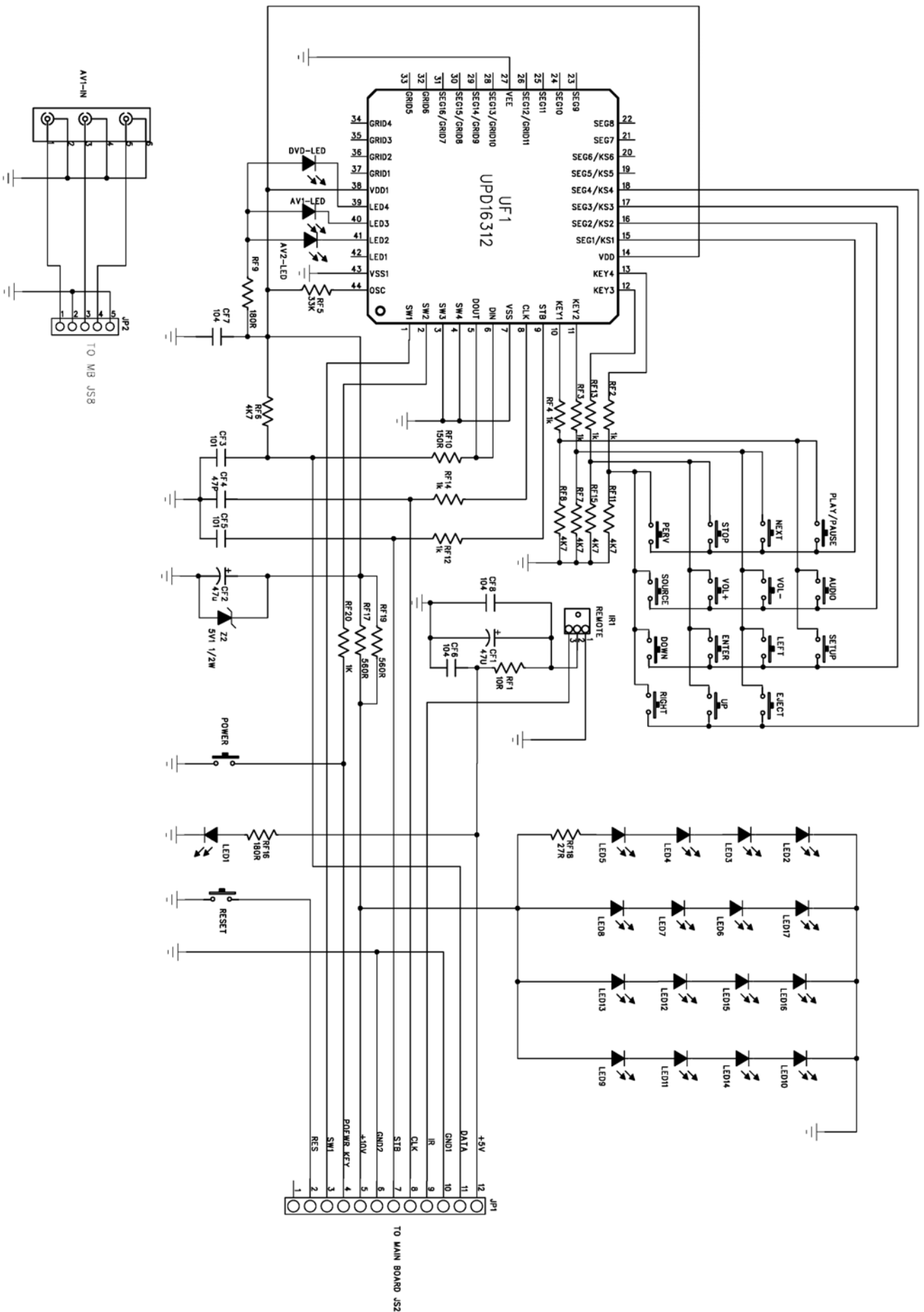
SCHEMATIC DIAGRAM (I/O)



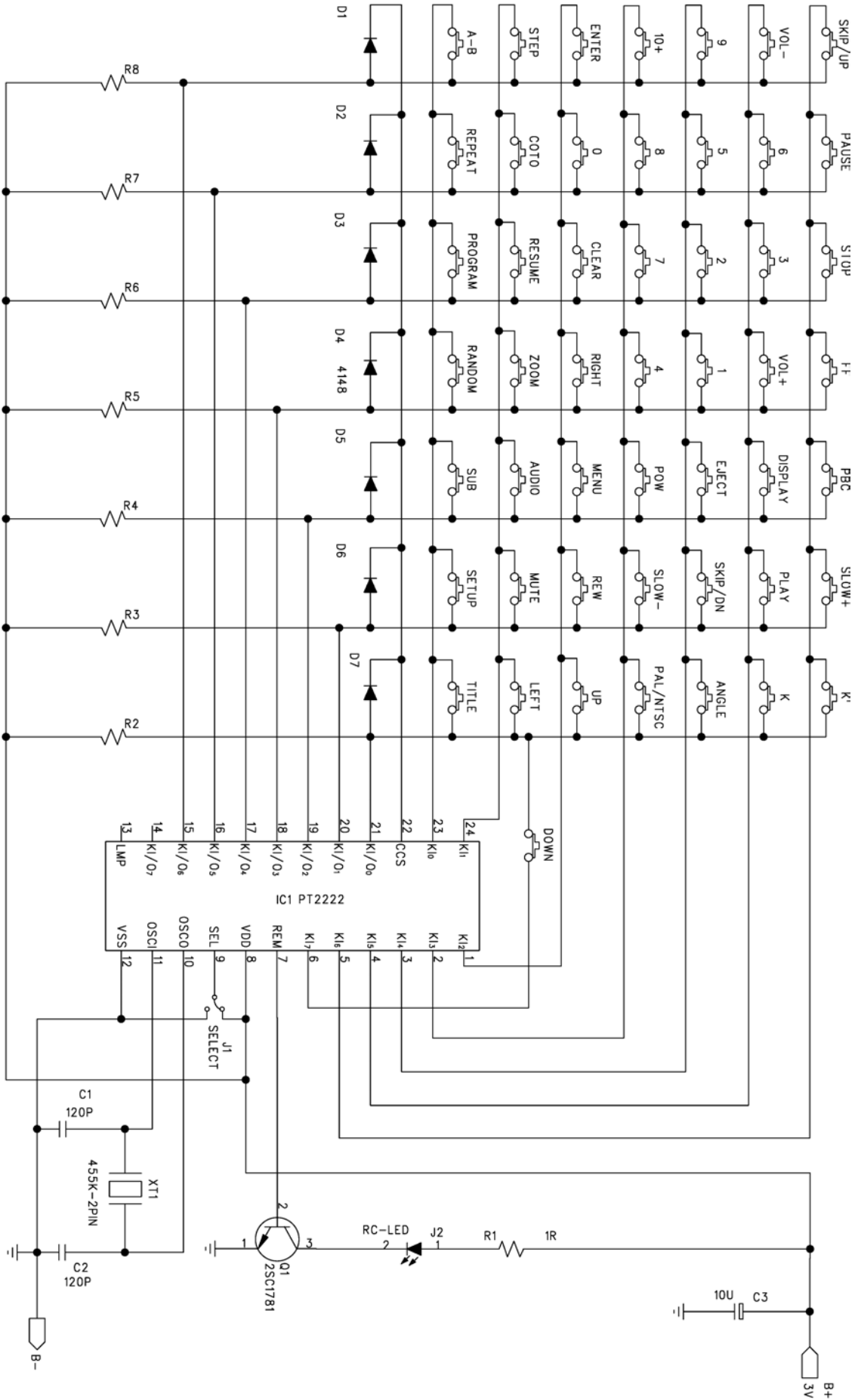
SCHEMATIC DIAGRAM (AV/POWER)



SCHEMATIC DIAGRAM (KEY BOARD)



SCHEMATIC DIAGRAM (REMOTE BOARD)



ELECTRICAL PARTS LIST

Ref. No.	Parts No.	Description	Q'ty
PC BOARD ASSY, MAIN BOARD			
Q2,7,24~6,QV7,8	01-00106-00	KRA106S (SOT-23)	7
Q3,5,QV5,6	01-00106-10	KRC106S (SOT-23)	4
Q13,22,QA7~11	01-00231-00	KRC231S (SOT-23)	7
QQ1,2,QV1	01-01298-00	KTA1298 (SOT-23)	3
Q4	01-01385-00	KTA1385D-Y (DPAK)	1
Q1,8,QQ4,QV2,3	01-03265-00	KTC3265-Y (SOT-23)	5
Q6,11,QP1	01-04375-00	TR. KTC4375-Y (SOT-89)	3
D2	02-04001-01	CHIP IN4001 (SOD-106)	1
D4,6,7,10~2,DD2,3,6,8	02-04148-02	DIODE CHIP RLS4148 1206 ROHM	10
D1,3,5,DP8,9	02-05819-02	CHIP IN5819 (SOD-106)	5
ZZ1	02-50043-00R	CHIP ZENER DIODE 4.3V (LL-34)	1
Z4,ZP1	02-50051-03	CHIP ZENER DIODE 5.1V ±5% (LL-34)	2
Z1~3	02-50100-02	CHIP ZENER DIODE 10V ±5% (LL-34)	3
UU7	03-01616-00	W981616BH-7 (TSOP II-50PIN)	1
UV1	03-02235-00	IC CHIP NJM2235M JRC	1
U2	03-02401-00	EEPROM (FLAT RACK) 24C01	1
UU2	03-03721-00	SP3721A (PQFP-64PIN)	1
UA1	03-04052-03	IC CHIP BU4052BCF ROHM	1
UA2,3,UU4	03-04558-26	I.C. NJM-4558M	3
U23	03-04580-00	NJM4580M (SOP-8PIN)	1
UU1	03-05705-00	M5705 (PQFP-176PIN)	1
UU9	03-05954-00	BA5954FP (HSOP-28PIN)	1
U1	03-06008-00	ES6008 (PQFP-208PIN)	1
UU12	03-06209-00	BA6209N (SIP-10PIN) ROHM	1
U3	03-06416-00	W986416DH-6 (TSOP II-54PIN)	1
U4	03-07404-01	TC74HCU04AFN (SOL-14PIN)	1
U9	03-07805-01	REGULATOR 7805 (NJM78L05UA-TEI)	1
U30	03-08728-00	WM8728 (SSOP-20PIN)	1
U28	03-29400-15	AM29LV400BT-90 DVD201H	1
U5,7	03-34063-01	MC34063A (SOP-8PIN)	2
UU5	03-39010-00	IC W39F010P-70B (PLCC-32PIN)	1
U6	03-78153-00	IC EM78P153EP-171A DIP14	1
Y1	04-00270-00	CRYSTAL 27M (HC-49/US)	1
Y3	04-00400-02	CERAMIC RESONATOR 4MHZ	1
YY1	04-03386-00	CERAMIC ZTA33.86MX	1
CC24/6,73~8	05-63100-00	CHIP CAP 10PF ±5% NPO 0603 SMT	8
CC46,82/5,CV2,8,12	05-63101-00	CHIP CAP 100PF ±5% NPO 0603 SMT	6
C185,190,CA19,27,30/1,CC11,21/2,47	05-63102-01	CHIP CAP 1000PF ±10% X7R 0603 SMT	10

ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Parts No.	Description	Q'ty
B6~9,11/3/5~30/4~8,41/5/6,57/9,C192 2,128,191,230/2,246/7,256,CC3,6,7,9 ,10/2/9	05-63104-02	CHIP CAP 0.1μF ±20% X7R 0603 SMT	104
C184/8,CA17,20/5/8	05-63151-00	CHIP CAP 150PF ±5% NPO 0603 SMT	6
C249	05-63200-00	CHIP CAP 20PF ±5% NPO 0603 SMT	1
C216,223	05-63222-01	CHIP CAP 2200PF ±10% X7R 0603 SMT	2
C20/1,248	05-63330-00	CHIP CAP 33PF ±5% NPO 0603 SMT	3
C3,9,CC8,59	05-63470-00	CHIP CAP 47PF ±5% NPO 0603 SMT	4
C196/7,CC16/7,SC1~4	05-63471-00	CHIP CAP 470PF ±5% NPO 0603 SMT	8
CC86	05-63472-01	CHIP 4700P ±10% X7R 0603 SMT	1
C8,23,CC2,15,43	05-63473-01	CHIP CAP 0.047μF ±10% X7R 0603 SMT	5
C7,CC14,64/7	05-63474-02	CHIP CAP 0.47μF ±20% X7R 0603 SMT	4
CC4	05-63561-00	CHIP CAP 560PF ±5% NPO 0603 SMT	1
CC35,41/2/4/5	05-63681-00	CHIP CAP 680PF ±5% NPO 0603 SMT	5
CC13	05-63682-01	CHIP CAP 6800PF ±10% X7R 0603 SMT	1
C6,16,180/1,213/5/9,257,B14,CV1,5,9, CA1~6,8,11~6,22~4,CP3	06-16106-02	E. CAP 10μF 16V (Ø3.5X5MM)	29
C13/5,226/7,CC83,CA7,9,CV4,6,11,CA 10,CC18	06-16107-04	E. CAP 100μF 16V (Ø6X5MM)	12
C4,5,14	06-16108-00	E. CAP 1000μF 16V (Ø10X15MM)	3
C1,10~2/7/8,CC1,5,29,55/8,116/8,122/ 3,B1,10/2,31~3/9,40/2/7,56,61	06-63227-01	E. CAP 220μF 6.3V (Ø6X5MM)	27
CC33,50,91	06-63476-00	E. CAP 47μF/6.3V Ø5X5MM	3
RR30/3~5	07-05220-54	CHIP RES 22Ω 1/10W	4
RR21/3,RV3,R8,16,RA10/4,25,31	07-63000-00	CHIP RES 0Ω 0603 SMT	8
R19,RR29,37,RV5,12	07-63100-00	CHIP RES 10Ω ±5% 0603 SMT	5
R11/2/6,RR66/8,RV2	07-63101-00	CHIP RES 100Ω ±5% 0603 SMT	6
RRN6~8,13~6	07-63101-04	CHIP CN34JT 100Ω (0603X4 SMT)	7
R29,156,RA7,8,37	07-63102-00	CHIP RES 1kΩ ±5% 0603 SMT	5
R149,159,185/7/8,RR4,15,24/6/8,40/2, 51,73,102,126/7/9,RA38~40	07-63103-00	CHIP RES 10kΩ ±5% 0603 SMT	21
RRN4,5,9~12	07-63103-04	CHIP CN34JT 10kΩ (0603X4 SMT)	6
R43,304,RR2,3,27,50	07-63104-00	CHIP RES 100kΩ ±5% 0603 SMT	6
R20/4	07-63113-00	CHIP RES 11kΩ ±5% 0603 SMT	2
RV1,3,4	07-63121-00	CHIP RES 120Ω ±5% 0603 SMT	3
RR1,6,38/9,RA1,2,20/1	07-63122-00	CHIP RES 1.2kΩ ±5% 0603 SMT	8
R181	07-63122-01	CHIP RES 1.2kΩ ±1% 0603 SMT	1
R178	07-63151-00	CHIP RES 150Ω ±1% 0603 SMT	1
RR49	07-63152-00	CHIP RES 1.5kΩ ±5% 0603 SMT	1

ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Parts No.	Description	Q'ty
R186,189,RR9,70/2,95	07-63203-00	CHIP RES 20kΩ ±5% 0603 SMT	6
R184,192,RR19	07-63222-01	CHIP RES 2.2kΩ ±5% 0603 SMT	3
R22/8,RV6	07-63223-00	CHIP RES 22kΩ ±5% 0603 SMT	3
R296	07-63271-00	CHIP RES 270Ω ±5% 0603 SMT	1
RA12/9,29,36	07-63303-00	CHIP RES 30kΩ ±5% 0603 SMT	4
R44,RR18,98	07-63330-00	CHIP RES 33Ω ±5% 0603 SMT	3
R3,4,20/1	07-63331-00	CHIP RES 330Ω ±5% 0603 SMT	4
R14/5,21/7,RR12~4,20,101,RA11/5/6/ 8,28,32/3/5	07-63332-00	CHIP RES 3.3kΩ ±5% 0603 SMT	17
RR93/4/7	07-63333-00	CHIP RES 33kΩ ±5% 0603 SMT	3
R180,191	07-63362-01	CHIP RES 3.6kΩ ±1% 0603 SMT	2
RA9,17,26,34	07-63392-00	CHIP RES 3.9kΩ ±5% 0603 SMT	4
R9,25,RV7~9,RP2	07-63471-00	CHIP RES 470Ω ±5% 0603 SMT	6
R1,3~7,10/8,26,299,RR7,11/6,22,67,R A5,6,22/3	07-63472-00	CHIP RES 4.7kΩ ±5% 0603 SMT	19
RR17,96,100	07-63473-00	CHIP RES 47kΩ ±5% 0603 SMT	3
RR54	07-63474-00	CHIP RES 470kΩ ±5% 0603 SMT	1
R165,RR5,25,32,41	07-63512-00	CHIP RES 5.1kΩ ±5% 0603 SMT	5
RR10	07-63513-00	CHIP RES 51kΩ ±5% 0603 SMT	1
RA13,24/7,30	07-63683-00	CHIP RES 68kΩ ±1% 0603 SMT	4
R64,179,RV1,2	07-63750-00	CHIP RES 75Ω ±5% 0603 SMT	4
R167	07-63821-00	CHIP RES 820Ω ±5% 0603 SMT	1
RR31,53	07-63822-01	CHIP RES 8.2kΩ ±1% 0603 SMT	2
RR104/5/7/8	07-85010-00	CHIP RES 1Ω ±5% 0805 SMT	4
L5,6,12	09-00270-00	CHIP SGMI1608M2R7KT	3
FB1~3,5~9,FLV2	09-00601-00	CHIP BGH2012B601LB	9
L184/5/7	09-03315-00	SL0805-3R3M1R5	3
L1,180~2	09-10190-00	SL0805-101KR90	4
L183/6	09-22113-00	CDRH125-221M1R3	2
	11-02014-007	DVD-2014H MB 178.8X144.7X1.2MM	1
JS4	16-00035-04	Ø3.5MM JACK (4PIN) W/SW	1
JS3,6,11	16-00035-10	Ø3.5MM JACK 4PIN BLACK	3
JS5,10/2	16-00035-20	Ø3.5MM JACK 4PIN YELLOW	3
JS9	16-00035-30	Ø3.5MM JACK 4PIN ORANGE	1
SW1	16-04201-04	SLIDE SWITCH 4P2T SK-42D01-PG4-N	1
JS8	25-00171-22	2PIN DC IN SOCKET	1
JS7,13	25-00174-03	Ø3.5MM DC OUT SOCKET	2
JS2	25-02010-12	CON CHIP 12PIN P=1.0MM FPC TOP SOCK	1
JS15	25-02013-00	5PIN S-VIDEO CONNECTOR	1

ELECTRICAL PARTS LIST - CONTINUED

Ref. No.	Parts No.	Description	Q'ty
CN2	25-08360-13A	CON CHIP 13PIN P=1.0MM FPC TOP	1
CN1	25-08360-24A	CON CHIP 24PIN P=0.5MM FPC TOP	1
AV-IN	25-24184-05	WAFER FOR 5PIN JST 2.0	1
PC BOARD ASSY, KEY BOARD			
LEF1	02-01112-02F	SMD LED PG1112H RED "STANLEY"	1
	02-01112-06M	SMD LED S172DNB4-5 0805 BLUE	12
ZF2	02-50053-00	CHIP ZENER DIODE 4.3V (LL-34)	1
UF1	03-06312-00	IC PT6312LQ ANGUS	1
CF3,5	05-63101-00	CHIP 100PF ±5% NPO 0603 SMT	2
CF6~8	05-63104-02	CHIP CAP 0.1µF ±20% Y5V 0603 SMT	3
CF4	05-63470-00	CHIP 47PF ±5% NPO 0603 SMT	1
CF1,2	06-10476-01	E. CAP 47µF 10V (Ø4X7 MINI)	2
RF1	07-63100-00	CHIP RES 10Ω ±5% 0603 SMT	1
RF2~4,9,12~4,20	07-63102-00	CHIP RES 1kΩ ±5% 0603 SMT	8
RF10	07-63151-00	CHIP RES 150Ω ±5% 0603 SMT	1
RF16	07-63221-00	CHIP RES 220Ω ±5% 0603 SMT	1
RF22/5	07-63331-00	CHIP RES 330Ω ±5% 0603 SMT	2
RF5	07-63333-00	CHIP RES 33kΩ ±5% 0603 SMT	1
RF6~8,11/5	07-63472-00	CHIP RES 4.7kΩ ±5% 0603 SMT	5
RF17/9,21	07-63561-00	CHIP RES 560Ω ±5% 0603 SMT	3
RF26	07-63681-00	CHIP RES 680Ω ±5% 0603 SMT	1
	11-02014-337	DVD2014 KB D/S 186X37.5X1.2MM	1
	16-01107-00K	TACT SW. DCT/1101 4.3MM 2 PIN	17
ENTER,VOL+/-,AUDIO,SOURCE	16-01140-04A	TACT SW KPS-1107SW TAPPING	5
AV-IN	25-01712-03	AV INPUT BASE	1
JP1	25-02010-12	CON CHIP 12PIN P=1.0MM FPC TOP SOCK	1
IR1	29-01201-00	IR RECEIVER GP1UM261XK (SHARP)	1
PC BOARD ASSY, REMOTE BOARD			
Q1	01-01781-18	TR. 2SD1781K-R "ROHM"	1
	02-00120-00	IR EMITIER DIODE MIE-544A4	1
D4	02-04148-02	DIODE CHIP RLS4148 1206 ROHM	1
IC1	03-02222-00	IC PT2222-001 SOP ANGUS	1
C1,2	05-63121-00	CHIP CAP 120P ±5% NPO 0603 SMT	2
C3	06-06476-02	E. CAP 47µF 6.3V (Ø5X5MM)	1
R1	07-05010-54	CHIP RES 1Ω 1/10W	1
XT1	09-50455-05	CER RESONATOR CSB-455E "MURATA"	1
	12-00172-817	PCB RC-12 REM 164X47	1

SPECIFICATIONS

Current Consumption.....	Less than 2.0A
Signal System	Competitive video 1.0Vp-p 75Ω RCA pin jack
Audio Output level	600Ω (2CH 2.0Vrms)
Audio signal output	
Characteristics:	
Frequency response	20 Hz - 20 kHz
S/N Ratio.....	90 dB (JIS)
Wow and flutter	Below Measurable Limits

Note:

Specifications and design are subject to modification, without notice, due to improvements in technology.