

MV-8000

PRODUCTION STUDIO

MV8-OP1

AUDIO I/O EXPANSION

SERVICE NOTES

Issued by RJA

TABLE OF CONTENTS

SPECIFICATIONS.....	2	RESTORING THE FACTORY SETTINGS.....	23
LOCATION OF CONTROLS	4	PROCEDURE FOR UPDATING	
LOCATION OF CONTROLS PARTS LIST	5	THE SYSTEM SOFTWARE.....	23
EXPLODED VIEW	6	BLOCK DIAGRAM.....	24
EXPLODED VIEW PARTS LIST	7	CIRCUIT BOARD (MAIN)	26
WIRING DIAGRAM.....	8	CIRCUIT DIAGRAM(MAIN).....	30
PARTS LIST (MV-8000).....	10	CIRCUIT BOARD (PANEL/PAD/MIDI)	38
PARTS LIST (MV8-OP1)	17	CIRCUIT DIAGRAM(PANEL/PAD/MIDI).....	42
MOVING THE MAIN BAORD.....	20	CIRCUIT BOARD (CONTRAST/CDRW)	50
IDENTIFYING THE VERSION NUMBER.....	20	CIRCUIT DIAGRAM(CONTRAST/CDRW)	52
SAVE AND LOADING THE CONTENTS OF		CIRCUIT BOARD (MV8-OP1)	56
THE HARD DISK.....	20	CIRCUIT DIAGRAM(MV8-OP1).....	58
TEST MODE.....	20	ERROR MESSAGES.....	66



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SPECIFICATIONS

MV-8000: PRODUCTION STUDIO

Sampler Section

Audio Data Format

16-bit linear

Sampling Frequency

44.1 kHz (fixed)

Parts

16 (Patches) + 8 (Audio Tracks / Audio Phrases)

Maximum Polyphony

64 voices

Wave Memory (RAM)

DIMM: 1 slot
(168 pins, PC100 CL = 2 or PC133 CL = 3, 3.3 V, 128 M bytes, 256 M bytes, 512 M bytes)
128 M bytes (standard)
Expandable up to 512 M bytes (replacement to 512 M bytes DIMM is required.)

Maximum Sampling Time

. with 128 M bytes DIMM (standard)
mono: 24 min. approx. (stereo: 12 min. approx.)
. with 512 M bytes DIMM (expanded)
mono: 100 min. approx. (stereo: 50 min. approx.)

Effects

Multi-effects (MFX): 1 (24 types)
Reverb: 1 (2 types)
Chorus: 1 (4 types)
Mastering Tool Kit: 1 (only in the Mastering Mode)

Sequencer Section

Tracks

MIDI tracks (1 MIDI channel per track): 128
Audio tracks: 8
Tempo track: 1

Resolution

480 TPQN

Tempo

5 -- 300

Note Capacity

approx. 150,000 notes

Song Length

9,999 measures

Recording Method

Event recording (Realtime/Step)
Audio recording

Others

Project

Songs: 16
Patches: 16 (per Song)
Partials: 96 (16 pads x 6 banks per Patch)
Samples: 9,999
Audio Phrases: 512 (16 pads x 32 banks)
Patch Libraries: 128
MIDI Clips: 100
Multi-effects (MFX) Libraries: 124 (Preset: 24, User: 100)
Chorus Libraries: 52 (Preset: 2, User: 50)
Reverb Libraries: 54 (Preset: 4, User: 50)
Mastering Tool Kit Libraries: 71 (Preset: 21, User: 50)

Signal Processing

AD Conversion: 24 bits, 64 times oversampling
DA Conversion: 24 bits, 128 times oversampling

Frequency Response

MIC/Line Inputs: 20 Hz -- 20 kHz (+0/-2 dB)

Nominal Input Level

MIC/Line Inputs: -50~ +14 dBu
(maximum +26 dBu: balanced, maximum +20 dBu: unbalanced)
Phono Inputs: -87~ -27 dBu

Input Impedance

MIC/Line Inputs: 40 k ohms
Phono Inputs: 50 k ohms

Nominal Output Level

+4 dBu (balanced)

Output Impedance

600 ohms

Recommended Load Impedance

Master Outputs: 10 k ohms or greater
Headphones: 8~600 ohms

Residual Noise Level

-86 dBu or less (SENS: LINE, Phono Input Jacks: short-circuited, IHF-A Typ.)

Display

320 x 240 dots, graphic LCD (backlit)

Pads

16 Pads, Velocity and Aftertouch sensitive

Controllers

Effects control knobs: C1~C3
Mixer sliders: 1~8

Floppy Disk Drive

3.5-inch Micro Floppy Disk, 1.44 M bytes (2HD),
720 K bytes (2DD)

Hard Disk Drive

3.5 inches, 40 G bytes

CD-R/RW Drive

Built-in type

CD-DA, CD-ROM, CD-R, CD-RW

* 0 dBu = 0.775 V rms

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Connectors

Phono Input Jacks: L, R (RCA phono type)

MIC/Line Input Jacks: L, R (1/4 inch TRS phone type)

Master Output Jacks: L, R (1/4 inch TRS phone type)

Headphones Jack (Stereo 1/4 inch phone type)

Digital Out Connector A (Coaxial type)

Digital Out Connector B (Optical type)

MIDI Connectors: IN, OUT A, OUT B

USB Connector (supports file transfer (mass storage class))

Foot Switch Jack (1/4 inch phone type)

AC Inlet

* When installed MV8-OP1 Audio I/O Expansion (option)

Analog Multi Output Jacks: 1–6 (1/4 inch TRS phone type)

Digital In Connector A (Coaxial type)

Digital In Connector B (Optical type)

R-BUS Connector (DB-25 type)

* When installed MV8-VGA VGA/Mouse Expansion (option)

VGA Out Connector (HD DB-15 type)

PS/2 Mouse Connector (6-pin mini DIN type)

Power Supply

AC 117 V, AC 230 V or AC 240 V (50/60 Hz)

AC 220 V (60 Hz)

Power Consumption

40 W

Dimension

480 (W) x 482 (D) x 136 (H) mm

18-15/16 (W) x 19 (D) x 5-3/8 (H) inches

Weight

9.8 kg / 21 lbs 10 oz(excluding MV8-OP1, MV8-VGA)

Accessories

Owner's Manual English (#72349190)

AC Cord 120V (#00894378)

AC Cord 230V (#00894389)

AC Cord 240VA (#23495124)

AC Cord 240VE (#00907001)

Sample Data CD-ROM (#03456412)

Backup Date CD-ROM (#03456434)

Shortcut Stickers (#40564212)

Short pin (#03459356)

Options

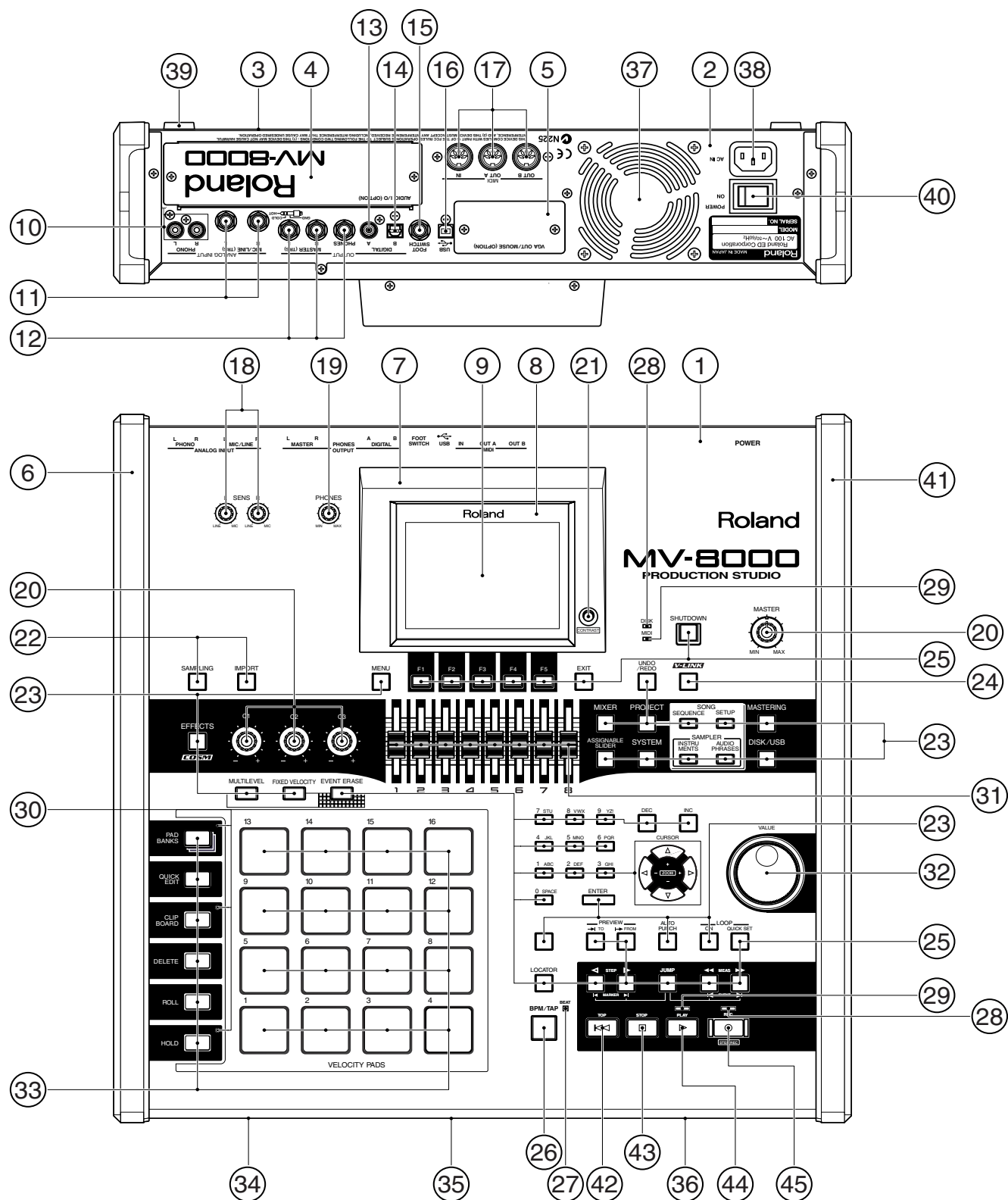
Audio I/O Expansion: MV8-OP1

VGA/Mouse Expansion: MV8-VGA

Foot Switch: FS-5U (BOSS)

Pedal Switch: DP-2

LOCATION OF CONTROLS

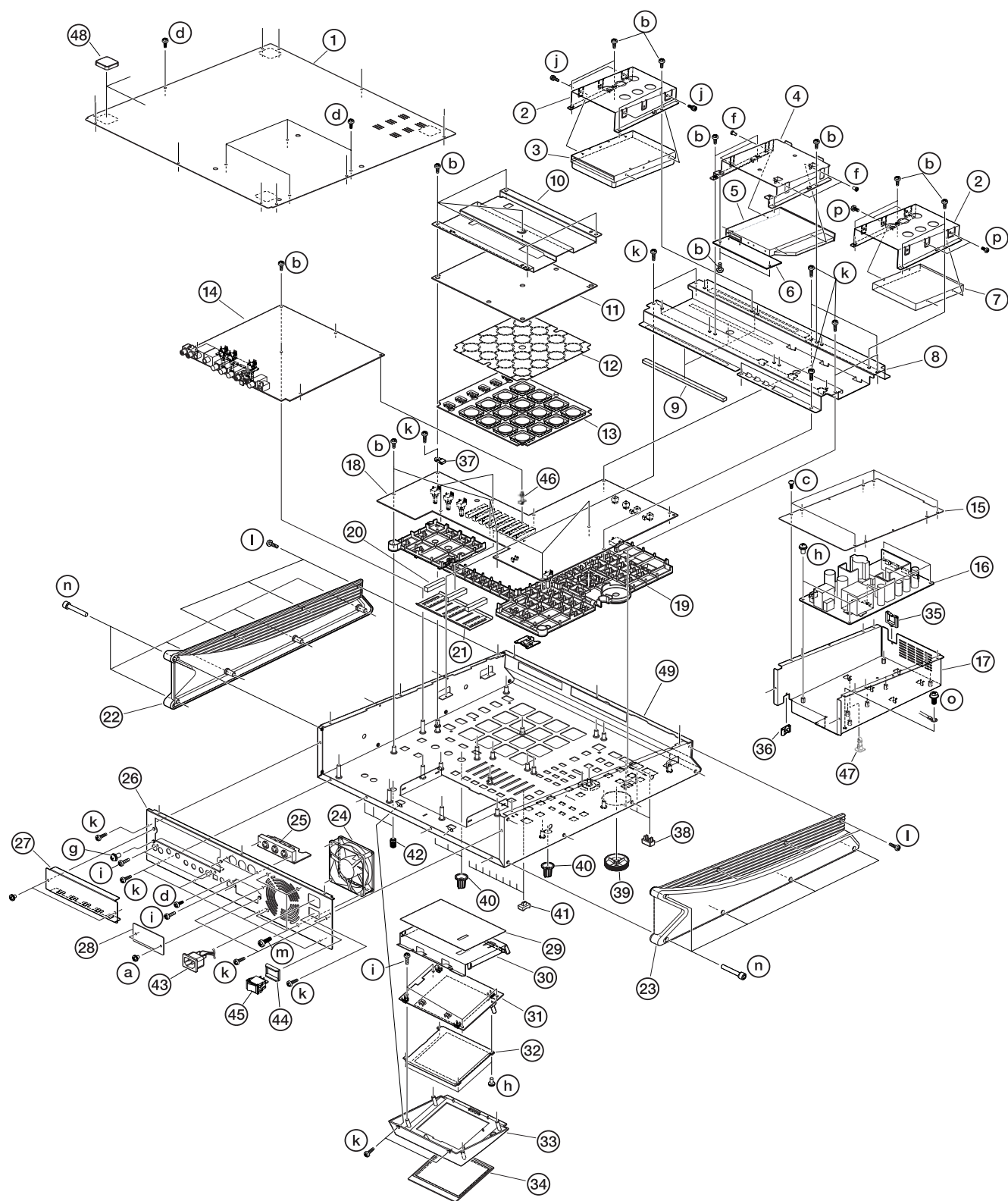


LOCATION OF CONTROLS PARTS LIST

[Parts]

No.	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	03239889	CASING	TOPCASE		1
2	03239901	CASING	REAR PANEL		1
3	03121389	CASING	BOTTOM COVER		1
4	03345845	CASING	AUDIO I/O BLIND		1
5	03345867	CASING	VGA BLIND		1
6	03239912	CASING	SIDE PANEL L		1
7	03239867	CASING	DISPLAY ESCUTCHEON		1
8	03239878	CASING	DISPLAY COVER		1
9	03122690	DISPLAY UNIT	LCD UNIT	F-51477GNF-SLY-AA	1
10	01899801	JACK, EXT TERMINAL	RCA(PIN) JACK	YKC21-3834	1
11	03239812	JACK, EXT TERMINAL	6.5MM JACK	JY-6308X01-090	2
12	03234456	JACK, EXT TERMINAL	6.5MM JACK	HTJ-064-12D	3
13	03237378	JACK, EXT TERMINAL	RCA(PIN) JACK	YKC21-3895	1
15	03239801	JACK, EXT TERMINAL	6.5MM JACK	HTJ-064-12I	1
16	02781101	JACK, EXT TERMINAL	USB CONNECTOR	YKF45-0020	1
17	13429274	JACK, EXT TERMINAL	MIDI SOCKET	YKF51-5041	1
18	01891801	KNOB, BUTTON	U R-KNOB	S1 LCG BLK	2
	03124945	POTENTIOMETER	9M/M ROTARY POT.	RK09L1140 50KRD L25 RR1	2
19	01891834	KNOB, BUTTON	U R-KNOB	S1 LCG BLU	1
	02901678	POTENTIOMETER	9M/M ROTARY POT.	RK09L12D0 50KA L=25	1
20	01343112	KNOB, BUTTON	J R-KNOB	J R-KNOB MF BLK/LCG	4
	01904401	POTENTIOMETER	9M/M ROTARY POT.	EVU F2A E25 B53	1
21	03345389	POTENTIOMETER	9M/M ROTARY POT.	EVUF2LFL3B14	4
22	03340034	KNOB, BUTTON	KEYTOP		1
	02891789	SWITCH	TACT SWITCH	SKRGADD010 H=5.0	55
	00560756	DIODE	LED (RED)	SEL5221S TP15	4
23	03340034	KNOB, BUTTON	KEYTOP		1
	02891789	SWITCH	TACT SWITCH	SKRGADD010 H=5.0	55
	01239856	DIODE	LED (ORANGE)	SEL5921A TP15	19
24	03340034	KNOB, BUTTON	KEYTOP		1
	02902278	DIODE	LED (BLUE)	L-934MBD	1
	02891789	SWITCH	TACT SWITCH	SKRGADD010 H=5.0	55
25	03340034	KNOB, BUTTON	KEYTOP		1
	02891789	SWITCH	TACT SWITCH	SKRGADD010 H=5.0	55
26	03340034	KNOB, BUTTON	KEYTOP		1
	00125590	SWITCH	TACT SWITCH	EVQ QJJ 05Q	1
27	01239867	DIODE	LED (RED/GREEN)CLR	SML72423C TP15	1
28	00560756	DIODE	LED (RED)	SEL5221S TP15	4
29	00676423	DIODE	LED (GREEN)	SEL5421E TP-15	2
30	01011656	DIODE	LED (RED)	SLR-332VR3F	3
31	01342134	POTENTIOMETER	30MM SLIDE POT.	EWA NKE C10 B14	8
	03458478	KNOB, BUTTON	F S-KNOB	M BLK/LCG	8
32	01231367	ENCODER	ROTARY ENCODER	EC16B24204 (L=15) (W/N&W)	1
	22485303	KNOB, BUTTON	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
33	03237678	KNOB, BUTTON	RUBBER PAD		1
	03239978	MISCELLANEOUS	PRESSURE SHEET SENSOR		1
34	03231689	DISK DRIVE UNIT	FDD UNIT	JU-226A033FC (1/2 INCH HEIGHT)	1
35	03231878	DISK DRIVE UNIT	CD-R/RW DRIVE UNIT	UJDA360RL-Z	1
36	03230378	DISK DRIVE UNIT	HDD UNIT	2F040J0	1
37	02562956	MISCELLANEOUS	DC FAN MOTOR	9A0812L403	1
38	02563867	WIRING, CABLE	WIRING	AC ASSY	1
39	22355334	MISCELLANEOUS	FOOT MKS	235-334	4
40	01786012	SWITCH	SEESAW SWITCH	JW-M11RKK	1
41	03239923	CASING	SIDE PANEL R		1
42	00901445	KNOB, BUTTON	KEYTOP	RESET(WHIT GREY)	1
	00894645	SWITCH	TACT SWITCH	SKECAF WITHOUT LED	4
43	00901390	KNOB, BUTTONT	KEYTOP	STOP(WHIT GREY)	1
	00894645	SWITCH	TACT SWITCH	SKECAF WITHOUT LED	4
44	00901401	KNOB, BUTTON	KEYTOP	PLAY(WHIT GREY)	1
	00894645	SWITCH	TACT SWITCH	SKECAF WITHOUT LED	4
45	00901412	KNOB, BUTTON	KEYTOP	REC(RED)	1
	00894645	SWITCH	TACT SWITCH	SKECAF WITHOUT LED	4

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

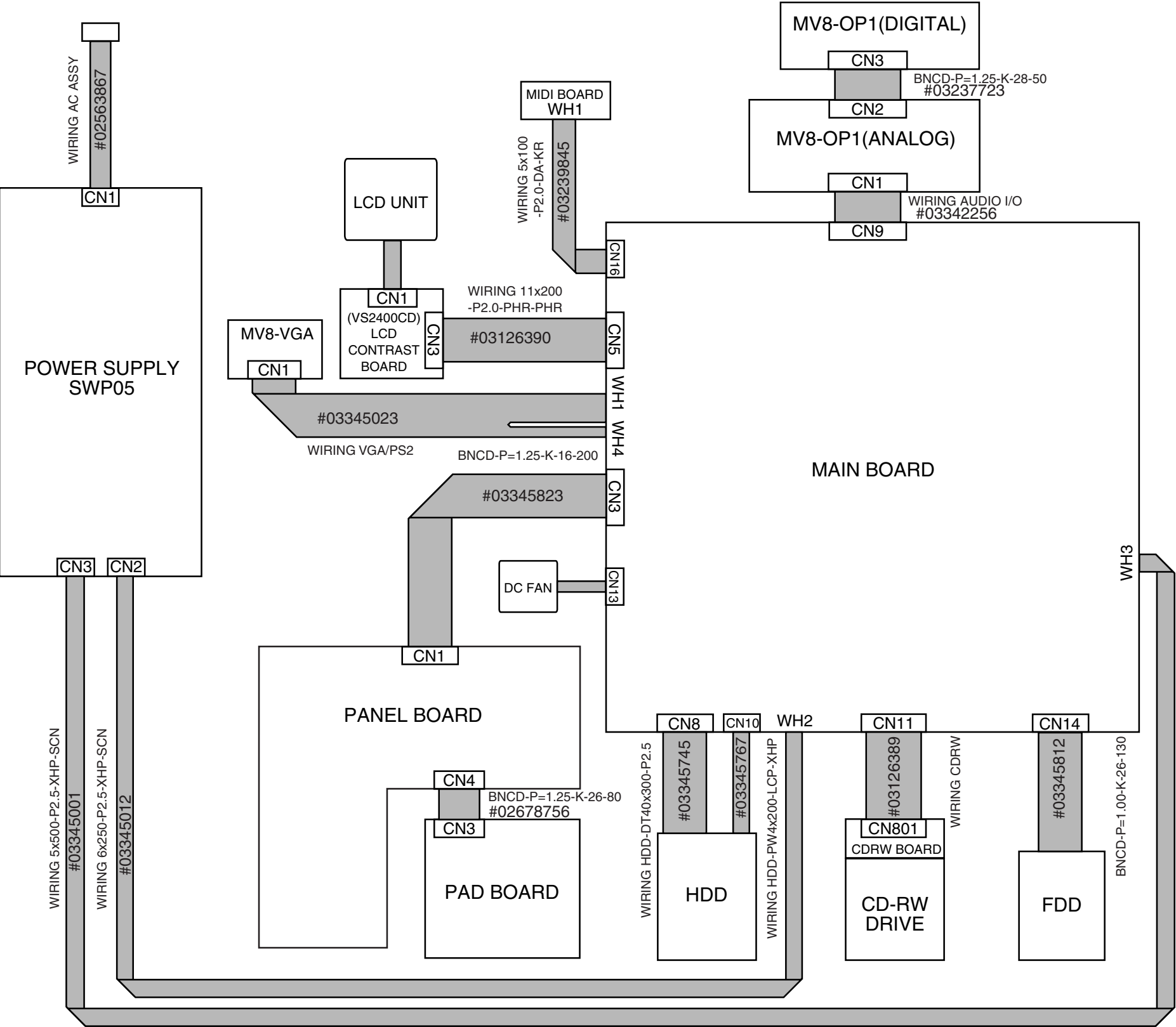
[Parts]

No.	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	03121389	CASING	BOTTOM COVER		1
2	03121456	CHASSIS	HDD HOLDER		1
3	03230378	DISK DRIVE UNIT	HDD UNIT	2F040J0	1
4	03121489	CHASSIS	CD HOLDER		1
5	03231878	DISK DRIVE UNIT	CD-R/RW DRIVE UNIT	UJDA360RL-Z	1
6	72349156	PCB ASSY	CDRW BOARD ASSY		1
7	03231689	DISK DRIVE UNIT	FDD UNIT	JU-226A033FC (1/2 INCH HEIGHT)	1
8	03239956	CHASSIS	CHANNEL HOLDER		1
9	03345878	MISCELLANEOUS	CUSHION		3
10	03239945	CHASSIS	PAD HOLDER		1
11	72348534	PCB ASSY	PAD BOARD ASSY		1
12	03239978	MISCELLANEOUS	PRESSURE SHEET SENSOR		1
13	03237678	KNOB, BUTTON	RUBBER PAD		1
14	72346723	PCB ASSY	MAIN BOARD ASSY		1
15	03121378	CASING	POWER SPLY COVER		1
16	02562889	POWER SUPPLY UNIT	SWITCHING REGULATOR	SWP05	1
17	03121445	CHASSIS	PWR SPLY HOLDER		1
18	72346734	PCB ASSY	PANEL BOARD ASSY		1
19	03340034	KNOB, BUTTON	KEYTOP		1
20	03456290	MISCELLANEOUS	SPACER		3
21	03455778	CASING	DUST COVER		1
22	03239923	CASING	SIDE PANEL R		1
23	03239912	CASING	SIDE PANEL L		1
24	02562956	MISCELLANEOUS	DC FAN MOTOR	9A0812L403	1
25	72346745	PCB ASSY	MIDI BOARD ASSY		1
26	03239901	CASING	REAR PANEL		1
27	03345845	CASING	AUDIO I/O BLIND		1
28	03345867	CASING	VGA BLIND		1
29	03455790	MISCELLANEOUS	INSULATING SHEET		1
30	03452123	CASING	SHIELD COVER		1
31	72232123	PCB ASSY	CONTRAST BOARD ASSY		1
32	03122690	DISPLAY UNIT	LCD UNIT	F-51477GNF-SLY-AA	1
33	03239867	CASING	DISPLAY ESCUTCHEON		1
34	03239878	CASING	DISPLAY COVER		1
35	01455523	MISCELLANEOUS	CORD BUSHING	EDS-1717U	1
36	00902790	MISCELLANEOUS	CORD BUSHING	EDS-1208U	1
37	03455801	MISCELLANEOUS	CORD KEEP	PM-375	1
38	00901445	KNOB, BUTTON	KEYTOP	RESET(WHIT GREY)	1
38	00901412	KNOB, BUTTON	KEYTOP	REC(RED)	1
38	00901401	KNOB, BUTTON	KEYTOP	PLAY(WHIT GREY)	1
38	00901390	KNOB, BUTTON	KEYTOP	STOP(WHIT GREY)	1
39	22485303	KNOB, BUTTON	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
40	01343112	KNOB, BUTTON	J R-KNOB	J R-KNOB MF BLK/LCG	4
41	03458478	KNOB, BUTTON	F S-KNOB	M BLK/LCG	8
42	01891834	KNOB, BUTTON	U R-KNOB	S1 LCG BLU	1
42	01891801	KNOB, BUTTON	U R-KNOB	S1 LCG BLK	2
43	02563867	WIRING, CABLE	WIRING	AC ASSY	1
44	01786045	CHASSIS	SW HOLDER	AT-217K	1
45	01786012	SWITCH	SEESAW SWITCH	JW-M11RKK	1
46	03239989	MISCELLANEOUS	PWB SPACER	WLS-10-0	1
47	12189817	MISCELLANEOUS	PCB SPACER	RSPLS-10U	1
48	22355334	MISCELLANEOUS	FOOT MKS	235-334	4
49	03239889	CASING	TOPCASE		1

[Screws]

No.	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40342712	SCREW M3x6	PAN MACHINE W/SW+SMALL PW BZC	2 +2
b	40011056	SCREW 3x6	BINDING TAPTITE B ZC	31 +2
c	40239889	SCREW M3x6	BUTTON-TRUS TAPTITE S BZC	4
d	40012534	SCREW 3x6	BINDING TAPTITE S FE BZC	19
e	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	7
f	40454956	SCREW M2x2.5	SPECIAL PAN ZNC	4
g	40458345	SCREW M4x8	PAN MACHINE W/SW+SMALL PW NI	1
h	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	4
I	40011312	SCREW 3x8	BINDING TAPTITE P BZC	5
j	40450367	SCREW 6-32UNC	1008SR/KM003	4
k	40011101	SCREW 3x8	BINDING TAPTITE B BZC	4
l	40563590	SCREW 3x8	BINDING TAPTITE B NI	6
m	40561745	SCREW 5x10	BINDING TAPPING B1 BZC	4
n	40459590	SCREW M4x20	HEX SOCKET HEAD NI	10
o	40342989	SCREW M4x8	PAN W/EX.TOOTH WASHER	1
p	40562623	SCREW M2.5x3	BINDING MACHINE ZC	3
q	40011101	SCREW 3x8	BINDING TAPTITE B BZC	16

WIRING DIAGRAM



PARTS LIST (MV-8000)

SAFETY PRECAUTIONS:
The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

CONSIDERATION ON PARTS ORDRING
When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)

CASING

			Q'TY
#	03345845	AUDIO I/O BLIND	1
	03121389	BOTTOM COVER	1
#	03239878	DISPLAY COVER	1
#	03239867	DISPLAY ESCUTCHEON	1
#	03455778	DUST COVER	1
	03121378	POWER SPLY COVER	1
#	03239901	REAR PANEL	1
#	03452123	SHIELD COVER	1
#	03239912	SIDE PANEL L	1
#	03239923	SIDE PANEL R	1
#	03239889	TOPCASE	1
#	03345867	VGA BLIND	1

CHASSIS

	03121489	CD HOLDER		1
#	03239956	CHANNEL HOLDER		1
	03121456	HDD HOLDER		1
#	03239945	PAD HOLDER		1
	03121445	PWR SPLY HOLDER		1
	01786045	SW HOLDER	AT-217K	1

KNOB, BUTTON

	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
#	03458478	F S-KNOB	M BLK / LCG	8
	01343112	J R-KNOB	J R-KNOB MF BLK / LCG	4
	00901390	KEYTOP	STOP(WHIT GREY)	1
	00901401	KEYTOP	PLAY(WHIT GREY)	1
	00901412	KEYTOP	REC(RED)	1
	00901445	KEYTOP	RESET(WHIT GREY)	1
#	03340034	KEYTOP		1
#	03237678	RUBBER PAD		1
	01891801	U R-KNOB	S1 LCG BLK	2
	01891834	U R-KNOB	S1 LCG BLU	1

SWITCH

Δ	01786012	JW-M11RKK	SEESAW SWITCH	1
	00125590	EVQ QJJ 05Q	TACT SWITCH	1
	00894645	SKECAF WITHOUT LED	TACT SWITCH	4
	01458501	SKQMAK	TACT SWITCH	1
	02891789	SKRGADD010 H=5.0	TACT SWITCH	55

SW56 on PANEL
SW57,SW58,SW59,SW60 on PANEL
SW4 on MAIN
SW19,SW25,SW26,SW23,SW24,SW22,SW27,SW20,SW18,SW17,SW16,SW15,SW21,SW37,SW30,SW31,SW32,SW33,SW34,SW28,SW36,SW14,SW38,SW39,SW40,SW41,SW42,SW43,SW11,SW44,SW35,SW52,SW49,SW48,SW13,SW53,SW29,SW46,SW51,SW1,SW50,SW45,SW54,SW2,SW3,SW4,SW5,SW6,SW7,SW8,SW9,SW10,SW55,SW12,SW47 on PANEL

JACK, EXT TERMINAL

	03234456	HTJ-064-12D	6.5MM JACK	JK5,JK9,JK7 on MAIN	3
	03239801	HTJ-064-12I	6.5MM JACK	JK3 on MAIN	1
#	03239812	JY-6308X01-090	6.5MM JACK	JK8,JK6 on MAIN	2
	01899801	YKC21-3834	RCA(PIN) JACK	JK10 on MAIN	1
#	03237378	YKC21-3895	RCA(PIN) JACK	JK2 on MAIN	1
	13429274	YKF51-5041	MIDI CONNECTOR	JK1 on MIDI	1
	02781101	YKF45-0020	USB CONNECTOR	JK4 on MAIN	1

DISPLAY UNIT

#	03122690	F-51477GNF-SLY-AA	LCD UNIT	1
	NOTE: Replacement LCD UNIT F-51477GNF-SLY-AA should be made on a unit base.			

DISK DRIVE UNIT

	03230378	2F040J0	HDD UNIT	1
	NOTE: Replacement HDD UNIT 2F040J0 should be made on a unit base.			
	03231689	JU-226A033FC (1/2 INCH HEIGHT)	FDD UNIT	1
	NOTE: Replacement FDD UNIT JU-226A033FC should be made on a unit base.			
	03231878	UJDA360RL-Z	CD-R/RW DRIVE UNIT	1
	NOTE: Replacement CD-R/RW DRIVE UNIT UJDA360RL-Z should be made on a unit base.			

POWER SUPPLY UNIT

△	02562889	SWP05	SWITCHING REGULATOR	1
	NOTE: Replacement SWITCHING REGULATOR SWP05 should be made on a unit base.			

PCB ASSY

#	72346723	MAIN BOARD ASSY			1
	NOTE: 'MAIN BOARD ASSY' includes the following parts.				
#	03345001	WIRING	5x500-P2.5-XHP-SCN	WH3 on MAIN	1
#	03345012	WIRING	6x250-P2.5-XHP-SCN	WH2 on MAIN	1
#	03345023	WIRING VGA/PS2	WIRING	WH1, WH4 on MAIN	1
#	72346745	MIDI BOARD ASSY			1
	NOTE: 'MIDI BOARD ASSY' includes the following parts.				
#	03239845	WIRING	5x100-P2.0-DA-KR		1
#	72349156	CDRW BOARD ASSY			1
#	72232123	CONTRAST BOARD ASSY			1
#	72348534	PAD BOARD ASSY			1
#	72346734	PANEL BOARD ASSY			1

IC

#	03348489	HD6432148SA94FA	IC (16BIT CPU)	IC1 on PANEL	1
	02903723	HD6417706	IC (32BIT CPU)	IC3 on MAIN	1
	01672867	M38881M2-069FP	IC (CPU)	IC38 on MAIN	1
	02231767	RA0A-101 (TC223C080AF-101)	IC (DSP)	IC30 on MAIN	1
	02568456	FDC FDC37C78	IC (FDC CPU PERIPH)	IC49 on MAIN	1
#	*****	TC58FVM5B2ATG65BAH	IC (FLASH MEMORY/BLANK)	IC4 on MAIN	1
	02453878	AK4528VF	IC (AD/DA)	IC54 on MAIN	1
	03237367	IC41C16100S-50T	IC (DRAM)	IC33,IC29 on MAIN	2
#	03237356	IC41LV16100S-50T	IC (DRAM)	IC23 on MAIN	1
#	03450345	MOD DIMM SMS-12866-H(N)-H 128M	IC (DRAM)		1
	03342201	K4S281632E-TC75	IC (SDRAM)	IC2,IC8 on MAIN	2
	15269219H0	HD74LS05FPEL	IC (TTL)	IC35 on MAIN	1
	01783589	HD74HC4052FPEL	IC (CMOS)	IC11,IC12,IC7,IC9 on PANEL	4
	02675656	HD74LV11ATELL	IC (CMOS)	IC15 on MAIN	1
	02451712	HD74LV14ATELL	IC (CMOS)	IC3 on PANEL	1
	02675689	HD74LV245ATELL	IC (CMOS)	IC1 on MAIN	1
	02892334	TC74LCX245FT(EL)	IC (CMOS)	IC31 on MAIN	1
	01901623	TC74LVXC3245FS	IC (CMOS)	IC14,IC10 on MAIN	2
	01675034	TC74VHC138FT(EL)	IC (CMOS)	IC43 on MAIN ,IC5 on PANEL	1
					+1
	01675023	TC74VHC139FT(EL)	IC (CMOS)	IC11 on MAIN	1
	03015389	TC74VHC153FT(EL)	IC (CMOS)	IC60 on MAIN	1
#	01908712	TC74VHC164FT(EL)	IC (CMOS)	IC67 on MAIN	1
	02902856	TC74VHCT139AFT	IC (CMOS)	IC12,IC63 on MAIN	2
	01783523	TC74VHCT245AFT(EL)	IC (CMOS)	IC36,IC20,IC7,IC6,IC39,IC40,IC5 on MAIN	7
	02675634	TC74VHCT32AFT(EL)	IC (CMOS)	IC32 on MAIN	1
	03127589	TC7S08FU	IC (CMOS)	IC4 on PANEL	1
	03129934	TC7SET04FU(Te85L)	IC (CMOS)	IC15 on PANEL	1
	02905445	TC7SET08FU(Te85L)	IC (CMOS)	IC45 on MAIN	1
	01348901	TC7SH04FU(Te85L)	IC (CMOS)	IC13 on MAIN. IC6 on PANEL	1
					+1
	01348912	TC7SH08FU(Te85L)	IC (CMOS)	IC65,IC25 on MAIN	2
	01568845	TC7SH86FU(Te85L)	IC (CMOS)	IC9 on MAIN	1
	02129334	TC7WH08FU(Te12L)	IC (CMOS)	IC61 on MAIN	1
	02234245	TC7WHU04FU(Te12L)	IC (CMOS)	IC64,IC42,IC41,IC34 on MAIN	4
	01348101	TTL TC7SET32FU(Te85L)	IC (CMOS)	IC62 on MAIN	1
	15189266	NE-5532AN	IC (BIPOLAR OP AMP)	IC50,IC58,IC59 on MAIN	3
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC52,IC53,IC57,IC51 on MAIN	4
	02897690	OP275GS	IC (BIPOLAR OP)	IC56,IC55 on MAIN	2

IC

15289128	BA10324AF	IC (OP AMP)	IC8 on PANEL. IC1 on CONTRAST	1
01785178	TC9271FS	IC (DIGITAL OUT IF)	IC44 on MAIN	+1
02782778	TC200E06 (PPC)	IC (I/F)	IC18 on MAIN	1
02900456	TC200E1005AF-11 (BA)	IC (I/F)	IC27 on MAIN	1
02454334	SED1356F0A	IC (LCD-DRIVER)	IC17 on MAIN	1
03235789	GP1FA513TZ	IC (OPTICAL CONNECTOR TX)	JK11 on MAIN	1
02900545	PC410LKNIP	IC (PHOTO COUPLER)	IC37 on MAIN	1
01455956	TC223C660CF-503	IC (RA08-503)	IC28 on MAIN	1
00126912	AN78L09M-(E1)	IC (VRGL)	IC10 on PANEL	1
00458312	NJM2360M	IC (REGULATOR)	IC2 on CONTRAST	1
02230056	PQ07VZ5M2ZP	IC (REGULATOR)	IC19 on MAIN	1
01899790	UPC29L33T-E2	IC (REGULATOR)	IC14 on PANEL	1
02454878	M62220FP-600C	IC (REGULATOR)	IC16 on MAIN	1
02903745	S-80930CNMC-G80	IC (RESET)	IC26 on MAIN	1
02900978	M66291GP	IC (USB CONTROLLER)	IC66 on MAIN	1

TRANSISTOR

01902012	2SA1244Y(Te16L)	TRANSISTOR	Q1 on MAIN	1
01121278	2SA1576A T106 QRS	TRANSISTOR	Q5 on MAIN	1
02454390	2SA1588-GR(Te85L)	TRANSISTOR	Q4 on MAIN	1
01121289	2SC4081 T106 QRS	TRANSISTOR	Q3 on MAIN. Q13,Q14 on PANEL	1
01239990	2SC4117-GR(Te85L)	TRANSISTOR	Q13,Q10,Q2,Q9,Q14 on MAIN. Q1 on CON-TRAST	+2
15319115	2SC4213-A(Te85L)	TRANSISTOR	Q12,Q8,Q7,Q16,Q15,Q11 on MAIN	5
00239812	DTC114EUT106	TRANSISTOR	Q6 on MAIN.	+1
02451378	RN2427	TRANSISTOR	Q12,Q11,Q10,Q9,Q8,Q7,Q6,Q5 on PANEL	6
			Q1,Q2,Q3,Q4 on PANEL	1
				+8
				4

DIODE

00783034	1SS294(Te85L)	DIODE	D1 on CONTRAST	1
01019534	1SS355 TE-17	SWITCHING DIODE	D2,D6,D7 on MAIN	3
01780045	RB051L-40	SCHOTTKY DIODE	D1 on MAIN	1
02454412	CRG02 (Te85L)	RECTIFIER DIODE	D4,D5 on MAIN	2
01239867	SML72423C TP15	LED (RED/GREEN)	LED30 on PANEL	1
00560756	SEL5221S TP15	LED (RED)	LED23,LED1,LED11,LED2 on PANEL	4
01011656	SLR-332VR3F	LED (RED)	LED29,LED28,LED27 on PAD	3
01239856	SEL5921A TP15	LED (ORANGE)	LED5,LED6,LED7,LED9,LED16,LED3,LED10,LED12,LED13,LED14,LED22,LED18,LED15,LED19,LED20,LED21,LED26,LED25,LED24 on PANEL	19
00676423	SEL5421E TP-15	LED (GREEN)	LED4,LED17 on PANEL	2
02902278	L-934MBD	LED (BLUE)	LED8 on PANEL	1
15339130	MA142WK-(TX)	DIODE ARRAY	DA37,DA36,DA35 on PAD.	34
			DA4,DA26,DA19,DA2,DA21,DA22,DA23,DA1,DA25,DA18,DA27,DA28,DA29,DA30,DA31,DA32,DA33,DA34,DA24,DA11,DA3,DA5,DA6,DA7,DA8,DA20,DA10,DA17,DA12,DA13,DA14,DA15,DA16,DA9 on PANEL	+3
01897189	MA147-(TX)	DIODE ARRAY	D3 on MAIN	1

RESISTOR

15399750	MCR100 39 1W	RESISTOR	R95 on MAIN	1
15399707	MCR25 JZH J 151	MTL.FILM RESISTOR	R150,R170,R149,R138,R137,R118,R117,R171 on MAIN	8
01454890	MCR50 JZH J 220	MTL.FILM RESISTOR	R201,R187 on MAIN	2
01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	R2 on MAIN. R54 on PANEL	1
00567023	RPC05T 101 J	MTL.FILM RESISTOR	R229 on MAIN. R77,R67,R75,R56 on PANEL. R9 on CONTRAST	+1
00567156	RPC05T 102 J	MTL.FILM RESISTOR	R20,R92 on MAIN.	19
			R63,R74,R72,R73,R71,R69,R31,R68,R66,R65,R64,R61,R59,R58,R57,R55,R34,R38,R62 on PANEL. R11 on CONTRAST	+2
00567289	RPC05T 103 J	MTL.FILM RESISTOR	R109,R94,R101,R103,R104,R108,R217,R218,R219,R220,R221,R224,R75,R107,R14,R82,R35,R30,R29,R24,R23,R41,R15,R42,R13,R12,R11,R10,	54
			R9,R8,R7,R5,R18,R68,R89,R87,R83,R77,R36,R73,R39,R71,R90,R62,R52,R49,R48,R47,R46,R45,R44,R43,R72,R34 on MAIN.	+9
			R17,R3,R4,R13,R29,R9,R33,R27,R21 on PANEL	
00567556	RPC05T 105 J	MTL.FILM RESISTOR	R55,R81 on MAIN	2
00567034	RPC05T 121 J	MTL.FILM RESISTOR	R21 on MAIN	1
00566890	RPC05T 150 J	MTL.FILM RESISTOR	R13,R14,R15,R16,R17 on CONTRAST	5
00567045	RPC05T 151 J	MTL.FILM RESISTOR	R87,R88 on PANEL	2

RESISTOR					
	00567178	RPC05T 152 J	MTL.FILM RESISTOR	R100 on MAIN	1
	00567056	RPC05T 181 J	MTL.FILM RESISTOR	R7 on CONTRAST	1
	00567312	RPC05T 183 J	MTL.FILM RESISTOR	R51 on MAIN. R10 on CONTRAST	1
					+1
	00566912	RPC05T 220 J	MTL.FILM RESISTOR	R57, R233, R232, R228, R76, R56, R53, R33, R17, R16, R4, R3, R78 on MAIN. R42, R44, R7 on PANEL	13
					+3
	00567067	RPC05T 221 J	MTL.FILM RESISTOR	R85, R84, R83, R82, R81 on MIDI	5
	00567190	RPC05T 222 J	MTL.FILM RESISTOR	R191, R157, R124, R133, R193, R163, R225 on MAIN. R2, R5, R1, R6 on PANEL.	7
				R1, R2, R4, R5 on CONTRAST	+4
					+4
	00567323	RPC05T 223 J	MTL.FILM RESISTOR	R3 on CONTRAST	1
	00567456	RPC05T 224 J	MTL.FILM RESISTOR	R111 on MAIN	1
	00566923	RPC05T 270 J	MTL.FILM RESISTOR	R97, R98 on MAIN	2
	03236123	RPC05T 2R2 J	MTL.FILM RESISTOR	R37 on MAIN	1
	00566934	RPC05T 330 J	MTL.FILM RESISTOR	R58, R79 on MAIN.	2
				R52, R51, R53, R50, R49, R48, R46, R47 on PAN-EL	+8
	00567089	RPC05T 331 J	MTL.FILM RESISTOR	R105 on MAIN	1
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R8 on CONTRAST	1
	00567478	RPC05T 334 J	MTL.FILM RESISTOR	R110 on MAIN	1
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R102, R99, R96 on MAIN. R43, R45, R41, R40 on PANEL	3
					+4
	00567112	RPC05T 471 J	MTL.FILM RESISTOR	R18, R16, R14, R12, R10, R8, R20 on PANEL	7
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R31, R32 on MAIN	2
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R112 on MAIN	1
	00567501	RPC05T 474 J	MTL.FILM RESISTOR	R76, R35, R36, R37, R60, R70, R78 on PANEL	7
	00567256	RPC05T 562 J	MTL.FILM RESISTOR	R85, R66 on MAIN	2
	00567134	RPC05T 681 J	MTL.FILM RESISTOR	R80, R54 on MAIN	2
	00567001	RPC05T 750 J	MTL.FILM RESISTOR	R84 on MAIN	1
	00567012	RPC05T 820 J	MTL.FILM RESISTOR	R88, R86, R69, R67 on MAIN	4
	03233201	RPC50T 3R3 J	MTL.FILM RESISTOR	R6 on CONTRAST	1
	15419702	RR1220P-102-D 1K OHM 1/10W	MTL.FILM RESISTOR	R226, R227, R26 on MAIN	3
	15419701	RR1220P-103-D 10K OHM (CHIP)	MTL.FILM RESISTOR	R194, R135, R146, R129, R123, R147, R115, R156, R183, R159, R184, R189, R200, R167, R202, R203, R185, R186, R188, R172 on MAIN	20
	00120289	RR1220P-104-D 100K OHM (CHIP)	MTL.FILM RESISTOR		14
	15419706	RR1220P-122-D 1.2K OHM (CHIP)	MTL.FILM RESISTOR	R181, R144 on MAIN	2
	00564189	RR1220P-152-D 1.5KOHM (CHIP)	MTL.FILM RESISTOR	R22 on MAIN	1
	01013889	RR1220P-181-D	MTL.FILM RESISTOR	R27 on MAIN	1
	00897234	RR1220P-183-D (CHIP)	MTL.FILM RESISTOR	R211, R197 on MAIN	2
	01013890	RR1220P-221-D 220 OHM 1/10W	MTL.FILM RESISTOR	R196, R210 on MAIN	2
	00897245	RR1220P-222-D 2.2K (D)	MTL.FILM RESISTOR	R119, R161, R162, R120 on MAIN	4
	15419725	RR1220P-223D 22KOHM (CHIP)	MTL.FILM RESISTOR	R192, R176 on MAIN	2
	01018234	RR1220P-331-D	MTL.FILM RESISTOR	R173, R153, R130, R114, R28 on MAIN	5
	00564212	RR1220P-332-D 3.3KOHM (CHIP)	MTL.FILM RESISTOR	R148 on MAIN	1
	15419718	RR1220P-391-D	MTL.FILM RESISTOR	R209, R195 on MAIN	2
	15419726	RR1220P-393-D	MTL.FILM RESISTOR	R128, R168 on MAIN	2
	15419707	RR1220P-472-D 4.7KOHM (CHIP)	MTL.FILM RESISTOR	R113, R151, R152 on MAIN	3
	00564234	RR1220P-473-D 47K OHM (CHIP)	MTL.FILM RESISTOR	R132, R175 on MAIN	2
	01788834	RR1220P-622-D	MTL.FILM RESISTOR	R169, R121, R136, R154 on MAIN	4
	00899178	RR1220P-683-D (68K D-RANK)	MTL.FILM RESISTOR	R206, R215 on MAIN	2
	15419729	RR1220P-822-D	MTL.FILM RESISTOR	R174, R155, R142, R122 on MAIN	4
#	03237434	RR1220P-823-D	MTL.FILM RESISTOR	R179, R141 on MAIN	2
	01013878	RR1220Q-100-D	MTL.FILM RESISTOR	R182, R131, R116, R145, R160 on MAIN	5
	01345990	RR1220Q-120-D	MTL.FILM RESISTOR	R180, R143 on MAIN	2
	01122089	RR1220Q-220-D 22 OHM (CHIP)	MTL.FILM RESISTOR	R213, R204 on MAIN	2
	01455856	RR1220Q-680-D	MTL.FILM RESISTOR	R25 on MAIN	1
	15419703	RR1220R-184-D	MTL.FILM RESISTOR	R214, R205 on MAIN	2
#	03237445	RR1220R-274-D	MTL.FILM RESISTOR	R198, R212 on MAIN	2
	02564078	BPR28F 0.05 OHM K	MTL.PLATE RESISTOR	R19 on MAIN	1
	01457145	EXBE10C103J	RESISTOR ARRAY	RA8, RA1, RA43, RA21, RA22, RA26, RA27, RA33, RA37, RA38, RA39, RA42, RA14 on MAIN. RA2, RA3 on PANEL	13
					+2
	15409113	EXBV8V103JV	RESISTOR ARRAY	RA1 on PANEL	1
	03127101	RS4N-1000-J-2	RESISTOR ARRAY	RA23, RA24 on MAIN	2
#	03237412	RS4N-1001-J-2	RESISTOR ARRAY	RA49, RA53, RA54 on MAIN	3
	03127123	RS4N-1002-J-2	RESISTOR ARRAY	RA31, RA18, RA19, RA20, RA25, RA28, RA30, RA32, RA35, RA29 on MAIN	10
#	03237390	RS4N-22R0-J-2	RESISTOR ARRAY	RA9, RA48, RA56, RA55, RA7, RA46, RA11, RA2, RA3, RA4, RA6, RA10, RA12, RA13, RA15, RA16, RA17, RA36, RA5 on MAIN	19
#	03237401	RS4N-33R0-J-2	RESISTOR ARRAY	RA41, RA47, RA44, RA40, RA45 on MAIN	5
#	03237423	RS4N-47R0-J-2	RESISTOR ARRAY	RA52, RA50, RA51 on MAIN	3
	01903523	ERTJ1VR153J	THERMISTOR RESISTOR	R12 on CONTRAST	1

POTENTIOMETER

#	01904401	EVU F2A E25 B53	9M/M ROTARY POT.	VR1 on CONTRAST	1
	03345389	EVUF2LFL3B14	9M/M ROTARY POT.	VR9,VR10,VR11,VR12 on PANEL	4
	03124945	RK09L1140 50KRD L25 RR1	9M/M ROTARY POT.	VR1,VR2 on MAIN	2
	02901678	RK09L12D0 50KA L=25	9M/M ROTARY POT.	VR3 on MAIN	1
	01342134	EWA NKE C10 B14	30MM SLIDE POT.	VR1,VR2,VR3,VR4,VR8,VR6,VR5,VR7 on PANEL	8

CAPACITOR

	01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C15,C20 on PANEL	2
	01674512	ECJ1VB1H222K	CERAMIC CAPACITOR	C104 on MAIN	1
	00568456	ECJ1VF1C474Z	CERAMIC CAPACITOR	C17 on PANEL	1
	01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C216,C215,C208,C209,C290,C269,C266,C265,C259,C280,C282,C232,C289,C219,C291,C250,C248,C207,C149,C246,C279,C245,C287,C56,C80,C205,C78,C74,C117,C73,C72,C70,C69,C68,C67,C28,C57,C116,C47,C46,C45,C154,C29,C59,C95,C100,C101,C102,C103,C105,C107,C108,C109,C110,C111,C98,C79,C96,C115,C94,C93,C91,C112,C90,C89,C88,C87,C86,C85,C113,C84,C81,C114,C97,C157,C131,C30,C133,C135,C138,C143,C144,C145,C146,C44,C43,C42,C40,C39,C38,C35,C34,C31,C99,C153,C27,C156,C130,C158,C159,C160,C161,C162,C164,C165,C186,C189,C190,C198,C200,C201,C204,C155,C18,C9,C132,C12,C14,C126,C17,C8,C19,C21,C22,C23,C24,C25,C26,C16,C120,C125,C124,C123,C122,C10,C121,C7,C119,C118,C1,C3,C4,C5,C6 on MAIN.	144
	01674167	ECUV1H100DCV	CERAMIC CAPACITOR	C46,C2,C5,C21,C22,C24,C25,C27,C64,C45,C48,C49,C50,C60,C61,C63,C36 on PANEL	16
	01674334	ECUV1H101JCV	CERAMIC CAPACITOR	C66,C221,C274,C268,C239,C230,C229,C62,C206,C61,C192,C63,C65,C64,C212,C193 on MAIN	20
	15359707	ECUV1H104KN 0.1	CERAMIC CAPACITOR	C49,C168,C55,C53,C52,C51,C50,C166,C167,C54,C169,C176,C48,C177,C170,C175,C174,C173,C172,C171 on MAIN.	+8
	01674190	ECUV1H150JCV	CERAMIC CAPACITOR	,C9,C23,C12,C10,C8,C7,C6,C11 on PANEL	1
	01674389	ECUV1H221JCV	CERAMIC CAPACITOR	C5 on CONTRAST	8
	01674423	ECUV1H471JCV	CERAMIC CAPACITOR	C150,C179,C151,C129,C13,C15,C128,C178 on MAIN	16
	01674434	ECUV1H561JCV	CERAMIC CAPACITOR	C51,C56,C55,C54,C53,C52 on MIDI.	+6
	01909667	ECEA1CPZ101B	CHEMICAL CAPACITOR	C42,C39,C31,C32,C33,C34,C35,C30,C38,C29,C40,C28,C43,C41,C44,C37 on PANEL	2
	00568801	ECEA1EPZ470B	CHEMICAL CAPACITOR	C33,C32 on MAIN	1
	02562478	ECEA1HPZ101B	CHEMICAL CAPACITOR	C1 on CONTRAST	2
	15369109	ECEV0JA101SP	CHEMICAL CAPACITOR	C247,C260 on MAIN	14
	15369186	ECEV1VA4R7SR	CHEMICAL CAPACITOR	C218,C276,C185,C196,C225,C227,C243,C254,C275,C271,C262,C188,C235,C261 on MAIN	4
	01909690	RA2-16V471MC-T2	CHEMICAL CAPACITOR	C236,C234,C211,C210 on MAIN	3
	02891767	RC2-16V100M-T2	CHEMICAL CAPACITOR	C26,C19,C4 on PANEL	5
	01894601	RC2-16V101MB-T2	CHEMICAL CAPACITOR	C6,C7,C8,C9,C10 on CONTRAST	3
	02891756	RC2-6V331M-T2	CHEMICAL CAPACITOR	C242,C217,C181 on MAIN	2
	02898090	RFS-16V101MH3-T2	CHEMICAL CAPACITOR	C62,C3 on PANEL	1
	02121089	RFS-16V222M BLACK	CHEMICAL CAPACITOR	C47 on PANEL	1
#	02345034	RV2-35V4R7MU-RR2	CHEMICAL CAPACITOR	C1 on PANEL	1
	02345234	RV2-6V101M-R	CHEMICAL CAPACITOR	C263 on MAIN	2
	02904934	RV3-16V221MF80U-RR2	CHEMICAL CAPACITOR	C270,C267 on MAIN	1
	02564867	RV-35V470MG68-R	CHEMICAL CAPACITOR	C182 on MAIN	14
	02904923	RV3-6V331MF80-R	CHEMICAL CAPACITOR	C82,C288,C220,C137,C127,C83,C75,C58,C41,C36,C20,C11,C2,C92 on MAIN. C2 on CONTRAST	+1
	02565545	RV-6V331MG68-R	CHEMICAL CAPACITOR	C147,C180 on MAIN	2
#	03237334	ECHU1C153JX5	POLYEST. CAPACITOR	C3, C4 on CONTRAST	2
	02018178	ECHU1C223JX5	POLYEST. CAPACITOR	C37,C148,C152,C60 on MAIN	4
	01898412	ECHU1C392JX5	POLYEST. CAPACITOR	C801 on CDRW	1
	01898434	ECHU1H101JX5	POLYEST. CAPACITOR	C256,C273 on MAIN	2
	01899345	ECHU1H121JX5	POLYEST. CAPACITOR	C258,C249 on MAIN	2
	01784145	ECHU1H152JX5	POLYEST. CAPACITOR	C255,C272 on MAIN	2
	01905534	ECHU1H221JX5	POLYEST. CAPACITOR	C241,C244,C257,C195,C252,C224 on MAIN	6
	01896589	SK4-0J106MZ4-RA	TANTALUM CAPACITOR	C240,C194,C238,C203,C213,C231 on MAIN	6
				C187,C228 on MAIN	2
				C237,C214,C191,C223 on MAIN	4
				C197,C199,C233,C202 on MAIN	4

INDUCTOR, COIL, FILTER

	01904001	TSL1315S-101	CHOKE COIL	L1 on MAIN	1
	01893634	LQH4N151K04	CHOKE COIL	L1 on CONTRAST	1

INDUCTOR, COIL, FILTER					
	01565578	N1608Z601T01	FERRITE-BEAD	L13,L9,L11,L12,L7,L10 on MAIN. L3,L2,L4,L5,L6 on MIDI. L1 on PANEL	6 +1 +5
	02895645	FERRITE-CORE ZCAT2035-0930A	FERRITE-CORE		1
CRYSTAL, RESONATOR					
	01340745	MA-406 12MHZ	CRYSTAL	X4 on MAIN	1
#	03237456	MA-406 16.665MHZ TE24	CRYSTAL	X1 on MAIN	1
	02673134	MA-406 16.9344MHZ	CRYSTAL	X3 on MAIN	1
	00891801	MA-406 24.000MHZ TE24	CRYSTAL	X5 on MAIN	1
#	03345645	SG-9001JC D20P	OSCILLATOR	X2 on PANEL	1
ENCODER					
	01231367	EC16B24204 (L=15) (W/N&W)	ROTARY ENCODER	EN1 on PANEL	1
CONNECTOR					
	01908645	16FE-BT-VK-N	CONNECTOR	CN3 on MAIN	1
	02010867	16FE-ST-VK-N	CONNECTOR	CN1 on PANEL	1
	03121101	23FLZ-RSM1-TB	CONNECTOR	CN1 on CONTRAST	1
	02678523	26FFS-SP-T	CONNECTOR	CN3 on PAD	1
#	03237323	26FMN-BMTTN-A-TFT	CONNECTOR	CN14 on MAIN	1
#	03237467	52492-2620	CONNECTOR	CN4 on PANEL	1
	02237512	75501-0X0-B	CONNECTOR P/N	CN11,CN1 on MAIN. CN801 on CDRW	2 +1
	13369565	B11B-PH-K-S JST	CONNECTOR	CN5 on MAIN. CN3 on CONTRAST	1 +1
	13369570	B2B-PH-K-S (2P)	CONNECTOR	CN13 on MAIN	1
	13369594	B4B-XH-A	CONNECTOR	CN10 on MAIN	1
	13369515	B5B-PH-K-S JST	CONNECTOR	CN16 on MAIN	1
	13369566	B6B-PH-K-S JST(6P)	CONNECTOR	CN2 on PANEL	1
	03124967	KX14-50KL7.9H1	CONNECTOR	CN802 on CDRW	1
#	02561690	P/N 75341-0X0-B	CONNECTOR	CN9 on MAIN	1
	02349545	P/N 75401-0X0-B	CONNECTOR	CN8 on MAIN	1
WIRING, CABLE					
#	03345767	4x200-LCP-XHP	WIRING HDD-PW		1
#	03345745	40x300-P2.5	WIRING HDD-DT		1
	03126390	11x200-P2.0-PHR-PHR	WIRING		1
△	02563867	AC ASSY	WIRING		1
	03126389	CDRW	WIRING		1
#	03345812	BNCD-P=1.00-K-26-130	BAN CARD		1
	03345823	BNCD-P=1.25-K-16-200	BAN CARD		1
	02678756	BNCD-P=1.25-K-26-80	BAN CARD		1
TRANSFORMER					
	02019478	(7KQ5) 19832A	PULSE TRANS	L8 on MAIN	1
SCREW					
	40454956	SCREW M2x2.5	SPECIAL PAN ZNC		4
#	40562623	SCREW M2.5x3	BINDING MACHINE ZC		3
	40011056	SCREW 3x6	BINDING TAPTITE B ZC		31 +2
	40012534	SCREW 3x6	BINDING TAPTITE S FE BZC		19
	40342712	SCREW M3x6	PAN MACHINE W/ SW+SMALL PW BZC		2 +2
	40239889	SCREW M3x6	BUTTON-TRUS TAPTITE S BZC		4
	40011101	SCREW 3x8	BINDING TAPTITE B BZC		16
	40011101	SCREW 3x8	BINDING TAPTITE B BZC		4
#	40563590	SCREW 3x8	BINDING TAPTITE B NI		6
	40011312	SCREW 3x8	BINDING TAPTITE P BZC		5
	40013067	SCREW M3x8	PAN MACHINE W/ SW+SMALL PW ZC		7
	40013067	SCREW M3x8	PAN MACHINE W/ SW+SMALL PW ZC		4
	40458345	SCREW M4x8	PAN MACHINE W/ SW+SMALL PW NI		1
	40342989	SCREW M4x8	PAN W/EX.TOOTH WASHER		1
	40459590	SCREW M4x20	HEX SOCKET HEAD NI		10
#	40561745	SCREW 5x10	BINDING TAPPING B1 BZC		4
	40450367	SCREW 6-32UNC	1008SR/KM003		4
PACKING					
#	03561256	BOTTOM PAD L			1

PACKING

#	03561267	BOTTOM PAD R	1
#	03454067	PACKING CASE	1
	03121523	PAD UPPER	1
#	03561223	UPPER PAD L	1
#	03561245	UPPER PAD R	1

MISCELLANEOUS

	40238545	CAUTION LABEL	SHOCK HAZARD & ICES	1
	00902790	CORD BUSHING	EDS-1208U	1
	01455523	CORD BUSHING	EDS-1717U	1
#	03455801	CORD KEEP	PM-375	1
#	03345878	CUSHION		3
	02562956	DC FAN MOTOR	9A0812L403	1
	40230812	DOUBLE SIDED ADHESIVE TAPE	NITTO #541 10X10	4
	40122534	DOUBL-FACE TAPE #500	W3MM 20M 136P	1
	22355334	FOOT MKS	235-334	4
	12199599	GRAND TERMINAL	M3	2
	12189804	GROUNDING TERMINAL	M1700	4
#	03346289	IC SOCKET	61816-61103	1
#	03455790	INSULATING SHEET		1
	40016512	INSULOK TIE	80M/M T-18S	2
	40016545	INSULOK TIE	SKM-1	1
	12189817	PCB SPACER	RSPLS-10U	1
#	40564990	POP LABEL		1
#	03239978	PRESSURE SHEET SENSOR		1
#	03239989	PWB SPACER	WLS-10-0	1
	02908967	SHIELD CUSHION		1
#	03456290	SPACER		3

ACCESSORIES (STANDARD)

#	72348512	OWNER'S MANUAL	JAPANESE	1
#	72349190	OWNER'S MANUAL	ENGLISH	1
△	03340956	AC CORD SET	100V YA-101/YP-3NB	1
△	00894378	AC CORD SET	120V SP301+IS14 SJT18/3	1
△	00894389	AC CORD SET	230V SP22+IS14 H05VV-F3G1.0	1
△	00907001	AC CORD SET	240VE KP-610 GTTBS-3 KS-31A	1
△	23495124	AC CORD SET	240VA SC-144-JO1 ES303-10HMA	1
#	03456434	CD-ROM	BACKUP DATA	1
#	03456412	CD-ROM	SAMPLE DATA	1
	40563756	LEAFLET HDD CAUTION (COPY)	JAPANESE/ENGLISH	1
	*****	LEAFLET USER TOUROKU ANNAI	MANUAL	1
#	40564212	SHORT-CUT SEAL		1
#	03459356	SHORT PIN	TERMINAL	1
	40232334	WARRANTY CARD	(JAPAN ONLY)	1

PARTS LIST (MV8-OP1)

SAFETY PRECAUTIONS:

The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

CONSIDERATION ON PARTS ORDRING

When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)

CHASSIS					Q'TY
#	03342123	AUDIO I/O HOLDER			1
JACK, EXT TERMINAL					
	03234456	6.5MM JACK	HTJ-064-12D	JK2,JK3,JK4,JK5,JK6,JK1 on ANALOG	6
#	03237378	RCA(PIN) JACK	YKC21-3895	JK7 on DIGITAL	1
	02455890	D-SUB CONNECTOR	YKF42-8039	CN4 on DIGITAL	1
PCB ASSY					
#	72346845	ANALOG BOARD ASSY			1
#	72346856	DIGITAL BOARD ASSY			1
IC					
	02234167	AK4393-VF-E2	IC (DAC)	IC4,IC5,IC8 on ANALOG	3
	01679090	TC74VHC08FT(EL)	IC (CMOS)	IC30 on ANALOG	1
	03016167	TC74VHCT08AFT(EL)	IC (CMOS)	IC11 on ANALOG	1
	02897690	OP275GS	IC (BIPOLAR OP)	IC2,IC9,IC10,IC7,IC3,IC6 on ANALOG	6
	15199286	AN78L05M-(E1)	IC (REGULATOR)	IC34,IC33,IC32 on ANALOG	3
	03129934	TC7SET04FU(TE85L)	IC (CMOS)	IC24 on DIGITAL	1
	01349590	TC7WU04FU(TE12L)	IC (CMOS)	IC26 on DIGITAL	1
	01348956	TC7SH00FU(TE85L)	IC (CMOS)	IC27 on DIGITAL	1
	01679023	TC74VHC157FT(EL)	IC (CMOS)	IC13,IC20 on DIGITAL	2
	01897967	TC74VHC74FT(EL)	IC (CMOS)	IC22 on DIGITAL	1
	01908701	TC74VHC14FT(EL)	IC (CMOS)	IC21 on DIGITAL	1
	02456756	TC74VHCT04AFT(EL)	IC (CMOS)	IC18 on DIGITAL	1
	02901578	HD74LV161ATELL	IC (CMOS)	IC29,IC23 on DIGITAL	2
	00564690	TC9246F(ELP)	IC (PLL)	IC25 on DIGITAL	1
	01458445	UPC29M33T-T1	IC (REGULATOR)	IC16 on DIGITAL	1
	03015701	AD1895A	IC	IC15,IC17,IC14,IC12,IC19 on DIGITAL	5
#	03237545	LC89056W-E	IC	IC28 on DIGITAL	1
	03237556	GP1FA513RZ	IC (OPTICAL CONNECTOR RX)	CN5 on DIGITAL	1
TRANSISTOR					
	00901523	2SA1681 (SC-62)(POW SW)	TRANSISTOR	Q12 on ANALOG	1
	01121289	2SC4081 T106 QRS	TRANSISTOR	Q10,Q11 on ANALOG	2
	15319115	2SC4213-A(TE85L)	TRANSISTOR	Q16,Q1,Q2,Q3,Q4,Q5,Q6,Q7,Q9,Q13,Q14,Q15 on ANALOG	12
	15329533	RN2307(TE85R)	TRANSISTOR	Q8 on ANALOG	1
DIODE					
	01780045	RB051L-40	SCHOTTKY DIODE	D3 on DIGITAL	1
	02908890	FTZ6.8E T148	ZENER DIODE	D2,D1,D4 on DIGITAL	3
	01897189	MA147-(TX)	DIODE ARRAY	DA1 on ANALOG	1
RESISTOR					
	01788834	RR1220P-622-D	MTL.FILM RESISTOR	R45,R20,R2,R6,R16,R35,R49,R68,R72,R82,R86,R31 on ANALOG	12
	15399707	MCR25 JZH J 151	MTL.FILM RESISTOR	R42,R85,R84,R79,R78,R71,R70,R58,R57,R93,R47,R92,R4,R34,R33,R27,R26,R19,R18,R13,R12,R5,R48,R41 on ANALOG	24
	15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R136,R138,R137 on ANALOG	3
	15419701	RR1220P-103-D 10K OHM (CHIP)	MTL.FILM RESISTOR	R76,R11,R91,R90,R77,R55,R53,R40,R39,R24,R10,R25 on ANALOG	12
	01788856	RR1220P-912-D	MTL.FILM RESISTOR	R17,R75,R83,R9,R23,R32,R38,R46,R3,R52,R69,R89 on ANALOG	12
	00120289	RR1220P-104-D 100K OHM (CHIP)	MTL.FILM RESISTOR	R28,R7,R21,R36,R43,R50,R61,R73,R80,R87,R94,R14 on ANALOG	12

RESISTOR

	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R59 on ANALOG,R132 on DIGITAL	1 +1
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R60 on ANALOG	1
	00567178	RPC05T 152 J	MTL.FILM RESISTOR	R65 on ANALOG	1
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R15,R22,R29,R37,R44,R51,R62,R74,R81,R88, R95,R8 on ANALOG	12
	00567289	RPC05T 103 J	MTL.FILM RESISTOR	R99,R98,R97,R64,R63 on ANA- LOG,R120,R118,R116,R114,R112,R123 on DIGITAL	5 +6
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R66 on ANALOG,R125 on DIGITAL	1 +1
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R54,R56 on ANALOG	2
	00564189	RR1220P-152-D 1.5KOHM (CHIP)	MTL.FILM RESISTOR	R126 on DIGITAL	1
	00564201	RR1220P-224D 220K OHM (CHIP)	MTL.FILM RESISTOR	R124 on DIGITAL	1
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R122,R105,R107,R108,R109,R110,R111,R113 ,R115,R117,R121,R119 on DIGITAL	12
	00567001	RPC05T 750 J	MTL.FILM RESISTOR	R128 on DIGITAL	1
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R130 on DIGITAL	1
	00567256	RPC05T 562 J	MTL.FILM RESISTOR	R129 on DIGITAL	1
	00567345	RPC05T 333 J	MTL.FILM RESISTOR	R131 on DIGITAL	1
	00567556	RPC05T 105 J	MTL.FILM RESISTOR	R133 on DIGITAL	1
	01122089	RR1220Q-220-D 22 OHM (CHIP)	MTL.FILM RESISTOR		2
	15419704	RR1220P-101-D 100 OHM (CHIP)	MTL.FILM RESISTOR	R127 on DIGITAL	1
	01898345	ERY43SA125VA	THERMISTOR	R134 on DIGITAL	1

CAPACITOR

	01674167	ECUV1H100DCV	CERAMIC CAPACITOR	C22,C50,C35,C55,C27,C62,C68,C88,C93,C10 0,C105,C41 on ANALOG,C153,C173,C174 on DIGITAL	12 +3
	01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C109,C111,C113,C114,C177,C178,C184,C18 1,C183,C61,C187,C180,C37,C6,C7,C9,C11,C 14,C15,C19,C72,C34,C108,C42,C46,C84,C10 6,C98,C29,C94,C80,C77,C75,C70,C56,C4 on ANALOG	36 +3 3
	01898434	ECHU1H101JX5	POLYEST. CAPACITOR	,C141,C165,C164,C163,C162,C159,C157,C15 5,C147,C146,C145,C144,C166,C142,C156,C1 40,C137,C136,C132,C131,C129,C128,C125,C 124,C121,C119,C118,C117,C143,C149,C171, C175,C170 on DIGITAL	18
#	01909667	ECEA1CPZ101B	CHEMICAL CAPACITOR	C53,C23,C24,C28,C36,C38,C83,C101,C63,C1 2,C51,C58,C102,C96,C90,C89,C65,C45 on ANALOG	2
	02345034	RV2-35V4R7MU-RR2	CHEMICAL CAPACITOR	C5,C8 on ANALOG	1
	02345145	RV2-16V101M-R	CHEMICAL CAPACITOR	C69 on ANALOG	5
	02562478	ECEA1HPZ101B	CHEMICAL CAPACITOR	C182,C67,C179,C185,C112 on ANALOG	12
	02904923	RV3-6V331MF80-R	CHEMICAL CAPACITOR	C54,C21,C26,C32,C49,C60,C66,C87,C92,C99 ,C104,C40 on ANALOG	1 +3
	03126623	RFS-16V471MI6-T4	CHEMICAL CAPACITOR	C33 on ANALOG,C186,C161,C120 on DIGI- TAL	2
	01896589	SK4-0J106MZ4-RA	TANTALUM CAPACITOR	C13,C10 on ANALOG	12
	01674190	ECUV1H150JCV	CERAMIC CAPACITOR	C43,C95,C85,C82,C81,C57,C47,C44,C30,C20 ,C17,C16 on ANALOG	1
	02568812	ECJ2FB1C474K	CERAMIC CAPACITOR	C148 on DIGITAL	1
	01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C152 on DIGITAL	4
	02345234	RV2-6V101M-R	CHEMICAL CAPACITOR	C167,C151,C150,C172 on DIGITAL	12
				C135,C134,C127,C176,C126,C123,C139,C15 4,C138,C122,C116,C115 on DIGITAL	

INDUCTOR, COIL, FILTER

	01565578	N1608Z601T01	FERRITE-BEAD	L25 on DIGITAL	1
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CRYSTAL, RESONATOR

	01455201	MA-406 12.288MHZ	CRYSTAL	X1 on DIGITAL	1
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CONNECTOR

	02120212	28FE-BT-VK-N	CONNECTOR	CN2 on ANALOG,CN3 on DIGITAL	1 +1
#	02561690	P/N 75341-0X0-B	CONNECTOR	CN1 on ANALOG	1

WIRING, CABLE

#	03342256	WIRING AUDIO I/O	WIRING		1
	03237723	BAN CARD	BNCD-P=1.25-K-28-50		1

SCREW

40011312	SCREW 3x8	BINDING TAPTITE P BZC	2
40344134	SCREW M4-40x7.9	HEX SOCKET NI	2
40016412	M9x13.5x0.45	JACK WASHER	6

PACKING

#	03454089	PACKING CASE	1
#	03455134	OUTER PACKING CASE	1

MISCELLANEOUS

#	03342134	PWB SPACER	KGLS-18S	2
#	40348289	CAUTION LABEL	REC ESD CAUTION SEAL EIA	1

ACCESSORIES (STANDARD)

#	72346823	OWNER'S MANUAL	JAPANESE	1
#	72450301	OWNER'S MANUAL	ENGLISH	1
	40232334	WARRANTY CARD	(JAPAN ONLY)	1

REMOVING THE MAIN BOARD



Use the following procedure to disassemble the unit as shown in the disassembly diagram.

1. Remove the bottom cover (1). (bottom cover screw 'b')
2. Remove side panels L (22) and R (23). (side panel screw 'l' and 'n')
3. Remove the power supply cover (15), and remove the wiring to the main board. (side panel screw 'c')
4. Remove the rear panel jack nuts/washers, and the PHONO, DIGITAL A,B, and USB screws (rear panel screws 'i' and 'd').
5. Remove screw 'b' which fastens the main board (14).
6. Remove all wiring connected to the main board.
7. Remove screw 'k' from the rear panel (26), then lift up the rear panel and remove the main board.

IDENTIFYING THE VERSION NUMBER

1. Turn on the power of the MV-8000 while holding down the [SHUTDOWN] button.
2. The screen will show the software version and checksum.

System: the software version of the main system.

Boot: the version of the updater and version display software etc.

Sub: the version of the software within the sub-CPU of the panel board.

* The version is also shown in the main screen when you start up Test mode.

SAVING AND LOADING THE CONTENTS OF THE HARD DISK

Required items

- A computer with a USB connector (with sufficient storage space to back up the contents of the MV-8000's hard disk)
 - USB cable
1. Turn on the power of the MV-8000 and start it up in normal operating mode.
 2. Use a USB cable to connect the MV-8000 to your computer.
 3. Press the [DISK/USB] button to enter the Disk/USB menu, and press the [F3] (USB) button.
 4. Press the [F5] (CONNECT) button, and the MV-8000's hard disk will be detected by your computer.
 5. If you want to back up the data, copy all folders/files from the root folder of the MV-8000's hard disk to your computer.
If you want to restore the data, copy all MV-8000 folders/files backed up on your computer into the MV-8000.



Do not modify the folder structure of the MV-8000's hard disk.

6. To break the connection with your computer, first break the connection on your computer, and then press the MV-8000's [F5] (Disconnect) button.

TEST MODE

Required items

- AC cord
- Foot Switch (FS-5U or DP-2)
- Blank CD-RW or CD-R Disk
- 2HD Floppy Disk (formatted)
- 2DD Floppy Disk (formatted)
- MV8-OP1
- MV8-VGA
- R-BUS Device
- A computer that is running Windows XP, and which fulfills the MV-8000's operating requirements (with sufficient storage space to back up the contents of the MV-8000's hard disk)
- CD Player
- Powerd Monitor Speaker
- Headphones
- PS/2 Mouse

Start the Test mode

1. Turn on the power of the MV-8000 while holding down the [MENU] and [F3] buttons.
2. After the MV-8000's start-up screen appears, the upper part of the screen will show the software version number and checksum.
3. The lower part of the screen will show the menu of test items.
Use the cursor to select an item, and press the [Execute] (F5) button to execute.

* If the MV8-VGA is installed and you want to check the PS/2 mouse, connect the mouse before you start up.



For test items that show [PREV], [GOTO TOP], and [NEXT] in the bottom line of the screen, use [GOTO TOP] to move to the Menu screen, [PREV] to move to the previous test item, and [NEXT] to move to the next test item.

Exit the Test mode

Turn off the power of the MV-8000.

Explanation of each test item

Device Auto Check

This automatically checks the main devices.

When you press the [Execute] (F5) button, the following checks will begin.

SDRAM Check

Display: OK/NG

Devices related to the test: Main:IC2, IC8

XV Chip Check

Display: OK/NG

Devices related to the test: Main: IC5, IC7, IC10, IC12, IC13, IC14, IC15, IC28, IC29, IC34, IC65, X3

ESP4 Chip Check

Display: OK/NG

Devices related to the test: Main: IC18, IC28, IC30, IC32, IC33

PPC Chip Check

Display: OK/NG

Devices related to the test: Main: IC11, IC18, IC31

BA Chip Check

Display: OK/NG

Devices related to the test: Main: IC27, IC31

DIMM Check

Display: OK/NG/NO ***MB ***** (SPD)

Devices related to the test: Main: IC27, 31

Displays the DIMM capacity and SPD information.

Wave Bus Check

Display: OK/NG

Devices related to the test: Main: IC27, IC28

Writes a test pattern to DIMM via BA, and verifies via XV.

HDD Check

Display: OK/NG ProductName ModelNumber

Devices related to the test: Main: IC36, IC39, IC40, IC43, IC45, IC62, IC63, HDD

Shows the name of the drive manufacturer and the model.

CD-RW Check

Display: OK/NG ModelNumber

Devices related to the test: Main: IC36, IC39, IC40, IC43, IC45, IC62, IC63, CD-RW

Obtains drive information, and displays the model number in the screen.

FDD Check

Display: OK/NG

Devices related to the test: Main: IC49, 63, 64, X5, FDD

* This test requires a formatted 2HD floppy disk.

Insert a formatted 2HD floppy disk beforehand, and a write/verify test will be performed.

MV8-VGA Check

Display: OK/NG

Devices related to the test: Main: IC1, Panel: IC1, MV8-VGA

* This test requires the MV8-VGA.

If the MV8-VGA is correctly installed, the screen will indicate "OK".

If "NG" is shown even if the MV8-VGA is installed, check the MV8-VGA's connector and wiring.

PS/2 Mouse Detect Check

Display: OK/NG

Devices related to the test: Panel: IC1, MV8-VGA

* This test requires the MV8-VGA and a PS/2 mouse.

The Device ID and Device Status of the PS/2 mouse will be obtained, and if communication with the mouse could be established, a result of "OK" will appear.

MIDI Connect Check

Display: OK/--

Devices related to the test: Main: IC35, 37, 38

* This test requires a MIDI cable.

1. Use a MIDI cable to make a loop connection between MIDI OUT A <---> MIDI IN.
If the messages sent from MIDI OUT A were correctly received at MIDI IN, a result of "OK" will appear.
2. Re-connect the MIDI cable to MIDI OUT B <---> MIDI IN.
If the messages sent from MIDI OUT B were correctly received at MIDI IN, a result of "OK" will appear.

LCD Check

Display: OK/NG

Devices related to the test: Main: IC17, 23, LCD

1. A test pattern will be displayed. Turn the contrast adjustment knob, and verify that the gradations can be distinguished.
2. Press the [NEXT] (F5) button. All pixels of the LCD will turn "black."
3. Next, press any button other than PAD. All pixels of the LCD will turn "off."
4. Press any button other than PAD to proceed to the next test.

Encoder Check

Display: OK/NG

Devices related to the test: Panel: IC1

Turn the rotary encoder to left and right. The "OK" result will appear when you turn the encoder 24 clicks in each direction.

LED Check

Display: OK/NG

Devices related to the test: Panel: IC1

1. Enter this screen and press the [PLAY] button. All LEDs will light. Press the [PLAY] button once again, and they will all go dark.
2. Press the [PLAY] button an additional time, and the LEDs will light one by one in sequence.
3. Press the [STOP] button, and the LEDs will light in the reverse order of when you pressed the [PLAY] button.
4. After the last LED has lit, press the [PLAY] button to return to the "all lit" state.

Switch Check

Display: OK/NG

Devices related to the test: Panel: IC1

This checks the operation of all switches on the panel board.

1. In the screen, switches that have not yet been pressed are shown as white rectangles. When a switch has been pressed, its display will change to a black rectangle.
2. If you press two or more switches simultaneously, a warning of "More than one Sw pressed!" will appear.
3. When all switches have been checked, you will automatically proceed to the next item.
4. To execute this test and move to the next item, turn the encoder toward the right for one and a half revolutions or more. To return to the preceding item, turn the encoder toward the left for one and a half revolutions or more.

A/D Check

Display: OK/NG

Devices related to the test: Panel: IC1

This tests the operation of the rotary volumes and sliders on the panel board.

1. Move each knob or slider through the "MIN" --> "MAX" --> "MIN" positions.
2. If the movement was detected correctly, the display will indicate "OK."

Velocity PAD Check

Display: OK/NG

Devices related to the test: Panel:IC1

1. Strike each of the sixteen velocity pads to check the sensitivity.
2. The small rectangle detects a soft strike, and the large rectangle detects a strong strike.
3. If both were detected, the rectangle will turn black.

Drive Check

FDD Check

Devices related to the test: Main:IC49,63,64, X5

* This test requires a formatted 2DD floppy disk.

Set the write protect tab of the blank 2DD floppy disk in the "ON" position, insert it into the FDD, and press the [FD (2DD)](F5) button. The 2DD floppy disk will be detected, and a Write Protect test will be performed.

CD-R/RW Drive Check

* This test requires a blank CD-R disc or a CD-RW disc.

1. Insert the blank CD-R disc or the CD-RW disc into the CD-RW drive, and press the [BURN T-CD](F2) button. A test CD-R (or CD-RW) will be created.
2. Then press [CD READ](F4) to perform a Read test on the test CD-R (or CD-RW) that was created by [BURN T-CD].
3. If the CD could be read correctly, the "OK" result will appear.

FootSw Check

Display: OK/--

Devices related to the test: Main:IC38

* This test requires a foot switch such as the FS-5U or DP-2.

When the "ON" and "OFF" positions of the foot switch have been detected, the "OK" result will appear.

Sound Check

Devices related to the test: Main:IC30,32,50,51,52,53,54,55,56,Q9,10,13,14

* This test requires an audio output device such as a CD player, and monitoring equipment such as speakers or headphones.

1. Routing A: The sound that is input from ANALOG INPUT will be output from MASTER, PHONES, and DIGITAL OUT without being affected by anything other than SENS.
2. To switch between MIC/LINE and PHONO, insert or remove the plug from the MIC/LINE jacks.
3. Input an audio signal into ANALOG INPUT, and use your headphones or speakers to monitor the output from each OUTPUT.

Mute Check

Devices related to the test: Main:IC6, Q3, Q4, Q6, Q7, Q8, Q11, Q12, Q15, Q16, D7

1. Each time you press the [MUTE SW] button, the Mute status will alternate "ON" --> "OFF" --> "ON" --> "OFF".
2. Verify that sound ceases to be output from OUTPUT when "MUTE ON." It takes several seconds from when you switch "MUTE ON" --> "OFF" until audio will be output.

USB Connect Check

Devices related to the test: Main:IC61, IC66

* This test requires a computer with a USB connector and a USB cable.

1. Use the USB cable to connect the MV-8000 to your computer, and press the [Connect] (F4) button.
2. After the computer has detected the MV-8000 and connection, break the connection from your computer.

3. When you then press either the [GOTO TOP], [PREV], or [NEXT] button to exit this test, the MV-8000 will break the connection.

MV8-OP Check

* This test requires the MV8-OP1, an audio output device such as a CD player, monitoring equipment such as speakers or headphones, an R-BUS device such as the VS-2400CD, and various audio cables.

Routing G: The input from Digital In, R-BUS In, or Analog In will be output to all channels of MULTI OUTPUT 1 - 6 and R-BUS Out.

Mute Check

Devices related to the test: MV8-OP1:IC1 - IC18, IC12 - IC18, IC21 - IC25, IC32 - IC34

Press the [MUTE SW] (F4) button, and verify that the sound from MULTI OUTPUT 1 - 6 is muted.

Input Check

Devices related to the test: MV8-OP1:IC11, IC19 - IC29

1. Connect cables to the OPT/COAX/R-BUS digital input and to the analog input, and input audio data.
2. In the screen, successively select [COAX], [OPT], [R-BUS], and [Analog], and verify that the same sound as the input is being output from MULTI OUTPUT 1 - 6 or R-BUS Out.
3. When you select R-BUS, the Slave Mode will also be checked, so set the word clock of your R-BUS device to "INT."

PLL Lock Check

Devices related to the test: MV8-OP1:IC21, IC25

1. Connect an R-BUS cable to your R-BUS device, and start up the R-BUS device.
2. Set the word clock of the R-BUS device to "INT," and verify that the MV-8000's display changes from "Unlock" --> "Lock."

Error Status Check

Devices related to the test: MV8-OP1:IC11, IC26, IC28, X1

1. Use a coaxial cable to connect a device that provides a digital output, and then unplug that cable.
2. Verify that the MV-8000's display changes from "Unlock" --> "Lock."

R-BUS U-ART Check

Devices related to the test: MV8-OP1:IC18, IC21

Use a copper wire etc. to short TX (pin 14) and RX (pin 25) of the R-BUS, and check the conductivity.

MV8-OP2 Detect

Display: OK/NG

Devices related to the test: Main:IC1, Panel:IC1, MV8-VGA

If the MV8-VGA is connected, the display will indicate "OK."

PS/2 Mouse Detect

Display: OK/NG

Devices related to the test: Panel:IC1, MV8-VGA

The MV-8000 will detect whether a PS/2 mouse is connected. If a mouse is detected, the display will indicate "OK."

RESTORING THE SYSTEM PARAMETERS TO THE FACTORY SETTINGS



User settings are saved on the hard disk, but they will be initialized when you execute the following procedure.

1. Turn on the power of the MV-8000, and start it up in the normal way.
2. Press the [SYSTEM] button to enter the System menu, and press the [F5] (SYSTEM INFO) button.
3. When you press the [F3] (INITIALIZE) button, all parameters in the system menu will be initialized to their factory-set condition.

PROCEDURE FOR UPDATING THE SYSTEM SOFTWARE

Updating via CD-ROM

Required items

- UPDATE CD-ROM (#17041402)

Procedure

1. While holding down the MV-8000's [INSTRUMENT] and [DISK/USB] buttons, press the [POWER] switch. CD-ROM update mode will start up.
2. Press the eject button of the CD-RW drive to open the CD tray, and insert the update CD-ROM.
3. Close the tray, and the update file will automatically be loaded from the CD-ROM.
4. The tray will open automatically when loading is completed, but the update process will continue, so be careful not to turn off the power yet.
5. When the update is completed, the version number will be displayed, and all LEDs will blink.
6. Press the [POWER] switch to turn off the power of the MV-8000.

Updating via USB

Required items

- UPDATE CD-ROM (#17041402)
- A computer that is running Windows XP, and which fulfills the MV-8000's operating requirements
- USB Cable

Procedure

1. Copy the program file "MV8000.PRG" from the update CD-ROM to your computer.
2. Use a USB cable to connect your computer to the MV-8000, and turn on the power switch of the MV-8000.
The MV-8000 will start-up in its normal state.
3. Press the [DISK/USB] button.
4. Press the [F3 (USB)] button.
5. Press the [F5 (Connect)] button.
A message of "Save Project?" will appear; simply press the [F1 (No)] button.

6. When the MV-8000 hard disk has been detected by your computer, copy "MV8000.PRG" to the root directory of the MV-8000's hard disk.
If an identically-named file exists, overwrite it.
7. When the copy has been completed, break the connection to the MV-8000 from your computer (use "Remove Hardware," or drag the drive into the trash). Then press the MV-8000's [F5 (Disconnect)] button.
8. Turn off the power of the MV-8000.
9. While holding down the [SEQUENCE] and [DISK/USB] buttons, turn on the power of the MV-8000 once again.
The MV-8000 will start up in Hard Disk Update mode.
10. The update file on the hard disk will be loaded automatically, and the update will be performed.



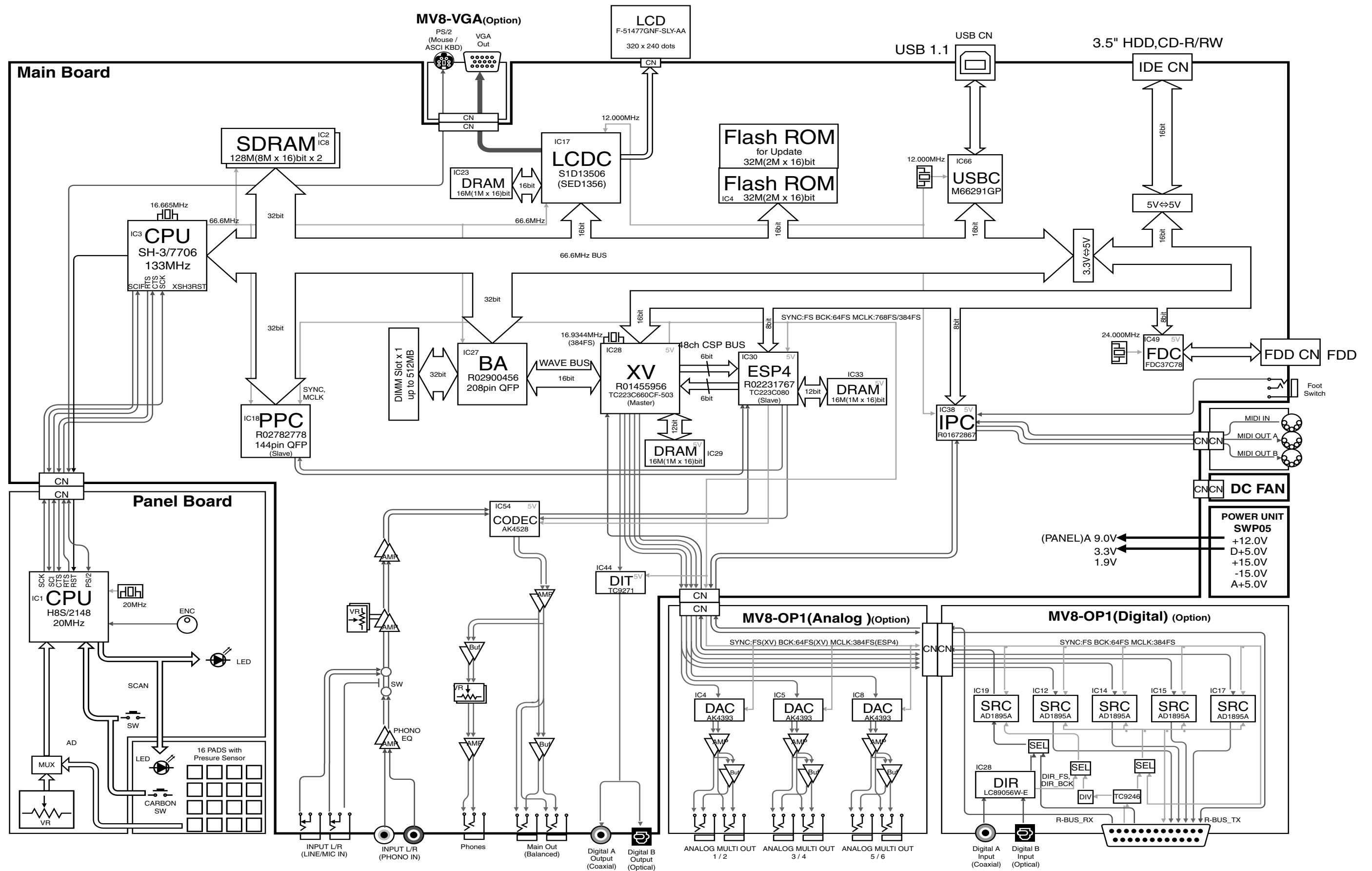
Never turn off the power while the update is in progress.

11. When the update has been completed, the version number will be displayed, and all LEDs will blink.
12. Turn off the power of the MV-8000.

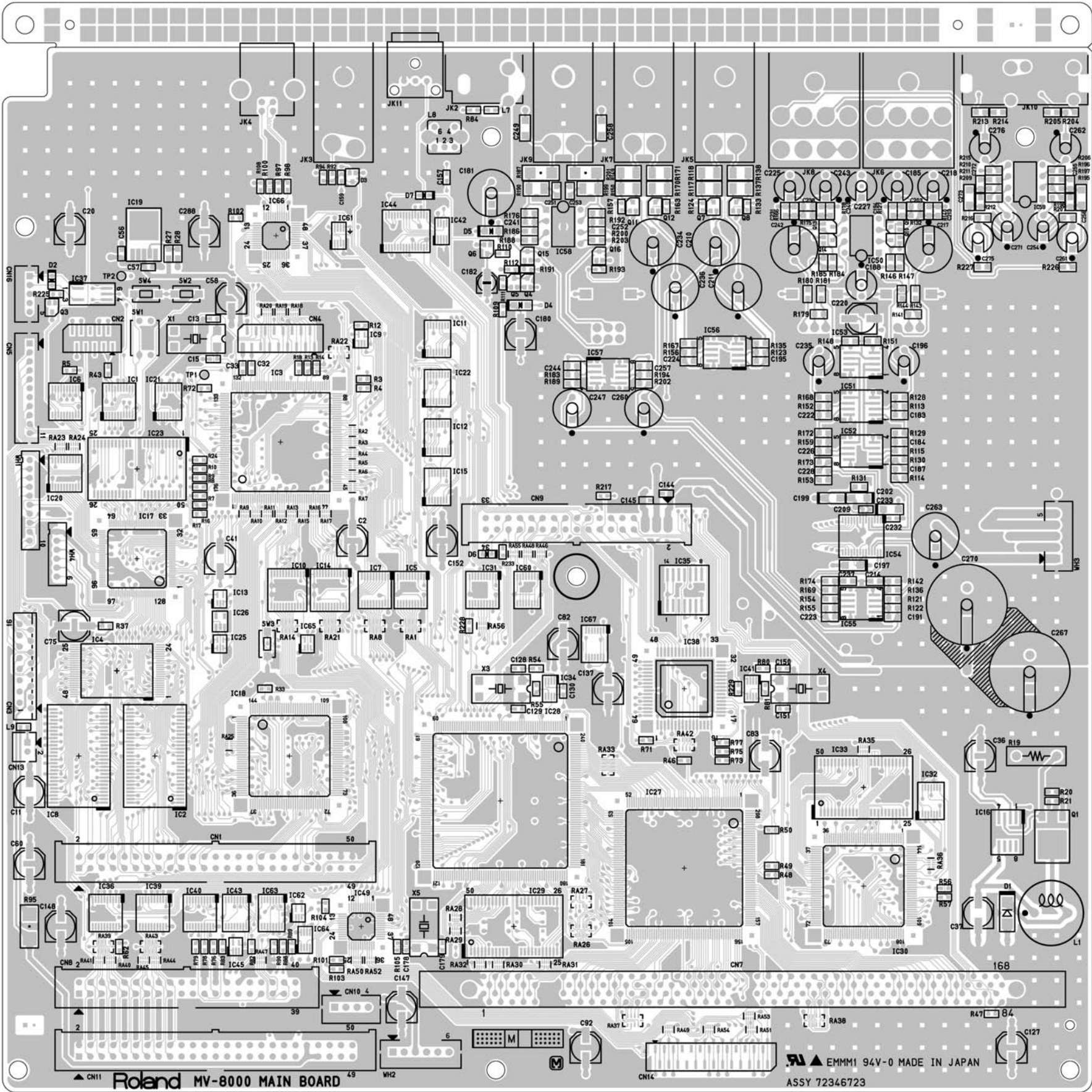


When you fail in update, start the updating from the beginning.

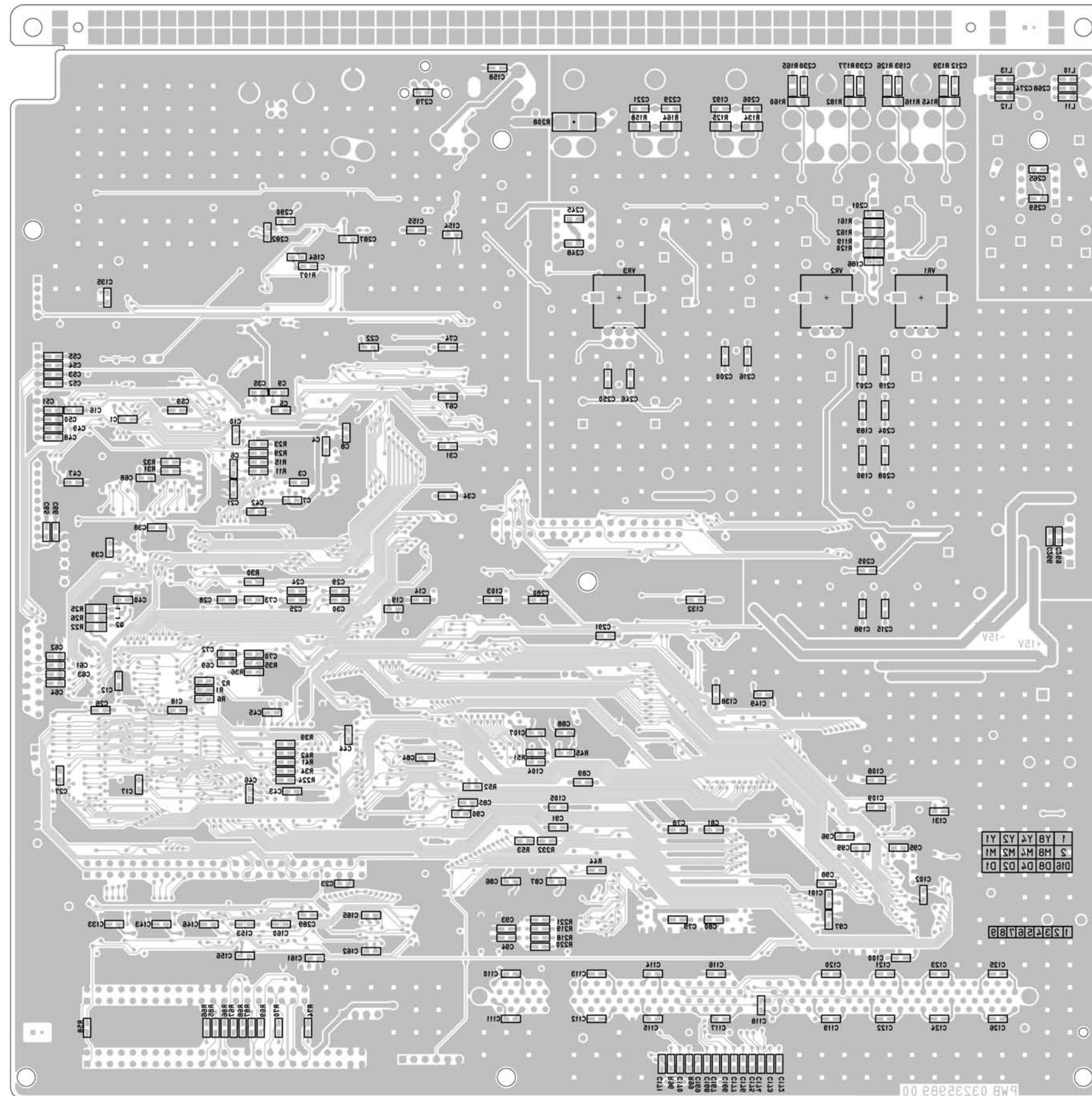
BLOCK DIAGRAM



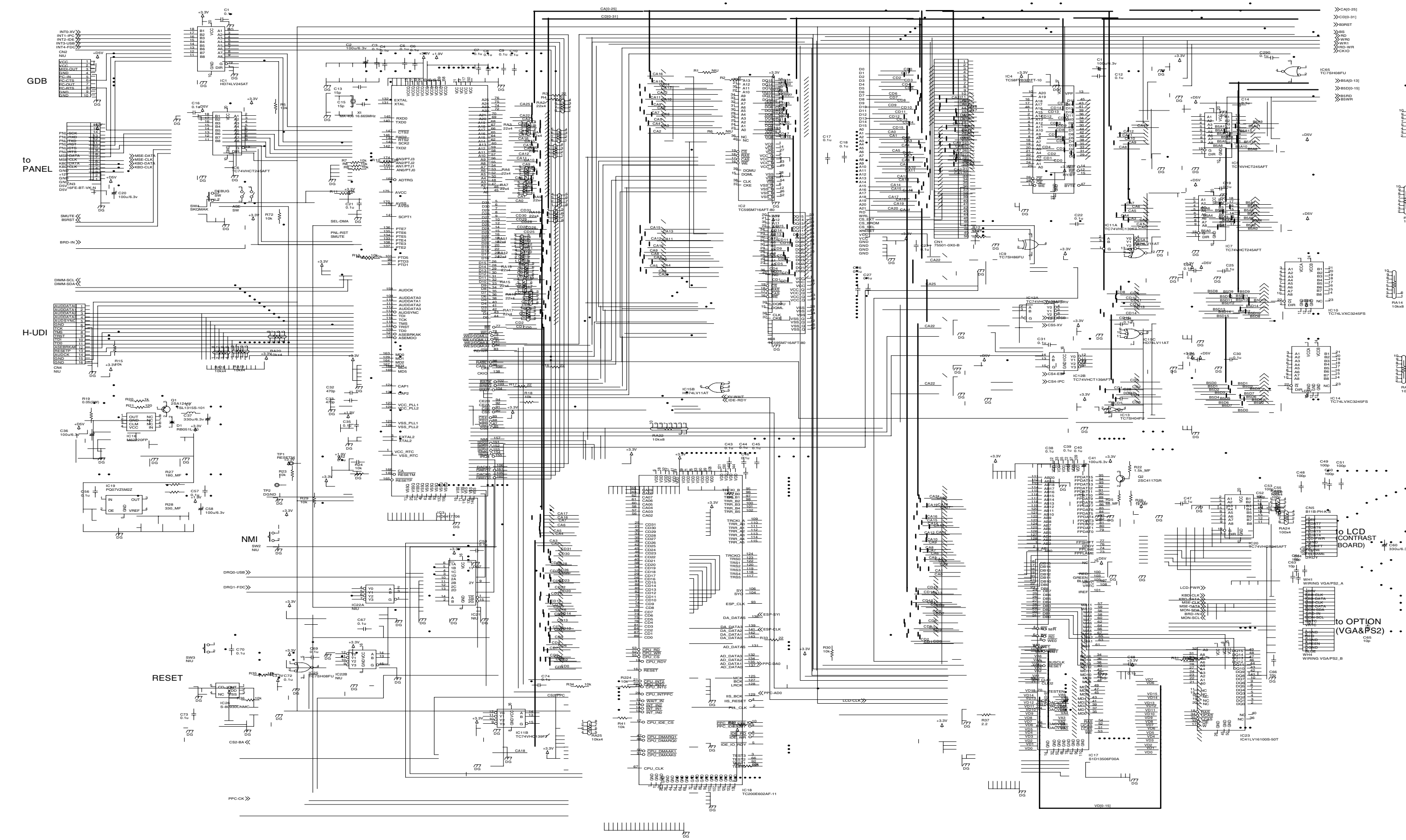
CIRCUIT BOARD (MAIN)



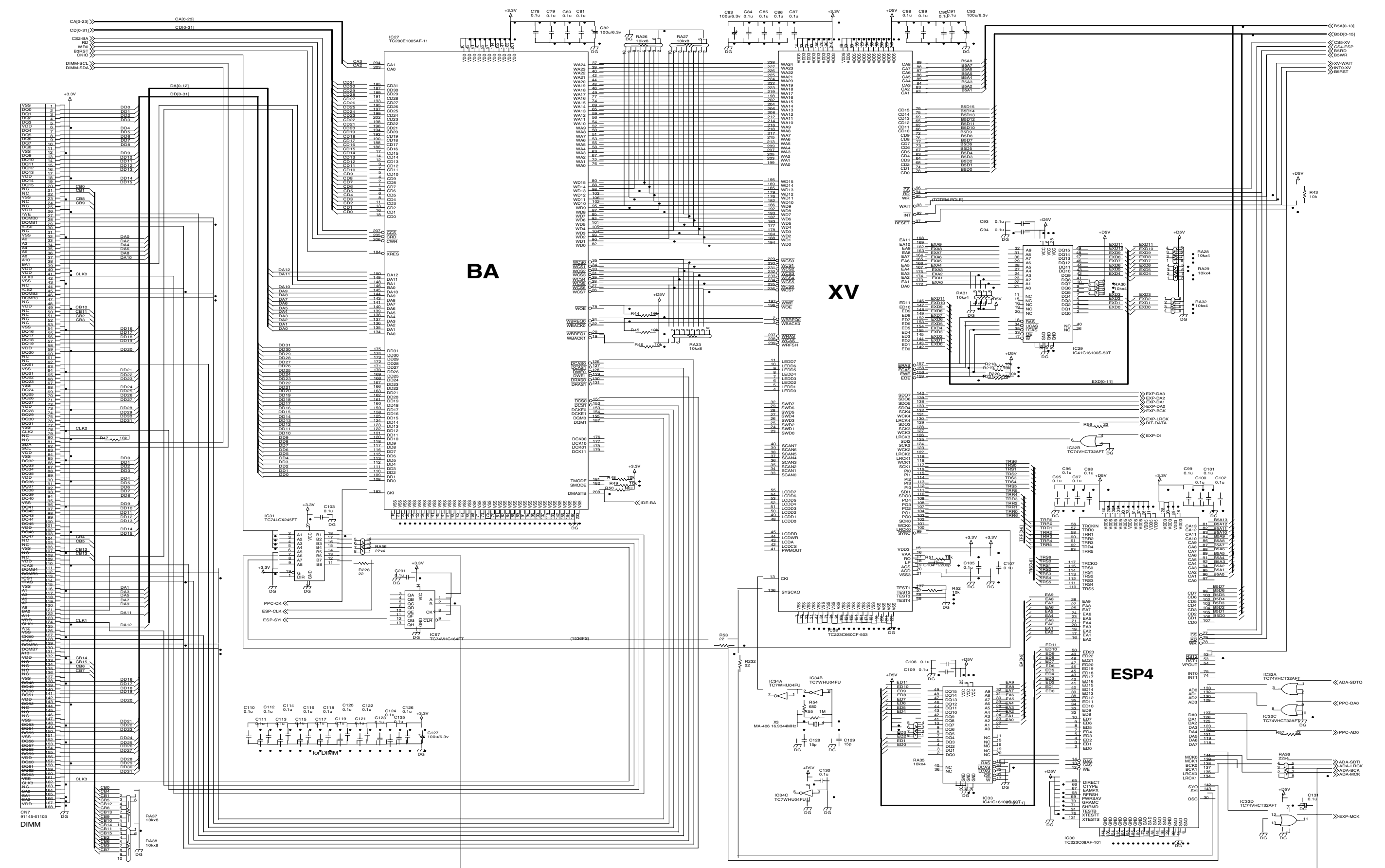
CIRCUIT BOARD (MAIN)



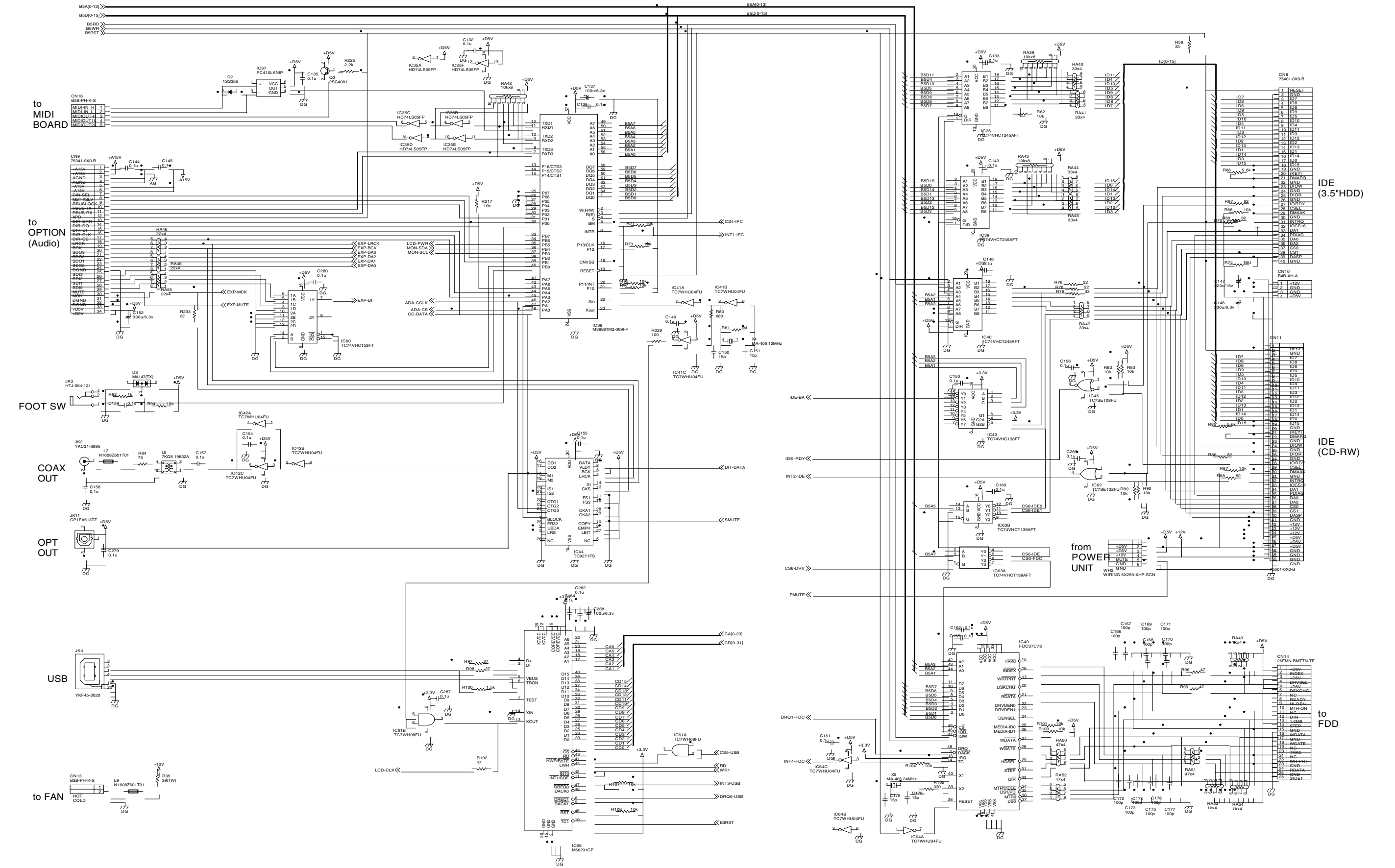
CIRCUIT DIAGRAM (MAIN 1/4)



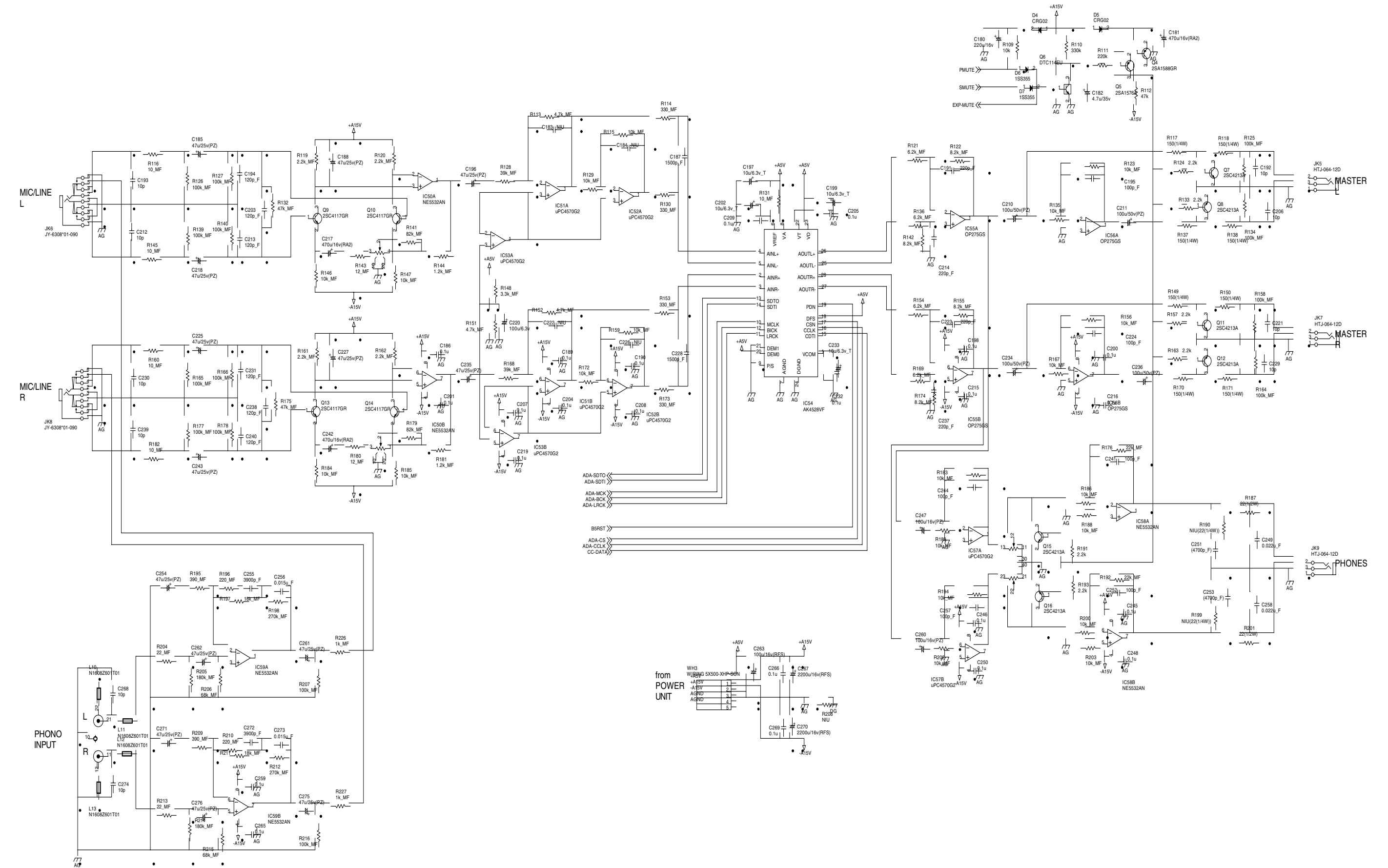
CIRCUIT DIAGRAM (MAIN 2/4)



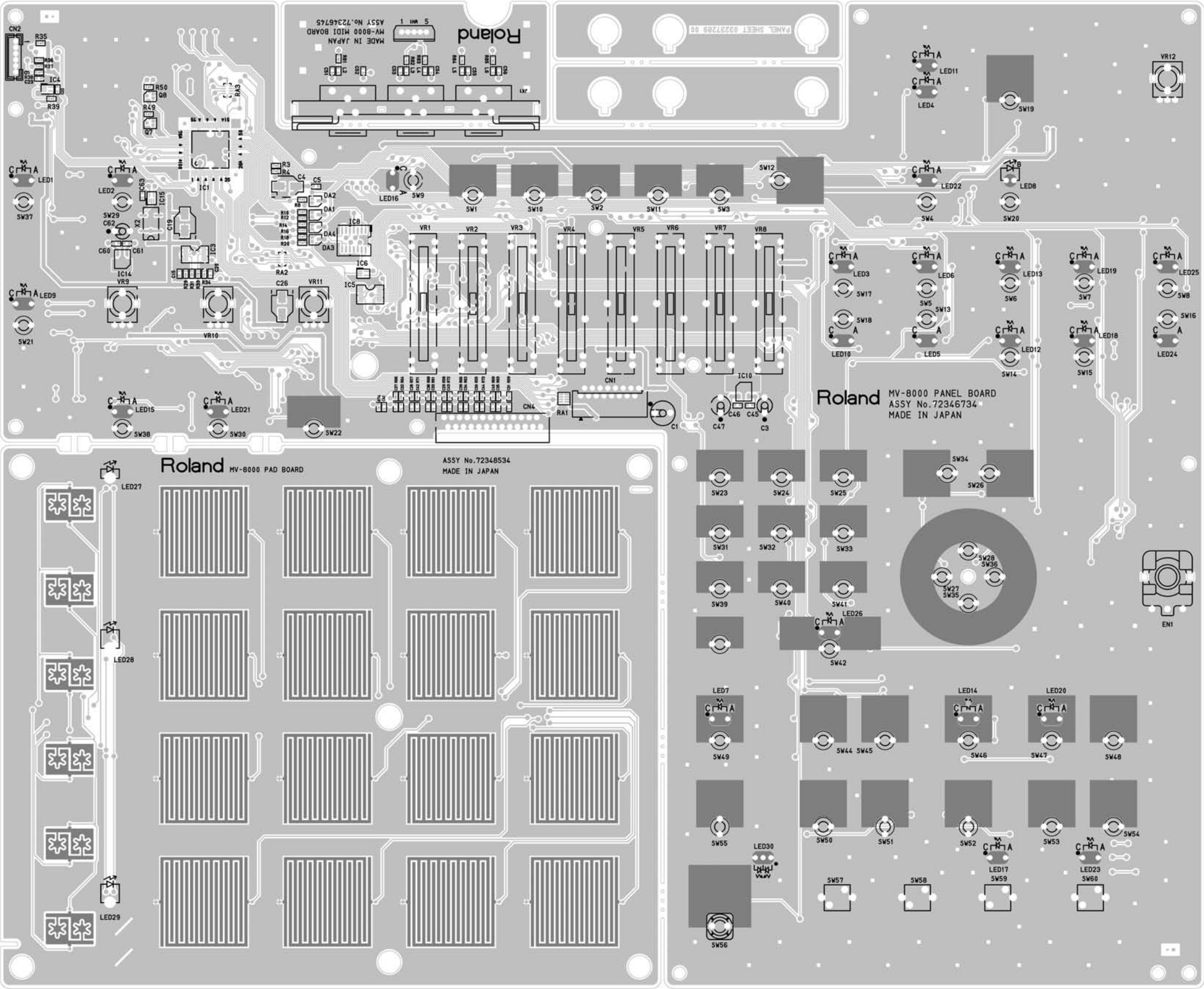
CIRCUIT DIAGRAM (MAIN 3/4)



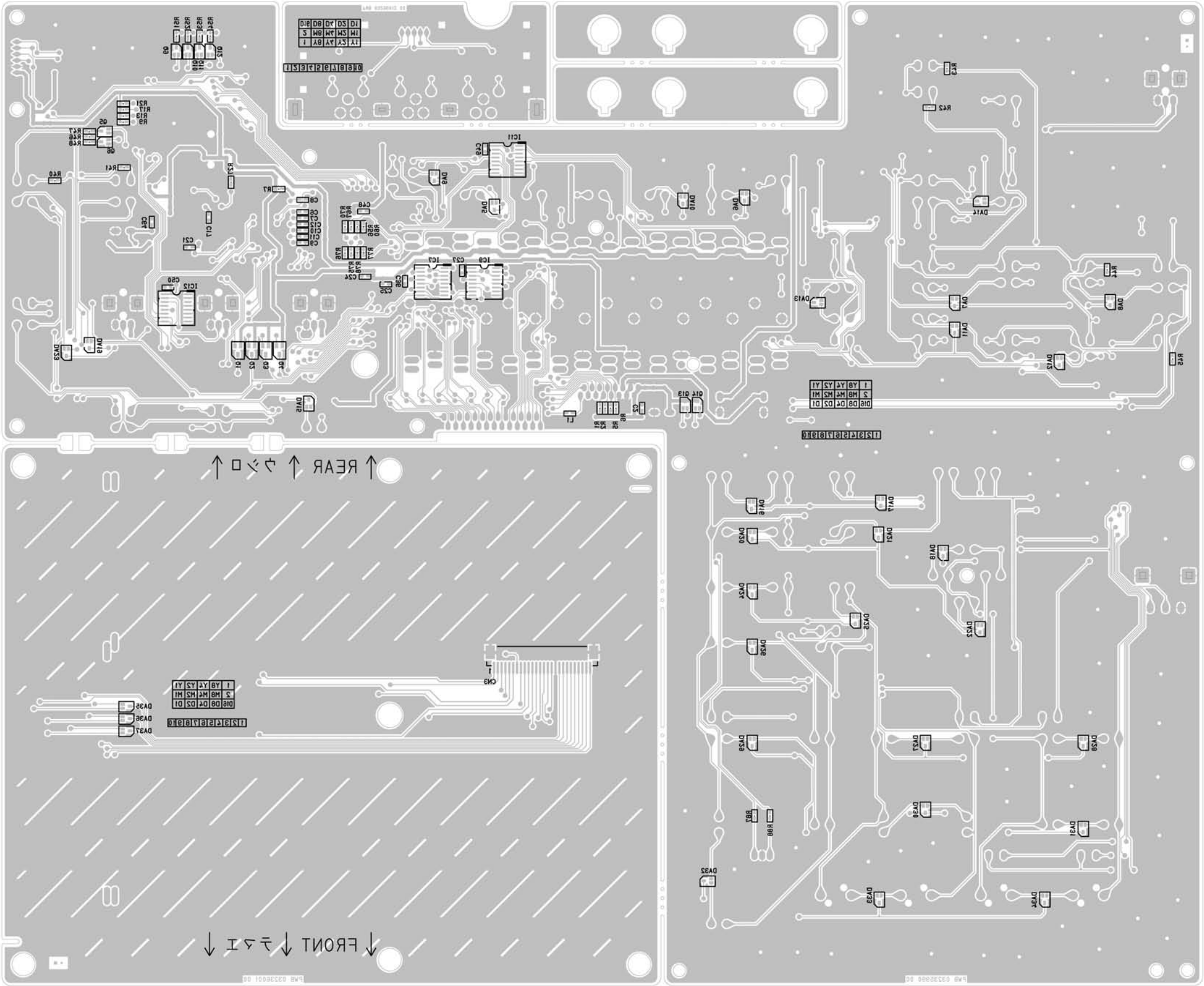
CIRCUIT DIAGRAM (MAIN 4/4)



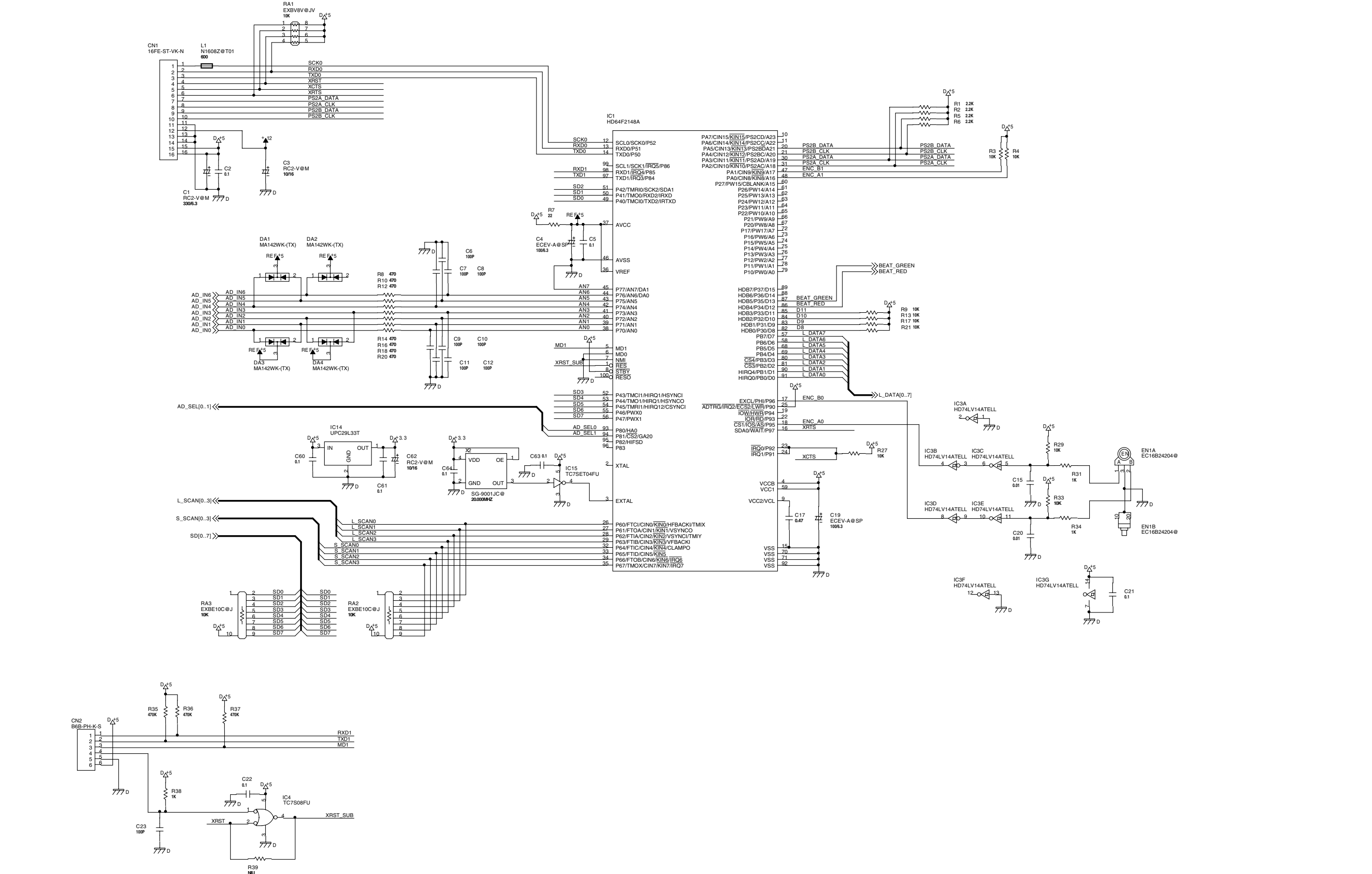
CIRCUIT BOARD (PANEL/PAD/MIDI)



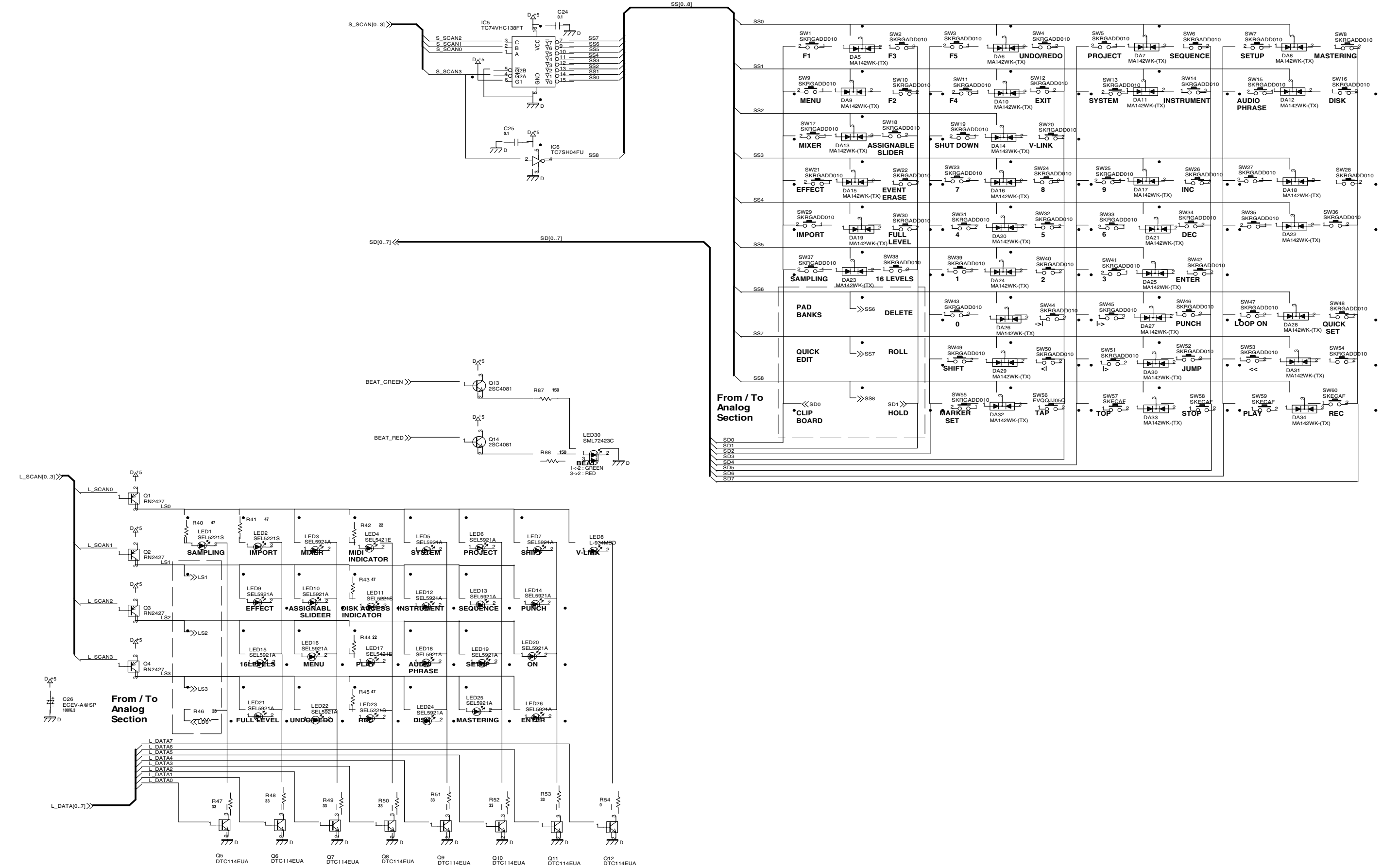
CIRCUIT BOARD (PANEL/PAD/MIDI)



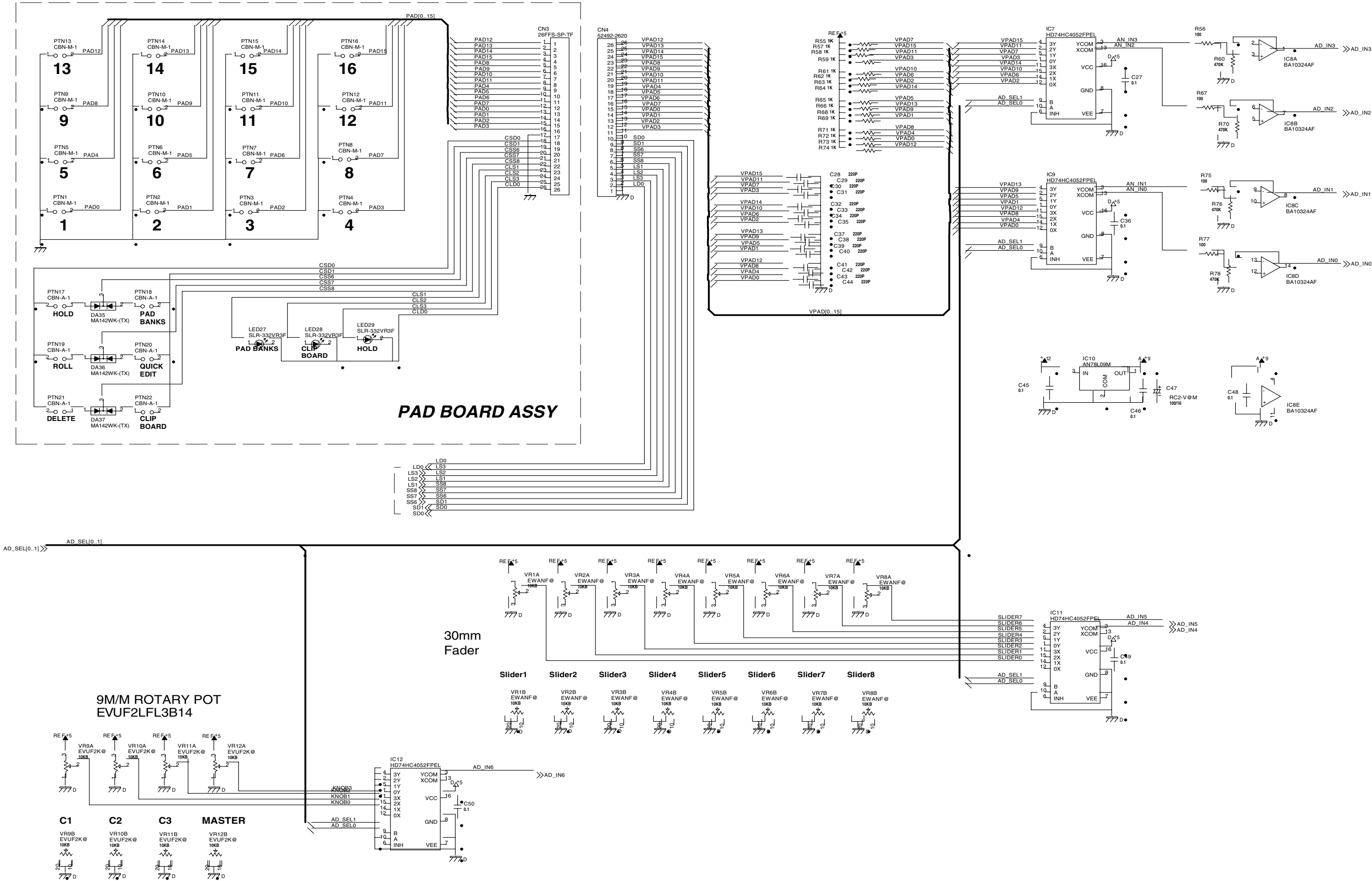
CIRCUIT DIAGRAM (PANEL/PAD/MIDI 1/4)



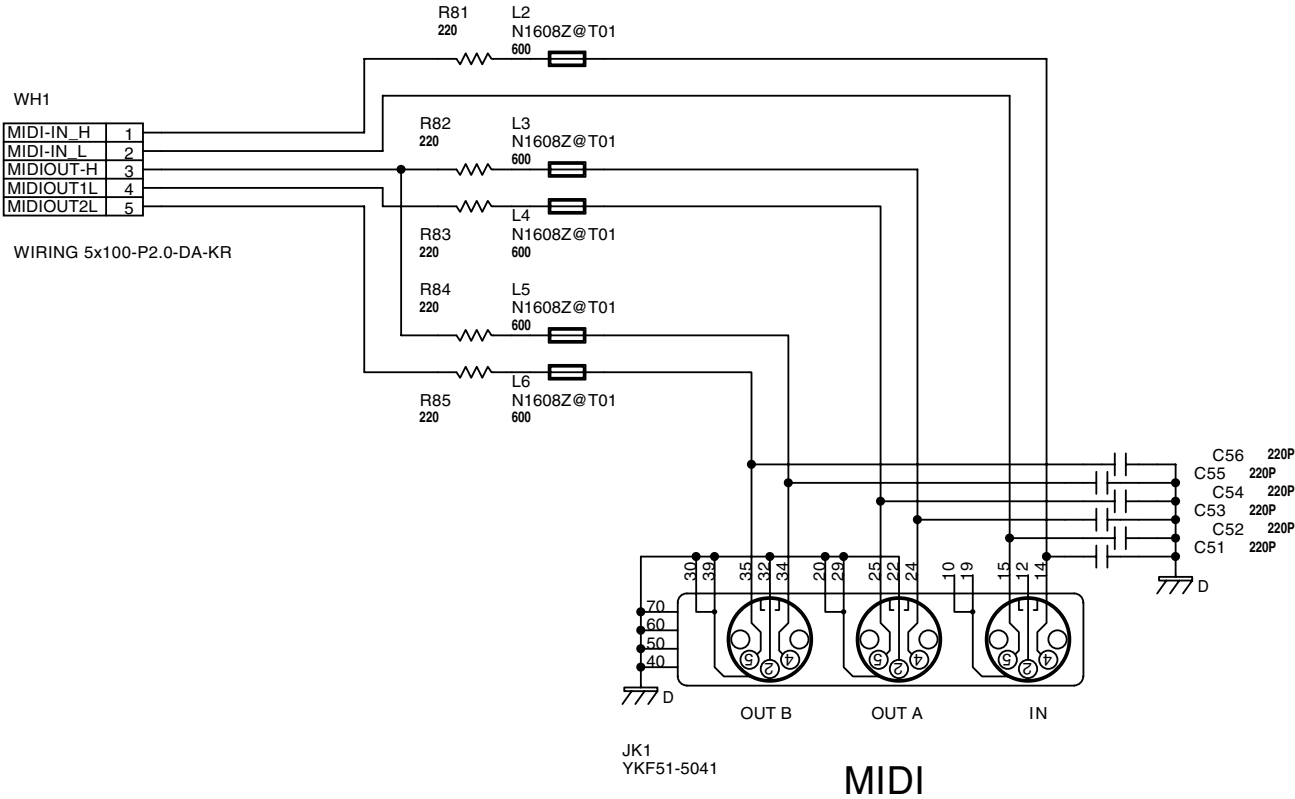
CIRCUIT DIAGRAM (PANEL/PAD/MIDI 2/4)



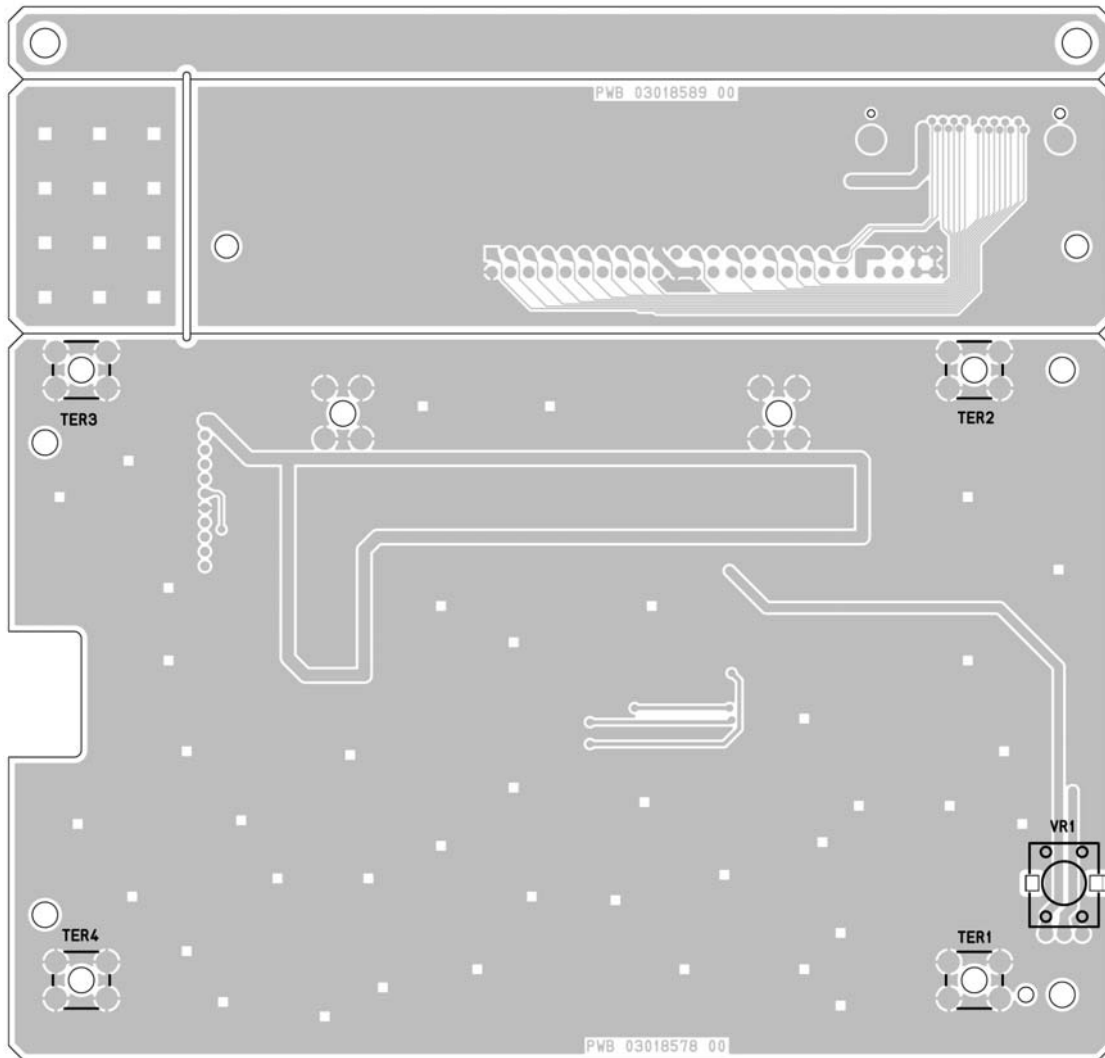
CIRCUIT DIAGRAM (PANEL/PAD/MIDI 3/4)



CIRCUIT DIAGRAM (PANEL/PAD/MIDI 4/4)

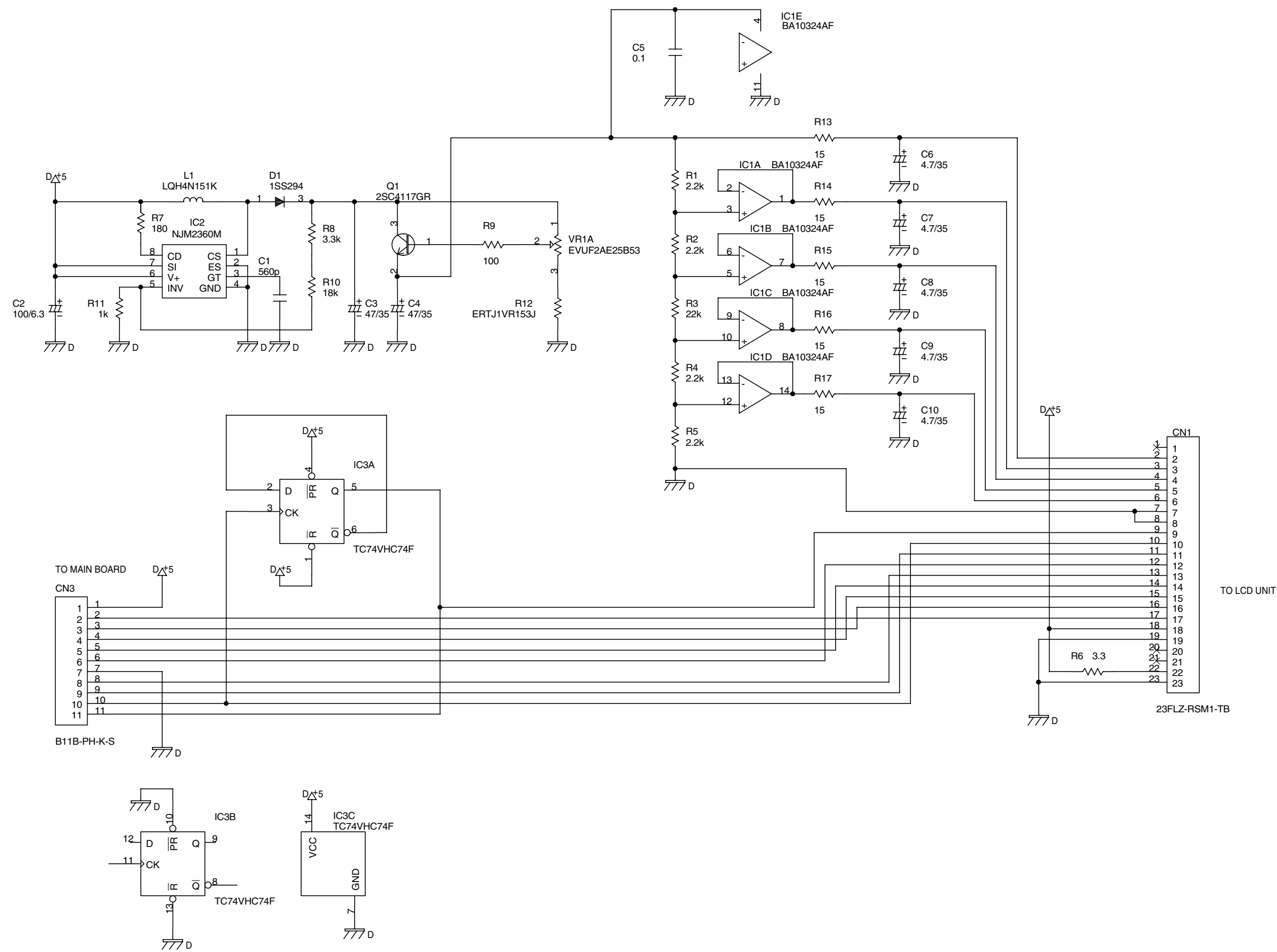




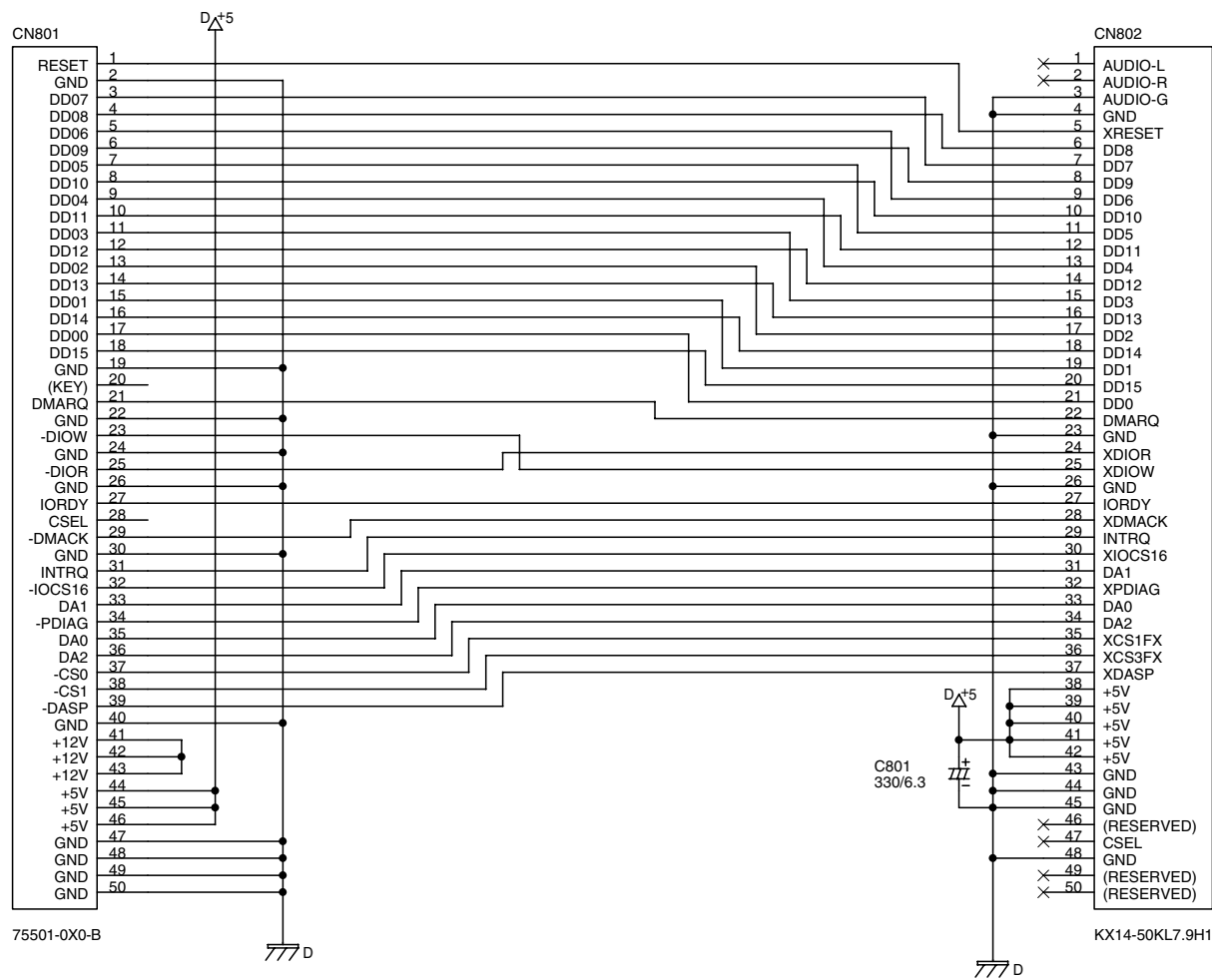


View from foil side

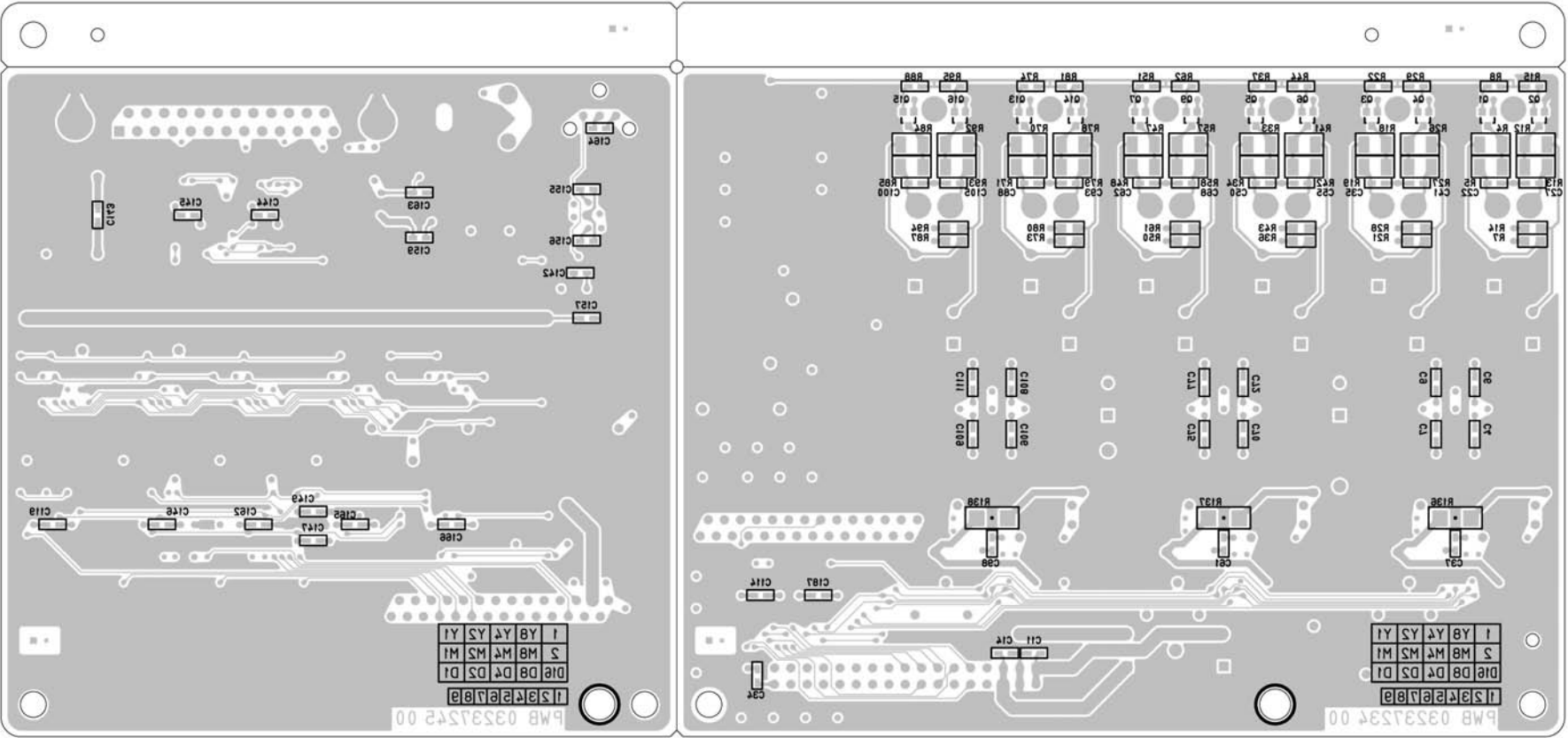
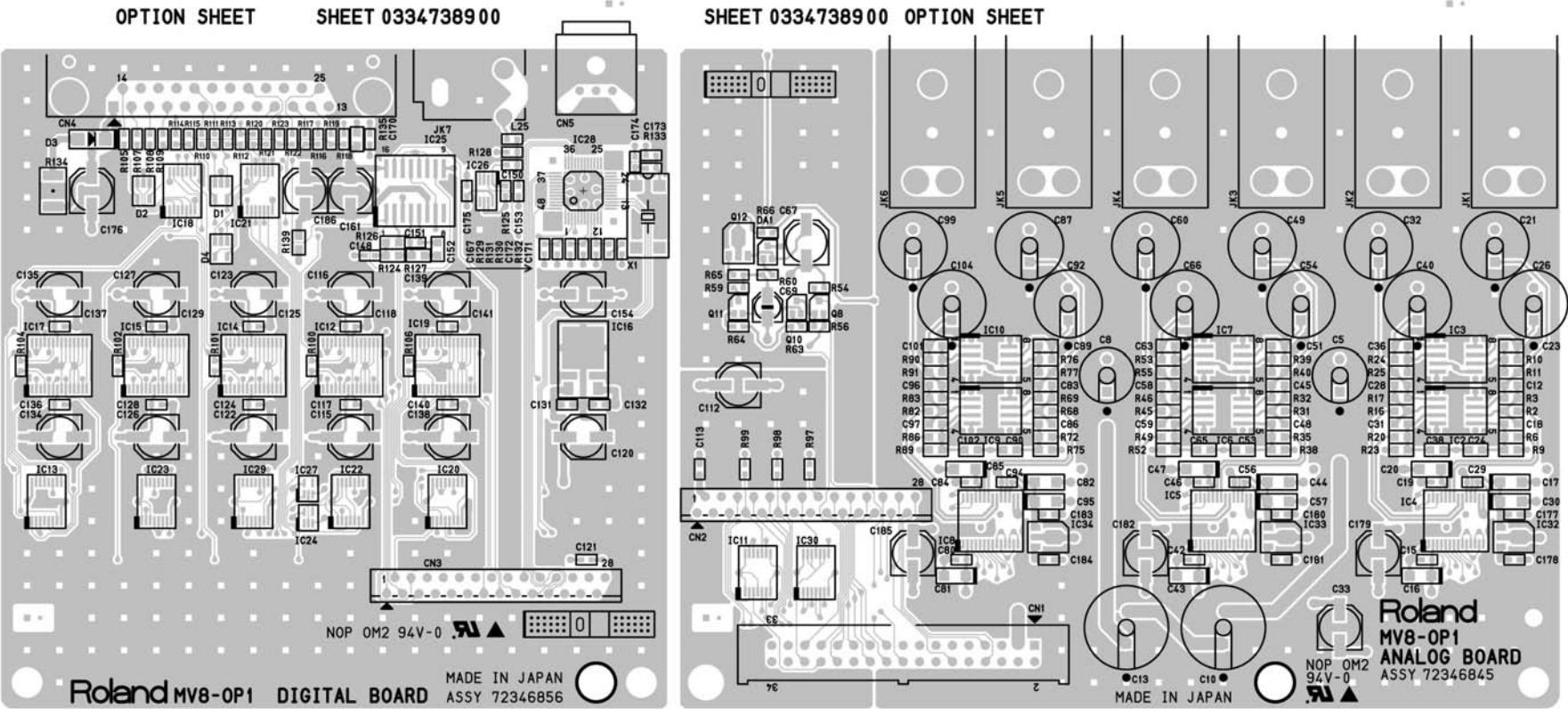
CIRCUIT DIAGRAM (CONTRAST/CDRW 1/2)



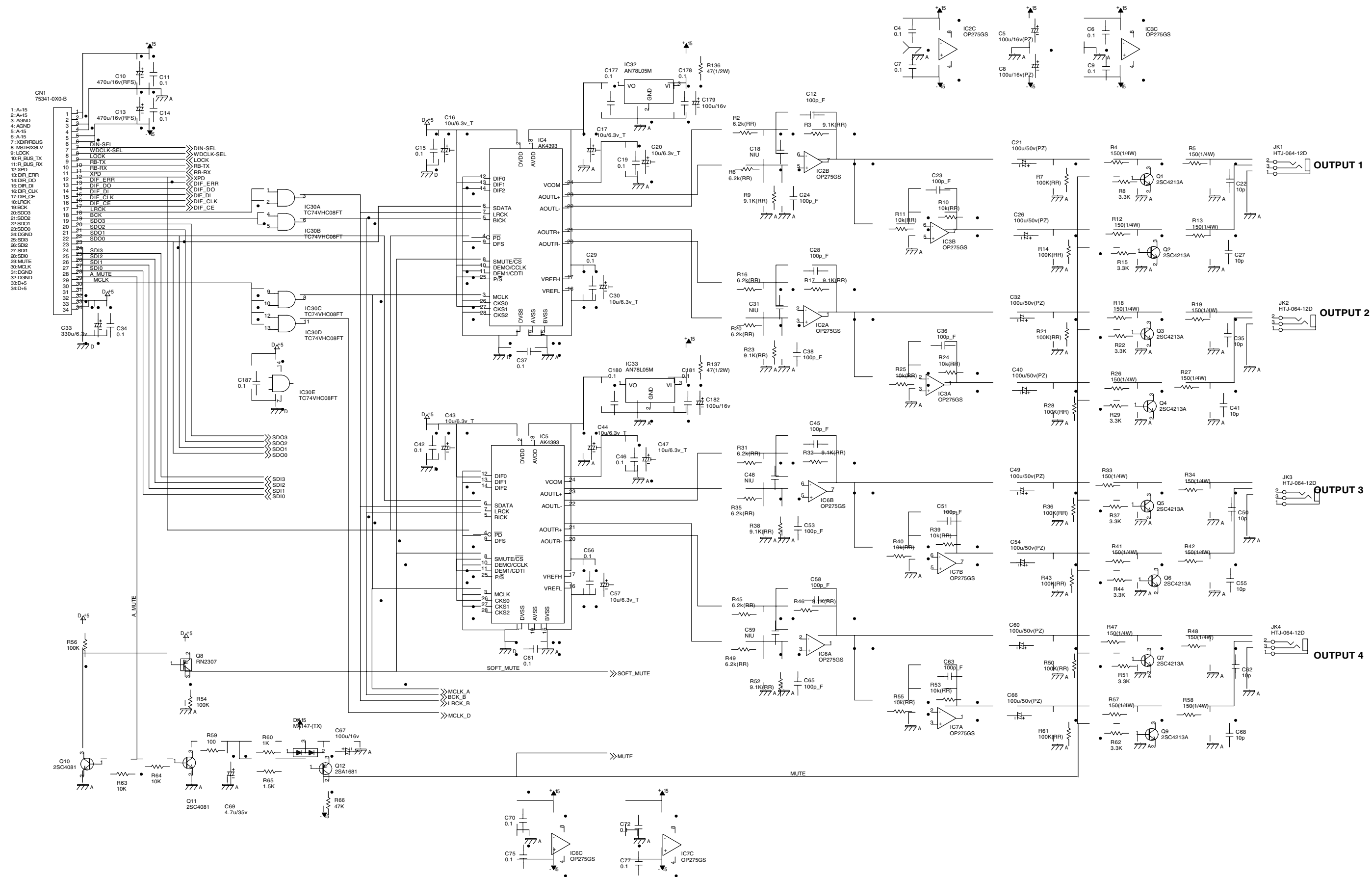
CIRCUIT DIAGRAM (CONTRAST/CDRW 2/2)



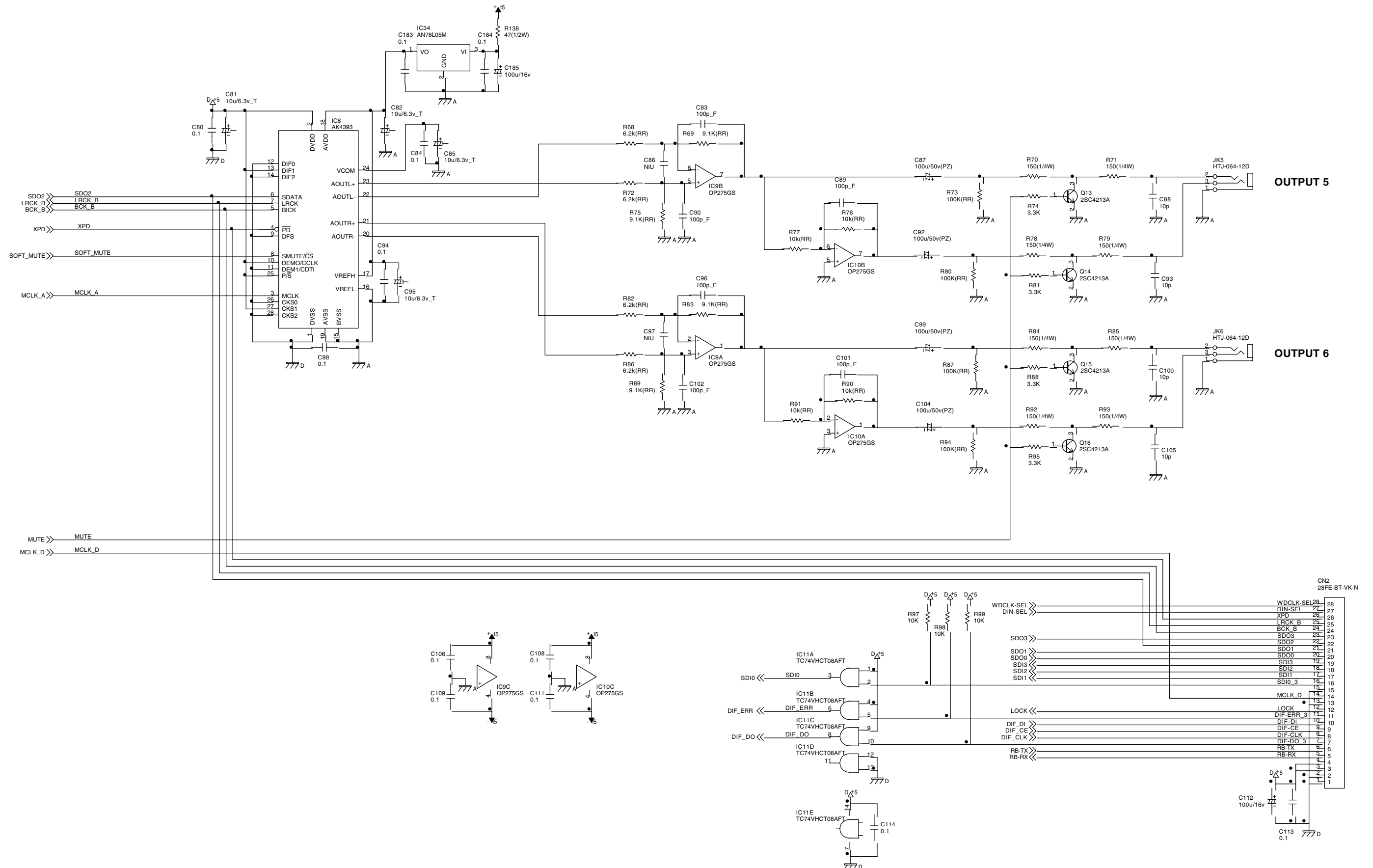
CIRCUIT BOARD (MV8-PO1)



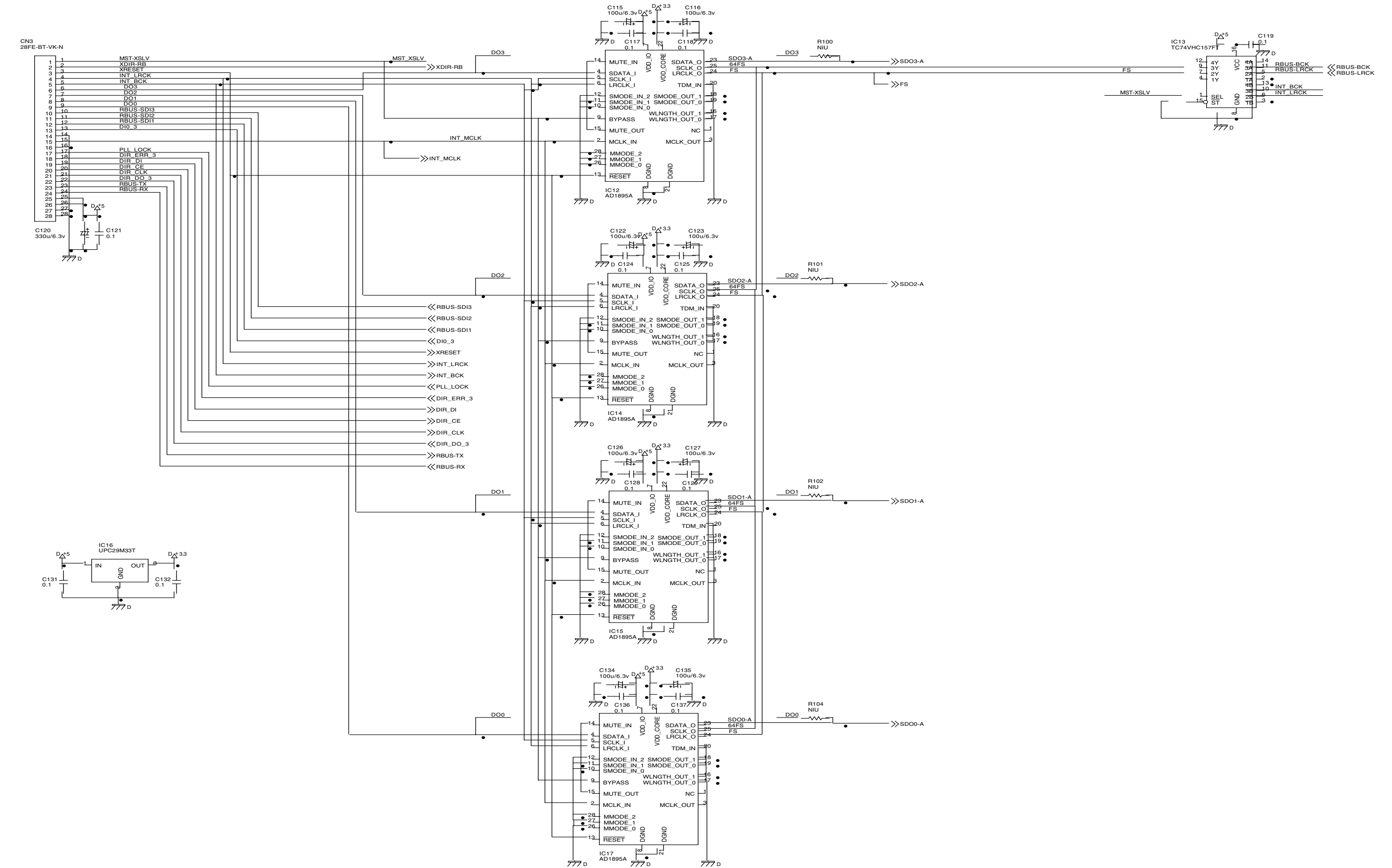
59



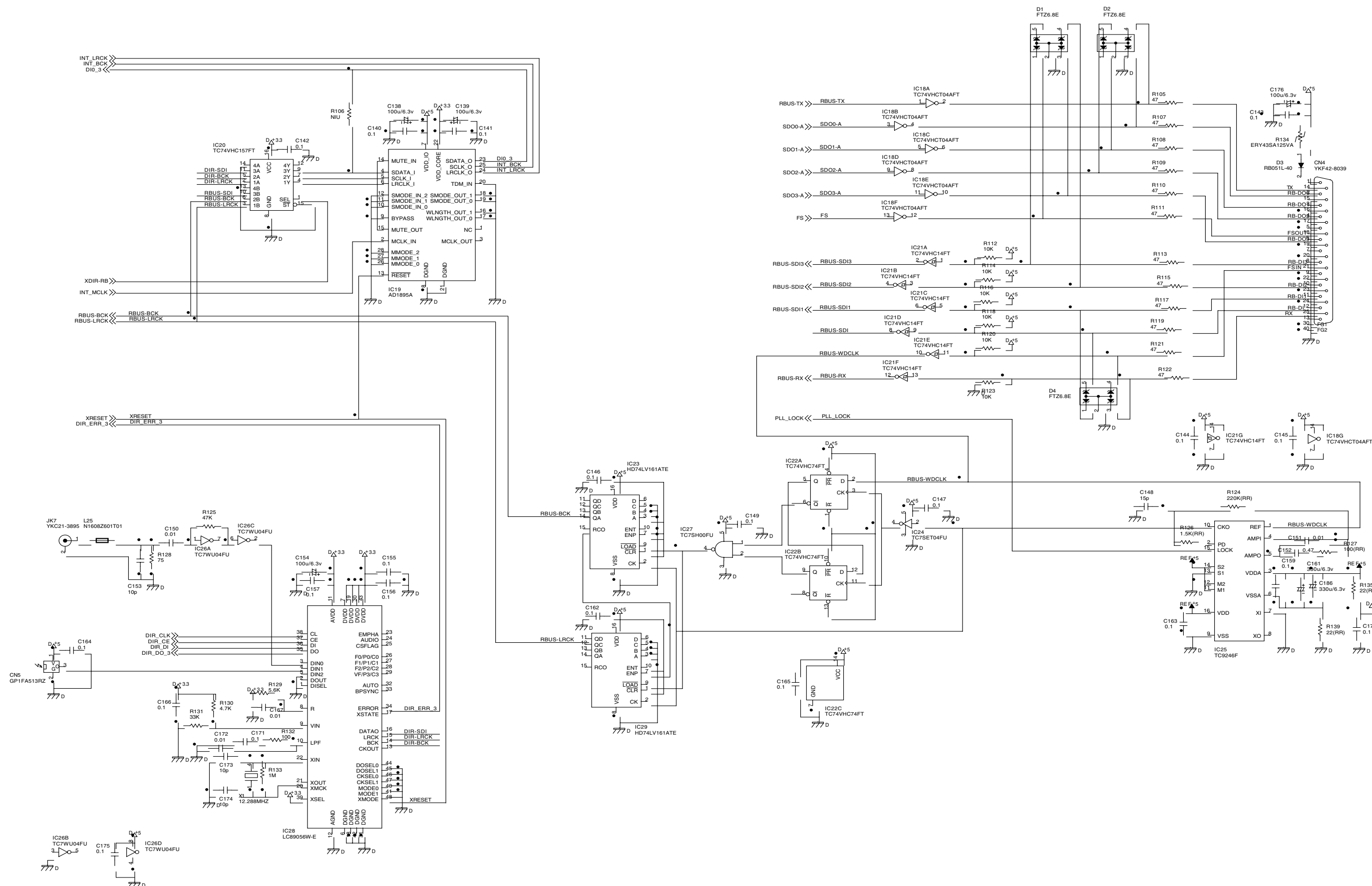
61



CIRCUIT DIAGRAM (MV8-OP1 3/4)



65



ERROR MESSAGES

No more Song numbers.

No more songs can be created.

No more MIDI tracks.

No more MIDI tracks can be created.

No more Audio tracks.

No more audio tracks can be created.

No more Marker numbers.

No more Marker can be stored.

No more MIDI Clip numbers.

No more MIDI clips can be stored.

Sequence memory full.

No more song performance data can be recorded / edited.

Can't delete current Song.

You cannot delete the song that you are currently working on.

Can't delete last one track.

You cannot delete the last track of the song.

No region to edit.

No editing region has been selected.

No MIDI track selected.

No MIDI track is selected in the editing region.

No more Sample numbers.

No more samples can be stored (no further sampling or Wave memory full. recording is possible).

End of Pads.

When assigning audio phrases or partials to the pads, you have reached the last pad.

Can't write to Preset library.

You cannot write settings to the preset library.

Other Project has the same name.

The same name is already used by an existing project.

Current Project is protected.

The project you are currently working on is writeprotected.

Selected Project is too large.

The project cannot be loaded (there is not enough wave memory to load it).

Can't delete current Project.

You cannot delete the project you are currently working on.

Unknown disc.

The disc/disk is of an unknown type (it cannot be used on Unformatted disk. the MV-8000).

Disk full.

There is no free space on the disk.

Writing or editing is not possible. Disk not ready.

No disk is inserted.

File name duplicate.

The file name is a duplicate. Editing is not possible.

File read error.

The file could not be read.

File write error.

The file could not be written.

Write Protected.

The disk is write-protected.

File not found.

The file was not found.

Unsupported file.

The MV-8000 cannot handle this file.

Invalid file name.

The file name is invalid.

Operation Failed.

The operation can not be finished for some reason.

Mixdown Mode.

The MV-8000 is in Mixdown mode.

No Audio Files for Mastering.

There are no audio files for mastering.

No Audio Files on the Cue Sheet.

There are no audio files in the cue sheet.

No more CD Track numbers.

You cannot register more than 99 audio files in the cue sheet.

CD-R/RW disc full.

There is insufficient space on the CD-R/RW disc (audio files cannot be added).

No Audio Files for CD writing.

There are no audio files to write to the music CD.

MIDI offline.

There is a problem with the MIDI cable connection (MIDI IN). Alternatively, the MIDI cable was disconnected during transmission.

MIDI buffer full.

An extremely large amount of MIDI data was received faster than it could be processed.

Load Project. Current Project is protected.

The current project cannot be saved since it is writeprotected.

(Can't save.) Load anyway?

Do you want to load without saving the current project?

Backup Project to CD.

The current project cannot be saved since it is writeprotected.

**Current Project is protected. (Can't save.)
Backup anyway?**

Do you want to backup the project without saving it?