SERVICE MANUAL

NAD

L73
DVD RECEIVER

L73

DVD RECEIVER

SECTION 1
SUMMARY

CONTENTS

PRODUCT SAFETY SERVICING GUIDELINES

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

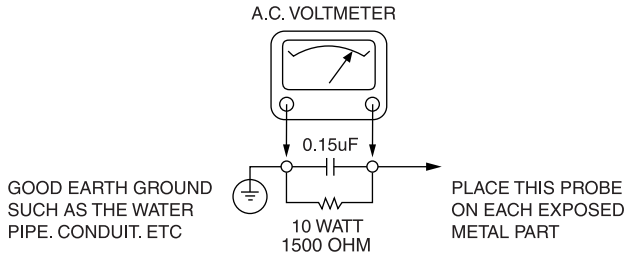
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM AC LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING AC CORD). AND REPLACE IF NECESSARY FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN AC LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFET TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN AC VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD, 150V AC TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME.
   MEASURE THE AC VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR.
   REVERSE THE AC PLUG AND REPEAT AC VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART.
   VOLTAGE MEASURE MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP AC ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS

THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.

THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE. OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCAL MOUNTING KIT MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM, BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the A/V Receiver covered by this service data and its supplements and addends, read and follow the *SAFETY PRECAUTIONS. NOTE* : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.
Remember Safety First:

General Servicing Precautions

1. Always unplug the A/V Receiver AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this A/V Receiver or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.

5. Do not apply AC power to this A/V Receiver and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an 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 (Note 1) should be more than 1M-ohm.
Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical Es 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 ES 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 ES devices.

4. Use only an antistatic solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

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

8. Minimize bodily motions when handing unpackaged replacement ES devices. (Normally 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 ES device.)

SPECIFICATIONS

Amplifier Section

Output Power (Front) :
F.T.C Rating:
60 watts RMS per channel minimum, both channels driven into 8 ohms from 20 Hz to 20kHz with no more than 0.09% total harmonic distortion

Surround Output Power (0.5% THD, 1 kHz, 8 ohms) :
50 + 50 Watt (Front)
50 Watt (Center)
50 + 50 Watt (Rear)

Total Harmonic Distortion (Front) :
0.05 % (at 30 watts, 1 kHz)

Delay Time :
DOLBY DIGITAL : REAR : 0 - 15 ms
CENTER : 0 - 5 ms
DOLBY PRO LOGIC : REAR : 15 - 30 ms

Audio Input Sensitivity/Impedance :
*LINE : 320 mV/47 k ohms

Output Level / Impedance :
VCR REC : 300 mV/2.2 k ohms

Frequency Response :
*LINE : 10 Hz - 60 kHz, +1/ -3 dB

Signal-to-Noise Ratio : 1 Watt
*LINE : 70 dB (IHF-A)

Tone Control :
BASS : ±10 dB at 100 Hz
TREBLE : ±10 dB at 10 kHz

Digital Audio Section

Sampling Frequency :
32 kHz, 44.1 kHz, 48 kHz, 96 kHz

DIGITAL Input Level/Impedance
COAXIAL : 0.5 Vp-p/75 ohms
OPTICAL : -15 dBm ~ -21 dBm

Video Section

Input Sensitivity /Impedance : 1.0 Vp-p/75 ohms
Output Level /Impedance : 1.0 Vp-p/75 ohms

*LINE means CABLE/SAT, VCR, VIDEO4

- Improvements may result in specifications and features changing without notice.
- Illustrations may differ slightly from production models.

FM Tuner Section

(Without notes 100.1 MHz, 65 dBf)

Tuning Range :
87.5 MHz - 108.0 MHz C: 50 kHz steps
AH: 100 kHz steps

AM Suppression Ratio: C: 50 dB
AH: 60 dB

Total Harmonic Distortion (1 kHz) :
Mono : 0.4%
Stereo : 0.5%

Frequency Respones : 20 Hz - 15 kHz, +1/ -1. 5 dB
Stereo Separation (1 kHz) : C: 40 dB
AH: 35 dB

Signal-to-Noise Ratio :
Mono : 70 dB
Stereo : 65 dB

AM Tuner Section

Tuning Range:
C : 522 kHz - 1,620 kHz (9 kHz steps)
AH : 520 kHz - 1,710 kHz (10 kHz steps)

Usable Sensitivity : 55 dB/m
Total Harmonic Distortion : 0.1% at 85 dB/m
Signal-to-Noise Ratio : 40 dB at 85 dB/m

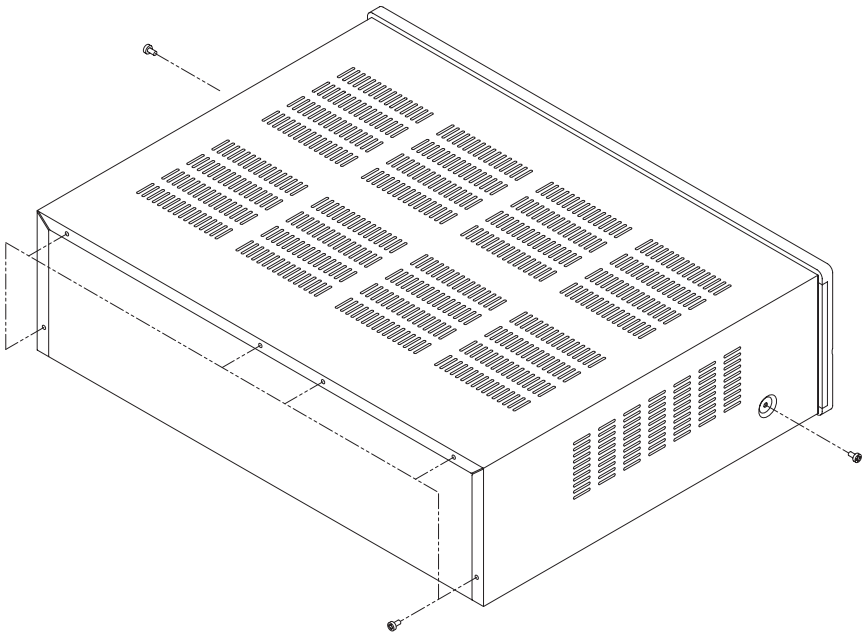
General

Power Requirements :
C : 230V AC, 50Hz
AH : 120V AC, 60Hz
Power Consumption : C: 1.3A
AH: 2.5A
AC Outlets : unswitched x 1, Total 100 W max. (1A)

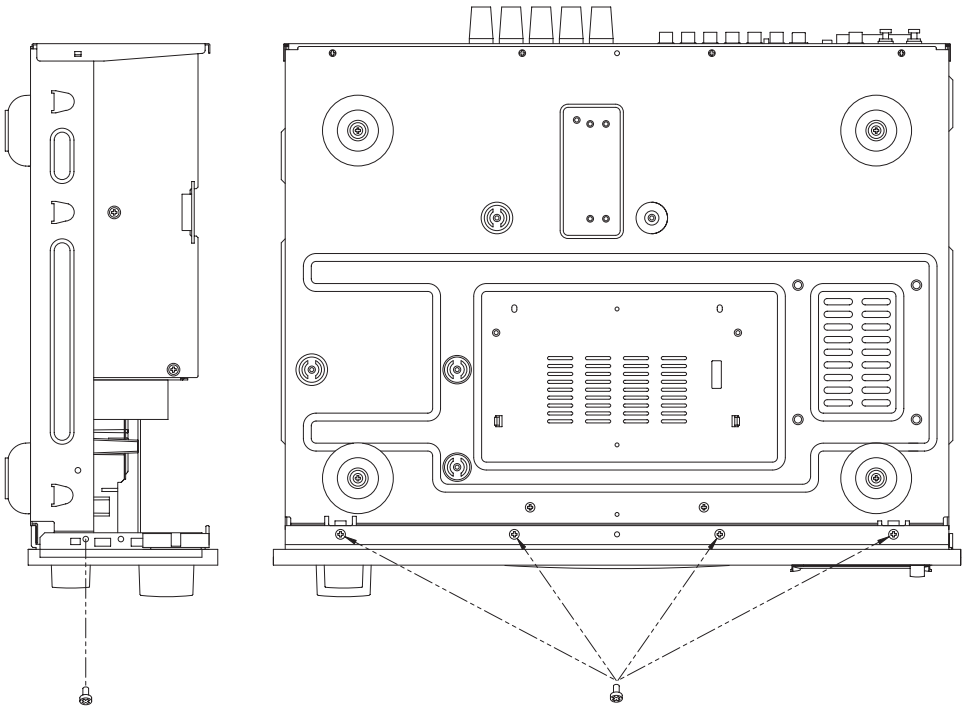
Dimensions (W x H x D) : 435 x 133 x 375
Weight (net) : 11.8kg

DISASSEMBLY

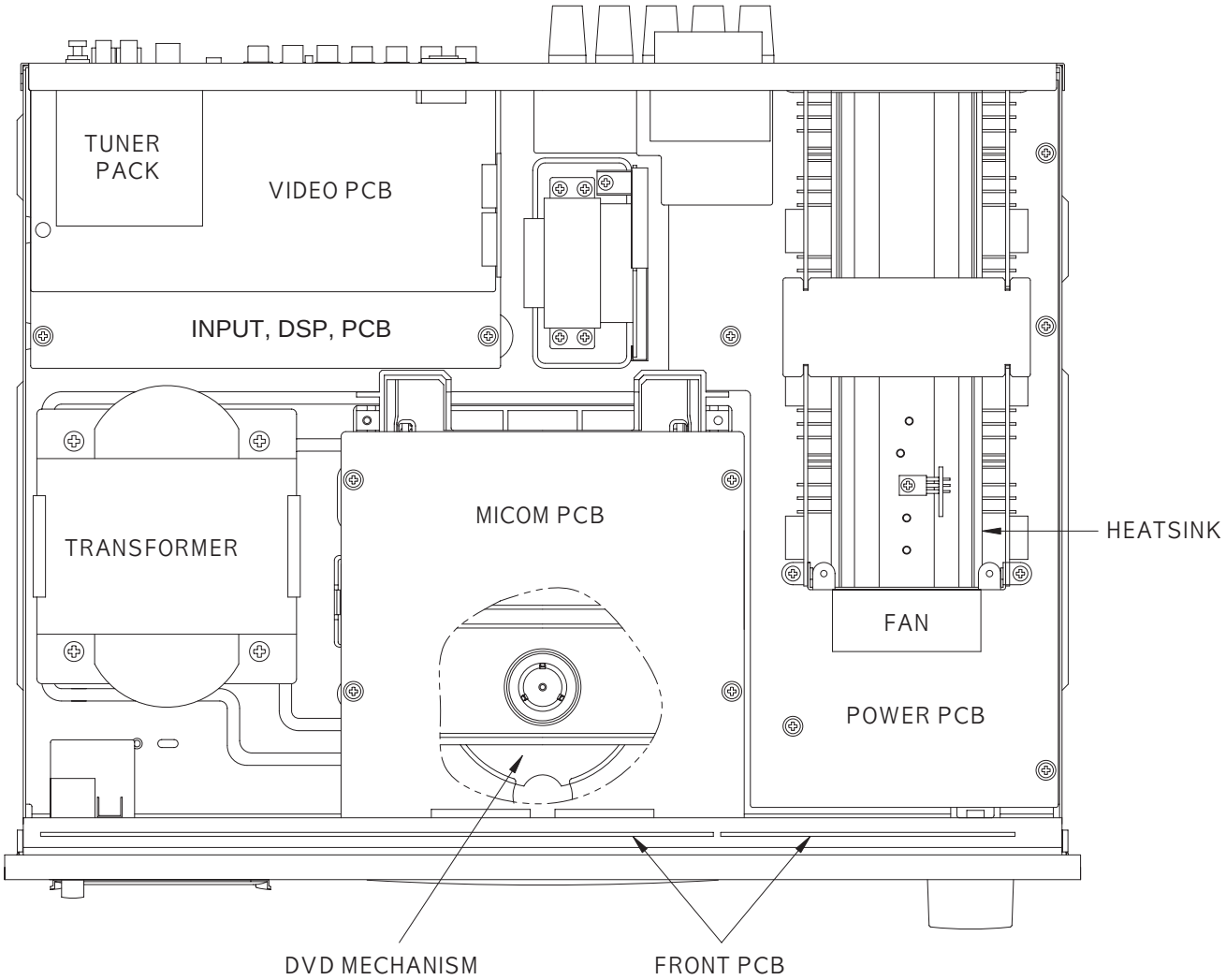
1> REMOVAL OF TOP COVER



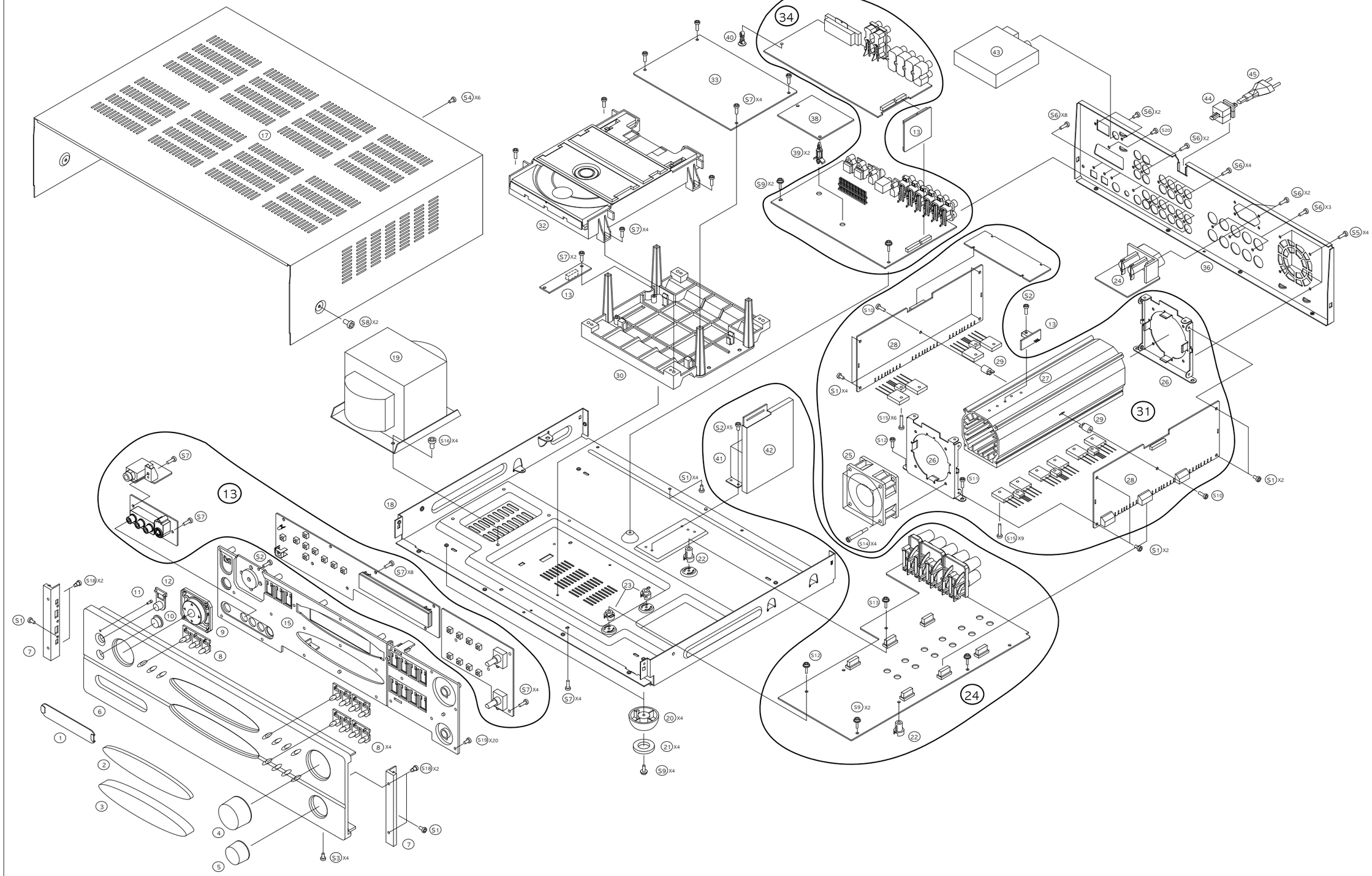
2> REMOVAL OF FRONT PANEL



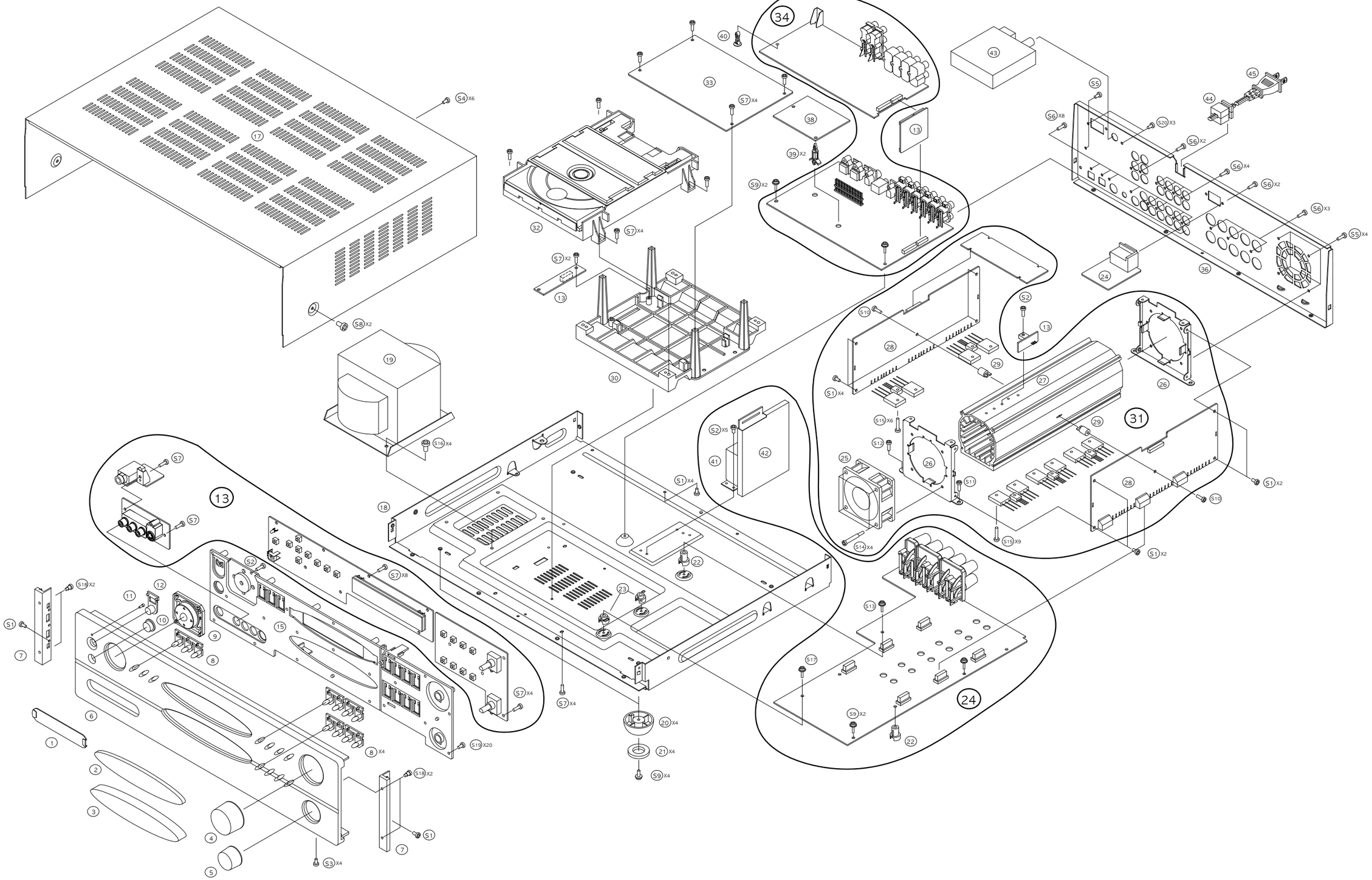
PRINCIPAL PARTS LOCATION



EXPLODED VIEW : L73C



EXPLODED VIEW : L73AH



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L73AH/C EXPLODED VIEW PARTS LIST

NO.	PARTS NO.	DESCRIPTION	Q'TY
S20	CTB3+8GFZ	SCREW(AH Ver.)	3
	CHD1A055	SCREW(C Ver.)	1
S19	CTB3+6F	SCREW	20
S18	CHD1A016	SCREW	4
S17	CTW3+14J	SCREW	1
S16	CHD1A023	SCREW,TRANS.	4
S15	CHD1A012	SCREW,TR	15
S14	CHD1A036	SCREW,FAN	4
S13	CTW3+20J	SCREW	1
S12	CTB3+14J	SCREW	1
S11	CTB3+20J	SCREW	1
S10	CTB3+16J	SCREW	2
S9	CTW3+8J	SCREW	9
S8	CTB4+6FFC	SCREW	2
S7	CTB3+10G	SCREW	28
S6	CTB3+10GFZ	SCREW(AH Ver.)	19
		SCREW(C Ver.)	21
S5	CTB3+8JFZ	SCREW(AH Ver.)	5
		SCREW(C Ver.)	4
S4	CTB3+8JFC	SCREW	6
S3	CTS3+8J	SCREW	4
S2	CTB3+8J	SCREW	7
S1	CTB3+6J	SCREW	15

NO.	PARTS NO.	DESCRIPTION	Q'TY
45	CJA523FBYA	CORD, POWER(AH Ver.)	1
	CJA2B068ZA	CORD, POWER(C Ver.)	1
44	KHR1A028	BUSHING, AC CORD	1
43	HNVTFCE1U116A	TUNER MODULE(AH Ver.)	1
	CNVKSTMB014MA18	TUNER MODULE(C Ver.)	1
42	CMX1A139	INSULATOR	1
41	CLT5L055ZU	SUB TRANS.ASS'Y(AH Ver.)	1
	CLT5L055ZE	SUB TRANS.ASS'Y(C Ver.)	1
40	KRE1A056	SUPPORT, PCB	1
39	KRE1A058	SUPPORT, PCB	2
38	CIP11755BSMD	DSP PCB ASS'Y	1
36	CKF4A244WK1	PANEL, REAR(AH Ver.)	1
	CKF3A244VK1	PANEL, REAR(C Ver.)	1
34	COP11736B	INPUT,DSP & VIDEO PCB ASS'Y(AH Ver.)	1
	COP11736C	INPUT,DSP & VIDEO PCB ASS'Y(C Ver.)	1
33	COP11737B	MICOM & POWER SUPPLY PCB ASS'Y(AH Ver.)	1
	COP11737C	MICOM & POWER SUPPLY PCB ASS'Y(C Ver.)	
32	HJDRL-S2004ZA	MECHANISM ASS'Y	1
31	CMYL70CCC	AMPLIFIER ASS'Y	
30	CMH2A189	SUPPORT, MECHA	1
29	CMH1A119	MOUNT, PCB	2
28	CUP11555Z	AMP PCB ASS'Y	1
27	CMY1A197	HEAT SINK	1
26	CMD1A479	BRACKET, HEATSINK	2
25	HDMKD1206PTS3	FAN	1
24	COP11556D	POWER PCB ASS'Y(AH Ver)	1
	COP11556E	POWER PCB ASS'Y(C VER)	
23	CHE1A030	HOLDER, PCB	2
22	CHE170	HOLDER, PCB	2
21	CHG1A297	CUSHION, FOOT	4
20	CKL1A086	FOOT	4
19	CLT5V031ZU	POWER TRANS. (AH Ver.)	1
	CLT5V031ZE	POWER TRANS. (C Ver.)	1
18	CUA1A223	CHASSIS, BOTTOM	1
17	CKC1A141S35	CABINET, TOP	1
15	CGW1A351M7K102	PANEL, SUB	1
13	COP11738B	FRONT PCB ASS'Y	1
12	CBT1A746M7K102	KNOB, POWER	1
11	CGL1A188	INDICATOR, POWER	0.17
10	CGU1A245A10	WINDOW, SENSOR	1
9	CBT1A853M7K102	KNOB, ENTER	1
8	CBT1A745M7K102	KNOB, DISPLAY	5
7	CKM2A062C37	BAR, SIDE	2
6	CKM1A130XC37	PANEL, AL	1
5	HGK1A081ZA	ROTARY KNOB ASS'Y	1
4	HGK2A063YA	VOLUME KNOB ASS'Y	1
3	CGR1A287M7YK102	ORNAMENT, DOOR	1
2	CGU1A244A8	WINDOW, FIP	1
1	CGR1A288M7K102	COVER, JACK	1

SECTION 2
ELECTRICAL CONTENTS

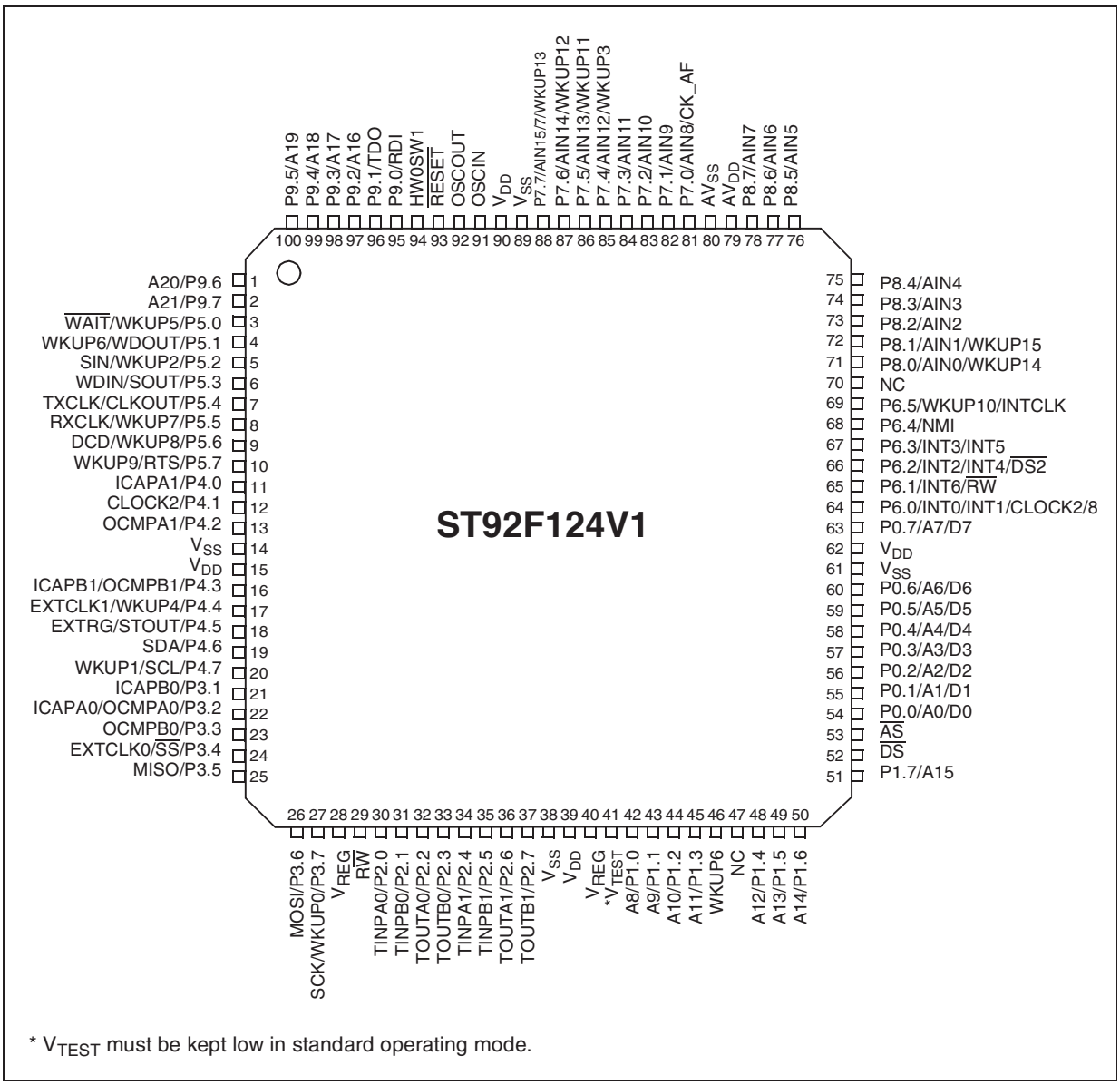
CONTENTS

I.C PIN DESCRIPTIONS (IC81 : FLASH u-COM : ST92F124VIT6)

PIN No	PIN Name	I/O	Function
1	T-MUTE	O	Tuner mute port
2	DVD_FAN	O	DVD Fan port
3	N.C		No Connection
4	N.C		
5	SIN	I	Micom update port
6	SOUT	O	Micom update port
7	TXCLK	O	Micom update TX port
8	RXCLK	I	Micom update RX port
9	VFD_DATA	O	VFD Display Data out port
10	VFD_CK	O	VFD Display Clock port
11	VFD_CS	O	VFD Display Chip selector port
12	N.C	-	No Connection
13			
14	GND1	-	GND Port1
15	VDD1	-	Power Supply Port1
16	V-MUTE	O	Video mute port
17	ROM-SEL	O	8M Flash Memory (IC46) selector port
18	N.C	-	No Connection
19			
20			
21			
22	DVD_RESET	O	DVD Reset port
23	DVD_FREQ	O	DVD Request port
24	GND	-	GND
25	DVD_TX	O	DVD Data out port (TX)
26	DVD_RX	I	DVD Data in port (RX)
27	DVD_CLK	I	DVD Chip enable port
28	VREG	-	Stabilization capacitor(s) for internal voltage regulator
29	N.C	-	No Connection
30	PLL_DOUT	I	PLL Data OUT port
31	TUNED	I	Tuner module TUNED control port
32	N.C	-	No Connection
33	PLL_CE	O	PLL Chip enable port
34	STEREO	I	Tuner module STEREO control port
35	PLL/FUNC_DA	O	PLL/FUNCTION data output port
36	PLL/FUNC_CLK	O	PLL/FUNCTION clock output port
37	FUNC_CE	I	FUNCTION IC chip enable port
38	GND2	-	GND2
39	VDD2	-	Power Supply port2
40	VREG	-	Stabilization capacitor(s) for internal voltage regulator
41	VTEST	-	Must be kept low in standard operating mode
42	EVOL_CE	O	Electronic volume IC chip enable port
43	EVOL_DA	O	Electronic volume IC data port
44	EVOL_CK	O	Electronic volume IC clock port
45	RDS_DA	I	RDS data in port
46	NC	-	No Connection
47			
48	AK_INTERRUPT	I	DIR+CODEC (IC31) interrupt port
49	AK/CS_CK	O	DSP(IC45) / DIR+CODEC(IC31) clock port
50	AK/CS_DA	O	DSP(IC45)/ DIR+CODEC(IC31) data out port
51	DATA_IN	I	DSP(IC45) / DIR+CODEC(IC31) data in port
52	NC	-	No Connection
53			

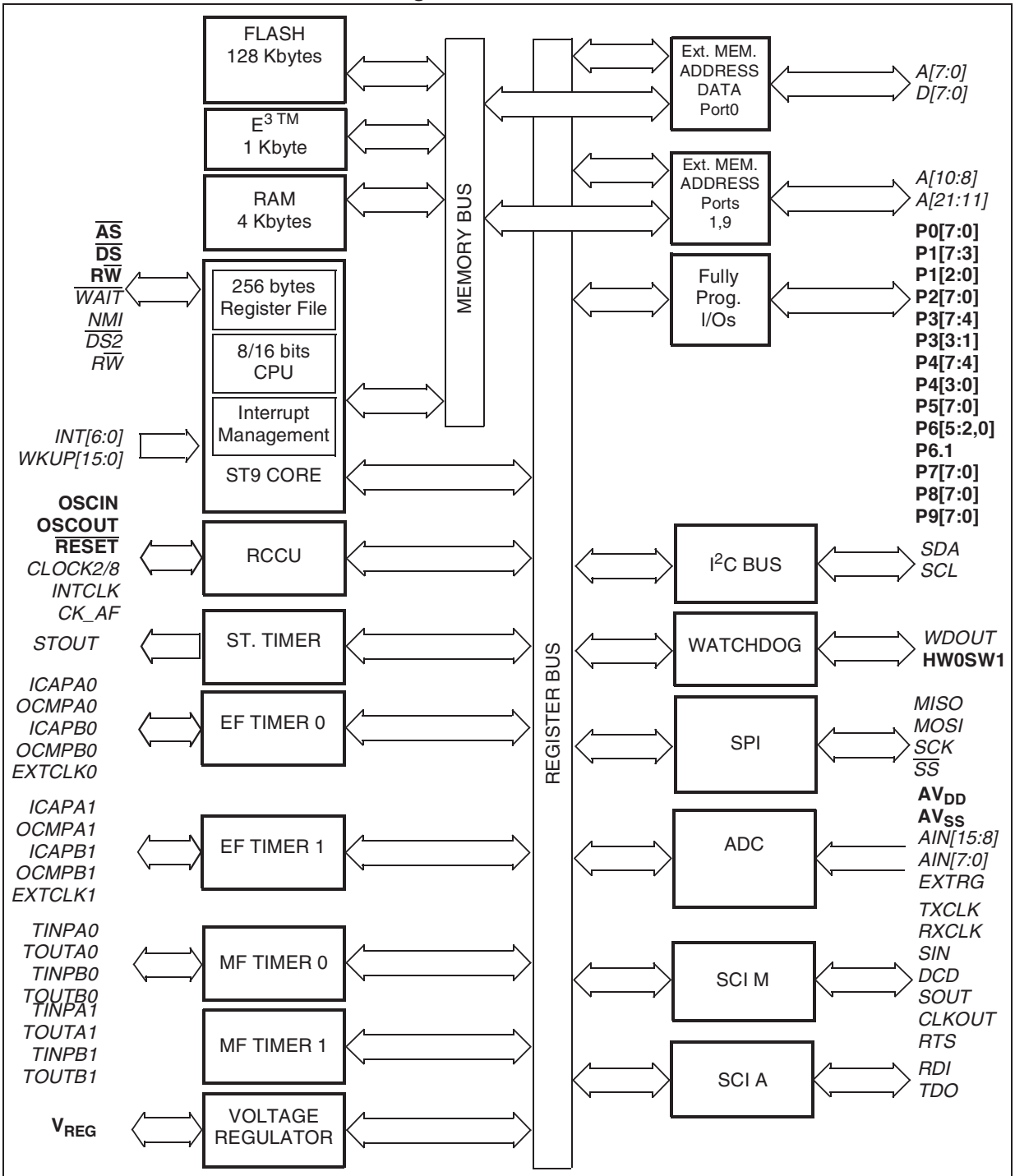
PIN No	PIN Name	I/O	Function
54	DSP_RESET	I	DSP(IC45) reset port
55	AK_RESET	I	DIR+CODEC(IC31) reset port
56	AK_CE	I	DIR+CODEC(IC31) chip enable port
57	HINBSY	I	HOST BUSY
58	DSP_C_CS	O	DSP(IC45) C Chip selector port
59	DSP_AB_CS	O	DSP(IC45) AB Chip selector port
60	INT_REQ	I	DSP(IC45) interrupt request port
61	GND3	-	GND3
62	VDD3	-	Power Supply port3
63	FINTREQ	I	DSP(IC45) interrupt request port
64	REMOTE_IN	I	System remote Input port
65	HOST_CE	I	HOST(IC81) Chip enable port
66	RDS_CLK	I	RDS Clock port
67	DVD_MREQ	I	DVD Main request port
68	OPTION1	I	* H : FM 50KHz step ,* L : FM 100KHz step
69	OPTION2	I	* H : AM 9KHz step ,* L : AM 10KHz step
70	NC	-	No Connection
71	KEY_IN1	I	KEY Data input port
72	KEY_IN2		
73	KEY_IN3		
74	VOL_B	I	Volume Data Input port(Master Volume)
75	VOL_A		
76	FUNC_A	I	Function A control port
77	FUNC_B	I	Function B control port
78	FAN_DET	I	Fan Detector port
79	AVDD	-	Analog Power Supply port
80	GND4	-	GND4
81	POWER_H	O	Power on control port (Active "H")
82	FUNC_MUTE(H)	O	Function mute port (Active "H")
83	H/PHONE_IN(L)	I	Headphone in port (Active "L")
84	DVDPW_ON	O	DVD Power ON port
85	DVDA_SEL	O	DVD Audio selector port
86	EXP_CLK	O	Expander IC14 Clock port
87	EXP_DA	O	Expander IC14 Data out port
88	EXP_CE	O	Expander IC14 Chip enable port
89	GND5	-	GND5
90	VDD4	-	Power Supply port4
91	OSCIN	-	4MHz Crystal Connection port
92	OSCOUT	-	
93	RESET	I	Reset port
94	HW0SW1	-	Watchdog option port
95	N.C	-	No Connection
96	PROTECT_IN(L)	I	Protection port (Active"L")
97	N.C	-	No Connection
98			
99	RTC_SDA	O	Real time control serial data out port
100	RTC_SCL	O	Real time control serial clock port

■ST92F124V1: Pin Configuration (Top-view TQFP100)



* V_{TEST} must be kept low in standard operating mode.

■ ST92F124V1: Architectural Block Diagram



The alternate functions (*Italic characters*) are mapped on Port 0, Port 1, Port2, Port3, Port4, Port5, Port6, Port7, Port8 and Port9.

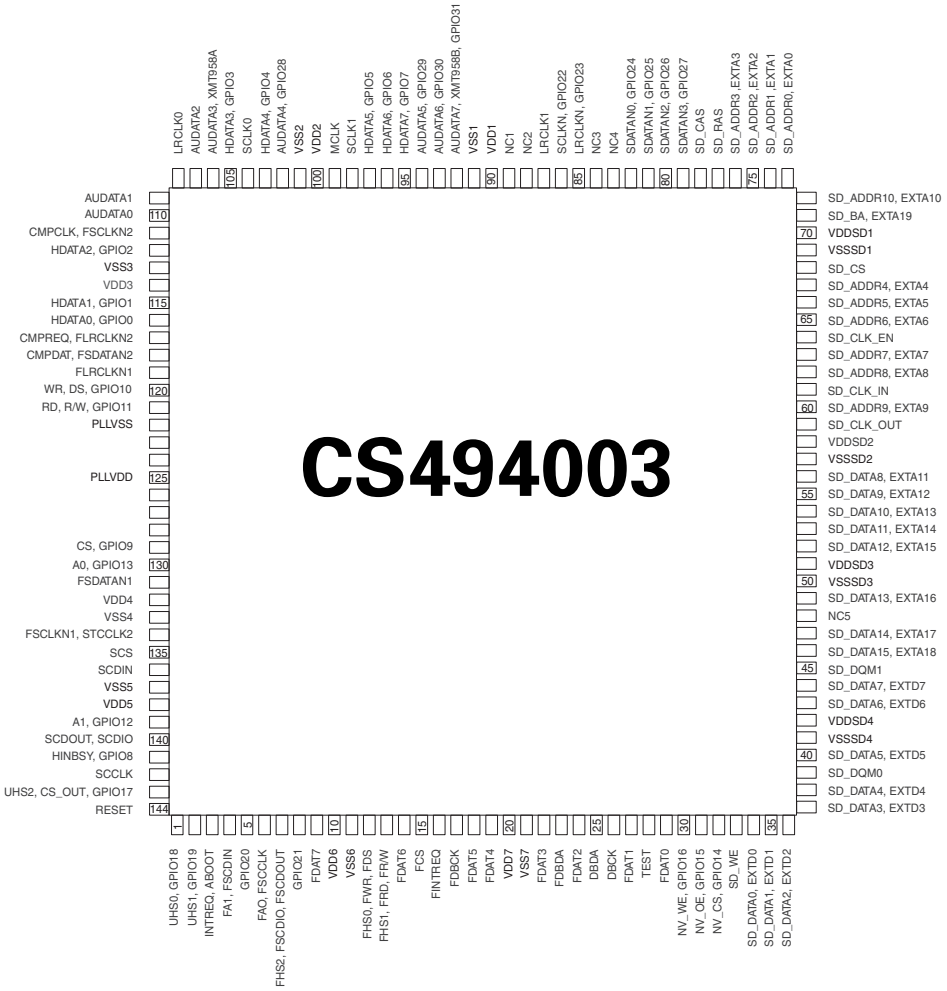
I.C PIN DESCRIPTIONS (IC45 : AUDIO DSP : CS494003)

PIN No	PIN Name	I/O	Function
1	UHS0	O	DSP C Control Mode Select BIT 0
2	HUS1	O	DSP C Control Mode Select BIT 0
3	$\overline{\text{INTREQ,ABODY}}$	O	Open-drain interrupt-request output
4	FA1,FSCDIN	I	Host Address Bit One or SPI Serial Control data input
5	GPIO20	O	General Purpose output
6	FA0,FSCCLK	I	Host parallel Address Bit Zero or Serial Control Port Clock
7	FHS2,FSCDIO	O	DSP AB Control port mode select bit2
8	GPIO21	O	General Purpose output
9	FDAT7	I	DSP AB Bidirectional data bus
10	VDD6		2.5V Supply Voltage
11	VSS6		2.5V Ground
12	FWR,FDS	I	Host write Strobe or Host data strobe
13	FRD,FR/W	O	Host Parallel Output Enable or
14	FDAT6	I	DSP AB Bidirectional data bus
15	$\overline{\text{FCS}}$	I	Host Parallel Chip Select , Host Serial SPI Chip Select
16	$\overline{\text{FINTREQ}}$	O	Open-drain interrupt-request output
17	FDBCK	I	Reserved
18	FDAT5	I	DSP AB Bidirectional data bus
19	FDAT4	I	DSP AB Bidirectional data bus
20	VDD7		2.5V Supply Voltage
21	VSS7		2.5V Ground
22	FDAT3	I	DSP AB Bidirectional data bus
23	FDBDA	I	Reserved
24	FDAT2	I	DSP AB Bidirectional data bus
25	DBDA	I	Debug Data
26	DBCK	I	Debug Clock
27	FDAT1	I	DSP AB Bidirectional data bus
28	TEST	I	Reserved
29	FDAT0	I	DSP AB Bidirectional data bus
30	$\overline{\text{NV\_WE}}$	O	SRAM Write Enable
31	$\overline{\text{NV\_OE}}$	O	SRAM Output Enable
32	$\overline{\text{NV\_CS}}$	O	SRAM Chip Select
33	$\overline{\text{SD\_WE}}$	O	SDRAM Write Enable
34	SD_DATA0	O	SDRAM Data Bus 0
35	SD_DATA1	O	SDRAM Data Bus 1
36	SD_DATA2	O	SDRAM Data Bus 2
37	SD_DATA3	O	SDRAM Data Bus 3
38	SD_DATA4	O	SDRAM Data Bus 4
39	SD_DQM0	O	SDRAM Data Mask 0
40	SD_DATA5	O	SDRAM Data Bus 5
41	VSSSD4		SDRAM Ground
42	VDDSD4		SDRAM Power Supply
43	SD_DATA6	O	SDRAM Data Bus 6
44	SD_DATA7	O	SDRAM Data Bus 7
45	SD_DQM1	O	SDRAM Data Mask 1
46	SD_DATA15	O	SDRAM Data Bus 15

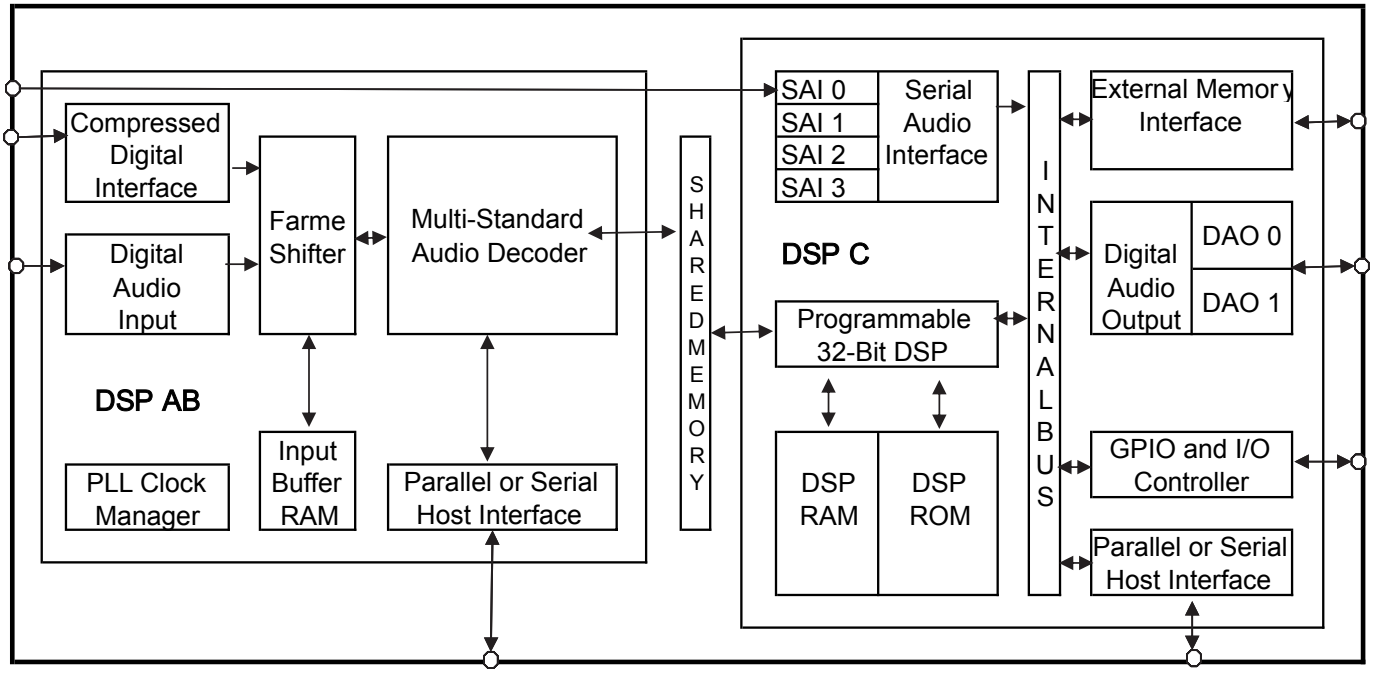
PIN No	PIN Name	I/O	Function
47	SD_DATA14	O	SDRAM Data Bus 14
48	NC5		No Connect (Ground)
49	SD_DATA13	O	SDRAM Data Bus 13
50	VSSSD3		SDRAM Ground
51	VDDSD3		SDRAM Power Supply
52	SD_DATA12	O	SDRAM Data Bus 12
53	SD_DATA11	O	SDRAM Data Bus 11
54	SD_DATA10	O	SDRAM Data Bus 10
55	SD_DATA9	O	SDRAM Data Bus 9
56	SD_DATA8	O	SDRAM Data Bus 8
57	VSSSD2		SDRAM Ground
58	VDDSD2		SDRAM Power Supply
59	SD_CLK_OUT	O	SDRAM CLOCK DATA OUT
60	SD_ADR9	O	SDRAM Address Bus
61	SD_CLK_IN	I	SDRAM CLOCK DATA IN
62	SD_ADR8	O	SDRAM Address Bus 8
63	SD_ADR7	O	SDRAM Address Bus 7
64	SD_CLK_EN	I	SDRAM Ground
65	SD_ADR6	O	SDRAM Address Bus 6
66	SD_ADR5	O	SDRAM Address Bus 5
67	SD_ADR4	O	SDRAM Address Bus 4
68	SD_CS	I	SDRAM Chip Select
69	VSSSD1		SDRAM Ground
70	VDDSD1		SDRAM Power Supply
71	SD_BA	O	SDRAM Bank Address Select
72	SD_ADR10	O	SDRAM Address Bus 10
73	SD_ADR0	O	SDRAM Address Bus 0
74	SD_ADR1	O	SDRAM Address Bus 1
75	SD_ADR2	O	SDRAM Address Bus 2
76	SD_ADR3	O	SDRAM Address Bus 3
77	SD_RAS	O	SDRAM Row Address Strobe
78	SD_CAS	O	SDRAM Column Address Strobe
79	SDATAN3	I	PCM Audio input Data 3
80	SDATAN2	I	PCM Audio input Data 2
81	SDATAN1	I	PCM Audio input Data 1
82	SDATAN0	I	PCM Audio input Data 0
83	NC4		No Connect (Ground)
84	NC3		
85	LRCLKN	I	PCM audio input sample rate clock
86	SCLKN	I	PCM audio input bit clock
87	LRCLK1	O	Audio Output Sample Rate Clock
88	NC2		No Connect (Ground)
89	NC1		
90	VDD1		2.5V Supply Voltage
91	VSS1		2.5V Ground
92	XMT958,AUDATA7	O	Digital Audio Output 7 , S/PDIF Transmitter
93	AUDATA6	O	Digital Audio Output 6
94	AUDATA5	O	Digital Audio Output 5
95	HDATA7	O	DSP C Bidirectional data bus 7

PIN No	PIN Name	I/O	Function
96	HDATA6	O	DSP C Bidirectional data bus 6
97	HDATA5	O	DSP C Bidirectional data bus 5
98	SCLK1	O	Audio output bit clock
99	MCLK	I	Audio Master clock
100	VDD2		2.5V Supply Voltage
101	VSS2		2.5V Ground
102	AUDATA4	O	Digital Audio Output 4
103	HDATA4	O	DSP C Bidirectional data bus 4
104	SCLK0	O	Audio output bit clock
105	HDATA3	O	DSP C Bidirectional data bus 3
106	AUDATA3	O	Digital Audio Output 3
107	AUDATA2	O	Digital Audio Output 2
108	LRCLK0	O	Audio Output Sample Rate Clock
109	AUDATA1	O	Digital Audio Output 1
110	AUDATA0	O	Digital Audio Output 0
111	CMPCLK,SCLKN2	I	PCM audio input bit clock
112	HDATA2	O	DSP C Bidirectional data bus 2
113	VSS3		2.5V Ground
114	VDD3		2.5V Supply Voltage
115	HDATA1	O	DSP C Bidirectional data bus 1
116	HDATA0	O	DSP C Bidirectional data bus 0
117	CMPREQ,FLRCLK2	I	PCM Audio Data input bit clock
118	CMPDAT,FSDATA2	I	PCM Audio data input Number two
119	FLRCLKN1	I	PCM audio data input one
120	WR,DS	I	DSP AB Control port mode select bit 0
121	RD,R/W	I	DSP AB Control port mode select bit 1
122	PLLVSS		PLL Ground voltage
123	FILT2		Phase-Locked Loop Filter
124	FILT1		Phase-Locked Loop Filter
125	PLLVDD		PLL supply voltage
126	XTALO	O	Crystal OSC Output
127	XTAL,1CLKIN	I	External Clock input/Crystal OSC input
128	CLKSEL	I	DSP Clock select
129	CS	O	Host parallel Chip Select
130	A0	O	Host Parallel Address bit 0
131	FSDATAN1	I	PCM Audio Data input one
132	VDD4		2.5V Supply Voltage
133	VSS4		2.5V Ground
134	FSCLKN1,STCLK2	I	PCM audio input bit clock
135	$\overline{SCS}$	I	Host Serial SPI Chip Select (Active "L")
136	SCDIN	I	SPI Serial control data input
137	VSS5		2.5V Ground
138	VDD5		2.5V Supply Voltage
139	A1	O	Host Address bit 1
140	SCDOUT	O	Serial control port data
141	HNBSY	I	Input Host Message status
142	SCCLK	O	Serial control port clock
143	UHS2,CS_OUT	O	DSP C Control Mode Select BIT 2
144	RESET	I	Master Reset Input

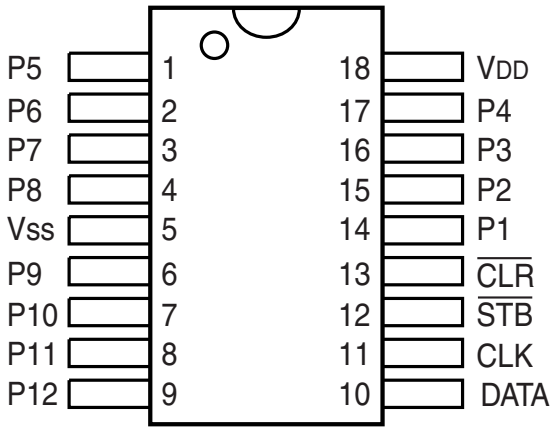
PIN ASSIGNMENT(IC45: CS494003)



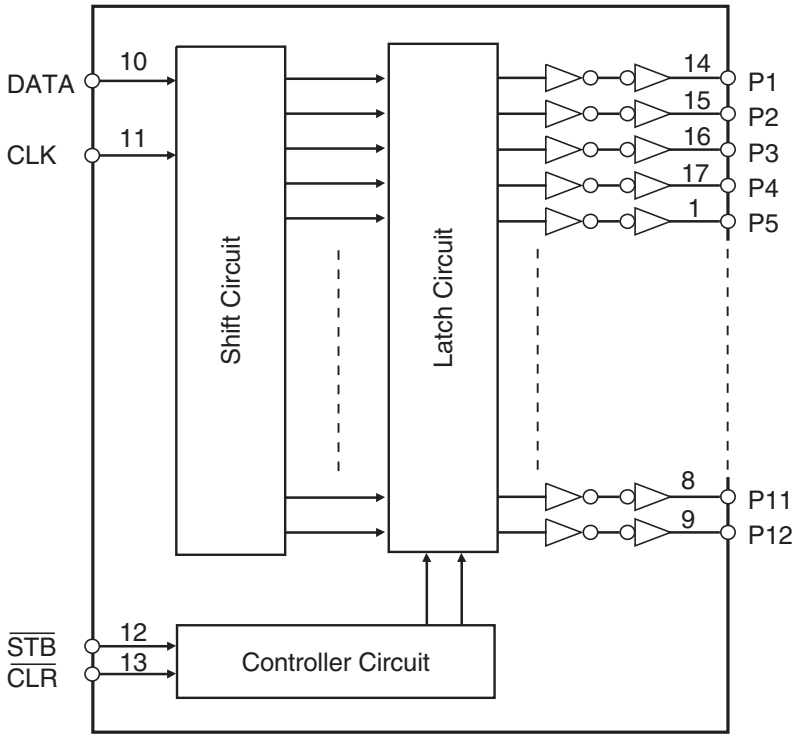
BLOCK DIAGRAM(IC45: CS494003)



■ NJU3713
(IC14 : EXPANDER / MAIN)



■ BLOCK DIAGRAM

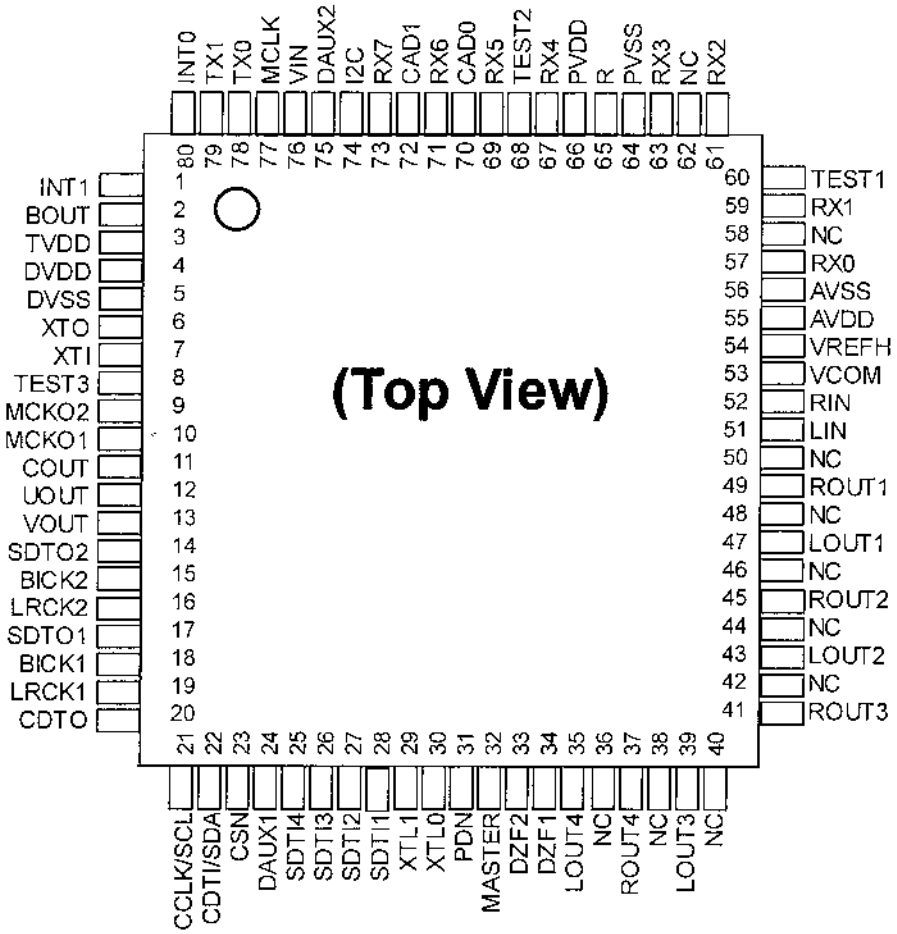


I.C PIN DESCRIPTIONS (IC31:AUDIO CODEC WITH DIR : AK4588)

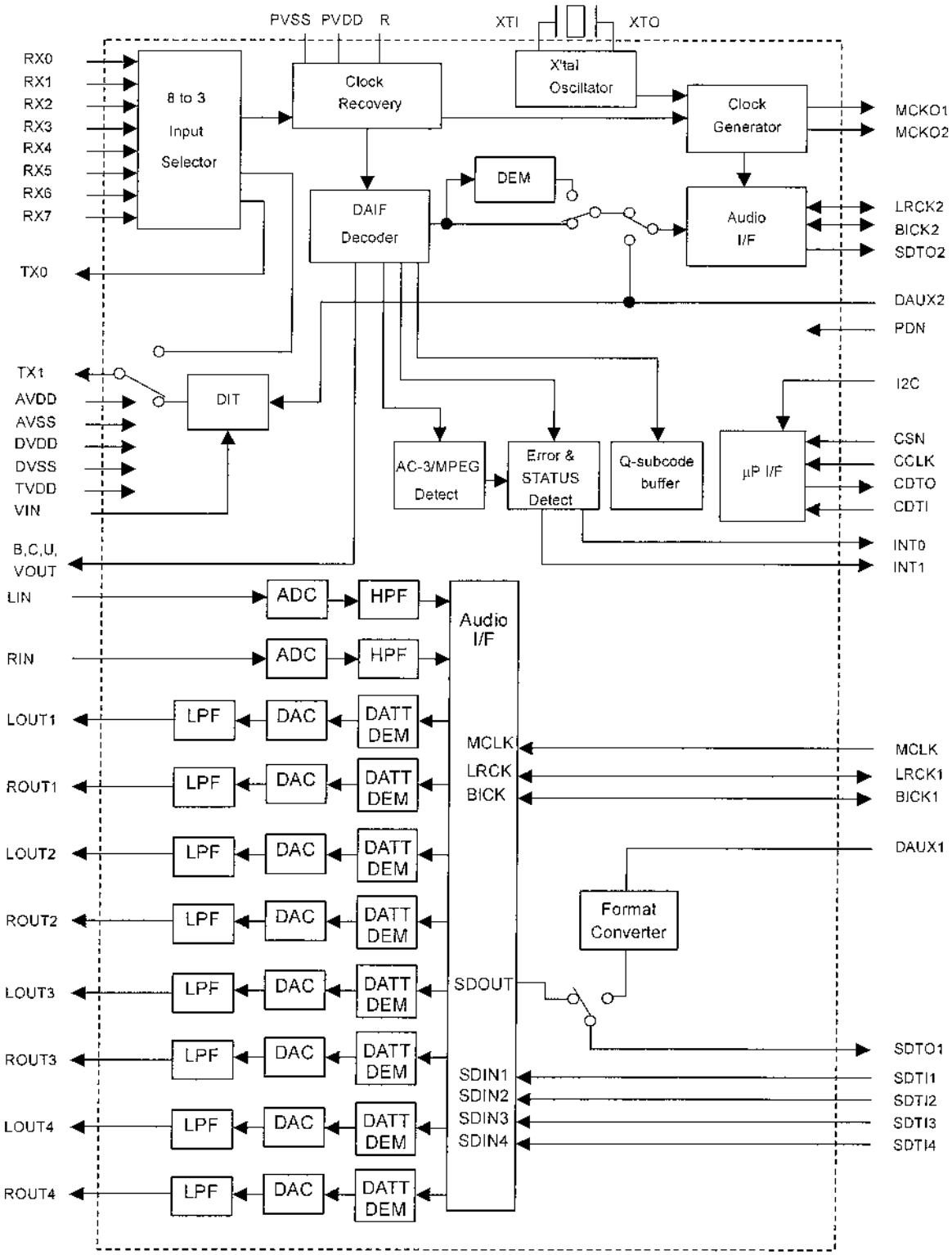
PIN No	PIN Name	I/O	Function
1	AK_INT	O	Interrupt pin
2	NC		Not connect
3	TVDD		3.3V Power Supply
4	DVDD		5V Power Supply
5	DVSS		Digital ground pin
6	NC		Not connect
7	XTAL_IN	I	X`tal clock input pin
8	DVSS		Digital ground pin
9	MCLK	O	Masster clock
10	MCLK	O	Masster clock
11	NC		Not connect
12	NC		Not connect
13	NC		Not connect
14	SDATA1	O	Audio serial data 1
15	FSCLK	O	Systm clock
16	FLRCLK	O	Audio serial data L/R clock
17	SDATA2	O	Audio serial data 2
18	SCLK0	O	Bit clock
19	LRCLK1	O	Audio serial data L/R clock
20	AK/CS_DOUT	O	Digital audio out
21	AK/CS_CK	I	System clock
22	AK/CS_DA	I	Control data
23	AK_CE	I	Chip enable
24	GND		High impeadance ground
25	AUDIODATA_DMIX	I	Audio data downmix data
26	AUDIODATA2	I	AUDIODATA2
27	AUDIODATA1	I	AUDIODATA1
28	AUDIODATA0	I	AUDIODATA0
29	GND		High impeadance ground
30	+5VD		5V Pull up
31	AK_RST		Chip reset
32	DVSS		Digital ground pin
33	NC		Not connect
34	NC		Not connect
35	DMIXL_DSP	O	Downed L-ch analog output
36	NC		Not connect
37	DMIXR_DSP	O	Downed R-ch analog output
38	NC		Not connect
39	SR-DSP	O	Surround right-ch analog output
40	NC		Not connect
41	SW-DSP	O	Subwoofer-ch analog output

PIN No	PIN Name	I/O	Function
42	NC		Not connect
43	FR-DSP	O	Front right-ch analog output
44	NC		Not connect
45	SL-DSP	O	Surround left-ch analog output
46	NC		No Connection
47	FL-DSP	O	Front left-ch analog output
48	NC		Not connect
49	CEN-DSP	O	Center-ch analog output
50	NC		Not connect
51	ADLIN-DSP	I	L-ch analog input
52	ADRIN-DSP	I	R-ch analog input
53	VCOM		GND(AC)
54	+5VD		5V power supply port
55	+5VD		5V power supply port
56	AVSS		Analog ground
57	SPDIF_IN		SPDIF input port
58	DVSS		Digital ground pin
59	OPTICAL_IN		Optical input port
60	DVSS		Digital ground pin
61	COAXIAL_IN		Coaxial input port
62	DVSS		Digital ground pin
63	NC		Not connect
64	DVSS		Digital ground pin
65	GND		High impeadance ground
66	+5VD		5V power supply port
67	NC		Not connect
68	DVSS		Digital ground pin
69	NC		Not connect
70	+5VD		5V Pull up
71	NC		Not connect
72	DVSS		Digital ground pin
73	NC		Not connect
74	DVSS		Digital ground pin
75	DAUX2		Auxiliary audio data input port
76	+5VD		5V Pull up
77	MCLK		Master clock
78	NC		Not connect
79	DIGITAL_OUT		Digital output port
80	AK_INT		Interrupt pin

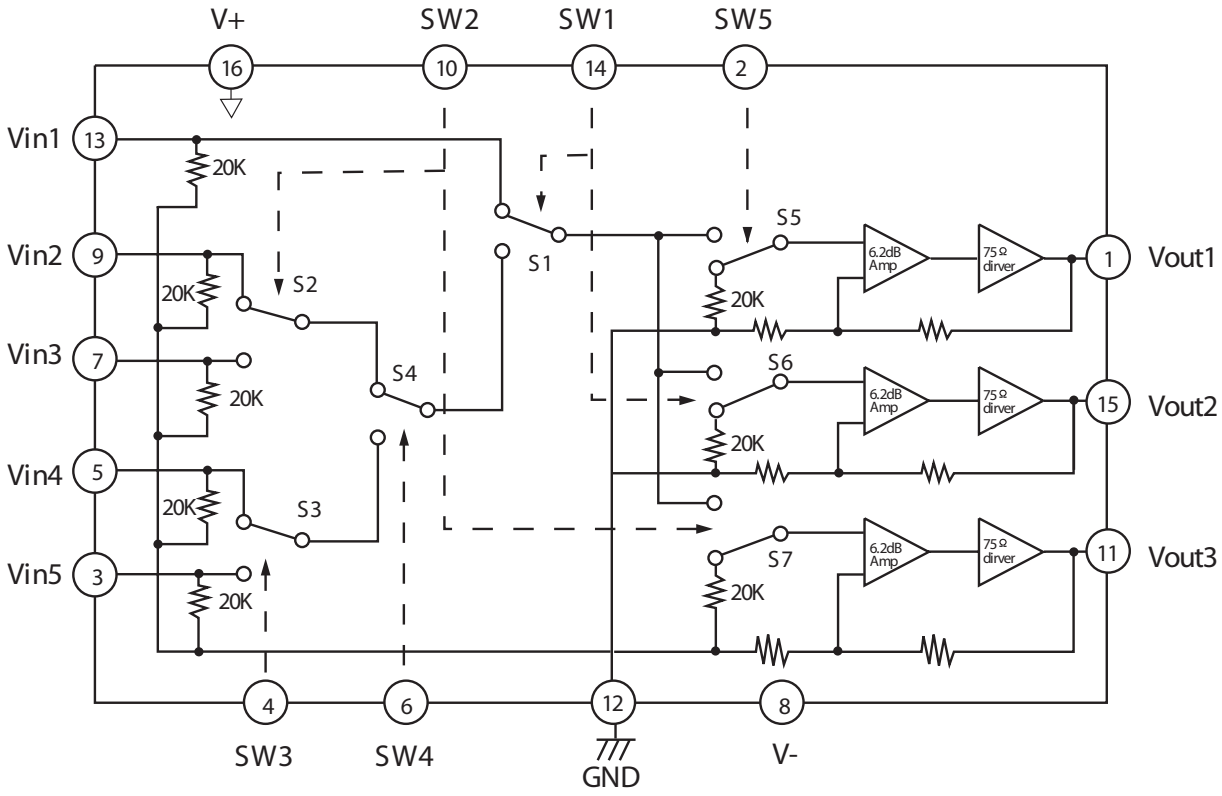
■ PIN ASSIGNMENT (IC31: AK4588)



■ BLOCK DIAGRAM (IC31: AK4588)

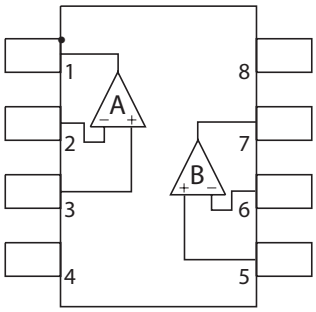


■ NJM2296M (VIDEO SW / IC51, 52, 53)



∗ Normally mute
Above circuits show that the switches are set at low.

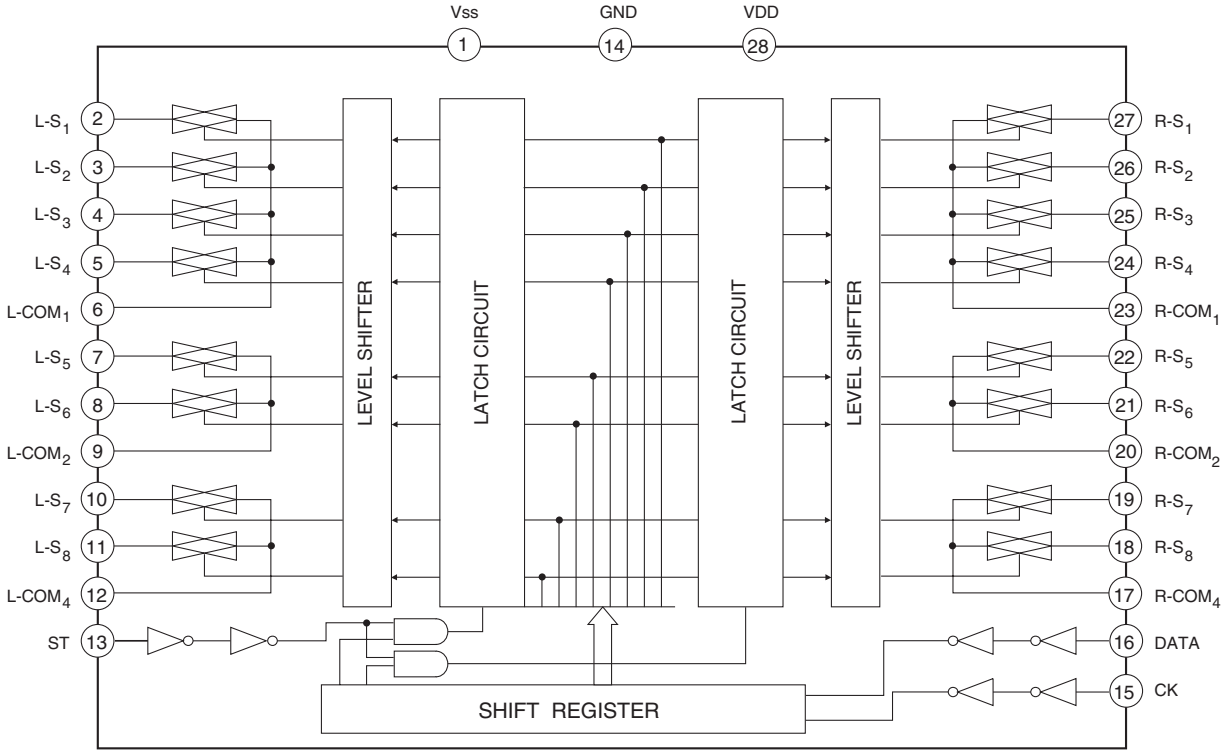
■ OPA2134UA / NJM 2068MD (OP AMP)



PIN FUNCITON
1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V^-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V^+

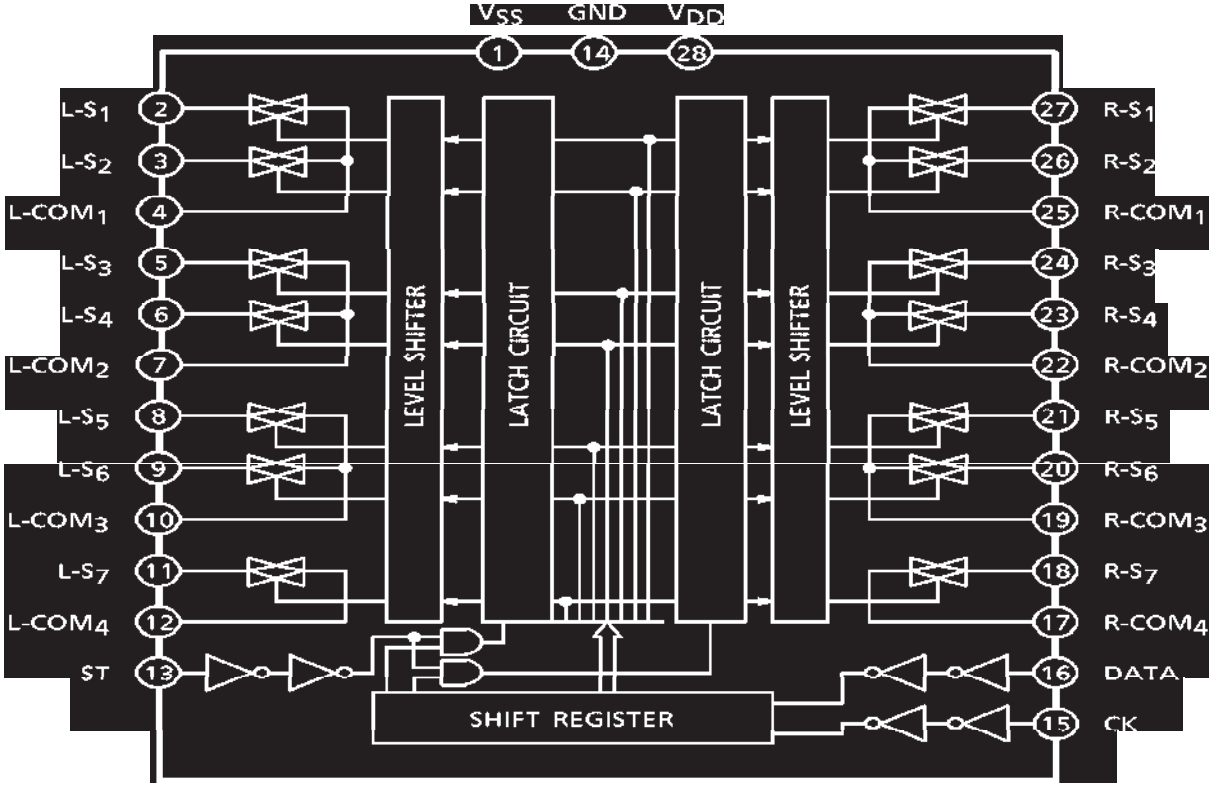
TC9164AF (FUNCTION IC11)

■ BLOCK DIAGRAM



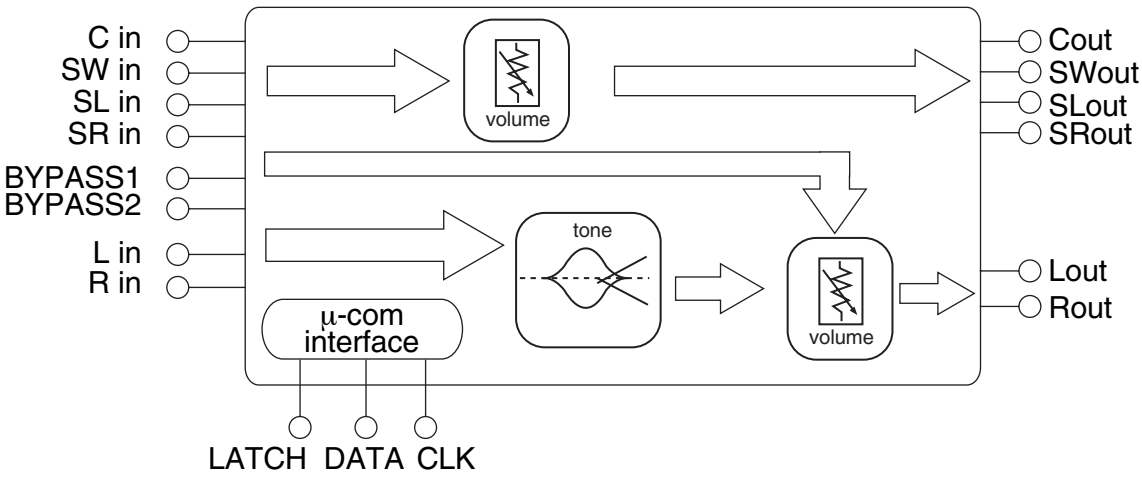
TC9162AF (FUNCTION IC12)

■ BLOCK DIAGRAM

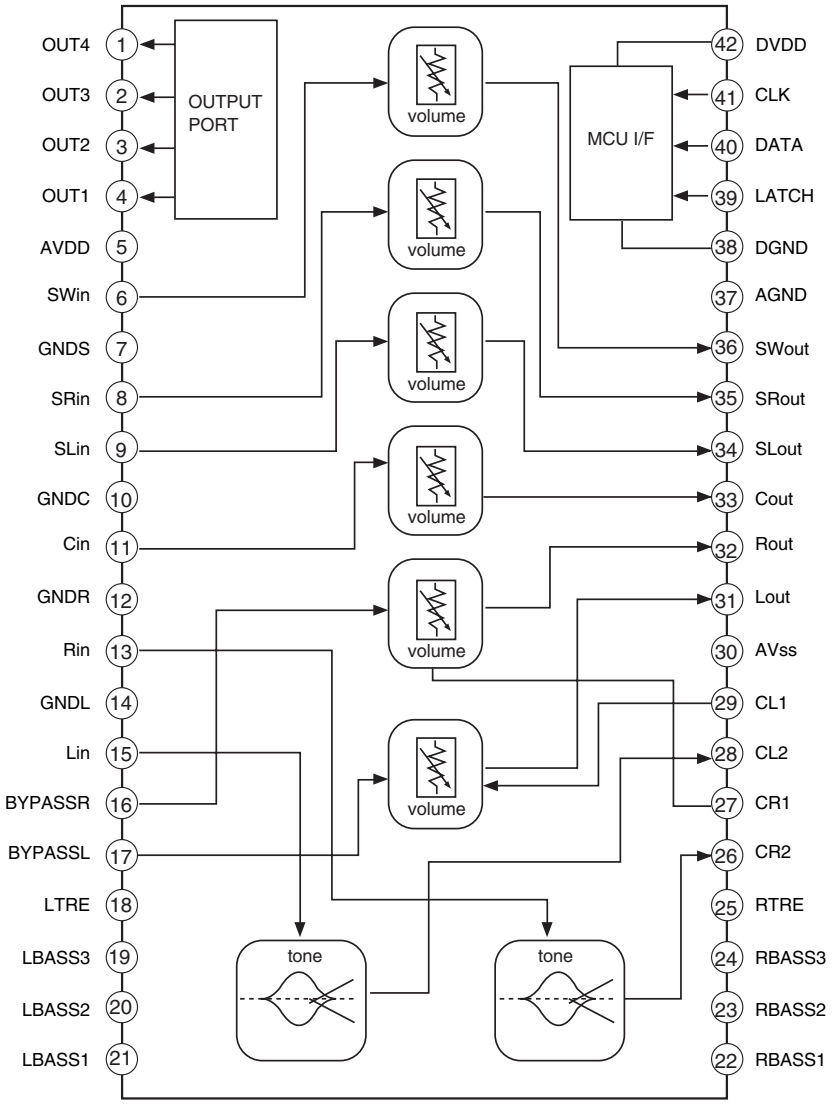


■ M62446FP (ELECTRONIC VOLUME/INPUT : IC13)

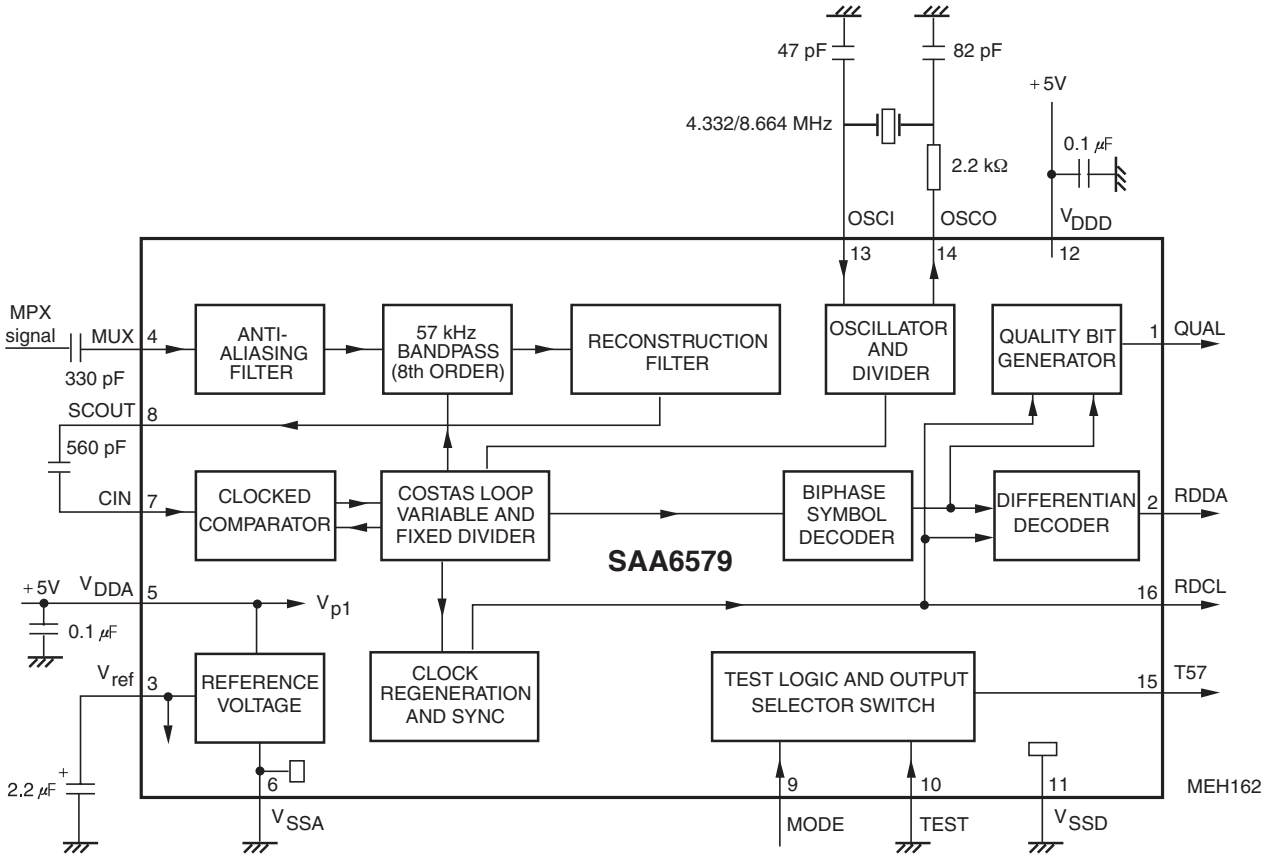
SYSTEM BLOCK DIAGRAM



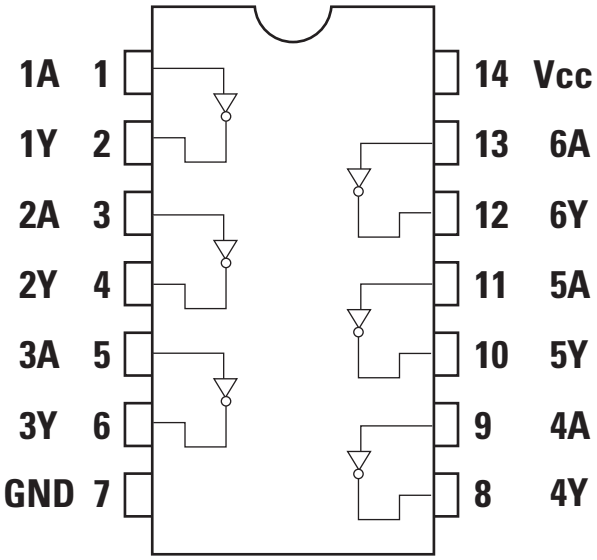
PIN CONFIGURATION AND IC INTERNAL BLOCK DIAGRAM



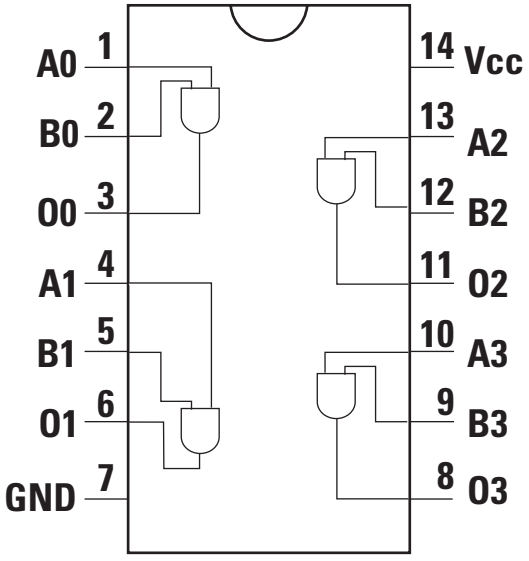
■ SAA6579TV1 (RDS FILTER IC82)



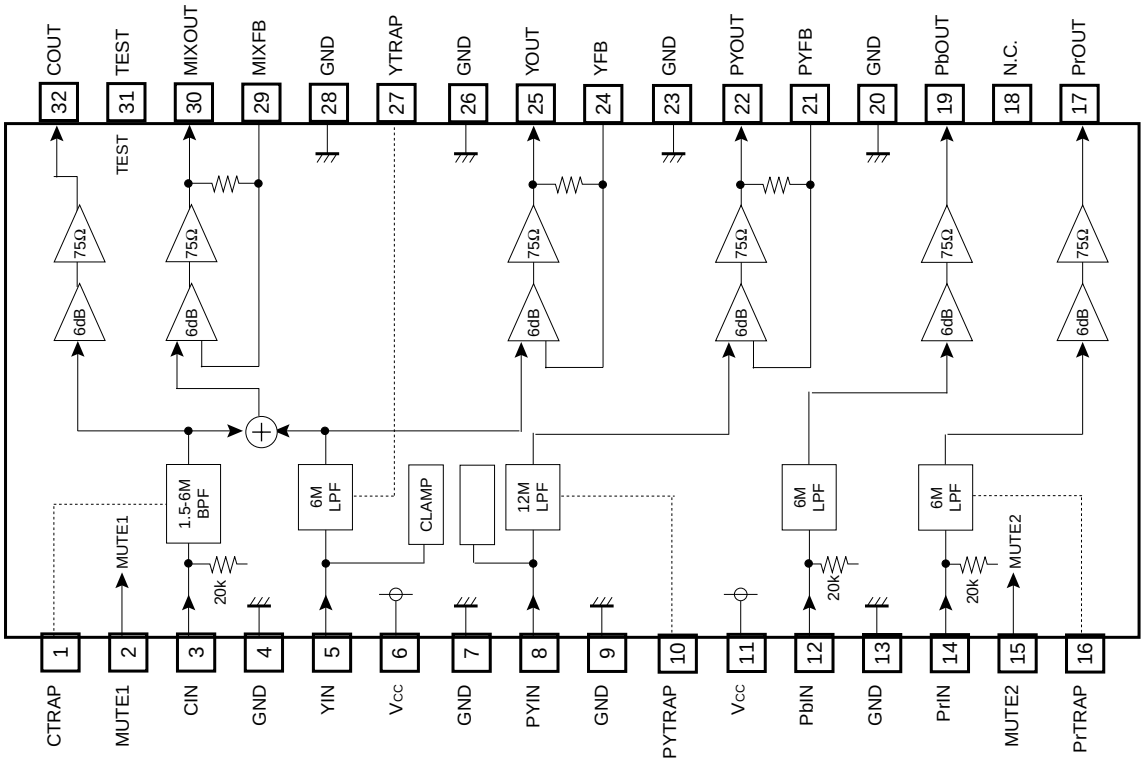
■ TC74 HCU04AFN (INVERTER IC34)



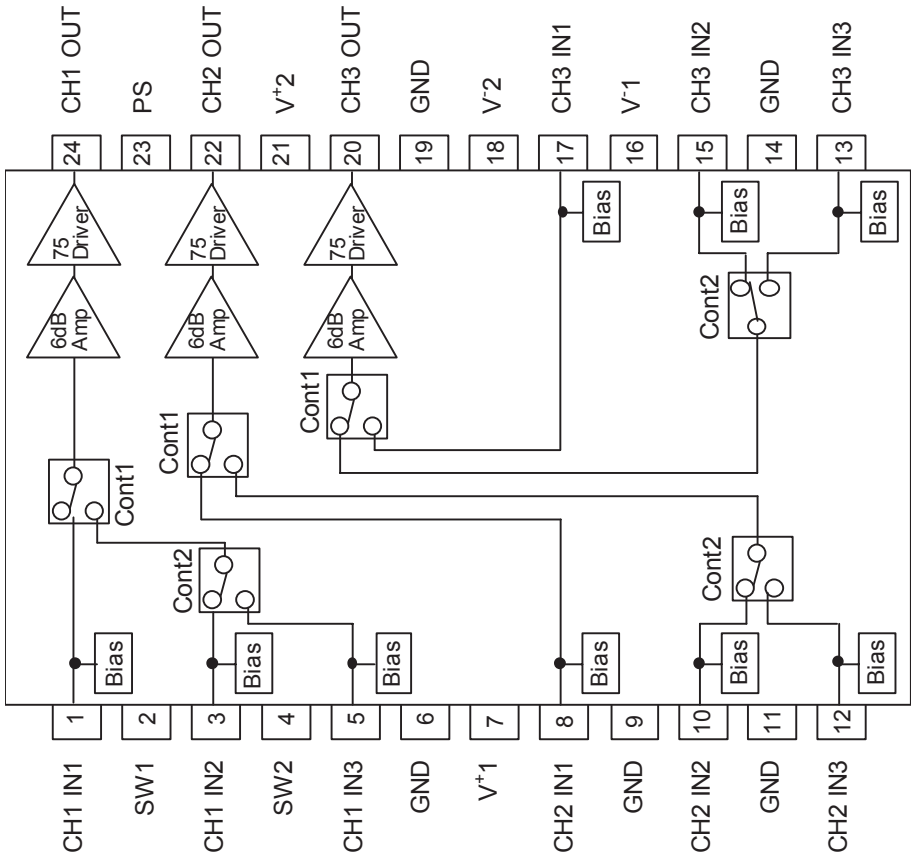
■ 74LCX08 (IC84: AND GATE)
74VHC08 (IC83, IC32 : AND GATE)



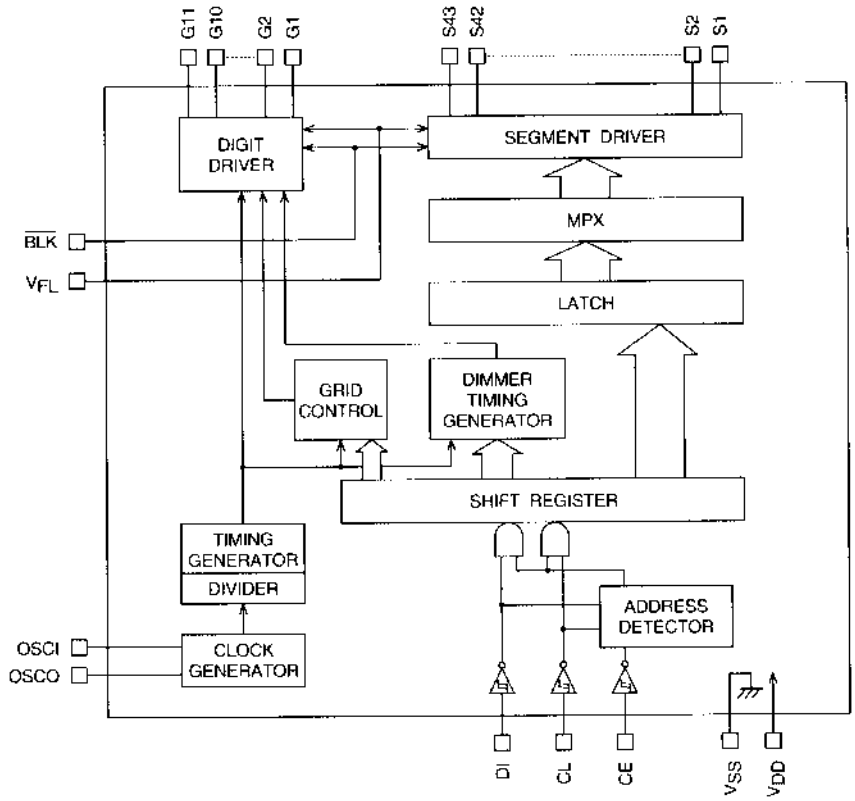
■ BH7862FS(VIDEO DRIVER IC54)



■ NJM2586(VIDEO S/W IC55)



■ LC75725 BLOCK DIAGRAM(VFD DRIVER IC91)

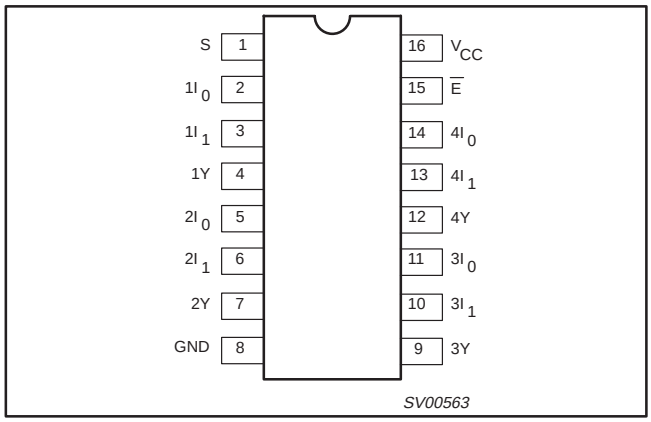


■ PIN FUNCTIONS

Pin	Pin No.	Function	I/O	Handling when unused
V_{FL}	1, 13	Driver block power supply connection. (Both pins must be connected.)	—	—
V_{DD}	60	Logic block power supply connection. Provide a voltage between 4.5 and 5.5 V.	—	—
V_{SS}	57	Power supply connection. Connect to the ground.	—	—
OSCI	59	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor to these pins.	I	GND
OSCO	58		O	OPEN
$\overline{BLK}$	61	Display off control input. $\overline{BLK}$ = Low (V_{SS}) ... Display off. (S1 to S43 and G1 to G11 at V_{FL} level.) $\overline{BLK}$ = High (V_{DD}) ... Display on. Note that serial data can be transferred while the display is turned off.	I	GND
CL	63	Serial data transfer inputs. These pins must be connected to the system microcontroller. CL: Synchronization clock DI: Transfer data CE: Chip enable	I	GND
DI	64			
CE	62			
G1 to G11	2 to 12	Digit outputs. These pins are P-channel open drain outputs with pull-down resistors.	O	OPEN
S1 to S43	56 to 14	Segment outputs for displaying the display data transferred by serial data input. These pins are P-channel open drain outputs with pull-down resistors.	O	OPEN

■ 74LVC157 (Multiplexer IC35)

PIN CONFIGURATION



PIN DESCRIPTION

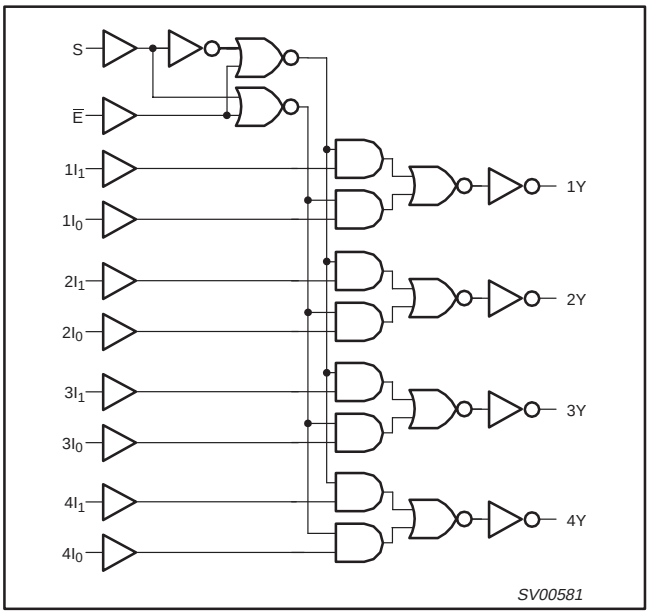
PIN NUMBER	SYMBOL	FUNCTION
1	S	Common data select input
2, 5, 11, 14	$1I_0$ to $4I_0$	Data inputs from sources 0
3, 6, 10, 13	$1I_1$ to $4I_1$	Data inputs from sources 1
4, 7, 9, 12	1Y to 4Y	Multiplexer outputs
8	GND	Ground (0 V)
15	$\overline{E}$	Enable input (active LOW)
16	V_{CC}	Positive supply voltage

FUNCTION TABLE

INPUTS				OUTPUTS
$\overline{E}$	S	nI_0	nI_1	nY
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

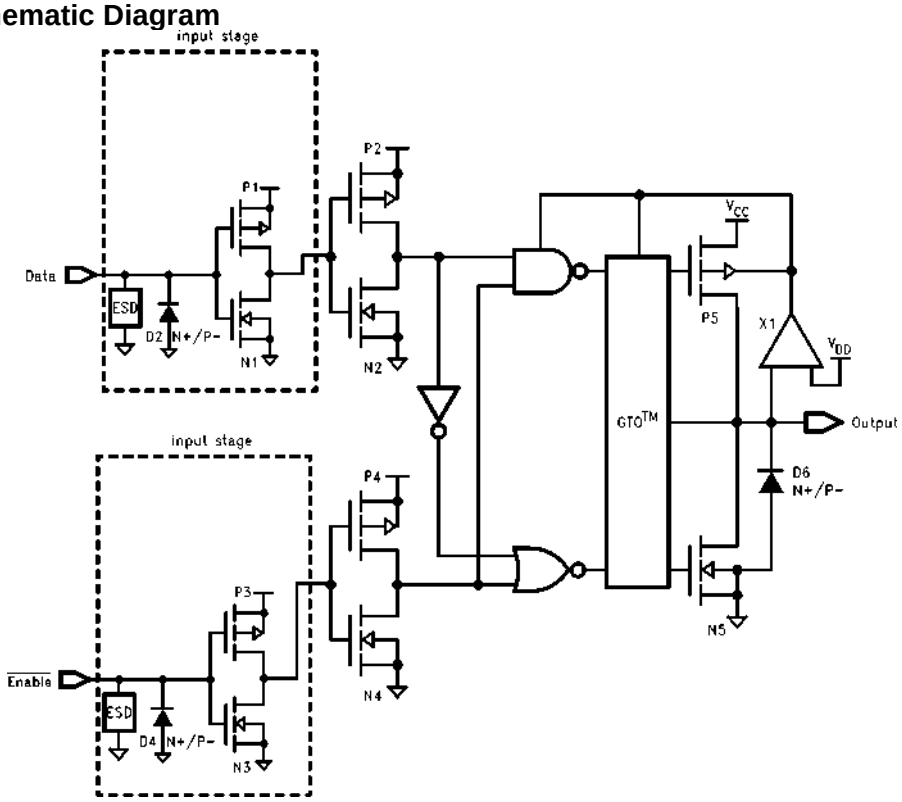
NOTES:
H = HIGH voltage level
L = LOW voltage level
X = don't care

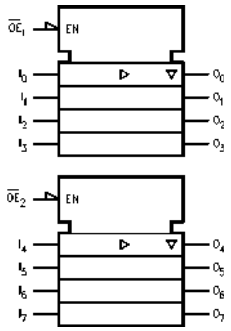
LOGIC DIAGRAM

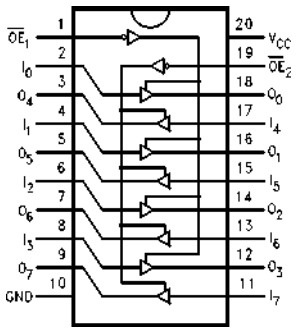


■ 74LCX244 (BUFFER IC33)

Schematic Diagram

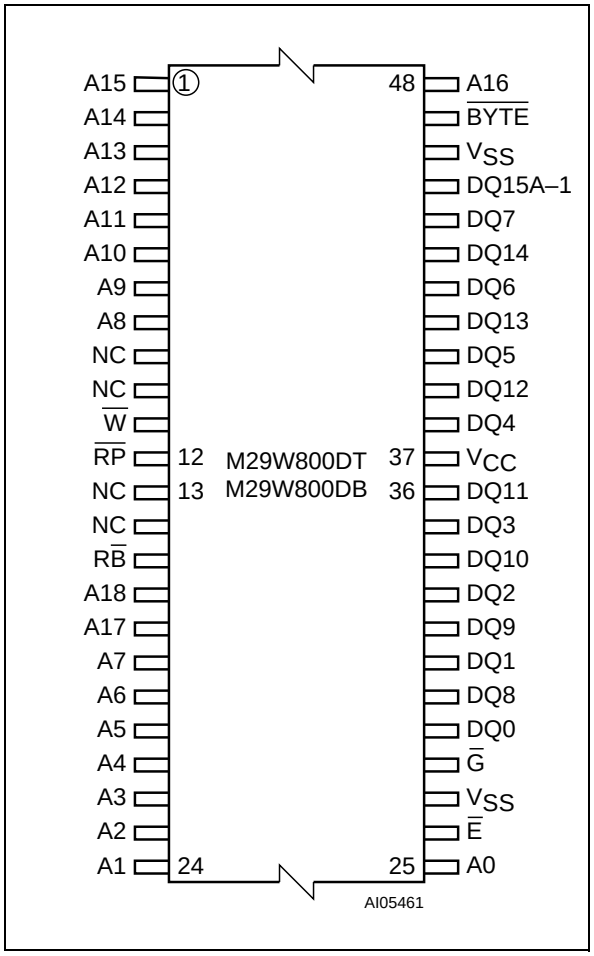


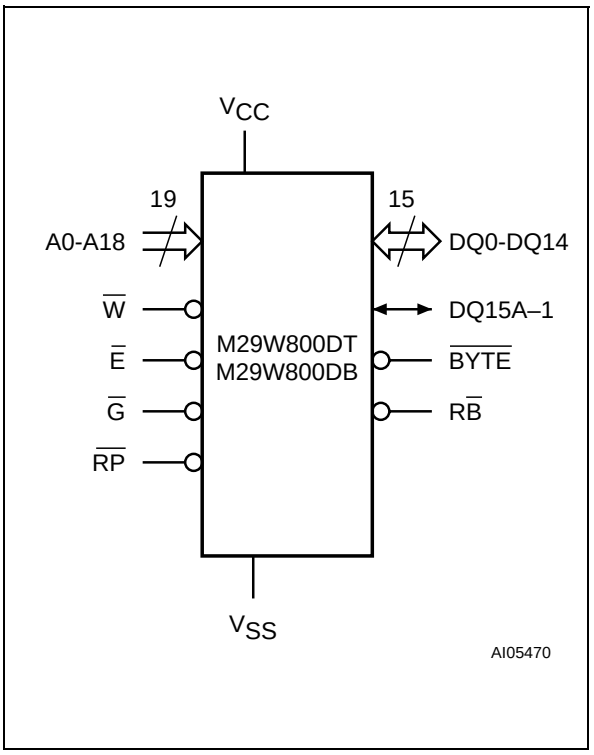




Pin Names	Description
$\overline{OE}_1$, $\overline{OE}_2$	3-STATE Output Enable Inputs
I_0–I_7	Inputs
O_0–O_7	Outputs

IC46 : M29W800DT, M29W800DB



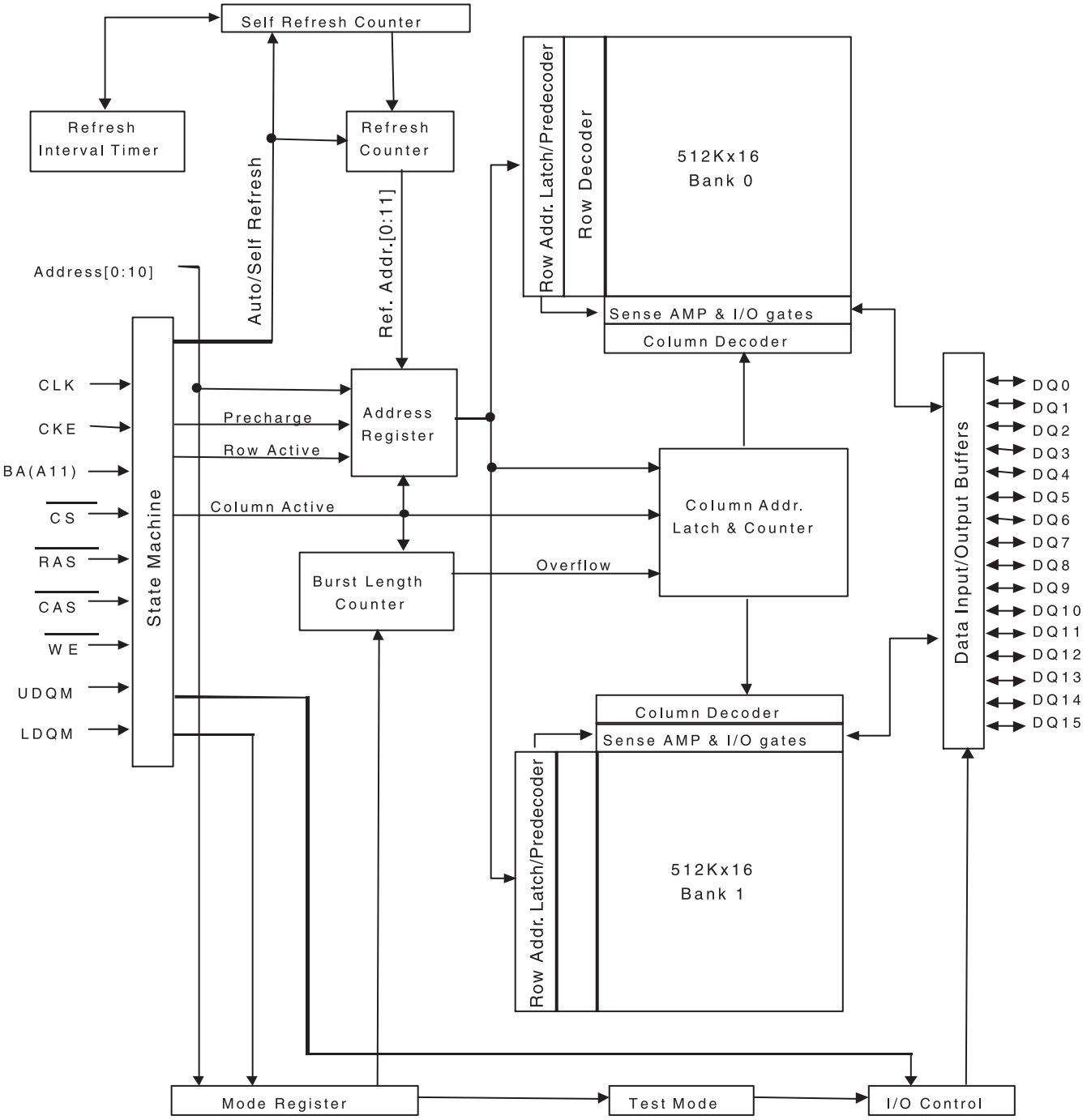


A0-A18	Address Inputs
DQ0-DQ7	Data Inputs/Outputs
DQ8-DQ14	Data Inputs/Outputs
DQ15A–1	Data Input/Output or Address Input
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{RP}$	Reset/Block Temporary Unprotect
$R\overline{B}$	Ready/Busy Output (not available on SO44 package)
$\overline{BYTE}$	Byte/Word Organization Select
V_{CC}	Supply Voltage
V_{SS}	Ground
NC	Not Connected Internally

HY57V161610 (IC47: SDRAM)

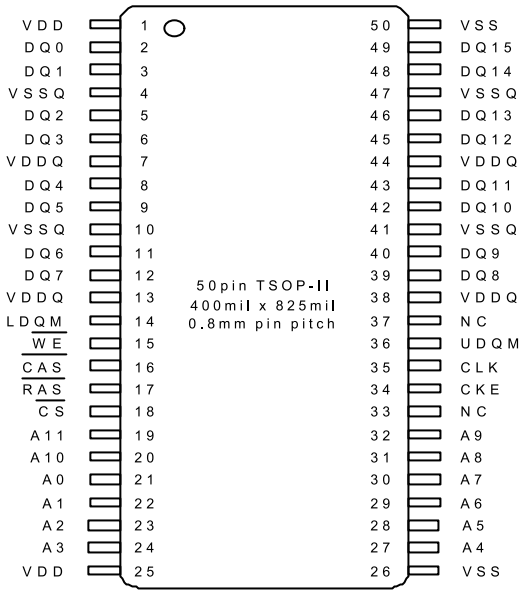
FUNCTIONAL BLOCK DIAGRAM

1Mx16 Synchronous DRAM



■ HY57V161610

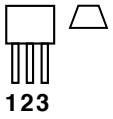
PIN CONFIGURATION

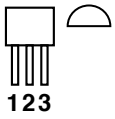


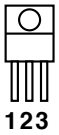
PIN DESCRIPTION

PIN	PIN NAME	DESCRIPTION
CLK	Clock	The system clock input. All other inputs are referenced to the SDRAM on the rising edge of CLK.
CKE	Clock Enable	Controls internal clock signal and when deactivated, the SDRAM will be one of the states among power down, suspend or self refresh.
$\overline{CS}$	Chip Select	Command input enable or mask except CLK, CKE and DQM
BA	Bank Address	Select either one of banks during both $\overline{RAS}$ and $\overline{CAS}$ activity.
A0 ~ A10	Address	Row Address : RA0 ~ RA10, Column Address : CA0 ~ CA7 Auto-precharge flag : A10
$\overline{RAS}$, $\overline{CAS}$, $\overline{WE}$	Row Address Strobe, Column Address Strobe, Write Enable	$\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ define the operation. Refer function truth table for details
LDQM, UDQM	Data Input/Output Mask	DQM control output buffer in read mode and mask input data in write mode
DQ0 ~ DQ15	Data Input/Output	Multiplexed data input / output pin
V_{DD}/V_{SS}	Power Supply/Ground	Power supply for internal circuit and input buffer
V_{DDQ}/V_{SSQ}	Data Output Power/Ground	Power supply for DQ
NC	No Connection	No connection

■ TRANSISTOR, REGULATOR IC BLOCK DIAGRAM

<table>
<tr>
<td>TO-92S
 

1. Emitter
2. Collector
3. Base
KRA102M KRC102M
KSC2785Y
KSA1175Y</td>
<td>TO-92
 

1. Emitter
2. Collector
3. Base
KTC3200GR KSB811Y
KTA1271Y KSA733
KTA1268GR</td>
<td>TO-220
 

1. INPUT
2. OUTPUT
3. GND
NJM7912FA</td>
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 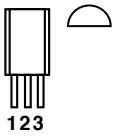

1. Emitter
2. Collector
3. Base
KSC2316Y
KSA316Y</td>
</tr>
<tr>
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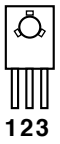
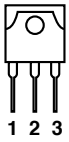
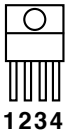
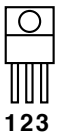
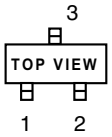
 

1. Emitter
2. Collector
3. Base
KTC3114A
KTA1360Y
KTC3423Y</td>
<td>TO-220
 

1. INPUT
2. GND
3. OUTPUT
NJM7812FA
MC7806C</td>
<td>TO-3P
 

1. Base
2. Collector
3. Emitter
2SB1559
2SD2389</td>
<td>TO-220
 

1. INPUT
2. OUTPUT
3. GND
4. CONTROL
KIA78R05 KA78R05
KIA278R12 KA278R12
KIA278R06 KA278R06</td>
</tr>
<tr>
<td>TO-220
 

1. Base
2. Collector
3. Emitter
KTB1369Y
KTD2061Y</td>
<td>SOT-23
 

1. Base
2. Emitter
3. Collecfor
KRA102S
KRC102S
KTD1304</td>
<td></td>
<td></td>
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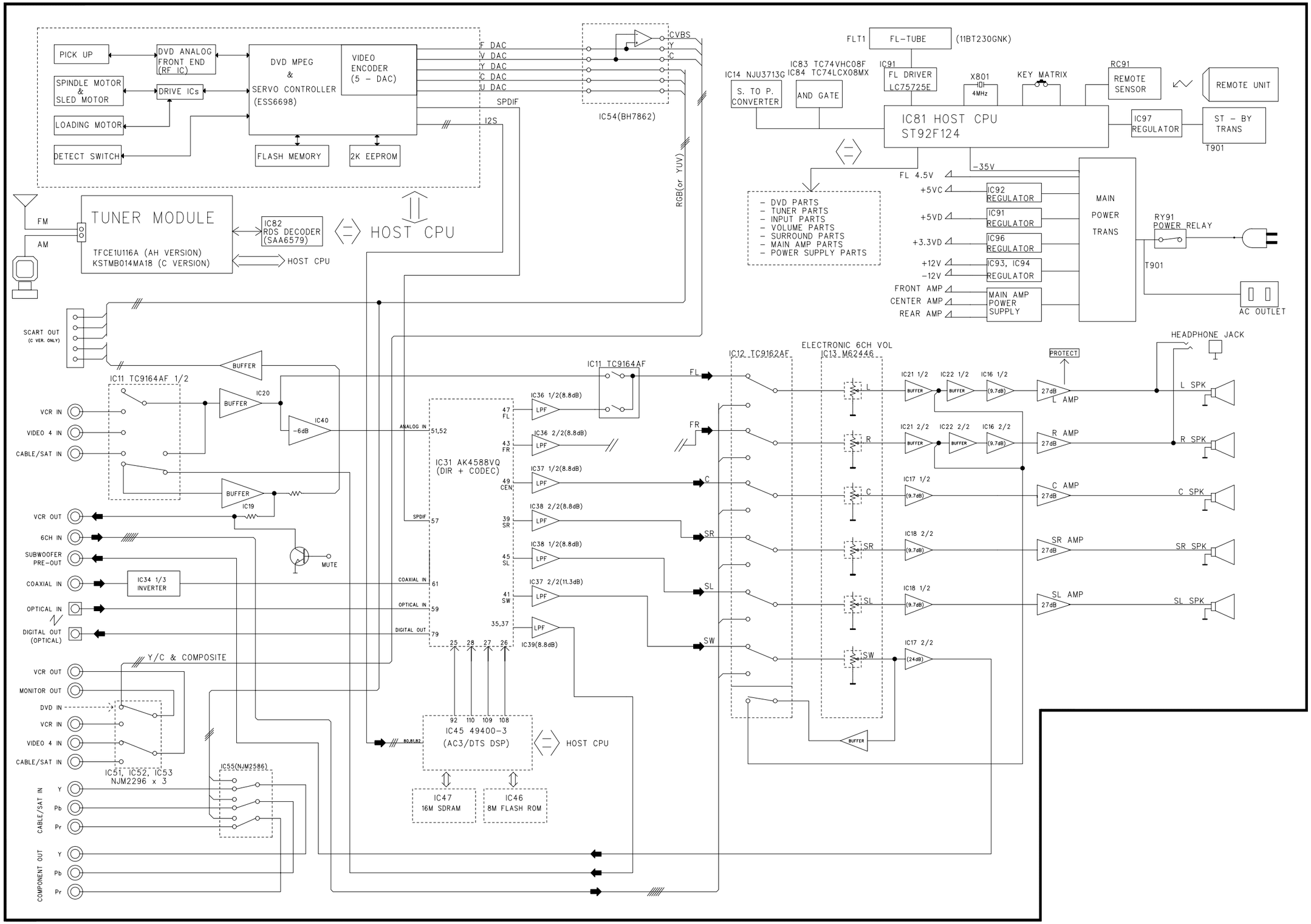
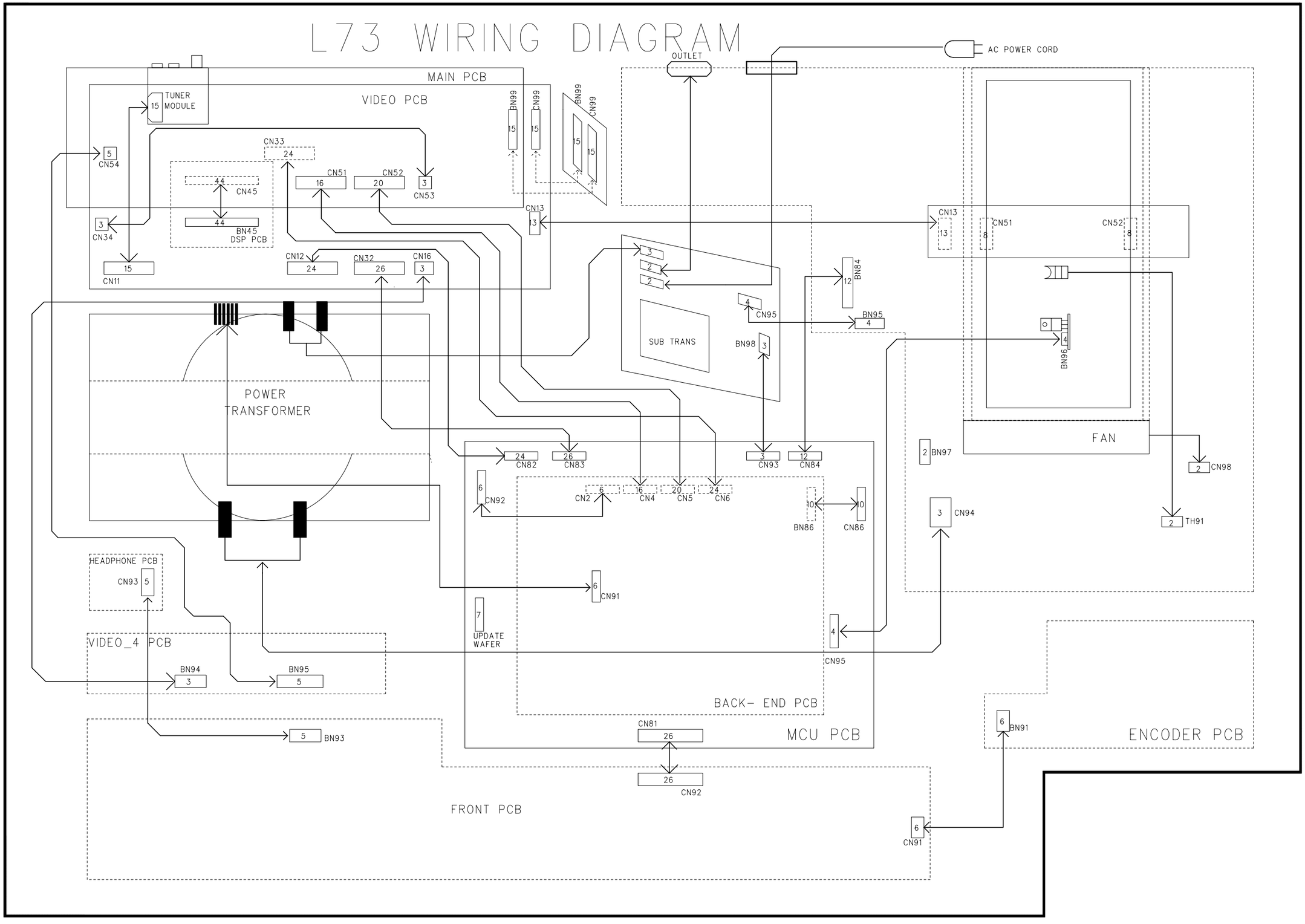
1. BLOCK DIAGRAM

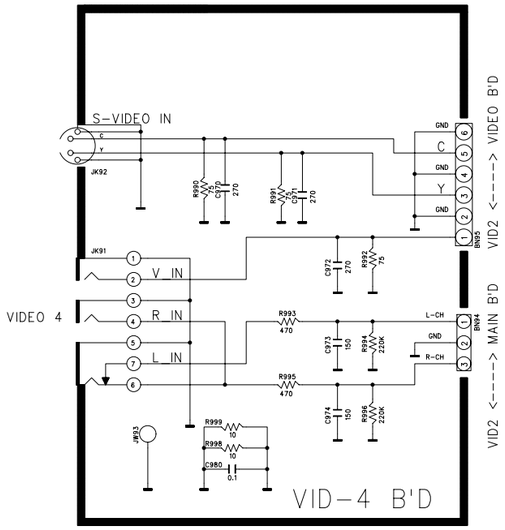


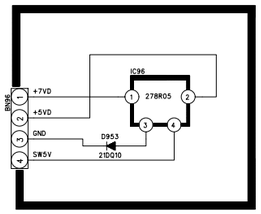
2. WIRING DIAGRAM

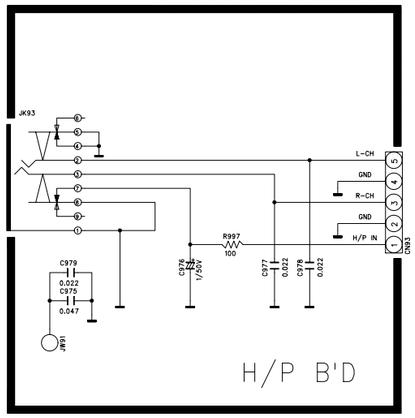


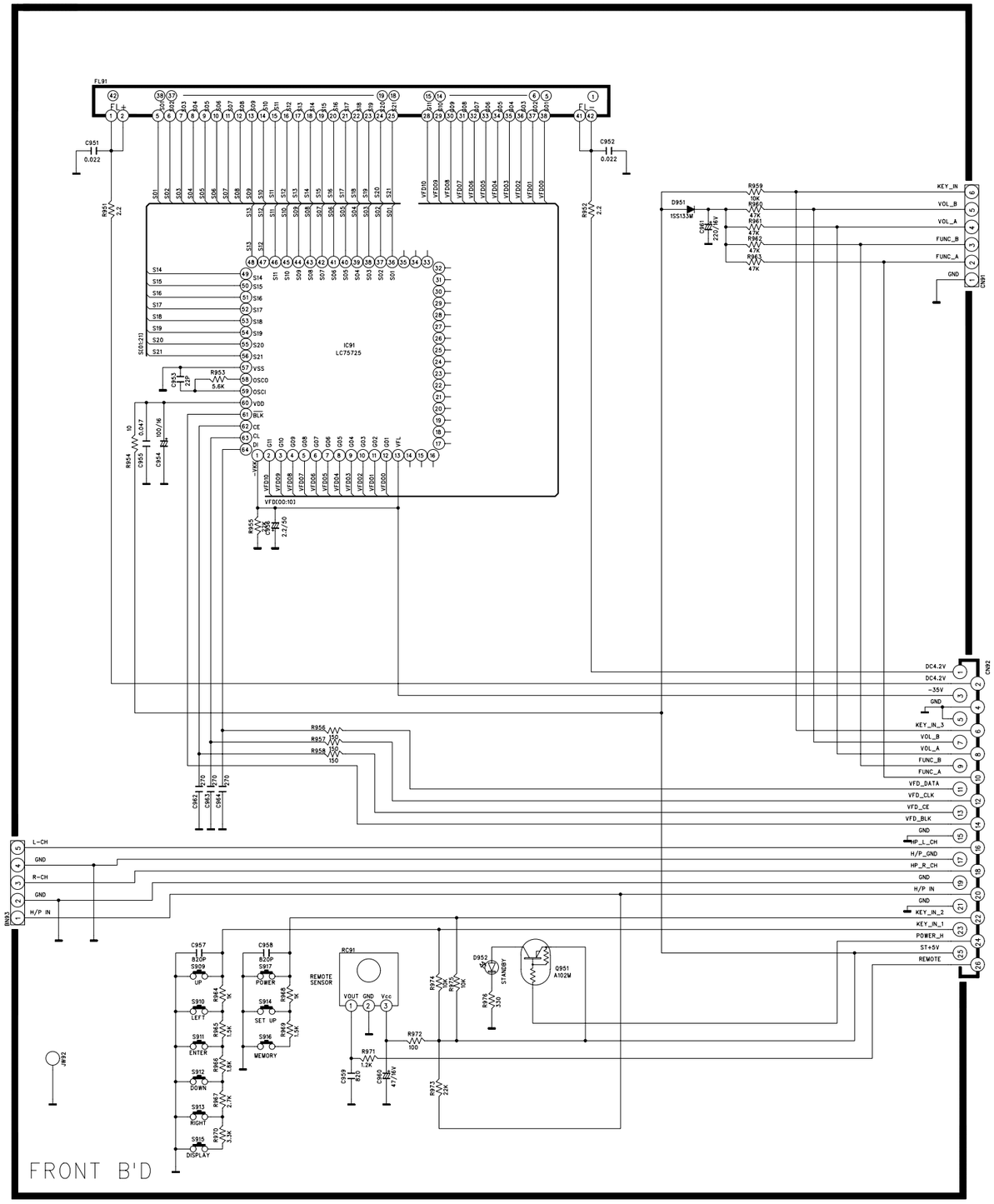
3. SCHEMATIC DIAGRAM

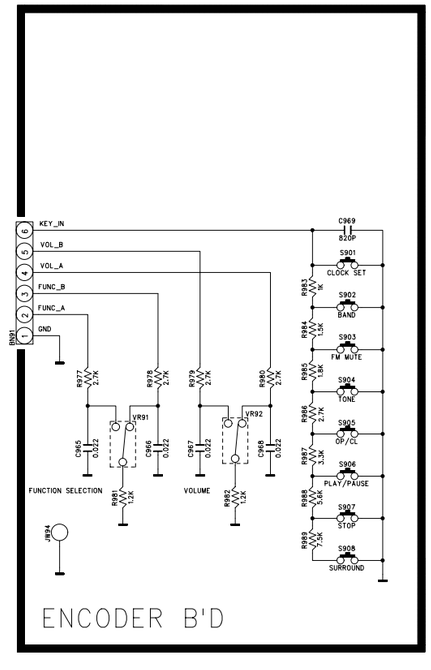
FRONT PART

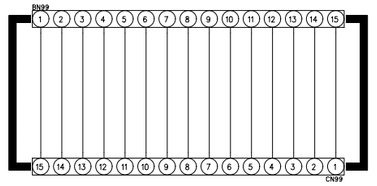


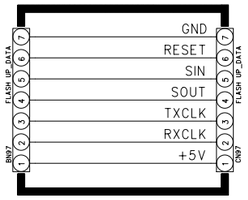




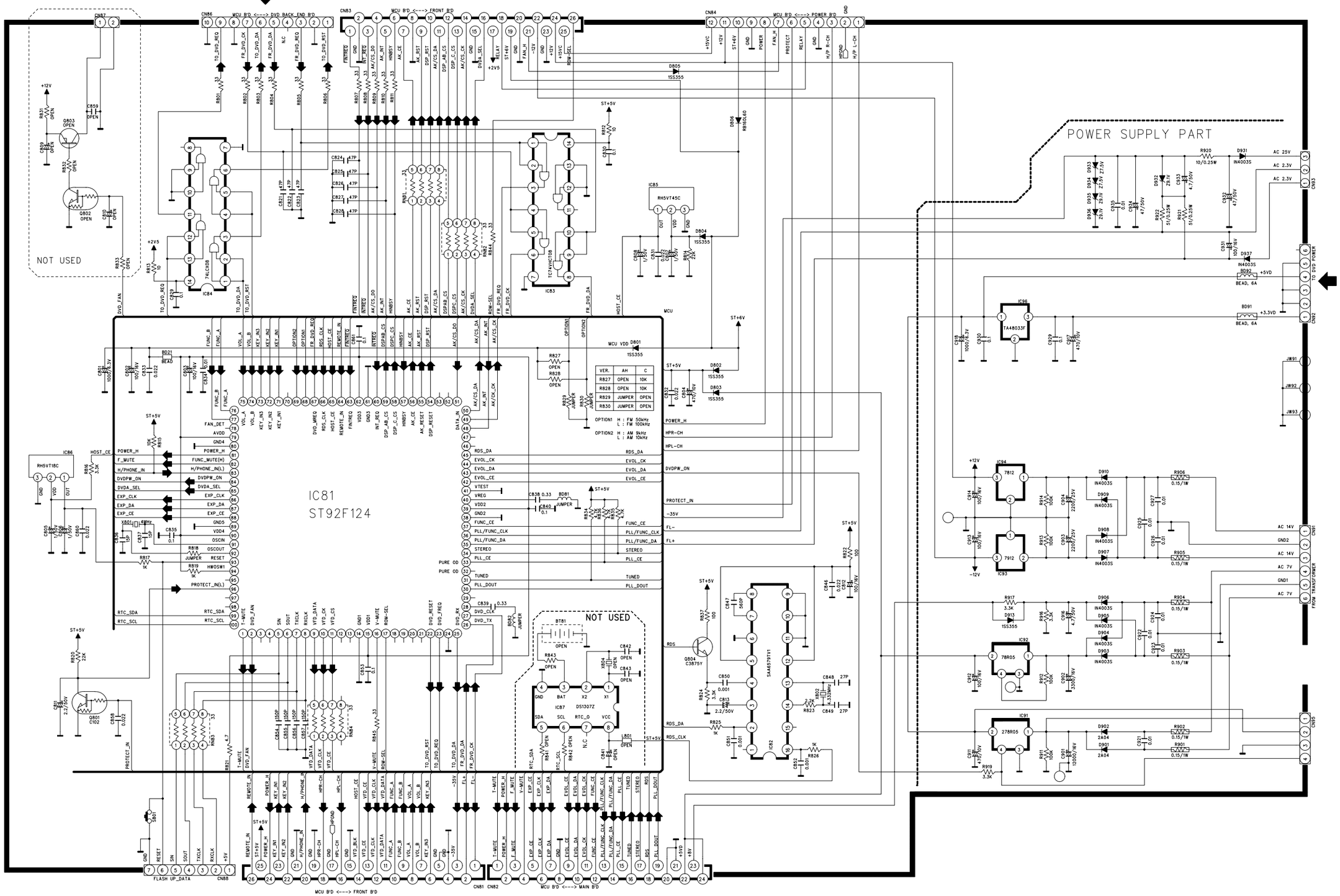




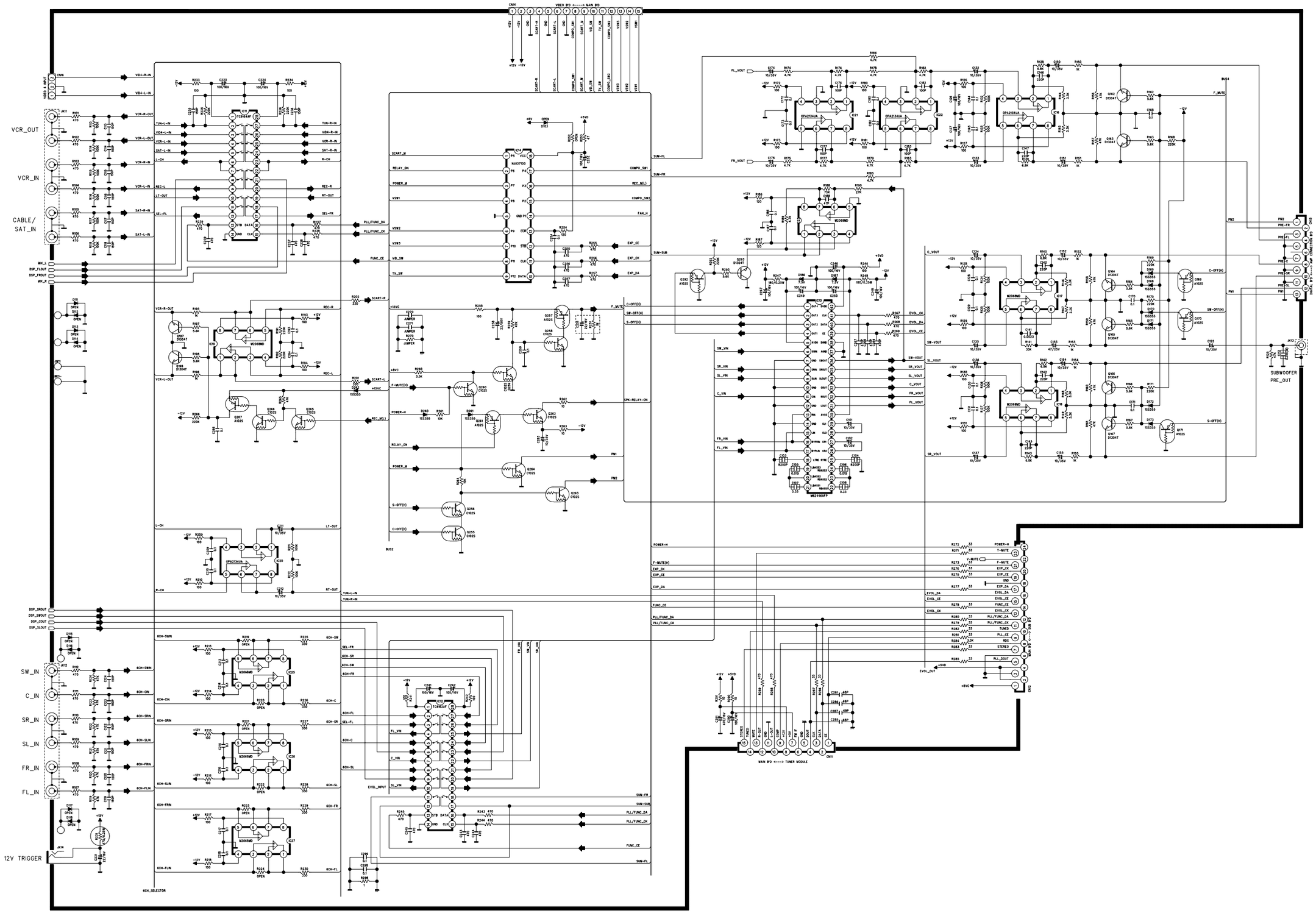




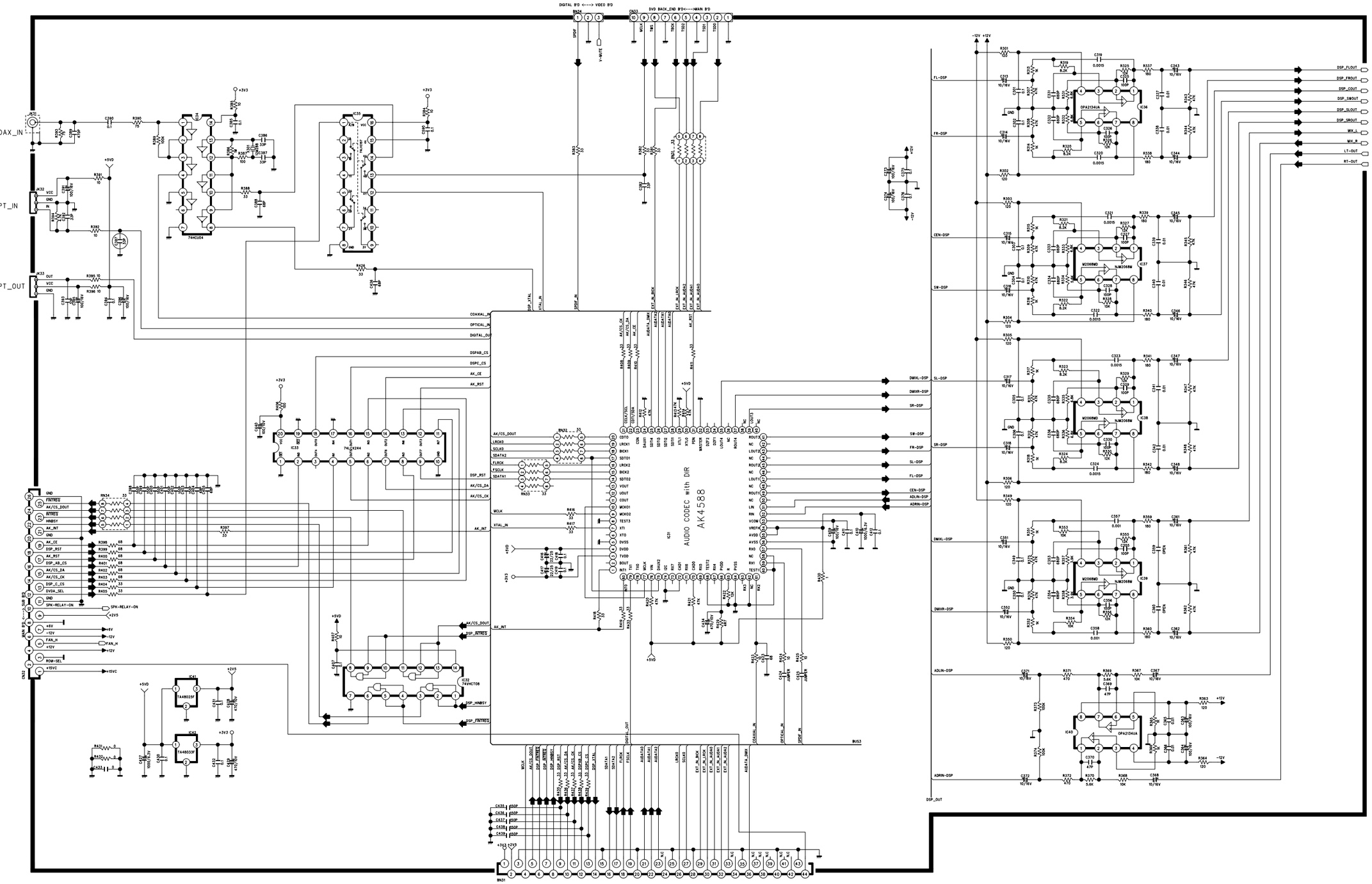
u-COM & POWER SUPPLY PART



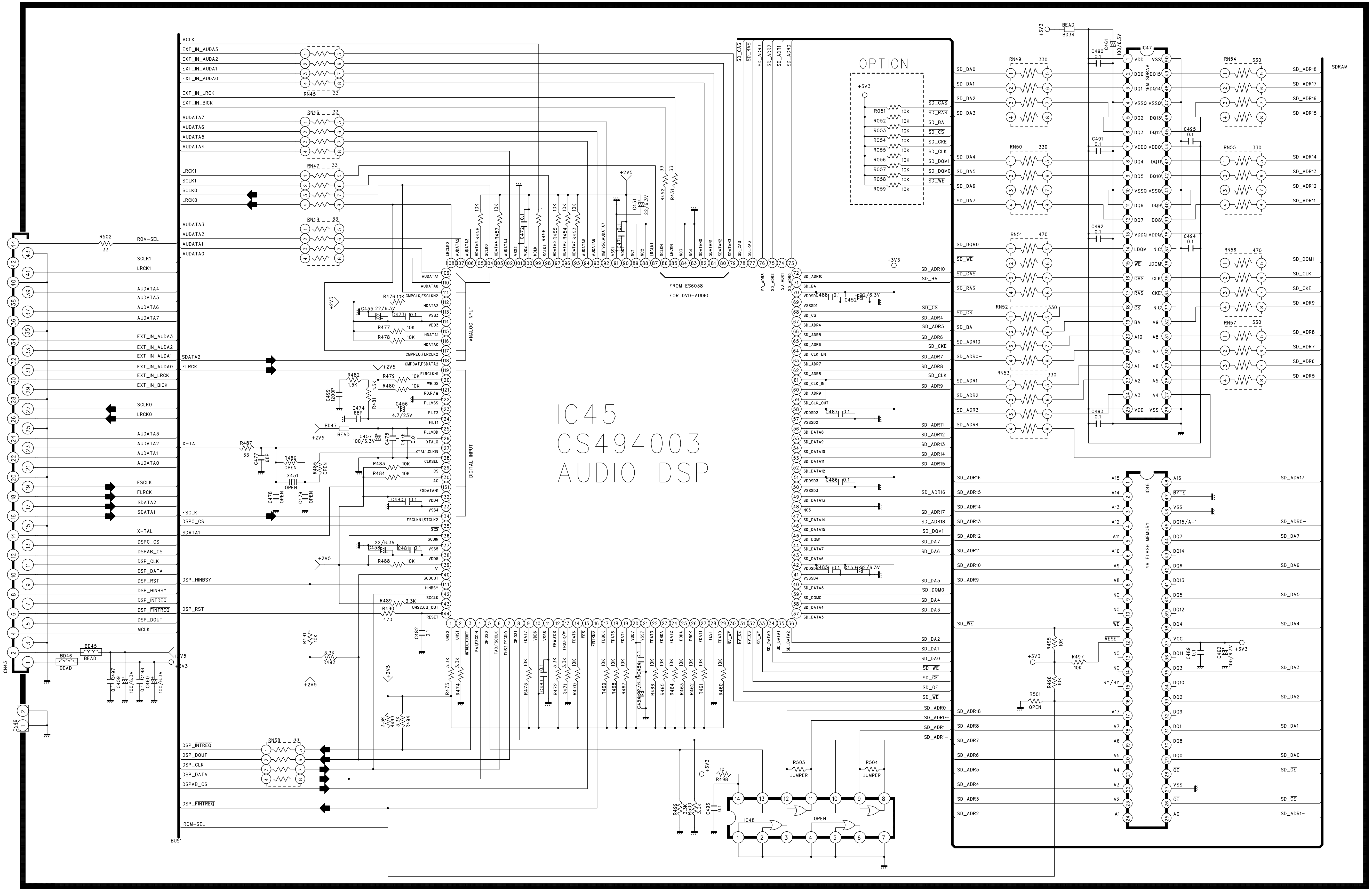
INPUT & VOLUME PART



CODEC & LPF PART

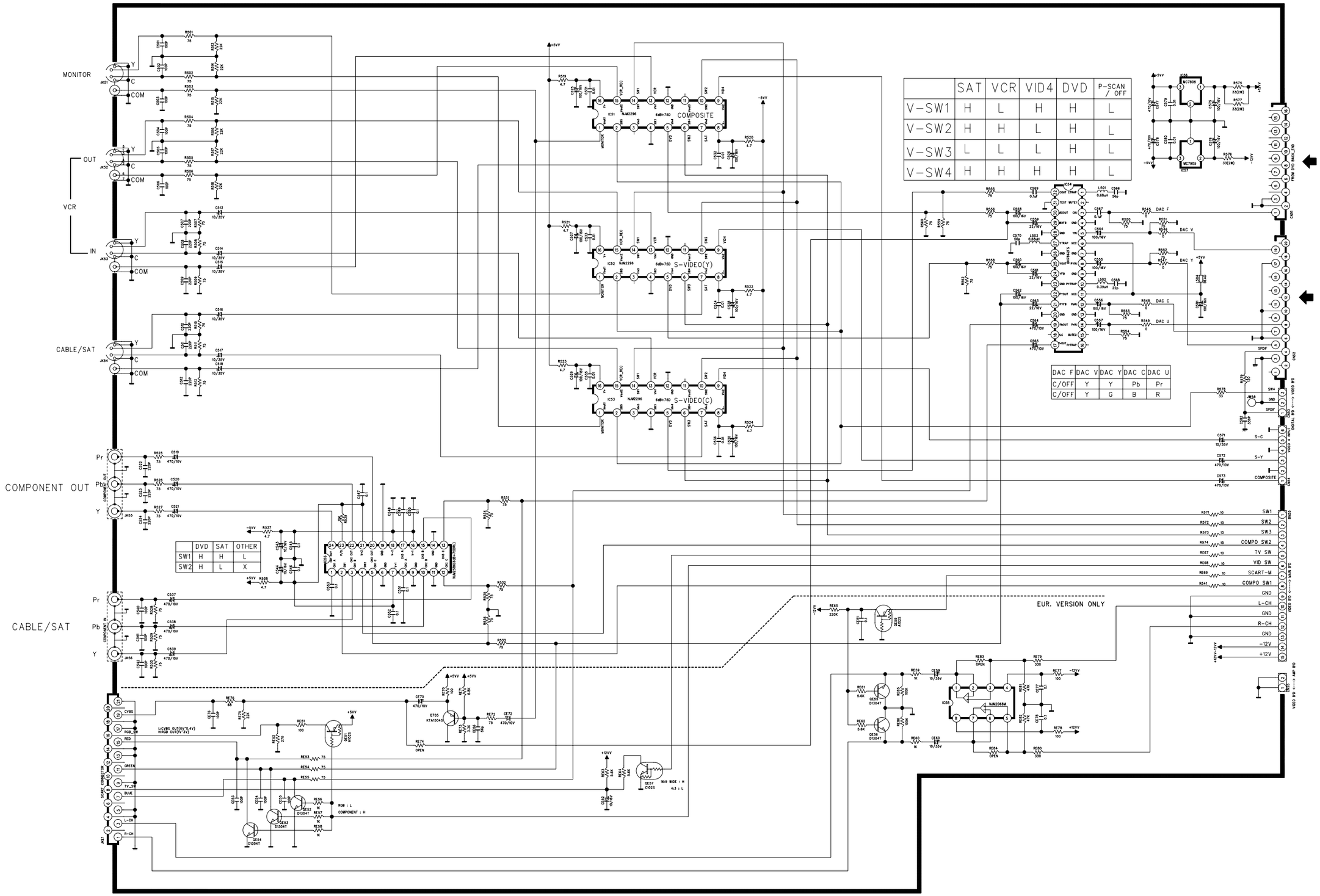


DSP PART



IC45
CS494003
AUDIO DSP
OPTION
FROM CS6038
FOR DVD-AUDIO
ANALOG INPUT
DIGITAL INPUT
SDRAM
4M FLASH MEMORY
IC46
IC47
IC48
CN45
CN46
BUS1

VIDEO PART

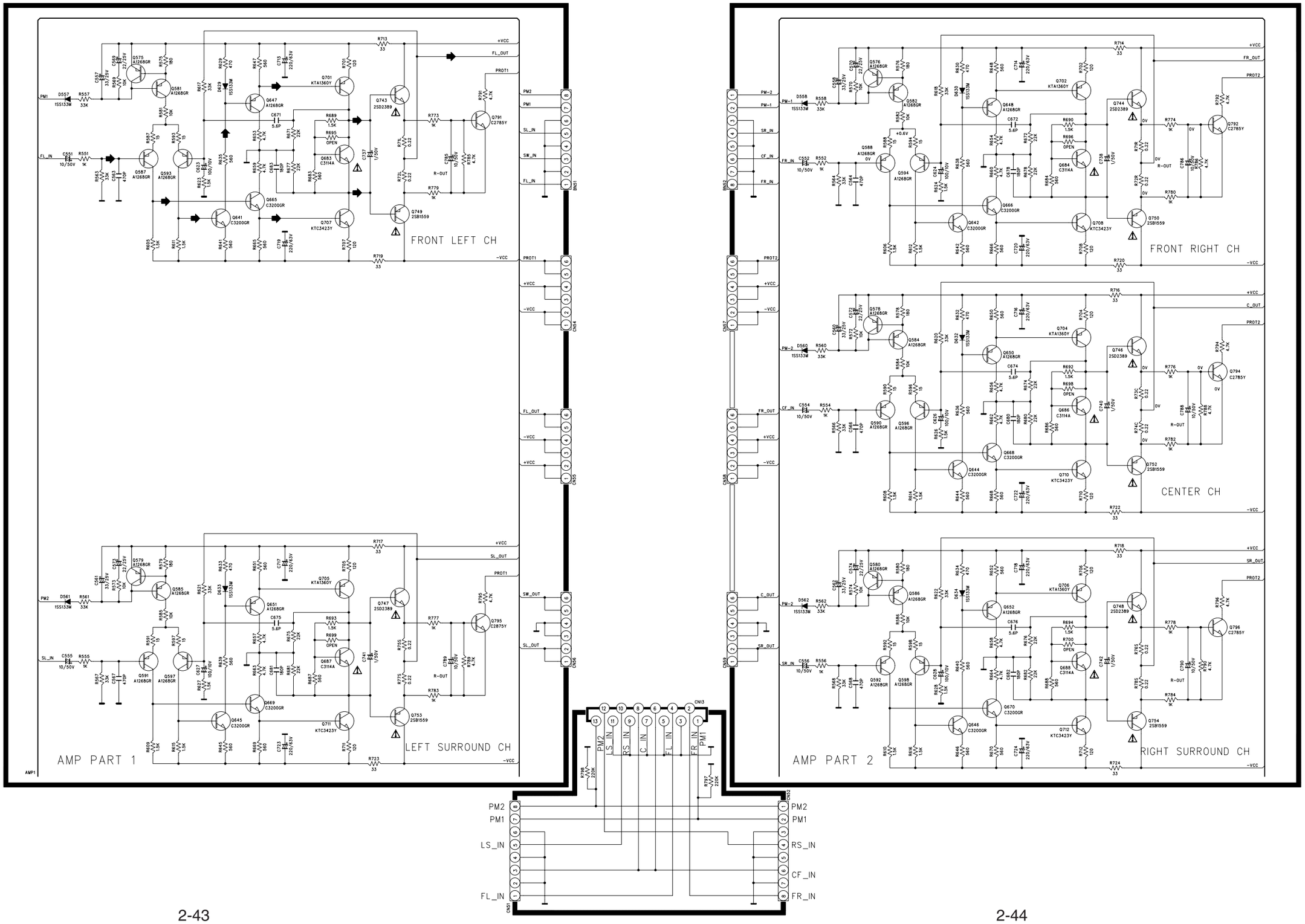


	SAT	VCR	VID4	DVD	P-SCAN / OFF
V-SW1	H	L	H	H	L
V-SW2	H	H	L	H	L
V-SW3	L	L	L	H	L
V-SW4	H	H	H	H	L

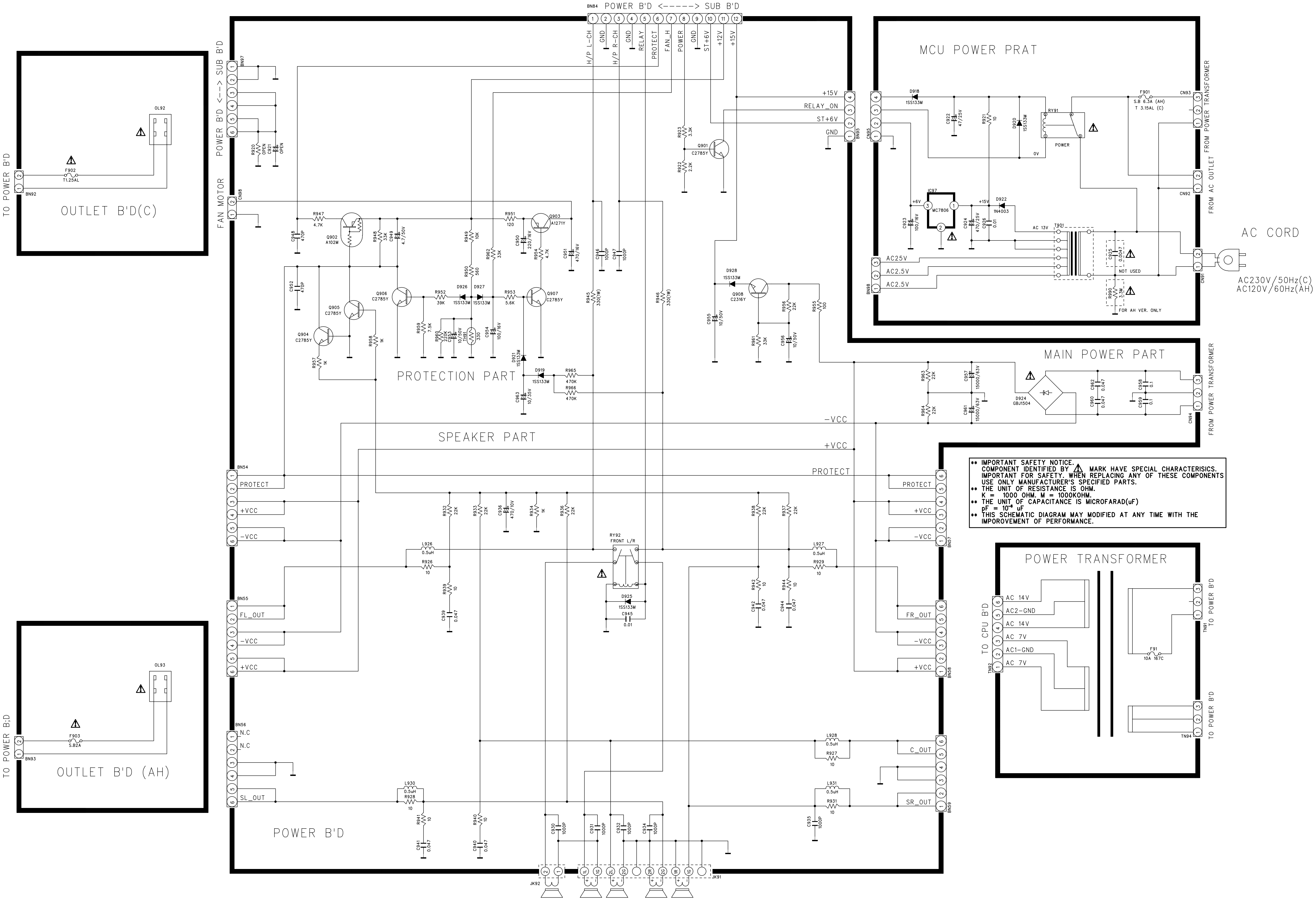
DAC F	DAC V	DAC Y	DAC C	DAC U
C/OFF	Y	Y	Pb	Pr
C/OFF	Y	G	B	R

	DVD	SAT	OTHER
SW1	H	H	L
SW2	H	L	X

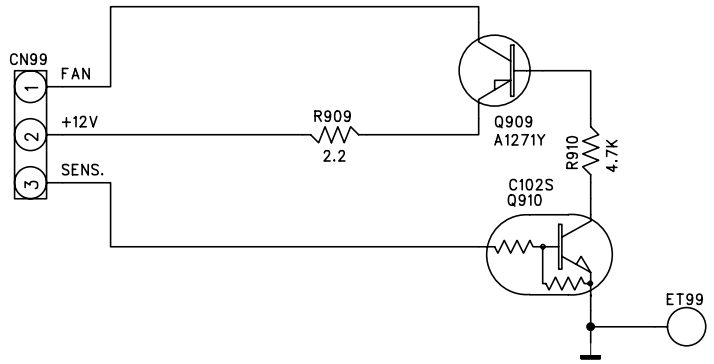
AMP PART


FRONT LEFT CH
FRONT RIGHT CH
CENTER CH
LEFT SURROUND CH
RIGHT SURROUND CH
AMP PART 1
AMP PART 2
+VCC
-VCC
FL_OUT
FR_OUT
C_OUT
SL_OUT
SR_OUT
R-OUT
PROT1
PROT2
PM1
PM2
SL_IN
SR_IN
C_IN
FL_IN
FR_IN
SW_IN
SW_OUT
CN51
CN52
CN53
CN54
CN55
CN56
CN57
CN58
CN59
CN60
CN61
CN62
CN63
CN64
CN65
CN66
CN67
CN68
CN69
BN51
BN52
AMP1

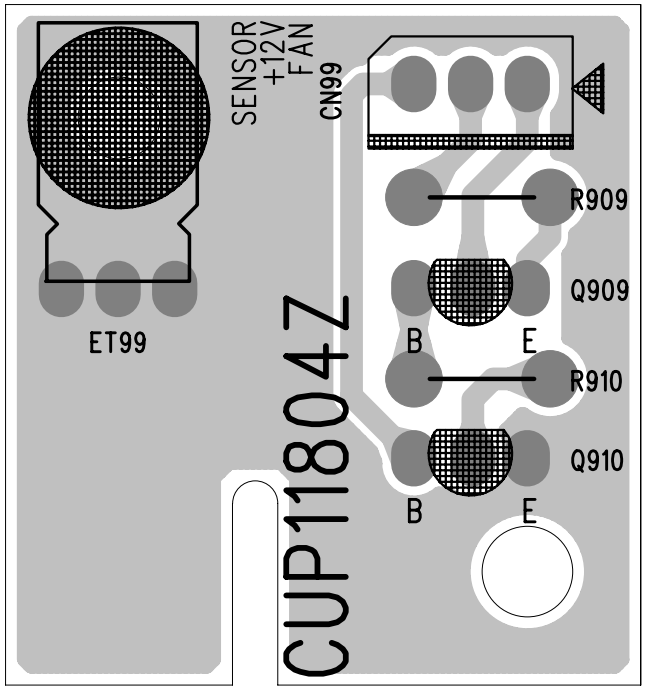
POWER PART


OUTLET B'D(C)
TO POWER B'D
POWER B'D <--> SUB B'D
FAN MOTOR
POWER B'D <-----> SUB B'D
H/P L-CH
GND
H/P R-CH
RELAY
PROTECT
FAN_H
POWER
ST+6V
+12V
+15V
MCU POWER PRAT
FROM AC OUTLET
FROM POWER TRANSFORMER
AC CORD
AC230V/50Hz(C)
AC120V/60Hz(AH)
RELAY_ON
NOT USED
FOR AH VER. ONLY
MAIN POWER PART
PROTECTION PART
SPEAKER PART
-VCC
+VCC
FL_OUT
FR_OUT
C_OUT
SR_OUT
SL_OUT
N.C
POWER B'D
OUTLET B'D (AH)
POWER TRANSFORMER
TO CPU B'D
AC 14V
AC2-GND
AC 7V
AC1-GND
** IMPORTANT SAFETY NOTICE.
COMPONENT IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
** THE UNIT OF RESISTANCE IS OHM.
K = 1000 OHM. M = 1000KOHM.
** THE UNIT OF CAPACITANCE IS MICROFARAD(uF)
pF = 10-6 uF
** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPOROVEMENT OF PERFORMANCE.

TEMPERATURE SENSING PART.

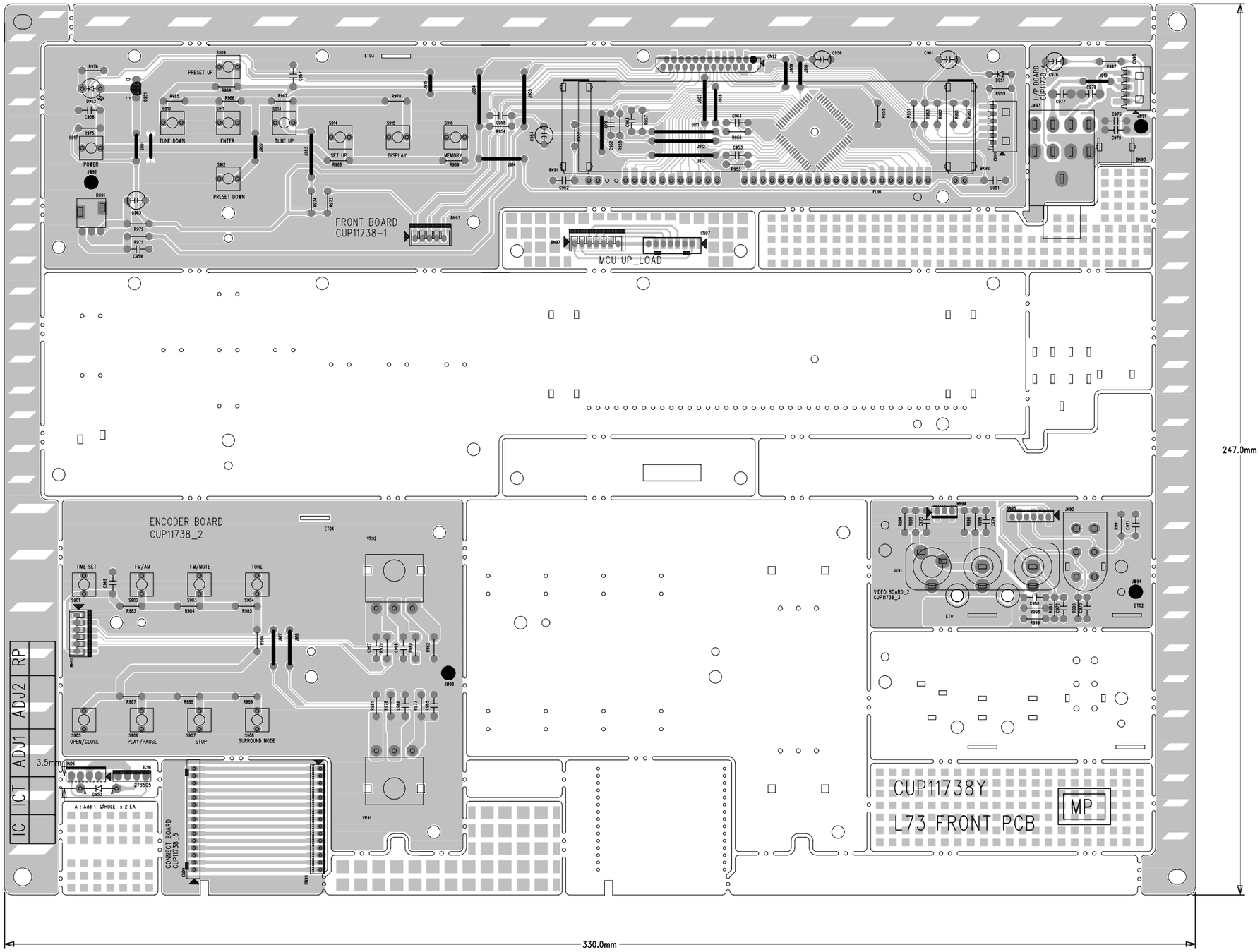


Ref. No.	Parts No.
CN99	CJP03GA01ZY
R909	CRD20TJ2R2T
R910	CRD20TJ472T
Q909	HVTKTA1271YT
Q910	HVTKRC102MT
ET99	HJT1A025



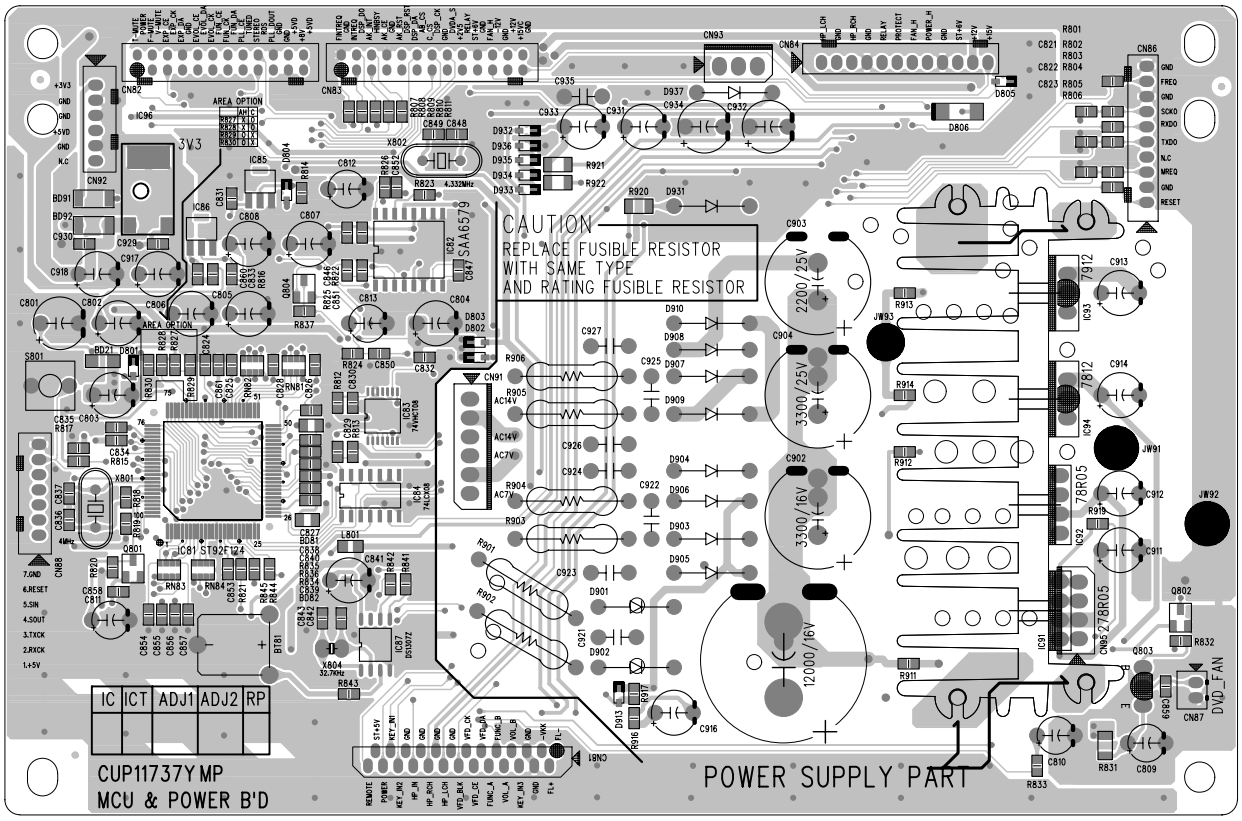
4. PRINTED CIRCUIT BOARDS

FRONT PART

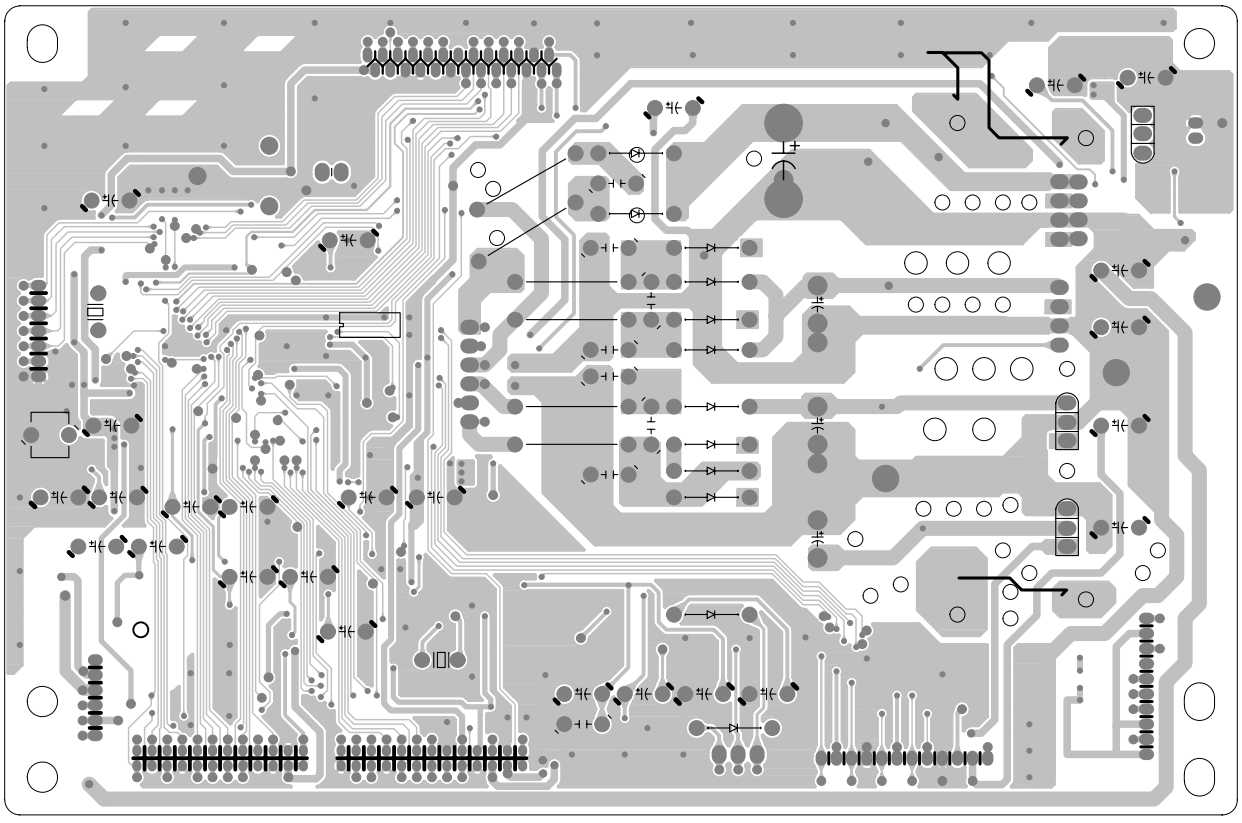


U-COM & POWER SUPPLY PART

< TOP VIEW >

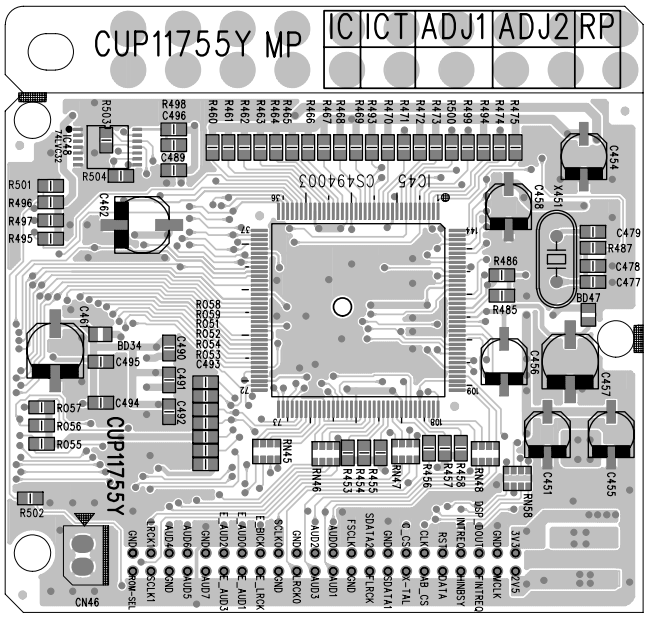


< BOTTOM VIEW >



DSP PART

< TOP VIEW >



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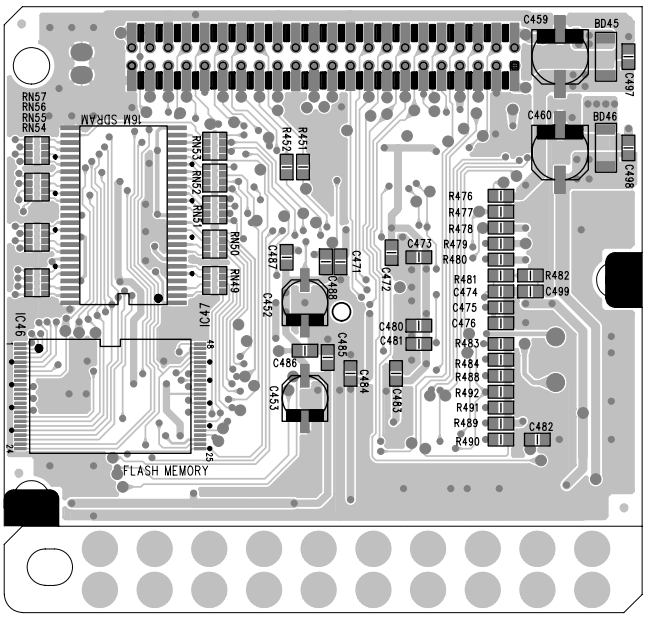
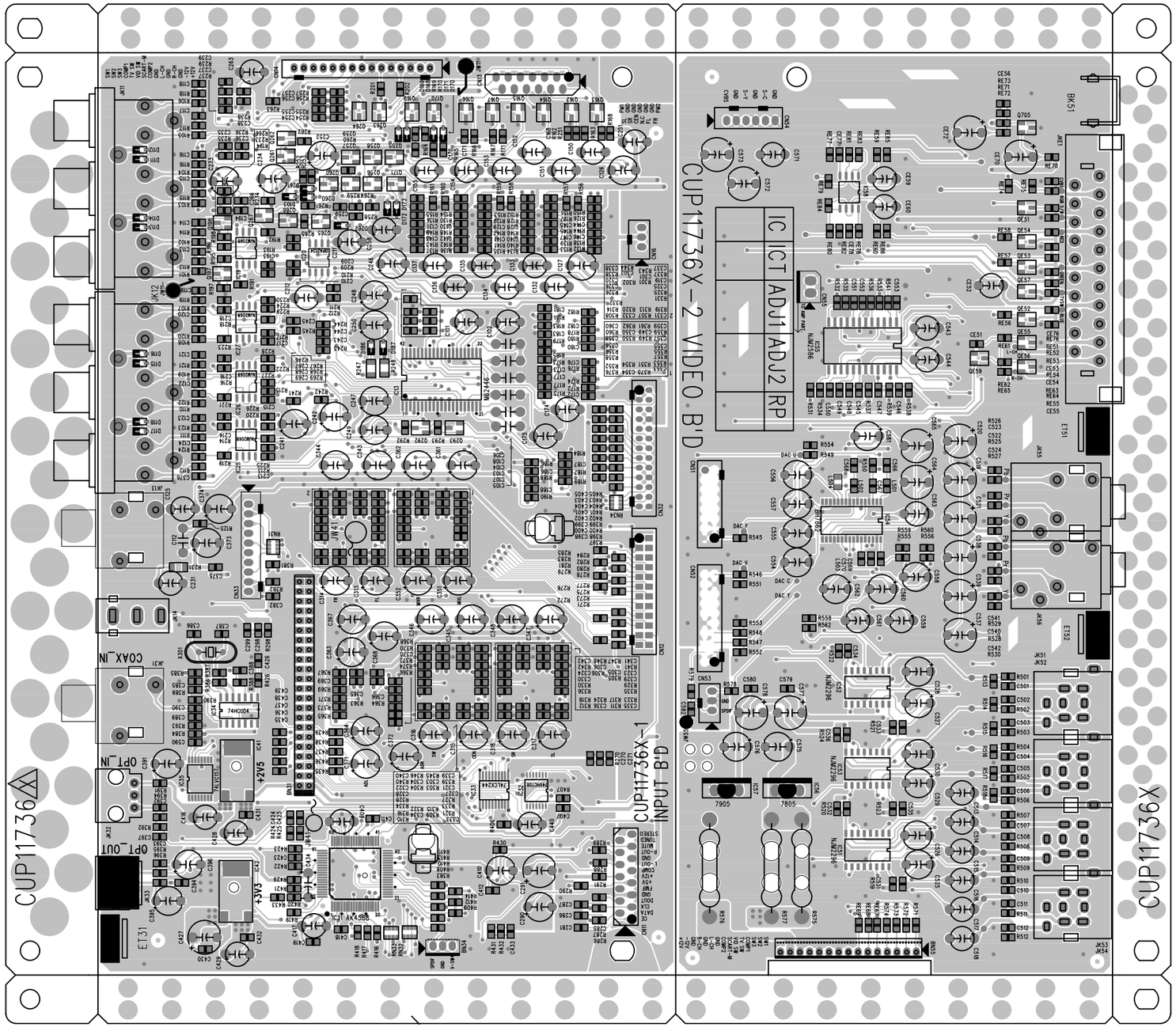


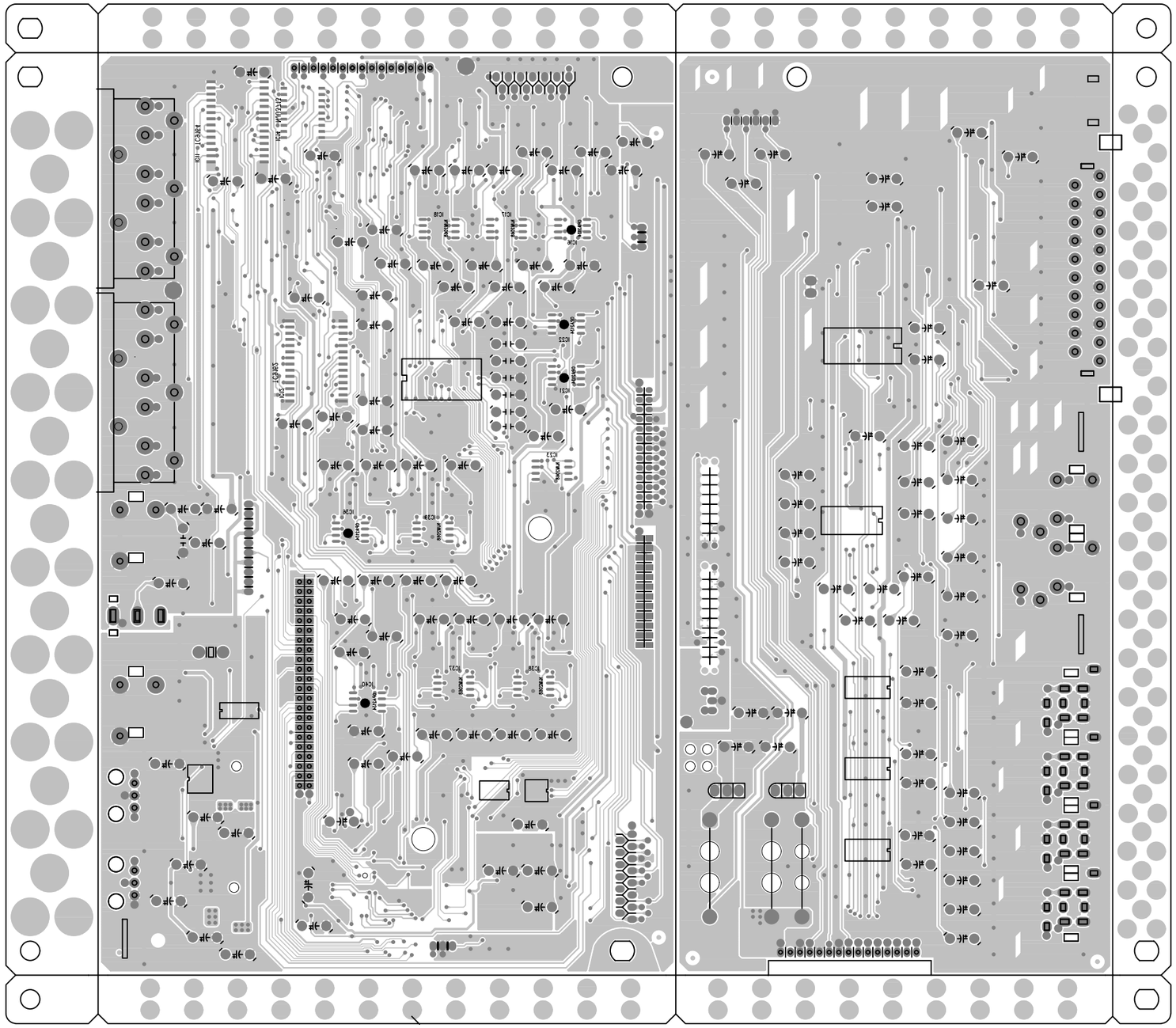
INPUT, VOLUME, CODEC, LPF & VIDEO PART

< TOP VIEW >

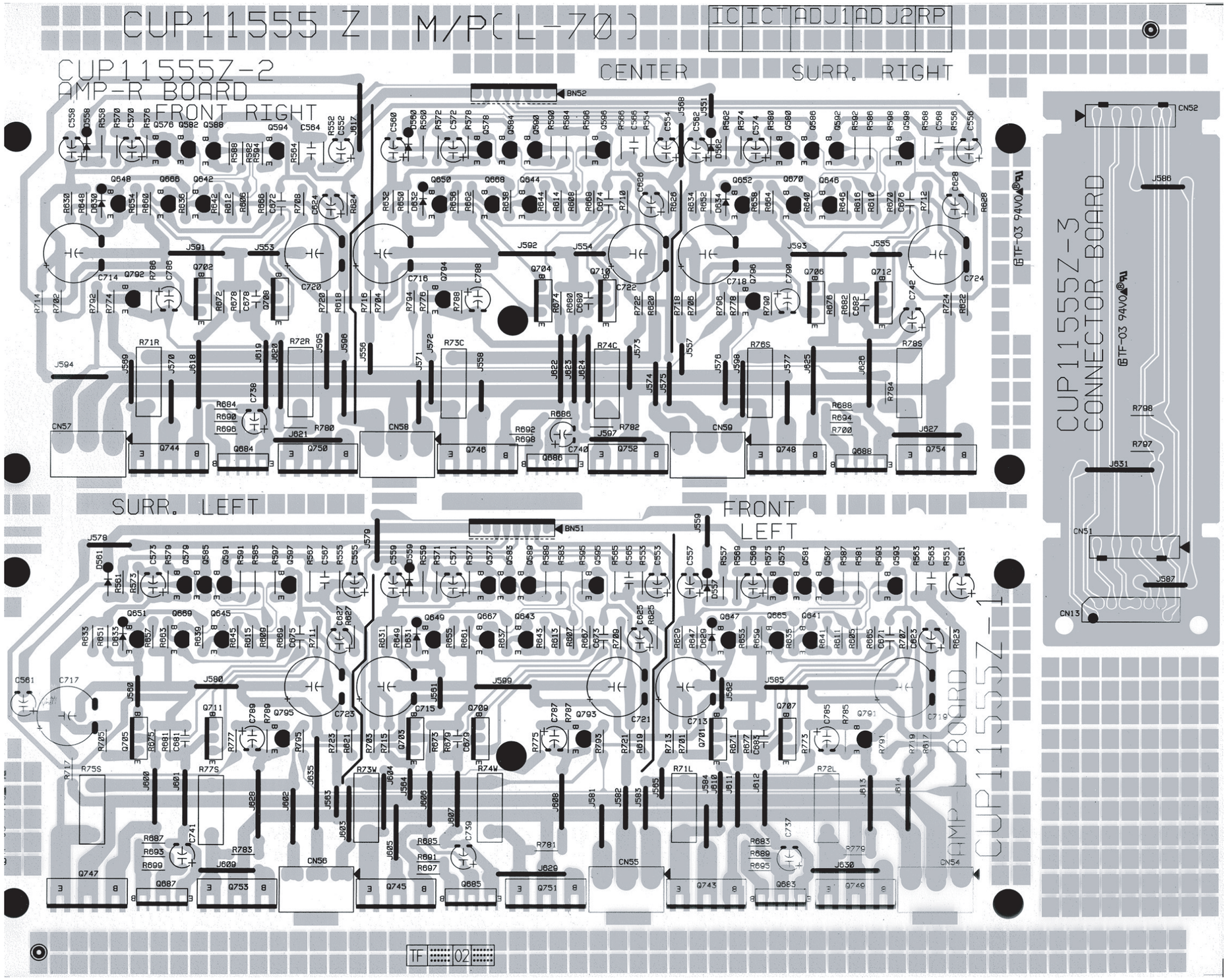


INPUT, VOLUME, CODEC, LPF & VIDEO PART

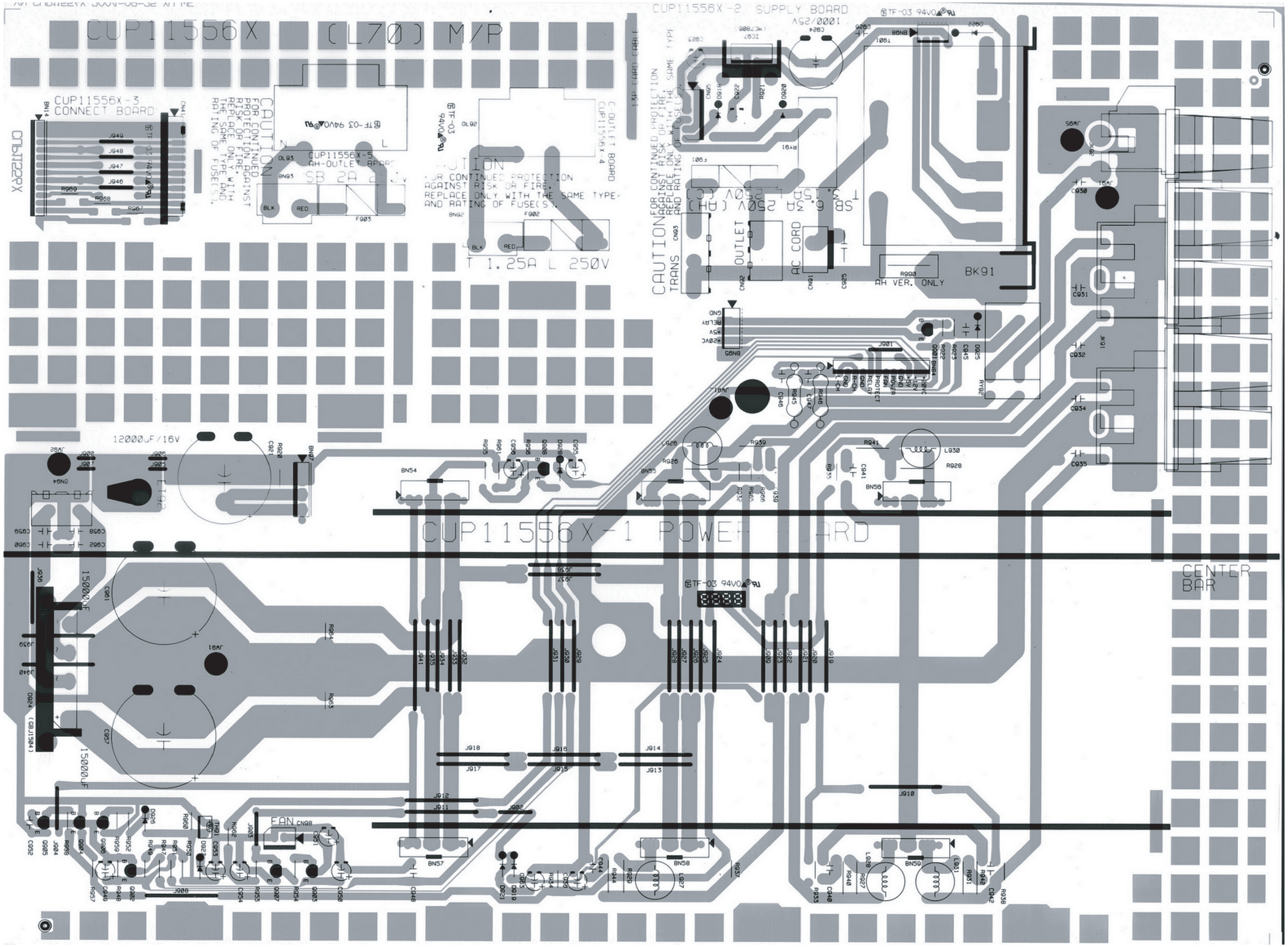
< BOTTOM VIEW >



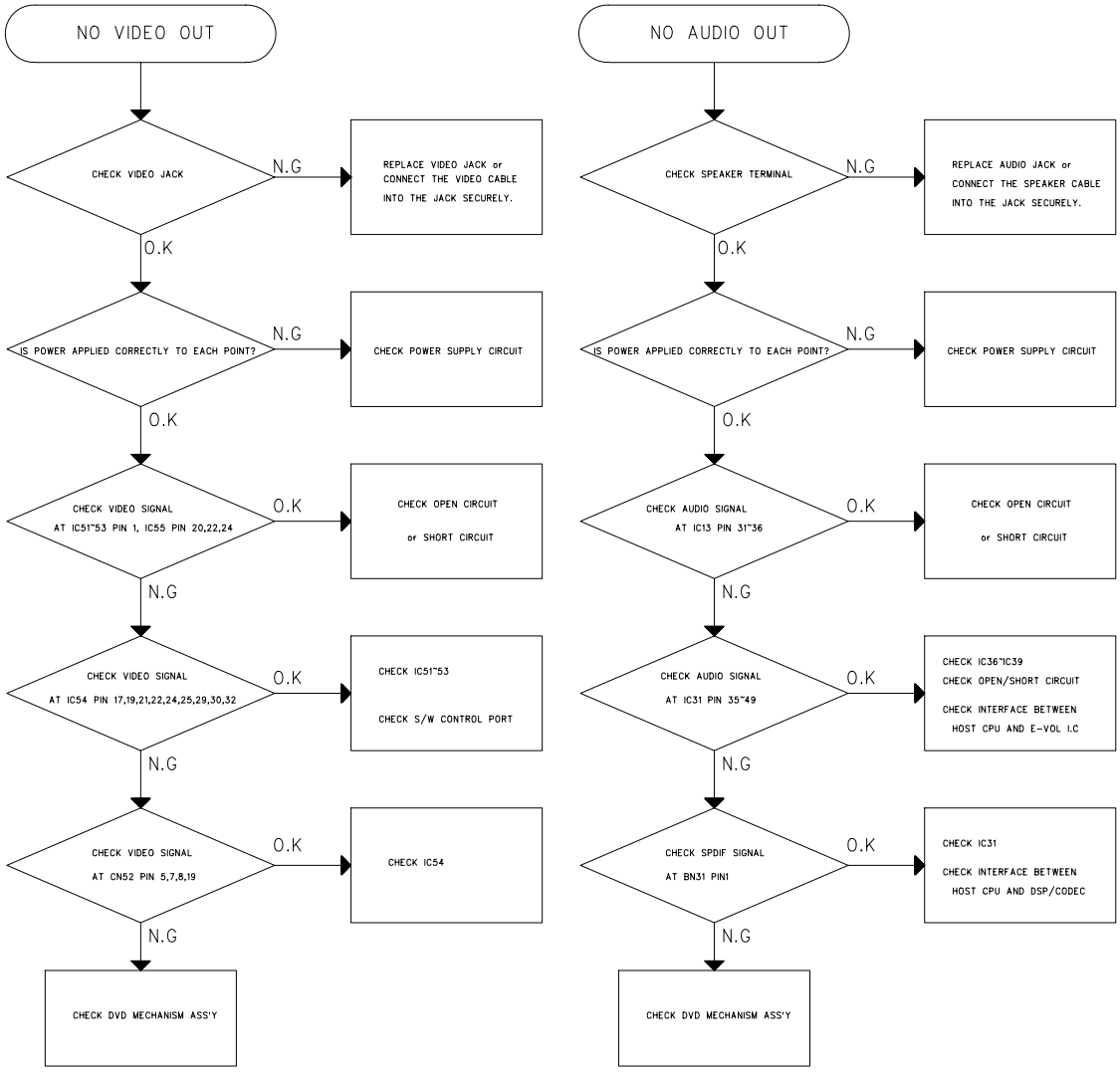
AMP PART


CUP11555Z M/P(L-70)
IC ICT ADJ1 ADJ2 RP
CUP11555Z-2
AMP-R BOARD
FRONT RIGHT
CENTER
SURR. RIGHT
SURR. LEFT
FRONT LEFT
CUP11555Z-3
CONNECTOR BOARD
CUP11555Z-1
AMP-L BOARD
GTF-03 94V0
TF 02

POWER PART


CUP11556X (L70) M/P
CUP11556X-2 SUPPLY BOARD
CUP11556X-3 CONNECT BOARD
CUP11556X-5 AH-OUTLET BOARD
CUP11556X-1 POWER BOARD
T 1.25A L 250V
AC CORD
OUTLET
TRANS
AH VER. ONLY
BK91
12000uF/16V
15000uF
CENTER BAR
FAN

5. TROUBLESHOOTING




NO LED LIGHT UP
IS THE POWER CORD CONNECTED?
No
Plug the power cord
into the wall outlet securely.
O.K
CHECK CN92 PIN 25 = 5V
CN92 PIN 24 = LOW
N.G
CHECK POWER SUPPLY CIRCUIT
CHECK HOST CPU(IC81) PART.
O.K
CHECK & REPLACE LED(D952) or
TR(Q951)
DISPLAY "DVD" ON VFD
CHECK CN92 PIN 1 = 3.3V
CN92 PIN 4 = 5V
No
CHECK POWER SUPPLY CIRCUIT
O.K
CHECK WAVEFORM ON CN86
N.G
CHECK HOST CPU PART
O.K
CHECK & REPLACE
DVD MECHANISM ASS'Y
NO "CLOCK" ON VFD
IS THE POWER CORD CONNECTED?
No
Plug the power cord
into the wall outlet securely.
O.K
IS POWER APPLIED CORRECTLY
TO CN92 EACH POINT?
N.G
CHECK POWER SUPPLY CIRCUIT
O.K
CHECK IC91 PIN61=HIGH
CHECK WAVEFORM ON IC91 PIN62~64
N.G
CHECK HOST CPU PART
CHECK OPEN/SHORT CIRCUIT
O.K
CHECK INTERFACE BETWEEN
VFD DRIVER(IC91) AND VFD(FL91)
N.G
CHECK AND REPLACE IC91
O.K
CHECK AND REPLACE VFD(FL91)

SECTION 3

ELECTRICAL PARTS LIST

■ RESISTORS AND CAPACITORS

Notes : * Please use this part number for parts order.

* IMPORTANT SAFETY NOTICE.
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components, use only manufacture's specified parts.
* The unit of resistance is ohm(Ω)
  k=1000Ω , M=1000kΩ
* The unit of capacitance is microfarad(μF)
  p=10-6 μF

■ Numbering System of Resistor

example

CRD 25 F J 101
Type Wattage Shape Tolerance Value

RESISTOR TYPE		WATTAGE	TOLERANCE
K(C)RD	CARBON	10 : 1/10 W	F : ±1 %
K(C)RJ	CARBON CHIP	14 : 1/4 W	J : ±10 %
K(C)RG	METAL OXIDE	20 : 1/5 W	K : ±20 %
K(C)RF	METAL CEMENT	25 : 1/4 W	
K(C)RQ	FUSIBLE	1 : 1 W	
		2 : 2 W	
		3 : 3 W	

■ Numbering System of Capacitor

example

CCC T 1H 101 K B
Type Voltage Value Tolerance Peculiarity

Capacitor Type	VOLTAGE		Tolerance
	HCEA Type	Other	
HCB CERAMIC	0J : 6.3V	1H : 50V DC	C : ±0.25pF
CCC CERAMIC	1A : 10V	1 : 125V DC	G : ±2 %
CCK CERAMIC	1C : 16V	KC : 400V AC	J: ±5 %
HCQ MYLAR	1E : 25V		K : ±10 %
HCU CERAMIC CHIP	1H : 50V		Z : +80%,-20%
HCE ELECT.	1V : 35V		

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
	CUP11738	**FRONT PCB**	
C951 , C952	HCBS1H223ZFT	CAPACITOR , CERAMIC	0.022uF 50V
C953	HCBS1H220JCT	CAPACITOR , CERAMIC	22pF
C954	CCEA1CKS101T	CAPACITOR , ELECT	100uF 16V
C955	HCBS1H473ZFT	CAPACITOR , CERAMIC	0.047uF 50V
C956	CCEA1HKS2R2T	CAPACITOR , ELECT	2.2uF 50V
C957 ~ C959	HCBS1H821KBT	CAPACITOR , CERAMIC	820pF 50V
C960	CCEA1AKS470T	CAPACITOR , ELECT	47uF 10V
C961	CCEA1AKS221T	CAPACITOR , ELECT	220uF 10V
C962 ~ C964	HCBS1H271KBT	CAPACITOR , CERAMIC	270uF 50V
C965 ~ C968	HCBS1H223ZFT	CAPACITOR , CERAMIC	0.022uF 50V
C969	HCBS1H821KBT	CAPACITOR , CERAMIC	820pF 50V
C970 ~ C972	HCBS1H271KBT	CAPACITOR , CERAMIC	270uF 50V
C973 , C974	HCBS1H151KBT	CAPACITOR , CERAMIC	150pF 50V
C975	HCBS1H473ZFT	CAPACITOR , CERAMIC	0.047uF 50V
C976	CCEA1HH1R0T	CAPACITOR , ELECT	1uGF 50V

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
C977 ~ C979	HCQI1H223JZT	CAPACITOR , MYLAR	0.022uF 50V
C980	HCBS1H104ZFT	CAPACITOR , CERAMIC	0.1uF 50V
D951	HVD1SS133MT	DIODE	1SS133T-77
D952	HVDSEL2E10CFT	L.E.D , BLUE	
D953 ~ D956	HVD1SS133MT	DIODE	1SS133T-77
Q951	HVTKRA102MT	T.R	KRA102M
R951 , R952	CRD20TJ2R2T	RESISTOR , CARBON	2.2 ohm 1/5W J
R953	CRD20TJ562T	RESISTOR , CARBON	5.6k ohm 1/5W J
R954	CRD20TJ100T	RESISTOR , CARBON	10 ohm 1/5W J
R955	CRD20TJ223T	RESISTOR , CARBON	22k ohm 1/5W J
R956 ~ R958	CRD20TJ151T	RESISTOR , CARBON	150 ohm 1/5W J
R959	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R960 ~ R963	CRD20TJ473T	RESISTOR , CARBON	47k ohm 1/5W J
R964	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R965	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R966	CRD20TJ182T	RESISTOR , CARBON	1.8k ohm 1/5W J
R967	CRD20TJ272T	RESISTOR , CARBON	2.7k ohm 1/5W J
R968	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R969	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R970	CRD20TJ332T	RESISTOR , CARBON	3.3k ohm 1/5W J
R971	CRD20TJ122T	RESISTOR , CARBON	1.2k ohm 1/5W J
R972	CRD20TJ101T	RESISTOR , CARBON	100 ohm 1/5W J
R973	CRD20TJ223T	RESISTOR , CARBON	22k ohm 1/5W J
R974 , R975	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R976	CRD20TJ331T	RESISTOR , CARBON	330 ohm 1/5W J
R977 ~ R980	CRD20TJ272T	RESISTOR , CARBON	2.7k ohm 1/5W J
R981 , R982	CRD20TJ122T	RESISTOR , CARBON	1.2k ohm 1/5W J
R983	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R984	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R985	CRD20TJ182T	RESISTOR , CARBON	1.8k ohm 1/5W J
R986	CRD20TJ272T	RESISTOR , CARBON	2.7k ohm 1/5W J
R987	CRD20TJ332T	RESISTOR , CARBON	3.3k ohm 1/5W J
R988	CRD20TJ562T	RESISTOR , CARBON	5.6k ohm 1/5W J
R989	CRD20TJ752T	RESISTOR , CARBON	7.5k ohm 1/5W J
R990 ~ R992	CRD20TJ750T	RESISTOR , CARBON	75 ohm 1/5W J
R993	CRD20TJ471T	RESISTOR , CARBON	470 ohm 1/5W J
R994	CRD20TJ224T	RESISTOR , CARBON	220 Kohm 1/5W J
R995	CRD20TJ471T	RESISTOR , CARBON	470 ohm 1/5W J
R996	CRD20TJ224T	RESISTOR , CARBON	220 Kohm 1/5W J
R997	CRD20TJ101T	RESISTOR , CARBON	100 ohm 1/5W J
R998 , R999	CRD20TJ100T	RESISTOR , CARBON	10 ohm 1/5W J
S901 ~ S910	CST1A012ZT	SW , TACT	SKHV10910G
S911	HST1A019ZT	SW , TACT	THVV503RAA
S912 ~ S917	CST1A012ZT	SW , TACT	SKHV10910G
BK91 , BK92	CMD1A374	BRACKET , FLT	
BK93	CMD1A387	BRACKET , PCB	
BN91	CWB1C006100EW	WIRE ASS'Y	
BN93	CWB1C905100EW	WIRE ASS'Y	
BN94	CWZL73BN84	WIRE ASS'Y	
BN95	CWZL73BN85	WIRE ASS'Y	
BN96	CWB1E904150BM	WIRE ASS'Y	
BN97	CWB1C007100EW	WIRE ASS'Y	
BN99	KJP15GB99ZM	WAFER	35237(15PIN)
CN91	KJP06GB46ZM	WAFER	
CN92	KJP26GA117ZG	WAFER , FFC CABLE	GF102-26S-TS
CN93	KJP05GB46ZM	WAFER	MOLEX 53015

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
CN97	KJP07GA19ZM	WAFER	MOLEX53014-0710
CN99	KJP15GA98ZM	WAFER	MOLEX35336-1510
D953	HVD21DQ10T	DIODE , SCHOTTKY	21DQ10(100V/2A)
ET01 ~ ET04	CMC1A111	PLATE , EARTH	
FL91	HFL11BT230GNK	V.F.D	11-BT-230GNK
IC91	HVILC75725E	IC , VFL DRIVER	LC75725E
IC96	HVIKIA278R05PI	REGULATOR (5V OUTPUT) ⚠	KIA278R05PI
JK91	KJJ4S027Z	RCA JACK (3P)	
JK92	CJJ9M003Y	JACK , S-VIDEO(GOLD)	DN-413HG
JK93	CJJ2E020Z	JACK , HEADPHONE	PJ-612AG-51
JW91	CWE8202070RV	WIRE ASS`Y	
JW92	CWE8202110RV	WIRE, ASS'Y	
JW93 , JW94	CWE8202070RV	WIRE ASS`Y	
RC91	HRVKSM603TH2	REMOTE SENSER	KSM-603TH2
VR91	HSR2A015Z	ENCODER	EC16B12S00B2ZZZ
VR92	HSR2A018Z	VR , ENCODER	EC16B24T03B2ZZZ
	CUP1736 - 1	**MAIN PCB (INPUT)**	
C113 ~ C124	HCUS1H151JA	CAPACITOR , CHIP	150pF
C128 ~ C131	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C140	HCUS1H221JA	CAPACITOR , CHIP	220pF
C141	HCUS1H223KC	CAPACITOR , CHIP	0.022uF
C142 , C143	HCUS1H221JA	CAPACITOR , CHIP	220pF
C144 , C145	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C146 , C147	HCUS1H221JA	CAPACITOR , CHIP	220pF
C168	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C170 ~ C173	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C176 , C177	HCUS1H101JA	CAPACITOR , CHIP	100pF
C180 , C181	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C182 , C183	HCUS1H101JA	CAPACITOR , CHIP	100pF
C186 , C187	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C188	HCUS1H470JA	CAPACITOR , CHIP	47pF
C193 , C194	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C209 , C210	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C213 ~ C218	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C235 , C236	HCUS1H151JA	CAPACITOR , CHIP	150pF
C237 ~ C239	HCUS1H471JA	CAPACITOR , CHIP	470pF
C238 ~ C239	HCUS1H471JA	CAPACITOR , CHIP	470pF
C243 ~ C245	HCUS1H471JA	CAPACITOR , CHIP	470pF
C254	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C255 ~ C257	HCUS1H471JA	CAPACITOR , CHIP	470pF
C259 , C266	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C267 ~ C269	HCUS1H471JA	CAPACITOR , CHIP	470pF
C270 , C271	CRJ10DJ0R0T	RESISTOR , CHIP	0 ohm 1/10W
C281	HCUS1H680JA	CAPACITOR , CHIP	68pF
C285 ~ C287	HCUS1H680JA	CAPACITOR , CHIP	68pF
C298 ,C299	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
D168 ~ D173	HVD1SS355T	DIODE , CHIP	1SS355TE-17
D186 , D187	HVDUDZS7.5BSR	DIODE , ZENER(7.5V)	1712 TYPE
D260 ~ D262	HVD1SS355T	DIODE , CHIP	1SS355TE-17
IC11	HVITC9164AF	I.C , FUNCTION	TC9164AF
IC12	HVITC9162AF	I.C , FUNCTION	TC9162AF
IC13	HVIM62446AFP	IC , VOLUME	M62446AFP
IC14	HVINJU3713G	I.C , EXPANNER	NJU3713G
IC16	BVIOPA2134UA	OP AMP	OPA2134
IC17 ~ IC19	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC20 ~ IC22	BVIOPA2134UA	OP AMP	OPA2134

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
IC23	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC25 ~ IC27	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
Q162 ~ Q167	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q169 ~ Q171	HVTKRA102S	T.R , CHIP	KRA102S
Q197 , Q198	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q255 , Q256	HVTKRC102S	T.R , CHIP	KRC102S
Q257	HVTKRA102S	T.R , CHIP	KRA102S
Q258 ~ Q260	HVTKRC102S	T.R , CHIP	KRC102S
Q261	HVTKRA102S	T.R , CHIP	KRA102S
Q262 ~ Q266	HVTKRC102S	T.R , CHIP	KRC102S
Q267 , Q292	HVTKRA102S	T.R , CHIP	KRA102S
Q293	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
R101 ~ R112	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R113 ~ R118	CRJ10DJ104T	RESISTOR , CHIP	100k ohm 1/10W
R119 ~ R125	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R126 ~ R131	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R132 ~ R137	CRJ10DJ104T	RESISTOR , CHIP	100k ohm 1/10W
R138 ~ R140	CRJ10DJ682T	RESISTOR , CHIP	6.8k ohm 1/10W
R141	CRJ10DJ333T	RESISTOR , CHIP	33k ohm 1/10W
R142 , R143	CRJ10DJ682T	RESISTOR , CHIP	6.8k ohm 1/10W
R144 ~ R146	CRJ10DJ332T	RESISTOR , CHIP	3.3k ohm 1/10W
R147	CRJ10DJ222T	RESISTOR , CHIP	2.2k ohm 1/10W
R148 , R149	CRJ10DJ332T	RESISTOR , CHIP	3.3k ohm 1/10W
R150 ~ R155	CRJ10DJ102T	RESISTOR , CHIP	1k ohm 1/10W
R156 ~ R161	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R162 ~ R167	CRJ10DJ562T	RESISTOR , CHIP	5.6k ohm 1/10W
R168 ~ R171	CRJ10DJ224T	RESISTOR , CHIP	220k ohm 1/10W
R172 , R173	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R174 ~ R179	CRJ10DJ472T	RESISTOR , CHIP	4.7k ohm 1/10W
R180 , R181	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R182 ~ R185	CRJ10DJ472T	RESISTOR , CHIP	4.7k ohm 1/10W
R186 , R187	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R188	CRJ10DJ753T	RESISTOR , CHIP	75k ohm 1/10W
R189	CRJ10DJ472T	RESISTOR , CHIP	4.7k ohm 1/10W
R190	CRJ10DJ273T	RESISTOR , CHIP	27k ohm 1/10W
R191 , R192	CRJ10DJ224T	RESISTOR , CHIP	220k ohm 1/10W
R193 , R194	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R195 , R196	CRJ10DJ102T	RESISTOR , CHIP	1k ohm 1/10W
R197 , R198	CRJ10DJ562T	RESISTOR , CHIP	5.6k ohm 1/10W
R201 , R202	CRJ10DJ331T	RESISTOR , CHIP	330 ohm 1/10W
R209 , R210	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R211 , R212	CRJ10DJ104T	RESISTOR , CHIP	100k ohm 1/10W
R213 ~ R218	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R225 ~ R230	CRJ10DJ331T	RESISTOR , CHIP	330 ohm 1/10W
R231	CRJ14CJ471T	RESISTOR , CHIP	470 ohm 1/4W
R233 , R234	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R235 , R236	CRJ10DJ224T	RESISTOR , CHIP	220k ohm 1/10W
R237 ~ R239	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R241 , R242	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R243 ~ R245	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R246	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R247 , R248	CRJ14CJ181T	RESISTOR , CHIP	180 ohm 1/4W
R253	CRJ10DJ470T	RESISTOR , CHIP	47 ohm 1/10W
R254	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R255 ~ R257	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R258	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
R259	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R260	CRJ10DJ332T	RESISTOR , CHIP	3.3k ohm 1/10W
R261	CRJ10DJ103T	RESISTOR , CHIP	10k ohm 1/10W
R262 , R263	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R264	CRJ10DJ103T	RESISTOR , CHIP	10k ohm 1/10W
R265	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R266	CRJ10DJ224T	RESISTOR , CHIP	220k ohm 1/10W
R267 ~ R269	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R270	CRJ10DJ0R0T	RESISTOR , CHIP	O ohm 1/10W
R271 ~ R273	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R275 ~ R283	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R284	CRJ10DJ332T	RESISTOR , CHIP	3.3k ohm 1/10W
R285 ~ R287	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R288 , R289	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R290 , R291	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R292	CRJ10DJ224T	RESISTOR , CHIP	220k ohm 1/10W
R293	CRJ10DJ562T	RESISTOR , CHIP	5.6k ohm 1/10W
R298	CRJ10DJ1R0T	RESISTOR , CHIP	1 ohm 1/10W
C101 , C102	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C103 , C104	HCQI1H822JZT	CAPACITOR , MYLAR	8200pF 50V
C105 , C106	HCQI1H153JZT	CAPACITOR , MYLAR	0.015uF 50V
C107 , C108	KCFE1J334JBT	CAPACITOR , FILM	0.33uF 63V
C112	HCQI1H153JZT	CAPACITOR , MYLAR	0.015uF 50V
C125	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C126 , C127	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C132 ~ C137	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C150 ~ C152	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C153	CCEA1EH470T	CAPACITOR , ELECT	47uF 25V
C154 , C155	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C174 , C175	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C211 , C212	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C231	CCEA1CH220T	CAPACITOR , ELECT	22uF 16V
C233 , C234	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C241 , C242	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C246 ~ C250	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C251	CCEA1CH220T	CAPACITOR , ELECT	22uF 16V
C252	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C258	CCEA1HH220T	CAPACITOR , ELECT	22uF 50V
C263	CCEA1VH100T	CAPACITOR , ELECT	10uF 35V
C290	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C291	CCEA1CH471T	CAPACITOR , ELECT	470uF 16V
CN11	KJP15GA115ZG	WAFER , CARD CABLE	GF120-15S-TS
CN12	CJP24GA147ZW	24 DUAL WAFER	JWT
CN13	KJP13GA115ZG	WAFER , CARD CABLE	GF120-13S-TS
CN14	KJP15GA98ZM	WAFER	MOLEX35336-1510
CN16	KJP03GA19ZM	WAFER	
JK11	CJJ4R020Z	JACK , BOARD	
JK12	CJJ4R035Z	JACK , BOARD	
JK13	CJJ4M056W	JACK , BOARD	
JK14	CJJ2D008Z	JACK , STEREO	
JW11	CWE8202120UU	WIRE ASS'Y	
	CUP11736 - 2	**MAIN (DIGITAL)**	
C301 ~ C306	HCUS1E104ZF	CAPACITOR , CHIP	0.1uF
C319 ~ C324	HCUS1H152KC	CAPACITOR , CHIP	1500pF
C325 ~ C330	HCUS1H101JA	CAPACITOR , CHIP	100pF
C331 ~ C336	HCUS1H681JA	CAPACITOR , CHIP	680pF

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
C337 ~ C342	HCUS1H103KC	CAPACITOR , CHIP		0.01uF
C349 , C350	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C353 , C354	HCUS1H681JA	CAPACITOR , CHIP		680pF
C355 , C356	HCUS1H101JA	CAPACITOR , CHIP		100pF
C357 , C358	HCUS1H102KC	CAPACITOR , CHIP		1000pF
C365 , C366	HCUS1H103KC	CAPACITOR , CHIP		0.01uF
C369 , C370	HCUS1H470JA	CAPACITOR , CHIP		47pF
C375 , C376	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C382	HCUS1H330JA	CAPACITOR , CHIP		33pF
C385	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C387	HCUS1H330JA	CAPACITOR , CHIP		33pF
C388	HCUS1H680JA	CAPACITOR , CHIP		68pF
C389	HCUS1H471JA	CAPACITOR , CHIP		470pF
C390	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C392 , C393	HCUS1H330JA	CAPACITOR , CHIP		33pF
C394	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C397	HCUS1H330JA	CAPACITOR , CHIP		33pF
C398 ~ C403	HCUS1H151JA	CAPACITOR , CHIP		150pF
C404 , C405	HCUS1H680JA	CAPACITOR , CHIP		68pF
C407	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C411 , C412	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C418 , C419	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C423	HCUS1H680JA	CAPACITOR , CHIP		68pF
C424 , C425	CRJ10DJ0R0T	RESISTOR , CHIP		0 ohm 1/10W
C426	HCUS1H680JA	CAPACITOR , CHIP		68pF
C430 ~ C432	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C433	CRJ10DJ0R0T	RESISTOR , CHIP		0 ohm 1/10W
C435 ~ C439	HCUS1H151JA	CAPACITOR , CHIP		150pF
IC31	HVIAK4588VQ-T	I.C , CODEC		AK4588
IC32	HVITC74VHCT08FT	I.C , AND-GATE		TC74VHCT08FT
IC33	HVI74LCX244T	I.C, BUS BUFFER		74LCX244TTR
IC34	HVITC74HCU04AFN	I.C , INVERTER		TC74HCU04AFN
IC35	HVI74LVC157ADBR	I.C , MULTIFLEXER		SN74LVC157A
IC36	BVIOPA2134UA	OP AMP		
IC37 ~ IC39	HVINJM2068MDTE1	I.C , OP AMP		NJM2068MD-TE1
IC40	BVIOPA2134UA	OP AMP		
IC41	HVITA48025FTE16	I.C , REGULAOTR	⚠	TA48025FTE16
IC42	HVITA48033FTE16	I.C , REGULAOTR	⚠	TA48033FTE16
RN31 ~ RN34	CRJ104DJ330T	RESISTOR , 4ARRAY		33 ohm 1/10W * 4
R301 ~ R306	CRJ10DJ121T	RESISTOR , CHIP		120 ohm 1/10W
R307 ~ R312	CRJ10DJ473T	RESISTOR , CHIP		47k ohm 1/10W
R313 ~ R318	CRJ10DJ102T	RESISTOR , CHIP		1k ohm 1/10W
R319 ~ R324	CRJ10DJ822T	RESISTOR , CHIP		8.2k ohm 1/10W
R325 ~ R327	CRJ10DJ123T	RESISTOR , CHIP		12k ohm 1/10W
R328	CRJ10DJ153T	RESISTOR , CHIP		15k ohm 1/10W
R329 , C330	CRJ10DJ123T	RESISTOR , CHIP		12k ohm 1/10W
R331 ~ R333	CRJ10DJ682T	RESISTOR , CHIP		6.8k ohm 1/10W
R334	CRJ10DJ562T	RESISTOR , CHIP		5.6k ohm 1/10W
R335 , R336	CRJ10DJ682T	RESISTOR , CHIP		6.8k ohm 1/10W
R337 ~ R342	CRJ10DJ181T	RESISTOR , CHIP		180 ohm 1/10W
R343 ~ R348	CRJ10DJ473T	RESISTOR , CHIP		47k ohm 1/10W
R349 , R350	CRJ10DJ121T	RESISTOR , CHIP		120 ohm 1/10W
R351 , R352	CRJ10DJ102T	RESISTOR , CHIP		1k ohm 1/10W
R353 , R354	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R355 , R356	CRJ10DJ123T	RESISTOR , CHIP		12k ohm 1/10W
R357 , R358	CRJ10DJ392T	RESISTOR , CHIP		3.9k ohm 1/10W

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
R359 , R360	CRJ10DJ181T	RESISTOR , CHIP	180 ohm 1/10W
R361 , R362	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R363 , R364	CRJ10DJ121T	RESISTOR , CHIP	120 ohm 1/10W
R365 , R366	CRJ10DJ102T	RESISTOR , CHIP	1k ohm 1/10W
R367 , R368	CRJ10DJ103T	RESISTOR , CHIP	10k ohm 1/10W
R369 , R370	CRJ10DJ562T	RESISTOR , CHIP	5.6k ohm 1/10W
R371 , R372	CRJ10DJ471T	RESISTOR , CHIP	470 ohm 1/10W
R373 , R374	CRJ10DJ104T	RESISTOR , CHIP	100k ohm 1/10W
R375 , R376	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R381 ~ R383	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R384 ~ R386	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R387	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R388	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R389	CRJ10DJ104T	RESISTOR , CHIP	100k ohm 1/10W
R390	CRJ10DJ750T	RESISTOR , CHIP	75 ohm 1/10W
R391 , R392	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R393	CRJ10DJ750T	RESISTOR , CHIP	75 ohm 1/10W
R394	CRJ10DJ472T	RESISTOR , CHIP	4.7k ohm 1/10W
R395 , R396	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R397	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R398 ~ R403	CRJ10DJ680T	RESISTOR , CHIP	68 ohm 1/10W
R404 , R405	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R406	CRJ10DJ101T	RESISTOR , CHIP	100 ohm 1/10W
R407	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R408 ~ R411	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R412 ~ R414	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R416 ~ R419	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R420 , R421	CRJ10DJ473T	RESISTOR , CHIP	47k ohm 1/10W
R422	CRJ10DJ123T	RESISTOR , CHIP	12k ohm 1/10W
R423 ~ R425	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R426	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R431 , R432	CRJ10DJ0R0T	RESISTOR , CHIP	0 ohm 1/10W
R433 ~ R439	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
C313 ~ C318	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C343 ~ C348	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C351 , C352	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C361 , C362	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C363 , C364	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C367 , C368	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C371 , C372	CCEA1CKS100T	CAPACITOR , ELECT	10uF 16V
C373 , C374	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C391	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C395 , C396	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C409	CCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C410	CCEA0JH102T	CAPACITOR , ELECT	1000uF 6.3V
C416 , C417	CCEA1EH220T	CAPACITOR , ELECT	22uF 25V
C427	CCEA0JH102T	CAPACITOR , ELECT	1000uF 6.3V
C428 , C429	CCEA1AH471T	CAPACITOR , ELECT	470uF 10V
C434	CCEA1AH471T	CAPACITOR , ELECT	470uF 10V
C440	CCEA1AH101T	CAPACITOR , ELECT	100uF 10V
BN31	CJP44TT153ZY	PIN , HEADE (2.00MM)	
BN34	CWZL73BN34	SHIELD WIRE ASS'Y	
CN32	CJP26GA147ZW	26 DUAL WAFER	JWT
CN33	KJP10GA19ZM	WAFER	
JK31	CJJ4M041Z	JACK , BOARD (COAX)	
JK32	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
JK33	HJSTOTX179L	MODULE , OPTICAL(TX)		TOTX179L
JW41	CWE7202090AA	WIRE ASS'Y		
X301	HOX12288E320C	CRYSTAL		
	CUP11736 - 3	**MAIN (VIDEO)**		
CE52	CCEA1CH100T	CAPACITOR , ELECT	**C Ver.**	10uF 16V
CE59 , CE60	CCEA1VH100T	CAPACITOR , ELECT	**C Ver.**	10uF 35V
CE70 , CE72	CCEA1AH471T	CAPACITOR , ELECT	**C Ver.**	470uF 10V
CE51	HCUS1E104ZF	CAPACITOR , CHIP	**C Ver.**	0.1uF
CE53 ~ CE55	HCUS1H101JA	CAPACITOR , CHIP	**C Ver.**	100pF
CE56	HCUS1H560JA	CAPACITOR , CHIP	**C Ver.**	56pF
CE76	HCUS1H101JA	CAPACITOR , CHIP	**C Ver.**	100pF
CE77 , CE78	HCUS1E104ZF	CAPACITOR , CHIP	**C Ver.**	0.1uF
C501 ~ C506	HCUS1H101JA	CAPACITOR , CHIP		100pF
C507 ~ C512	HCUS1H221JA	CAPACITOR , CHIP		220pF
C522 ~ C524	HCUS1H221JA	CAPACITOR , CHIP		220pF
C531 ~ C536	HCUS1H103KC	CAPACITOR , CHIP		0.01uF
C540 ~ C542	HCUS1H101JA	CAPACITOR , CHIP		100pF
C545 ~ C553	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C566	HCUS1H560JA	CAPACITOR , CHIP		56pF
C567	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C568	HCUS1H220JA	CAPACITOR , CHIP		22pF
C569	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C570	HCUS1H560JA	CAPACITOR , CHIP		56pF
C579 , C580	HCUS1H103KC	CAPACITOR , CHIP		0.01uF
C582	HCUS1H331JA	CAPACITOR , CHIP		330pF
C590	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
IC51 ~ IC53	HVINJM2296M	I.C , VIDEO SW		NJM2296M
IC54	BVIBH7862FS	I.C , 6CH VIDEO DRIVER		Rohm (BH7862FS)
IC55	HVINJM2586AMTE1	I.C , VIDEO SW		
IC56	HVIMC7805C	I.C, REGULATOR	**!**	KA7805-ABTU
IC57	HVIMC7905C	I.C, REGULATOR	**!**	KA7905-ABTU
IC58	HVINJM2068MDTE1	I.C , OP AMP		NJM2068MD-TE1
L501	HLQ07ER68KRZ	INDUCTOR , CHIP		
L502	HLQ07ER39KRZ	INDUCTOR , CHIP		
L503	HLQ07ER68KRZ	INDUCTOR , CHIP		
L504	HLZ9J003Z	BEAD , FERRITE(CHIP)		BLM21A121SPT
RE51	CRJ10DJ101T	RESISTOR , CHIP	**C Ver.**	100 ohm 1/10W
RE52	CRJ10DJ271T	RESISTOR , CHIP	**C Ver.**	270 ohm 1/10W
RE53 ~ RE55	CRJ10DJ750T	RESISTOR , CHIP	**C Ver.**	75 ohm 1/10W
RE56 ~ RE60	CRJ10DJ102T	RESISTOR , CHIP	**C Ver.**	1k ohm 1/10W
RE61 ~ RE64	CRJ10DJ562T	RESISTOR , CHIP	**C Ver.**	5.6k ohm 1/10W
RE65	CRJ10DJ224T	RESISTOR , CHIP	**C Ver.**	220k ohm 1/10W
RE67 ~ RE69	CRJ10DJ100T	RESISTOR , CHIP	**C Ver.**	10 ohm 1/10W
RE70	CRJ10DJ101T	RESISTOR , CHIP	**C Ver.**	100 ohm 1/10W
RE71	CRJ10DJ682T	RESISTOR , CHIP	**C Ver.**	6.8k ohm 1/10W
RE72	CRJ10DJ750T	RESISTOR , CHIP	**C Ver.**	75 ohm 1/10W
RE73	CRJ10DJ332T	RESISTOR , CHIP	**C Ver.**	3.3k ohm 1/10W
RE75	CRJ10DJ223T	RESISTOR , CHIP	**C Ver.**	22k ohm 1/10W
RE76	CRJ10DJ680T	RESISTOR , CHIP	**C Ver.**	68 ohm 1/10W
RE77 , RE78	CRJ10DJ101T	RESISTOR , CHIP	**C Ver.**	100 ohm 1/10W
RE79 , RE80	CRJ10DJ331T	RESISTOR , CHIP	**C Ver.**	330 ohm 1/10W
RE81 , RE82	CRJ10DJ473T	RESISTOR , CHIP	**C Ver.**	47k ohm 1/10W
RE85 , RE86	CRJ10DJ104T	RESISTOR , CHIP	**C Ver.**	100k ohm 1/10W
R501 ~ R512	CRJ10DJ750T	RESISTOR , CHIP		75 ohm 1/10W
R513 ~ R518	CRJ10DJ223T	RESISTOR , CHIP		22k ohm 1/10W
R519 ~ R524	CRJ10DJ4R7T	RESISTOR , CHIP		4.7 ohm 1/10W

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
R525 ~ R536	CRJ10DJ750T	RESISTOR , CHIP		75 ohm 1/10W
R537 , R538	CRJ10DJ4R7T	RESISTOR , CHIP		4.7 ohm 1/10W
R539	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R541	CRJ10DJ100T	RESISTOR , CHIP		10 ohm 1/10W
R545 ~ R549	CRJ10DJ0R0T	RESISTOR , CHIP		0 ohm 1/10W
R550 ~ R560	CRJ10DJ750T	RESISTOR , CHIP		75 ohm 1/10W
R562	CRJ10DJ750T	RESISTOR , CHIP		75 ohm 1/10W
R571 ~ R574	CRJ10DJ100T	RESISTOR , CHIP		10 ohm 1/10W
R575 ~ R578	CRG2ANJ330H	RESISTOR		33 ohm 2W
R579	CRJ10DJ121T	RESISTOR , CHIP		120 ohm 1/10W
QE51	HVTKRA102S	T.R , CHIP (MUTE)	**C Ver.**	KRA102S
QE52 ~ QE56	HVTKTD1304T	T.R , CHIP (MUTE)	**C Ver.**	KTD1304
QE57	HVTKRC102S	T.R , CHIP	**C Ver.**	KRC102S
QE59	HVTKRA102S	T.R , CHIP	**C Ver.**	KRA102S
Q705	HVTKTA1504SYRTK	T.R , CHIP	**C Ver.**	KTA1504S Y RTK
C513 ~ C518	CCEA1VH100T	CAPACITOR , ELECT		10uF 35V
C519 ~ C521	CCEA1AH471T	CAPACITOR , ELECT		470uF 10V
C525 ~ C530	CCEA1CH101T	CAPACITOR , ELECT		10uF 16V
C537 ~ R539	CCEA1AH471T	CAPACITOR , ELECT		470uF 10V
C543 , R544	CCEA1CH100T	CAPACITOR , ELECT		10uF 16V
C554 ~ R558	CCEA1CH101T	CAPACITOR , ELECT		100uF 16V
C559	CCEA1CH220T	CAPACITOR , ELECT		22uF 16V
C560	CCEA1CH101T	CAPACITOR , ELECT		100uF 16V
C561	CCEA1CH220T	CAPACITOR , ELECT		22uF 16V
C562	CCEA1CH101T	CAPACITOR , ELECT		100uF 16V
C563	CCEA1CH220T	CAPACITOR , ELECT		22uF 16V
C564 , R565	CCEA1AH471T	CAPACITOR , ELECT		470uF 10V
C571	CCEA1VH100T	CAPACITOR , ELECT		10uF 35V
C572 , R573	CCEA1AH471T	CAPACITOR , ELECT		470uF 10V
C575 , R576	CCEA1CH101T	CAPACITOR , ELECT		100uF 16V
C577 , R578	CCEA1AH471T	CAPACITOR , ELECT		470uF 10V
C581	CCEA1CH101T	CAPACITOR , ELECT		100uF 16V
BN55	KJP15GB99ZM	WAFER		35237(15PIN)
CN51	CJP16GA147ZW	16 DUAL WAFER		
CN52	CJP20GA147ZW	20 DUAL WAFER		JWT
CN53	KJP03GA19ZM	WAFER		
CN54	KJP06GA19ZM	WAFER		MOLEX53014-0610
ET52	CMC1A111	PLATE , EARTH		
JKE1	KJP21GA118ZP	SCART CONNECTOR	**C Ver.**	
JK51 ~ JK54	CJJ9N003Z	JACK , (S-VIDEO+VHS)		
JK55 , JK56	CJJ4S040Z	JACK , BOARD		
JW51	CWE7202300AA	WIRE ASS'Y		
	CUP11737	**MCU PCB**		
BD21	HLZ9J003Z	CHIP , BEAD		BLM21A121SPT
BD81	CRJ10DJ0R0T	RESISTOR , CHIP		0 ohm 1/10W
BD82, R818	CRJ10DJ0R0T	RESISTOR , CHIP		0 ohm 1/10W
BD91	HLZ9Z014Z	CHIP , BEAD		6A
BD92	HLZ9Z014Z	CHIP , BEAD		6A
C821~C828	HCUS1H470JA	CAPACITOR , CHIP		47pF
C829, C830	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C835, C840	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C853, C861	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C929, C930	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C831~C833	HCUS1H223KC	CAPACITOR , CHIP		0.022uF
C846, C858	HCUS1H223KC	CAPACITOR , CHIP		0.022uF
C860	HCUS1H223KC	CAPACITOR , CHIP		0.022uF

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
C834	HCUS1H103KC	CAPACITOR , CHIP	0.01uF
C836, C838	HCUS1H150JA	CAPACITOR , CHIP	15pF
C838, C839	HCUS1E334ZF	CAPACITOR , CHIP	0.33uF
C847	HCUS1H561JA	CAPACITOR , CHIP	560pF
C848, C849	HCUS1H270JA	CAPACITOR , CHIP	27pF
C850~C852	HCUS1H102KC	CAPACITOR , CHIP	0.001uF
C854~C857	HCUS1H151JA	CAPACITOR , CHIP	150pF
C801	CCEA0JH102T	CAPACITOR , CHIP	1000uF 6.3V
C804, C911	CCEA1AH471T	CAPACITOR , CHIP	470uF 10V
C917	CCEA1AH471T	CAPACITOR , CHIP	470uF 10V
C805~C808	CCEA1HH1R0T	CAPACITOR , CHIP	1uF 50V
C811, C813	CCEA1HH2R2T	CAPACITOR , CHIP	2.2uF 50V
C802, C803	CCEA1CH101T	CAPACITOR , CHIP	100uF 16V
C812, C931	CCEA1CH101T	CAPACITOR , CHIP	100uF 16V
C912~C914	CCEA1CH101T	CAPACITOR , CHIP	100uF 16V
C916, C933	CCEA1HH4R7T	CAPACITOR , CHIP	4.7uF 50V
C918	CCEA0JH102T	CAPACITOR , CHIP	1000uF 6.3V
C921~C927	CCKT1H103ZF	CAPACITOR , CERAMIC	0.01uF 50V ZF
C932, C934	CCEA1HH470T	CAPACITOR , ELECT	47uF 50V
C935	CCKT1H103ZF	CAPACITOR , CERAMIC	0.01uF 50V ZF
C901	CCEA1CH123E	CAP , ELECT	12000uF 16V
C902	HCEA1CH332E	CAP , ELECT	3300uF 16V
C903, C904	CCEA1EH222E	CAP , ELECT.	2200uF 25V
CN81	KJP26GA117ZG	WAFER , CARD CABLE	26P , 1mm
CN82	CJP24GA147ZW	WAFER , DUAL	24P
CN83	CJP26GA147ZW	WAFER , DUAL	26P
CN84	KJP12GA19ZM	WAFER	MOLEX53014-1210
CN86	KJP10GA19ZM	WAFER	MOLEX53014-1010
CN88	KJP07GA19ZM	WAFER	MOLEX53014-0710
CN91	KJP06GA01ZM	WAFER	MOLEX 5267-06A
CN92	KJP06GA19ZM	WAFER	MOLEX53014-0610
CN93	KJP03GA01ZM	WAFER	MOLEX 5267-03A
CN95	KJP04GA01ZM	WAFER	MOLEX 5267-04A
D901, D902	HVD2A04H	DIODE , RECT(2A)	2A04H 2A
D801~D805	HVD1SS355T	DIODE , CHIP	1SS355TE-17
D913	HVD1SS355T	DIODE , CHIP	1SS355TE-17
D806	HVDRB160L60TE25	DIODE , SCHOTTKEY	RB160L-60TE25
D932	HVDUDZS9.1BSR	DIODE , ZENER	9.1V
D936, D935	HVDUDZS9.1BSR	DIODE , ZENER	9.1V
D933, D934	HVDUDZS7.5BSR	DIODE , ZENER	7.5V
D903~D910	KVD1N4003ST	DIODE	1N4003
D931, D937	KVD1N4003ST	DIODE	1N4003
IC81	HVIST92F124V1T6	I.C , MCU	ST92F124V1T6
IC82	BVISAA6579TV1	I.C , RDS FILTER	SAA6579T/V1
IC83	HVITC74VHCT08FT	I.C , AND-GATE	TC74VHCT08FT
IC84	HVI74LCX08MX	I.C , AND GATE	74LCX08MX
IC85	HVIRH5VT45C	I.C , RESET	RICOH 4.5V
IC86	HVIRH5VT18C	I.C , RESET	RH5VT18CA-T1
IC92	HVIKIA78R05PI	I.C , REGULATOR ⚠	KIA78R05PI
IC93	HVINJM7912FA	I.C , REGULATOR ⚠	NJM7912FA
IC94	HVINJM7812FA	I.C , REGULATOR ⚠	NJM7812FA
IC96	HVITA48033FTE16	I.C , REGULATOR ⚠	TA48033FTE16
JW91	CWE8202150RV	WIRE ASS'Y	WIRE ASS'Y
JW95	CWE7202100AA	WIRE ASS'Y	WIRE ASS'Y
Q801	HVTKRC102S	TR , CHIP	KRC102S
Q804	HVTKTC3875SYRTK	TR , CHIP	KTC3875S Y RTK

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
R801 ~ R811	CRJ10DJ330T	RESISTOR , CHIP		33 ohm 1/10W
R844 , R845	CRJ10DJ330T	RESISTOR , CHIP		33 ohm 1/10W
R812 , R813	CRJ10DJ100T	RESISTOR , CHIP		10 ohm 1/10W
R814 , R820	CRJ10DJ223T	RESISTOR , CHIP		22k ohm 1/10W
R815	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R827 , R828	CRJ10DJ103T	RESISTOR , CHIP	**C Ver.**	10k ohm 1/10W
R829 , R830	CRJ10DJ0R0T	RESISTOR , CHIP	**AH Ver.**	0 ohm 1/10W
R816 , R824	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/10W
R916 , R917	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/10W
R919	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/10W
R817 , R819	CRJ10DJ102T	RESISTOR , CHIP		1k ohm 1/10W
R825 , R826	CRJ10DJ102T	RESISTOR , CHIP		1k ohm 1/10W
R821	CRJ10DJ4R7T	RESISTOR , CHIP		4.7 ohm 1/10W
R822 , R837	CRJ10DJ101T	RESISTOR , CHIP		100 ohm 1/10W
R823	CRJ10DJ222T	RESISTOR , CHIP		2.2k ohm 1/10W
R834 , R836	CRJ10DJ472T	RESISTOR , CHIP		4.7k ohm 1/10W
R911 , R914	CRJ10DJ104T	RESISTOR , CHIP		100k ohm 1/10W
R920	CRJ14CJ100T	RESISTOR , CHIP		10 ohm 1/4W
R921 , R922	HRJ14CJ510T	RESISTOR , CHIP		51 ohm 1/4W
R901 ~ R906	KRQ1AJR15H	RESISTOR , FUSE	⚠	0.15 ohm 1W
RN81 ~ RN84	CRJ104DJ330T	RES , 4ARRAY (1608*4)		33 ohm 1/10W
S801	HST1A016Z	SW , TACT		SKQNAED010
X801	HOX04000E150C	CRYSTAL		4.0MHz
X802	HOX04332A200C	CRYSTAL		4.332MHz
	CUP11555	**AMP PCB**		
BN51 , BN52	KJP08GB99ZM	CONNECTOR , HOUSING		MOLEX35237-0810
CN13	KJP13GA115ZG	WAFER, CARD CABLE		GF120-13S-TS
CN51 , CN52	KJP08GA98ZM	WAFER		MOLEX35336-0810
CN54 ~ CN59	BJP06GB131ZK	CONNECTOR(PLUG)		TAC-L06P-B3
C551 , C552	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
C554 ~ C556	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
C557 , C558	HCEA1EH330T	CAPACITOR , ELECT		33uF 25V
C560 ~ C562	HCEA1EH330T	CAPACITOR , ELECT		33uF 25V
C563 , C564	CCKT1H471KB	CAPACITOR , CERAMIC		470pF 50V
C566 ~ C568	CCKT1H471KB	CAPACITOR , CERAMIC		470pF 50V
C569 , C570	HCEA1EH220T	CAPACITOR , ELECT		22uF 50V
C572 ~ C574	HCEA1EH220T	CAPACITOR , ELECT		22uF 50V
C623 , C624	HCEA1AH101T	CAPACITOR , ELECT		100uF 10V
C626 ~ C628	HCEA1AH101T	CAPACITOR , ELECT		100uF 10V
C671 , C672	HCBS1H5R6KCT	CAPACITOR , CERAMIC		5.6pF 50V
C674 ~ C676	HCBS1H5R6KCT	CAPACITOR , CERAMIC		5.6pF 50V
C678	CCKT1H181KB	CAPACITOR , CERAMIC		180pF 50V
C680 ~ C683	CCKT1H181KB	CAPACITOR , CERAMIC		180pF 50V
C713 , C714	HCEA1JH221E	CAPACITOR , ELECT		220uF 63V
C716 ~ C720	HCEA1JH221E	CAPACITOR , ELECT		220uF 63V
C722 ~ C724	HCEA1JH221E	CAPACITOR , ELECT		220uF 63V
C737 , C738	HCEA1HH1R0T	CAPACITOR , ELECT		1uF 50V
C740 ~ C742	HCEA1HH1R0T	CAPACITOR , ELECT		1uF 50V
C785 , C786	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
C788 ~ C790	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
D557 , D558	HVD1SS133MT	DIODE		1SS133T-77
D560 ~ D562	HVD1SS133MT	DIODE		1SS133T-77
D629 , D630	HVD1SS133MT	DIODE		1SS133T-77
D632 ~ D634	HVD1SS133MT	DIODE		1SS133T-77
Q575 , Q576	HVTKTA1268GRT	T.R		KTA1268GR
Q578 ~ Q580	HVTKTA1268GRT	T.R		KTA1268GR

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
Q581 , Q582	HVTKTA1268GRT	T.R	KTA1268GR
Q584 ~ Q588	HVTKTA1268GRT	T.R	KTA1268GR
Q590 ~ Q594	HVTKTA1268GRT	T.R	KTA1268GR
Q596 ~ Q598	HVTKTA1268GRT	T.R	KTA1268GR
Q641 , Q642	HVTKTC3200GRT	T.R	KTC3200GR
Q644 ~ Q646	HVTKTC3200GRT	T.R	KTC3200GR
Q647 , Q648	HVTKTA1268GRT	T.R	KTA1268GR
Q650 ~ Q652	HVTKTA1268GRT	T.R	KTA1268GR
Q665 , Q666	HVTKTC3200GRT	T.R	KTC3200GR
Q668 ~ Q670	HVTKTC3200GRT	T.R	KTC3200GR
Q683,Q684,Q686	HVTKTC3114A	T.R, BIAS ⚠	KTC3114A
Q687,Q688	HVTKTC3114A	T.R, BIAS ⚠	KTC3114A
Q701 , C702	HVTKTA1360Y	T.R , PRE DRIVE	KTA1360Y
Q704 ~ Q706	HVTKTA1360Y	T.R , PRE DRIVE	KTA1360Y
Q707 , Q708	HVTKTC3423Y	T.R , PRE DRIVE	KTC3423Y
Q710 ~ Q712	HVTKTC3423Y	T.R , PRE DRIVE	KTC3423Y
Q743,Q744,Q746	HVT2SD2389P-OKM	T.R, POWER(DARLINGTON) ⚠	2SD2389
Q747,Q748	HVT2SD2389P-OKM	T.R, POWER(DARLINGTON) ⚠	2SD2389
Q749,Q750,Q752	HVT2SB1559P-OKM	T.R, POWER(DARLINGTON) ⚠	2SB1559
Q753,Q754	HVT2SB1559P-OKM	T.R, POWER(DARLINGTON) ⚠	2SB1559
Q791 , Q792	KVTKSC2785YT	T.R	KSC2785Y
Q794 ~ Q796	KVTKSC2785YT	T.R	KSC2785Y
R551 , R552	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R554 ~ R556	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R557 , R558	CRD20TJ333T	RESISTOR , CARBON	33k ohm 1/5W J
R560 ~ R564	CRD20TJ333T	RESISTOR , CARBON	33k ohm 1/5W J
R566 ~ R568	CRD20TJ333T	RESISTOR , CARBON	33k ohm 1/5W J
R569 , R570	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R572 ~ R574	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R575 , R576	CRD20TJ181T	RESISTOR , CARBON	180 ohm 1/5W J
R578 ~ R580	CRD20TJ181T	RESISTOR , CARBON	180 ohm 1/5W J
R581 , R582	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R584 ~ R586	CRD20TJ103T	RESISTOR , CARBON	10k ohm 1/5W J
R587 , R588	CRD20TJ150T	RESISTOR , CARBON	15 ohm 1/5W J
R590 ~ R594	CRD20TJ150T	RESISTOR , CARBON	15 ohm 1/5W J
R596 ~ R598	CRD20TJ150T	RESISTOR , CARBON	15 ohm 1/5W J
R605 , R606	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R608 ~ R612	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R614 ~ R616	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R617 , R618	CRD20TJ333T	RESISTOR , CARBON	33k ohm 1/5W J
R620 ~ R622	CRD20TJ333T	RESISTOR , CARBON	33k ohm 1/5W J
R623 , R624	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R626 ~ R628	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R629 , R630	CRD20TJ471T	RESISTOR , CARBON	470 ohm 1/5W J
R632 ~ R634	CRD20TJ471T	RESISTOR , CARBON	470 ohm 1/5W J
R635 , R636	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R638 ~ R642	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R644 ~ R648	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R650 ~ R652	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R653 , R654	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R656 ~ R660	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R662 ~ R664	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R665 , R666	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R668 ~ R670	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R671 , R672	CRD20TJ223T	RESISTOR , CARBON	22k ohm 1/5W J
R674 ~ R678	CRD20TJ223T	RESISTOR , CARBON	22k ohm 1/5W J

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
R680 ~ R682	CRD20TJ223T	RESISTOR , CARBON	22k ohm 1/5W J
R683 , R684	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R686 ~ R688	CRD20TJ561T	RESISTOR , CARBON	560 ohm 1/5W J
R689 , R690	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R692 ~ R694	CRD20TJ152T	RESISTOR , CARBON	1.5k ohm 1/5W J
R701 , R702	CRD20TJ121T	RESISTOR , CARBON	120 ohm 1/5W J
R704 ~ R708	CRD20TJ121T	RESISTOR , CARBON	120 ohm 1/5W J
R710 ~ R712	CRD20TJ121T	RESISTOR , CARBON	120 ohm 1/5W J
R713 , R714	CRD20TJ330T	RESISTOR , CARBON	33 ohm 1/5W J
R716 ~ R720	CRD20TJ330T	RESISTOR , CARBON	33 ohm 1/5W J
R722 ~ R724	CRD20TJ330T	RESISTOR , CARBON	33 ohm 1/5W J
R773 , R774	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R776 ~ R780	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R782 ~ R784	CRD20TJ102T	RESISTOR , CARBON	1k ohm 1/5W J
R785 , R786	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R788 ~ R792	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R794 ~ R796	CRD20TJ472T	RESISTOR , CARBON	4.7k ohm 1/5W J
R797 , R798	CRD20TJ224T	RESISTOR , CARBON	220 Kohm 1/5W J
R71L	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R71R	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R72L	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R72R	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R73C	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R74C	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R75S	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R76S	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R77S	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
R78S	CRF5EKR22	RESISTOR , CEMENT	0.22 ohm 5W
	HDMKD1206PTS3	FAN, MOTOR	KD1206PTS3
	CUP11556	**POWER PCB**	
BK91	CMD1A387	BRACKET , PCB	
BN54 ~ BN59	BJP06GA130ZK	CONNECTOR(SOCKET)	TAC-L06X-A3
BN84	CWB1C912130EN	WIRE ASS`Y	
BN92	CWB4DA32130PU	WIRE , ASS'Y **C Ver.**	
BN93	CWB4DA32130PU	WIRE , ASS'Y **AH Ver.**	
BN95	CWB1E904150BM	WIRE ASS'Y	
BN98	CWB1C903170BM	WIRE ASS'Y	
BN99	CWZL73BN99	WIRE ASS'Y	
CN91	KJP02KA060ZY	WAFER	7.92MM(YUNHO)
CN92	KJP02GA89ZM	WAFER	MOLEX35328-02
CN93	KJP03GA89ZM	WAFER	MOLEX35328-0310
CN94	KJP03GA90ZM	WAFER	MOLEX35313-0310
CN95	KJP04GA01ZM	WAFER	MOLEX 5267-04A
CN98	KJP02GA01ZM	WAFER	MOLEX 5267-02A
C924	CCEA1EH471E	CAP , ELECT	470uF 25V
C957 , C961	HCET63VFHS153ND	CAP , ELECT	15000uF 63V
C922	HCEA1EH470T	CAPACITOR , ELECT	47uF 25V
C923	HCEA1CH101T	CAPACITOR , ELECT	100uF 16V
C926	CCKT1H103ZF	CAPACITOR , CERAMIC	0.01uF 50V
C930 ~ C935	CCKT1H102KB	CAPACITOR , CERAMIC	1000pF 50V
C936	HCEA1AH471T	CAPACITOR , ELECT	470uF 10V
C939 ~ C944	CCKT1H473ZF	CAPACITOR , CERAMIC	0.047uF 50V
C945	CCKT1H103ZF	CAPACITOR , CERAMIC	0.01uF 50V
C946 , C947	CCKT1H102KB	CAPACITOR , CERAMIC	1000pF 50V
C948	CCKT1H471KB	CAPACITOR , CERAMIC	470pF 50V
C949	HCEA1HH4R7T	CAPACITOR , ELECT	4.7uF 50V

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
C950	HCEA1CH221T	CAPACITOR , ELECT		220uF 16V
C951 , C952	HCEA1CH471T	CAPACITOR , ELECT		470uF 16V
C953	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
C954	HCEA1CH101T	CAPACITOR , ELECT		100uF 16V
C955 , C956	HCEA1HH100T	CAPACITOR , ELECT		10uF 50V
C958	CCKT1H104ZF	CAPACITOR , CERAMIC		0.1uF 50V
C959	CCKT1H104ZF	CAPACITOR , CERAMIC		0.1uF 50V
C960 , C962	CCKT1H473ZF	CAPACITOR , CERAMIC		0.047uF 50V
C963	HCEA1VH100T	CAPACITOR , ELECT		10uF 35V
D918 ~ D921	HVD1SS133MT	DIODE		1SS133T-77
D922	KVD1N4003ST	DIODE		1N4003
D924	HVDGBJ1504	DIODE , BRIDGE		GBJ1504
D925 ~ D928	HVD1SS133MT	DIODE		1SS133T-77
ET92	CNE75	PLATE , EARTH		
F901	KBA2C6300TLUZ	FUSE	**AH Ver.**	
F901	KBA2C3150TLEZ	FUSE	**C Ver.**	
F902	KBA2C1250TLEZ	FUSE	**C Ver.**	
F903	KBA2C2000TLUZ	FUSE	**AH Ver.**	
IC97	HVIMC7806	I. C REGULATOR ⚠		KA7806TU
JK91	CJJ5Q007Y			
JK92	CJJ5N005Y	SPEAKER TERMINAL(2P)		
JW91	CWE8202150AA	WIRE ASS'Y		
JW92 , JW95	CWE8202150RV	WIRE ASS'Y		
L926 ~ L928	CLEY0R5KAK	COIL , SPEAKER		0.5uH
L930 , L931	CLEY0R5KAK	COIL , SPEAKER		0.5uH
OL92	KJJ7A021Z	AC OUT LET (230V)	**C Ver.**	A302D0060P
OL93	KJJ7A012Z	AC OUT LET (120V)	**AH Ver.**	A202D0030P
Q901	KVTKSC2785YT	T.R		KSC2785Y
Q902	HVTKRA102MT	T.R		KRA102M
Q903	HVTKTA1271YT	T.R		KTA1271Y
Q904 ~ Q907	KVTKSC2785YT	T.R		KSC2785Y
Q908	HVTKSC2316YT	T.R		KSC2316Y
R921	CRD20TJ100T	RESISTOR , CARBON		10 ohm 1/5W J
R922	CRD20TJ222T	RESISTOR , CARBON		2.2k ohm 1/5W J
R923	CRD20TJ332T	RESISTOR , CARBON		3.3k ohm 1/5W J
R926 ~ R929	KRD25FJ100T	RESISTOR , CARBON		10 ohm 1/4W J
R931	KRD25FJ100T	RESISTOR , CARBON		10 ohm 1/4W J
R932 , R933	CRD20TJ223T	RESISTOR , CARBON		22k ohm 1/5W J
R934	CRD20TJ102T	RESISTOR , CARBON		1k ohm 1/5W J
R935	CRD20TJ223T	RESISTOR , CARBON		22k ohm 1/5W J
R937 , R938	CRD20TJ223T	RESISTOR , CARBON		22k ohm 1/5W J
R939 ~ R942	CRD25TJ100T	RESISTOR , CARBON		10 ohm 1/4W J
R944	CRD25TJ100T	RESISTOR , CARBON		10 ohm 1/4W J
R945 , R946	CRG1ANJ331H	RES , METAL OXIDE FILM		330 ohm 1W J
R947	CRD20TJ472T	RESISTOR , CARBON		4.7k ohm 1/5W J
R948	CRD20TJ333T	RESISTOR , CARBON		33k ohm 1/5W J
R949	CRD20TJ103T	RESISTOR , CARBON		10k ohm 1/5W J
R950	CRD20TJ561T	RESISTOR , CARBON		560 ohm 1/5W J
R951	CRD20TJ121T	RESISTOR , CARBON		120 ohm 1/5W J
R952	CRD20TJ393T	RESISTOR , CARBON		39k ohm 1/5W J
R953	CRD20TJ562T	RESISTOR , CARBON		5.6k ohm 1/5W J
R954	CRD20TJ472T	RESISTOR , CARBON		4.7k ohm 1/5W J
R955	CRD20TJ101T	RESISTOR , CARBON		100 ohm 1/5W J
R956	CRD20TJ223T	RESISTOR , CARBON		22k ohm 1/5W J
R957 , R958	CRD20TJ102T	RESISTOR , CARBON		1k ohm 1/5W J
R959	CRD20TJ752T	RESISTOR , CARBON		7.5k ohm 1/5W J

LOAD No.	PART NO.	DESCRIPTION		SPECIFICATION
R960	CRD20TJ224T	RESISTOR , CARBON		220 Kohm 1/5W J
R961 , R962	CRD20TJ333T	RESISTOR , CARBON		33k ohm 1/5W J
R963 , R964	CRD20TJ223T	RESISTOR , CARBON		22k ohm 1/5W J
R965 , R966	CRD20TJ474T	RESISTOR , CARBON		470k ohm 1/5W
R990	BRDERC12UGK335T	RESISTOR , CARBON	**AH Ver.**	3.3M ohm
RY91	HSL1A008ZE	RELAY	⚠	SDT-S-112DMR
RY92	HSL3A015ZE	RELAY	⚠	OSA-SS-212DM5
TH91	KRTP42T7D330B	THERMAL SENSOR		P42T7D330BW20
T901	CLT5L055ZE	SUB TRANSFORMER	**C Ver.**	
T901	CLT5L055ZU	SUB TRANSFORMER	**AH Ver.**	
	CUP11755	**DSP , PCB**		
BD34	HLZ9J003Z	BEAD , FERRITE(CHIP)		BLM21A121SPT
BD45 , BD46	HLZ9Z014Z	CHIP , BEAD		HU-1H4516-600JT
BD47	HLZ9J003Z	BEAD , FERRITE(CHIP)		BLM21A121SPT
CN45	KJP44HA187ZY	44PIN WAFER 2MM		
C451 ~ C455	HCEC0JRV2220T	CAPACITOR , CHIP ELECT		22uF 6.3V
C456	HCEC1ERV24R7T	CAPACITOR , CHIP ELECT		4.7uF 25V
C457	HCEC0JRV2101T	CAPACITOR , CHIP ELECT		100uF 6.3V
C458	HCEC0JRV2220T	CAPACITOR , CHIP ELECT		22uF 6.3V
C459 ~ C462	HCEC0JRV2101T	CAPACITOR , CHIP ELECT		100uF 6.3V
C471 ~ C473	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C474	HCUS1H680JA	CAPACITOR , CHIP		68pF
C475	HCUS1C105ZF	CAPACITOR , CHIP		1uF 16V
C476	HCUS1H103KC	CAPACITOR , CHIP		0.01uF
C477	HCUS1H680JA	CAPACITOR , CHIP		68pF
C480 ~ C498	HCUS1E104ZF	CAPACITOR , CHIP		0.1uF
C499	HCUS1H122KC	CAPACITOR , CHIP		0.0012uF
IC45	HVICS49400-CQ	I.C , DECODER		CS49400-CQ
IC46	HVIM29W800DT70N	I.C, 4M FLASH MEMORY		M29W800DT-70N
IC47	HVI57V161610ET7	SDRAM 16M 7NS		HY57V161610ET-7
RN45 ~ RN48	CRJ104DJ330T	RESISTOR , 4ARRAY		33 ohm 1/10W
RN49 , RN50	HRJ104DJ331T	RESISTOR , 4ARRAY		330 ohm 1/10W
RN51	HRJ104DJ471T	RESISTOR , 4ARRAY		470 ohm 1/10W
RN52 ~ RN55	HRJ104DJ331T	RESISTOR , 4ARRAY		330 ohm 1/10W
RN56	HRJ104DJ471T	RESISTOR , 4ARRAY		470 ohm 1/10W
RN57	HRJ104DJ331T	RESISTOR , 4ARRAY		330 ohm 1/10W
RN58	CRJ104DJ330T	RESISTOR , 4ARRAY		33 ohm 1/10W
R451 , R452	CRJ10DJ330T	RESISTOR , CHIP		33 ohm 1/10W
R453 ~ R455	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R456	CRJ10DJ1R0T	RESISTOR , CHIP		1 ohm 1/10W
R457 , R458	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R460 ~ R470	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R461	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R471 , R472	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/102W
R473	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R474 , R475	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/102W
R476 ~ R480	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R481 , R482	CRJ10DJ152T	RESISTOR , CHIP		1.5k ohm 1/10W
R483 , R484	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R487	CRJ10DJ330T	RESISTOR , CHIP		33 ohm 1/10W
R488	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R489	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/102W
R490	CRJ10DJ471T	RESISTOR , CHIP		470 ohm 1/10W
R491	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W
R492 ~ R494	CRJ10DJ332T	RESISTOR , CHIP		3.3k ohm 1/102W
R495 ~ R497	CRJ10DJ103T	RESISTOR , CHIP		10k ohm 1/10W

LOAD No.	PART NO.	DESCRIPTION	SPECIFICATION
R498	CRJ10DJ100T	RESISTOR , CHIP	10 ohm 1/10W
R499 , R500	CRJ10DJ332T	RESISTOR , CHIP	3.3k ohm 1/102W
R502	CRJ10DJ330T	RESISTOR , CHIP	33 ohm 1/10W
R503 , R504	CRJ10DJ0R0T	RESISTOR , CHIP	0 ohm 1/10W
R504	CRJ10DJ0R0T	RESISTOR , CHIP	0 ohm 1/10W
	OTHERS		
PWR1	CLT5V031ZE	MAIN TRANSFORMER **C Ver.**	
	CLT5V031ZU	MAIN TRANSFORMER **AH Ver.**	
TUN1	CNVKSTMB014MA18	TUNER MODULE **C Ver.**	
	HNVTFCE1U116A	TUNER MODULE **AH Ver.**	
	CJA2B068ZA	⚠ AC POWER CORD **C Ver.**	
	CJA523FBYA	⚠ AC POWER CORD **AH Ver.**	
	HJDRL-S2004ZA	DVD MECHANISM ASS'Y	
	CSA267	ANT. FM T(LUG TYPE)	
	CSA3A013Z	ANT. AM LOOT **AH Ver.**	
	CSA3A011Z	ANT. AM LOOT **C Ver.**	
	KLR001	ADAPTOR, MATCHING	
	CARTL73	REMOTE CONTROL UNIT	
	CWZPW003Z	FERRITE , RING	29X7.7X19
	KLZ9Z061Z	FERRITE , CORE	ZCAT1518-0730
	KLZ9Z062Z	FERRITE , CORE	ZCAT2132-1130
	CWZL73BN82Z	WIRE ASS'Y	
	CWZL73BN83Z	WIRE ASS'Y	
	CWZL73BN86Z	WIRE ASS'Y	
	CWB1C006120EG	WIRE ASS'Y	
	CWC1C4A13B200B	FFC CABLE	
	CWC1C4A15B150B	FFC CABLE	
	CWE8202150RV	WIRE ASS'Y	
	CWZL73BN33Z	WIRE ASS'Y	
	CWZL73BN51Z	WIRE ASS'Y	
	CWZL73BN52Z	WIRE ASS'Y	
	HABAAAM1.5V	BATTERY	

SERVICE MANUAL

L73

DVD RECEIVER

NAD ELECTRONICS INTERNATIONAL
TORONTO