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Printed in Korea
AK82-01216A

SERVICE MANUAL

DVD-P475KD



DVD PLAYER

Chassis : BRINO
BASIC : DVD-P270K
Application Model
: DVD-P475KD

Application Areas
: NWT, SEO, XER

SERVICE Manual

DVD PLAYER



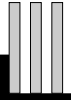
Merit & Character regarding Product

- ① 37 With LED Display
- ② ZORAN Vaddis 966Chip Solution
- ③ Multi Progressive Scan
- ④ 14Bit Video DAC
- ⑤ DivX
- ⑥ AC-3
- ⑦ Karaoke 2 mic



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1. Precautions

1-1 Safety Precautions

1) Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items:

(1) Be sure that no built-in protective devices are defective or have been defeated during servicing.
(1) Protective shields are provided to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.
(2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fish papers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

(2) Be sure that there are no cabinet openings through which adults or children might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, excessively wide cabinet ventilation slots, and an improperly fitted and/or incorrectly secured cabinet back cover.

(3) Leakage Current Hot Check-With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1270 (40.7). With the instrument's AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinets, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis.

Any current measured must not exceed 0.5mA. Reverse the instrument power cord plug in the outlet and repeat the test. See Fig. 1-1.

Any measurements not within the limits specified herein indicate a potential shock hazard that must be eliminated before returning the instrument to the customer.

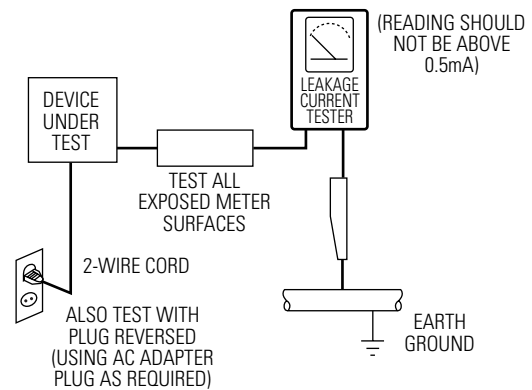


Fig. 1-1 AC Leakage Test

(4) Insulation Resistance Test Cold Check-(1) Unplug the power supply cord and connect a jumper wire between the two prongs of the plug. (2) Measure the resistance with an ohmmeter between the jumpered AC plug and all exposed metallic cabinet parts on the instrument, such as screwheads, antenna, control shafts, handle brackets, etc. When an exposed metallic part has a return path to the chassis, the reading should be between 1 and 5.2 megohm. When there is no return path to the chassis, the reading must be infinite. If the reading is not within the limits specified, there is the possibility of a shock hazard, and the instrument must be repaired and rechecked before it is returned to the customer. See Fig. 1-2.

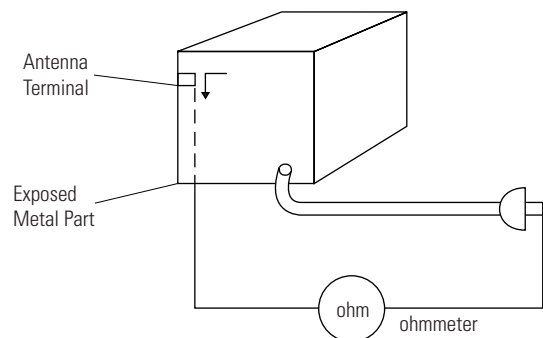


Fig. 1-2 Insulation Resistance Test

- 2) Read and comply with all caution and safety related notes on or inside the cabinet, or on the chassis.
- 3) Design Alteration Warning-Do not alter or add to the mechanical or electrical design of this instrument. Design alterations and additions, including but not limited to, circuit modifications and the addition of items such as auxiliary audio output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions will make you, the servicer, responsible for personal injury or property damage resulting therefrom.
- 4) Observe original lead dress. Take extra care to assure correct lead dress in the following areas:
(1) near sharp edges, (2) near thermally hot parts (be sure that leads and components do not touch thermally hot parts), (3) the AC supply, (4) high voltage, and (5) antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between a component and the printed-circuit board. Check the AC power cord for damage.
- 5) Components, parts, and/or wiring that appear to have overheated or that are otherwise damaged should be replaced with components, parts and/ or wiring that meet original specifications.
Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
- 6) Product Safety Notice-Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by shading, an (⚡) or a (⚡) on schematics and parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

CAUTION : Before servicing units covered by this service manual and its supplements, read and follow the Safety Precautions section of this manual.

Note : If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions. Remember: Safety First.

1-2-1 General Servicing Precautions

- (1) a. Always unplug the instrument's AC power cord from the AC power source before (1) removing or reinstalling any component, circuit board, module or any other instrument assembly, (2) disconnecting any instrument electrical plug or other electrical connection, (3) connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
- b. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
- c. Do not apply AC power to this instrument and /or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
- d. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Note : Refer to the Safety Precautions section ground lead last.

- (2) The service precautions are indicated or printed on the cabinet, chassis or components. When servicing, follow the printed or indicated service precautions and service materials.
- (3) The components used in the unit have a specified flame resistance and dielectric strength. When replacing components, use components which have the same ratings. Components identified by shading, by () or by () in the circuit diagram are important for safety or for the characteristics of the unit. Always replace them with the exact replacement components.

- (4) An insulation tube or tape is sometimes used and some components are raised above the printed wiring board for safety. The internal wiring is sometimes clamped to prevent contact with heating components. Install such elements as they were.

- (5) After servicing, always check that the removed screws, components, and wiring have been installed correctly and that the portion around the serviced part has not been damaged and so on. Further, check the insulation between the blades of the attachment plug and accessible conductive parts.

1-2-2 Insulation Checking Procedure

Connect the insulation resistance meter (500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts(see note) should be more than 1 Megohm.

Note : Accessible conductive parts include metal panels, input terminals, earphone jacks, etc.

1-3 ESD Precautions

Electrostatically Sensitive Devices (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity.

Such components commonly are called Electrostatically Sensitive Devices(ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

- (1) Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
- (2) After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- (3) Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
- (4) Use only an anti-static solder removal devices. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
- (5) Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
- (6) Do not remove a replacement ESD device from its protective package until immediately before you are ready to install it.(Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
- (7) Immediately before removing the protective materials from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- (8) Minimize bodily motions when handling unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

1-4 Handling the optical pick-up

The laser diode in the optical pick up may suffer electrostatic breakdown because of potential static electricity from clothing and your body.

The following method is recommended.

- (1) Place a conductive sheet on the work bench (The black sheet used for wrapping repair parts.)
 - (2) Place the set on the conductive sheet so that the chassis is grounded to the sheet.
 - (3) Place your hands on the conductive sheet (This gives them the same ground as the sheet.)
 - (4) Remove the optical pick up block
 - (5) Perform work on top of the conductive sheet. Be careful not to let your clothes or any other static sources to touch the unit.
- ◆ Be sure to put on a wrist strap grounded to the sheet.
 - ◆ Be sure to lay a conductive sheet made of copper etc. Which is grounded to the table.

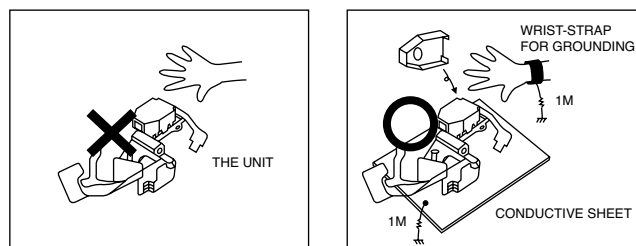


Fig.1-3

- (6) Short the short terminal on the PCB, which is inside the Pick-Up ASS'Y, before replacing the Pick-Up. (The short terminal is shorted when the Pick-Up Ass'y is being lifted or moved.)
- (7) After replacing the Pick-up, open the short terminal on the PCB.

1-5 Pick-up disassembly and reassembly

1-5-1 Disassembly

- 1) Remove the power cord.
- 2) Disassemble the Deck-Assy, Please see Chapter 4 (Fig 4-22 ~ 4-26).
- 3) Make solder land 2 points short on Pick-up.
(See Fig. 1-4)
- 4) Disassemble the Pick-up, Please see Chapter 4 (Fig 4-22 ~ 4-26)

1-5-2 Assembly

- 1) Replace the Pick-up.
- 2) Remove the soldering 2 points on Pick-up.
- 3) Reassemble the Deck-Assy.

Note : If the assembly and disassembly are not done in correct sequence, the Pick-up may be damaged.

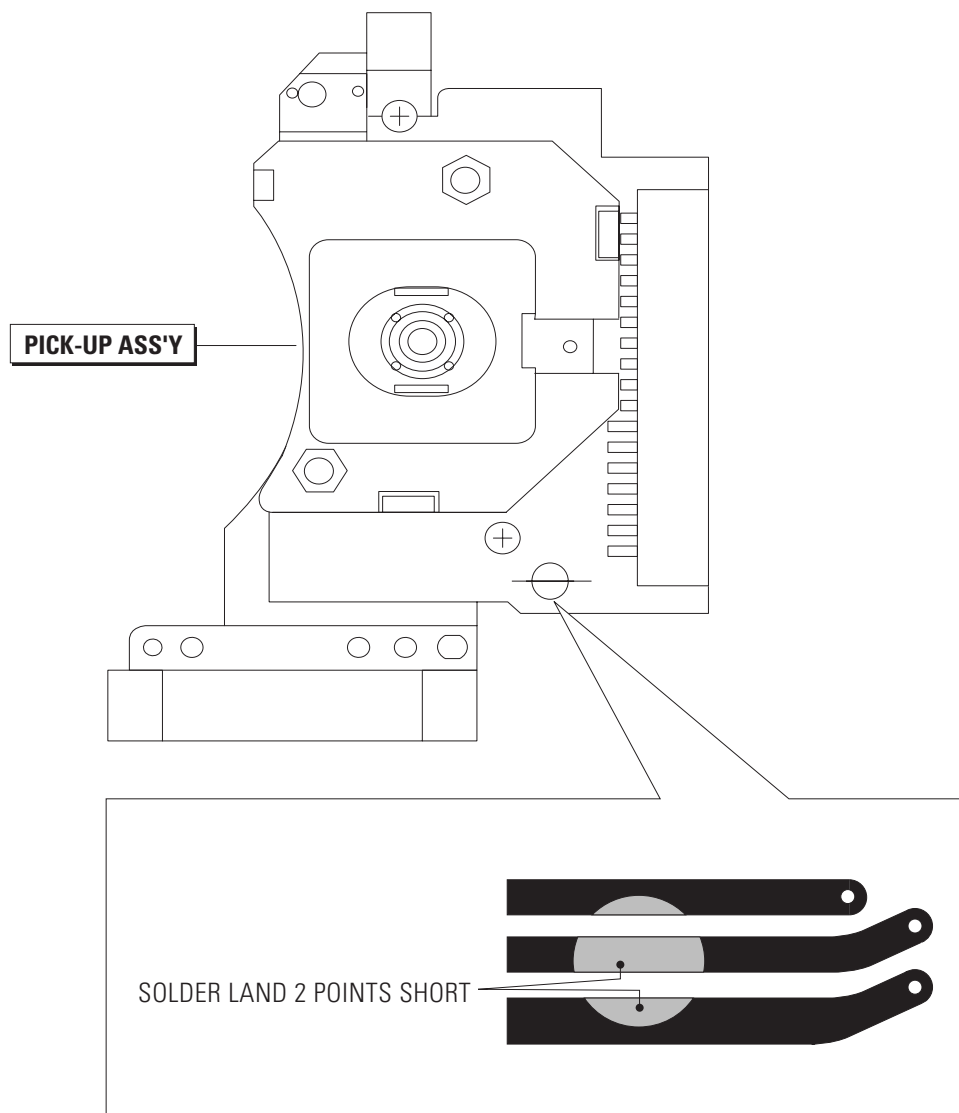


Fig. 1-4

2. Product Specification

2-1 Product Specification

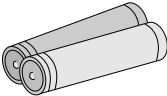
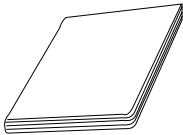
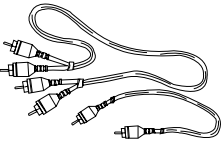
General	Power Requirements	AC110-240V, 60/50Hz
	Power Consumption	9W
	Weight	1.7Kg
	Dimensions	430mm (W) x 207mm (D) x 37mm (H)
	Operating Temperature Range	+5°C to +35°C
	Operating Humidity Range	10% to 75%
Disc	DVD (Digital Versatile Disc)	Reading Speed : 3.49 ~ 4.06m/sec. Approx. Play Time (Single Sided, Single Layer Disc) : 135min.
	CD : 12cm (Compact Disc)	Reading Speed : 4.8 ~ 5.6m/sec. Maximum Play Time : 74min.
	CD : 8cm (Compact Disc)	Reading Speed : 4.8 ~ 5.6m/sec. Maximum Play Time : 20min.
	VCD : 12cm	Reading Speed : 4.8 ~ 5.6m/sec. Maximum Play Time : 74min. (Video+Audio)
Video Output	Composite Video	1 channel : 1.0 Vp-p (75 Ω load)
	Scart Jack	R (Red) : 0.7 Vp-p (75 Ω load) G (Green) : 0.7 Vp-p (75 Ω load) B (Blue) : 0.7 Vp-p (75 Ω load) Composite Video : 1.0 Vp-p (75 Ω load) Luminance Signal : 1.0 Vp-p (75 Ω load) Color Signal : 0.3 Vp-p (75 Ω load)
	Component Video	Y : 1.0 Vp-p (75 Ω load) Pr : 0.70 Vp-p (75 Ω load) Pb : 0.70 Vp-p (75 Ω load)
	S-Video	Luminance Signal : 1.0 Vp-p (75 Ω load) Chrominance Signal : 0.3 Vp-p (75 Ω load)
	Scart Jack	2 Channel : L(1/L), R(2/R)
Audio Output	*Frequency Response	48KHz Sampling : 4Hz to 22KHz 96KHz Sampling : 4Hz to 44KHz
	*Dynamic Range	100dB

* : Nominal specification

2-2 Chassis Product Specification

Clasification	Item	DVD-P475KD	DVD-P465K
Chassis			
Compatibility	CD Disc Play	0	0
	DVD-RAM/-R/-RW/+RW(Video Mode)	0	0
	CD-R/-RW	0	0
Video	Progressive Scan Video	0	0
	108MHz/14Bit	0	0
Audio	Integrated Audio DAC	Down Sampling	Down Sampling
	DTS/AC-3 Decoder	0/0	0/0
	MP3/WMA Decoder	0	0
	Digital Out (DTS)	0	0
Convenience	VCD Playback	X	X
	SVCD/CDV	CVD 1.0 Not Compatible	CVD 1.0 Not Compatible
	Instant Replay/Skip	0	0
	Kodak Picture CD (JPEG)	0	0
	FRONT DISPLAY	LED	LED

2-3 Option Product Specification

Description Fig	Description	Parts No	Remark
	Remote Control	AK59-00054A	Model Standard of DVD-P475KD/XER
	Batteries for Remote Control	AC43-12002H	Model Standard of DVD-P475KD/XER S.N.A
	Owners Instructions	AK68-01291C	Model Standard of DVD-P475KD/XER
	Video/Audio Cable	AC39-42001R	Model Standard of DVD-P475KD/XER

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3. Alignment and Adjustment

3-1 Location of Test Point

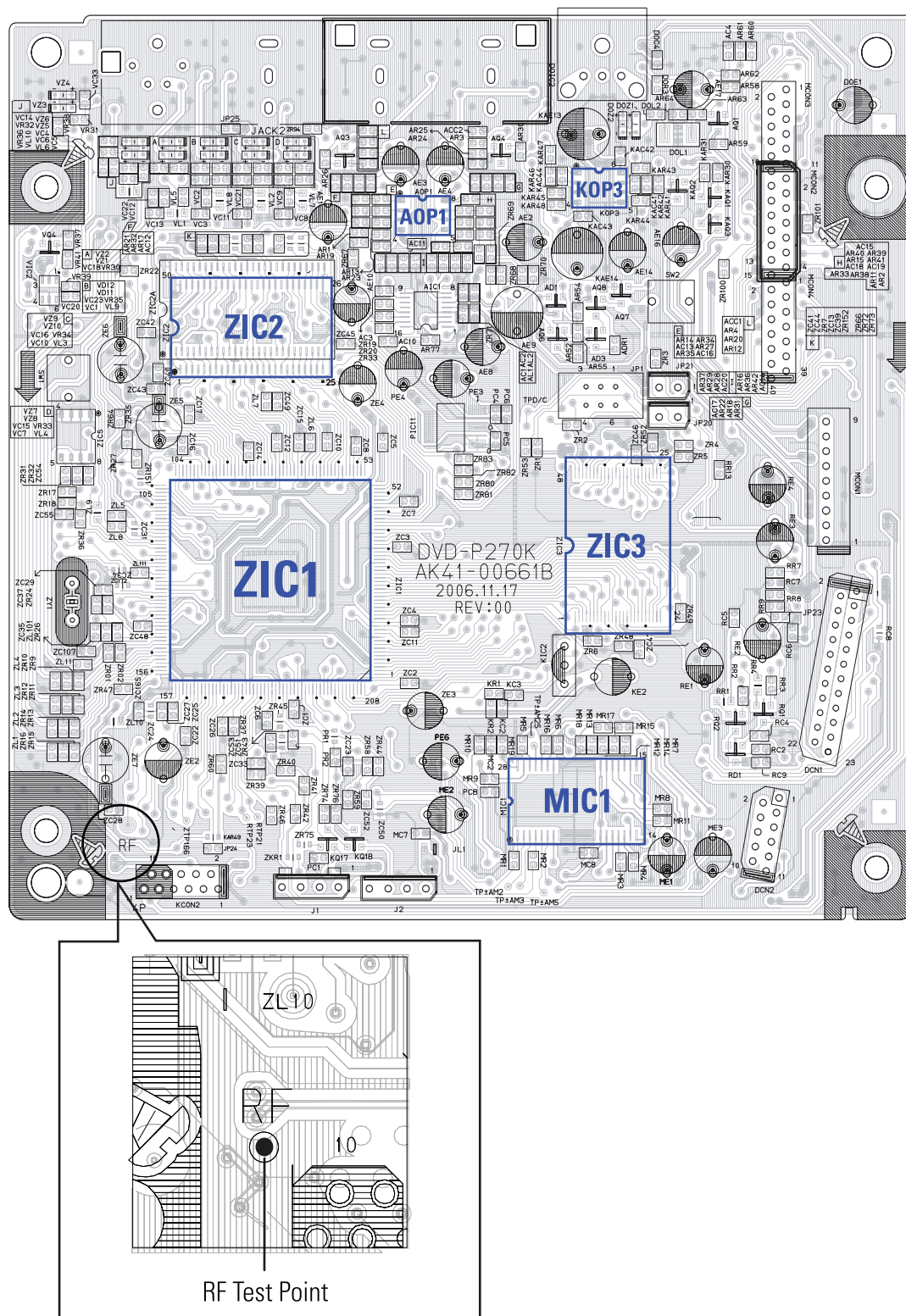


Fig. 3-1 Location of Test Point

3-2 Skew Adjustment

3-2-1 Adjustment Spec. and Test Point

<Table 3-1>

◆ Test Disc ; Service not Available

Test Disc	Adjustment Spec.	Test Point	Adjustment Location
TDV-533 Chapter 14	Clear Waveform	"RF" (Main PCB - Component Side) (See Fig. 3-1)	Screw A / B Ass'y Deck - Top Side (See Fig. 3-2)

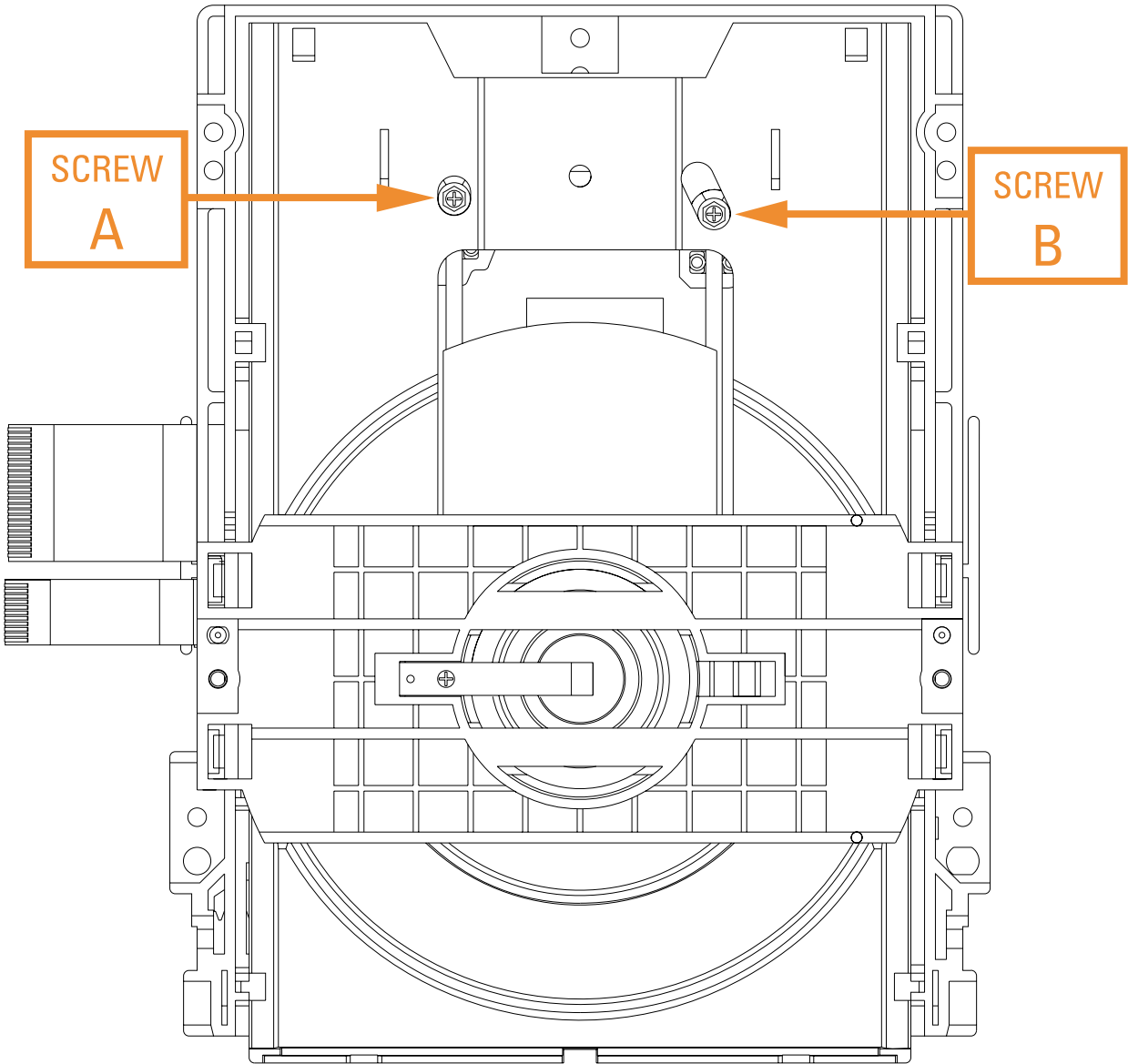


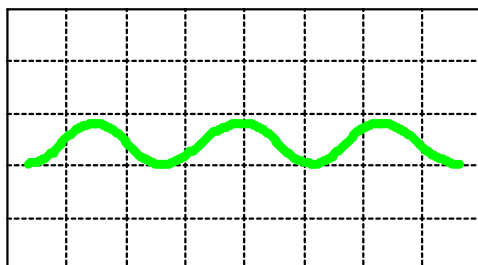
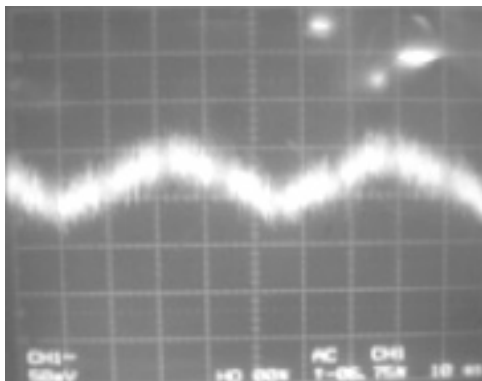
Fig. 3-2 Ass'y Deck (Top Side)

3-2-2 SKEW Adjustment Method

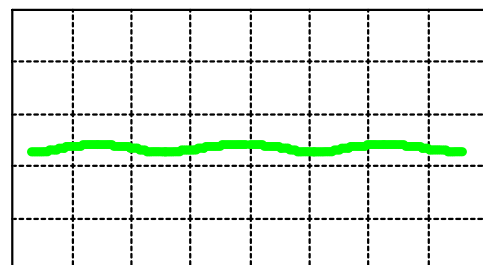
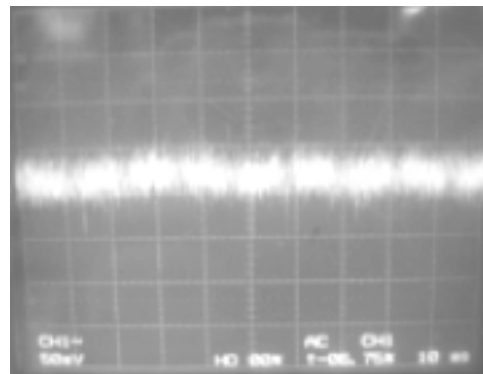
Needed to minimize RFSUM Jitter.

- 1) Connect an Oscilloscope to the "RF" Test Point (See Fig. 3-1).
 - 2) Connect Power, Open the Tray and Play the Ch.14 which is in the TDV-533 Disc.
 - ◆ Set the Oscilloscope Range as follows :
(Voltage ; 20mV/Div., Frequency ; 10m Sec.)
 - 3) Adjust the Screws Skew A and Skew B using a Hex screwdriver until you obtain a Flat Waveform and the picture is stable.
- Then, go to Chapter 1 and make sure the Waveform is Flat here as well.
If not, you have to go back to Chapter 14 and adjust again.
If you cannot obtain a Flat waveform, then the unit is defective.

Note : The Deck must be in a horizontal position. Use both "A" and "B" screws to adjust.



Typical Waveform before Adjustment



Waveform after Correct Adjustment

Fig.3-3 Envelope Waveform

MEMO

4. Disassembly and Reassembly

4-1 Cabinet and PCB

Note : Reassembly in reverse order.

4-1-1 Top Cabinet Removal

- 1) Remove 3 Screws ❶ on the back Top Cabinet.
- 2) Lift up the Top Cabinet in direction of arrow.

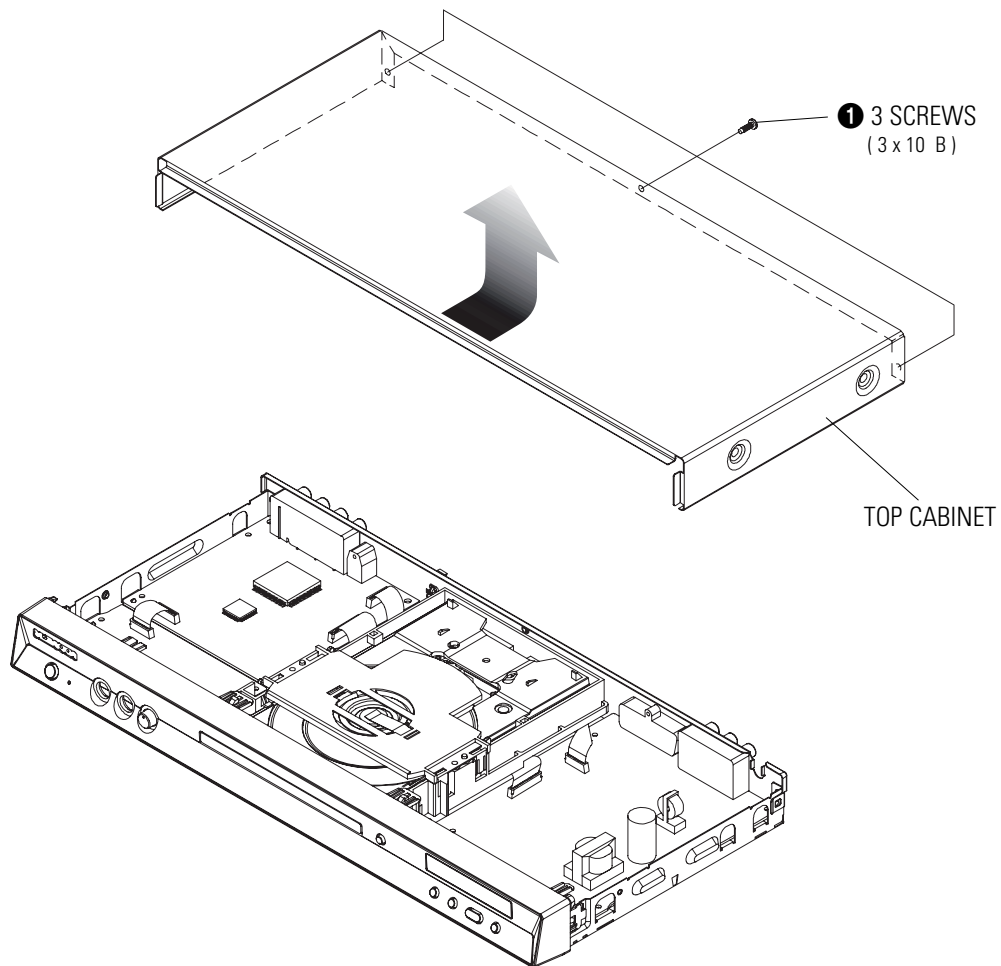


Fig. 4-1 Top Cabinet Removal

4-1-2 Ass'y Front-Cabinet Removal

1) Release 7 Hooks ❶, ❷, ❸, ❹ and Ass'y Front-Cabinet ❺.

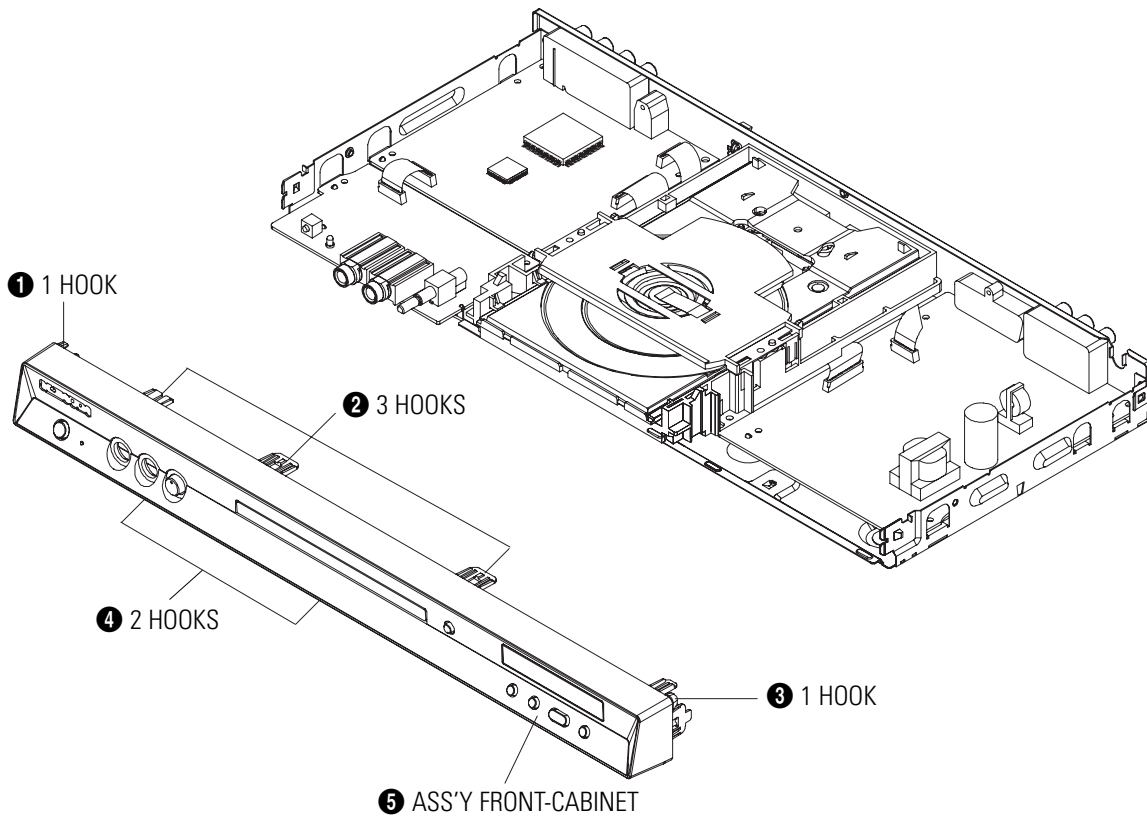


Fig.4-2 Ass'y Front-Cabinet Removal

4-1-3 Ass'y Deck Removal

- 1) Disconnect Flat-Cable from DCN1, DCN2 on Main PCB.
- 2) Remove 3 Screws ❶ from the Ass'y Deck and lift it up.

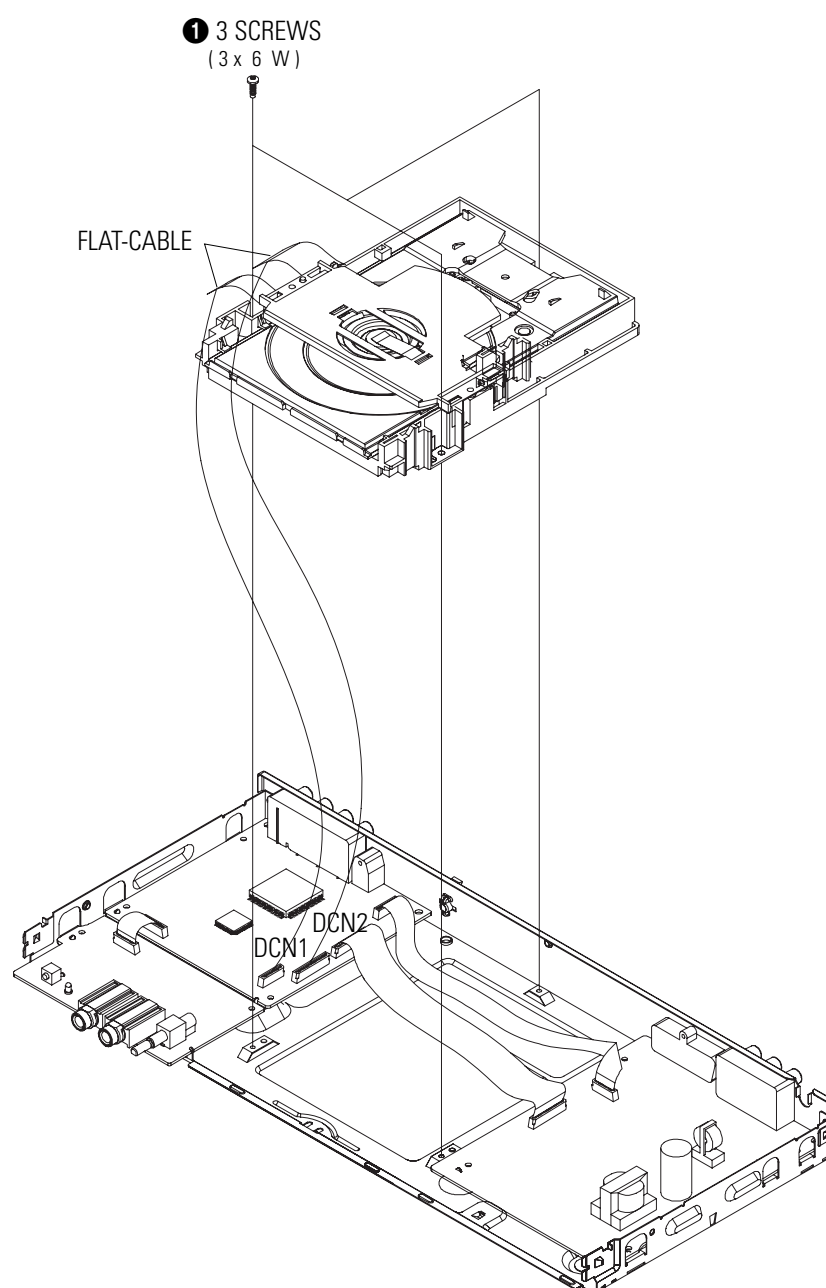


Fig. 4-3 Ass'y Deck Removal

4-1-4 Assy Main PCB & Jack PCB Removal

- 1) Remove 6 Screws ❶ from the Main PCB & K-OK PCB ❷ and lift up.
- 2) Remove 4 screws ❸ from Jack PCB ❹ and lift up.

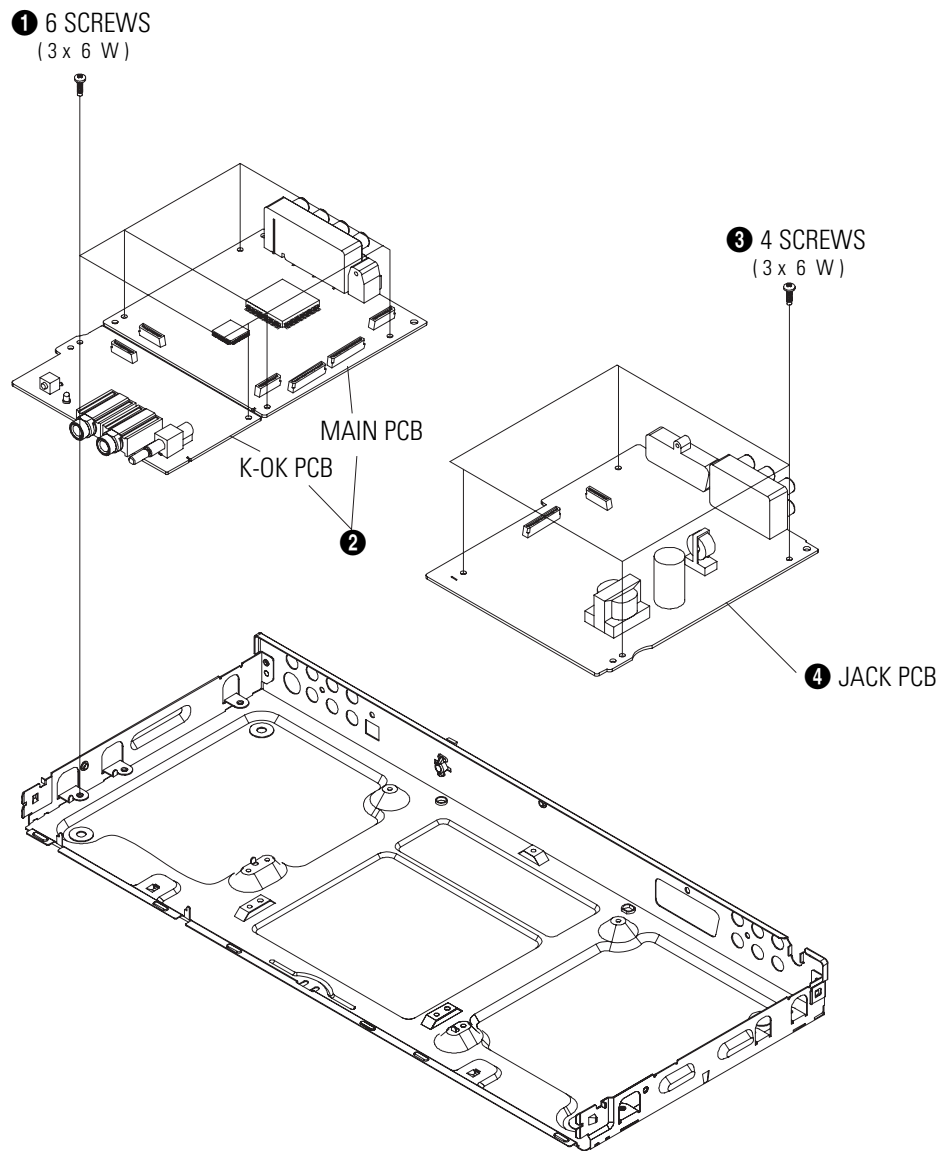


Fig. 4-4 Main PCB & Jack PCB Removal

4-2 Deck

4-2-1 Holder Chuck Removal

1) Push 4 Hooks ❶ in the direction of arrow "A" and lift up the Holder Chuck ❷.

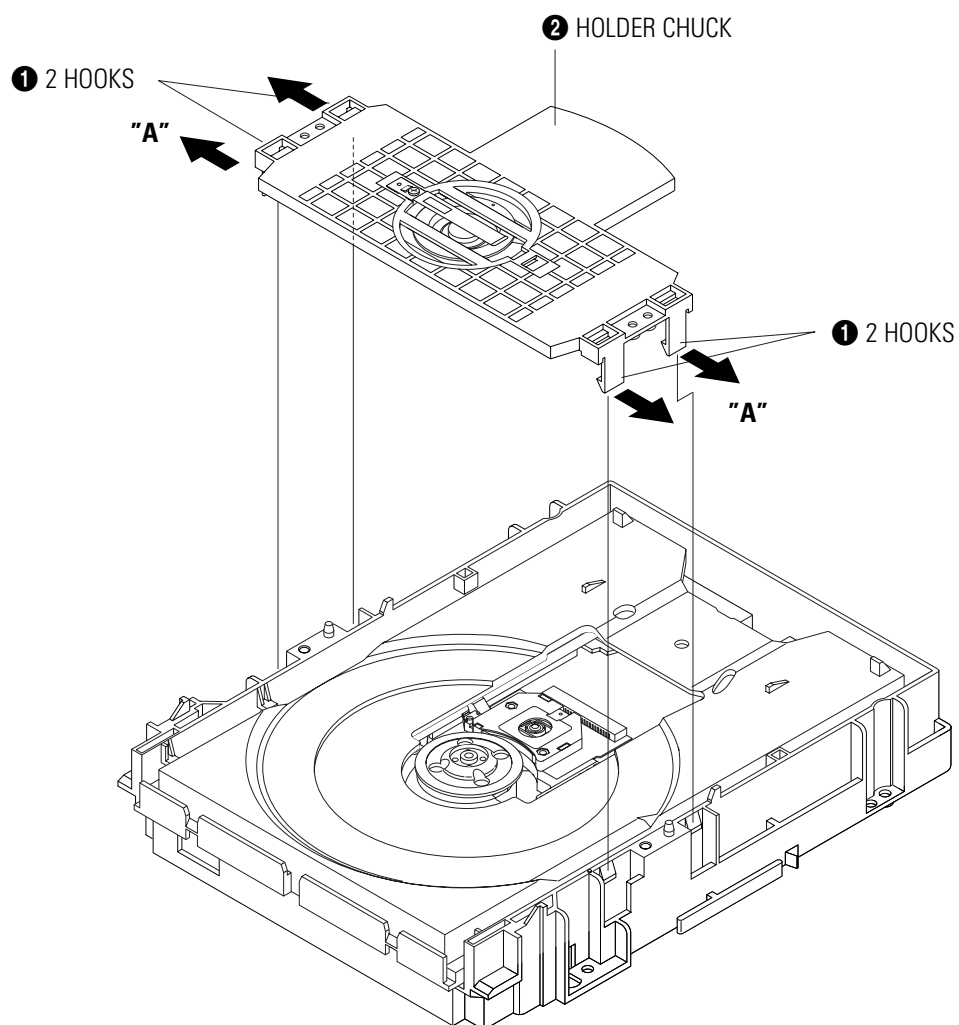


Fig. 4-5 Holder Chuck Removal

4-2-2 Tray Disc Removal

- 1) Insert a Screw Driver ❶ into Emergency Hole ❷ and push the Slider Housing ❸ in the direction arrow "A".
- 2) When the Tray Disc ❹ comes out a little, pull it in the direction arrow "B" by hand.

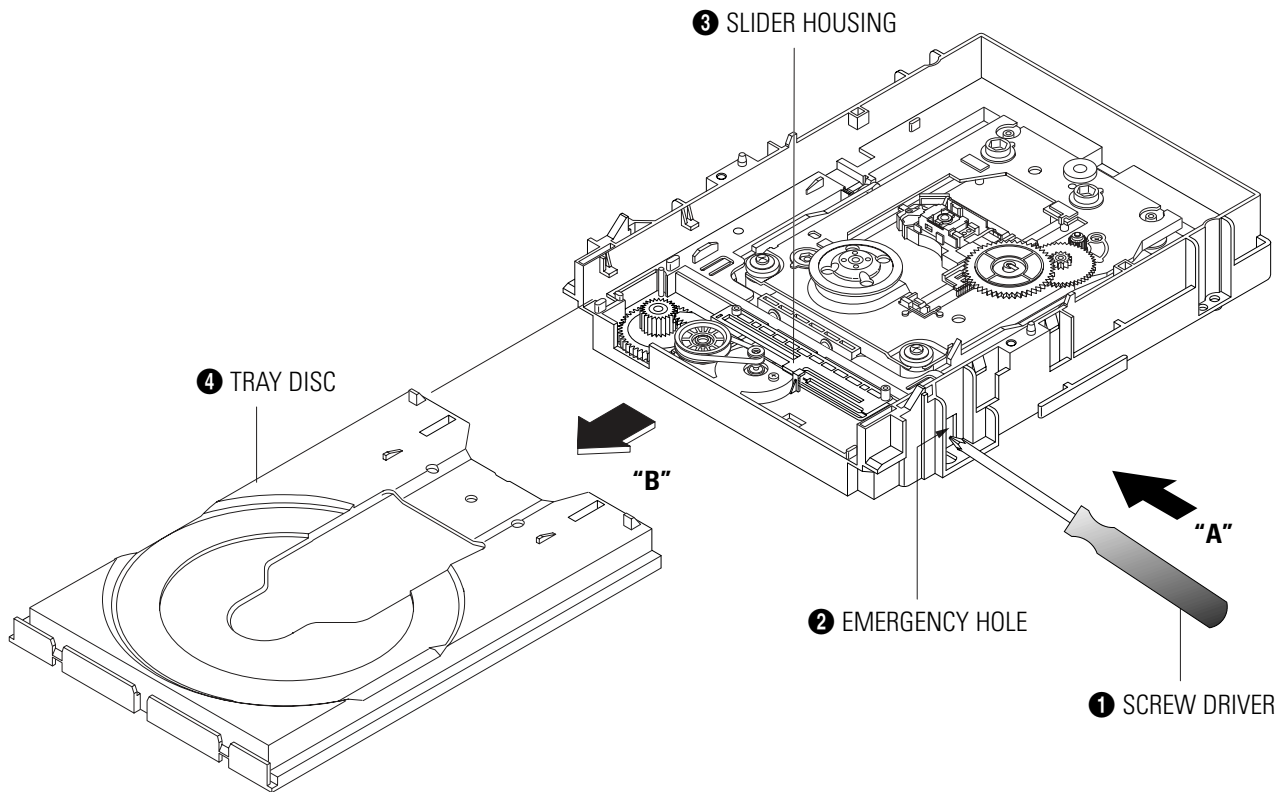


Fig.4-6 Tray Disc Removal

4-2-3 Assy P/U Deck Removal

- 1) Remove the 4 Soldering ❶ (SL+, SL-, SP+, SP-).
- 2) Remove the 1 Screw ❷ and lift up the Assy P/U Deck ❸

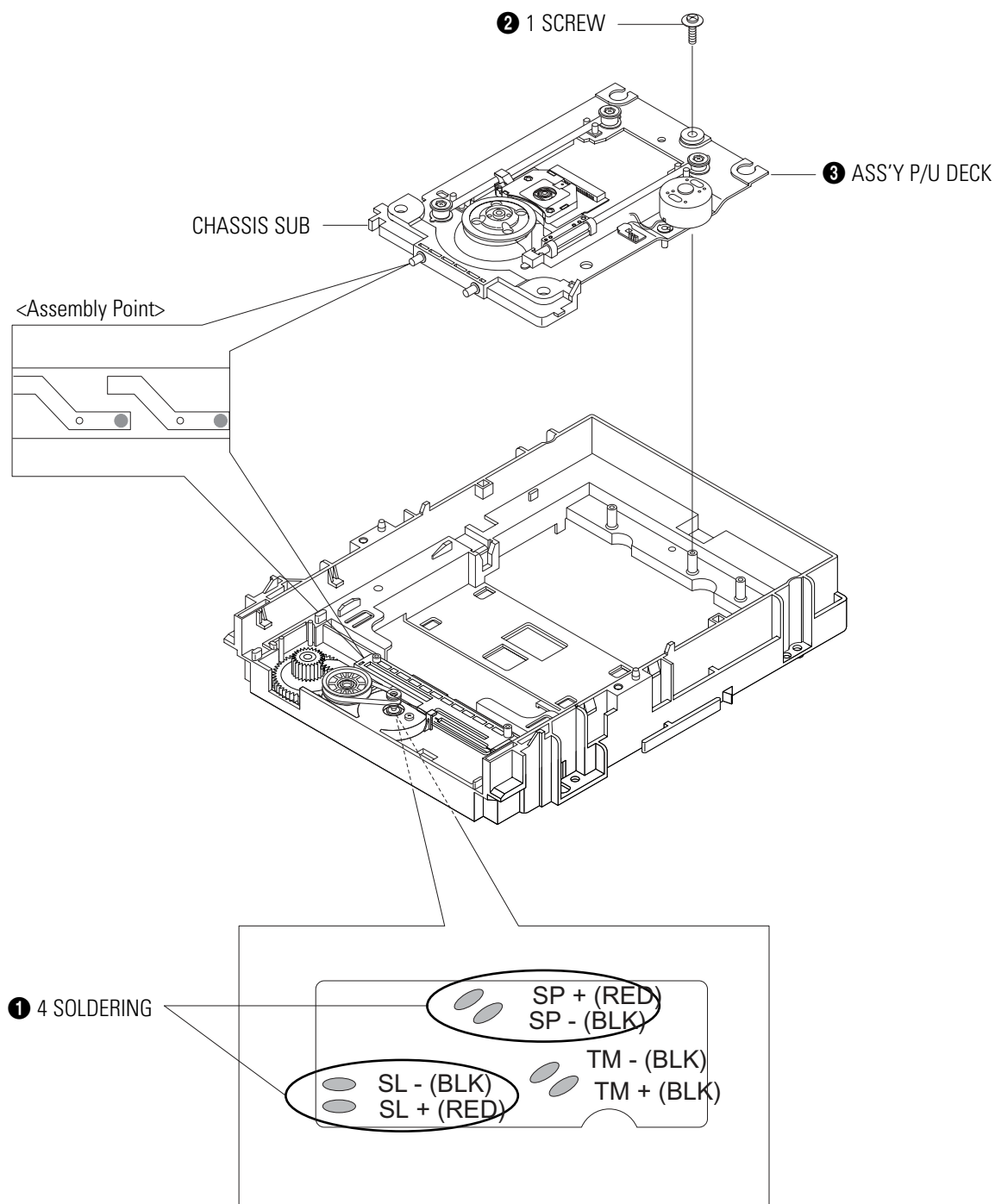


Fig. 4-7 Assy P/U Deck Removal

4-2-4 Ass'y Housing Removal

- 1) Remove the 2 Soldering ❶. (TM+, TM-)
- 2) Push the 2 Hooks ❷ in the direction of arrow "A" and remove Ass'y PCB Deck ❸.
- 3) Push the Slider Housing ❹ in the direction arrow "B".
- 4) Push the 1 Hook ❺ in the direction of arrow "C" and lift up the Slider Housing ❹.
- 5) Remove the Belt Pulley ❻ and 2 Screws ❼, Ass'y Motor Load ❽.
- 6) Push the 1 Hook ❾ in the direction of arrow "D" and lift up the Gear Pulley ❿, Gear Tray ⓫.

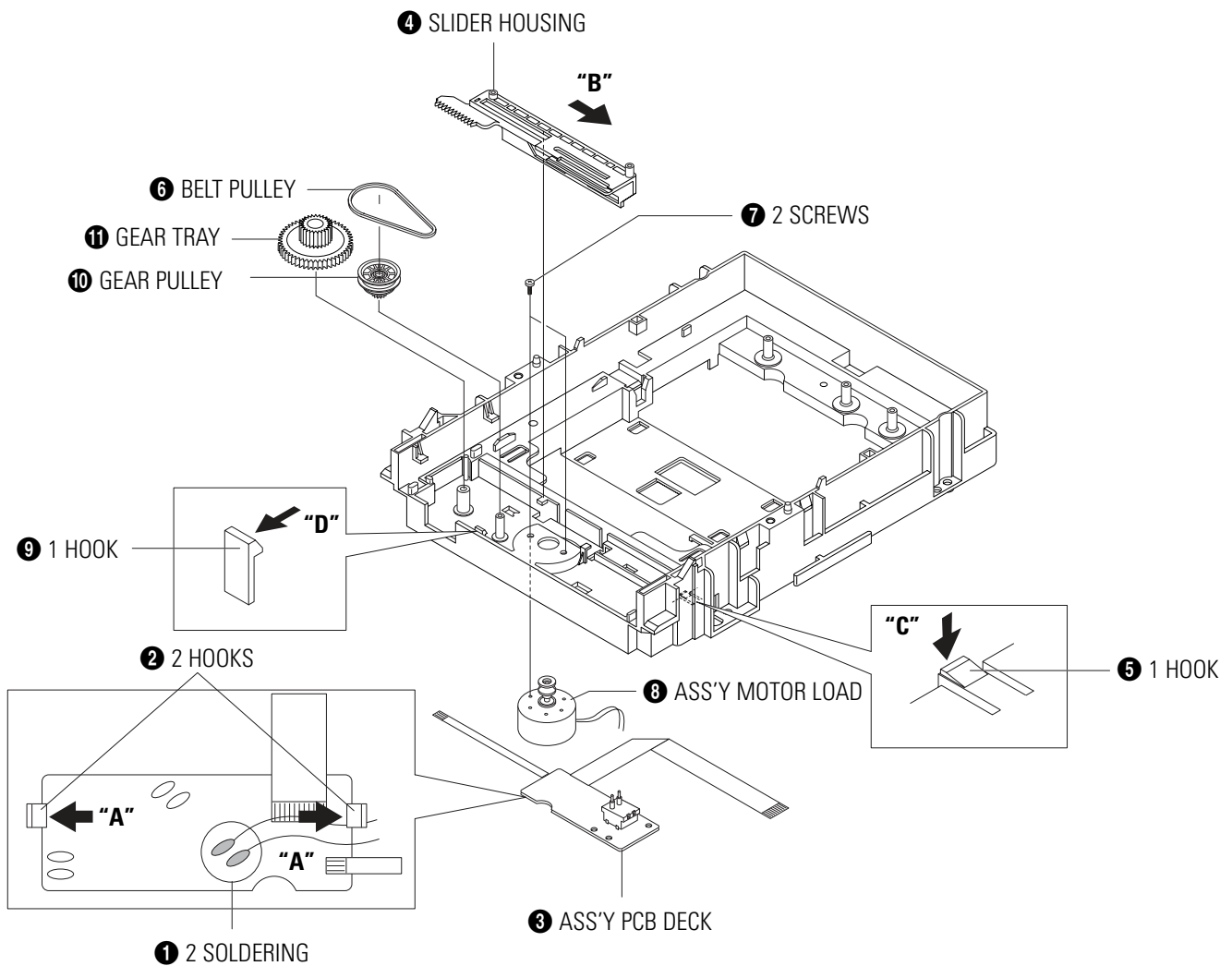


Fig. 4-8 Ass'y Housing Removal

4-2-5 Ass'y Bracket Deck Removal

- 1) Push the Hook ❶ in the direction of arrow "A" and lift up the Gear Feed B ❷.
- 2) Push the Hook ❸ in the direction of arrow "B" and lift up the Gear Feed A ❹.
- 3) Remove the 2 Screws ❺ and lift up Motor Feed Ass'y ❻.
- 4) Remove the 2 Screws ❼ and lift down Motor Spindl Ass'y ❸.
- 5) Remove the 3 Screws ❾ and remove 3 Holder Cam Skew ❿, Shaft Pick Up ⓫, Ass'y Pick Up ⓬.
- 6) Remove the 1 Screw ⓭ and remove Gear Back Lash ⓮.

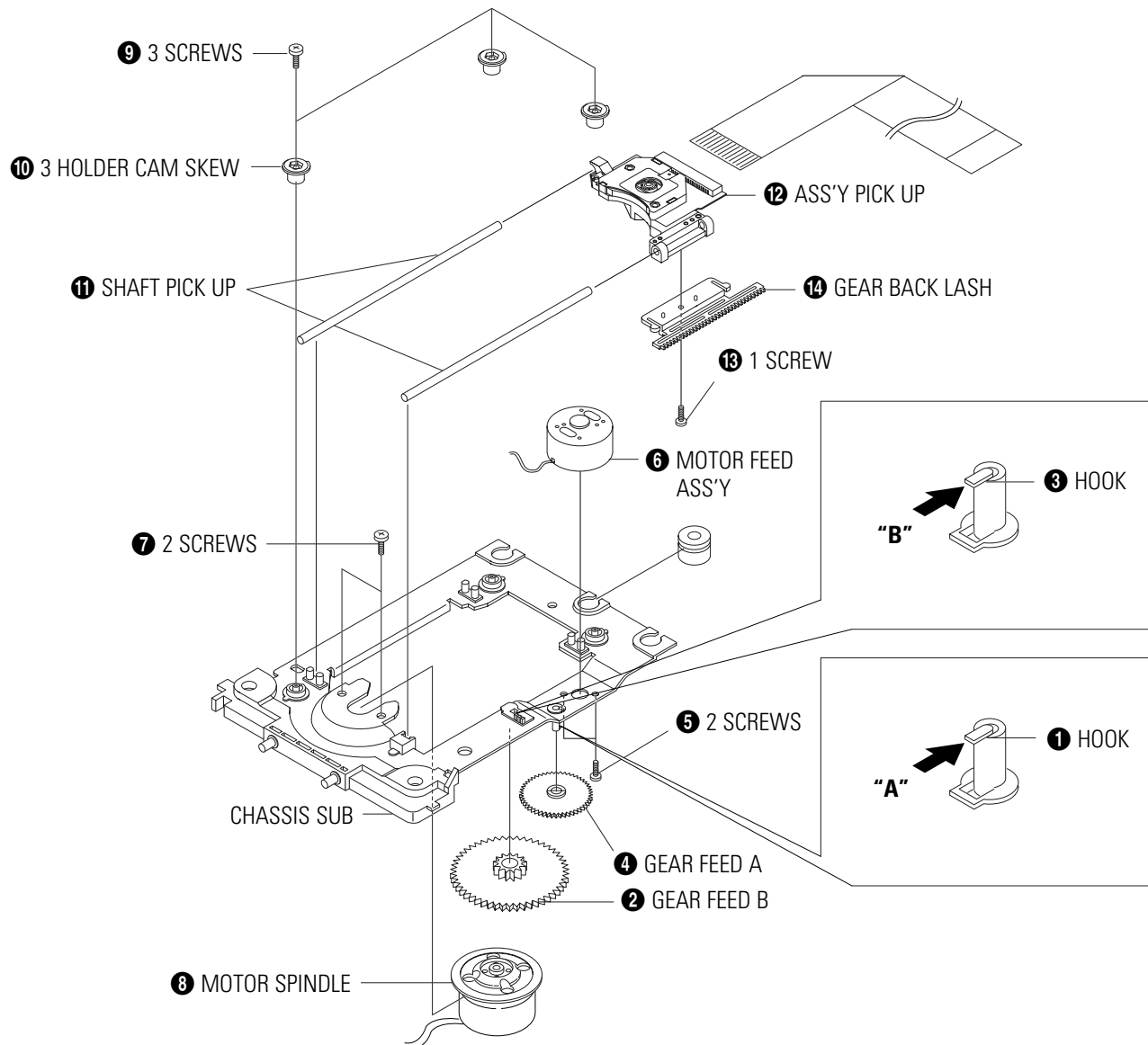
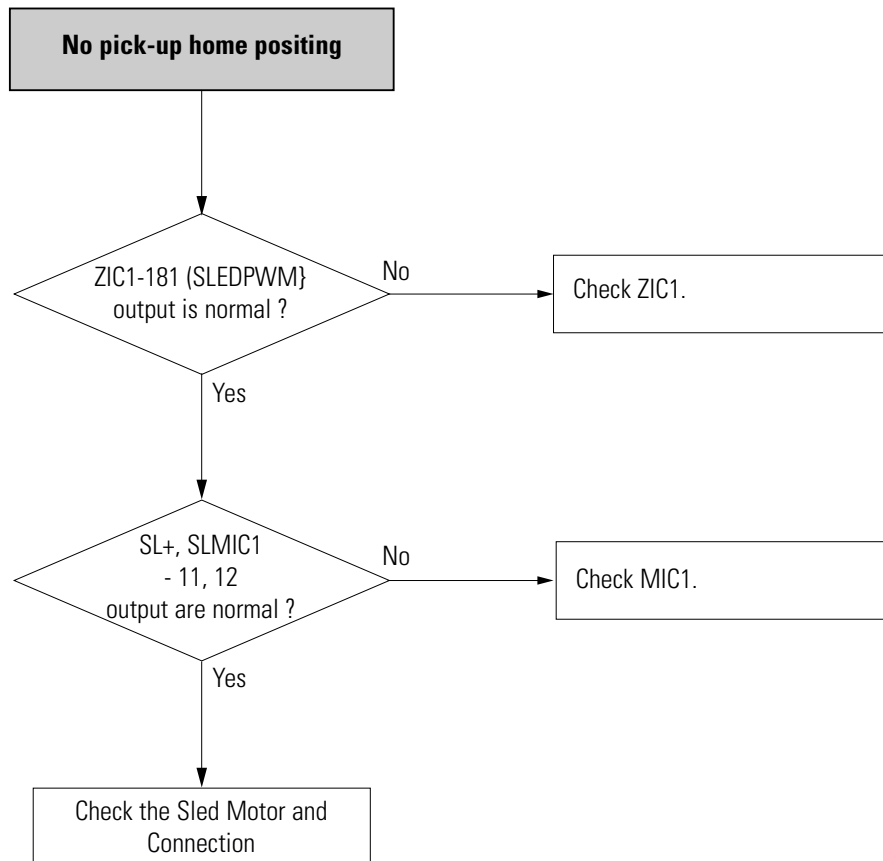
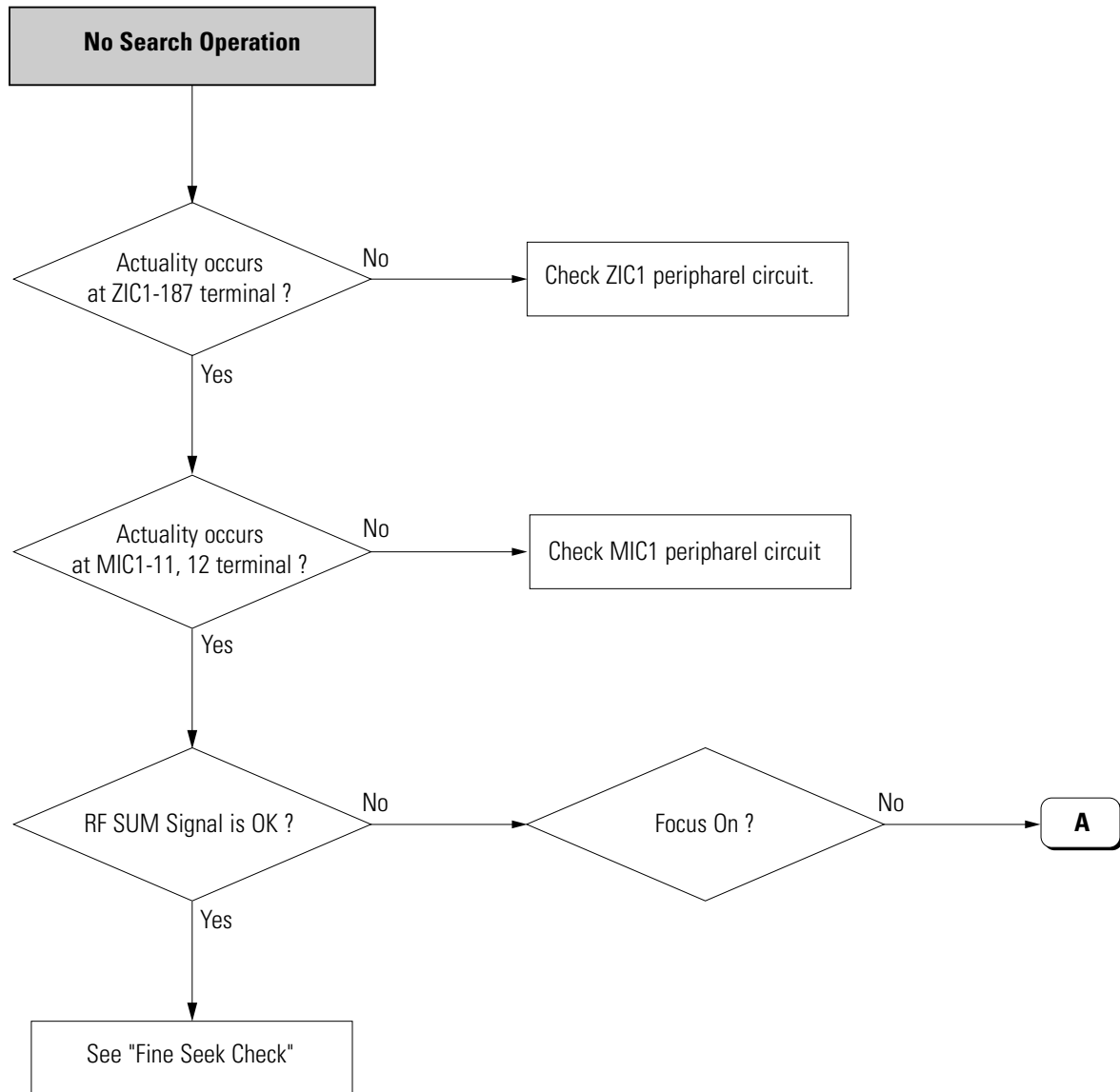


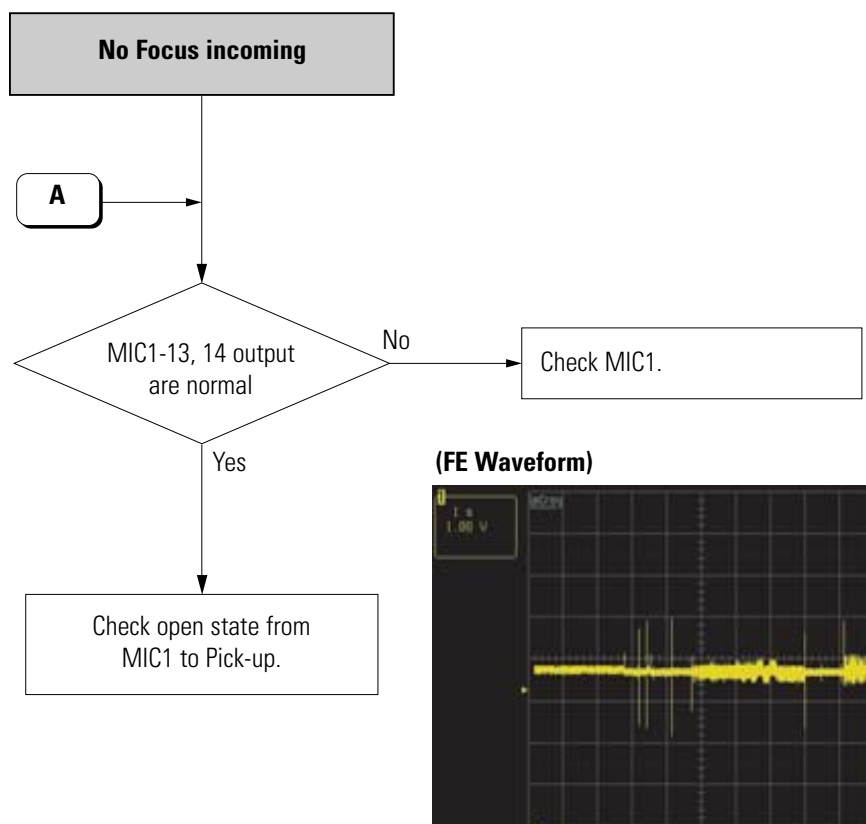
Fig. 4-9 Ass'y Bracket Deck Removal

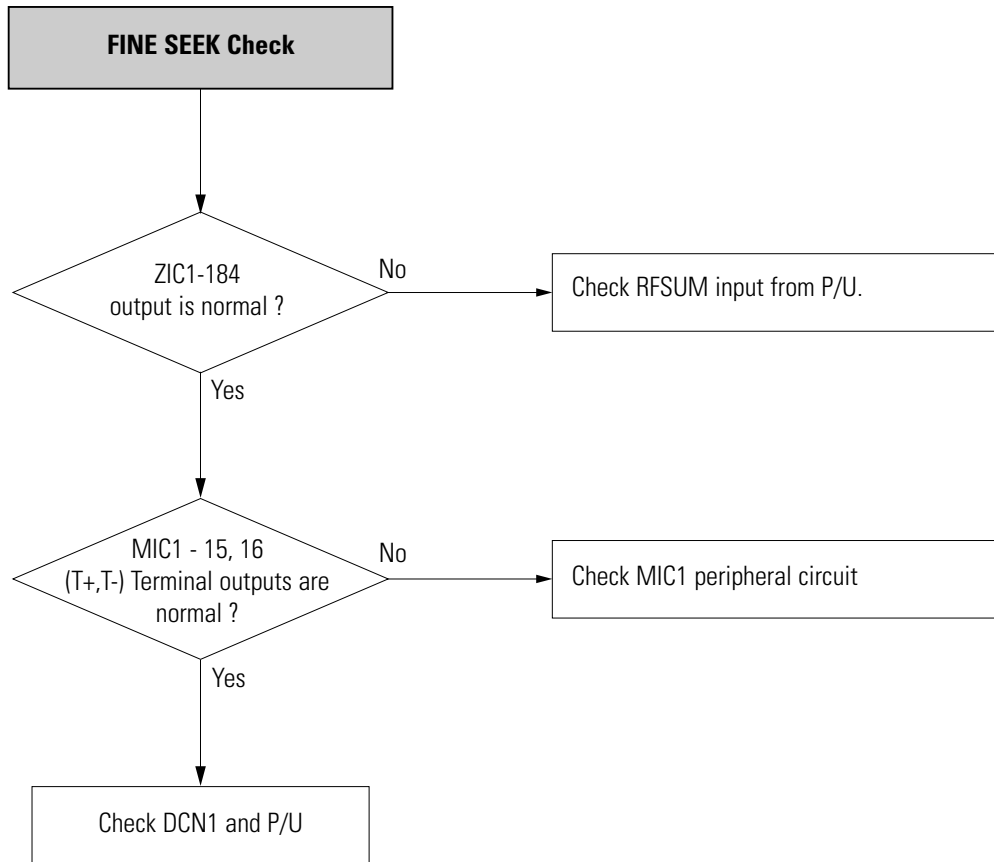
MEMO

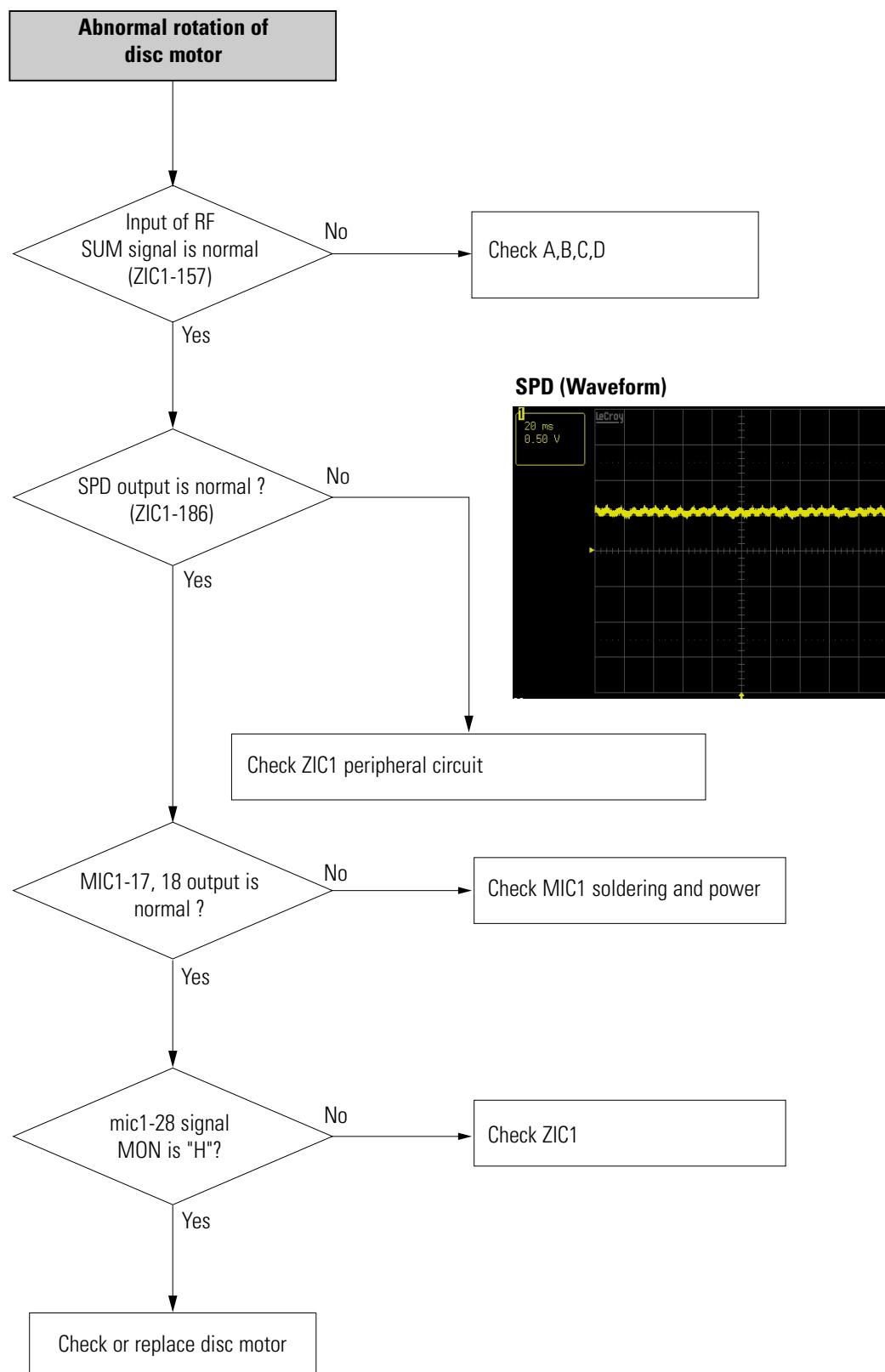
5. Trouble Shooting

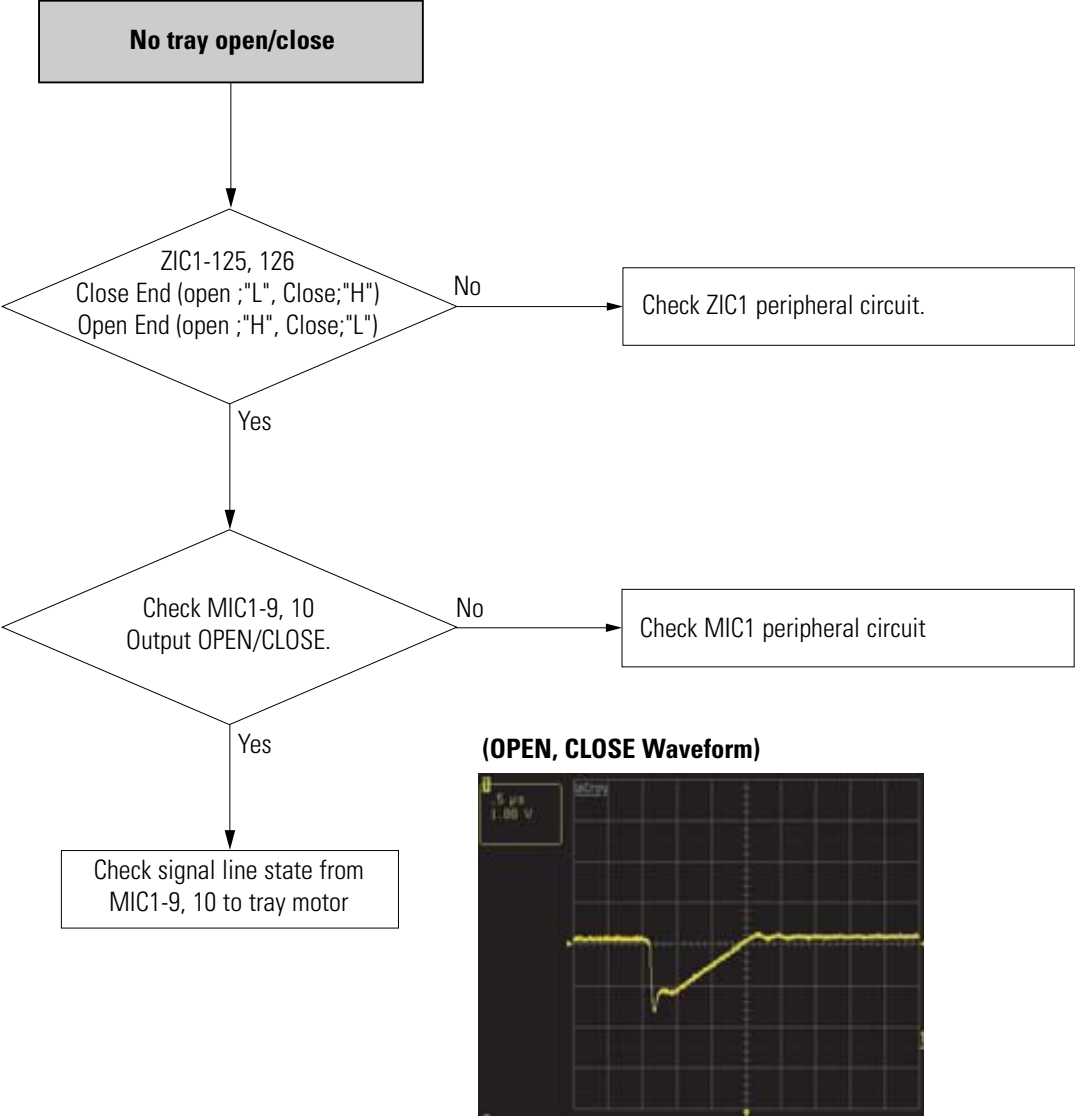


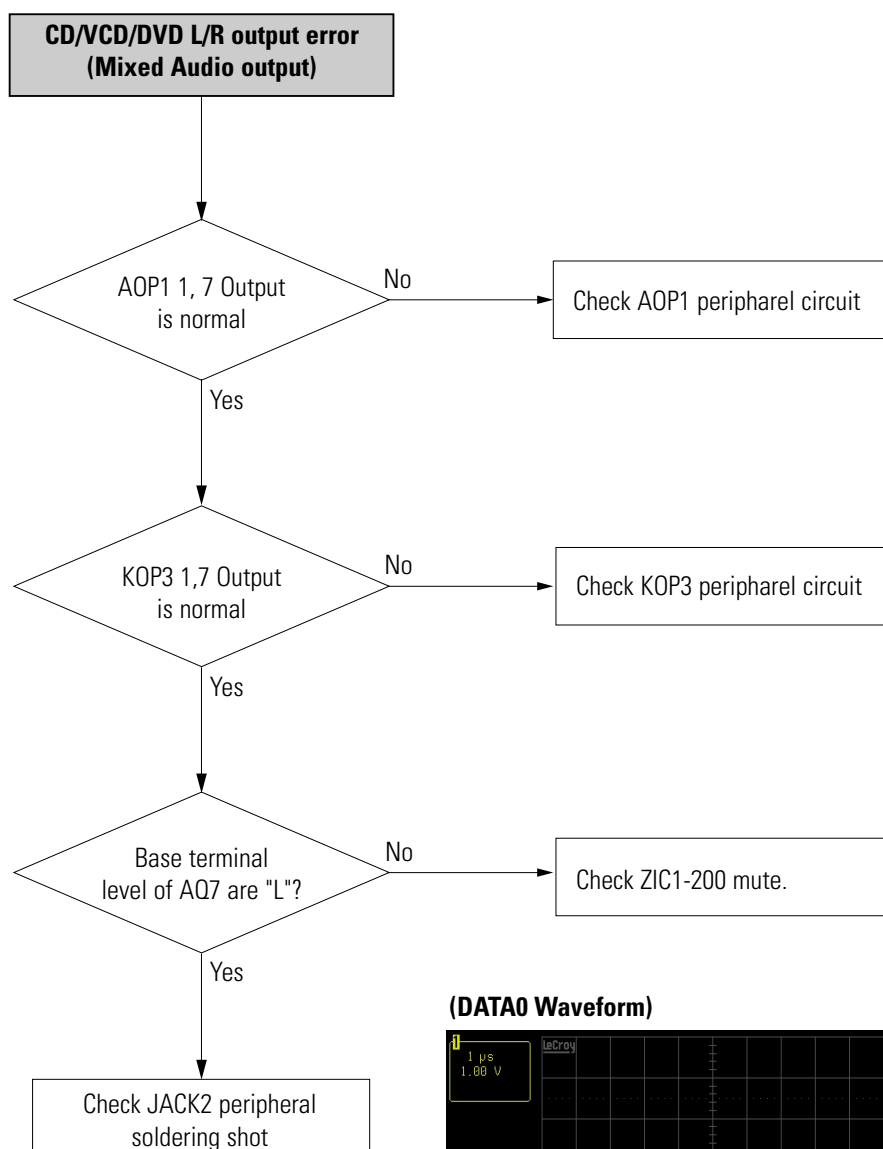




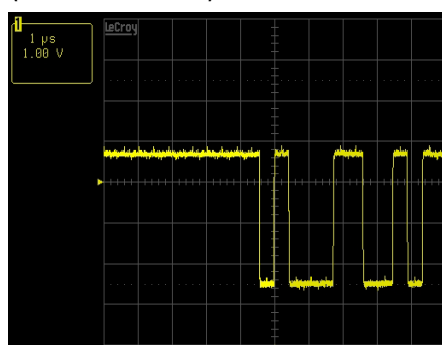


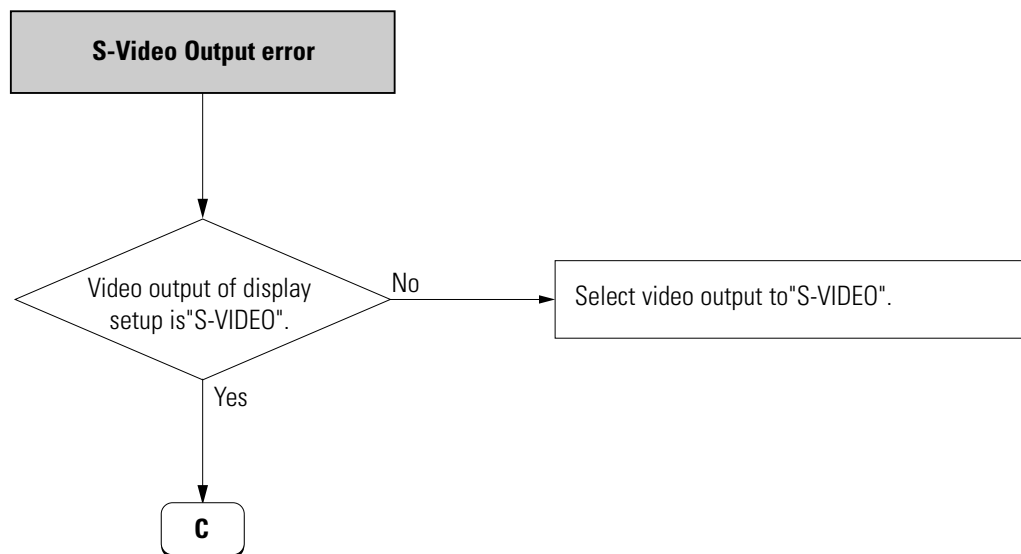


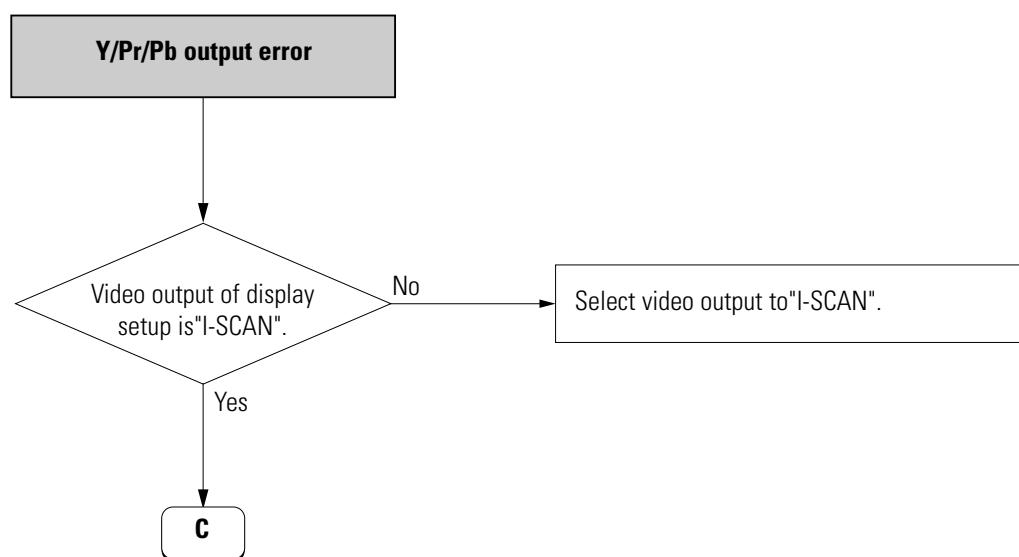


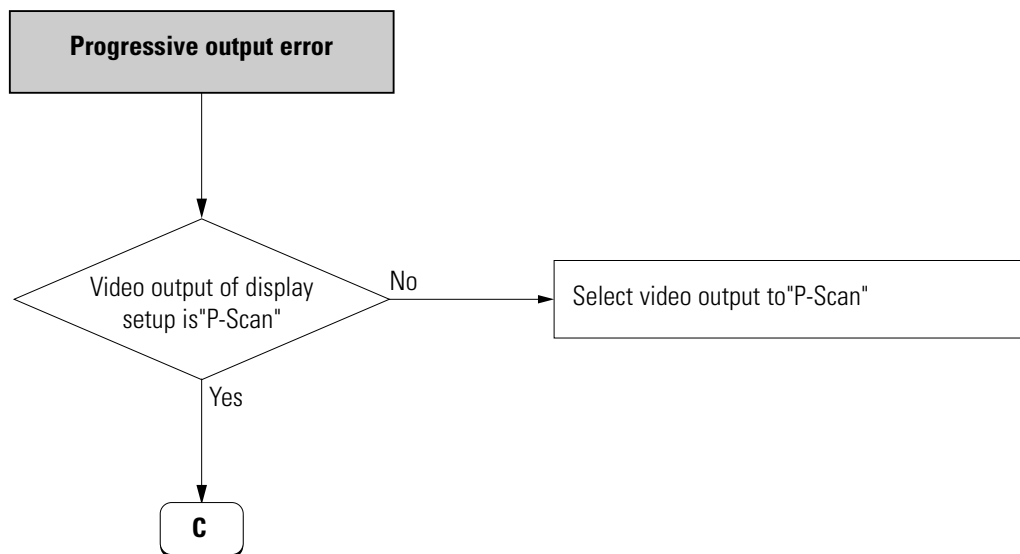


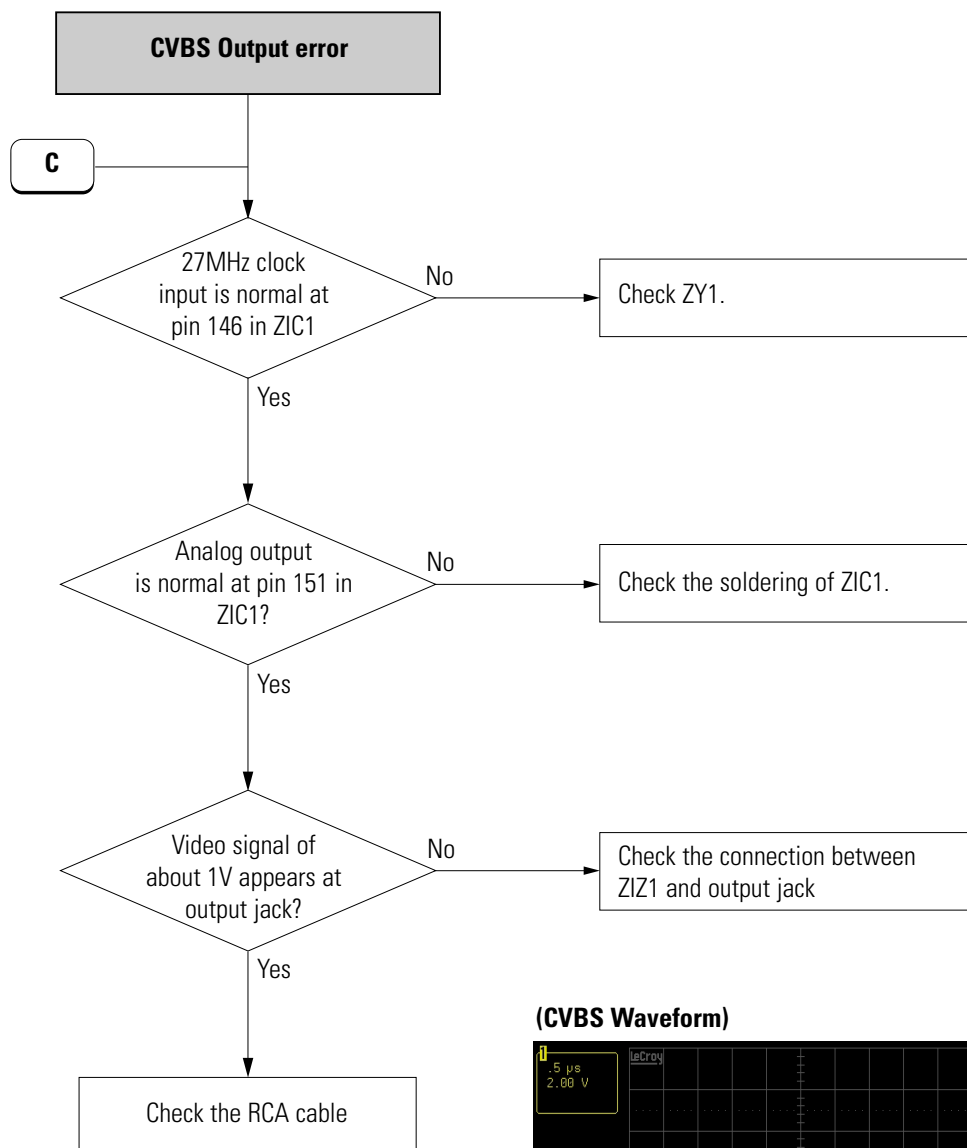
(DATA0 Waveform)



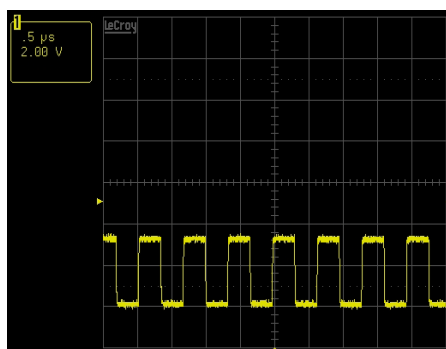


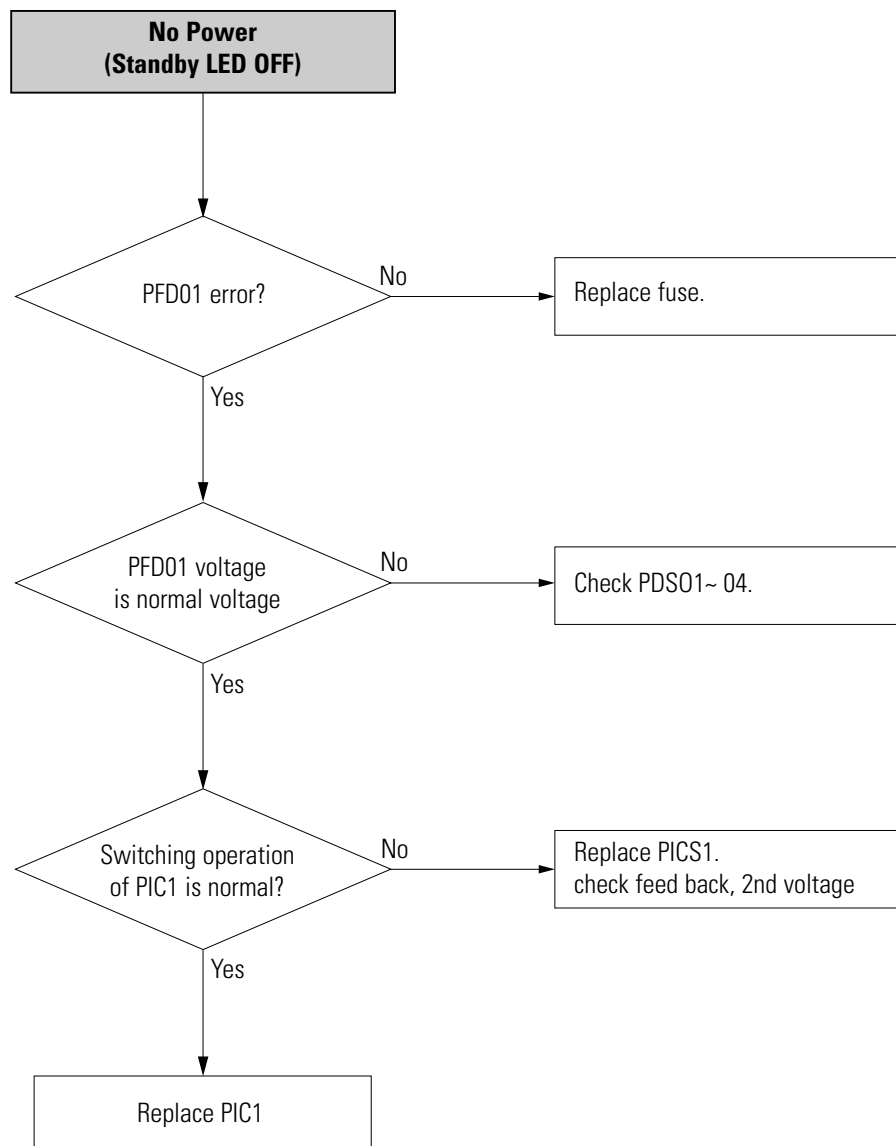






(CVBS Waveform)

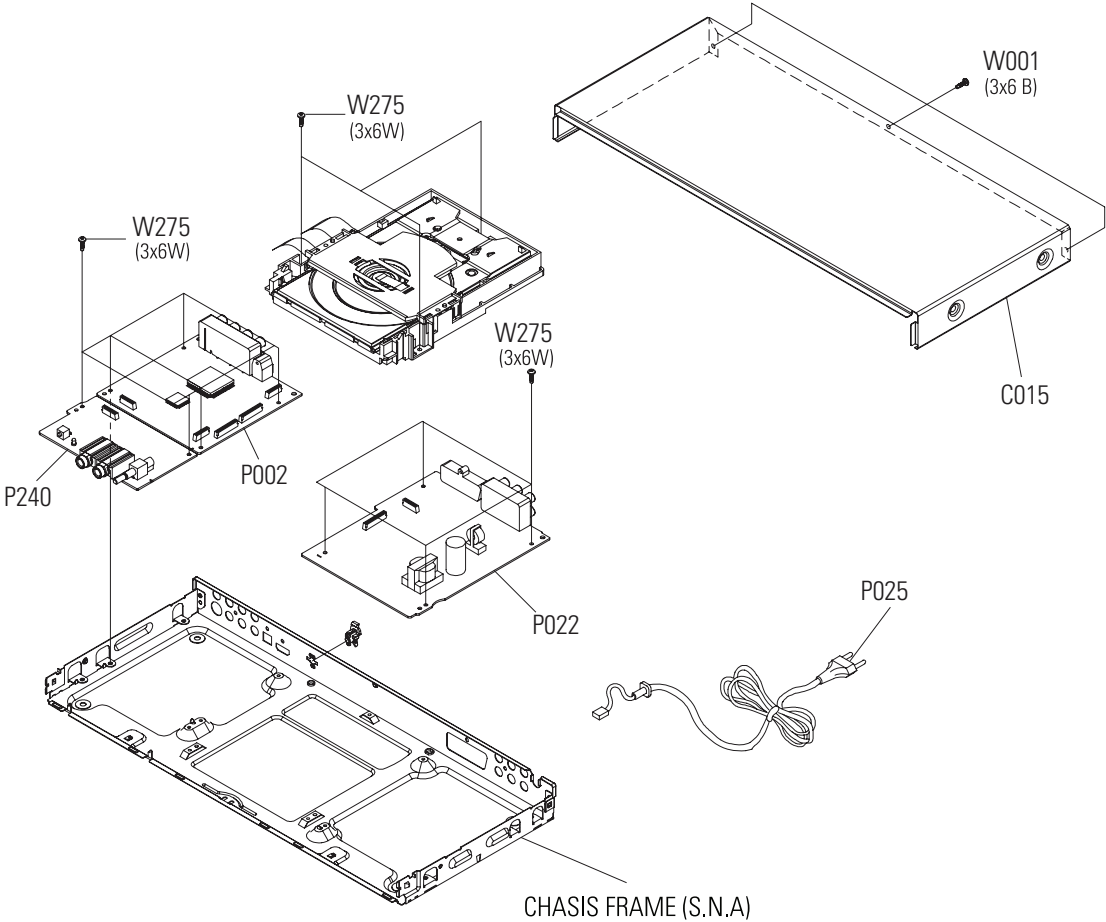




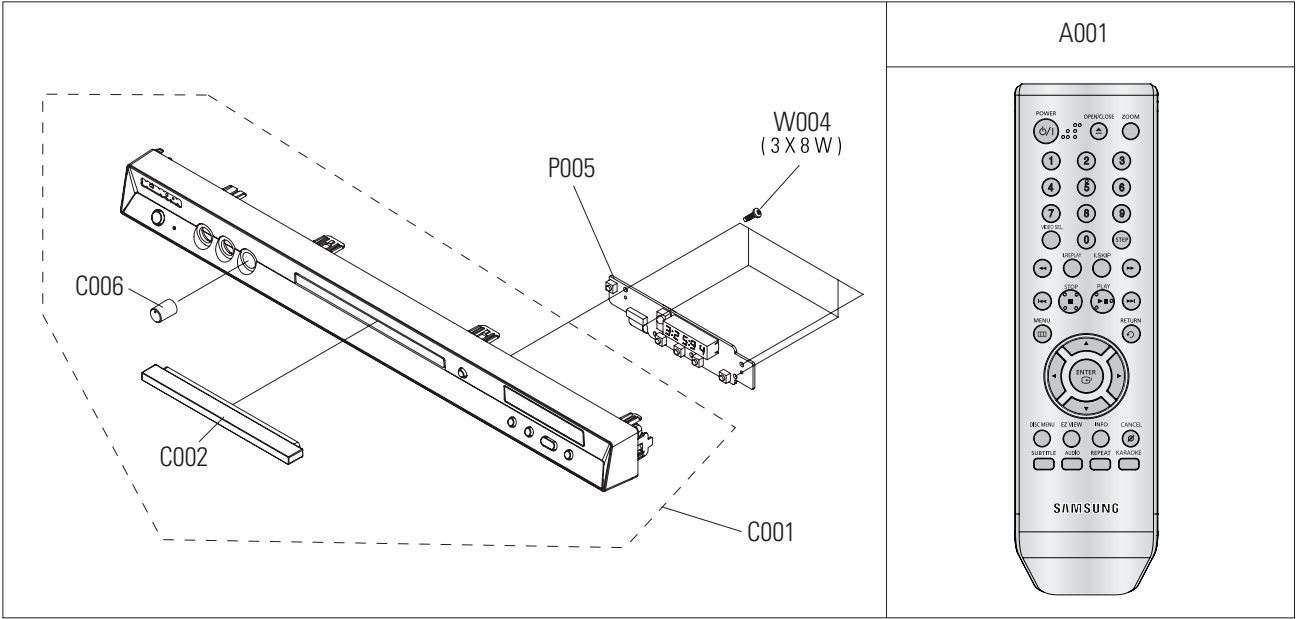
6. Exploded View and Parts List

6-1 Cabinet Assembly	-----	6-2
6-2 DVD Mechanical Parts	-----	6-4

6-1 Cabinet Assembly

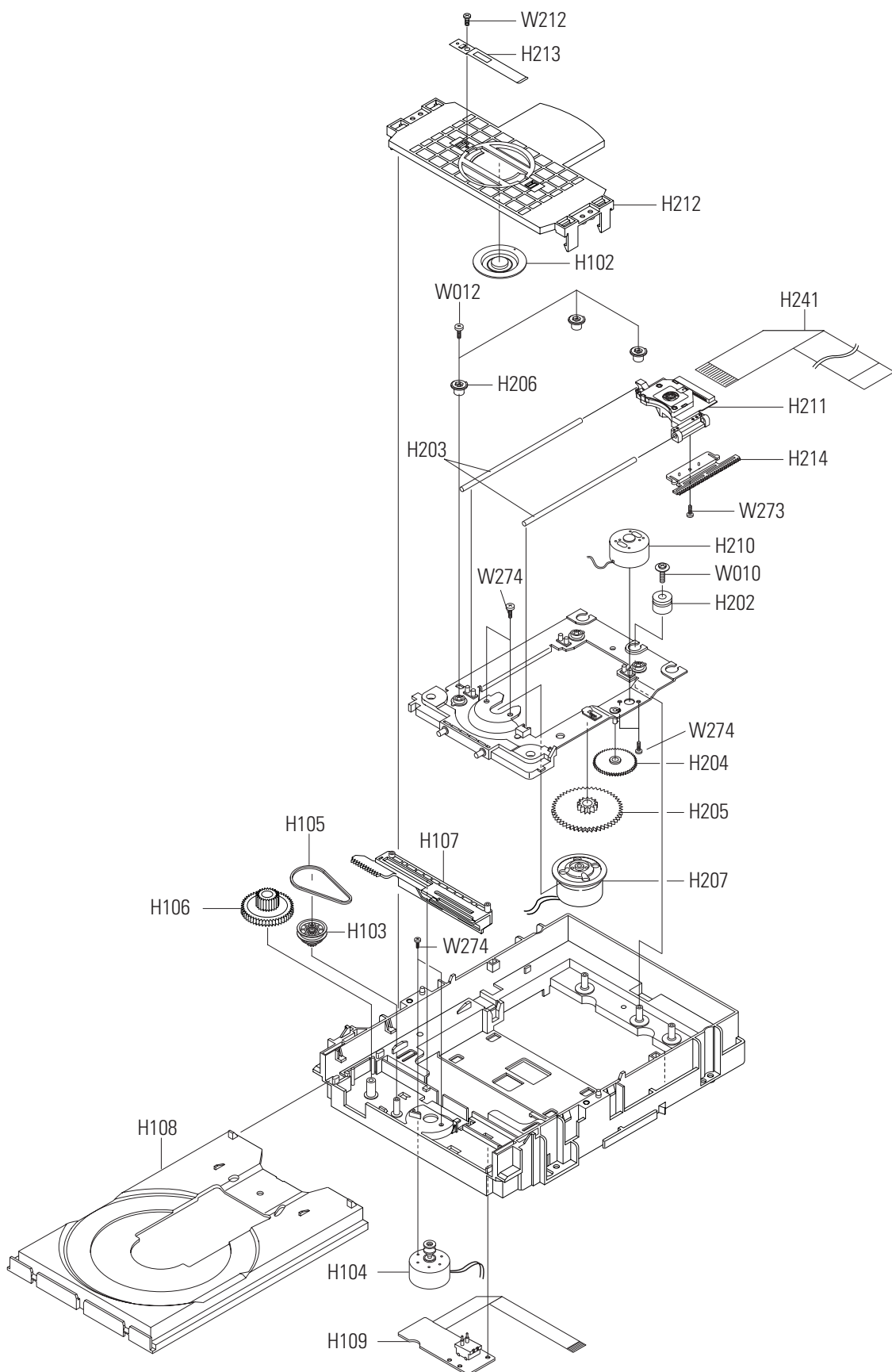


● S.N.A.: Service Not Available



Loc. No	Parts No.	Description ; Specification	Q ty	S.N.A	Remark
A001	AK59-00054A	REMOCON-ASSY;DVD-P260K/XSE,HUIZHOU	1	SA	
C001	AK97-01926C	ASSY-CABINET FRONT;HIPS 94 HB,DVD-P	1	SA	
C002	AK64-02022A	DOOR-TRAY;DVD-P375K,ABS 94HB,T2.5,H	1	SA	
C006	AK64-01012A	KNOB-VOLUME;DVD-P250K/XST,ABS,T2,W9	1	SA	
C015	AK97-01541E	ASSY-CABINET TOP;ASSY,DVD-P466KD/XE	1	SA	
P002	AK92-01234D	ASSY PCB-MAIN DVD;DVD-P470K/XEV,MAI	1	SA	
P005	AK92-01328A	ASSY PCB-FRONT KEY;DVD-P270K,ASSY F	1	SA	
P022	AK92-01332B	ASSY PCB-JACK;DVD-P470K/XEV,AC3, SC	1	SA	
P025	AC39-10019A	CBF-POWER CORD;KKP-419C,H03VVH2-F,V	1	SA	
P240	AK92-01318D	ASSY PCB-KARAOKE;DVD-P375K (2MIC),K	1	SA	
W001	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC(B	4	SA	
W004	6003-000283	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(WH	4	SA	
W275	6003-001561	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WH	13	SA	

6-2 DVD Mechanical Parts



Loc. No	Parts No.	Description ; Specification	Q ty	S.N.A	Remark
H102	AK61-00360A	BODY CLAMPER-DISC;DP-16,POM,T0.7,-,-	1	SA	
H103	AK66-00042A	GEAR-PULLEY;DP-15,POM,-,-,-,WHT,-,-	1	SA	
H104	AK31-00020A	MOTOR DC-LOAD ASSY;RF300EA-1D390,30	1	SA	
H105	6602-001076	BELT-RECTANGULAR;CR,T1.2,4.3%,1.2X2	1	SA	
H106	AK66-00041A	GEAR-TRAY;DP-15,POM,-,-,-,WHT,-,-,-	1	SA	
H107	AK66-00056A	SLIDER-HOUSING;DP-17,POM,-,-,-,WHT,	1	SA	
H108	AK63-00323A	TRAY-DISC;DP-19,ABS,-,W120,L186.3,-	1	SA	
H109	AK97-01004B	ASSY-PCB DECK;-,-,DP-19,-	1	SA	
H202	AK73-00005B	RUBBER-INSULATOR;DP-15,BUTYL,●'12,H	1	SA	
H203	AH61-50327A	SHAFT-P/U;DP-3,SUS,L84.7,OD3,-,-,-	2	SA	
H204	AK66-00043A	GEAR-FEED A;DP-15,POM,-,-,-,-,-,-,-	1	SA	
H205	AK66-00044A	GEAR-FEED B;DP-15,POM,-,-,-,-,-,-,-	1	SA	
H206	AK61-00363A	HOLDER-CAM SKEW;DP-16,POM,-,-,-,WHT	3	SA	
H207	AK31-00017A	MOTOR DC-SPINDLE;RF300FA-12350,3000	1	SA	
H210	AK31-00005A	MOTOR-FEED ASSY;-,-,DP-9,-,-,-,-,-,-,-	1	SC	
H211	AK97-01928A	ASSY-PLAYER PU;Mold,BRINO,Pick-Up	1	SA	
H212	AK61-00359A	HOLDER-CHUCK;DP-16,POM,T3,W140,L96,	1	SA	
H213	AK61-00357A	SPRING ETC-CLAMPER;-,-,SUS304CSP,-,-,	1	SA	
H214	AK66-00057A	GEAR-BACKLASH;DP-16,POM,0.5,-,-,WHT	1	SA	
H241	AK41-00250C	FFC-PU;DP-19,-,-,23P,-,1mm	1	SA	
W010	6003-001157	SCREW-TAPTITE;PWH,+,-,B,M2,L6,ZPC(W	1	SA	
W012	6002-001086	SCREW-TAPPING;PH,+,-,B,M1.7,L5.0,ZP	3	SA	
W212	6003-001251	SCREW-TAPTITE;CH,+,-,B,M1.7,L3,ZPC(	1	SA	
W273	6003-000233	SCREW-TAPTITE;PH,+,-,B,M2,L6,ZPC(BL	1	SA	
W274	6001-001730	SCREW-MACHINE;BH,+,-,M1.7,L2.5,ZPC(	6	SA	

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7. Electrical Parts List

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark	Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
P002	AK92-01234D	ASSY PCB-MAIN DVD:DVD-P470K/XEV,MAI	1	SA		AR32	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA	
AC11	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		AR33	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AC12	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA		AR36	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA	
AC13	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA		AR37	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA	
AC14	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA							
AC15	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		AR38	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AC16	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA		AR39	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AC17	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA		AR4	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA	
AC18	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA		AR42	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA	
AC19	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA		AR52	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA	
AC20	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA		AR54	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA	
AC4	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	SA		AR55	2007-000077	R-CHIP;470ohm,5%,1/10W,TP;1608	1	SA	
ACC1	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NP0,1608	1	SA		AR58	2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP;1608	1	SA	
ACC2	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NP0,1608	1	SA		AR59	2007-000079	R-CHIP;1.8Kohm,5%,1/10W,TP;1608	1	SA	
AD1	0401-000008	DIODE-SWITCHING;DAN217,80V,100MA,SO	1	SA		AR60	2007-000708	R-CHIP;3.9Kohm,1%,1/10W,TP;1608	1	SA	
AD3	0407-000123	DIODE-ARRAY;DAN202K,80V,100mA,CA2-3	1	SA		AR61	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA	
ADR1	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		AR62	2007-001134	R-CHIP;68ohm,5%,1/10W,TP;1608	1	SA	
AE14	2401-000438	C-AL;10uF,20%,25V,GP,-,5x11,5	1	SA		AR63	2007-000070	R-CHIP;0ohm,5%,1/10W,TP;1608	1	SA	
AE16	2401-000302	C-AL;100uF,20%,25V,GP,TP;6.3x11,5	1	SA		AR64	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA	
AE17	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA		DCN1	3708-000491	CONNECTOR-FPC/FFC/PIC;23P;1mm,STRAI	1	SA	
AE3	2401-000913	C-AL;22uF,20%,16V,GP,TP;5x11,5	1	SA		DCN2	3708-001266	CONNECTOR-FPC/FFC/PIC;11P;1MM,STRAI	1	SA	
AE4	2401-000913	C-AL;22uF,20%,16V,GP,TP;5x11,5	1	SA		DOC4	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AE9	2401-002594	C-AL;220uF,20%,16V,GP,TP;8x11.5.5	1	SA		DOE1	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA	
AL2	3301-001419	BEAD-SMD;220ohm,1608,TP;133ohm/70MH	1	SA		DOIC2	3707-001065	CONNECTOR-OPTICAL;PLUG,GP1FA550TZ,6	1	SA	
AOP1	1201-000163	IC-OP AMP;4560,SOP8P;173MIL,DUAL,1	1	SA		DOL1	2007-000033	R-CHIP;0ohm,5%,1/4W,TP;3216	1	SA	
AQ1	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA		DOL2	2007-000070	R-CHIP;0ohm,5%,1/10W,TP;1608	1	SA	
AQ3	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA		DOR3	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA	
AQ4	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA		FL261	3809-001881	FFC CABLE-FLAT;30V,80C,285MM,40P,1.	1	SA	
AQ6	0501-000002	TR-SMALL SIGNAL;KSA812,PNP;150MMW,SO	1	SA		JACK2	3722-002297	JACK-PIN;7P+1P(VHS),SN,BA-RD-BU-GR/	1	SA	
AQ7	0504-000128	TR-DIGITAL,-,NPN,200MMW,22K/22K,SOT-	1	SA		JL1	2007-000033	R-CHIP;0ohm,5%,1/4W,TP;3216	1	SA	
AQ8	0504-000156	TR-DIGITAL;KSR2103,PNP;200MMW,22K/22	1	SA		KAC41	2203-001686	C-CER,CHIP;0.075nF,5%,50V,NP0,1608	1	SA	
AR1	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAC42	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AR11	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAC43	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AR13	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAC44	2203-001686	C-CER,CHIP;0.075nF,5%,50V,NP0,1608	1	SA	
AR14	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAE13	2401-002144	C-AL;47uF,20%,16V,GP,TP;5x11,5	1	SA	
AR15	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAE14	2401-002144	C-AL;47uF,20%,16V,GP,TP;5x11,5	1	SA	
AR16	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAQ1	0504-000156	TR-DIGITAL;KSR2103,PNP;200MMW,22K/22	1	SA	
AR17	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAQ2	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AR18	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAQ3	0504-000128	TR-DIGITAL,-,NPN,200MMW,22K/22K,SOT-	1	SA	
AR19	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAR30	2007-001134	R-CHIP;68ohm,5%,1/10W,TP;1608	1	SA	
AR21	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAR31	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA	
AR22	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAR41	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR22	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAR42	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR23	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAR43	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA	
AR26	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		KAR44	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR27	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KAR45	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR28	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAR46	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR29	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KAR47	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA	
AR3	2007-000075	R-CHIP;220ohm,5%,1/10W,TP;1608	1	SA		KAR48	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP;1608	1	SA	
AR30	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		KAR49	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP;1608	1	SA	
AR31	2007-000939	R-CHIP;47Kohm,1%,1/10W,TP;1608	1	SA		KC3	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	SA	
						KCON2	3708-001266	CONNECTOR-FPC/FFC/PIC;11P;1MM,STRAI	1	SA	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
KOP3	1201-000163	IC-OP AMP;4560,SOP8P,173MIL,DUAL,1	1	SA	
KQ17	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
KQ18	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
KR1	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
KR2	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	SA	
MC2	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
MC7	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
MC8	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
MCON2	3708-002311	CONNECTOR-FPC/FFC/PIC;40P,1MM,STRAI	1	SA	
ME1	2401-003036	C-AL;100uF,20%,16V,GP,TP,5X11mm,5mm	1	SA	
ME2	2401-003036	C-AL;100uF,20%,16V,GP,TP,5X11mm,5mm	1	SA	
ME3	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	1	SA	
MIC1	1003-001978	IC-MOTOR DRIVER;AM5766,HSOP28H,28P,	1	SA	
MR1	2007-000805	R-CHIP;36Kohm,5%,1/10W,TP,1608	1	SA	
MR10	2007-007277	R-CHIP;392ohm,1%,1/10W,TP,1608	1	SA	
MR11	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	SA	
MR12	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
MR13	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP,1608	1	SA	
MR14	2007-000109	R-CHIP;1Mohm,5%,1/10W,TP,1608	1	SA	
MR15	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
MR16	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR17	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR18	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	SA	
MR19	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
MR2	2007-000130	R-CHIP;39Kohm,5%,1/10W,TP,1608	1	SA	
MR3	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR4	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR5	2007-000805	R-CHIP;36Kohm,5%,1/10W,TP,1608	1	SA	
MR6	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR7	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR8	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
MR9	2007-007277	R-CHIP;392ohm,1%,1/10W,TP,1608	1	SA	
P022	3711-001170	CONNECTOR-HEADER;BOX,9P,1R,2mm,ANGL	1	SA	
PC1	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
PC4	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
PC5	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
PC6	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
PC8	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
PE3	2401-003036	C-AL;100uF,20%,16V,GP,TP,5X11mm,5mm	1	SA	
PE4	2401-003036	C-AL;100uF,20%,16V,GP,TP,5X11mm,5mm	1	SA	
PE6	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	1	SA	
PIC11	1203-002779	IC-POS.FIXED REG.;G952T63U,SOT-223	1	SA	
PR1	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
PR2	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
RC2	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC4	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC5	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC6	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC7	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC8	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RC9	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
RD1	0407-000116	DIODE-ARRAY;DAP202K,80V,100mA,CK2-3	1	SA	
RE1	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	1	SA	
RE2	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	1	SA	
RE3	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
RE4	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	1	SA	
RQ1	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
RQ2	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
RR1	2007-001146	R-CHIP;7.5ohm,5%,1/8W,TP,2012	1	SA	
RR13	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	SA	
RR2	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
RR3	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
RR4	2007-001146	R-CHIP;7.5ohm,5%,1/8W,TP,2012	1	SA	
RR7	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	SA	
RR8	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	SA	
RR9	2007-001010	R-CHIP;51Kohm,5%,1/10W,TP,1608	1	SA	
VC1	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC10	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC11	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC12	2203-000041	C-CER,CHIP;0.01nF,0.25pF,50V,COG,16	1	SA	
VC13	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC14	2203-000783	C-CER,CHIP;0.33nF,5%,50V,COG,1608	1	SA	
VC2	2203-000041	C-CER,CHIP;0.01nF,0.25pF,50V,COG,16	1	SA	
VC20	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
VC21	2203-000041	C-CER,CHIP;0.01nF,0.25pF,50V,COG,16	1	SA	
VC22	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC3	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC4	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC5	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC6	2203-000041	C-CER,CHIP;0.01nF,0.25pF,50V,COG,16	1	SA	
VC7	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC8	2203-000357	C-CER,CHIP;0.15nF,5%,50V,COG,1608	1	SA	
VC9	2203-000041	C-CER,CHIP;0.01nF,0.25pF,50V,COG,16	1	SA	
VD11	0403-001083	DIODE-ZENER;UDZ9.1B,8.85-9.23V,200M	1	SA	
VD12	0403-001083	DIODE-ZENER;UDZ9.1B,8.85-9.23V,200M	1	SA	
VIC2	1204-001748	IC-SELECTOR;MM1503XN,SOP8P,63MIL,P	1	SA	
VL1	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	SA	
VL10	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
VL2	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	SA	
VL3	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
VL4	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
VL5	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
VL6	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	SA	
VL7	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	SA	
VL8	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	SA	
VL9	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
VO4	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
VR30	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
VR31	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
VR32	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
VR33	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
VR34	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
VR35	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
VR37	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
VR38	2007-000119	R-CHIP;560ohm,5%,1/10W,TP,1608	1	SA	
VR39	2007-000164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
VR41	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
ZC1	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
ZC10	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark	Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
ZC11	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL11	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC12	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL111	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
ZC14	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL2	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC15	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL3	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC16	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL4	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC165	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA		ZL6	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
ZC17	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZL7	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
ZC172	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA		ZR01	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC2	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR10	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC22	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR100	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
ZC23	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR101	3301-001419	BEAD-SMD;220ohm,1608,TP,133ohm/70MH	1	SA	
ZC24	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA		ZR12	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC25	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA		ZR14	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC26	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR151	2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	1	SA	
ZC27	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR152	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
ZC28	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR16	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC29	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR2	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC3	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR24	2007-000109	R-CHIP;1Mohm,5%,1/10W,TP,1608	1	SA	
ZC31	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR26	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	SA	
ZC33	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR27	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
ZC34	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR3	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
ZC35	2203-000681	C-CER,CHIP;0.027nF,5%,50V,COG,1608	1	SA		ZR37	2007-008567	R-CHIP;15.4Kohm,1%,1/10W,TP,1608	1	SA	
ZC37	2203-000681	C-CER,CHIP;0.027nF,5%,50V,COG,1608	1	SA		ZR39	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
ZC39	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR4	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
ZC4	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR40	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
ZC40	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR41	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
ZC41	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR42	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
ZC42	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR43	2007-000086	R-CHIP;5.6Kohm,5%,1/10W,TP,1608	1	SA	
ZC43	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR44	2007-000329	R-CHIP;11Kohm,5%,1/10W,TP,1608	1	SA	
ZC44	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR45	2007-000329	R-CHIP;11Kohm,5%,1/10W,TP,1608	1	SA	
ZC45	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR46	2007-000086	R-CHIP;5.6Kohm,5%,1/10W,TP,1608	1	SA	
ZC46	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR47	2007-007277	R-CHIP;392ohm,1%,1/10W,TP,1608	1	SA	
ZC47	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR48	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC48	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR64	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
ZC49	2203-000332	C-CER,CHIP;0.012nF,5%,50V,COG,1608	1	SA		ZR66	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC5	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR67	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC50	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA		ZR68	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC51	2203-000669	C-CER,CHIP;27nF,10%,25V,X7R,1608	1	SA		ZR69	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC52	2203-000669	C-CER,CHIP;27nF,10%,25V,X7R,1608	1	SA		ZR74	2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	1	SA	
ZC53	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA		ZR75	2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	1	SA	
ZC55	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR76	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SA	
ZC6	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR80	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC7	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR81	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZC8	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA		ZR82	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZE2	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7.5	1	SA		ZR83	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
ZE3	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7.5	1	SA		ZR94	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
ZE4	2401-003036	C-AL;100uF,20%,16V,GP,TP,5X11mm,5mm	1	SA		ZY1	2801-003554	CRYSTAL-UNIT;27MHz,10ppm,28-AAM,12p	1	SA	
ZE5	2401-001479	C-AL;470uF,20%,10V,GP,TP,6.3*11mm,5	1	SA							
ZE6	2401-001479	C-AL;470uF,20%,10V,GP,TP,6.3*11mm,5	1	SA							
ZE7	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7.5	1	SA							
ZIC1	1204-002679	IC-DECODER;ZR3696ELCG-D,PQFP,208P	1	SA		P005	AK92-01328A	ASSY PCB-FRONT KEY;DVD-P270K,ASSY F	1	SA	
ZIC2	1105-001261	IC-DRAM;12L1616A,16Bit,TSOP,SOP,400	1	SA		AMR1	2007-001010	R-CHIP;51Kohm,5%,1/10W,TP,1608	1	SA	
ZIC3	1107-001242	IC-FLASH MEMORY;39VF160,1Mx16,TSOP	1	SNA		CM11	3708-001752	CONNECTOR-FPC;FFC/PIC;15P;1MM,ANGLE	1	SA	
ZL1	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA		FL261	3809-001930	FFC CABLE-FLAT;30V,80C,75MM,15P,1.0	1	SA	
ZL10	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA		KC1	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
KC1A	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
KC2A	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
KC4	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	SA	
KE1	2401-001507	C-AL;47uF,20%,16V,GP,TP;6.3x5,5	1	SA	
KE3	2401-002165	C-AL;100uF,20%,16V,GP,TP;6.3x7,5	1	SA	
KIC1	1003-001895	IC-LED DRIVER;LD1207,SOP24P;15.6x7	1	SA	
KIR1	0609-001204	Module Remocon;HORIZONTAL,6.5mm,TR	1	SA	
KML1	AK07-00051A	LED DISPLAY;BCD-9045A,DVD-HD860,-,5	1	SA	
KQ12	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
KQ13	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
KQ14	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
KQ15	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
KQ16	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW	1	SA	
KR22	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
KR23	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
KR24	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
KR25	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
KR26	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	SA	
KR27	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR28	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR29	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR3	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3	1	SA	
KR30	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR31	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR32	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR33	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR35	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
KR37	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
KR38	2007-000122	R-CHIP;1.2Kohm,5%,1/10W,TP,1608	1	SA	
KR39	2007-000122	R-CHIP;1.2Kohm,5%,1/10W,TP,1608	1	SA	
KR4	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	SA	
KR40	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
KR43	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X	1	SA	
KR44	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
KR45	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3	1	SA	
KR46	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3	1	SA	
KRJ01	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA	
KSW2	3404-001182	SWITCH-TACT;DC12V,50MA,100GF,6.0X6.	1	SA	
KSW3	3404-001182	SWITCH-TACT;DC12V,50MA,100GF,6.0X6.	1	SA	
KSW4	3404-001182	SWITCH-TACT;DC12V,50MA,100GF,6.0X6.	1	SA	
KSW5	3404-001182	SWITCH-TACT;DC12V,50MA,100GF,6.0X6.	1	SA	
KSW6	3404-001182	SWITCH-TACT;DC12V,50MA,100GF,6.0X6.	1	SA	
P022	AK92-01332B	ASSY PCB-JACK;DVD-P470K/XEV,AC3, SC	1	SA	
AAC1	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC10	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC11	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC12	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC13	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC14	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC15	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC16	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC17	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC18	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
AAC19	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC2	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC20	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC21	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC22	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC23	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC24	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC25	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC26	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC27	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC28	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC29	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC3	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC30	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC31	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC32	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC33	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC34	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC35	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC36	2203-001408	C-CER,CHIP;0.27nF,5%,50V,NPO,1608	1	SA	
AAC4	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC5	2203-000541	C-CER,CHIP;0.2nF,5%,50V,COG,1608	1	SA	
AAC6	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC7	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAC8	2203-005148	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	SA	
AAC9	2203-000815	C-CER,CHIP;0.033nF,5%,50V,COG,1608	1	SA	
AAE1	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAE2	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAE3	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAE4	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAE5	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAE6	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA	
AAOP1	1201-000163	IC-OP AMP;4560,SOP8P;173MIL,DUAL,1	1	SA	
AAOP2	1201-000163	IC-OP AMP;4560,SOP8P;173MIL,DUAL,1	1	SA	
AAOP3	1201-000163	IC-OP AMP;4560,SOP8P;173MIL,DUAL,1	1	SA	
AAQ1	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAQ2	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAQ3	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAQ4	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAQ5	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAQ6	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
AAR1	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	
AAR10	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP,1608	1	SA	
AAR100	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	
AAR102	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP,1608	1	SA	
AAR11	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP,1608	1	SA	
AAR12	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
AAR13	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	
AAR14	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	
AAR15	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP,1608	1	SA	
AAR16	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP,1608	1	SA	
AAR18	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	
AAR19	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP,1608	1	SA	
AAR2	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP,1608	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark	Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
AAR22	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA		AAR78	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR23	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR79	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR24	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR8	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR25	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR80	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR26	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA		AAR81	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR27	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR82	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR28	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR83	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR29	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR84	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR3	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR85	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA	
AAR30	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR86	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR32	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR87	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR33	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR88	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA	
AAR34	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		AAR89	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR35	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR9	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR36	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR90	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA	
AAR37	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR91	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA	
AAR38	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA		AAR92	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR39	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR93	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA	
AAR4	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR94	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA	
AAR40	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR95	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR42	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AAR96	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR43	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AAR99	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA	
AAR44	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AHC1	2202-000109	C-CERAMIC,MLC-AXIAL;100NF;+80-20%,5	1	SA	
AAR45	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AHC2	2202-000109	C-CERAMIC,MLC-AXIAL;100NF;+80-20%,5	1	SA	
AAR46	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AHE10	2401-001250	C-AL;4.7uF;20%,35V,GP;TP;4x5,5	1	SA	
AAR47	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AHE20	2401-001250	C-AL;4.7uF;20%,35V,GP;TP;4x5,5	1	SA	
AAR48	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AHOP1	1201-000163	IC-OP AMP;4560,SOP8P;173MIL,DUAL,1	1	SA	
AAR49	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AHR1	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA	
AAR5	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		AHR2	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA	
AAR50	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA		AHR5	2001-000515	R-CARBON;2200HM,5%,1/8W,AA,TP;1.8X3	1	SA	
AAR51	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		AHR6	2001-000515	R-CARBON;2200HM,5%,1/8W,AA,TP;1.8X3	1	SA	
AAR52	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA		AJACK1	3722-002338	JACK-PIN;6PSn,RED/WH/BLKx2,ANGLE	1	SA	
AAR54	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		JC1	2007-000029	R-CHIP;0ohm,5%,1/8W,TP;2012	1	SA	
AAR55	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		JF70	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-4	1	SA	
AAR57	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		KJC01	2007-000070	R-CHIP;0ohm,5%,1/10W,TP;1608	1	SA	
AAR59	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		KR39	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP;1.8X	1	SA	
AAR6	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		MCON2	3708-002293	CONNECTOR-FPC;FFC/PIC;40P;1mm,STRAI	1	SA	
AAR60	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP;1608	1	SA		MCON5	3708-001755	CONNECTOR-FPC;FFC/PIC;15P;1mm,STRAI	1	SA	
AAR61	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PBR11	3301-000297	BEAD-AXIAL;25ohm,3.6x1.2x5.7mm,-,TP	1	SA	
AAR62	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA		PBS01	AC27-92001M	COIL-INDUCTOR;RH3.5X6.5RS,BEAD(RADI	1	SC	
AAR63	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCD01	2201-000963	C-CERAMIC,DISC;1NF;20%,400V,Y5U,TP	1	SA	
AAR64	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PCD02	2201-000963	C-CERAMIC,DISC;1NF;20%,400V,Y5U,TP	1	SA	
AAR65	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCD11	2305-001029	C-FILM,LEAD-PEF;10nF;10%,630V,TP;12	1	SA	
AAR66	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP;1608	1	SA		PCD12	2201-002076	C-CERAMIC,DISC;0.068nF;5%,1KV,SL,TP	1	SA	
AAR67	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCF01	2301-001718	C-FILM,LEAD-PEF;10nF;10%,275V,BK,17*5*1	1	SA	
AAR68	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCF02	2301-001718	C-FILM,LEAD-PEF;10nF;10%,275V,BK,17*5*1	1	SA	
AAR69	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PCF11	2401-002608	C-AL;33uF;20%,35V,GP;TP;5x11,5	1	SA	
AAR7	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCF12	2301-001654	C-FILM,LEAD-PEF;1000nF;5%,100V,TP;2	1	SA	
AAR70	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PCF20	2201-000012	C-CERAMIC,DISC;0.22nF;10%,1000V,Y5P	1	SA	
AAR71	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP;1608	1	SA		PCF29	2301-000129	C-FILM,LEAD-PEF;100nF;5%,50V,TP;10X	1	SA	
AAR72	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PCNS2	3711-000203	HEADER-BOARD TO CABLE;1WALL,2P/3P;1	1	SA	
AAR73	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PCS32	2301-000129	C-FILM,LEAD-PEF;100nF;5%,50V,TP;10X	1	SA	
AAR74	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PDF13	0402-001195	DIODE-RECTIFIER;F1T4,400V,1A,DO-204	1	SA	
AAR75	2007-000910	R-CHIP;43Kohm,1%,1/10W,TP;1608	1	SA		PDS01	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	1	SA	
AAR77	2007-002987	R-CHIP;4.75Kohm,1%,1/10W,TP;1608	1	SA		PDS02	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	1	SA	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
PDS03	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	1	SA	
PDS04	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	1	SA	
PDS11	0402-000012	DIODE-RECTIFIER;UF4007,1KV,1A,DO-41	1	SA	
PDS31	0402-001195	DIODE-RECTIFIER;F1T4,400V,1A,DO-204	1	SA	
PDS33	0402-001194	DIODE-RECTIFIER;UG2D,200V,2A,-,TP	1	SA	
PDS34	0402-001643	DIODE-RECTIFIER;MBRF10A0,100V,10A,I	1	SA	
PDS35	0402-001195	DIODE-RECTIFIER;F1T4,400V,1A,DO-204	1	SA	
PDS52	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-4	1	SA	
PDS59	0401-000005	DIODE-SWITCHING;1N4148,75V,150mA,DO	1	SA	
PDS60	0401-000005	DIODE-SWITCHING;1N4148,75V,150mA,DO	1	SA	
PER10	2401-003368	C-AL;47uF,20%,450V,GPBK,20x25,4,10	1	SA	
PES31	2401-003477	C-AL;330uF,20%,25V,LZ,TP,10X12.5MM,	1	SA	
PES33	2401-003059	C-AL;1000uF,20%,16V,WT,TP,10X16,5	1	SA	
PES34	2401-003480	C-AL;1000uF,20%,10V,LZ,TP,10X16MM,5	1	SA	
PES35	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	1	SA	
PES52	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	1	SA	
PES55	2401-001358	C-AL;470uF,20%,10V,WT,TP,8x11.5mm,5	1	SA	
PES59	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	1	SA	
PES62	2401-001370	C-AL;470uF,20%,16V,GP,TP,8x11,5,5	1	SA	
PES63	2401-002438	C-AL;47uF,20%,50V,WT,TP,6.3x11,5mm	1	SA	
PF001	3601-001123	FUSE-CARTRIDGE;250V,1.6A,TIME-LAG,C	1	SA	
PIC1	1203-004025	IC-PWM CONTROLLER;ICE380365J,DIP8P	1	SA	
PICS1	0604-001028	PHOTO-COUPLER;TR,50-600%,250mW,DIP-	1	SA	
PICS2	AC14-12006D	IC;KA431Z,TO-92,TAPING	1	SA	
PICS3	1203-000122	IC-NEGA.FIXED REG.;7908,TO-220,3P,-	1	SA	
PICS4	1203-000293	IC-POS.FIXED REG.;7808,TO-220,3P,-	1	SA	
PICS8	1203-001586	IC-POS.FIXED REG.;278R33,TO-220F,4	1	SA	
PICS9	1203-001006	IC-POS.FIXED REG.;78R05,TO-220F,4P	1	SA	
PLS01	AC29-00003A	FILTER LINE NOISE;-20mH MIN.-,-	1	SA	
PLS31	AC27-12001N	COIL CHOKE;10UH-15%,RA,K-30,Q80,150	1	SA	
PLS32	AC27-12001N	COIL CHOKE;10UH-15%,RA,K-30,Q80,150	1	SA	
PPS12	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP	1	SA	
PQS63	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400mW	1	SA	
PQS64	0504-000156	TR-DIGITAL;KSR2103,PNP,200MW,22K/22	1	SA	
PQS65	0504-000128	TR-DIGITAL;-NPN,200MW,22K/22K,SOT-	1	SA	
PQS66	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO	1	SA	
PRD31	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
PRD32	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	SA	
PRF01	2002-000121	R-COMPOSITION;1Mohm,10%,1/2W,AA,TP,	1	SA	
PRF10	1404-001361	THERMISTOR-NTC;3ohm,4A,-,35mW/C,0uF	1	SA	
PRF11	2001-000708	R-CARBON;390HM,5%,1/8W,AA,TP,1.8X3.	1	SA	
PRF20	2003-002213	R-METAL OXIDE(S);0.82ohm,5%,2W,AF,TP	1	SA	
PRS13	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP	1	SA	
PRS32	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
PRS33	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA	
PRS34	2007-000256	R-CHIP;1.6Kohm,1%,1/10W,TP,1608	1	SA	
PRS55	2001-000062	R-CARBON;470OHM,5%,1/4W,AA,TP,2.4X6	1	SA	
PRS56	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X	1	SA	
PRS57	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X	1	SA	
PRS58	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	SA	
PRS59	2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	1	SA	
PRSD1	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3	1	SA	
PVA1	1405-000186	TRANS SWITCHING;EER2828,DVD-P260K,-	1	SA	
PZD21	0403-000713	DIODE-ZENER;MTZJ20B,18.63-17.7V,500	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
PZD22	0403-001318	DIODE-ZENER;MTZJ4.3B,4.17-4.43V,500	1	SA	
PZD23	0403-001318	DIODE-ZENER;MTZJ4.3B,4.17-4.43V,500	1	SA	
SCC17	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	SA	
SCC18	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	SA	
SCC3	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	SA	
SCC4	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	SA	
SCE5	2401-000922	C-AL;22uF,20%,16V,GP,TP,5x5,5	1	SA	
SCE6	2401-000922	C-AL;22uF,20%,16V,GP,TP,5x5,5	1	SA	
SCJ1	3722-001359	JACK-SCART;21P,SN,BLK	1	SA	
SCL1	2703-000125	INDUCTOR-SMD;10uH,10%,2012	1	SA	
SCL2	2703-000125	INDUCTOR-SMD;10uH,10%,2012	1	SA	
SCQ1	0504-000128	TR-DIGITAL;-NPN,200MW,22K/22K,SOT-	1	SA	
SCQ2	0504-000128	TR-DIGITAL;-NPN,200MW,22K/22K,SOT-	1	SA	
SCQ3	0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW	1	SA	
SCQ4	0504-000128	TR-DIGITAL;-NPN,200MW,22K/22K,SOT-	1	SA	
SCQ5	0501-000002	TR-SMALL SIGNAL;KSA812,PNP,150MW,SO	1	SA	
SCQ6	0504-000156	TR-DIGITAL;KSR2103,PNP,200MW,22K/22	1	SA	
SCR1	2001-000325	R-CARBON;120OHM,5%,1/8W,AA,TP,1.8X3	1	SA	
SCR15	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
SCR19	2007-000119	R-CHIP;560ohm,5%,1/10W,TP,1608	1	SA	
SCR2	2007-000121	R-CHIP;820ohm,5%,1/10W,TP,1608	1	SA	
SCR20	2007-000119	R-CHIP;560ohm,5%,1/10W,TP,1608	1	SA	
SCR3	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	SA	
SCR35	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
SCR36	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
SCR37	3301-001309	BEAD-SMD;47ohm,1608,TP,-	1	SA	
SCR38	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	SA	
SCR39	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	SA	
SCR4	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
SCR40	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	SA	
SCR5	2007-000121	R-CHIP;820ohm,5%,1/10W,TP,1608	1	SA	
SCR6	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA	
VS106	AK39-00109A	LEAD CONNECTOR;DVD-P260KA,UL1007#26	1	SA	
ZD1	0403-001211	DIODE-ZENER;MTZJ12B,11.8-12.3V,500m	1	SA	
P240	AK92-01318D	ASSY PCB-KARAOKE;DVD-P375K(2MIC),K	1	SA	
FL261	3809-001797	FFC CABLE-FLAT;30V,80C,50mm,11P;1.0	1	SA	
KAC1	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5	1	SA	
KAC10	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA	
KAC11	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5	1	SA	
KAC12	2202-000253	C-CERAMIC,MLC-AXIAL;4.7nF,20%,16V,Y	1	SA	
KAC13	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5	1	SA	
KAC14	2202-000809	C-CERAMIC,MLC-AXIAL;3.3nF,20%,16V,Y	1	SA	
KAC15	2202-000814	C-CERAMIC,MLC-AXIAL;390pF,10%,50V,Y	1	SA	
KAC16	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5	1	SA	
KAC17	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA	
KAC18	2202-000253	C-CERAMIC,MLC-AXIAL;4.7nF,20%,16V,Y	1	SA	
KAC19	2202-000253	C-CERAMIC,MLC-AXIAL;4.7nF,20%,16V,Y	1	SA	
KAC2	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5	1	SA	
KAC20	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL	1	SA	
KAC21	2202-000121	C-CERAMIC,MLC-AXIAL;0.1nF,10%,50V,Y	1	SA	
KAC22	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA	
KAC23	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark	Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
KAC3	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA		KSW1	3404-001261	SWITCH-TACT;15V DC,20mA,100gf,7.4X7	1	SA	
KAC4	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50	1	SA		KVR1	2101-001130	VR-ROTARY;20Kohm,20%,1/20W,SIDE	1	SA	
KAC5	2202-000830	C-CERAMIC,MLC-AXIAL;82pF,10%,50V,Y5	1	SA		LED1	0601-001587	LED;ROUND,RED,3.1mm,635nm,3.8x5.2mm	1	SA	
KAC6	2202-000830	C-CERAMIC,MLC-AXIAL;82pF,10%,50V,Y5	1	SA		MIC1	3722-000441	JACK-PHONE;9P6,43PI,SN,BLK,-	1	SA	
KAC9	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL	1	SA		MIC2	3722-000441	JACK-PHONE;9P6,43PI,SN,BLK,-	1	SA	
KAD1	0401-000005	DIODE-SWITCHING;1N4148,75V,150mA,DO	1	SA							
KAD2	0401-000005	DIODE-SWITCHING;1N4148,75V,150mA,DO	1	SA							
KAE1	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA		H100	AK97-01935A	ASSY-DVD DECK;DP-19,DL3RS,LEFT,BLK6	1	SNA	
KAE10	2401-002165	C-AL;100uF,20%,16V,GP,TP;6.3x7,5	1	SA		DSW1	3403-001026	SWITCH-PUSH;5V,0.7mA,DPST,OFF-ON-OFF	1	SA	
KAE11	2401-002165	C-AL;100uF,20%,16V,GP,TP;6.3x7,5	1	SA		H102	AK61-00360A	BODY CLAMPER-DISC;DP-16,POM,T0.7,-	1	SA	
KAE12	2401-002165	C-AL;100uF,20%,16V,GP,TP;6.3x7,5	1	SA		H103	AK66-00042A	GEAR-PULLEY;DP-15,POM,,-,WHT,-,-	1	SA	
KAE2	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA		H104	AK31-00020A	MOTOR DC-LOAD ASSY;RF300EA-1D390,30	1	SA	
KAE3	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA		H105	6602-001076	BELT-RECTANGULAR;CR,T1.2,4.3,1.2X2	1	SA	
KAE4	2401-000598	C-AL;1uF,20%,50V,GP,TP;4x7,5	1	SA		H106	AK66-00041A	GEAR-TRAY;DP-15,POM,,-,WHT,-,-,-	1	SA	
KAE5	2401-000665	C-AL;2.2uF,20%,50V,GP,TP;3.5x5,5	1	SA		H107	AK66-00056A	SLIDER-HOUSING;DP-17,POM,,-,WHT,	1	SA	
KAE6	2401-000922	C-AL;22uF,20%,16V,GP,TP;5x5,5	1	SA		H108	AK63-00323A	TRAY-DISC;DP-19,ABS,-,W120,L186.3,-	1	SA	
KAE7	2401-001250	C-AL;4.7uF,20%,35V,GP,TP;4x5,5	1	SA		H109	AK97-01004B	ASSY-PCB DECK;-DP-19,-	1	SA	
KAE8	2401-000414	C-AL;10uF,20%,16V,GP,TP;4x7,5	1	SA		H202	AK73-00005B	RUBBER-INSULATOR;DP-15,BUTYL,•12,H	1	SA	
KAE9	2401-002165	C-AL;100uF,20%,16V,GP,TP;6.3x7,5	1	SA		H203	AH61-50327A	SHAFT-P/U;DP-3,SUS,184.7,0D3,-,-,-	1	SA	
KAIC1	1204-001470	IC-AUDIO CONTROLLER;M65855FP,SOP16	1	SA		H203	AH61-50327A	SHAFT-P/U;DP-3,SUS,184.7,0D3,-,-,-	1	SA	
KAR1	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP;1.8X3	1	SA		H204	AK66-00043A	GEAR-FEED A;DP-15,POM,,-,,-,-,-,-,-	1	SA	
KAR10	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP;1.8X	1	SA		H205	AK66-00044A	GEAR-FEED B;DP-15,POM,,-,,-,-,-,-,-	1	SA	
KAR11	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP;1.8X	1	SC		H206	AK61-00363A	HOLDER-CAM SKEW;DP-16,POM,,-,-,WHT	1	SA	
KAR12	2001-000864	R-CARBON;4.7KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H206	AK61-00363A	HOLDER-CAM SKEW;DP-16,POM,,-,-,WHT	2	SA	
KAR13	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H207	AK31-00017A	MOTOR DC-SPINDLE;RF300FA-12350,3000	1	SA	
KAR14	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H210	AK31-00005A	MOTOR-FEED ASSY;-DP-9,-,-,-,-,-,-,-	1	SC	
KAR15	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H211	AK97-01928A	ASSY-PLAYER PU;Mold,BRINO,Pick-Up	1	SA	
KAR16	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP;1.8X	1	SA		H212	AK61-00359A	HOLDER-CHUCK;DP-16,POM,T3,W140,L96,	1	SA	
KAR17	2001-000734	R-CARBON;56KOHM,5%,1/8W,AA,TP;1.8X	1	SA		H213	AK61-00357A	SPRING ETC-CLAMPER;-SUS304CSP,-,-	1	SA	
KAR18	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H214	AK66-00057A	GEAR-BACKLASH;DP-16,POM,0.5,-,-,WHT	1	SA	
KAR19	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		H241	AK41-00250C	FFC-PU;DP-19,-,-,23P,-,1mm	1	SA	
KAR2	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP;1.8X3	1	SA		H401	AK61-00358A	FRAME-MAIN;DP-17,ABS,SR-0320,94HB,B	1	SNA	
KAR20	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AH97-00448B	ASSY-SUB MATERIAL;DP-7S,-,-	1	SNA	
KAR21	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	0205-001033	GREASE-PL-30G,W050030019,-	0.5	SNA	
KAR22	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	0205-001048	GREASE-BEARING;G-754,BRN,1Kg/6	0.01	SNA	
KAR23	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AK97-01006A	ASSY-HOLDER CHUCK;-DP-16,-	1	SNA	
KAR24	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AK97-01454B	ASSY-PU DECK;-DP-19,LD VE	1	SNA	
KAR25	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AK97-01106A	ASSY-SUB DECK;-DP-16S,SEM	1	SNA	
KAR26	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AH66-00077A	GEAR-FEED MOTOR;-POM M90-44,-,-,-	1	SNA	
KAR28	2001-000548	R-CARBON;270KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AK31-00006A	MOTOR-FEED;RF-300EA-1D390,DP-9,90MA	1	SNA	
KAR29	2001-000515	R-CARBON;220KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AK61-00362A	BRACKET-DECK OUTSET;DP-16,POM,T1.2	1	SNA	
KAR3	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AK61-00361A	BRACKET-DECK;DP-16,SECC T1.2,T1.2,-	1	SNA	
KAR33	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AK97-01456A	ASSY-HOUSING;-DP-19,SLIM TRAY	1	SNA	
KAR35	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AH31-00025A	MOTOR-LOADING;RF-300EA-1D390,DP-7,1	1	SNA	
KAR36	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AK66-00058A	PULLEY-MOTOR;DP-17,POM,-,BLK,I3.5,0	1	SNA	
KAR37	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP;1.8X	1	SA		S.N.A	AK41-00249B	FFC-DECK;DP-19,-,-,11P,-,1mm	1	SNA	
KAR4	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		S.N.A	AK41-00251A	PCB-DECK;DP-17,PHENOL,-,T1.6,-,-	0.056	SNA	
KAR5	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		W010	6003-001157	SCREW-TAPTITE;PWH,+,-,B,M2,L6,ZPC(W	1	SA	
KAR6	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP;1.8X	1	SC		W012	6002-001086	SCREW-TAPPING;PH,+,-,B,M1.7,L5.0,ZP	1	SA	
KAR7	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP;1.8X3	1	SA		W012	6002-001086	SCREW-TAPPING;PH,+,-,B,M1.7,L5.0,ZP	2	SA	
KAR8	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP;1.8X	1	SC		W212	6003-001251	SCREW-TAPTITE;CH,+,-,B,M1.7,L3,ZPC	1	SA	
KAR9	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP;1.8X	1	SA		W273	6003-000233	SCREW-TAPTITE;PH,+,-,B,M2,L6,ZPC(BL	1	SA	
KCON1	3708-001266	CONNECTOR-FPC/FFC/PIC;11P,1MM,STRAI	1	SA		W274	6001-001730	SCREW-MACHINE;BH,+,-,M1.7,L2.5,ZPC	4	SA	
KOP1	1201-000163	IC-OP AMP;4560,SOP8P,173MIL,DUAL,1	1	SA		W274	6001-001730	SCREW-MACHINE;BH,+,-,M1.7,L2.5,ZPC	2	SA	
KOP2	1201-000163	IC-OP AMP;4560,SOP8P,173MIL,DUAL,1	1	SA							

Electrical Parts List

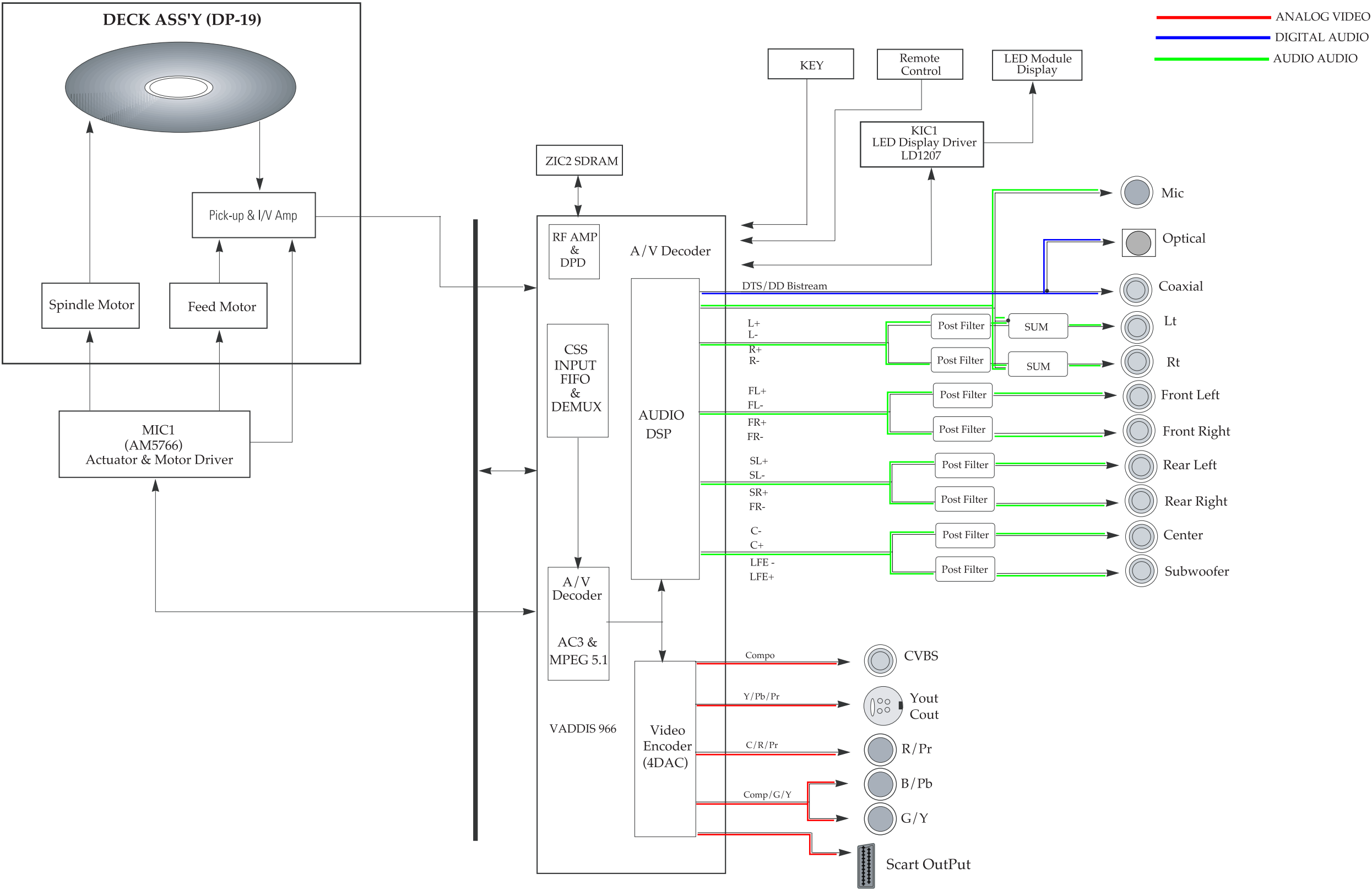
Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
A001	AK59-00054A	REMOCON-ASSY;DVD-P260K/XSE,HUIZHOU	1	SA	
CT1	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	1	SA	
CT2	2203-000192	C-CER,CHIP;100nF,+80-20%,50V,Y5V,20	1	SA	
LDT1	0601-000519	LED-IR;ROUND,5mm,170mW,4V,940nm,TP	1	SA	
OP4	2007-000029	R-CHIP;0ohm,5%,1/8W,TP,2012	1	SA	
QT1	0501-000534	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,	1	SA	
RT1	2007-000881	R-CHIP;4.7ohm,5%,1/8W,TP,2012	1	SA	
RT2	2007-000593	R-CHIP;22ohm,5%,1/8W,TP,2012	1	SA	
C-A/V	AC39-42001R	CABLE-A/V;PVC,-,-,3P,-,-	1	SA	
I/B	AK68-01291C	MANUAL USERS;DVD-P470K,XEV,Russian,	1	SA	
P-CASE	AK69-00544F	PACKING CASE;DVD-P475KD/XEV,PEPER,S	1	SA	
W001	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC B	4	SA	
W004	6003-000283	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC WH	2	SA	
W275	6003-001561	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC WH	13	SA	

Loc.No	Part No	Description ; Specification	Q'ty	S.N.A	Remark
--------	---------	-----------------------------	------	-------	--------

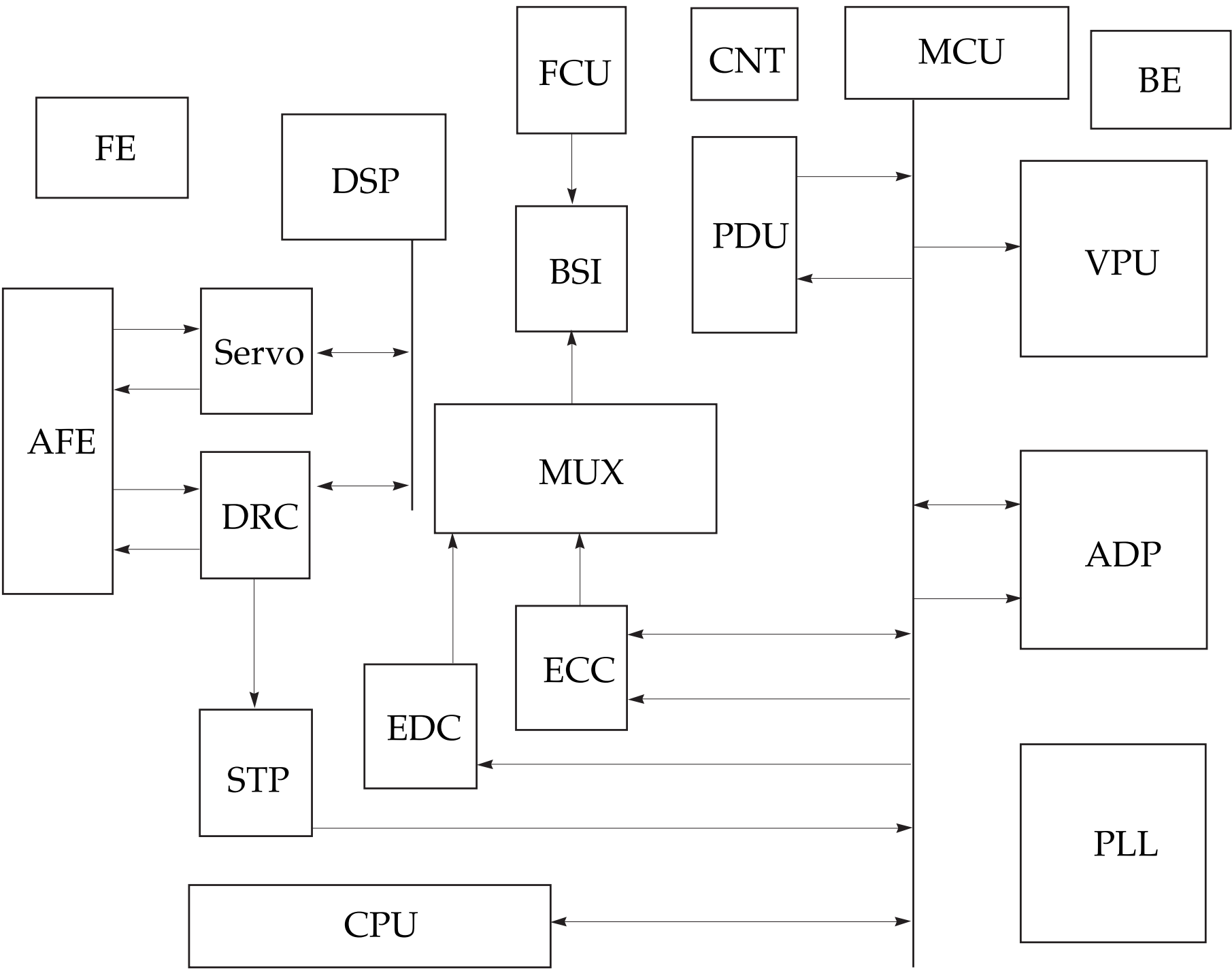
8. Block Diagrams

8-1 All Block Diagram	8-2
8-2 ZIC1 (Vadiss 966 Integration) Block Diagram	8-3
8-3 ZIC2 (SDRAM) Block Diagram	8-4
8-4 MIC1 (AM 5766) Block Diagram	8-5

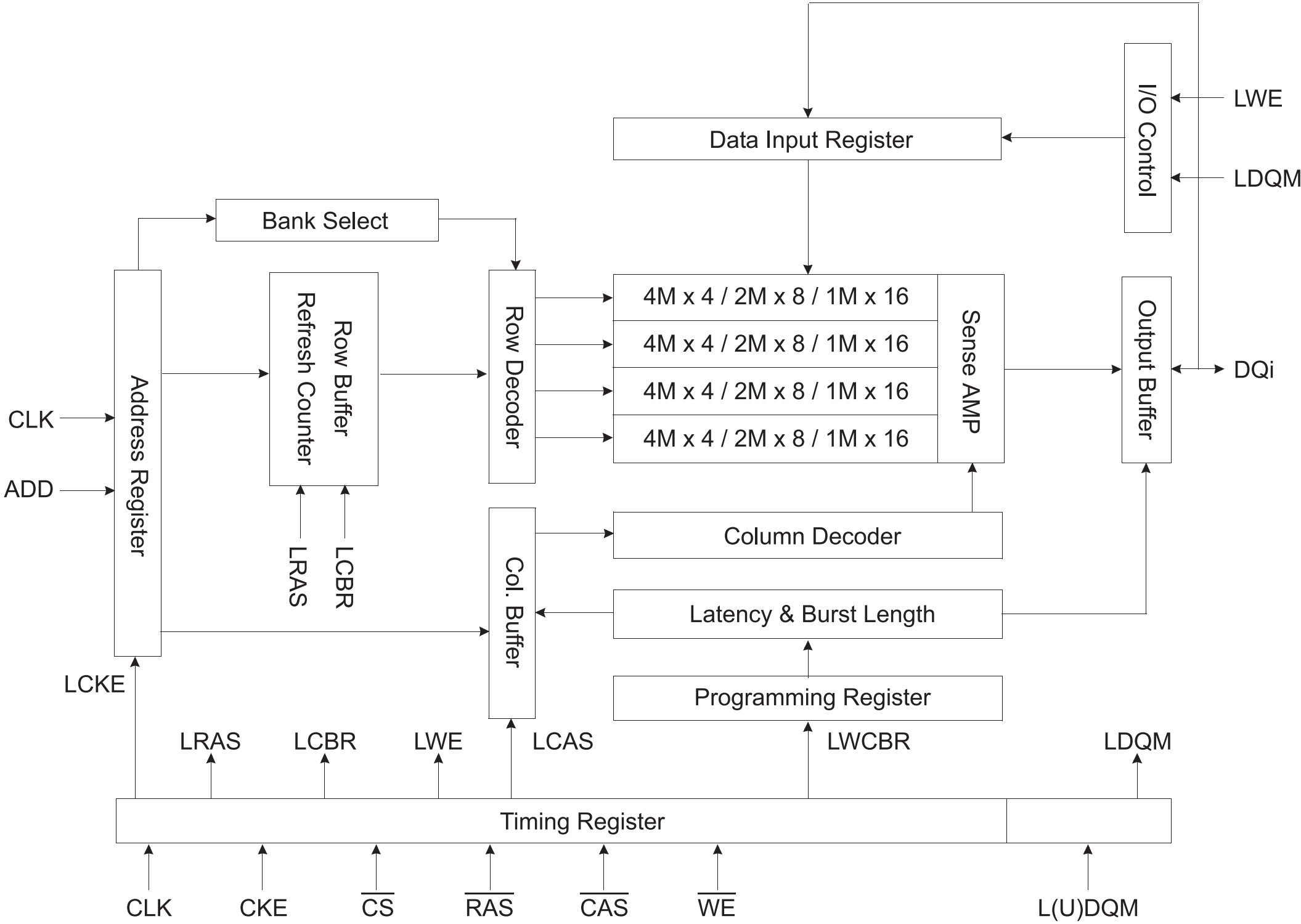
8-1 All Block Diagram



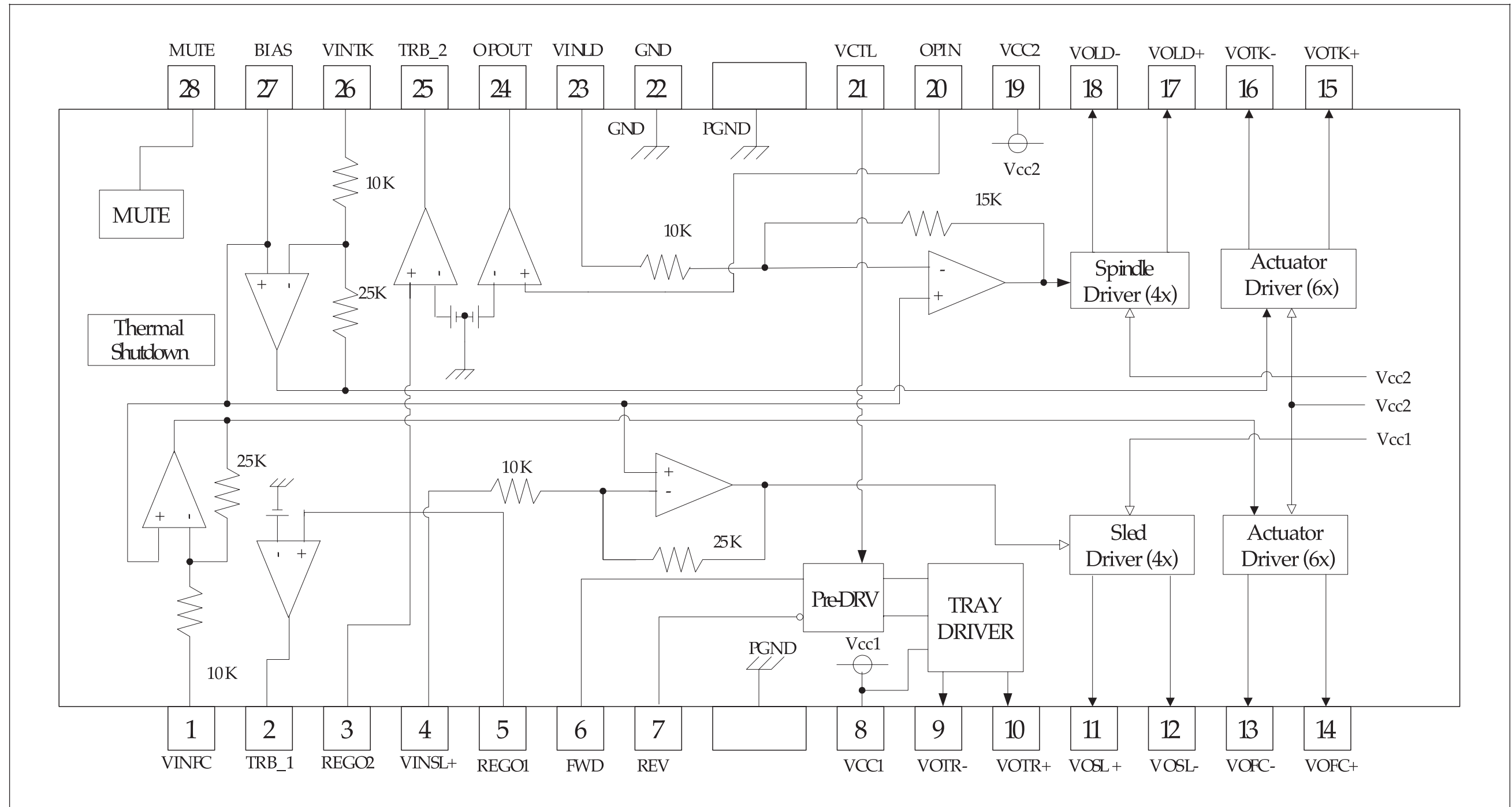
8-2 ZIC1 (Vadiss 966 Integration) Block Diagram



8-3 ZIC2 (SDRAM) Block Diagram

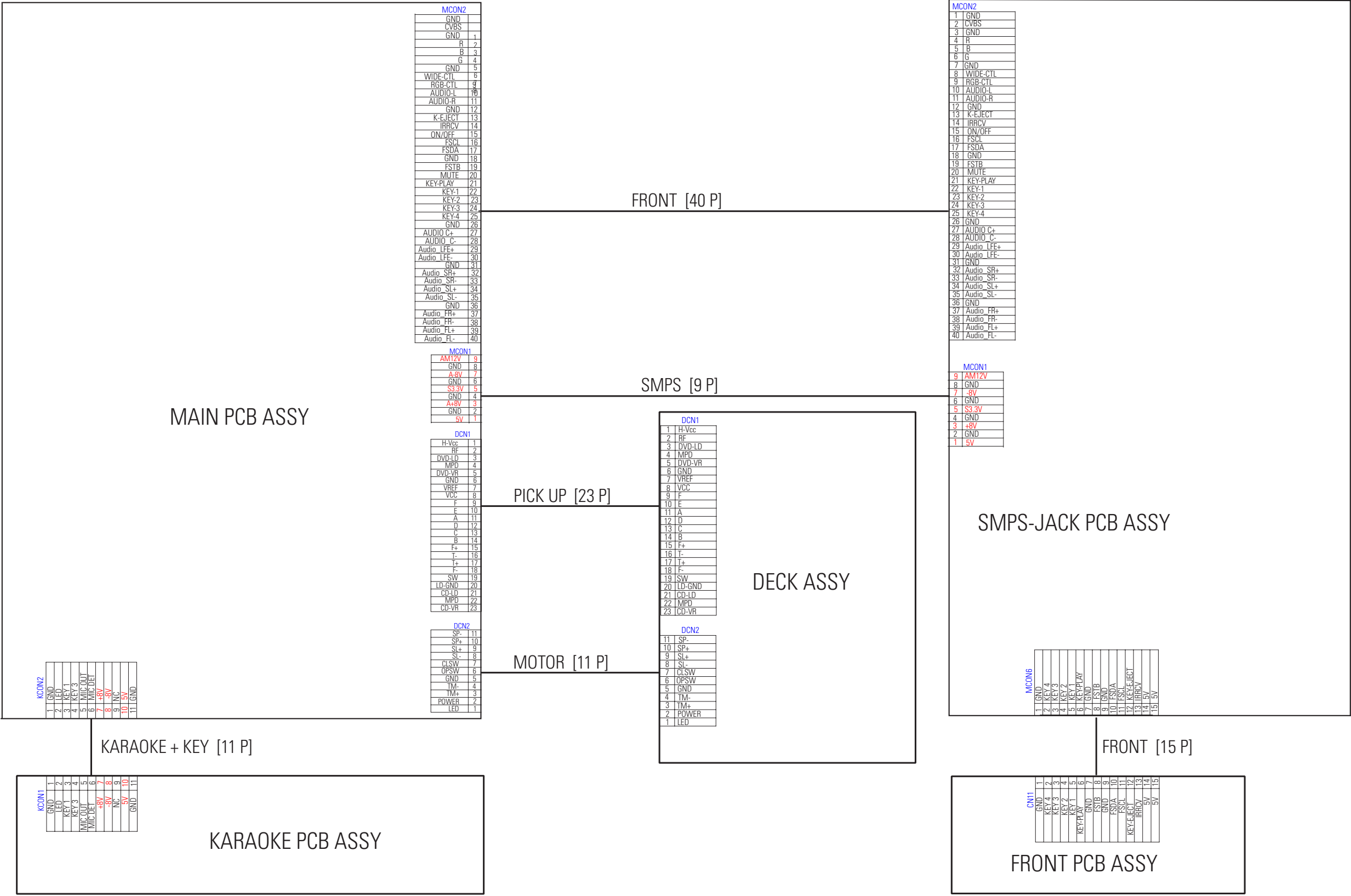


8-4 MIC1 (AM 5766) Block Diagram



MEMO

9. Wiring Diagram



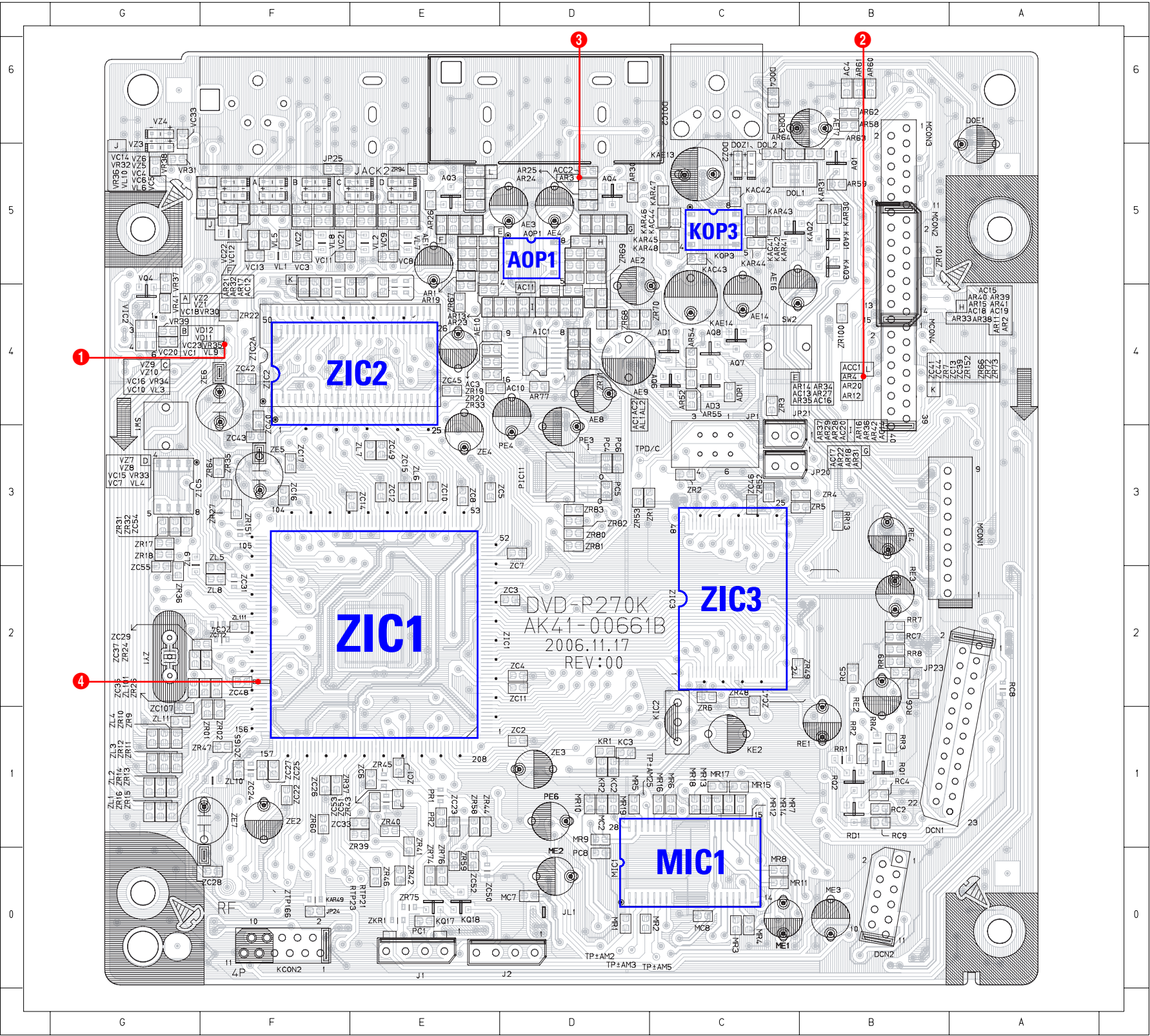
MEMO

10. PCB Diagrams

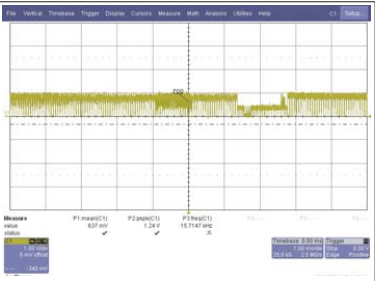
10-1 Main PCB	10-2
10-2 S.M.P.S PCB	10-4
10-3 Karaoke PCB	10-6
10-4 Front Key PCB	10-8

10-1 Main PCB

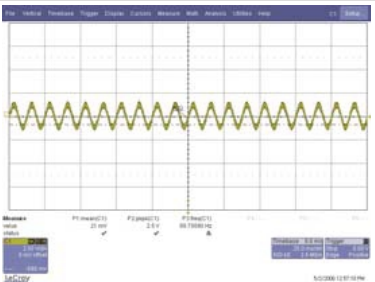
COMPONENT SIDE



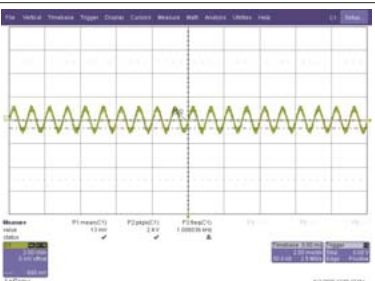
NO.	X-Y
MIC1	C-0
ZIC3	C-2
KOP3	C-5
AOP	D-5
ZIC1	E-2
ZIC2	E-4



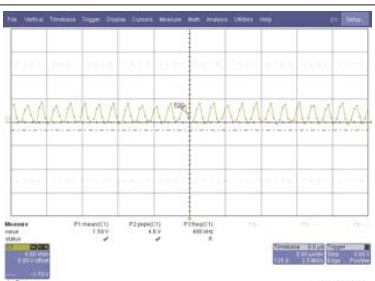
1 VR35 (Video Disc)



2 AR4 (Audio Disc)



3 AR3 (Audio L Disc)



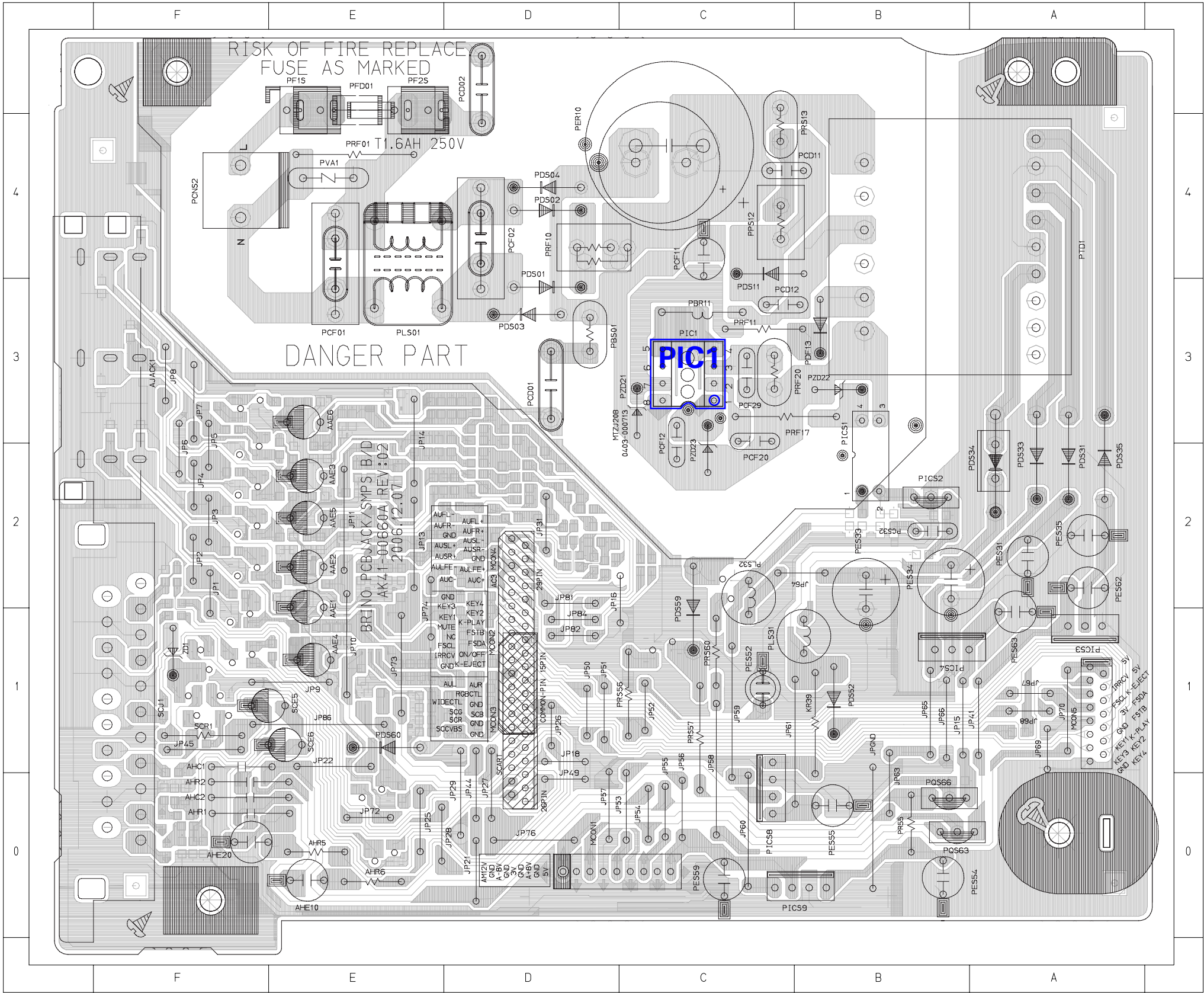
4 PIN143 (Decoder XIN)

CONDUCTOR SIDE

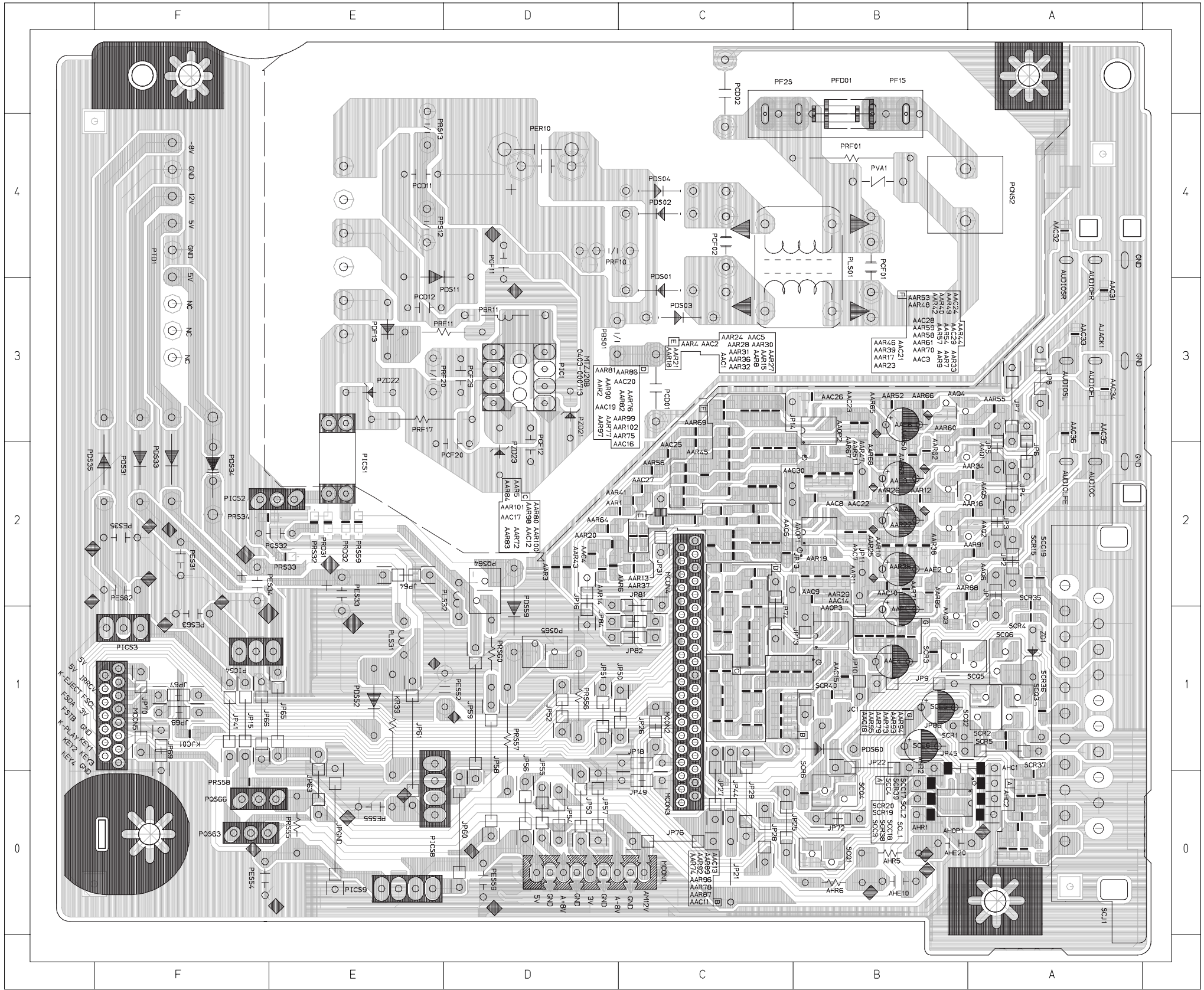


10-2 S.M.P.S PCB

COMPONENT SIDE

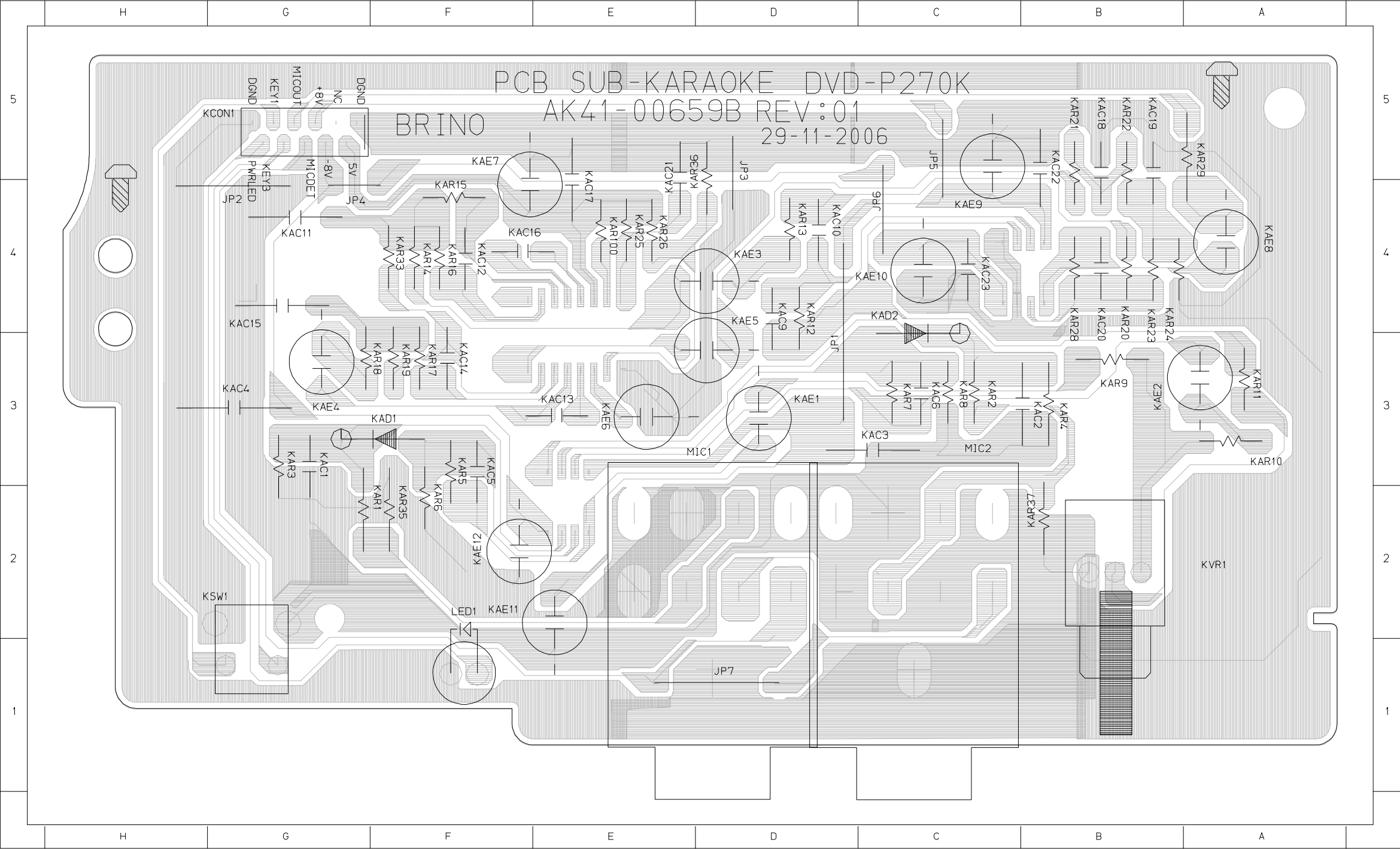


CONDUCTOR SIDE

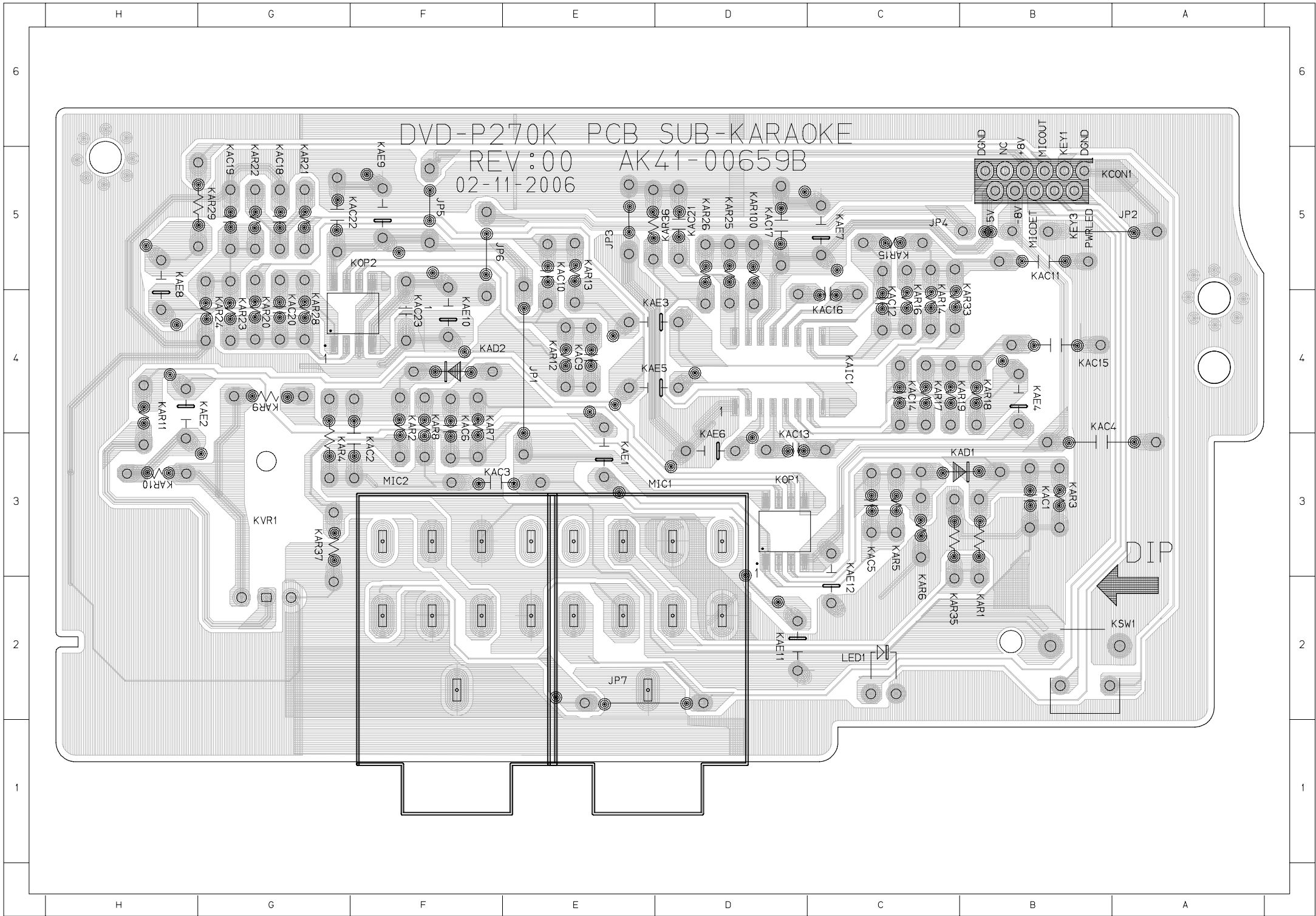


10-3 Karaoke PCB

COMPONENT SIDE

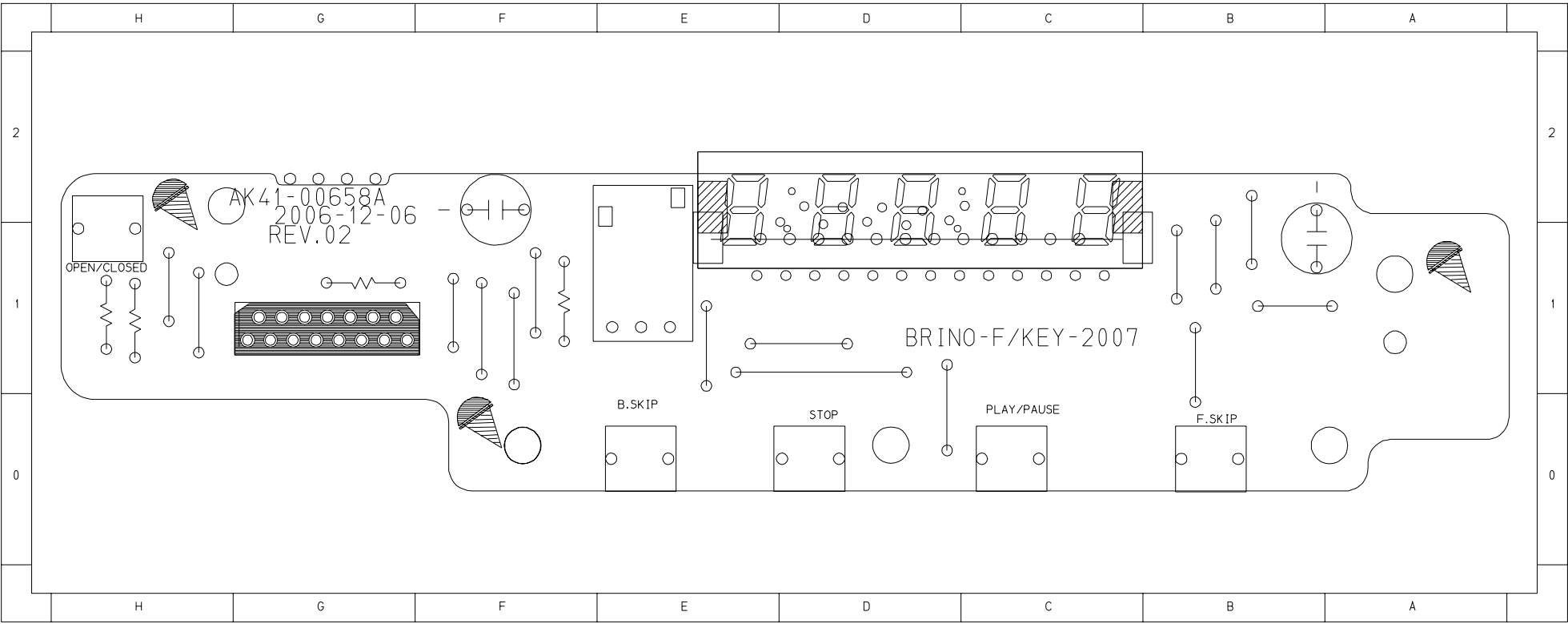


CONDUCTOR SIDE

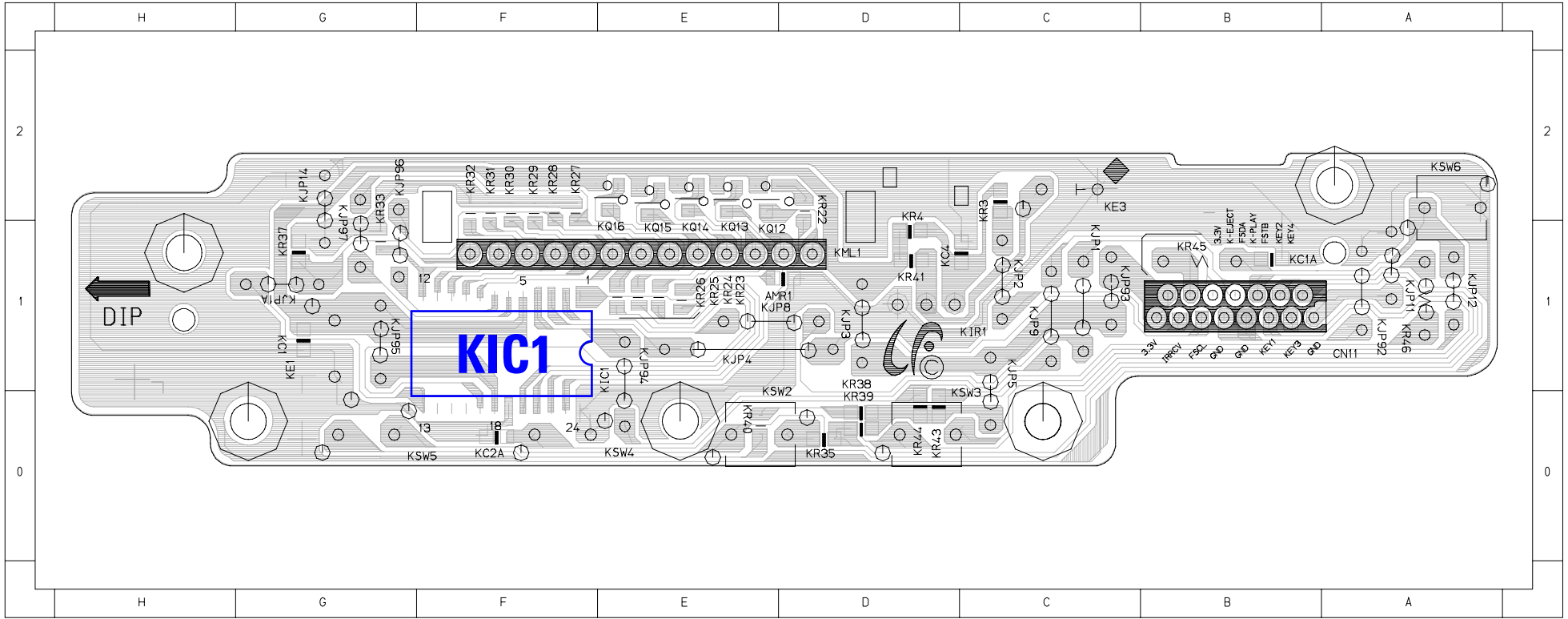


10-4 Front Key PCB

COMPONENT SIDE



CONDUCTOR SIDE



11. Schematic Diagrams

11-1 S.M.P.S (Jack PCB) - - - - -	11-2
11-2 AC-3 (Jack PCB) - - - - -	11-3
11-3 Front Micom (Jack PCB) - - - - -	11-4
11-4 Scart (Jack PCB) - - - - -	11-5
11-5 Connector (Jack PCB) - - - - -	11-6
11-6 Audio (Main PCB) - - - - -	11-7
11-7 Video (Main PCB) - - - - -	11-8
11-8 Decoder (Main PCB) - - - - -	11-9
11-9 Motor Driver (Main PCB) - - - - -	11-10
11-10 Karaoke (Karaoke PCB)- - - - -	11-11

Note

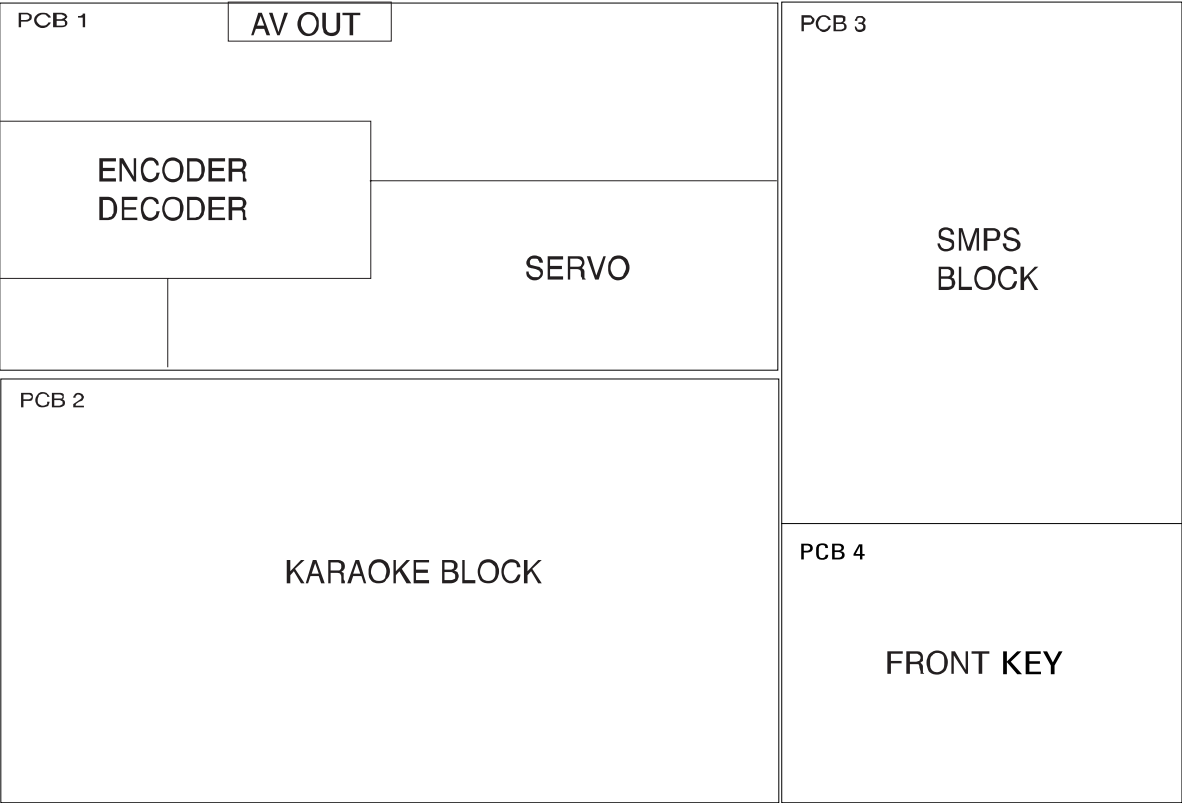
For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

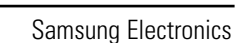
Special note :
Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the “electrostatically sensitive (ES) devices” section of this service manual.

Note :
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

Important safety notices :
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components. Use only the same type.

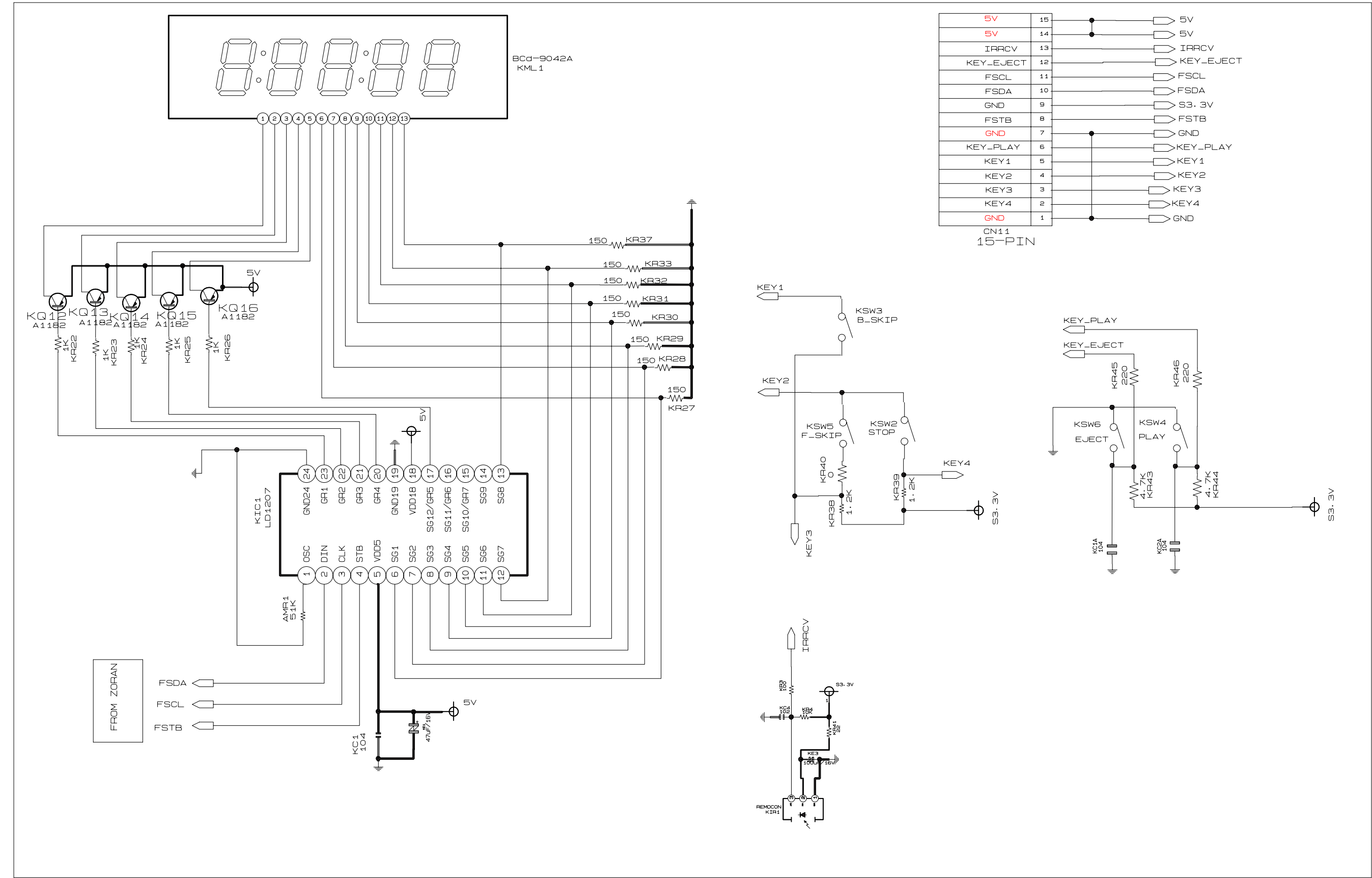
◆ Block Identification of Main PCB



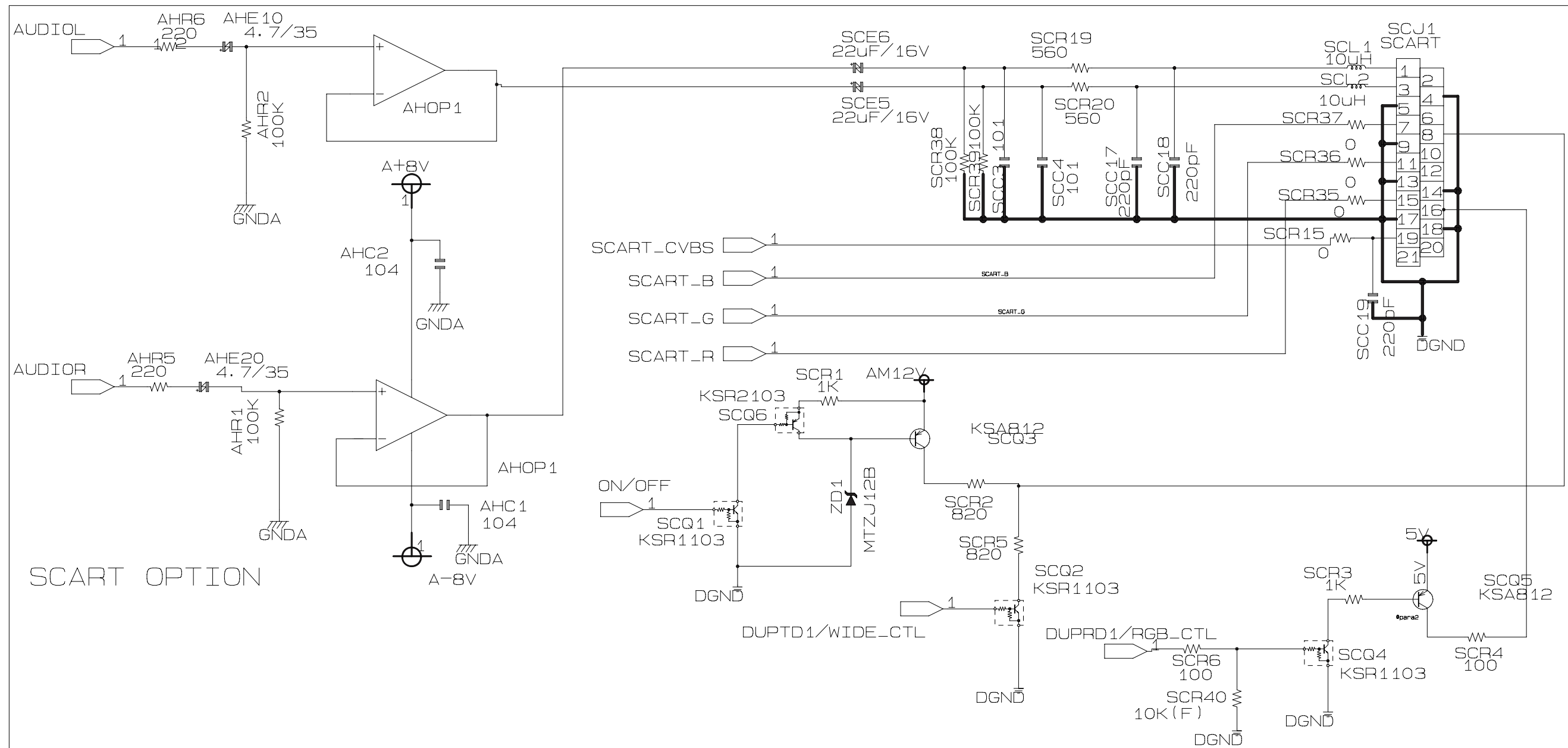




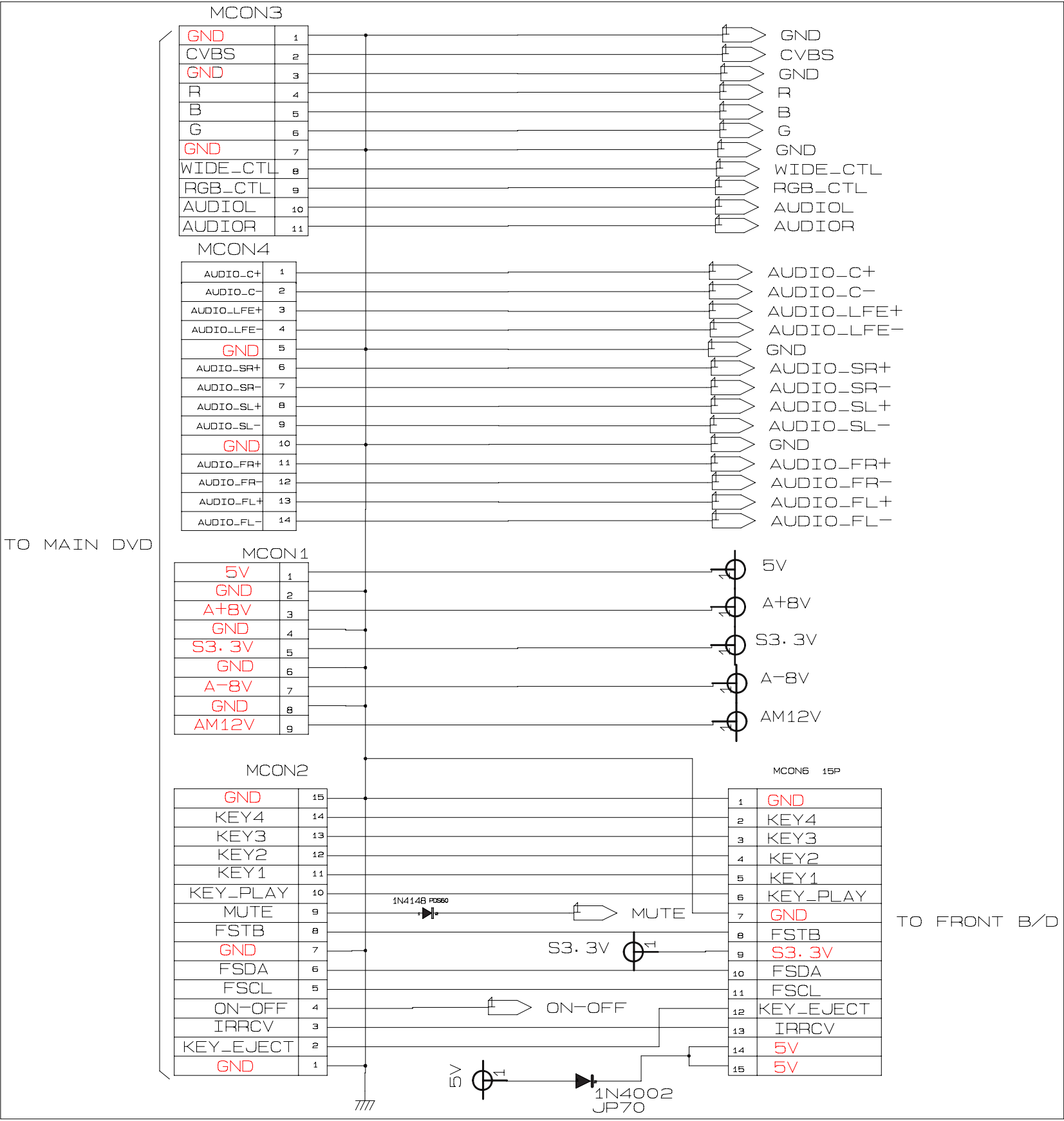
11-3 Front Micom (Jack PCB)



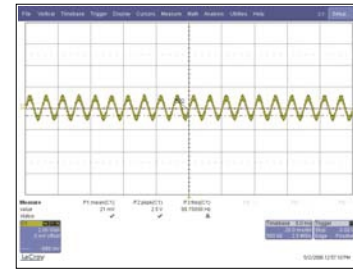
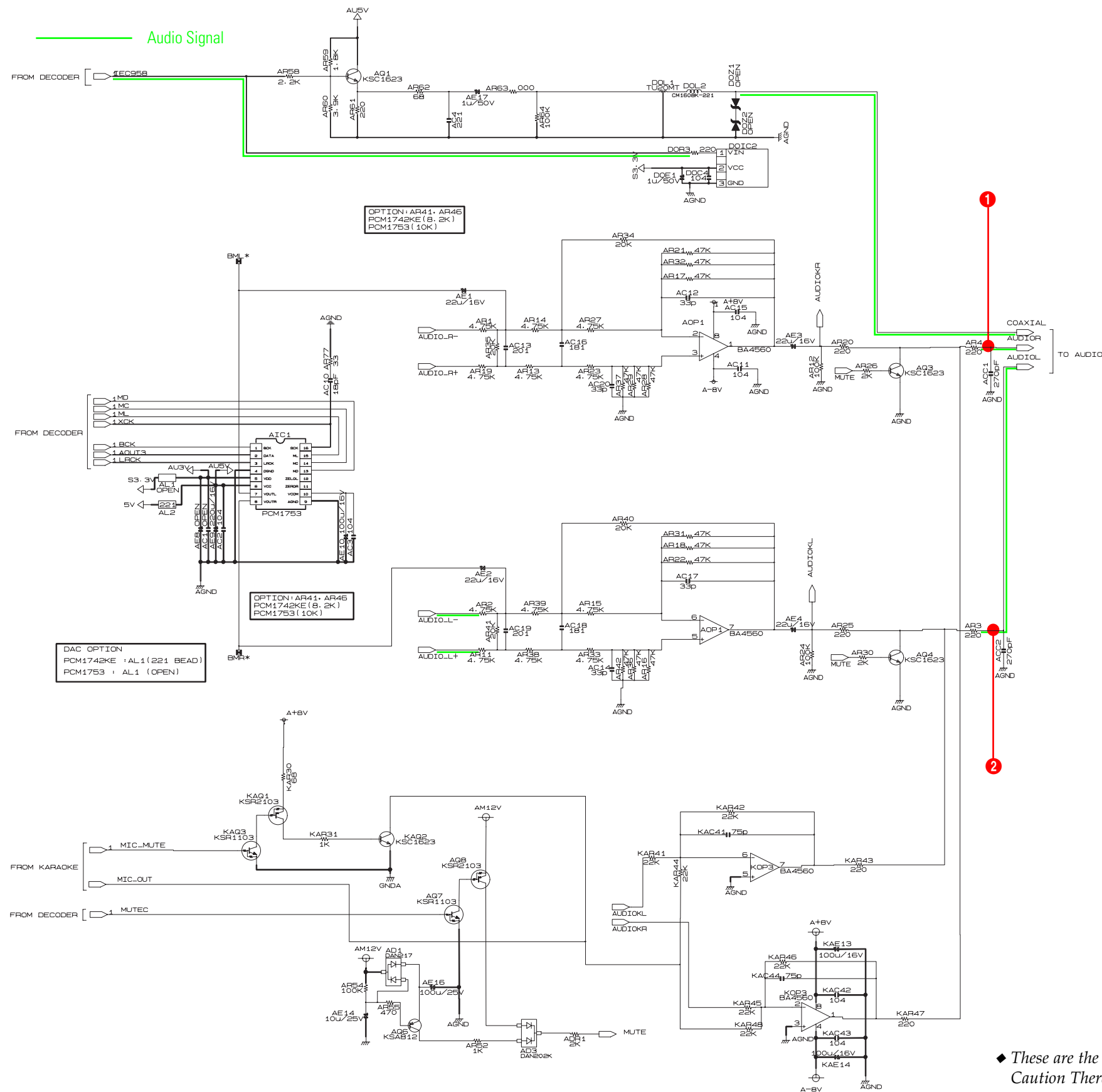
11-4 Scart (Jack PCB)



11-5 Connector (Jack PCB)



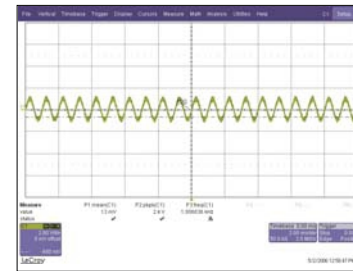
11-6 Audio (Main PCB)



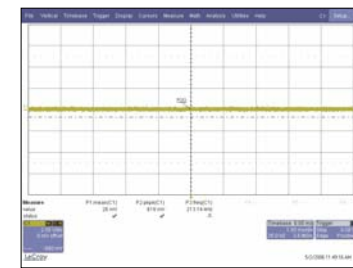
① AR4 (Audio_R_disc)



AR4 (Audio_R_NoDisc)



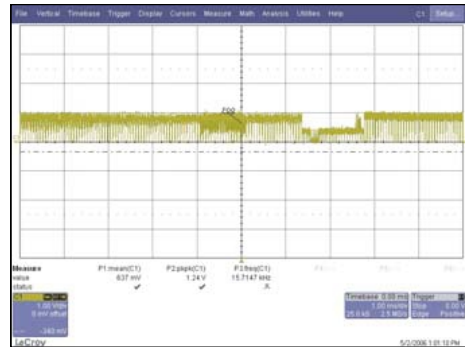
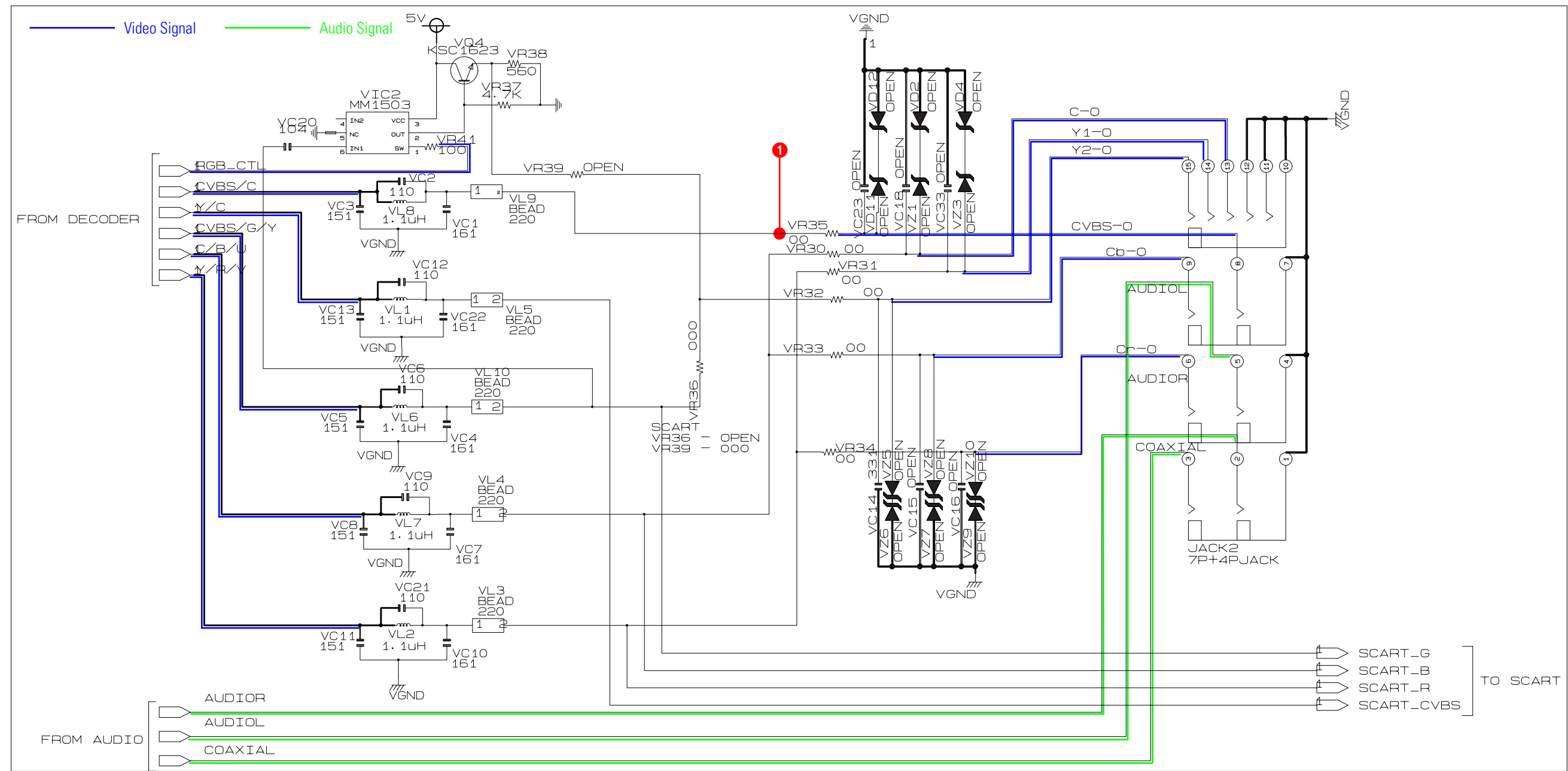
2 AR3 (Audio_L_Disc)



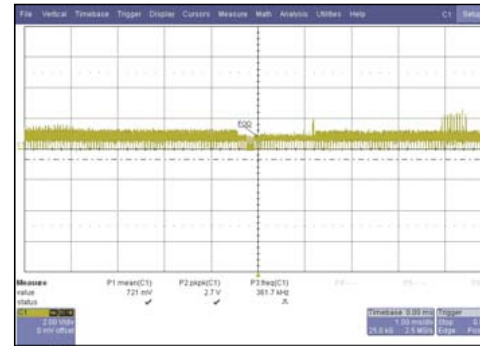
AR3 (Audio_L_No Disc)

◆ These are the waveforms of DVD-P475KD .
Caution There can be some differences (Voltage, Frequency, etc.) among cameras.

11-7 Video (Main PCB)



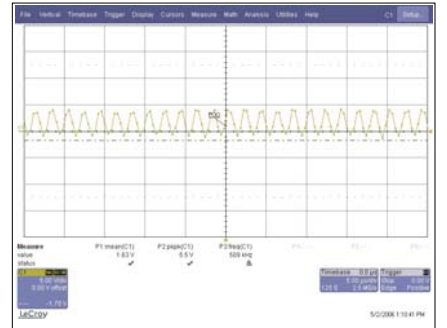
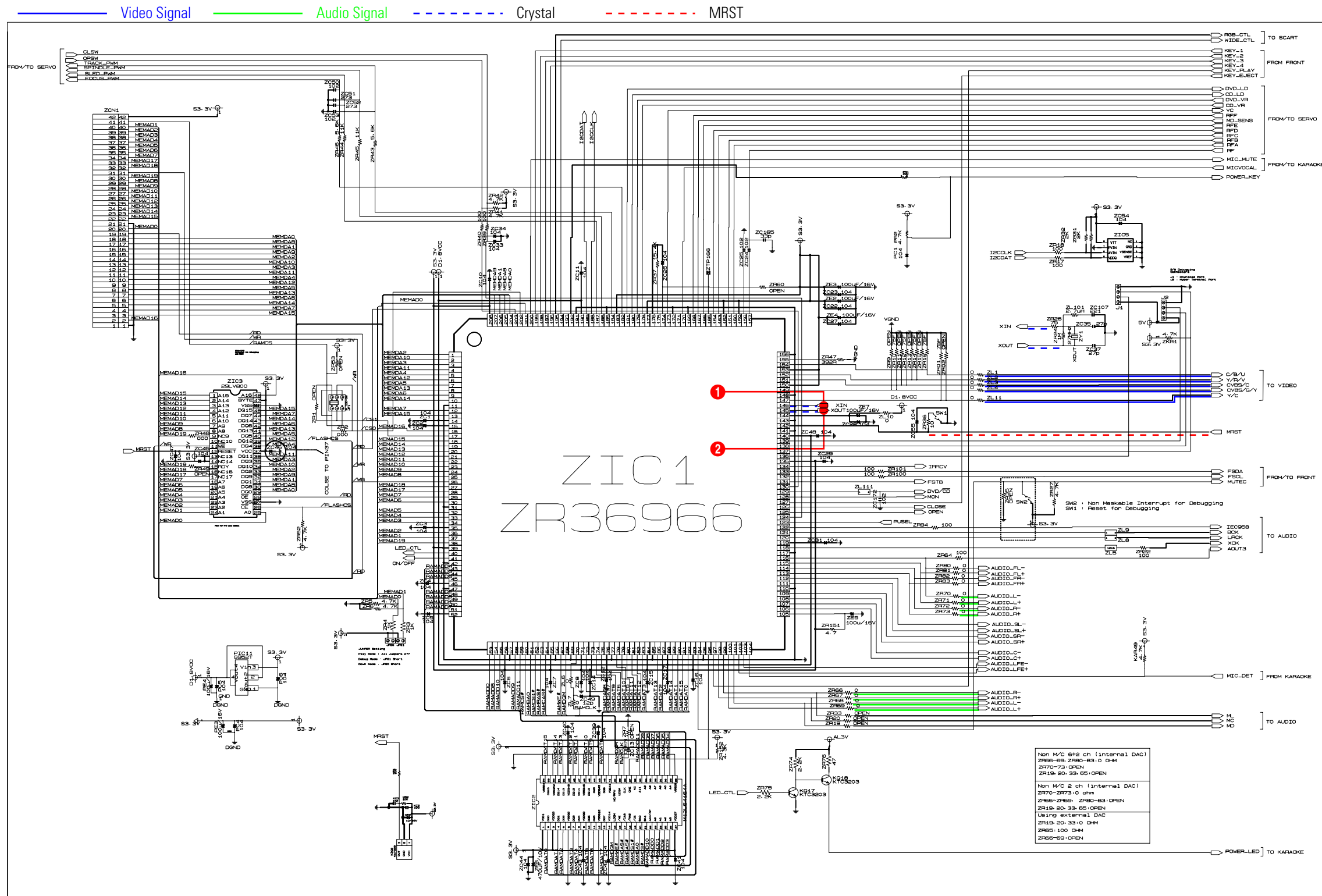
① VR35 (Video_Disc)



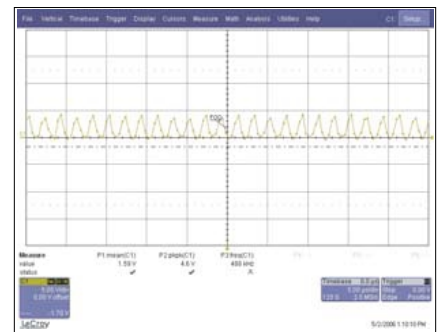
① VR35 (Video_No Disc)

◆ These are the waveforms of DVD-P475KD .
Caution There can be some differences (Voltage, Frequency, etc.) among cameras.

11-8 Decoder (Main PCB)



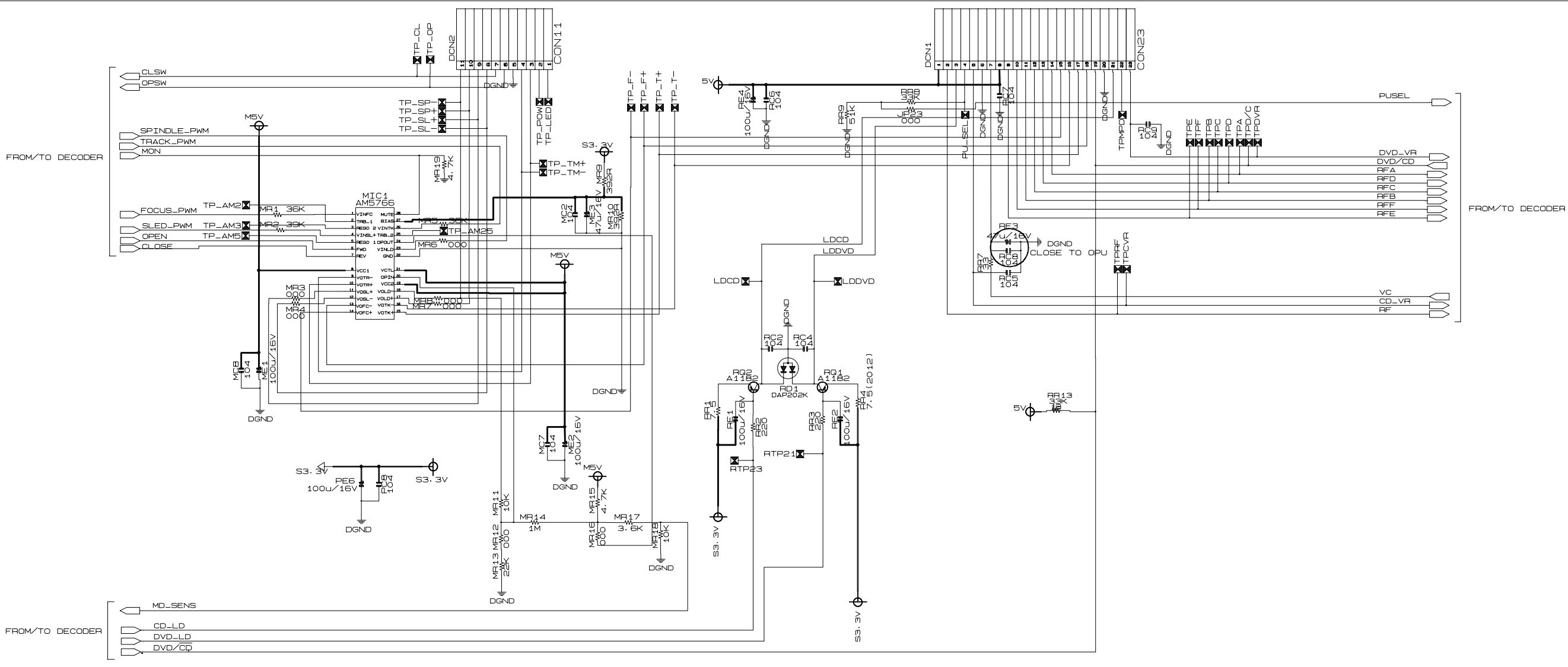
① Pin 143 (XIN)



② Pin 144 (XOUT)

◆ These are the waveforms of DVD-P475KD .
Caution There can be some differences (Voltage, Frequency, etc.) among cameras.

11-9 Motor Driver (Main PCB)





MEMO

13. Circuit Operating Descriptions

13-1 Power

13-1-1 Comparison between Linear Power Supply and S.M.P.S

13-1-1 (a) Linear

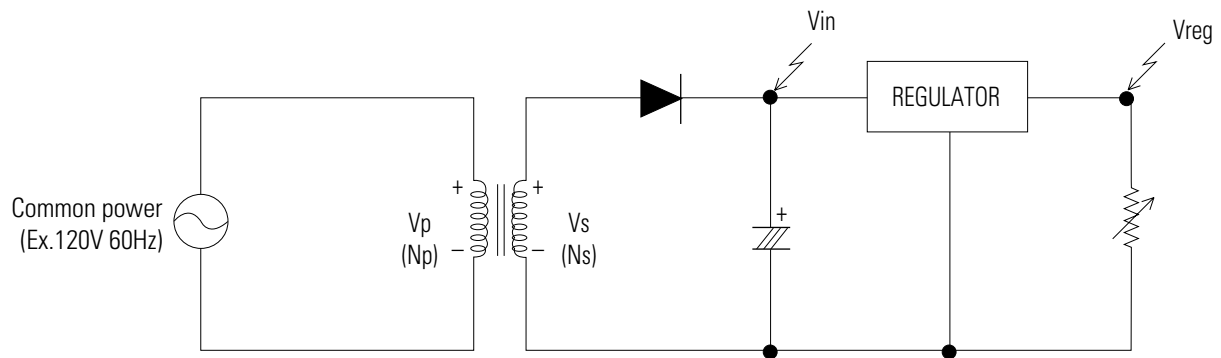


Fig.13-1 Linear Power Supply

◆ Waveform/Description

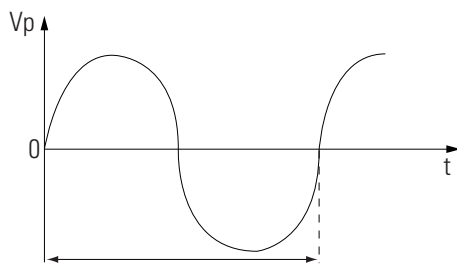


Fig. 13-2

Input : Common power to transformer (V_p).

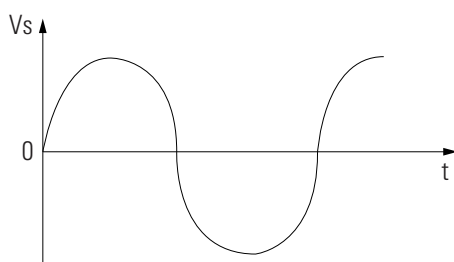


Fig. 13-3

The output V_s of transformer is determined by the ratio of 1st N_p and 2nd N_s .

$$V_s = (N_s/N_p) \times V_p$$

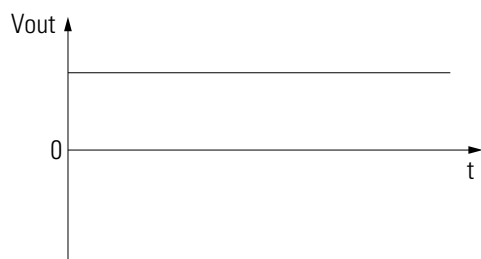


Fig. 13-4

V_{out} is output (DC) by diode and condensor.

◆ Advantages and disadvantages of linear power supply

1) Advantages : Little noise because the output waveform of transformer is sine wave.

2) Disadvantages :

- ❶ Additional margin is required because V_s is changed (depending on power source). (The regulator loss is caused by margin design).
- ❷ Greater core size and condensor capacity are needed, because the transformer works on a single power frequency.

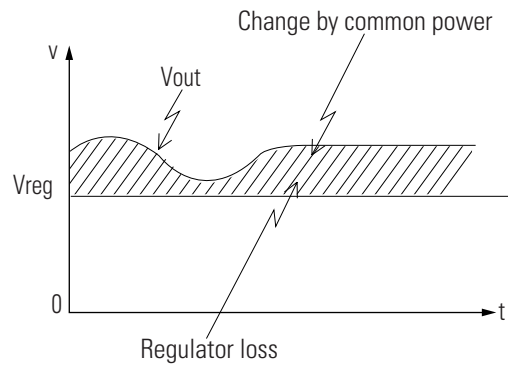


Fig. 13-5

13-1-1 (b) S.M.P.S. (Ringing Choke Converter method)

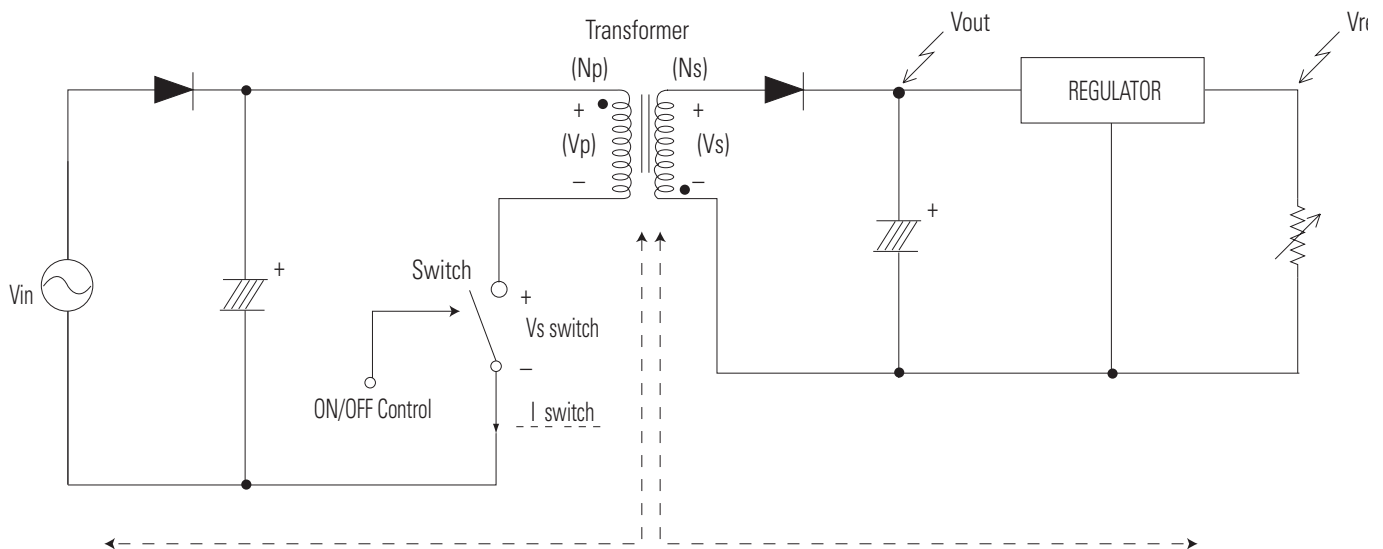


Fig. 13-6

◆ Terms

- 1) 1st : Common power input to 1st winding.
- 2) 2nd : Circuit followings output winding of transformer.
- 3) f (Frequency) : Switching frequency (T : Switching cycle)
- 4) Duty : $(T_{on}/T) \times 100$

13-1-2 Circuit description [FLY-Back RCC(Ringing Choke Converter)] Control

13-1-2 (a) AC Power Rectification/Smoothing Terminal

- 1) PDS01, PDS02, PDS03, PDS04 : Convert AC power to DC(Full wave rectification).
- 2) PEF10 : Smooth the voltage converted to DC.
- 3) PLS01, PBS01 : Noise removal at power input/output.
- 4) PVA1 : SMPS protection at power surge input.

13-1-2 (b) SNUBBER Circuit : PDS11, PCD12, PER13, PRS11, PRS12

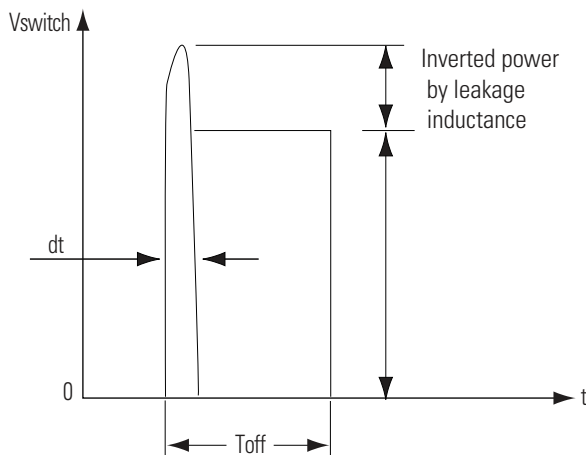


Fig. 13-7

- 1) Prevent residual high voltage at the terminals of switch during switch off/Suppress noise.
High inverted power occurs at switch (PQR11) off, because of the 1st winding of transformer :
($V = -L1 \times di/dt$. $L1$: Leakage Induction)
A very high residual voltage exist on both terminals of PQR11 because dt is a very short.

- 2) SNUBBER circuit protects PQR11 from damage through leakage voltage suppression by RC,
(Charges the leakage voltage to PDS11, PER13, PCD12 and discharges to PRS13).

13-1-2 (c) Driving circuit

When V_{in} supplied, driving current I_g occurs through the PQR11. By this $I_C (=H_{fe} \times I_g)$ occurs through the PQR11 and the V_b is inducted to base winding coil NB of PQR11. By inducted V_b , I_b start flow and the PQR11 is sustained (S/W ON). I_b is constant and I_c increases in Proportion to time. After constant time passed I_b become to shortage and PQR11 is cut OFF (S/W OFF).

Circuit Operating Description

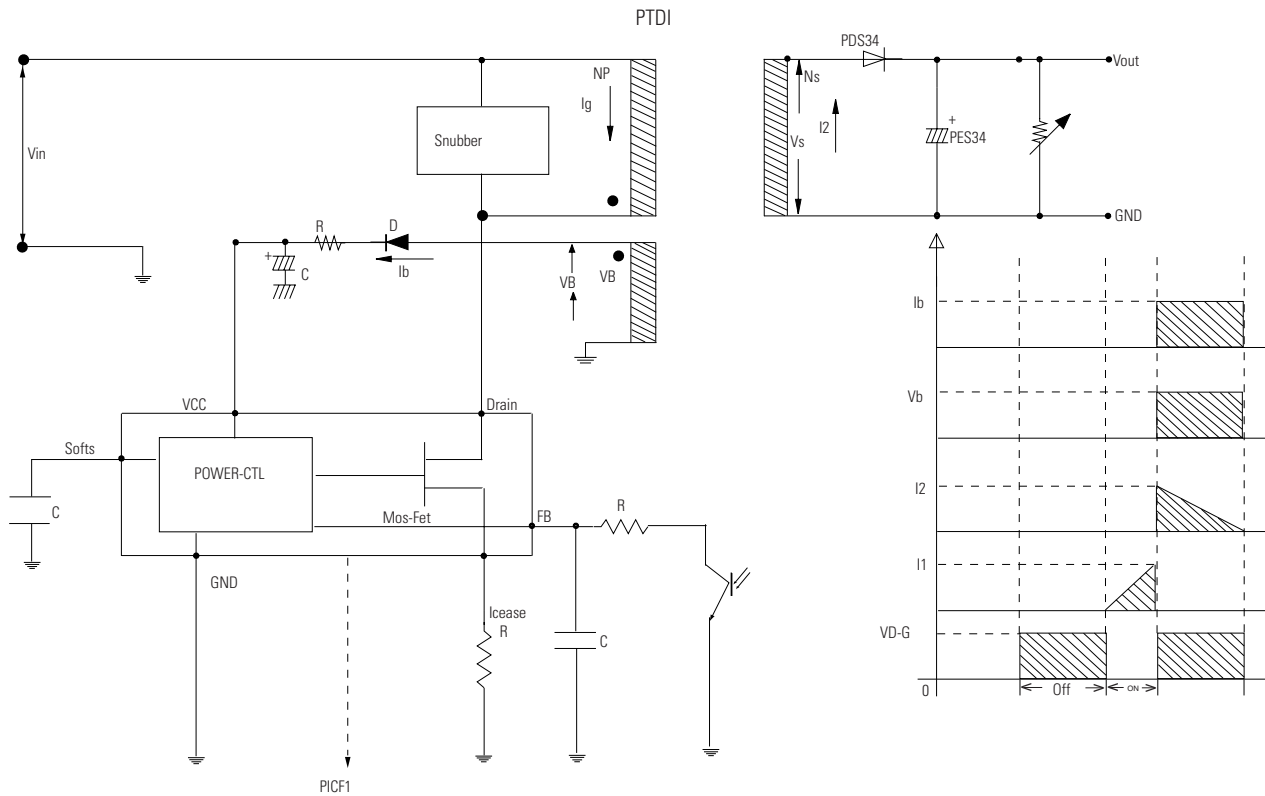


Fig. 13-8 Driving Circuit

13-1-2 (d) Feedback Control Circuit

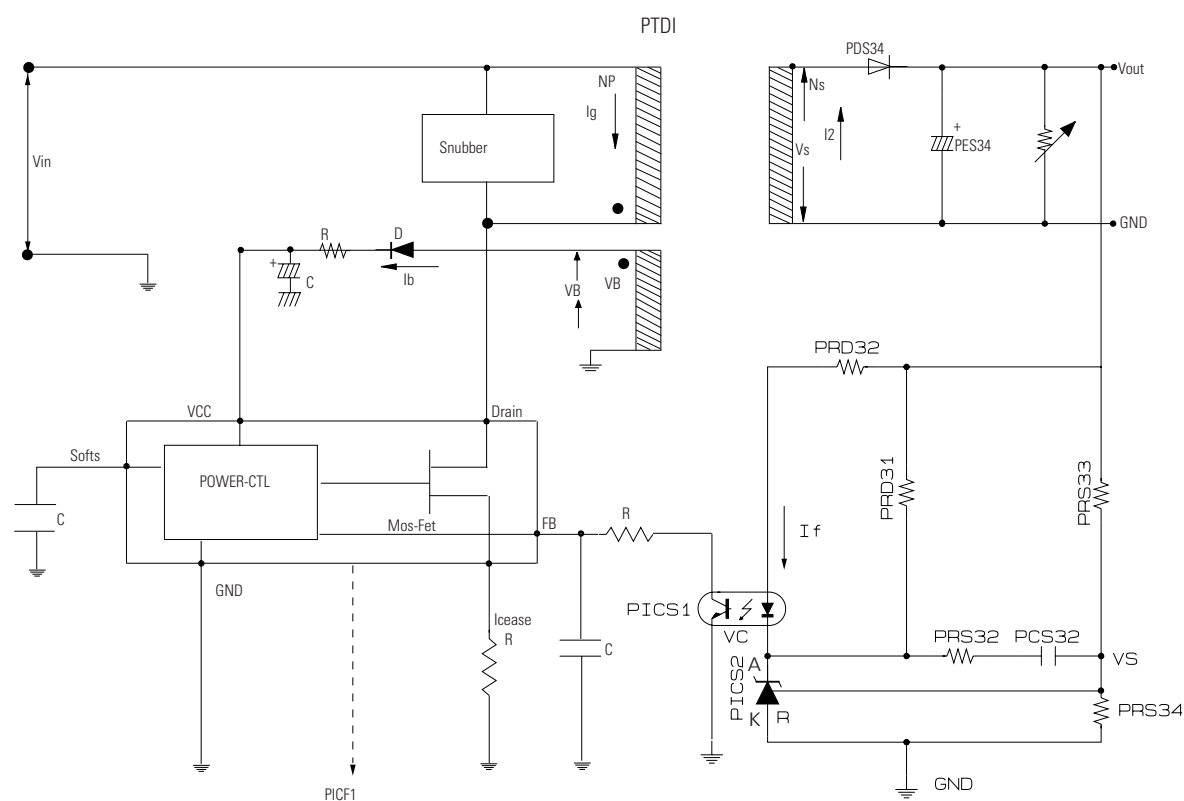


Fig.13-9

◆ Operation descriptions

- 1) Internal OP-Amp '+' base potential of PICS2 is 2.5V and external '-' input potential is connected with PRS33 and PRS34 to maintain Vout of 5.8V.
- 2) If load of 5.8V terminal increase (or AC inout voltage decrease) and Vout decrease over 5.8V,
Then : PICS2 "R" potential decrease over 2.5V --> PICS2 A-K BASE Current decrease --> PICS2 A-K Current decrease --> PICS1 DIODE Current decrease --> PICS1 C-E Current decrease --> PICS1 C-E Voltage increase --> PICS1 F-B Voltage increase --> OUT DUTY increase TRANS Primary Current Increase --> TRANS Primary Power increase --> Vout increase --> Vout maintain 5.8V

- PRD31, PRD32 : Reduce 5.8V overshoot.
- PRS32, PCS32 : Prevent PICS2 oscillation (for phase correction).

13-1-3 Internal Block Diagram

◆ Internal Block Diagram

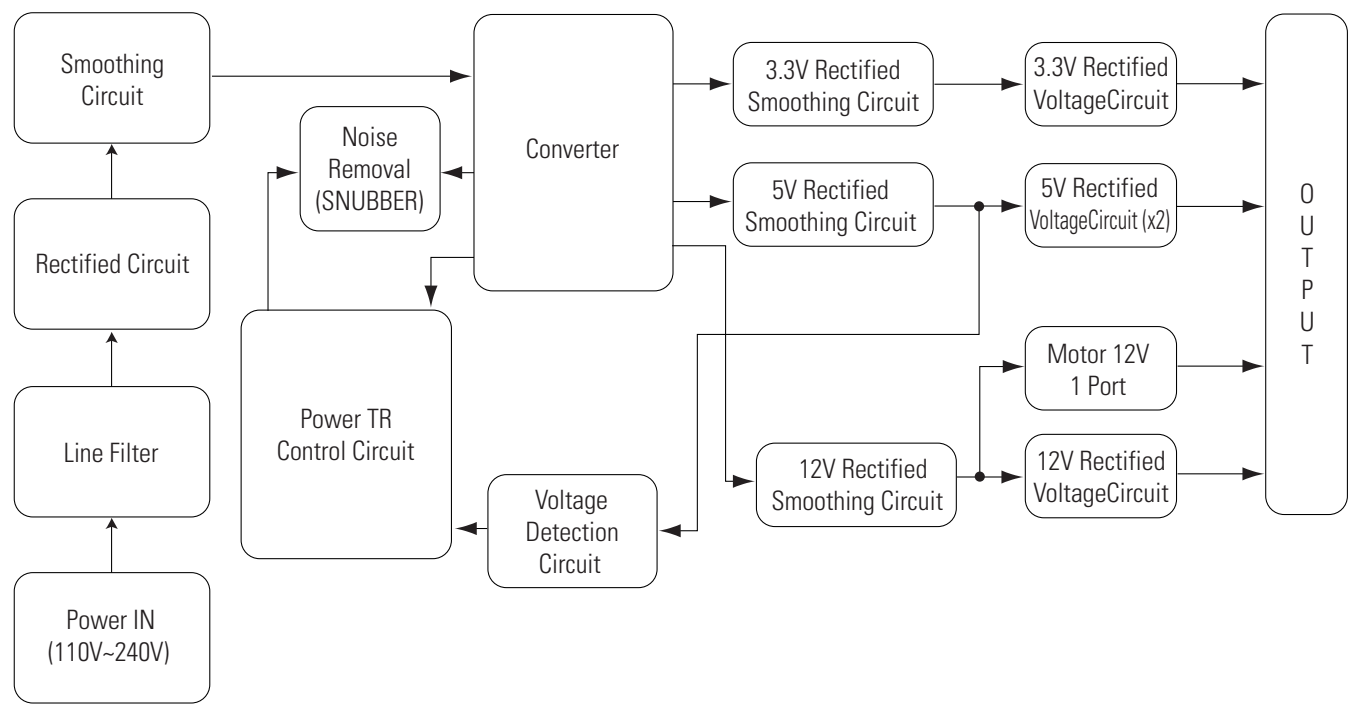


Fig.13-10

13-2 System Control

13-2-1 Outline

The main micom peripheral circuit is composed of 8M Flash Memory (ZIC3) for Microcode and data save, 16Mbit SDRAM (ZIC2) for temporary data read and write.

The Micom (ZIC1 ; Vaddis 966) mounted in main board analyzes the key commands of front panel or instructions of remote control and controls the devices on board to execute the corresponding commands after initializing the devices connected with micom on board at power on.

13-2-2 Block Diagram

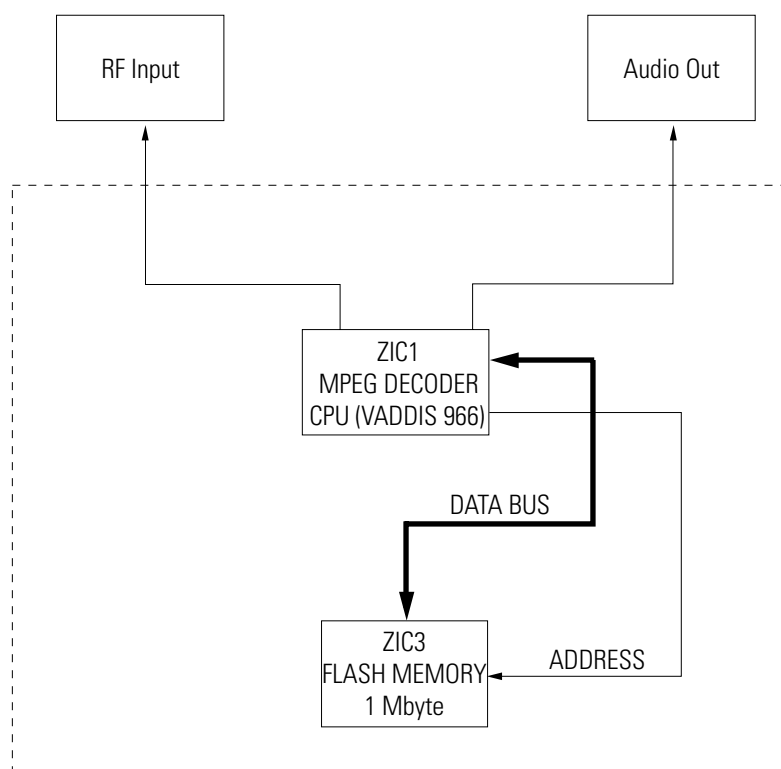


Fig. 13-11

13-3 DVD Data Processor

13-3-1 Outline

The Vaddis 966 (highly-integrated device) includes the full front-end disc controller, back-end decoder functions as well as the host control CPU.

The principal off-chip components include the disc drive with its optical pickup, tray, sled and spindle drivers and motors, 2Mbits of flash EPROM, 64Mbits of SDRAM, and the audio Digital-to-Analog converters some applications.

In case of general disc refresh, the memory is almost filled up periodically. It is because Write rate to memory after disc playback and signal process is faster than Read of A/V decoder. When the memory is filled, this status is reported by interrupt to main micom, which controls the servo to kick back the pick-up to the previous track after memorizing the last data read from disc until now. It takes some times to jump to the previous track and return to the original(jump location) again. The memory will have an empty space because A/V decoder reads out data of memory.

When the memory has an empty space, where data can be processed and written and the pick-up correctly gets to the original location(before kick back location) again, it reads data again avoids the interrupt of data read previously. The basic operation repeats to perform as described above.

13-3-2 Block Diagram

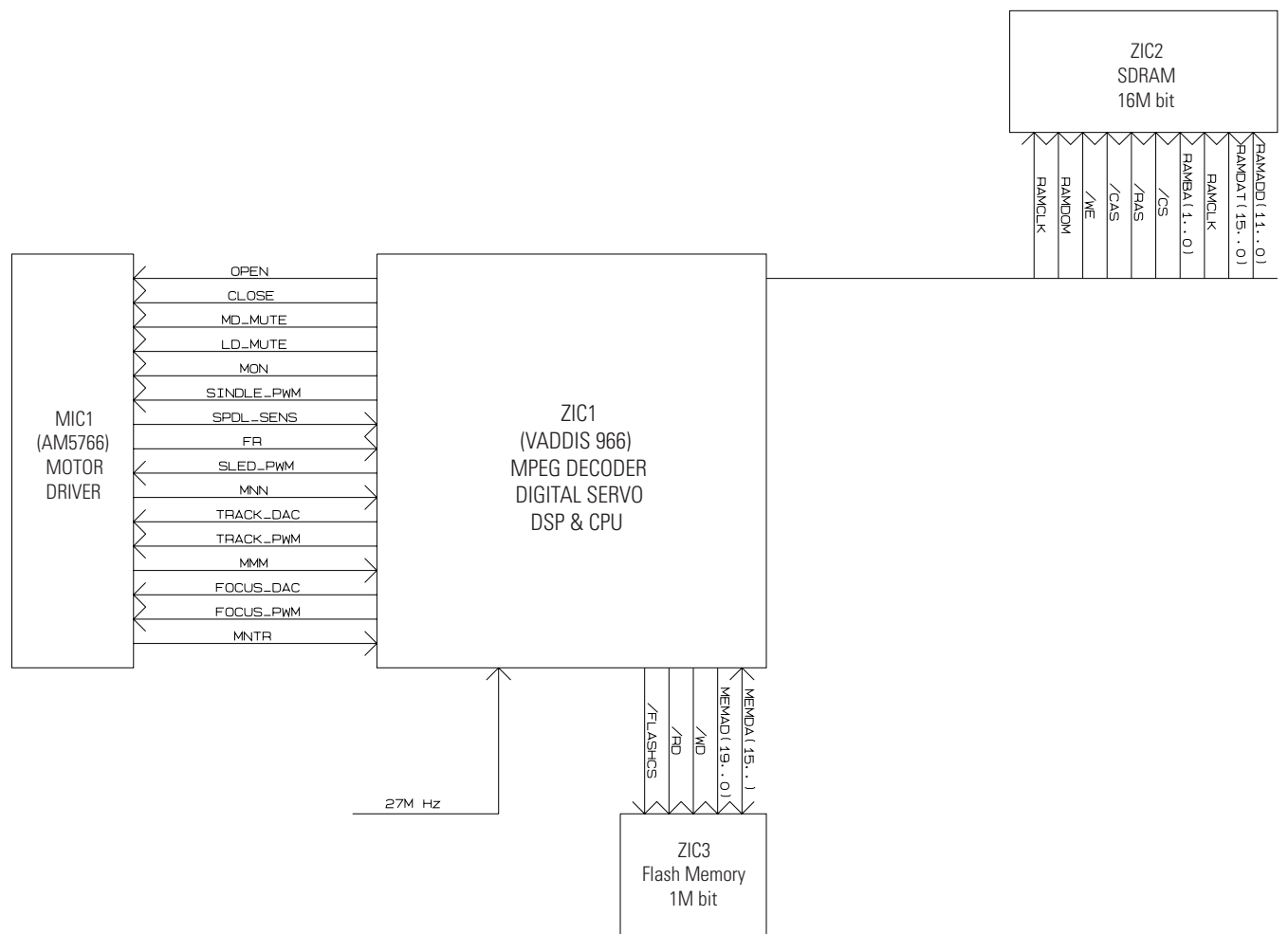


Fig.13-12

13-4 Video

13-4-1 Outline

ZIC1(A/V decoder with video encoder) diverges from the 27MHz crystal, then generates VSYNC and HSYNC. ZIC1(A/V decoder with video encoder) does RGB encoding, copy guard processing and D/A conversion of 8bit video data internally inputted from video decoder block by ZIC1. Video signal converted into analog signal is outputted via amplifier of analog part.

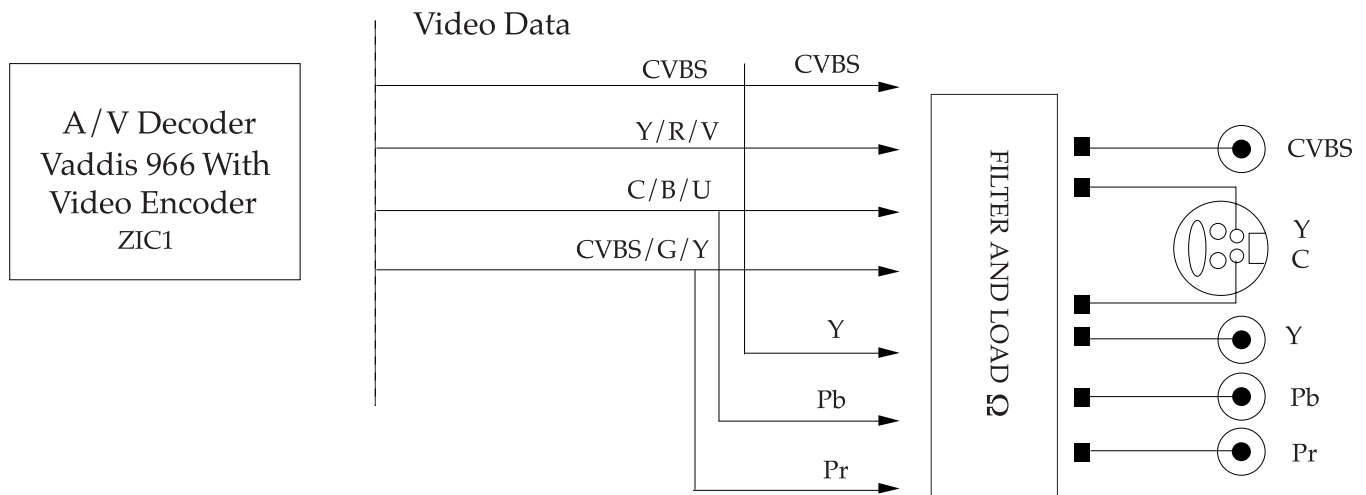


Fig. 13-13 Video Output Block Diagram

13-4-2 NTSC/PAL Digital Encoder (VADDIS 966 ; Built in video encode)

ZIC1 inputted from pin 161 with 27MHz generates HSYNC and VSYNC which are based on video signal. ZIC1 is synchronous signals with decoded video signal and control the output timing of 8bit video signal of ITUR601 format.

The separate signal is encoded to NTSC/PAL by control of ZIC1.

The above signals, which are CVBS (Composite Video Burst Synchronized)/G (GREEN)/Y [PIN148], Y (S_VIDEO)/R (RED)/Pr [PIN151] and C (S_VIDEO)/B (BLUE)/Pb, are selectively outputted CVBS +S_VIDEO, RGB/Component menu setup. In Course of encoding, 8bit data can extend to 10bit or more.

To convert the extended data to quantization noise as possible, ZIC1 adopts 14bit D/A converter.

ZIC1 perform video en-coding as well as copy protection.

13-5 Audio

13-5-1 Outline

A/V decoder (ZIC1 ; Vaddis 966) is supply to DATA 0 for 2-channel mixed audio output.
The audio data transmitted from A/V decoder (ZIC1 ; Vaddis 966) are converted into analog signal via audio D/A converter and outputted via post filter and amplifier.
CD and VCD are outputted with only 2 channels audio data and transmit them to Data 0.
If DVD of multichannel Source disc, it is downmixed and transmit them to Data0.

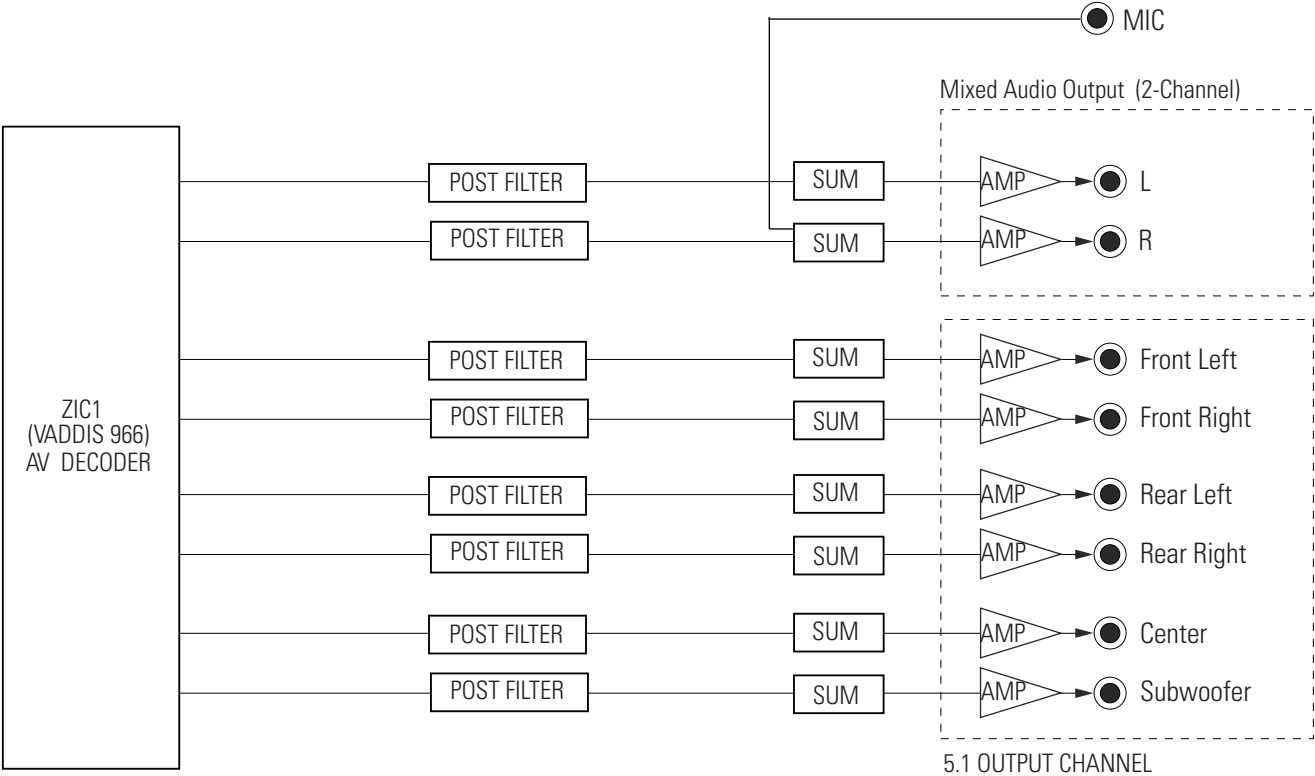


Fig. 13-14 Audio Output Block Diagram

13-5-2 DVD Audio Outline

1) Compressed Data

The audio data inputted to ZICI (Vaddis 9) A/V decoder is divided into compressed data and uncompressed data. It is compressed data that is compressed with multi-channel audio data such as Dolby digital, MPEG, DTS, WMA, etc.

The compressed data inputted to ZICI (Vaddis 9) is converted into the uncompressed data of 2, 4, and 6 channel through ZICI built-in audio decoder and is outputted to data 0 through digital audio interface.

The compressed data is transmitted to external AC-3 amplifier or MPEG/DTS amplifier as IEC-958/1937 transmission data format compressed by ZICI built-in IEC-958 output process

2) Uncompressed Data

The uncompressed data is that data isn't compressed. so it is called CD-DA, LPCM data.

The 2 channels data converted through audio decoder 2-channel data and data 0 and are outputted in digital audio interface. Via IEC-958 output process, they is transmitted to digital amplifier or AC-3/MPEG/DTS amplifier built in the external digital input source with IEC-958/1937 transmission format.

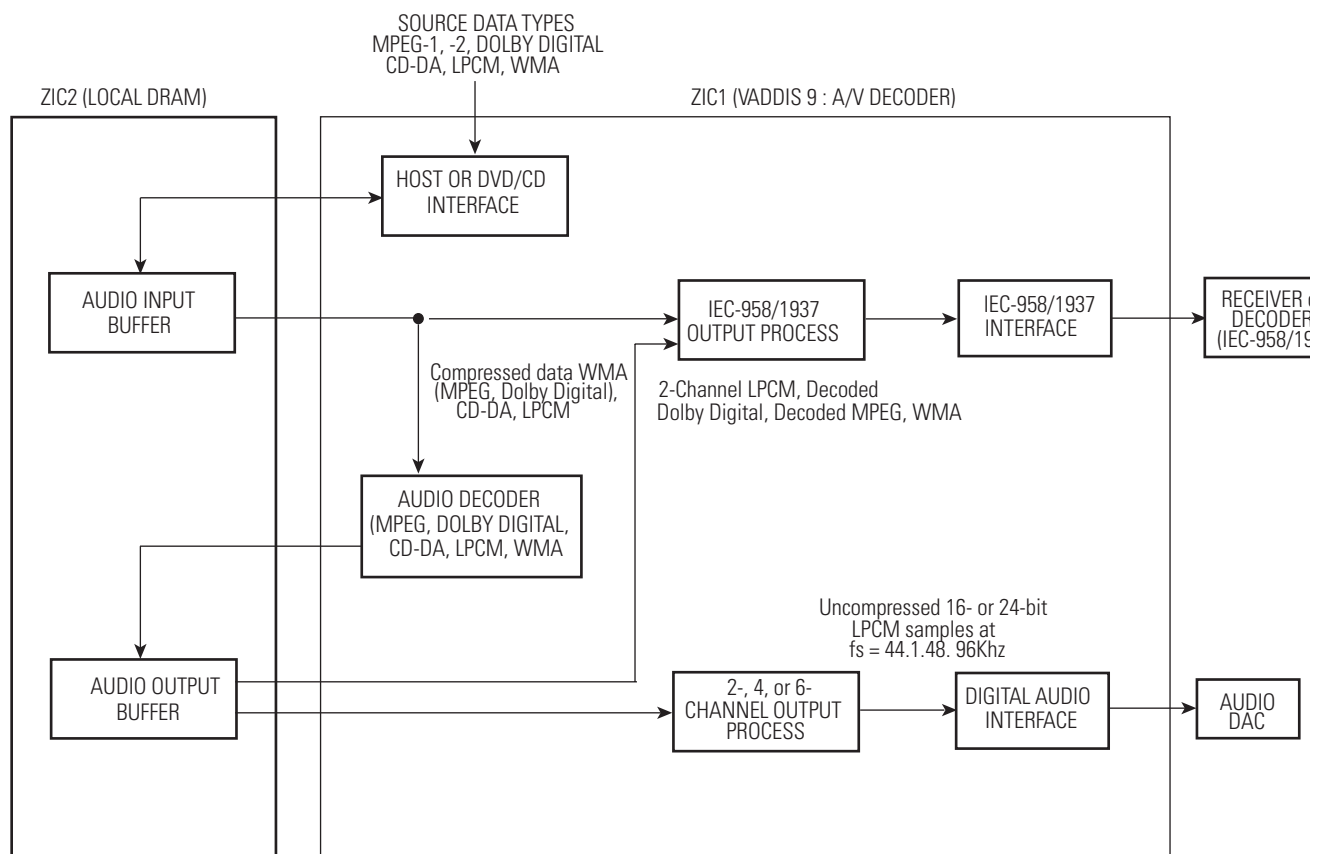


Fig. 13-15 Audio Decoder and Output Interface Datapath

13-6 Servo

13-6-1 Outline

SERVO system of DVD is Composed of Focusing SERVO, Tracking SERVO, SLED Linked SERVO and CLV SERVO (DISC Motor Control SERVO).

- 1) Focusing SERVO : Focuses the optical spot output from object lens onto the disc surface. Maintains a uniform distance between object lens of Pick-up and disc (for surface vibration of disc).
- 2) Tracking SERVO : Make the object lens follow the disc track in use of tracking error signal (created from Pick-up).
- 3) SLED Linked SERVO : When the tracking actuator inclines outwardly as the object lens follows the track during play, the SLED motor moves slightly (and counteracts the incline).
- 4) CLV SERVO (DISC Motor Control SERVO) : Controls the disc motor to maintain a constant linear velocity (necessary for RF signal).

13-6-2 Block Diagram

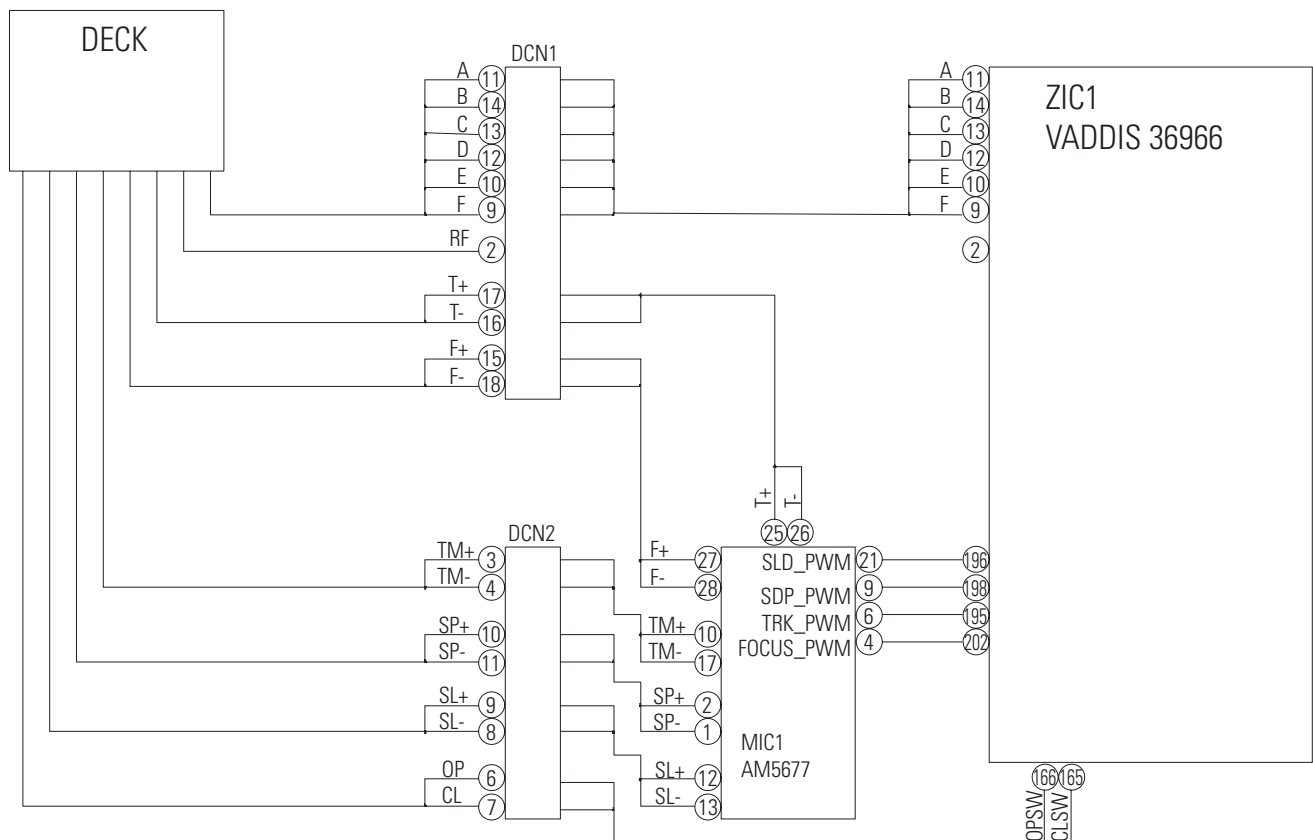


Fig.13-16

13-6-3 Operation

1) FOCUSING SERVO

(1) FOCUS INPUT

The focus loop is changed from open loop to closed loop, and the triangular waveform moves the object lens up and down (at pin 202 of ZIC1 during Focus SERVO ON.) At that time, S curve is generated in ZIC1.

Summing signal of PD A, B, C, D, is generated, and zero cross(1.65V) point occurs when S curve is focused and ABCD signal exceeds a preset, constant value. The focus loop is changed to closed loop, and the object lens follows the disc movement, maintaining a constant distance from the disc. (these operations are same in CD and DVD).

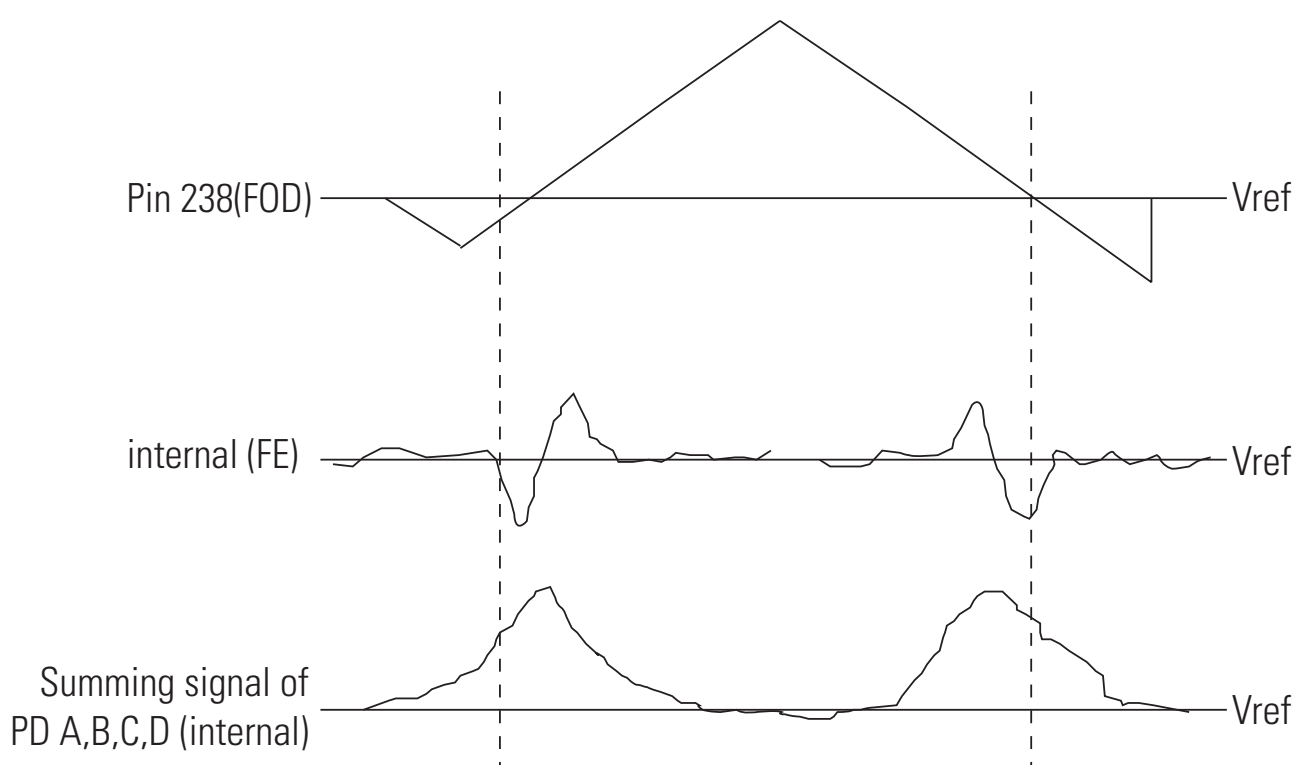


Fig. 13-17

(2) PLAY

When focus loop closes the loop during focus servo on, both pin 27 and pin 28 of MIC1 are controlled by ZIC1.

2) TRACKING SERVO

(1) NORMAL PLAY MODE

① For DVD

Composite : The signal output from PD A, B, C, D of Pick-up, the tracking error phase difference of A+C and B+D in RIC1, and inputs to ZIC1. Then, it is output to ZIC1 pin 169 via digital equalizer, and applied to the tracking actuator through FIC3.

Pin 69 of ZIC1 is controlled by VREF(approx. 1.65V) during normal play.

Meanwhile, DVD repeats the track jump from 1 to 4 in inner direction at normal play (because data- read speed from disc is faster than data output speed on screen).

② For CD, VCD

Receive the signal output through E, F of Pick-up. The tracking error signal is similar to DVD.

(2) SEARCH Mode :

Search mode : Fine seek,(Moving the tracking actuator slightly little below 255 track) and coarse search, moving much in use of sled motor. The coarse search will be described in sled linked servo and now, the fine seek is explained shortly.

If the object lens is located near target, cut off the tracking loop and give the control signal as many as desired count to move the tracking actuator via ZIC1 pin 184 terminal(TRACK_PWM).

3) SLED LINKED SERVO

- Normal play mode

Move SLED motor slightly by means of PWM signal in ZIC1 pin 196, as the tracking actuator moves along with track during play. Control to move the entire Pick-up as the tracking actuator moves.

- Coarse search mode

In case of long-distance search (such as chapter search), ZIC1 uses open-loop jump method.

Then, read ID and compute the existing track count after input of next track.

If the existing track count is within fine seek range, tracking begins using fine seek.

4) CLV SERVO(DISC MOTOR CONTROL SERVO)

Detect SYNC signal from R/U in ZIC1, and output PWM signal to ZIC1 pin 236 for constant linear velocity.