

SP-606

Sampling Workstation

SERVICE NOTES

Issued by RJA

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* The following items of this test mode will erase the data in the user area. You must save a backup of the user data before you use test mode.

- Sound test
- Load Data



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Roland

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CAUTIONARY NOTES

User data status

User data status after each of the following processes is described below.
Whenever carrying out procedures that involve deleting or erasing user data, always be sure to back up the user data to some form of external media (refer to Saving and Loading Data).

Process	User Data
Backup Version	O Preserved
Factory Reset	X Deleted
System Update	O Preserved
Test Mode	X Preserved

PART LIST

Due to one or more of the following reasons, parts with parts code ***** cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

SPECIFICATIONS

SP-606: Sampling Workstation

Maximum Polyphony

8 voices

Maximum Sampling Time (mono, approx.)

Internal Memory		
STANDARD	LONG	
5 min.	11 min.	
Card Memory (CompactFlash)		
STANDARD	LONG	
16 MB	5 min.	11 min.
32 MB	12 min.	24 min.
64 MB	24 min.	48 min.
128 MB	48 min.	96 min.
256 MB	96 min.	193 min.
512 MB	193 min.	386 min.

Sampling Mode

STANDARD/LONG

Sampling Frequency

44.1 kHz

Data Format

SP-606 original format
(.WAV / AIFF import/export possible)

Internal Memory

Samples: 128 (8 Banks)
(Including Pre-loaded Sample Banks)

Card Memory

Sample: 384 (24 Banks)

Effects Section

Multi-Effects:2 systems, 45 types
Mastering Effect:2-bands Compressor

Sequencer Section

Mode:PATTERN, SONG
Tracks:4
Resolution:96 ticks per quarter note
Song Steps:999
Songs:25
Patterns:140
(Including Pre-loaded Patterns)
Maximum measures per Pattern:32
Beats:2/4--32/4
Tempo:40.0--200.0
Pattern recording method:Realtime, Step Recording (Note/Sample)
Maximum recordable notes:Approximately 18,000 notes (Approx. 8,000 per Pattern)

Others

Display:128 x 64 dots (Backlit graphic LCD)
Controllers:Control Knobs x 3, D Beam
Pads:16 with velocity sensitivity

Connectors

Headphones Jack
Output Jacks (L (MONO), R)
Input Jacks (L (MONO)/MIC, R)
Foot Switch Jack
Digital Audio Interfaces (COAXIAL, IN/OUT)
MIDI Connectors (IN, OUT)
USB Connector (compatible with MIDI, audio and mass storage class)
AC Adaptor Jack

Power Supply

DC 9 V (AC Adaptor)

Current Draw

1,000 mA

Dimensions

358.3 (W) x 271.2 (D) x 84.0 (H) mm
14-1/8 (W) x 10-11/16 (D) x 3-5/16 (H) inches

Weight

2.3 kg
5 lbs 2 oz
(excluding AC Adaptor)

Accessories

Owner's Manual	ENGLISH(#72670412)
	JAPANESE(#72670101)
AC Adaptor	ACI-100C(#00905756)
	ACI-120C(#00905767)
	PSB-1U(R) (#03017356)
AC CORD SET230V(#01903356)	
AC CORD SET240V(#01903367)	
USB Cable(#03237578)	
CD-ROM (USB MIDI/ AUDIO driver(#03678845)	
Memory card (Compact Flash) Protector(#03568412)	

Options

Pedal Switch (DP-2)

Foot Switch (BOSS FS-5U)

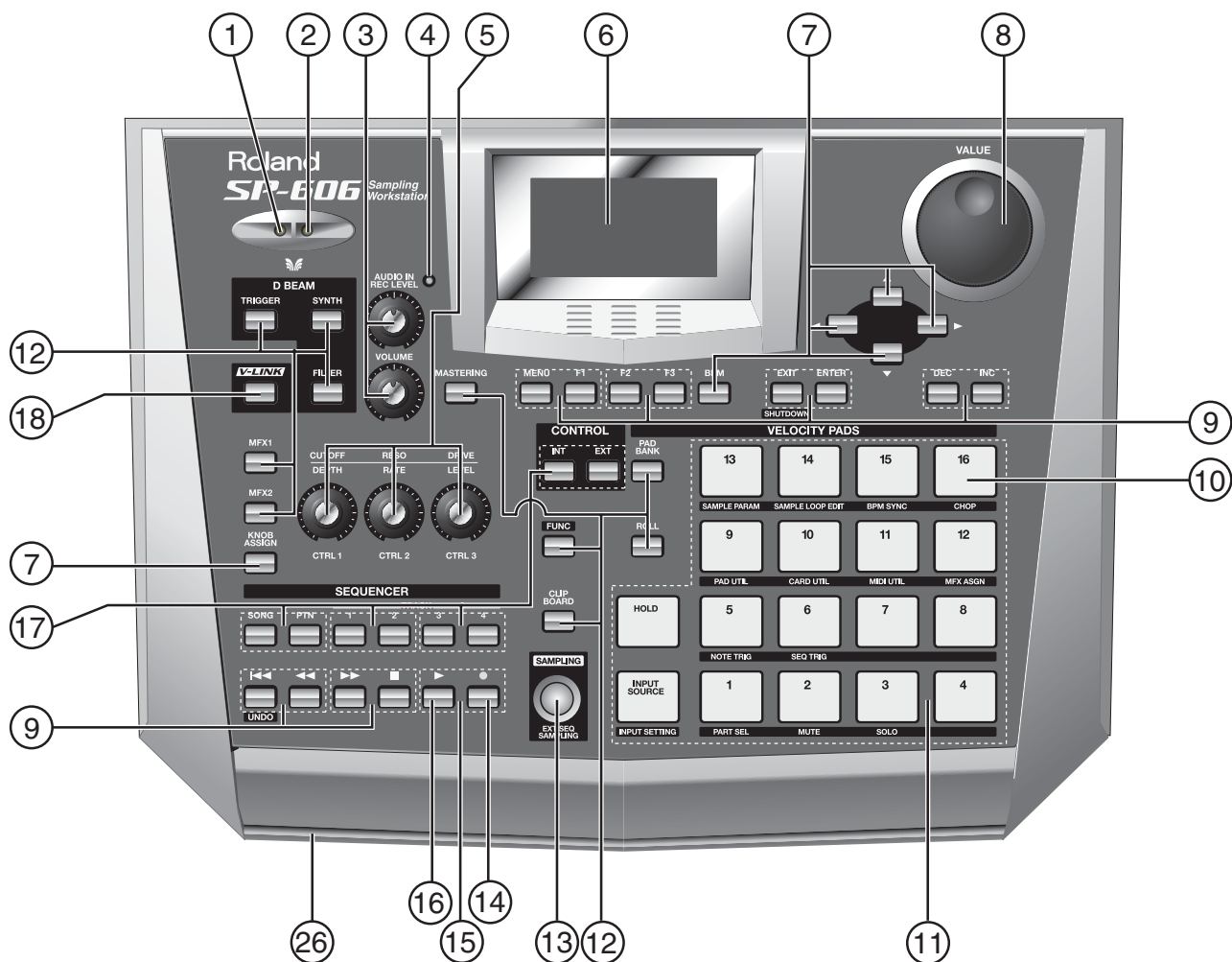
Recommended Memory cards
(Compact Flashes)

As of the date of writing, the following Memory cards (Compact Flash) have been tested by Roland and found to operate correctly with the SP-606.

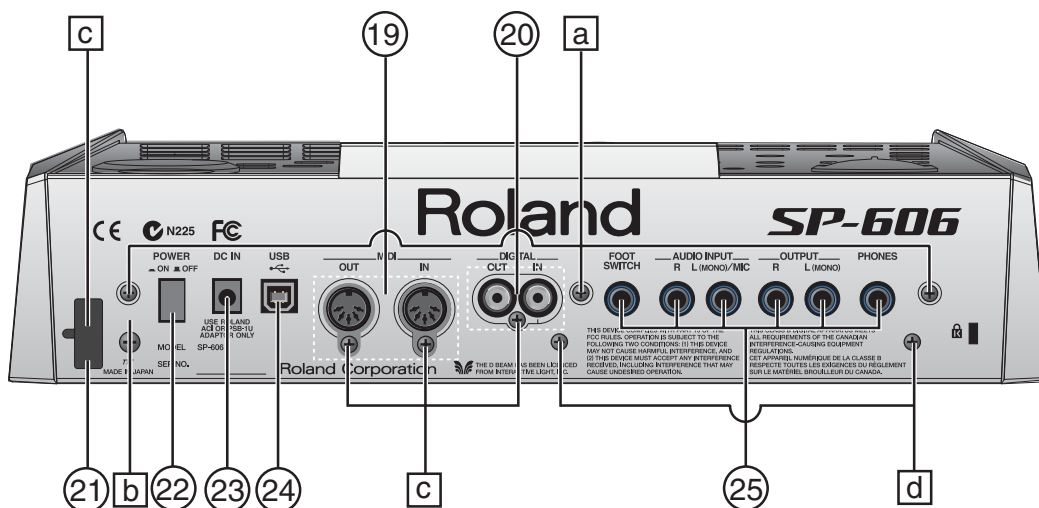
Maker	Model number
DELKIN DEVICES	DDCFCLS-064 (eFilm) (64 MByte)
LEXAR	CF*** 8X USB (***: card capacity)
Memorex	THNCF064MMA (64 MByte), THNCF128MBA (128 MByte)
PNY TECHNOLOGIES	THNCF064MBA (P-CF064-RF) (64 MByte), THNCF128MBA (P-CF128-RF) (128 MByte)
PQI (Power Quotient International)	FC128 (Hi-Speed)(128 MByte)
SanDisk	ultra series
SST (Silicon Storage Technology, Inc.)	SST48CF032 (32 MByte)
vivanco	FC032 (CFC F32) (32 MByte)
hama	THNCF128MMA (128 MByte), FC128 (Hi-Speed) (128 MByte)
HAGIWARA SYS-COM	V series, Z series
HITACH	C6 series

LOCATION OF CONTROLS

[TOP]



[REAR]



LOCATION OF CONTROLS PARTS LIST

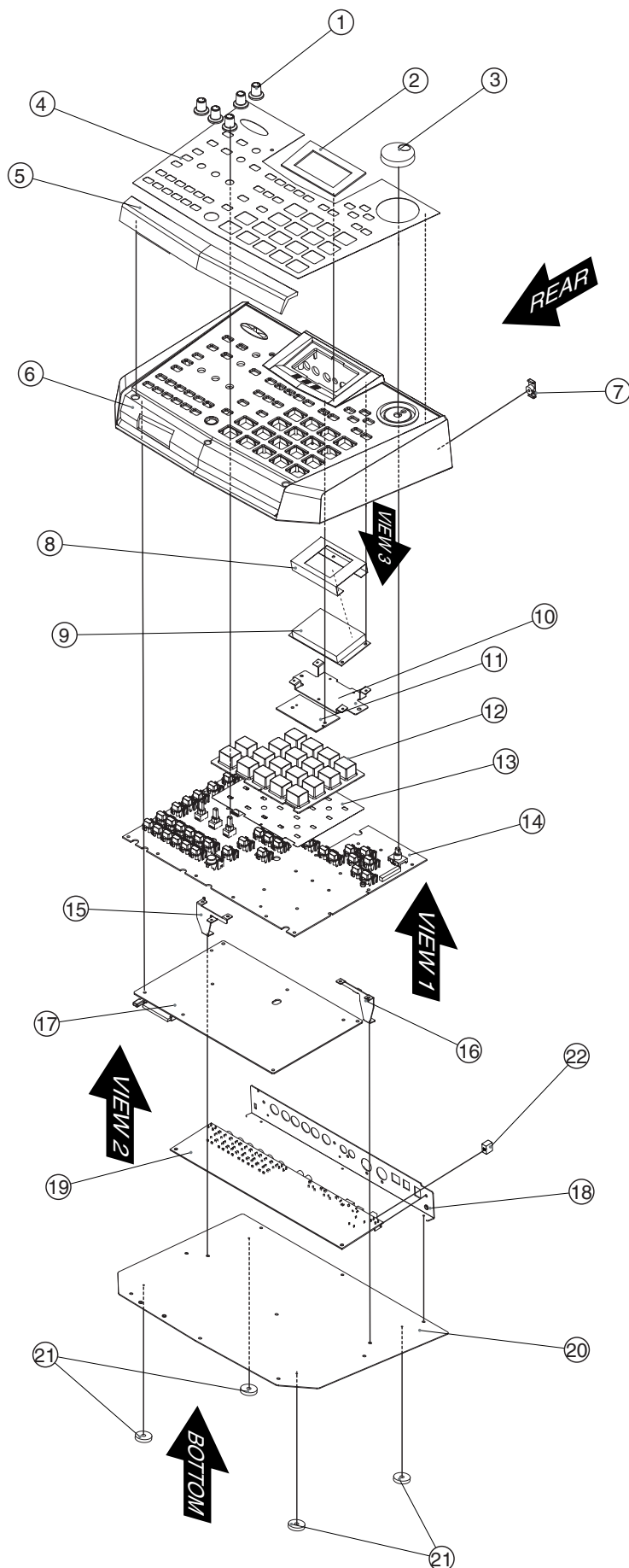
[Parts]

NO	PART CODE	CATEGORY	PART NAME	DESCRIPTION
1	01900612	DIODE	DIODE	TPS611
	12169368	MISCELLANEOUS	LED SPACER	LDS-40B
2	03126134	DIODE	LED	TLN233
	02230578	MISCELLANEOUS	LED SPACER	LDS-50R
3	03565234	KNOB,BUTTON	J R-KNOB	SF-ELA BLK/SLV
	03568189	POTENTIOMETER	ROTARY POTENTIOMETER	RK12L12C0A0E
4	00785856	DIODE	LED	SLR-342VR3F
	12169406	MISCELLANEOUS	LED SPACER	LDS-100Y 10MM
5	03565234	KNOB,BUTTON	J R-KNOB	SF-ELA BLK/SLV
	02455223	POTENTIOMETER	9M/M ROTARY POTENTIOMETER	EVUF2KFK4B14
6	03568445	CASING	DISPLAY COVER	
	03678912	MISCELLANEOUS	SHIELD SHEET LCD	
	02565034	DISPLAY UNIT	LCD	F-51320GNY-LY-AA
7	03120890	KNOB,BUTTON	D S-KEYTOP	SX1H-B GRS
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
8	22485303	KNOB,BUTTON	D R-KNOB(ALPHA-DIAL)	L BLK 248-303
	02345734	ENCODER	ROTARY ENCODER	EVE LA1 F20 24B
9	03120889	KNOB,BUTTON	D S-KEYTOP	SX2H-B GRS
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
10	03564712	DIODE	LED	SML-512MWT86
11	03677312	KNOB,BUTTON	RUBBER SW	
	03128767	PICK UP,SENSOR	PRESSURE SENSOR SHEET	
	03564701	DIODE	LED	SML-512DWT86
12	03120890	KNOB,BUTTON	D S-KEYTOP	SX1H-B GRS
	02894090	DIODE	LED (ORNG)	SLR-343DUT32
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
13	02013090	KNOB,BUTTON	F C-KEYTOP	MX1H CLR
	03122112	DIODE	LED(BLUE)	SLR-343BBT3F
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
14	01904112	DIODE	LED(RED)	SLR-342VCT32 N.P.Q RANK
15	03120889	KNOB,BUTTON	D S-KEYTOP	SX2H-B GRS
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
16	01121689	DIODE	LED (RED/GREEN)	SPR-325MVWT31
17	03120889	KNOB,BUTTON	D S-KEYTOP	SX2H-B GRS
	02894090	DIODE	LED (ORNG)	SLR-343DUT32
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
18	03120890	KNOB,BUTTON	D S-KEYTOP	SX1H-B GRS
	03122112	DIODE	LED(BLUE)	SLR-343BBT3F
	01340290	SWITCH	TACT SWITCH	EVQ11A H=5.0
19	13429825	JACK,EXT TERMINAL	MIDI CONNECTOR	YKF51-5054 2PZ
20	03231812	JACK,EXT TERMINAL	RCA(PIN)	YKC21-4173
21	22365714	MISCELLANEOUS	CORD HOOK	236-714
22	12499175	KNOB,BUTTON	BUTTON	JSPUE001A
	01676512	SWITCH	PUSH SWITCH	SDKLA1-B
23	13449711	JACK,EXT TERMINAL	AC ADAPTOR JACK	HEC0470-01-630
24	02781189	JACK,EXT TERMINAL	USB CONNECTOR	YKF45-0021
25	13449275	JACK,EXT TERMINAL	6.5MM JACK	YKB21-5074
26	03121689	JACK,EXT TERMINAL	COMPACTFLASH EJECTOR	ICM-MAE-R21

[Screw]

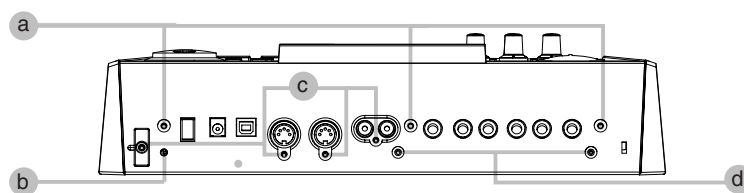
NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40011490	SCREW M3X6	PAN MACHINE W/SW BZC	3
b	40454856	SCREW M4X10	BINDING NI	1
c	40011312	SCREW 3X8	BINDING TAPTITE P BZC	4
d	40011090	SCREW 3X6	BINDING TAPTITE B BZC	2

EXPLODED VIEW 1

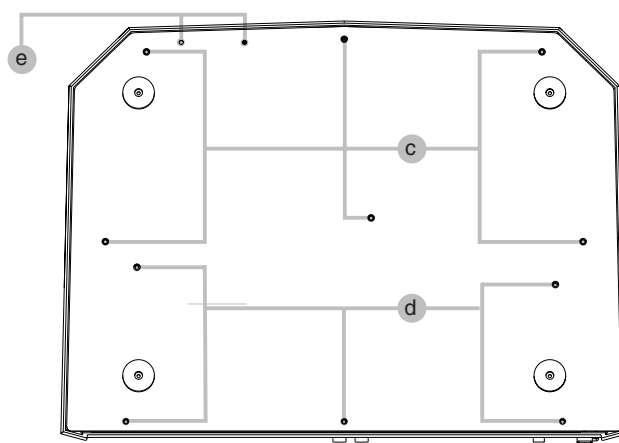


EXPLODED VIEW 2

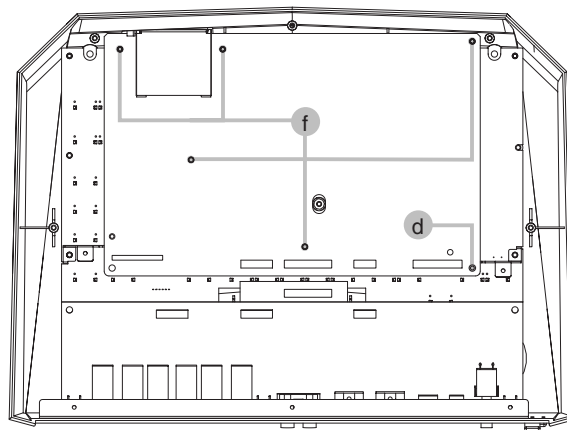
REAR



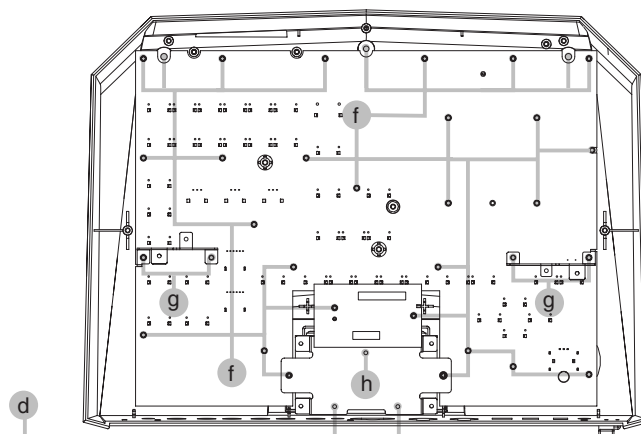
BOTTOM



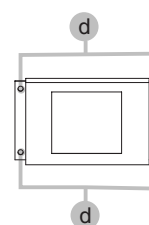
VIEW 1



VIEW 2



VIEW 3



EXPLODED VIEW PARTS LIST

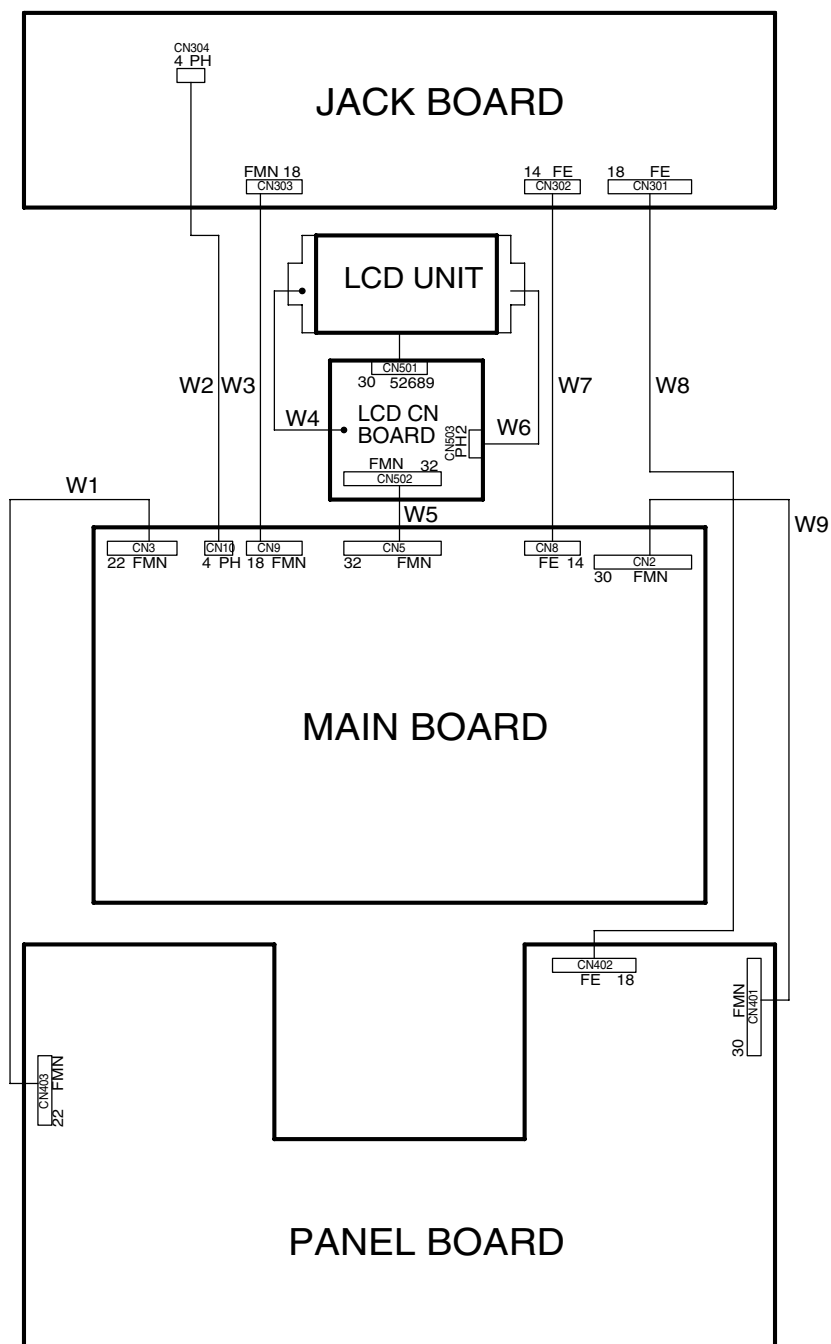
[Parts]

No	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	03565234	J R-KNOB	SF-ELA BLK/SLV	5
2	03568445	DISPLAY COVER		1
3	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
4	03568367	TOP PANEL		1
5	03568423	FRONT COVER		1
6	03568356	TOP CASE		1
7	22365714	CORD HOOK	236-714	1
8	03678912	SHIELD SHEET LCD		1
9	02565034	LCD	F-51320GNY-LY-AA	1
10	03568378	LCD HOLDER		1
11	72568178	LCD CN BOARD ASSY		1
12	03677312	RUBBER SW		1
13	03128767	PRESSURE SENSOR SHEET		1
14	72670123	PANEL KEYTOP ASSY		1
15	03568434	MAIN BOARD HOLDER L		1
16	03677301	MAIN BOARD HOLDER R		1
17	72568134	MAIN BOARD ASSY		1
18	03568389	REAR HOLDER		1
19	72568167	JACK BOARD ASSY		1
20	03568390	BOTTOM COVER		1
21	01235378	FOOT		4
22	12499175	BUTTON	JSPUE001A	1

[Screw]


No	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40011490	SCREW M3X6	PAN MACHINE W/SW BZC	3
b	40454856	SCREW M4X10	BINDING NI	1
c	40011312	SCREW 3X8	BINDING TAPTITE P BZC	10
d	40011090	SCREW 3X6	BINDING TAPTITE B BZC	14
e	40012534	SCREW 3X6	BINDING TAPTITE S FE BZC	2
f	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC	34
g	40011278	SCREW 3X10	BINDING TAPTITE P FE ZC	4
h	40016589	NYRON RIVET	NRP-335	1

WIRING DIAGRAM



No	PART CODE	PART NAME	DESCRIPTION	Q'TY
W1	03675401	BAN CARD	BNCD-P=1.00-K-22-150	1
W2	02341978	WIRING	4X100-P2.0-PHR-PHR-F	1
W3	02903067	BAN CARD	BNCD-P=1.00-K-18-60	1
W4	03678889	WIRING W2		1
W5	03679934	BAN CARD	BNCD-S-P=1.00-K-32-50 W/O GS	1
W6	03678878	WIRING W1		1
W7	02672434	BAN CARD	BNCD-P=1.25-K-14-60	1
W8	03236067	BAN CARD	BNCD-P=1.25-K-18-120	1
W9	03678867	BAN CARD	BNCD-P=1.00-K-30-170	1

PARTS LIST

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

Due to one or more of the following reasons, parts with parts code ***** cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

NOTE: The parts marked # are new. (initial parts) The description "Q'TY" means a necessary number of the parts per one product.

CASING

#	03568390	BOTTOM COVER	1
#	03568356	TOP CASE	1
#	03568445	DISPLAY COVER	1
#	03568423	FRONT COVER	1
#	03568367	TOP PANEL	1

CHASSIS

#	03568378	LCD HOLDER	1
#	03568434	MAIN BOARD HOLDER L	1
#	03677301	MAIN BOARD HOLDER R	1
#	03568389	REAR HOLDER	1

KNOB, BUTTON

	12499175	BUTTON	JSPUE001A	1
	03565234	J R-KNOB	SF-ELA BLK /SLV	5
	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
#	03677312	RUBBER SW		1

SWITCH

01340290	TACT SWITCH	EVQ11A H=5.0	SW435,SW425,SW430,SW427,SW428,SW424,SW429,SW423,SW426,SW431,SW432,SW434,SW436,SW437,SW439,SW403,SW422,SW438,SW433,SW406,SW421,SW440,SW402,SW404,SW405,SW401,SW407,SW408,SW409,SW410,SW411,SW420,SW413,SW414,SW415,SW416,SW417,SW418,SW419,SW412 on PAB	40
01676512	PUSH SWITCH	SDKLA1-B	SW301 on JAB	1

JACK, EXT TERMINAL

03121678	CARD CONECTR	ICM-MA2H-SS52-R21A	CN7 on MAB	1
03121689	COMPACTFLASH EJECTOR	ICM-MAE-R21		1
13429825	MIDI CONNECTOR	YKF51-5054 2PZ	JK301 on JAB	1
03231812	RCA(PIN)	YKC21-4173	JK309 on JAB	1
02781189	USB CONNECTOR	YKF45-0021	JK308 on JAB	1
13449275	6.5MM JACK	YKB21-5074	JK304,JK305,JK306,JK307,JK302,JK303 on JAB	6
13449711	AC ADAPTOR JACK	HEC0470-01-630	JK310 on JAB	1

DISPLAY UNIT

02565034	F-51320GNY-LY-AA	LCD		1
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NOTE: Replacement F-51320GNY-LY-AA should be made on a unit base.

PCB ASSY

#	72568134	MAIN BOARD ASSY		1
#	72670123	PANEL KEYTOP ASSY		1
NOTE: 'PANEL KEYTOP ASSY' includes the following parts.				
	02013090	F C-KEYTOP	MX1H CLR	1
	03120889	D S-KEYTOP	SX2H-B GRS	11
	03120890	D S-KEYTOP	SX1H-B GRS	17
	02230578	LED SPACER	LDS-50R	1
	12169368	LED SPACER	LDS-40B	1
	12169406	LED SPACER	LDS-100Y 10MM	1
#	72568178	LCD CN BOARD ASSY		1
#	72568167	JACK BOARD ASSY		1

IC					
#	03568778	UPD703107AGJ-197-UEN	IC (32BIT CPU)	IC4 on MAB	1
	02900978	M66291GP	IC (USB CONTROLLER)	IC13 on MAB	1
	02231767	RA0A-101 (TC223C080AF-101)	IC (DSP)	IC6 on MAB	1
	02121556	LC24085B-SD1	IC (I/F)	IC3 on MAB	1
	03670112	M11L16161SA-45T (0.18U)	IC (DRAM)	IC8 on MAB	1
	02781312	HN58X2464FPIZ	IC (EEPROM)	IC20 on MAB	1
	03341590	TC58FVM5B2ATG65BAH	IC (FLASH MEMORY)	IC2 on MAB	1
	03349478	TC58DVM72A1TG00BBH	IC (FLASH MEMORY)	IC1 on MAB	1
	03018301	K4S641632F-TC75	IC (SDRAM)	IC5 on MAB	1
	03016290	AK5353VT AD 24BIT	IC (AD)	IC35 on MAB	1
#	02900812	AK4353VFP-E2	IC (AD/DA)	IC33 on MAB	1
	03017590	UDA1351TS	IC (DIR DAC)	IC36 on MAB	1
	02781323	TUSB3200ACPAH	IC (AD/DA)	IC17 on MAB	1
	03239434	HD74LV02ATELL	IC (CMOS)	IC30,IC26 on MAB	2
	02905445	TC7SET08FU(TE85L)	IC (CMOS)	IC11,IC39,IC46 on MAB	3
	01349590	TC7WU04FU(TE12L)	IC (CMOS)	IC40 on MAB	1
	01348956	TC7SH00FU(TE85L)	IC (CMOS)	IC42 on MAB	1
	01348912	TC7SH08FU(TE85L)	IC (CMOS)	IC10,IC47 on MAB ,IC306 on JAB	2
					+1
	02565723	TC74VHC161FT(EL)	IC (CMOS)	IC43,IC44 on MAB	2
	02451923	HD74LV74ATELL	IC (CMOS)	IC22,IC28 on MAB	2
	01348901	TC7SH04FU(TE85L)	IC (CMOS)	IC15 on MAB	1
	01679056	TC74VHC574FT(EL)	IC (CMOS)	IC9 on MAB	1
	01783523	TC74VHCT245AFT(EL)	IC (CMOS)	IC7 on MAB	1
	01898023	TC7WH241FU(TE12L)	IC (CMOS)	IC27 on MAB	1
	02451712	HD74LV14ATELL	IC (CMOS)	IC12 on MAB	1
	01899167	TC74VHC04FT(EL)	IC (CMOS)	IC19 on MAB	1
	02675689	HD74LV245ATELL	IC (CMOS)	IC23,IC31,IC29,IC24 on MAB	4
	03015234	HD74LV32ATELL	IC (CMOS)	IC25 on MAB	1
	01897967	TC74VHC74FT(EL)	IC (CMOS)	IC45,IC41 on MAB	2
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC34,IC37,IC32 on MAB,IC402,IC404,IC412 on PAB	3
					+3
	03123734	PQ033DZ01ZP	IC (REGULATOR)	IC38 on MAB ,IC309 on JAB	1
					+1
	03126101	AT43301-AC	IC(USB HUB)	IC14 on MAB	1
	01783589	HD74HC4052FPPEL	IC (CMOS)	IC406,IC407,IC409,IC405 on PAB	4
	02017034	TC7W53FU(TE12L)	IC (CMOS)	IC413 on PAB	1
	01675034	TC74VHC138FT(EL)	IC CMOS	IC401 on PAB	1
	03129190	UPC324G2-E2	IC (BIPOLAR OP)	IC408 on PAB	1
	15289151	NJM2904M-TE3	IC (OP AMP)	IC410,IC403 on PAB	2
	15269219H0	HD74LS05FPPEL	IC (TTL)	IC304 on JAB	1
	03232267	TC7WH14FU(TE12L.F)	IC (CMOS)	IC303 on JAB	1
	02901590	HD74LVU04ATELL	IC (CMOS)	IC307 on JAB	1
	15289109	M5216FP-600D	IC (BIPOLAR OP AMP)	IC302 on JAB	1
	15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	IC305 on JAB	1
	03230667	PQ1CZ41H2ZP	IC (SWITCHING REGULATOR)	IC311,IC310 on JAB	2
	03235967	S-80927CLMC-G6X-T2	IC(RESET)	IC308 on JAB	1
	02900545	PC410LKNIP	IC (PHOTO COUPLER)	IC301 on JAB	1
TRANSISTOR					
	15309101	2SA1037AKT146R	TRANSISTOR	Q8,Q7 on MAB ,Q306,Q308,Q312 on JAB	2
					+3
	15329103T0	2SK880-GR(TE85R)	FET	Q4,Q5,Q3,Q6 on MAB ,Q309 on JAB	4
					+1
	02905501	SSM3J02T	TRANSISTOR	Q1 on MAB	1
	15329516	DTC114EKT146	TRANSISTOR	Q9 on MAB	1
				Q421,Q404,Q405,Q406,Q407,Q408,Q409,Q410,Q416,Q411 on PAB,Q310,Q313 on JAB	+10
	15319101	2SC2412KR T146	TRANSISTOR	Q423 on PAB,Q307 on JAB	1
					+1
	00562012	2SC3265-Y(TE85R)	TRANSISTOR	Q420 on PAB,Q311 on JAB	1
					+1
	01783612	RN2426(TE85L)	TRANSISTOR	Q415,Q401,Q412,Q414,Q413 on PAB	5
	15329507	DTA114EKT146	DIGITAL TRANSISTOR	Q417,Q422 on PAB,Q301 on JAB	2
					+1
	02670989	DTB113ZK-146T	TRANSISTOR	Q419 on PAB	1
	15319115	2SC4213-A(TE85L)	TRANSISTOR	Q315,Q314,Q304,Q302,Q303,Q305 on JAB	6
DIODE					
	01897178	MA142WA-(TX)	ARRAY DIODE	DA2 on MAB ,DA306 on JAB	1
					+1
	15339130	MA142WK-(TX)	ARRAY DIODE	DA9,DA6,DA7,DA10,DA4,DA1,DA8,DA5,DA3 on MAB	9
				DA409,DA416,DA430,DA429,DA428,DA424,DA423,DA422,DA421,DA420,DA419,DA407,DA417,DA401,DA406,DA402,DA403,DA418,DA405,DA415,DA408,DA410,DA411,DA412,DA413,DA414,DA404 on PAB	+2
				DA305,DA301,DA304 on JAB	7
					+3

DIODE					
	01897189	MA147-(TX)	ARRAY DIODE	DA426,DA425 on PAB	2
	01900612	TPS611	DIODE	DA302,DA303,DA307 on JAB	+3
	03126134	TLN233	LED	Q418 on PAB	1
	01904112	SLR-342VCT32 N.P.Q RANK	LED(RED)	LED443 on PAB	1
	02894090	SLR-343DUT32	LED (ORNG)	LED441 on PAB	1
				LED437,LED435,LED438,LED440,LED436,L	18
				ED403,LED434,LED419,LED418,LED439,LE	
				D427,LED425,LED433,LED417,LED412,LE	
				D411,LED410,LED409 on PAB	
#	03122112	SLR-343BBT3F	LED(BLUE)	LED402,LED401 on PAB	2
	03564701	SML-512DWT86	LED	LED416,LED420,LED421,LED415,LED432,L	18
				ED431,LED422,LED413,LED408,LED406,LE	
				D405,LED423,LED407,LED414,LED429,LE	
				D428,LED430,LED424 on PAB	
#	03564712	SML-512MWT86	LED	LED404 on PAB	1
	00785856	SLR-342VR3F	LED	LED426 on PAB	1
	01121689	SPR-325MVWT31	LED (RED/GREEN)	LED442 on PAB	1
	01780045	RB051L-40	SCHOTTKY DIODE	D302,D301 on JAB	2
	02781290	RB161L-40 TE25	SCHOTTKY DIODE	D303 on JAB	1
	02014778	U1GC44(TE12L)	RECTIFIER DIODE	D304,D305 on JAB	2
RESISTOR					
	03012990	MCR50 JZH J 2R2	CARBON RESISTOR	R128 on MAB	1
	00567256	RPC05T 562 J	MTL.FILM RESISTOR	R110,R124 on MAB	2
	00567045	RPC05T 151 J	MTL.FILM RESISTOR	R16,R23 on MAB	2
	01454890	MCR50 JZH J 220	MTL.FILM RESISTOR	R188,R187 on MAB,R461 on PAB	2
					+1
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R139,R131,R83,R82 on MAB,R458,R456 on	4
				PAB,R378,R376 on JAB	+2
					+2
	00567112	RPC05T 471 J	MTL.FILM RESISTOR	R122,R112 on MAB ,R356,R349,R332 on JAB	2
					+3
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R22,R21,R24,R163 on	4
				MAB,R415,R412,R409,R406,R404,R402,R475	+7
				on PAB ,R467 on JAB (ZS52520-)	
	02789001	RR0816Q-220-D	MTL.FILM RESISTOR	R46,R44,R60,R48,R58,R47 on MAB	6
	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R133,R29,R66,R71,R75,R76,R77,R79,R20,R1	27
				23,R141,R149,R159,R172,R173,R174,R180,R	+21
				184,R185,R186,R113,R19,R158,R15,R8,R2,R1	+4
				on MAB	
				R444,R465,R455,R454,R452,R451,R449,R429	
				,R445,R430,R443,R442,R439,R438,R437,R43	
				6,R435,R433,R467(-ZS52519),R448,R426 on	
				PAB,R310,R347,R309,R354 on JAB	
	00567067	RPC05T 221 J	MTL.FILM RESISTOR	R98,R97 on MAB,R468 on PAB,R320,R318	2
				on JAB	+1
					+2
	00566867	RPC05T 100 J	MTL.FILM RESISTOR	R105,R165 on MAB	2
	00566912	RPC05T 220 J	MTL.FILM RESISTOR	R4,R6,R91,R92,R101,R104 on MAB	6
	00567078	RPC05T 271 J	MTL.FILM RESISTOR	R72 on MAB	1
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R67,R35,R32,R85 on MAB	4
				R470,R466,R473,R464 on	+4
				PAB,R348,R355,R339,R308,R381,R380,R367,	+8
				R317 on JAB	
	00567178	RPC05T 152 J	MTL.FILM RESISTOR	R169,R41,R78,R65 on MAB	4
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R80 on MAB,R474 on PAB,R330,R324 on	1
				JAB	+1
					+2
	00567301	RPC05T 153 J	MTL.FILM RESISTOR	R53,R52,R55,R54,R59,R49,R62,R56 on MAB	8
	00567312	RPC05T 183 J	MTL.FILM RESISTOR	R147 on MAB ,R312,R303 on JAB	1
					+2
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	R195,R130,R176,R168,R61,R117,R177,R175,	20
				R198,R178,R36,R100,R191,R57,R33,R30,L6,	+9
				R5,R183,R108 on MAB	
				,R364,R372,R370,R325,R359,R352,R342,R33	
				1,R313 on JAB	
	00567389	RPC05T 563 J	MTL.FILM RESISTOR	R132,R140 on MAB,R471 on PAB	2
					+1
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R102,R146,R142,R134,R126,R103,R96,R95,R	12
				39,R38,R68,R115 on MAB,R459,R457,R434	+3
				on PAB,R307,R316,R373 on JAB	+3
	00567445	RPC05T 184 J	MTL.FILM RESISTOR	R135,R116 on MAB	2
	00567478	RPC05T 334 J	MTL.FILM RESISTOR	R119,R138 on MAB	2
	00567556	RPC05T 105 J	MTL.FILM RESISTOR	R70,R69 on MAB ,R343,R345 on JAB	2
					+2
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R148,R145,R144 on MAB,	3
				R428,R431,R427,R432 on	+4
				PAB,R323,R336,R329,R341,R360,R340,R344	+7
				on JAB	
	00567334	RPC05T 273 J	MTL.FILM RESISTOR	R114,R121,R127,R107 on MAB	4
				,R333,R337,R338,R328 on JAB	+4
	02122623	RR0816R-104-D	MTL.FILM RESISTOR	R50 on MAB	1
	02782367	MCR25 JZH J 6R8	MTL.FILM RESISTOR	R37 on MAB	1

RESISTOR				
00567289	RPC05T 103 J	MTL.FILM RESISTOR	R136,R86,R64,R63,R51,R34,R171,R170,R164, R137,R129,R125,R120,R111,R106,R90,R89,R 88,R143,R87,R28,R27,R26,R25,R10,R3,R9,R3 1 on MAB,R476 on PAB R369,R335,R319,R383,R334,R346 on JAB	28 +1 +6
03232678	RR0816Q-270-D	MTL.FILM RESISTOR	R43,R74,R73,R40 on MAB	4
00126112	EXBV8V101JV	RESISTOR ARRAY	RA24,RA25 on MAB	2
00909801	EXBV8V220JV	RESISTOR ARRAY	RA16,RA17 on MAB	2
02456878	EXB2HV220JV	RESISTOR-ARRAY	RA34,RA37,RA18,RA10,RA35,RA33,RA28, RA38,RA12,RA31 on MAB,RA401 on PAB	10 +1
02457723	EXB2HVR000V	RESISTOR-ARRAY	RA46,RA47,RA48 on MAB	3
02678534	EXB2HV103V	RESISTOR-ARRAY	RA15,RA39,RA36,RA40,RA20,RA32,RA14, RA9,RA7,RA4,RA1,RA29,RA26,RA41,RA44 on MAB	15
02781623	EXB2HV101JV	RESISTOR-ARRAY	RA11,RA49,RA23,RA22,RA2 on MAB	5
02904445	EXB2HV330JV	RESISTOR-ARRAY	RA43,RA6,RA3,RA8,RA42 on MAB	5
15409113	EXBV8V103JV	RESISTOR ARRAY	RA27,RA13,RA5,RA21,RA45,RA19,RA30 on MAB	7
00567456	RPC05T 224 J	MTL.FILM RESISTOR	R462 on PAB	1
00567190	RPC05T 222 J	MTL.FILM RESISTOR	R477 on PAB,R375,R306 on JAB	1 +2
00567201	RPC05T 272 J	MTL.FILM RESISTOR	R463 on PAB	1
01783623	MCR50 JZH J 100	MTL.FILM RESISTOR	R460 on PAB	1
00567034	RPC05T 121 J	MTL.FILM RESISTOR	R472 on PAB,R301 on JAB	1 +1
00566890	RPC05T 150 J	MTL.FILM RESISTOR	R422 on PAB	1
00566934	RPC05T 330 J	MTL.FILM RESISTOR	R403,R421,R419,R417,R414,R411,R408,R405 on PAB	8
00566956	RPC05T 390 J	MTL.FILM RESISTOR	R418 on PAB	1
00566990	RPC05T 680 J	MTL.FILM RESISTOR	R425,R424,R401 on PAB	3
00567012	RPC05T 820 J	MTL.FILM RESISTOR	R420 on PAB	1
00567056	RPC05T 181 J	MTL.FILM RESISTOR	R469 on PAB	1
00567501	RPC05T 474 J	MTL.FILM RESISTOR	R446,R441,R440,R450,R447,R453 on PAB	6
03125234	EXB2HV222JV	RESISTOR-ARRAY	RA403,RA402 on PAB	2
00567001	RPC05T 750 J	MTL.FILM RESISTOR	R361,R362 on JAB	2
00567089	RPC05T 331 J	MTL.FILM RESISTOR	R322,R327 on JAB	2
00567134	RPC05T 681 J	MTL.FILM RESISTOR	R321,R326 on JAB	2
01904990	RR0816P-562-D	MTL.FILM RESISTOR	R366 on JAB	1
02568401	RR0816P-272-D	MTL.FILM RESISTOR	R365 on JAB	1
02673401	RR0816P-102-D	MTL.FILM RESISTOR	R368 on JAB	1
03126234	RR0816P-822-D	MTL.FILM RESISTOR	R363 on JAB	1
15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R305,R315,R314,R304 on JAB	4
00567278	RPC05T 822 J	MTL.FILM RESISTOR	R311,R302 on JAB	2
00567323	RPC05T 223 J	MTL.FILM RESISTOR	R350,R382,R358,R357,R351,R353 on JAB	6
03348556	RPC05T 4R7 J	MTL.FILM RESISTOR	R374 on JAB	1
POTENTIOMETER				
03568189	RK12L12C0A0E	ROTARY POTENTIOMETER	VR404,VR405 on PAB	2
02455223	EVUF2KFK4B14	9M/M ROTARY POTENTIOM- ETER	VR401,VR402,VR403 on PAB	3
CAPACITOR				
01674512	ECJ1VB1H222K	CERAMIC CAPACITOR	C316,C122,C315 on MAB	3
01674234	ECJ1VC1H330J	CERAMIC CAPACITOR	C320 on MAB	1
01674334	ECJ1VC1H101J	CERAMIC CAPACITOR	C194,C179,C180,C181,C182,C183,C185,C18 7,C188,C189,C322,C192,C321,C178,C2,C191 ,C4,C3,C5,C1,C190,C32,C152,C150,C136,C6 3,C42,C177,C161,C193,C41 ,C30,C28,C26,C24,C22,C20,C17,C7,C6,C34, C173,C170,C169,C168,C167,C166,C171,C16 5,C174,C164,C163,C162,C175,C176,C172 on MAB ,C302,C308,C342 on JAB	56 +3
01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C145,C133,C159,C158,C157,C147,C117,C14 4,C143,C142,C139,C130,C141,C121,C132,C1 84,C153,C270,C265,C262,C263,C264,C259,C 266,C247,C272,C273,C274,C275,C310,C311 ,C312,C267,C232,C200,C204,C211,C216,C21 8,C261,C231,C186, C234,C236,C238,C239,C240,C243,C244,C22 8,C48,C61,C40,C43,C44,C45,C38,C47,C37,C 49,C52,C56,C57,C58,C59,C71,C46,C21,C8,C 9,C11,C14,C16,C39,C19,C62,C23,C25,C27,C 29,C31,C33,C35,C36,C18,C99,C84,C60,C88, C92,C94, C116,C98,C83,C101,C102,C103,C104,C111, C112,C114,C115,C96,C70,C64,C65,C66,C67, C68,C87,C203,C82,C313,C72,C74,C75,C76,C 77,C80,C81,C69,C314,C317,C318,C197 on MAB, C437,C423,C404,C413,C412,C411,C402,C40 3,C422,C432,C428,C429,C430,C427,C442,C4 31,C457,C433,C434,C436,C439,C446,C449,C 451,C452,C456 on PAB,	125 +26 +23

CAPACITOR

			C356,C360,C355,C352,C351,C348,C347,C345,C344,C343,C341,C306,C361,C303,C311,C312,C317,C322,C329,C334,C335,C318,C301 on JAB	
00568789	ECJ1VF1C224Z	CERAMIC CAPACITOR	C119 on MAB	1
01674190	ECJ1VC1H150J	CERAMIC CAPACITOR	C135,C134 on MAB,C447,C448 on PAB	2
				+2
01674212	ECJ1VC1H220J	CERAMIC CAPACITOR	C196,C195,C53,C51 on MAB	4
01674223	ECJ1VC1H270J	CERAMIC CAPACITOR	C154,C155 on MAB	2
01674278	ECJ1VC1H470J	CERAMIC CAPACITOR	C148,C149,C123,C124 on MAB	4
01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C89,C108,C128 on MAB,C443,C426 on PAB,C336,C324,C337 on JAB	3
				+2
				+3
01674712	ECJ1VF1A105Z	CERAMIC CAPACITOR	C106 on MAB	1
02129534	ECJ1VB1H102K	CERAMIC CAPACITOR	C151 on MAB,C453 on PAB,C309,C310,C316,C321,C307 on JAB	1
				+1
				+5
02566945	ECJ1VB1C473K	CERAMIC CHIP CAPACITOR	C255,C221 on MAB	2
01784123	ECHU1H471JX5	POLYEST. CAPACITOR	C229,C214 on MAB	2
01899223	ECHU1H102JX5	POLYEST. CAPACITOR	C215,C230 on MAB	2
01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C202,C110,C212,C217,C233,C235,C79 on MAB ,C327,C319,C305,C332,C314,C315 on JAB	7
				+6
02891767	RC2-16V100M-T2	CHEMICAL CAPACITOR	C13,C85,C113,C138,C140,C160,C10,C54,C12,C73,C55,C15,C50,C78 on MAB,C435,C438,C450,C454,C440,C455,C401 on PAB	14
				+7
01906501	RA2-16V220M-T2	CHEMICAL CAPACITOR	C210,C226,C224,C213 on MAB	4
01454889	RA2-16V470MT2	CHEMICAL CAPACITOR	C252,C260,C271,C91 on MAB	4
01902590	RA2-6V101MC-T2	CHEMICAL CAPACITOR	C246,C258,C242,C241 on MAB	4
01900823	RA2-16V100M-T2	CHEMICAL CAPACITOR	C199,C207,C208,C219,C225,C257,C269,C100,C227,C245,C93,C86,C251,C95 on MAB ,C323,C338 on JAB	14
				+2
02782912	RE3-50V3R3MB-T2	CHEMICAL CAPACITOR	C97,C107,C105 on MAB	3
01674389	ECJ1VC1H221J	CERAMIC CAPACITOR	C424,C421,C410,C425,C420,C406,C407,C408,C418,C409,C405,C414,C417,C416,C419,C415 on PAB,C333,C328 on JAB	16
				+2
02891756	RC2-6V331M-T2	CHEMICAL CAPACITOR	C445,C444 on PAB	2
01674167	ECJ1VC1H100D	CERAMIC CAPACITOR	C339,C340 on JAB	2
01674301	ECJ1VC1H101J	CERAMIC CAPACITOR	C372,C371 on JAB	2
02014923	RA2-35V470MT2	CHEMICAL CAPACITOR	C326,C331 on JAB	2
03234534	EEUFC1C681B	CHEMICAL CAPACITOR	C353,C357 on JAB	2
13639557M0	ECA1CM102B	CHEMICAL CAPACITOR	C354,C350 on JAB	2
02236701	RA2-25V221MC-T2	CHEMICAL CAPACITOR	C359 on JAB	1
02014890	RA2-16V221MT2	CHEMICAL CAPACITO	C320,C346,C358,C349 on JAB	4

INDUCTOR, COIL, FILTER

02451367	ZCYS51R5-M3PAT	CHOKE COIL	L4 on MAB	1
01565578	N1608Z601T01	FERRITE-BEAD	L5,L1 on MAB	2
			,L312,L302,L304,L311,L305,L306,L307,L308,L309,L303,L310,L301 on JAB	+12
02891034	N2012ZP121T	FERRITE-BEAD	L2,L3 on MAB	2
02783467	SLF10145T-470M1R4	CHOKE COIL	L316 on JAB	1
02783478	SLF10145T-101M1R0	CHOKE COIL	L317 on JAB	1
12449268	BL02RN2-R62T2	FERRITE-BEAD	L314,L315 on JAB	2

CRYSTAL, RESONATOR

01340745	MA-406 12MHZ	CRYSTAL	X4 on MAB	1
02673267	CX-49G 5MHZ	CRYSTAL	X1 on MAB	1
03017301	MA-406 6.000MHZ TE24	CRYSTAL	X5 on MAB	1
01893334	SG8002JC-67.7376M-PHCL	OSCILLATOR	X2 on MAB	1

ENCODER

02345734	EVE LA1 F20 24B	ROTARY ENCODER	EN401 on PAB	1
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CONNECTOR

#	02012101	32FMN-BTK-A	CONNECTOR	CN5 on MAB ,CN502 on LCB	2
	02011956	18FMN-BTK	CONNECTOR	CN9 on MAB ,CN303 on JAB	2
	01908634	14FE-BT-VK-N	CONNECTOR	CN8 on MAB ,CN302 on JAB	2
	02011990	22FMN-BTK-A	CONNECTOR	CN3 on MAB	1
	02012089	30FMN-BTK	CONNECTOR	CN2 on MAB	1
	03013989	B4B-PH-K-S JST(PB FREE)	CONNECTOR	CN6,CN10 on MAB ,CN304 on JAB	3
	02010878	18FE-ST-VK-N	CONNECTOR	CN402 on PAB	1
	03452934	30FMN-STK-A	CONNECTOR	CN401 on PAB	1
	03564823	22FMN-STK-A	CONNECTOR	CN403 on PAB	1
	02567701	52689-3093	CONNECTOR	CN501 on LCB	1
	02893434	S2B-PH-K-S	CONNECTOR	CN503 on LCB	1
	01908656	18FE-BT-VK-N	CONNECTOR	CN301 on JAB	1

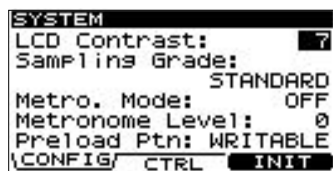
WIRING, CABLE				
	02341978	WIRING	4X100-P2.0-PHR-PHR-F	1
#	03678889	WIRING W2		1
	02672434	BAN CARD	BNCD-P=1.25-K-14-60	1
#	02903067	BAN CARD	BNCD-P=1.00-K-18-60	1
#	03679934	BAN CARD	BNCD-S-P=1.00-K-32-50 W/O GS	1
	03236067	BAN CARD	BNCD-P=1.25-K-18-120	1
#	03675401	BAN CARD	BNCD-P=1.00-K-22-150	1
#	03678867	BAN CARD	BNCD-P=1.00-K-30-170	1
#	03678878	WIRING W1		1
TRANSFORMER				
	02019478	(7KQ5) 19832A	PULSE TRANS	T301 on JAB
				1
PICKUP, SENSOR				
	03128767	PRESSURE SENSOR SHEET		1
SCREW				
	40011090	SCREW 3X6	BINDING TAPTITE B BZC	14
	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC	35
	40011312	SCREW 3X8	BINDING TAPTITE P BZC	10
	40012534	SCREW 3X6	BINDING TAPTITE S FE BZC	2
	40454856	SCREW M4X10	BINDING NI	1
	40011490	SCREW M3X6	PAN MACHINE W/SW BZC	3
	40011289	SCREW 3X10	BINDING TAPTITE PE ZC	4
PACKING				
	03679589	ACCESSORY PAD		1
	03679578	LOWER PAD R		1
	03679567	LOWER PAD L		1
	03568456	UPPER PAD		1
	03568467	PACKING CASE		1
	03679590	OUTER PACKING CASE		1
MISCELLANEOUS				
	03568412	CF PROTECTOR		1
	40122812	ACETATE TAPE	NITTO NO.5 BLK W15MM 30M	1
	01235378	FOOT		4
	22365714	CORD HOOK	236-714	1
	03678912	SHIELD SHEET LCD		1
	40016589	NYLON RIVET	NRP-335	1
	12199584	GROUNDING TERMINAL	M1698	TER302,TER303,TER301 on JAB
				3
ACCESSORIES (STANDARD)				
△	00905756	AC ADAPTOR	ACI-100C	1
△	00905767	AC ADAPTOR	ACI-120C	1
△	03017356	AC ADAPTOR WITHOUT AC CORD	PSB-1U(R) UNIVERSAL	1
△	01903356	AC CORD SET	230V 1.0M FOR PSB	1
△	01903367	AC CORD SET	240V 1.0M FOR PSB	1
	03237578	USB CONNECT CORD	YAF11-1118 2M CERTIFIED	1
#	*****	CD-ROM	P606 V1.00	1
#	72670101	OWNER'S MANUAL	JAPANESE	1
#	72670412	OWNER'S MANUAL	ENGLISH	1
#	03678845	CD-ROM	DRIVER AND CONTENT DATA	1
△	00905234	EURO CONVERTER PLUG	ECP01-5A (PLUG FOR BRC-230T)	1
	40232334	WARRANTY CARD	MOCHIKOMI JAPAN ONLY	1

CHECKING THE VERSION NUMBER

1. Power-on the SP-606.
2. Press [MENU] to access the Top Menu screen.



3. With "1: System" selected, press [ENTER] to enter the SYSTEM screen.



4. Hold down [FUNC] and press [F1](INFO) to enter the SYSTEM INFO screen.



5. Now you can press [F2] (VER) to get the Version Info screen which displays the version number.



USERS DATA SAVE AND LOAD

BACKUP SAVE

Here's how to save all internal data (including samples, patterns, and songs) and settings to a Memory card (Compact Flash). You can save up to four such sets of data on a card.

If there are a large number of saved samples and insufficient capacity on the card, the number of backup data sets that can be saved will be fewer.

1. Power-on the SP-606.
2. Into the card slot on the front panel, insert a Memory card (Compact Flash) that has been formatted by the SP-606.
3. Hold down [FUNC] and press pad [10](CARD UTIL) to access the CARD UTILITY screen.



4. In this CARD UTILITY screen, use [▲] [▼] to move the cursor to the "Backup Save" line.
5. Press [ENTER] to access the BACKUP SAVE screen.



Empty backup areas are shown by a dotted line. (Backup areas containing data are shown by a solid line.)

You can also access the same screen by pressing [F1](SAVE) from the CARD UTILITY screen.

If a Memory card (Compact Flash) is not inserted, the display will indicate "Card Not Ready!"

6. Turn the VALUE dial or use [◀] [▶] [▲] [▼] [DEC] [INC] to set "Backup" to the desired backup area 1 - 4.

This selects the area in which the backup data will be saved.

7. Press [F3](EXEC) to save the backup data.

If you decide to cancel, press [F2](CANCEL).

If the selected backup area already contains data, a message of "A Backup Data Already Exists! Overwrite?" will appear.

If you are sure it is ok to overwrite the existing backup data, press [F3](EXEC) or [ENTER]. If you decide to cancel, press [F2](CANCEL) or [EXIT].

BACKUP LOAD

Here's how to load previously-saved backup data (all internal settings and data including samples, patterns, and songs) from a Memory card (Compact Flash).



Be aware that when you execute the Backup Load operation, the internal settings will be replaced by the loaded backup data.

1. In the CARD UTILITY screen, use [▼] [▲] to move the cursor to the "Backup Load" line.
2. Press [ENTER] to access the BACKUP LOAD screen.



Backup areas that contain data are shown as solid lines. (Empty backup areas are shown as dotted lines.)

You can also get to the same screen by pressing [F2](LOAD) from the CARD UTILITY screen.



If a Memory card (Compact Flash) is not inserted, the display will indicate "Card Not Ready!"

3. Turn the VALUE dial or use [◀] [▶] [▲] [▼] [DEC] [INC] to set "Backup" to 1 - 4.

This selects the backup data that will be loaded from the Memory card (Compact Flash).

4. Press [F3](EXEC) to load the backup data.

If you decide to cancel, press [F2](CANCEL).

SYSTEM INITIALIZE INSTRUCTIONS

Here's how to use SP-606 SERVICE DATA&PROGRAM (#17041448) to return the SP-606 to its factory-set state.



All data in the SP-606's internal memory will be lost when you perform this procedure. Save a backup of the data if necessary.

You will need the following items.

- A computer with a CD-ROM drive
- A card reader appropriate for the Memory card (Compact Flash)
- SP-606 SERVICE DATA&PROGRAM (#17041448)
- Memory card (Compact Flash) (32 MB or larger / formatted by the SP-606)

1. Connect the card reader to your computer, and make it ready for use.
2. Insert SP-606 SERVICE DATA&PROGRAM in the CD-ROM drive.
3. Insert the Memory card (Compact Flash) in the card reader.
4. From SP-606 SERVICE DATA&PROGRAM, copy the "FCTRY" folder into the "ROLAND" folder of the Memory card (Compact Flash).



If the "ROLAND" folder of the Memory card (Compact Flash) already contains a "FCTRY" folder, delete this "FCTRY" folder before copying.

5. Remove the Memory card (Compact Flash) (containing the copied data) from the card reader as described in "Removing the Memory card (Compact Flash) Safely" (see p.22).
6. Turn on the power of the SP-606.
7. Insert the above Memory card (Compact Flash) into the SP-606's card slot.
8. Press [MENU] to get the Top Menu screen.
9. Move the cursor to the "1:SYSTEM" line and press [ENTER]. The SYSTEM screen will appear.
10. Press [F3](INIT) to get the SYSTEM INITIALIZE screen.
11. Press [F1](PRESET) to add a check mark to "Load Factory Data."



If a Memory card (Compact Flash) is not inserted, a message of "Card Not Ready!" will appear.



If you initialize without adding a check mark, all of the internal memory data will be erased and the system settings will be initialized. However if pad banks or preloaded patterns are protected, an indication of "Protected!" will appear, and these cannot be initialized.

12. Press [F3](EXEC).

If you decide to cancel, press [F2](CANCEL).

13. A message of "This will clear all the internal contents. Are you sure?" will appear; press [F3](EXEC).

The display will indicate "Executing ..."

If you decide to cancel, press [F2](CANCEL).

14. An indication of "Please Power Off." will blink. Turn the SP-606's power off, and then on again.

SYSTEM SOFTWARE UPDATING INSTRUCTIONS

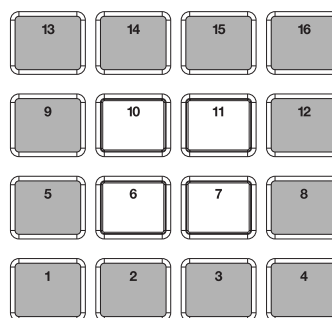
The items required are the same as for the preceding section, "System initialize."

1. Connect a card reader to your computer, and make it ready for use.
2. Insert SP-606 SERVICE DATA&PROGRAM (#17041448) into the CD-ROM drive.
3. Insert the Memory card (Compact Flash) into the card reader.
4. From the "UPDATE" folder of SP-606 SERVICE DATA&PROGRAM, copy the "DCNAPL.BIN" file into the root folder of the Memory card (Compact Flash).
5. Turn off the power of the SP-606.
6. Remove the Memory card (Compact Flash) (containing the copied data) from the card reader as described in "Removing the Memory card (Compact Flash) Safely" (see p.22).
7. Insert the above Memory card (Compact Flash) into the SP-606's card slot.
8. Turn on the power of the SP-606.
9. The SP-606 will execute the update automatically. (While the update is in progress, the LEDs of pads [1][5][9][13][14][15][16][12][8][4][3][2] will light one by one in succession (rotating toward the right)).



Don't turn off the power while the update is to be performed.

10. After approximately one minute, if the update was successful, the LEDs of pads [1][5][9][13][14][15][16][12][8][4][3][2] will blink simultaneously.



11. Turn off the power of the SP-606 and remove the Memory card (Compact Flash).

If an error occurs during the update, the LED of one of the following pads will blink.

Pad	Meaning
Pad [1]	Hardware error (flash memory manufacturer ID cannot be read)
Pad [2]	Hardware error (flash memory device ID cannot be read)
Pad [3]	The SP-606 cannot read the file "DCNAPL.BIN" (the Memory card (Compact Flash) is faulty)
Pad [4]	The file "DCNAPL.BIN" is damaged
Pad [5]	Hardware error (cannot write to flash memory)

TEST MODE

The SP-606 has two test modes.

One is the Function Tester mode, and the other is for normal use.

The Function Tester mode is used only in order to adjust the LCD contrast.

Adjusting the LCD contrast

LCD contrast adjustment is performed using the Function Tester test mode.

This adjustment cannot be performed in the normal test mode.

You must perform this adjustment after replacing the main board or the LCD unit.

1. While holding down [V-LINK] and [▲], turn on the power.
 - * Continue holding down these buttons until the LCD indicates "TEST MODE Please wait...."
2. You will enter Function Tester mode.
3. Press [MENU] to get the MENU screen.
4. Use [▼] [▲] to select "6:LCD Adjust" and press [ENTER].



5. You will enter the LCD Adjust screen. Use the VALUE dial or the [INC][DEC] buttons to adjust the contrast, and press the [F2](WRITE) button at the point of visibility.
6. Hold down [FUNC] and press [EXIT] twice.
7. Press [ENTER].
8. You will return to the normal Play screen; turn off the power.

Entering the normal test mode

NOTE

The following items of this test mode will erase the data in the user area. You must save a backup of the user data before you use test mode.

Sound test : The data will be partially erased.
Load Data : All of the data will be erased.

1. While holding down [◀◀] and [▲], turn on the power.
 - * Continue holding down these buttons until the LCD indicates "TEST MODE Please wait..."
2. You will enter the normal test mode.

Exiting test mode

Turn off the power.

* Except for 18. Load Data.

Required items

1. A computer with a CD-ROM and USB connector. (The operating system can be Windows 2000 or Windows XP. Windows XP is recommended.)
2. Memory card (Compact Flash) (32MB or larger / formatted on the SP-606)
3. Headphones
4. MIDI cable
5. Audio cables (two)
6. Coaxial cable
7. USB cable
8. Pedal switch (e.g., DP-2)
9. Test device that applies 3 kgf of force (e.g., a push-pull gauge) or a 3 kg weight
10. An audio source that can produce stereo sound (i.e., that can output separate sounds from L and R)

Preparations

- computer

From the "DRIVER" folder of SP-606 SERVICE DATA&PROGRAM (#17041448), install the dedicated SP-606 USB driver into your computer. For the installation procedure, refer to the README file located in the "DRIVER" directory.

- Memory card (Compact Flash)

From the "TEST_MODE" folder of SP-606 SERVICE DATA&PROGRAM (#17041448), copy the entire "ROLAND" folder into the root folder of the Memory card (Compact Flash).

Subsequently, we will refer to this Memory card (Compact Flash) as the "test mode Memory card (Compact Flash)."

Before you initiate Test mode

You will be able to perform the tests more smoothly if you connect the following cables before you initiate Test mode.

1. Use a MIDI cable to connect MIDI IN and MIDI OUT.
2. Use two audio cables to connect AUDIO INPUT L / AUDIO INPUT R to the L/R output of a stereo sound source.
3. Connect the PHONES to head phones.
4. Use a coaxial cable to connect DIGITAL IN and DIGITAL OUT.
5. Use a USB cable to connect the USB connector to your computer.
6. Connect a pedal switch (e.g., DP-2) to the FOOT SWITCH jack.
7. Insert the test mode Memory card (Compact Flash) into the slot.
8. Place the SP-606 SERVICE DATA&PROGRAM disc in the CD-ROM drive.

Test items

The following 18 items are tested.

1. Version check
2. Device test
3. Card test
4. MIDI test
5. Audio Input test
6. Sound test
7. LCD test
8. D-Beam Adjust test
9. D-Beam test
10. Pad Adjustment test
11. Pad Velocity test
12. Encoder test
13. A/D test
14. Switch1 & LED test
15. Switch2 test
16. USB MIDI/Audio test
17. USB Mass Storage test
18. Load Data

During Test mode you can press [MENU] to view all test items.

You can use [▲] [▼] to select an item and then press [ENTER] to jump to the desired test.

You can also use [F1](PREV) / [F3](NEXT) to move to the previous or next test item.

However for some test items, [F1](PREV) / [F3](NEXT) will not work unless the test is completed successfully.

If you want to move to the previous or next item even though the test was not completed successfully, you can hold down [FUNC] and press [F1](PREV) or [F3](NEXT) to forcibly move to the previous or next test item.

Test mode procedure

1. Version check

The LCD will indicate the versions of the following programs.

PROG Version : Program version in the NOR FLASH MEMORY

BOOT Version : Program version of the CPU's internal memory



All LEDs will light.

After you have noted the version, press [F3](NEXT) to proceed to the next test item.

2. Device test

This tests various devices on the main board.

When you enter the Device test, the following indication will appear in the LCD and the device test will begin automatically.



LCD indication	Corresponding device on the main board
CPU (ROM)	IC4
CPU (RAM)	IC4
FLASH (NOR)	IC2
FLASH (NAND)	IC1
SD-RAM	IC5
ESP	IC6
ESP D-RAM	IC8
USBC	IC13

If all devices are OK, you will automatically proceed to the next test item.

3. Card test

This tests the Memory card (Compact Flash).

If you enter the Card test without inserting a Memory card (Compact Flash), the LCD will show as follows.



Insert the test mode Memory card (Compact Flash) into the slot.

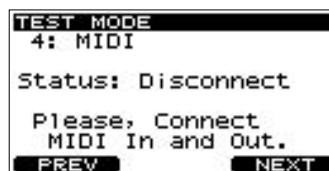
If the test result is OK, you will automatically proceed to the next test item.

- * If you enter this test with the test mode Memory card (Compact Flash) already inserted, the test will end immediately and you will proceed to the next test item.

4. MIDI test

This tests transmission between MIDI IN and MIDI OUT.

If you enter this test without connecting a MIDI cable between MIDI IN and MIDI OUT, the LCD will show as follows.



Use one MIDI cable to connect MIDI IN and MIDI OUT.

If the test result is OK, you will automatically proceed to the next test item.

- * If you enter this test with a MIDI cable already connected, the test will end when you unplug the MIDI cable.

5. Audio Input test

This tests the AUDIO IN REC LEVEL knob.

When you enter the Audio Input test, the LCD will show as follows.



Use two audio cables to connect a stereo audio source to AUDIO INPUT L and AUDIO INPUT R.

From your stereo audio source, input an audio signal (a sustained sound that differs between L and R) into the AUDIO INPUT.

The audio input signal will be output without change from PHONES and LINE OUT.

Use headphones to check the PHONES output.

Check both L and R to verify that the output volume changes normally as you operate the AUDIO IN REC LEVEL knob.



The audio signal that is input from USB or DIGITAL IN is also output from PHONES and OUTPUT L / OUTPUT R, but its waveform is not affected when you operate the AUDIO IN REC LEVEL knob.

When you have finished checking the output, use two audio cables and a coaxial cable to connect the following jacks before you proceed to the next item (Sound test).

OUTPUT L(MONO) and AUDIO INPUT L(MONO)/MIC

OUTPUT R and AUDIO INPUT R

DIGITAL OUT and DIGITAL IN

Turn the AUDIO IN REC LEVEL knob and VOLUME knob to the far right (MAX).

Then press [F3](NEXT) to proceed to the next item.



In the following Sound test, the display will indicate "Now Processing..." when you move between items.

6. Sound test



This item will erase the data in the user area. You must save a back up of the user data before you perform this test.

Before you perform this Sound test, use two audio cables and a coaxial cable to make the following connections:

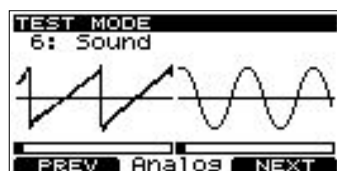
- OUTPUT L(MONO) and AUDIO INPUT L(MONO)/MIC
- OUTPUT R and AUDIO INPUT R
- DIGITAL OUT and DIGITAL IN

You must also turn the AUDIO IN REC LEVEL knob and VOLUME knob to the far right (MAX).



If you enter this test item before making the connections, press [F1](PREV) to return to the previous item, connect the cables and set the knobs appropriately, and then press [F3](NEXT) to perform this test.

- The analog input/output will be tested.
- The LCD will show as follows.

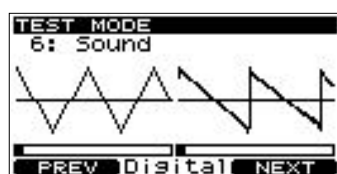


Verify that a sawtooth wave is displayed in the left, and a sine wave in the right.

When you have verified this, press [F3](NEXT) to proceed to the next test item.

Next the digital input/output will be tested.

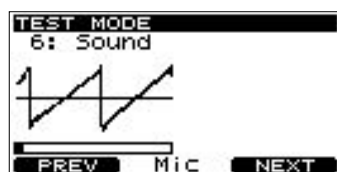
The LCD will show as follows.



Verify that a triangle wave is displayed in the left, and a sawtooth wave in the right.

When you have verified this, press [F3](NEXT) to proceed to the next item.

Next the mic input will be tested.



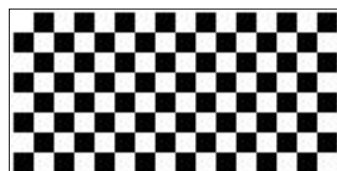
Verify that a sawtooth wave is displayed in the left.

When you have verified this, press [F3](NEXT) to proceed to the next item.

7. LCD test

This tests the LCD.

First the LCD will show as follows.



A test pattern (four types) will be displayed each time you press [F3]; verify that the pattern is displayed correctly.



When the center of the screen indicates LCD Contrast, use the VALUE dial or [INC][DEC] to verify that the contrast changes normally.

When you have verified this, press [F3](NEXT) to proceed to the next item.

8. D-Beam Adjust test

This adjusts the sensitivity of the D BEAM controller.

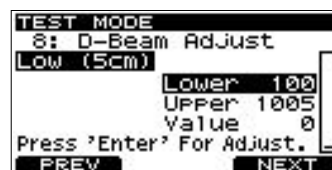
This adjustment optimizes the response of the controller by setting two points

(5 cm and 35 cm) of distance between your hand and the D BEAM controller.

Before the test:

- * *In order to perform the D-Beam Adjust test and D-Beam test, the following conditions are required.*
- Do not place objects nearby. (They must be at least 30 cm away.)
- Place the unit away from large flat surfaces such as the ceiling or wall. (Such surfaces must be at least 100 cm away.)
- Do not place the unit in strong light, such as in direct sunlight or under an electric light.

When you enter the D-Beam Adjust test, the LCD will show as follows.



First you will make the D BEAM controller "5 cm" setting.

The LCD will indicate "Low (5cm)."

Place your hand parallel with the panel surface at a distance of 5 cm above the D BEAM controller, and press [ENTER].

Do not move your hand while the lower part of the LCD indicates "Now Adjusting..."

When the setting has been completed, you will automatically proceed to the next setting.

Now you will make the D BEAM controller "35cm" setting.

The LCD will indicate "High (35cm)."

Place your hand parallel with the panel surface at a distance of 35 cm above the D BEAM controller, and press [ENTER].

- * *Do not move your hand while the lower part of the LCD indicates "Now Adjusting..."*

When the setting has been completed, you will automatically proceed to the next test item.

9. D-Beam test

This tests the operation of the D BEAM controller.

When you enter the D-Beam test, the LCD will show as follows.



The D BEAM controller will be tested.

The LCD will indicate "Max."

Place your hand above the D BEAM controller, and move your hand downward.

Verify that the LCD shows the maximum value (127) when your hand is approximately 5 cm above the panel surface.

If the test result is OK, the LCD will indicate "Min."

Place your hand above the D BEAM controller, and move your hand upward.

Verify that the LCD shows the minimum value (0) when your hand is approximately 35 cm above the panel surface.

If the test result is OK, you will automatically proceed to the next test item.

10. Pad Adjustment test

This adjusts the pad sensitivity.

This adjustment optimizes the sensitivity of the pad by specifying the base value when 3 kgf is applied to the pad.

When you enter the Pad Adjustment test, the LEDs of all pads will light, and the LCD will show as follows.



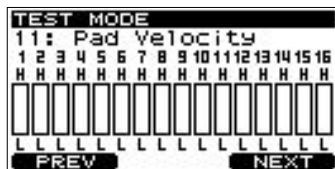
Use your push-pull gauge to apply 3 kgf of pressure to pad [16].

When you press [ENTER], the setting will be saved and you will automatically proceed to the next test item.

11. Pad Velocity test

This tests the operation of the pads.

When you enter the Pad Velocity test, all pads will blink and the LCD will show as follows.



Successively strike pad [1] through pad [16] softly.

Verify that the LED of the pad you pressed changes from blinking to lit, and that "L" indication disappears for the corresponding pad number in the LCD.

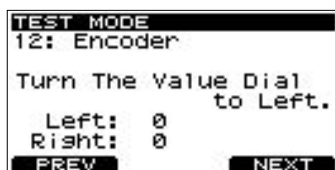
Successively strike pad [1] through pad [16] strongly.

Verify that the LED of the pad you pressed changes from lit to dark, and that "H" indication disappears for the corresponding pad number in the LCD.

If the test result is OK, you will automatically proceed to the next test item.

12. Encoder test

When you enter the Encoder test, the LCD will show as follows.



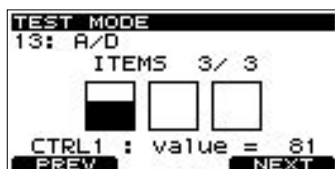
Continue turning the VALUE dial toward the left, and verify that the LCD indicates "Left: 72 OK".

Next, continue turning the VALUE dial toward the right; when the LCD reaches "Right: 72" you will automatically proceed to the next test item.

13. A/D test

This tests the operation of the CTRL knobs (A/D function).

When you enter the A/D test, the LCD will show as follows.



One by one, turn the CTRL1 - CTRL3 knobs through their variable range from MAX to MIN.

When the respective minimum (0) and maximum (127) values occur, the rectangle in the LCD will change to a solid line.

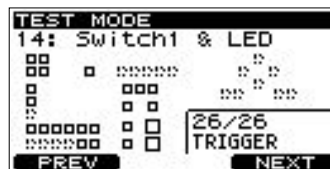
When all of the rectangles are shown as solid lines and the test result is OK, you will automatically proceed to the next test item.

14. Switch1 & LED test

This tests the operation of the LEDs and switches.

This test also tests the foot switch, so connect a pedal switch such as the DP-2 to the FOOT SWITCH jack.

When you enter the Switch1 & LED test, the LCD will show as follows.



The LCD shows a graphic that corresponds to the switches on the panel. The rectangles drawn in solid lines indicate the locations of the switches that have not been tested.

On the panel, one switch with an LED will light.

When you press this switch, the next switch with LED will light.

Continue repeating this operation.

For [PLAY], the green LED and red LED will light successively, so you will need to press the switch twice.

When the corresponding switch has been pressed, the rectangle shown in the LCD will appear drawn in dotted lines.

Finally the green LED of pad [16] will light; press the pedal switch.

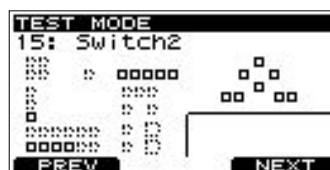
If all tests are OK, you will automatically proceed to the next test item.

15. Switch2 test

This tests the operation of the switches.

Switches that were not tested by the Switch1 & LED test are tested here.

When you enter the Switch2 test, the LCD will show as follows.



One by one, press each panel switch corresponding to the rectangles drawn in solid lines in the LCD.

Verify that the rectangle in the LCD corresponding to the switch changes to appear drawn in dotted lines.

When the indications of all switches have changed to dotted lines and the test result is OK, you will automatically proceed to the next test item.

16. USB MIDI/Audio test

This tests USB MIDI/AUDIO operation.

Before you perform this test, insert the SP-606 SERVICE DATA&PROGRAM disc in the CD-ROM drive.

When you enter the USB MIDI/Audio test, the LCD will show as follows.



Use a USB cable to connect the SP-606 to your computer. (The computer must have a USB connector. The operating system may be either Windows 2000 or Windows XP. Windows XP is recommended.)

- Verify that the indication changes between "Status: Connect" / "Status: Disconnect" when you connect or disconnect.
- With the "Status: Connect" indication showing, use Media Player or a similar application to play back the wave data "TestSound.WAV" located in the "TEST_SOUND" directory of the SP-606 SERVICE DATA&PROGRAM disc.
- Sine waves of differing frequencies will be output from L and R; use an oscilloscope etc. to check the waveforms that are output from PHONES or OUTPUT L/OUTPUT R.

When you have finished checking, insert the test mode Memory card (Compact Flash) for the USB Mass Storage test which follows, and then press [F3](NEXT).



Leave the USB cable connecting the SP-606 to your computer.

17. USB Mass Storage test

This tests USB Mass Storage operation.

When you enter the USB Mass Storage test, the LCD will show as follows.



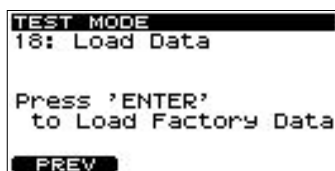
Verify that the computer display shows the contents of the Memory card (Compact Flash) (ROLAND folder).

When you have verified this, press [F3](NEXT) to proceed to the next item.

18. Load Data

This initializes the system and writes the initial data.

When you enter this item, the LCD will show the following.



Insert the test mode Memory card (Compact Flash) and press [ENTER].

Processing will require approximately 40 seconds.



Do not turn off the power until writing has been completed.



Remove the test mode Memory card (Compact Flash).

The display will indicate

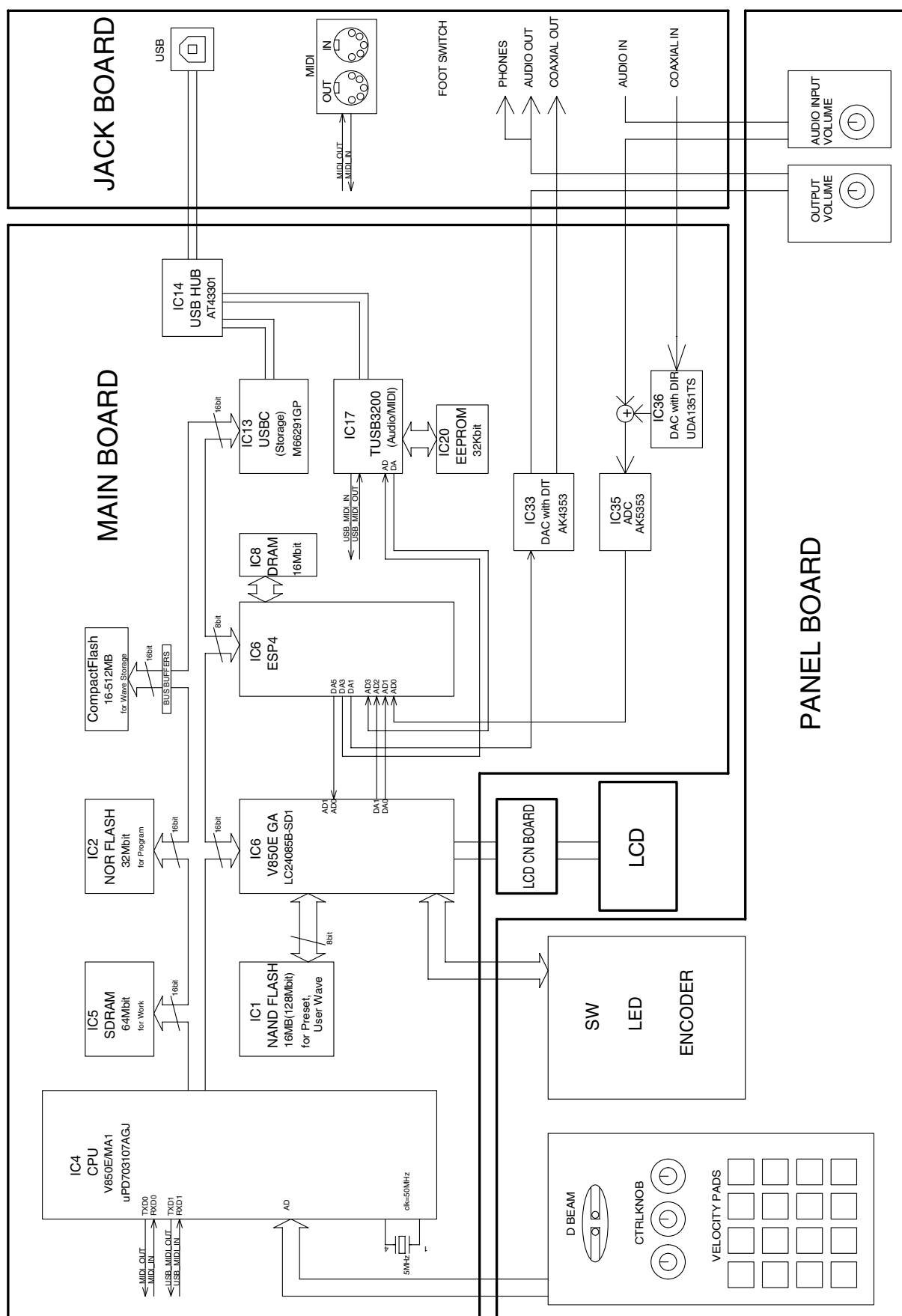


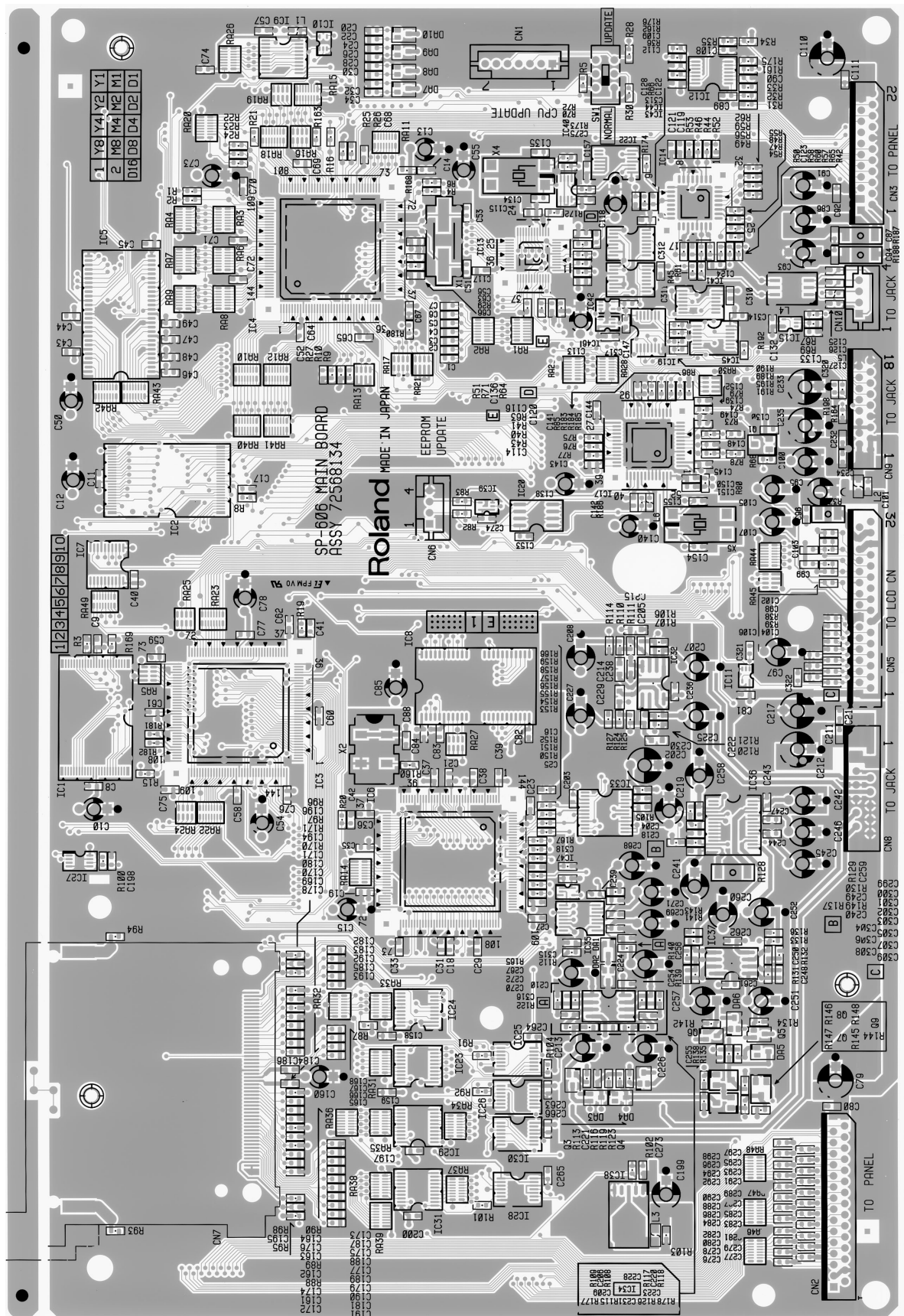
Turn off the power.

Removing the Memory card (Compact Flash) safely

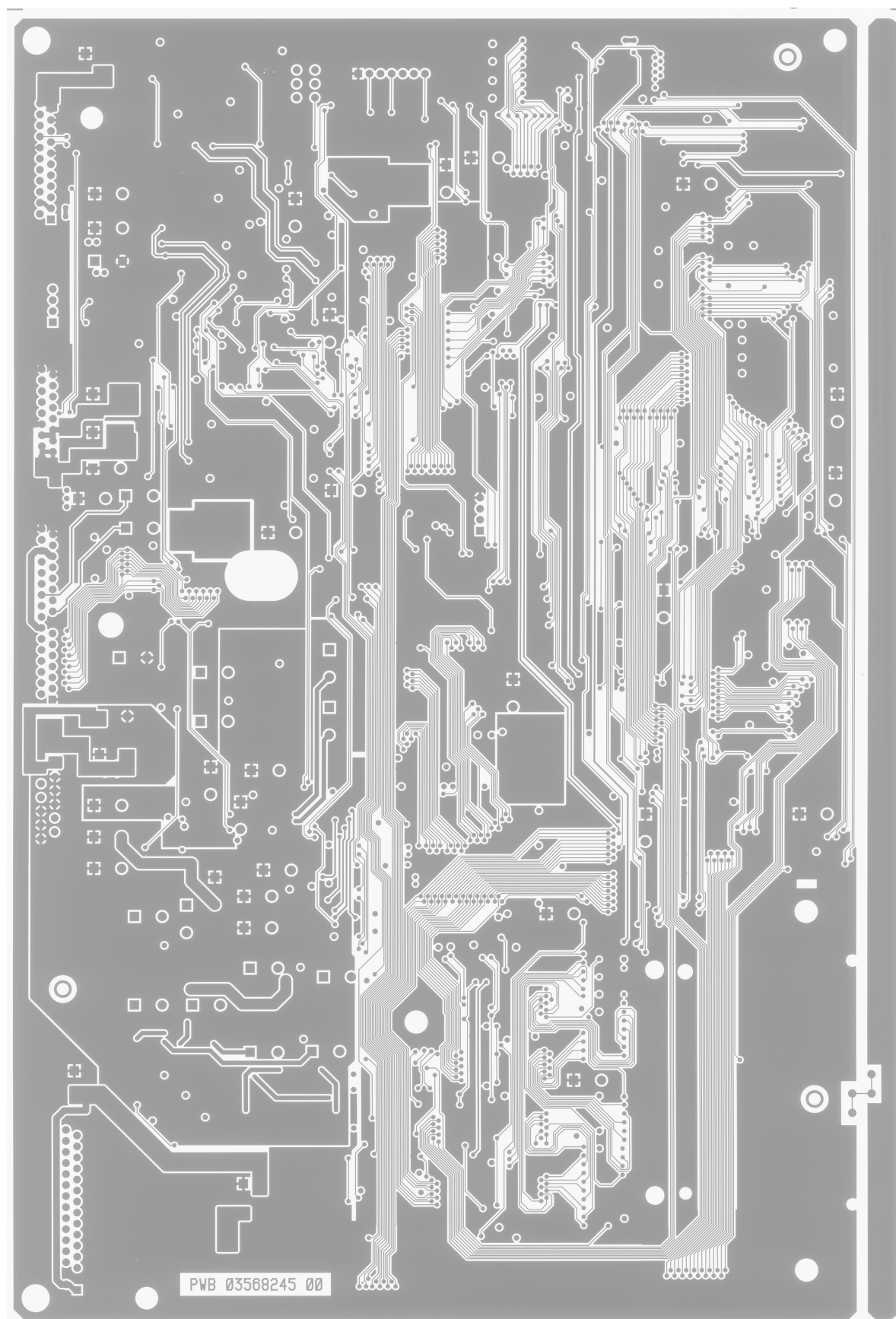
Use “Safely Remove Hardware” (displayed in the taskbar at the lower right of the screen) to “Stop” the card reader. Then remove the Memory card (Compact Flash).

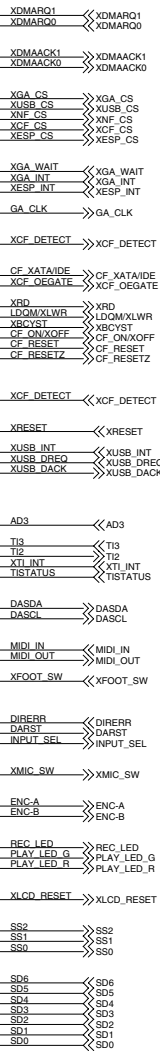
BLOCK DIAGRAM



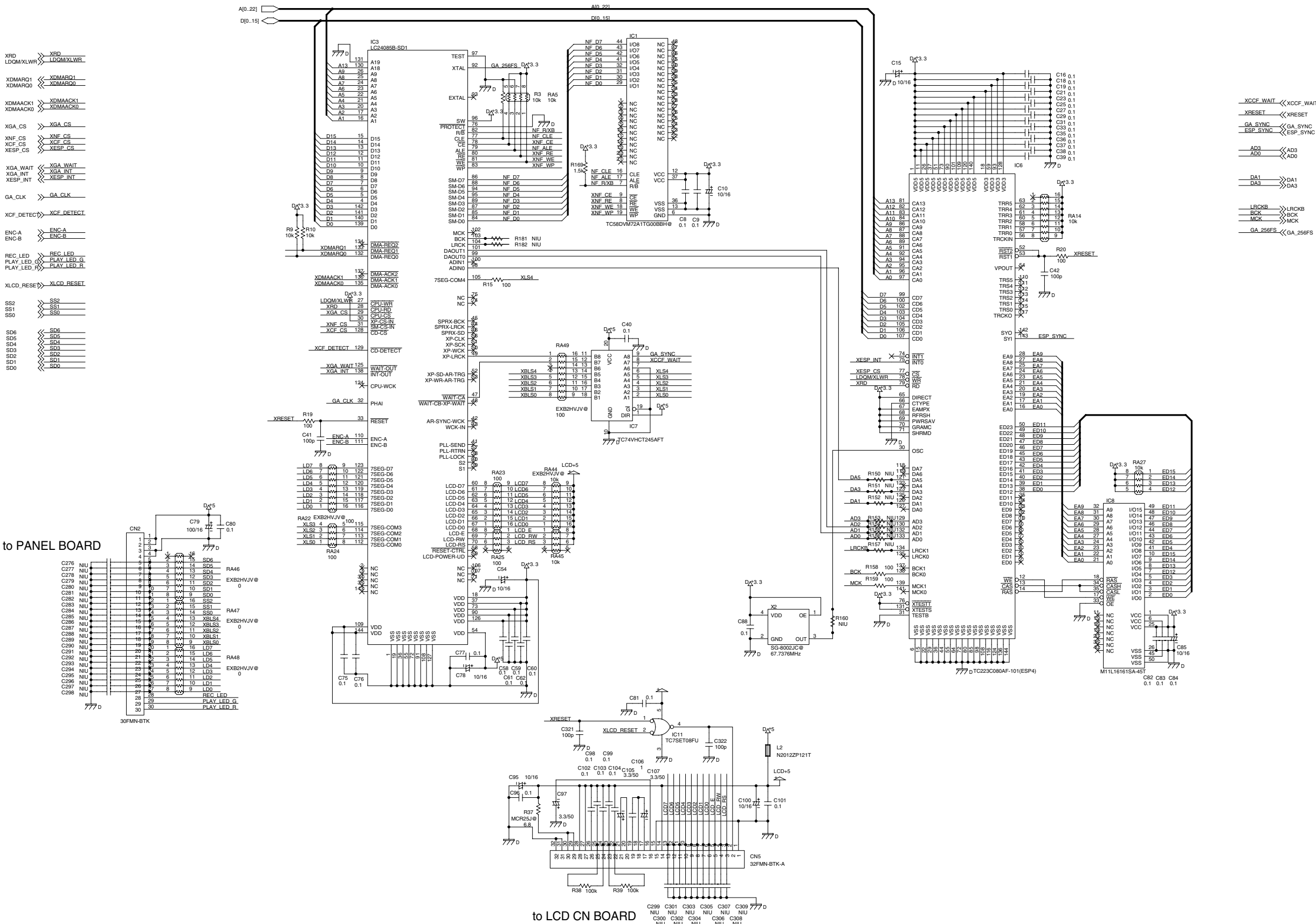


CIRCUIT BOARD (MAIN BOARD 2)

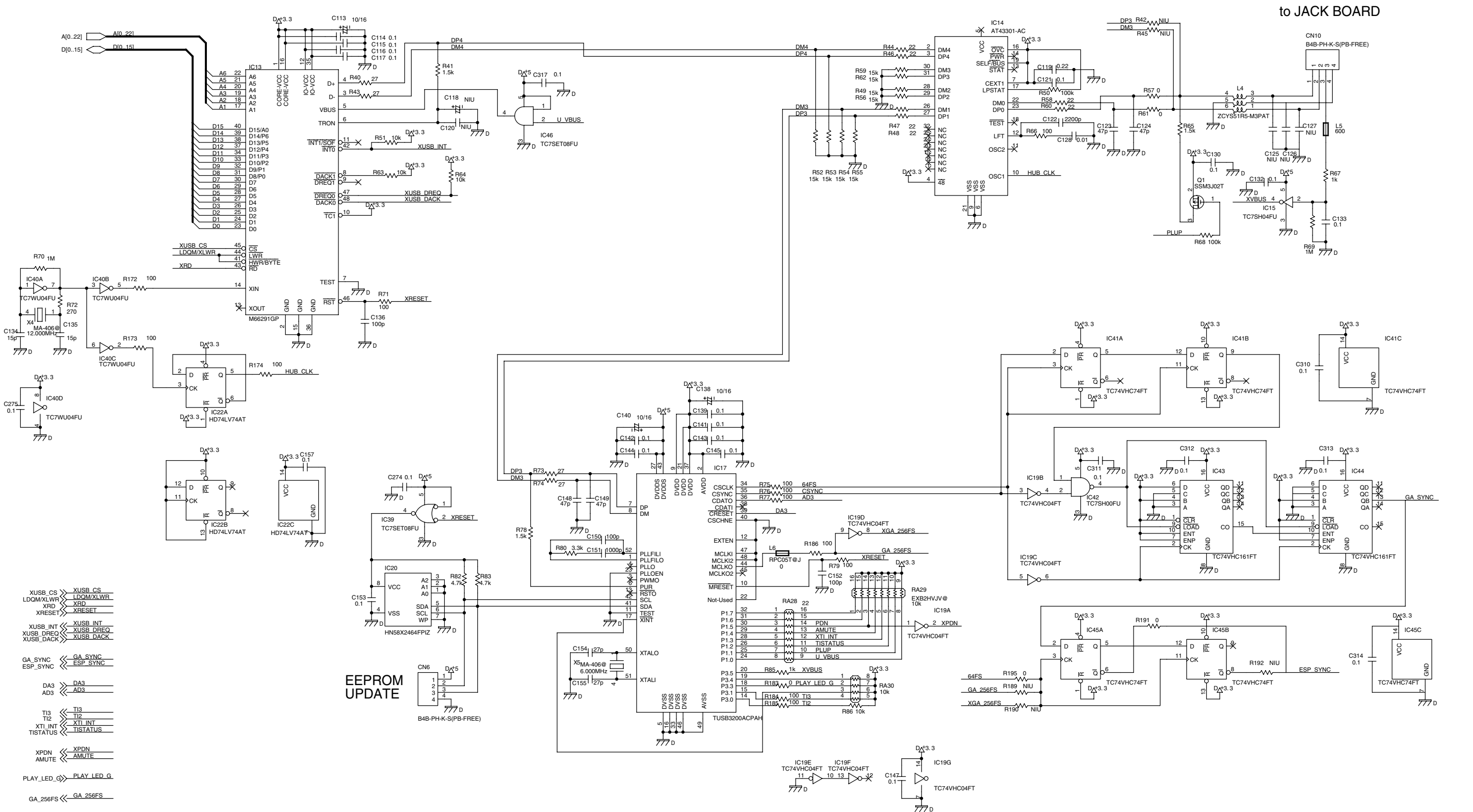




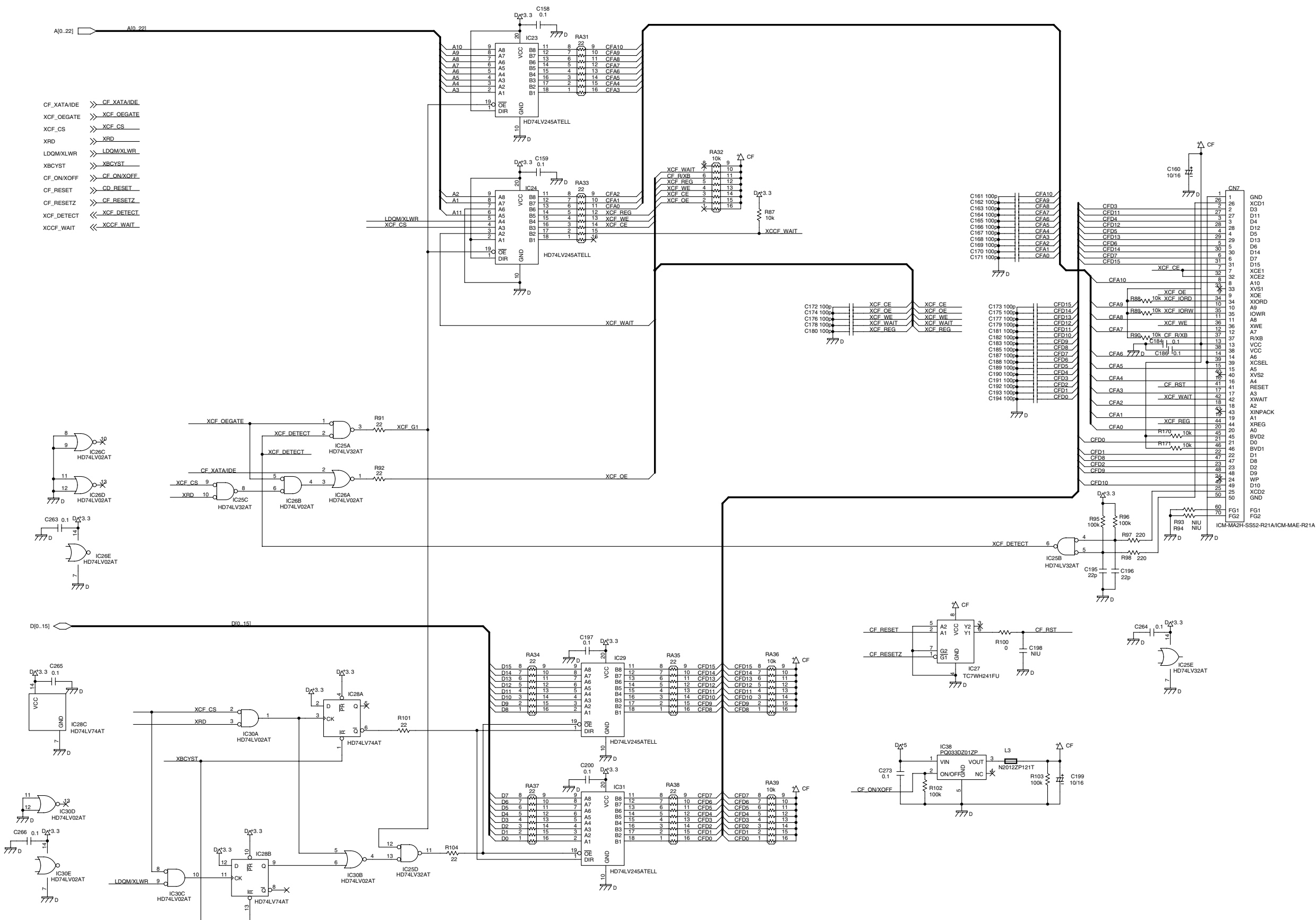
29



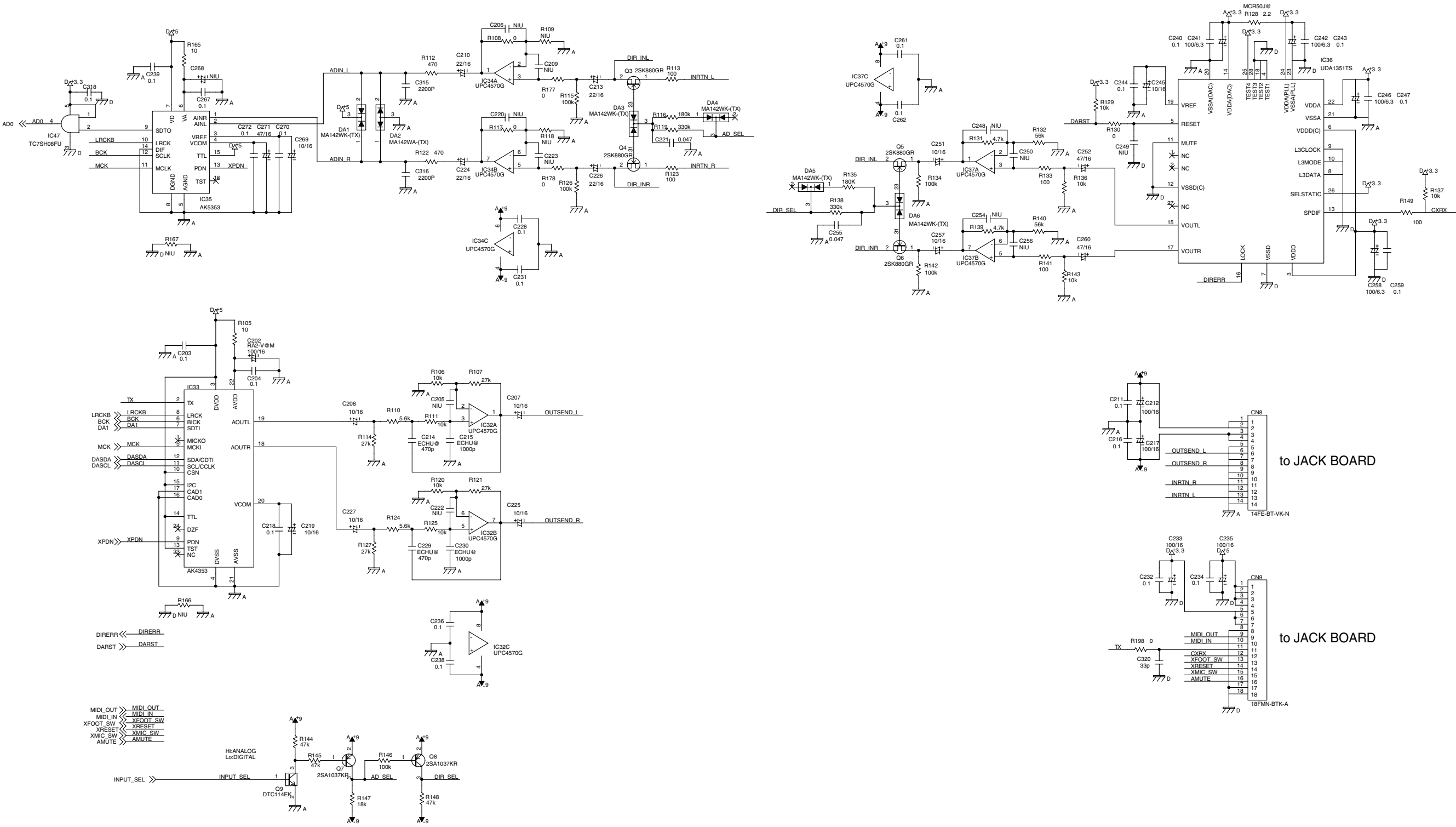
31



CIRCUIT DIAGRAM (MAIN BOARD 4)

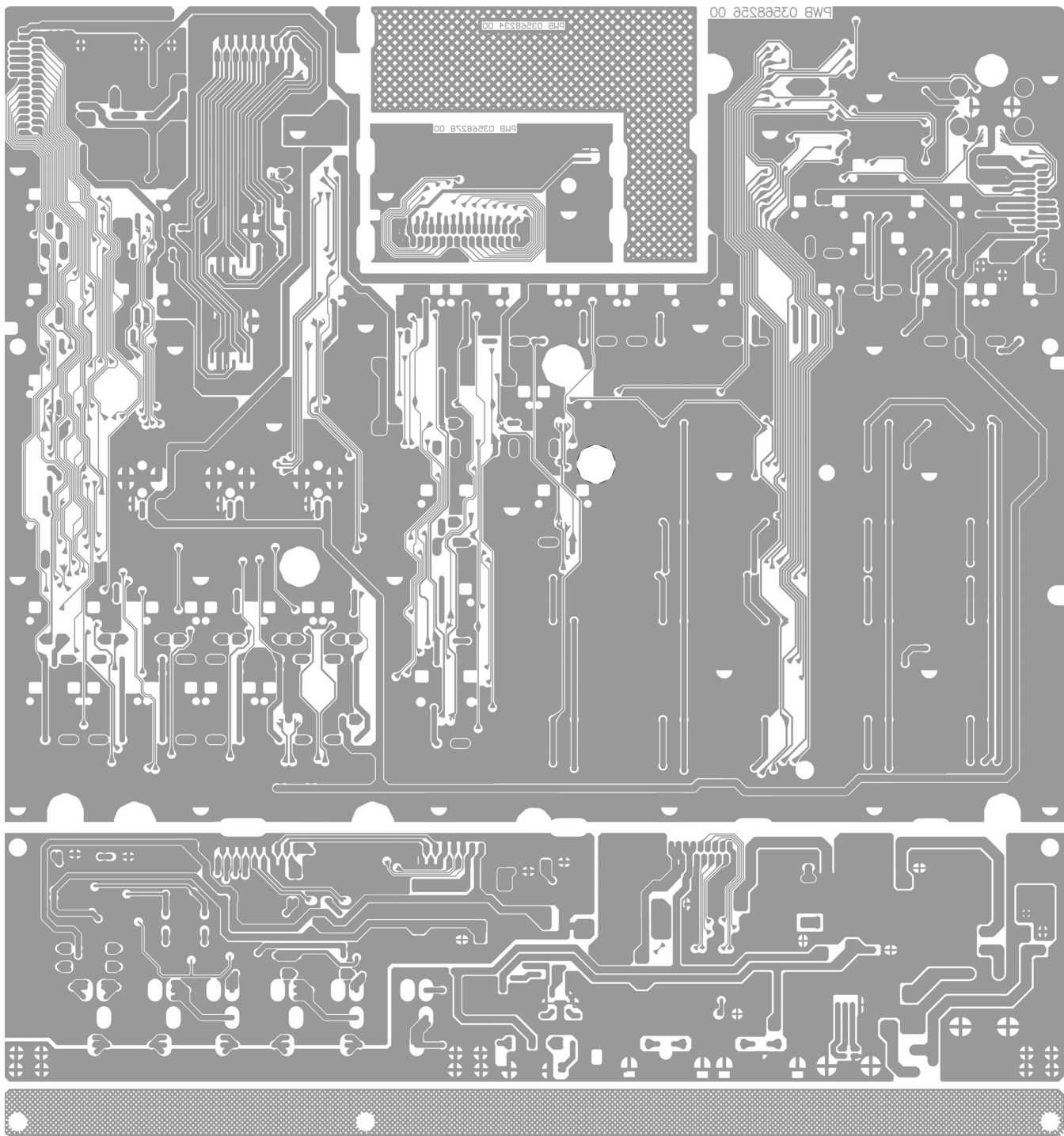


CIRCUIT DIAGRAM (MAIN BOARD 5)



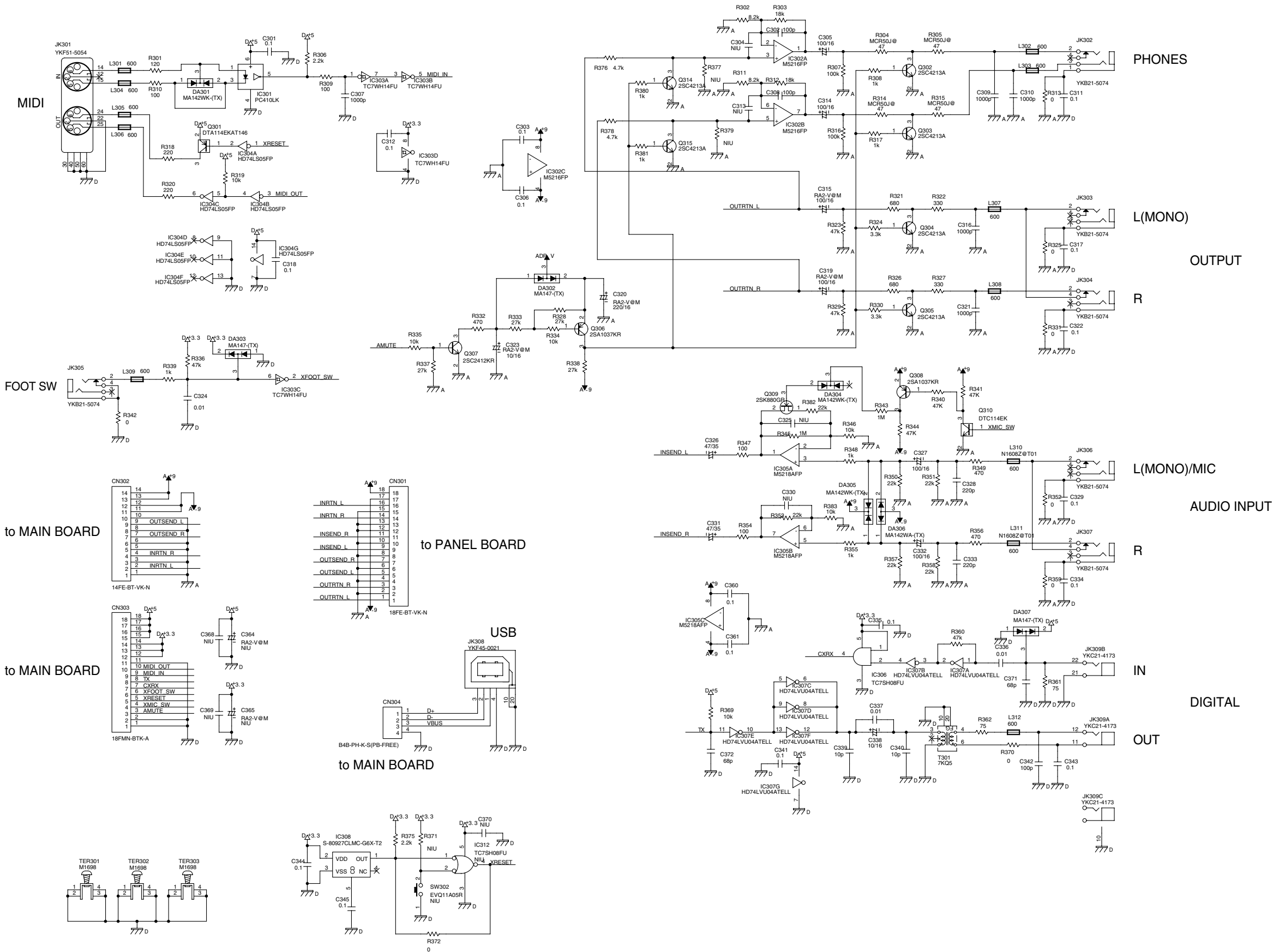


CIRCUIT BOARD (PANEL SHEET 2)

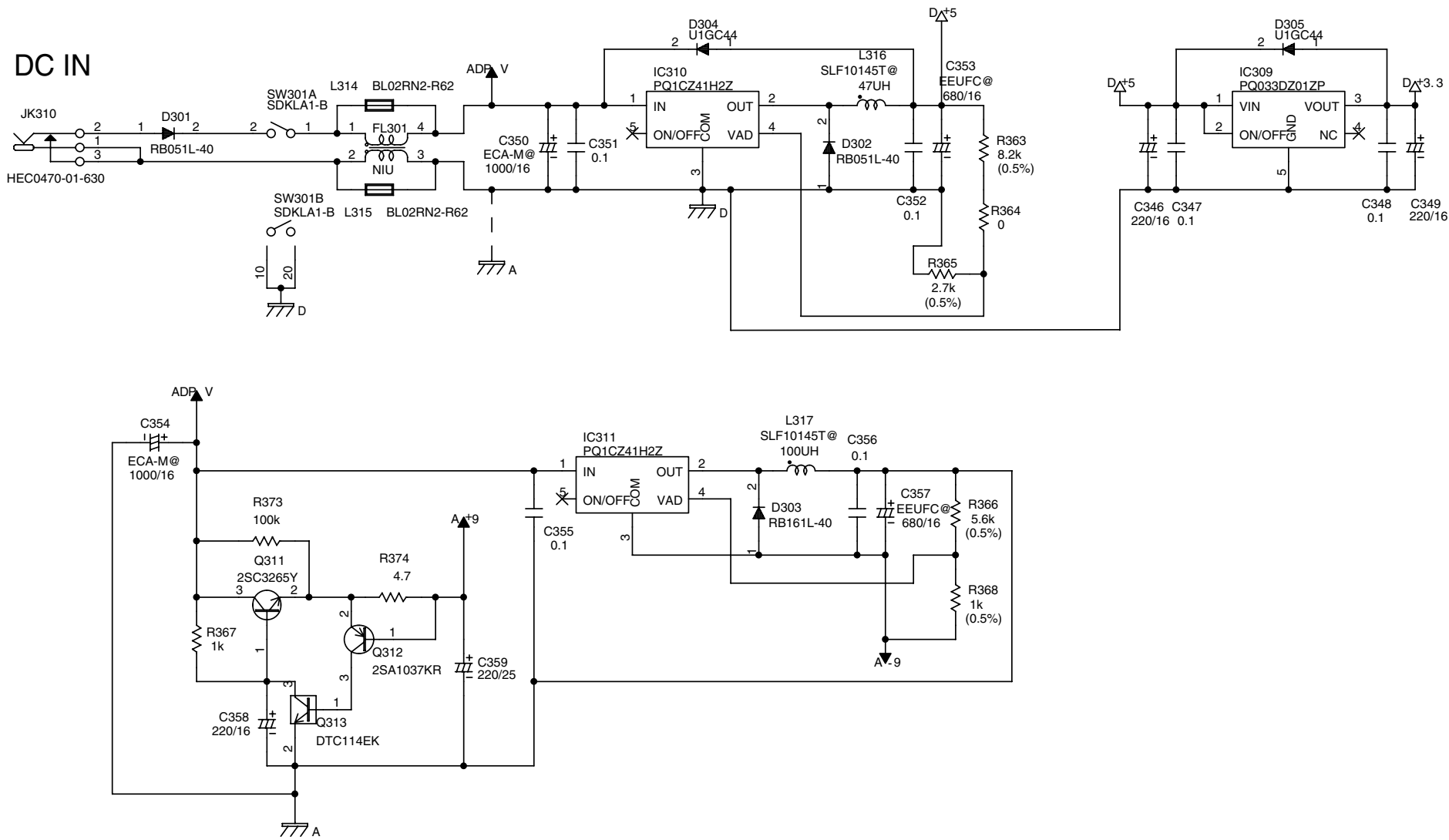


Scale=0.64

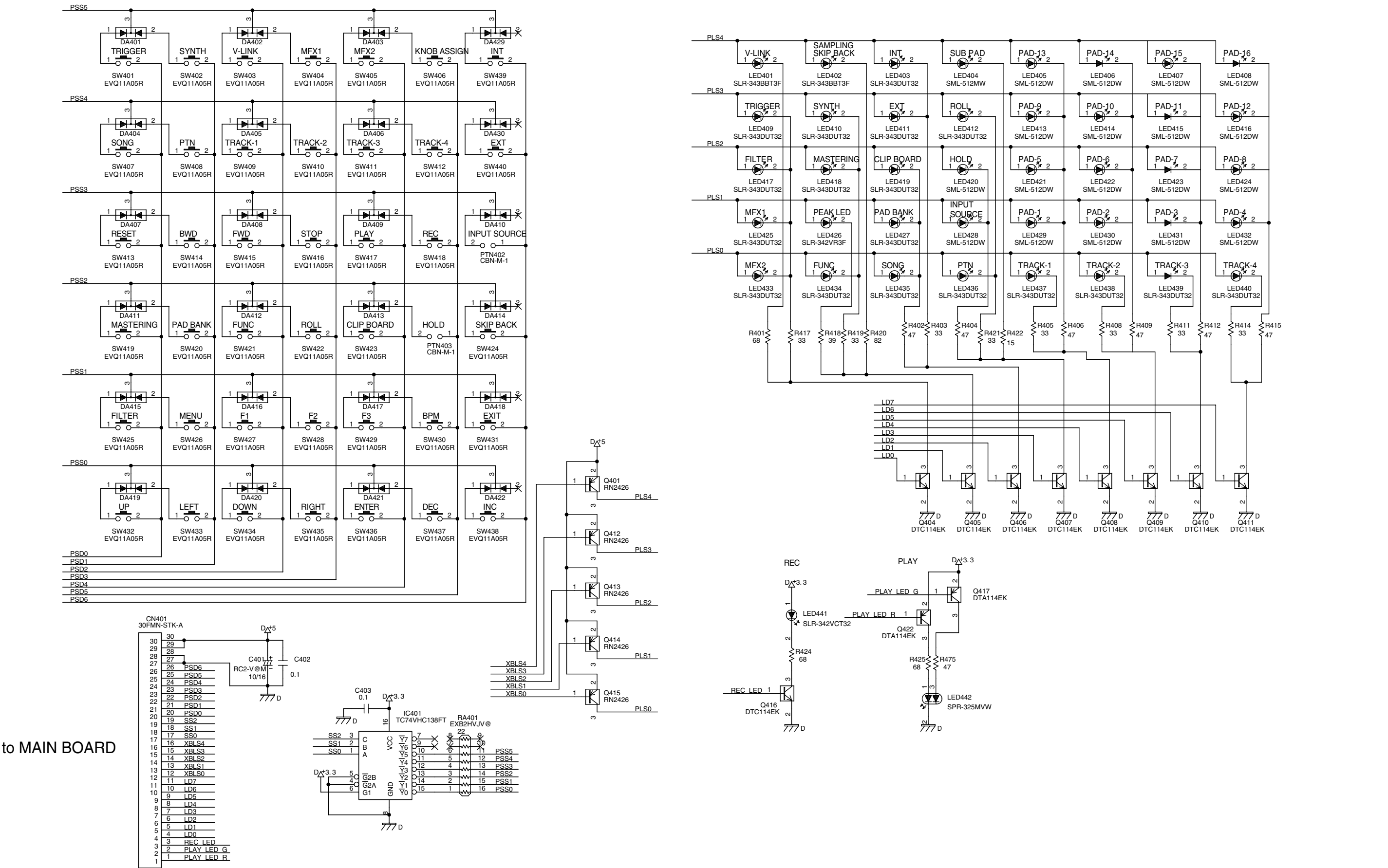
39



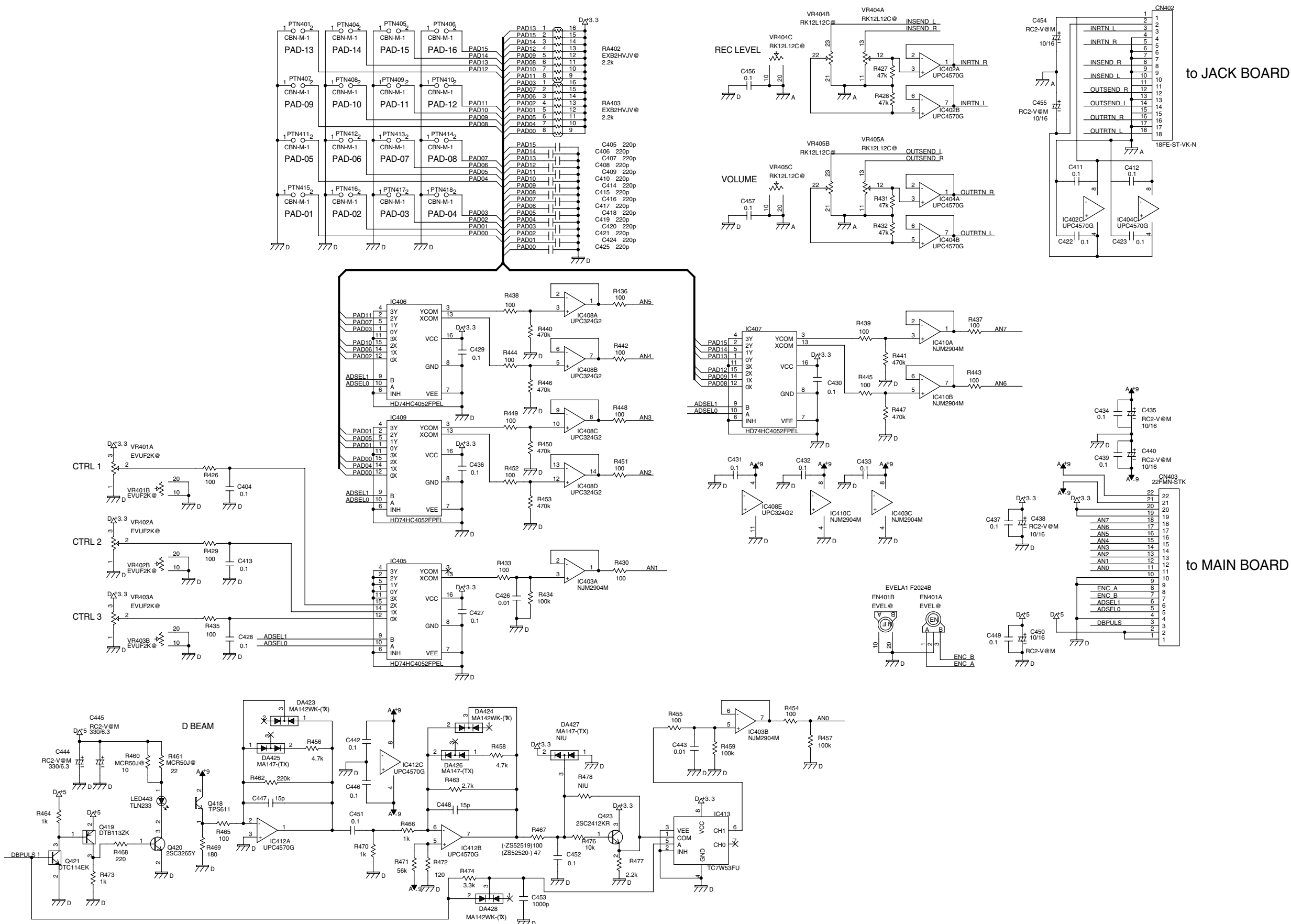
DC IN



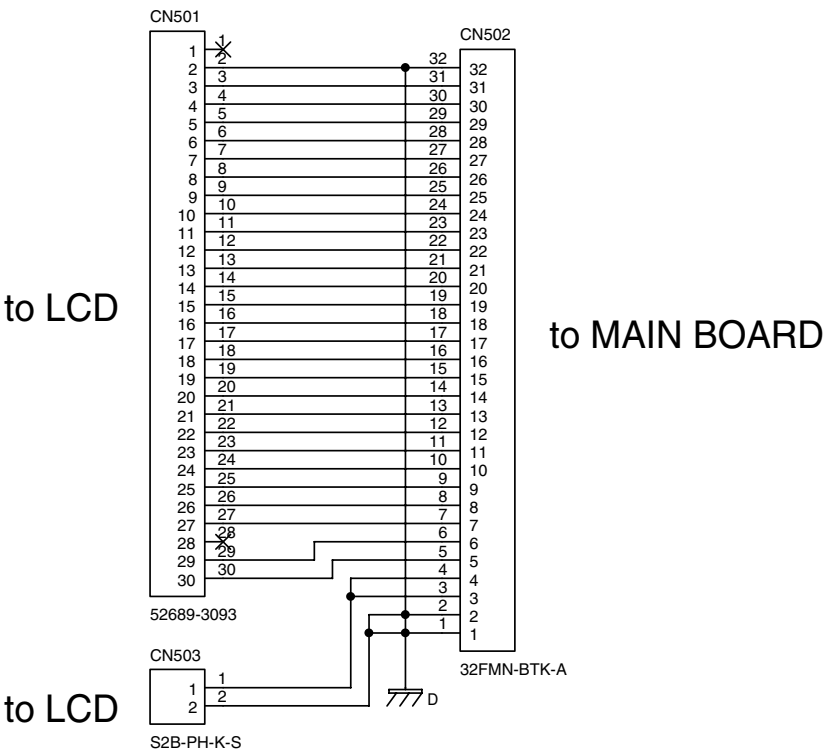
CIRCUIT DIAGRAM (PANEL BOARD 1)



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CIRCUIT DIAGRAM (LCD CN BOARD)



ERROR MESSAGES

Memory (Card)

Message	Explanation	Action
SYSTEM DAMAGED	A serious problem has occurred in the memory because the power was not turned off correctly. The memory has been initialized in order to recover the contents; please turn the power off and then on again.	You must use the correct procedure to turn off the power.
MEMORY INITIALIZE	Memory was lost because the power was not turned off correctly. The memory is being initialized.	
MEMORY RESTORE	Part of the memory was damaged because the power was not turned off correctly. The memory contents are being recovered.	
Memory Full!	The operation cannot be executed because there is not enough remaining memory.	Delete unneeded data (samples, patterns, songs).
Memory Damaged!	The contents of internal memory were damaged.	Execute the System Initialize operation . If this does not resolve the problem, contact your dealer or a Roland service center.
Not Supported Format!	You inserted a card of a capacity that the SP-606 cannot use.	The SP-606 can use CompactFlash cards with a capacity of from 16 MB through 512 MB (3.3V). Check the card you are using.
	You are attempting to import an audio file that the SP-606 cannot import.	
Unformatted!	You inserted a Memory card (Compact Flash) of a format that the SP-606 cannot use.	Check the points of caution regarding the import of audio files.
Card Damaged!	The contents of the Memory card (Compact Flash) were damaged.	Format the Memory card (Compact Flash).
Card Ejected!	You removed the card without performing the Shutdown procedure. The contents of internal memory or the Memory card (Compact Flash) may have been damaged.	-

MIDI

Message	Explanation	Action
MIDI RxError!	The received MIDI message was invalid.	Make sure that the MIDI device connected to the SP-606 is operating correctly.
MIDI Buffer Full!	Too many MIDI messages were received at the same time and could not be successfully processed.	Reduce the amount of MIDI messages being sent to the SP-606.
MIDI Offline!	There is a problem with the MIDI cable or USB cable connection.	Check whether the MIDI cable or USB cable has been disconnected or broken.

Protect

Message	Explanation	Action
Protected Pad Bank!	The operation cannot be executed because Bank Protect is turned on.	Either use a bank that is not protected, or defeat the Bank Protect setting.
Protected Pattern!	The operation cannot be executed because the preloaded pattern protect setting is turned on.	Either use a pattern that is not protected, or defeat the Protect setting.

Other

Message	Explanation	Action
No Backup Data!	You selected a backup file that contains no data.	Select a backup file that contains data, and execute the operation again.
Empty Pad!	You selected a pad that contains no sample.	Select a pad that contains a sample, and execute the operation again.

