

XV-5050

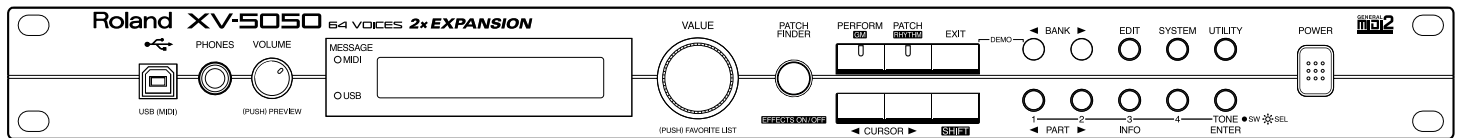
64 VOICES 2x EXPANSION

SERVICE NOTES

Issued by RJA

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SPECIFICATIONS

XV-5050: 64-Voice Sound Module (conforms to General MIDI 2 System)

- Parts
16
- Maximum Polyphony
64 voices
- Wave Memory
64 M Bytes (16-bit linear equivalent)
Wave forms: 1083
- Expansion Slot
Wave Expansion Board SRX Series: 2 slots
- Preset Memory
Patches: 1024 (128 x 8 banks) + 256 (General MIDI 2 Patches)
Rhythm Sets: 16 (2 x 8 banks) + 9 (General MIDI 2 Rhythm Sets)
Performances: 64 (32 x 2 banks)
- User Memory
Patches: 128
Rhythm Sets: 4
Performances: 64
- Effects
Multi-effects: 90 types
* Three different multi-effects (only 50 types) can be used simultaneously in Performance mode.
Chorus: 3 types
Reverb: 5 types
System Equalizer: 2 bands per each 4 outputs
- Display
20 characters, 2 lines (backlit LCD)
- Connectors
Headphones Jack
USB Connector
A (MIX) Output Jack (L/MONO, R)
B Output Jack (L, R) (or Individual Jacks 1-4)
MIDI Connectors (IN, OUT, THRU)
Digital Audio Outputs: S/P DIF Connectors (COAXIAL, OPTICAL) (24-bit, 44.1 kHz)
AC Inlet
- Power Supply
AC 117 V, AC 230 V, AC 240 V
- Power Consumption
9 W (AC 117 V)
11 W (AC 230 V, AC 240 V)
- Dimensions
482 (W) x 220 (D) x 44 (H) mm
19 (W) x 8-11/16 (D) x 1-3/4 (H) inches
(EIA-1U Rack Mount Type)

- Weight
2.6 kg
5 lbs 12 oz
- Accessories
Owner's Manual Set English (#72010056)
AC Cord 120V (#00894378)
AC Cord 230V (#00894389)
AC Cord 240VA (#23495124)
AC Cord 230VE (#00907001)
CD-ROM (#03011101)
RACKMOUNT WASHER SET W/POLICA (#71346223)
- Options
Wave Expansion Board: SRX Series

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

LOCATION OF CONTROLS PARTS LIST

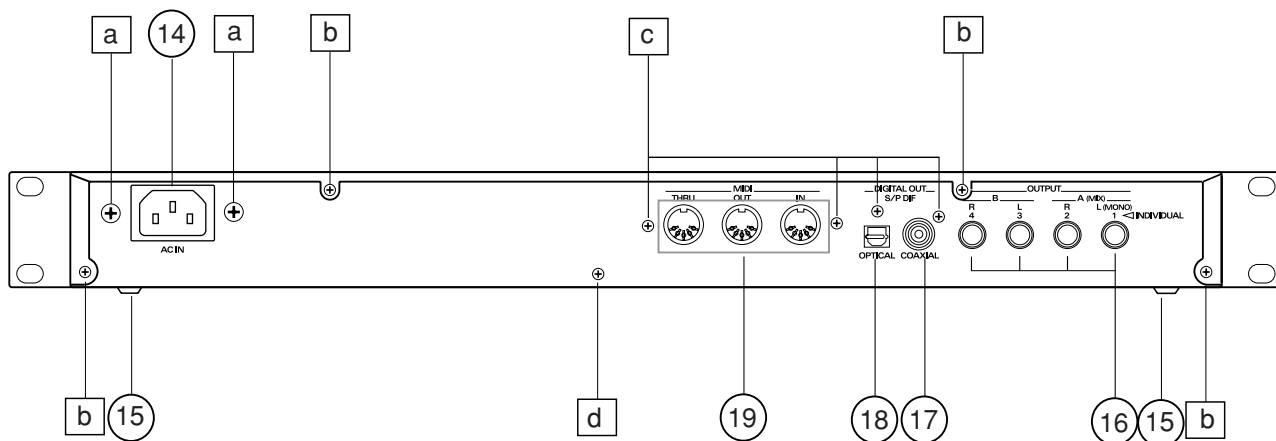
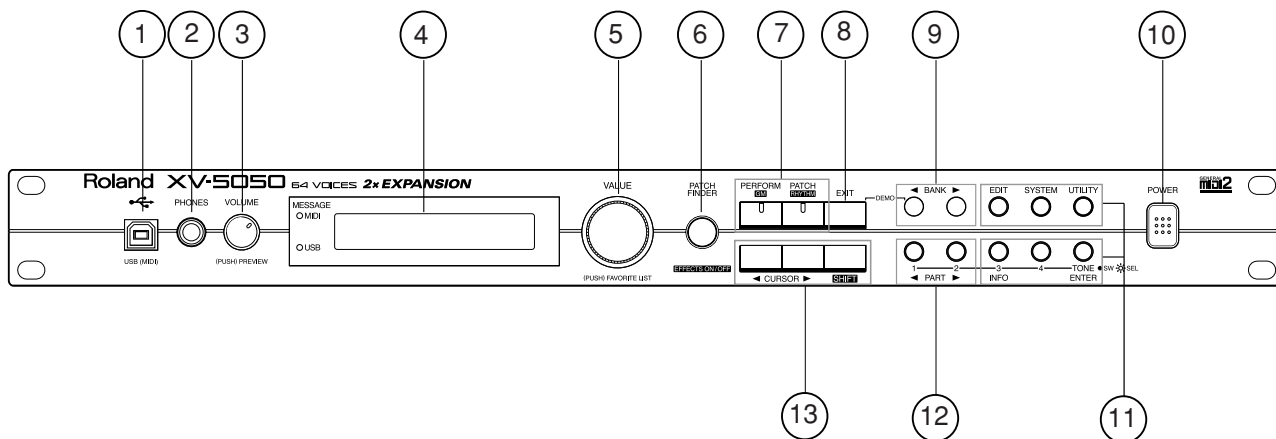
[FRONT]

No.	Part Code	Part Name	Description	Q'ty
1	02781189	USB CONNECTOR	YKF45-0021	1
2	01129145	6.5MM JACK STEREO	YKB21-5268(=YKB21-5255)	1
	12199556	JACK SNAP	MET41-0105	1
3	01899212	P R-KNOB	MF-A BLK/LCG	1
	13289209	9M/M ROTARY POT.	RK0971214 10KBx2 (W/SWITCH)	1
4	02453345	LCD HOLDER		1
	02780067	LCD UNIT	RCM2072M-B	1
	02453156	LED	LNJ801TP6JA	8
	01348623	LED (RED)	SLR-56VCT32	1
	01348634	LED (GREEN)	SLR-56MCT32	1
5	01785790	ROTARY ENCODER	RK09710EL-5R4611 (W/N&W)	1
	22480321	S R-KNOB	L BLK 248-321	1
6	02013090	F C-KEYTOP	MX1H CLR	1
	02125945	TACT SWITCH	EVQ 11G 05R	1
	02011856	LED (ORANGE)	SLR-56DCT32	1
7	02011423	Y S-KEYTOP	SD2H BLK	1
	02125945	TACT SWITCH	EVQ 11G 05R	2
	00348490	LED (RED)	SLR-325VCT31	2
8	02011456	Y S-KEYTOP	SX1H BLK	1
	02125945	TACT SWITCH	EVQ 11G 05R	1
9	01902734	F C-KEYTOP SX2H BLK		1
	02125945	TACT SWITCH	EVQ 11G 05R	2
10	32490595	P S-KEY	MX BLK	1
	22225375	P B-ESCT SD1H BLK		1
	01676512	SDKLA1-B	PUSH SWITCH	1
11	01670478	F C-KEYTOP	SX3H CLR	2
	00560745	LED (GREEN)	SLR-325MCT31	2
	01787045	LED (ORANGE)	SLR-325DCT31	1
	00348490	LED (RED)	SLR-325VCT31	3
	02125945	TACT SWITCH	EVQ 11G 05R	6
12	01670489	F C-KEYTOP	SX2H CLR	1
	00560745	LED (GREEN)	SLR-325MCT31	2
	02125945	TACT SWITCH	EVQ 11G 05R	2
13	02011478	Y S-KEYTOP	SX3H BLK	1
	02125945	TACT SWITCH	EVQ 11G 05R	3

[REAR]

No.	Part Code	Part Name	Description	Q'ty
14	02675701	WIRING ASSY	W3(AC INLET + GND)	1
15	12359137	RUBBER FOOT	SJ-5012 BLK	4
16	13449283	6.5MM JACK	HLJ7101-01-3010	4
17	01343723	RCA(PIN) JACK	YKC21-3117(ORANGE)	1
18	02565390	OPTICAL CONNECTOR TX	GP1FA501TZ	1
19	13429273	MIDI CONNECTOR	YKF51-5046 (TRIPRET)	1
a	40011090	SCREW 3x6	BINDING TAPTITE B BZC	5
b	40011312	SCREW 3x8	BINDING TAPTITE P BZC	4
c	40238501	SCREW 4x8	BINDING TAPTITE P BZC	2

LOCATION OF CONTROLS



EXPLODED VIEW PARTS LIST

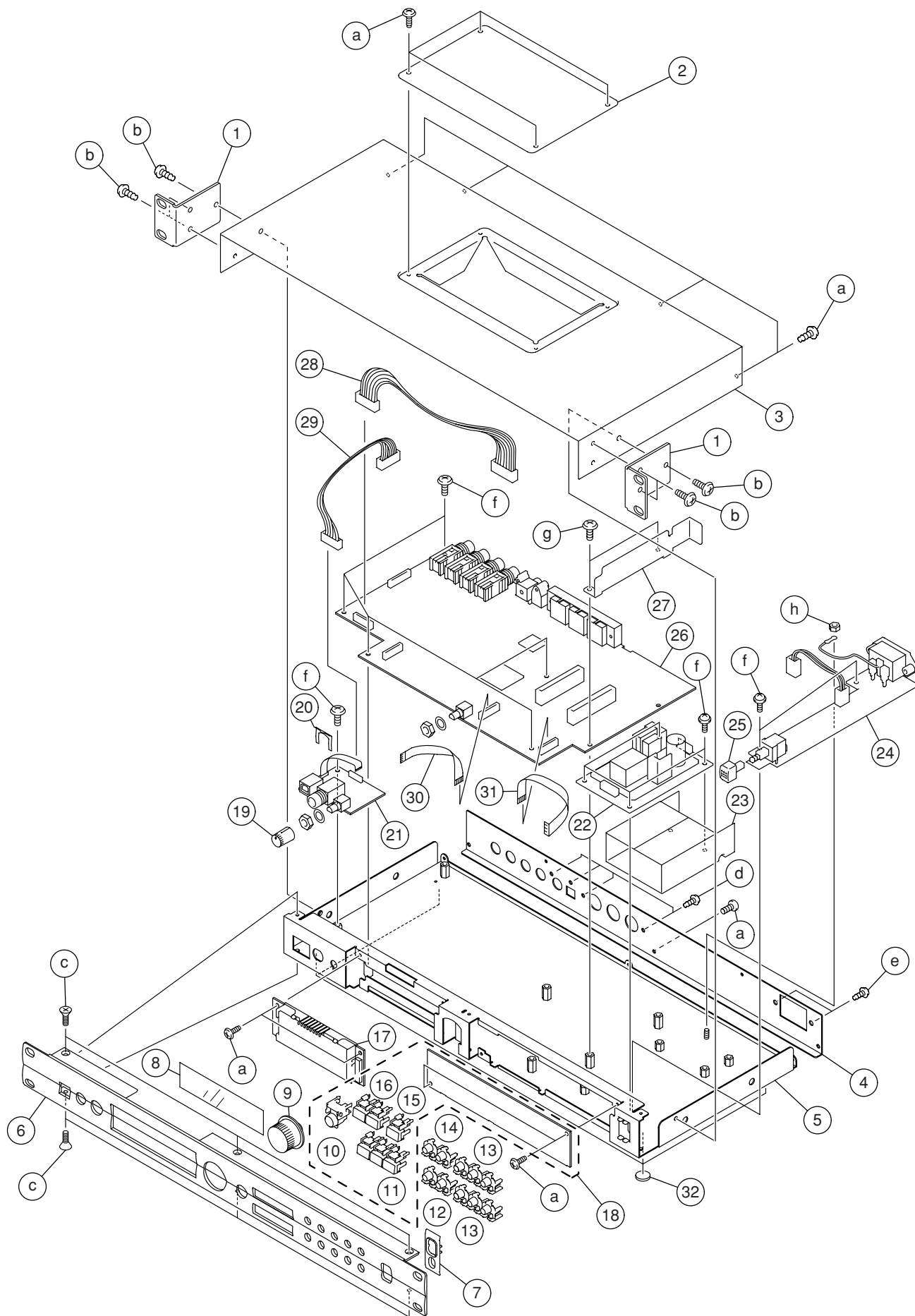
[Parts]

No.	Part Code	Part Name	Description	Q'ty
1	22123568	RACK MOUNT ANGLE 1U	212-568	2
2	01783878	EXP COVER 2H		1
3	02890934	TOP COVER		1
4	02890890	REAR PANEL		1
5	02890889	BOTTOM CHASSIS		1
6	02890901	FRONT PANEL		1
7	22225375	P B-ESECT SD1H BLK		1
8	02890923	DISPLAY COVER		1
9	22480321	S R-KNOB	L BLK 248-321	1
10	02013090	F C-KEYTOP	MX1H CLR	1
11	02011478	Y S-KEYTOP	SX3H BLK	1
12	01670489	F C-KEYTOP	SX2H CLR	1
13	01670478	F C-KEYTOP	SX3H CLR	2
14	01902734	F C-KEYTOP SX2H BLK		1
15	02011456	Y S-KEYTOP	SX1H BLK	1
16	02011423	Y S-KEYTOP	SD2H BLK	1
17	71905223	LCD BOARD ASSY		1
18	71905234	SWITCH BOARD ASSY		1
19	01899212	P R-KNOB	MF-A BLK/LCG	1
20	12199556	JACK SNAP	MET41-0105	1
21	71905201	PHONES BOARD ASSY		1
22	71781112	PS BASE BOARD ASSY		1
23	02894367	INSULATING COVER	SW-PS	1
24	71905289	INLET BOARD ASSY		1
25	32490595	P S-KEY	MX BLK	1
26	71905190	MAIN BOARD ASSY		1
27	02890912	PWR SPLY HOLDER		1
28	02012634	WIRING	7x410-P2.5-XHP-XHP-F	1
29	02343801	WIRING	10x100-P2.0-PHR-PHR-F	1
30	02120690	BAN CARD	BNCD-P=1.00-K-20-130	1
31	02673223	BAN CARD	BNCD-P=1.25-K-18-90	1
32	12359137	RUBBER FOOT	SJ-5012 BLK	4

[Screws]

No.	Part Code	Part Name	Description	Q'ty
a	40011090	SCREW 3x6	BINDING TAPTITE B BZC	13
b	40012345	SCREW 4x10	BINDING TAPTITE B BZC	6
c	40011145	SCREW 3x6	FLAT TAPTITE B BZC	6
d	40011312	SCREW 3x8	BINDING TAPTITE P BZC	4
e	40238501	SCREW 4x8	BINDING TAPTITE P BZC	2
f	40013056	SCREW M3x6	PAN MACHINE W/SW+PW ZC	12
g	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	2
h	40011745	HEX NUT M4	SPRING NUT FE ZC	1

EXPLODED VIEW



PARTS LIST

SAFETY PRECAUTIONS:

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

CONSIDERATION ON PARTS ORDERING

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)

MB -> MAIN BOARD ASSY, SB -> SWITCH BOARD ASSY, LB -> LCD BOARD ASSY, PHB -> PHONES BOARD ASSY, INB -> INLET BOARD ASSY

CASING					Q'ty
#	02890923	DISPLAY COVER			1
Δ	01783878	EXP COVER 2H			1
#	02890901	FRONT PANEL			1
	22225375	P B-ESCT SD1H BLK			1
	22123568	RACK MOUNT ANGLE 1U	212-568		2
#	02890890	REAR PANEL			1
#	02890934	TOP COVER			1
CHASSIS					
#	02890889	BOTTOM CHASSIS			1
Δ #	02890912	PWR SPLY HOLDER			1
KNOB, BUTTON					
	01670478	F C-KEYTOP	SX3H CLR		2
	01670489	F C-KEYTOP	SX2H CLR		1
	01902734	F C-KEYTOP SX2H BLK			1
	32490595	P S-KEY	MX BLK		1
	01899212	P R-KNOB	MF-A BLK/LCG		1
	22480321	S R-KNOB	L BLK 248-321		1
SWITCH					
Δ	01676512	SDKLA1-B	PUSH SWITCH	SW1 on INB	1
	02125945	EVQ 11G 05R	TACT SWITCH	SW14,SW18,SW17,SW15,SW11,SW13,SW19,SW2,SW3,SW4,SW5,SW7,SW8,SW9,SW10,SW12,SW16 on SB	17
JACK, EXT TERMINAL					
	13449283	HLJ7101-01-3010	6.5MM JACK	JK3,JK5,JK4,JK2 on MB	4
	01129145	YKB21-5268(=YKB21-5255)	6.5MM JACK STEREO	JK8 on PHB	1
	13429273	YKF51-5046 (TRIPRET)	MIDI CONNECTOR	JK1 on MB	1
	01343723	YKC21-3117(ORANGE)	RCA(PIN) JACK	JK6 on MB	1
	02781189	YKF45-0021	USB CONNECTOR	JK7 on PHB	1
DISPLAY UNIT					
#	02780067	RCM2072M-B	LCD UNIT	IC40 on LB	1
		NOTE: Replacement RCM2072M-B should be made on a unit base.			
PCB ASSY					
#	71905190	MAIN BOARD ASSY			1
	NOTE: 'MAIN BOARD ASSY' includes the following parts.				
	01902756	PWB SPACER	RSPS-12L		2
	02019034	PWB SPACER	RSPLS-12L		2
#	71905234	SWITCH BOARD ASSY			1
	NOTE: 'SWITCH BOARD ASSY' includes the following parts.				
	02011423	Y S-KEYTOP	SD2H BLK		1
	02011478	Y S-KEYTOP	SX3H BLK		1
	02011456	Y S-KEYTOP	SX1H BLK		1
	02013090	F C-KEYTOP	MX1H CLR		1
#	71905223	LCD BOARD ASSY			1
	NOTE: 'LCD BOARD ASSY' includes the following parts.				
	02453345	LCD HOLDER			1
#	71905201	PHONES BOARD ASSY			1
	NOTE: 'PHONES BOARD ASSY' includes the following parts.				
#	02789089	RIBBON CABLE	JWV5 5X90-P2.0		1

PCB ASSY

△ #	71905289	INLET BOARD ASSY		1
△ #	71781112	PS BASE BOARD ASSY		1

IC

#	02780034	CPU M37641M8-123FP	IC (8BIT CPU)	IC54 on MB	1
#	02780023	HD6437016E22F	IC (32BIT CPU)	IC2 on MB	1
	01455956	TC223C660CF-503	IC (RA08-503)	IC20 on MB	1
	02568489	DRAM GM71V18163CT-6	IC (DRAM)	IC8 on MB	1
	02450401	GM71C18163CJ-6	IC (DRAM)	IC60 on MB	1
	01906689	BR24C08F-E2	IC (EEPROM)	IC10 on MB	1
	02010056	UPD23C128040LGY-850-MJH	IC (MASK ROM)	IC36 on MB	1
	02010023	UPD23C128040LGY-849-MJH	IC (MASK ROM)	IC33 on MB	1
	02454867	TC58FVB321FT-10	IC (FLASH MEMORY /BLANK)	IC3 on MB	1
△	01451578	AK4324-VF-E2	IC (DAC)	IC49,IC46 on MB	2
	15269219H0	HD74LS05FPEL	IC (TTL)	IC18 on MB	1
	01451623	TTL TC7SET32F(TE85L)	IC (TTL)	IC5 on MB	1
	01458401	TC74LVX4245FS(EL)	IC (TTL)	IC14,IC11 on MB	2
	00785245	TC75H00F(TE85L)	IC (CMOS)	IC61 on MB	1
	15249111	TC7WU04F(TE12L)	IC (CMOS)	IC23 on MB	1
	15249116T0	TC7W00F(TE12L)	IC (CMOS)	IC50 on MB	1
	15249121	TC7W04F(TE12L)	IC (CMOS)	IC55 on MB	1
	01679412	TC7W139F(TE12L)	IC (CMOS)	IC56 on MB	1
	02675689	HD74LV245ATELL	IC (CMOS)	IC28,IC32,IC30 on MB	3
	02675690	HD74LV541ATELL	IC (CMOS)	IC9,IC7,IC6,IC1 on MB	4
	02675678	HD74LV139ATELL	IC (CMOS)	IC37,IC35,IC34 on MB	3
	01783523	TC74VHCT245AFT(EL)	IC (CMOS)	IC29,IC31 on MB	2
	00564701	TC7SH08F(TE85L)	IC (CMOS)	IC59 on MB	1
	02451690	HD74LV08ATELL	IC (CMOS)	IC38 on MB	1
	02451712	HD74LV14ATELL	IC (CMOS)	IC17 on MB	1
	02451912	HD74LV00ATELL	IC (CMOS)	IC41 on MB	1
	15259706T0	TC74HCU04AF(EL)	IC (HS-CMOS)	IC52 on MB	1
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC45,IC48 on MB. IC53 on PHB	2+1
	15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	IC44,IC42,IC47 on MB	3
△	01678512	UPC2933T-T2	IC (REGULATOR)	IC15 on MB	1
△	00344390	TA7805F(TE16L)	IC (REGULATOR)	IC43 on MB	1
	01785178	TC9271FS	IC	IC51 on MB	1
	15199937	M51953BFP-600C	IC (RESET)	IC16 on MB	1
	02565390	GP1FA501TZ TX	IC (OPTICAL CONNECTOR)	CN13 on MB	1
	15289125	PC-410KT 178FAY	IC (PHOTO COUPLER)	IC19 on MB	1

TRANSISTOR

	15309113	2SA1213-O	TRANSISTOR	Q4 on MB	1
	00901523	2SA1681	TRANSISTOR	Q21 on MB	1
	15319105	2SC3326-A	TRANSISTOR	Q19,Q18,Q17,Q16,Q15,Q20 on MB	6
	15319114	2SC2873-Y	TRANSISTOR	Q3 on MB	1
	15319116	2SC4154-T11-F	TRANSISTOR	Q22 on MB	1
	02671023	2SC3052-T12-1E	TRANSISTOR	Q6 on MB	1
	02671256	RT1P141C-T12-1	TRANSISTOR	Q11,Q12,Q5,Q13,Q14 on MB	5
#	02780056	RT1N144M	TRANSISTOR	Q23 on MB	1
	02671267	RT1N141C-T12-1	TRANSISTOR	Q7,Q24,Q10,Q9,Q8 on MB	5

DIODE

	02453156	LNJ801TP6JA	LED	LED6,LED1,LED2,LED3,LED5,LED7,LED8,LED4 on LB	8
	00560745	SLR-325MCT31	LED (GREEN)	LED17,LED16,LED18,LED15 on SB	4
	01348634	SLR-56MCT32	LED (GREEN)	LED23 on LB	1
	01787045	SLR-325DCT31	LED (ORANGE)	LED14 on SB	1
	02011856	SLR-56DCT32	LED (ORANGE)	LED21 on SB	1
	00348490	SLR-325VCT31	LED (RED)	LED11,LED12,LED13,LED19,LED20 on SB	5
	01348623	SLR-56VCT32	LED (RED)	LED22 on LB	1
	15339130	MA142WK-(TX)	DIODE ARRAY	DA4,DA1 on MB. DA14,DA6,DA7,DA8,DA9,DA10, DA11,DA13,DA17,DA12 on SB	2 +10
	01897189	MA147-(TX)	DIODE ARRAY	DA16,DA3,DA2 on MB	3

RESISTOR

	15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R110,R104 on MB. R186,R187 on PHB	2+2
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	R1,R61,R215,R211,R200,R80,R79,R20,R19,R18, L13,L12,R2,L11,R11,L10 on MB. C267,R209,C266,R210 on PHB	16 +4
	00908389	MCR100JZH J 331	MTL.FILM RESISTOR	R53,R45 on MB	2
	00566867	RPC05T 100 J	MTL.FILM RESISTOR	R113,R141,R83,R82,R84 on MB	5
	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R91,R75,R77,R50,R71,R72,R78,R73,R74,R99,R92, R93,R94,R96,R95,R76,R167,R98,R97,R169 on MB	20
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R89,R112,R189,R43,R106,R42,R177,R36 on MB. R180,R175 on PHB	8 +2

RESISTOR

00567289	RPC05T 103 J	MTL.FILM RESISTOR	R68,R172,R168,R163,R151,R137,R124,R111,R105, R40,R100,R69,R37,R59,R25,R191,R229,R24,R23, R56,R55,R17,R16,R3,R41,R39,R81,R227,R196, R228,R226,R213,R212,R204,R202,R201,R198,R197 on MB. R178,R183 on PHB	38 +2
00567412	RPC05T 104 J	MTL.FILM RESISTOR	R190,R166 on MB	2
00567556	RPC05T 105 J	MTL.FILM RESISTOR	R60 on MB	1
00567689	RPC05T 106 J	MTL.FILM RESISTOR	R139,R126 on MB	2
00567034	RPC05T 121 J	MTL.FILM RESISTOR	R51 on MB. R87,R86,R85,R88 on LB	1+4
00567167	RPC05T 122 J	MTL.FILM RESISTOR	R135,R117,R130,R144,R149,R156,R161,R122 on MB	8
00567178	RPC05T 152 J	MTL.FILM RESISTOR	R185,R170 on MB	2
00567301	RPC05T 153 J	MTL.FILM RESISTOR	R142,R164,R125,R138,R152,R154,R115,R128 on MB	8
00566912	RPC05T 220 J	MTL.FILM RESISTOR	R192,R194,R193,R67,R66,R65,R4,R195,R64 on MB	9
00567067	RPC05T 221 J	MTL.FILM RESISTOR	R47,R46,R49,R14,R48 on MB. R182,R179,R176,R174 on PHB	5+4
00567323	RPC05T 223 J	MTL.FILM RESISTOR	R63,R5 on MB	2
00566923	RPC05T 270 J	MTL.FILM RESISTOR	R13 on MB	1
00566934	RPC05T 330 J	MTL.FILM RESISTOR	R188,R12,R27,R70 on MB	4
00567212	RPC05T 332 J	MTL.FILM RESISTOR	R140,R15,R127,R153,R165,R90 on MB	6
00567234	RPC05T 392 J	MTL.FILM RESISTOR	R129,R134,R143,R148,R121,R155,R160,R116 on MB	8
00566967	RPC05T 470 J	MTL.FILM RESISTOR	R223,R222,R221,R220 on MB	4
00567112	RPC05T 471 J	MTL.FILM RESISTOR	R62,R21 on MB	2
00567245	RPC05T 472 J	MTL.FILM RESISTOR	R218,R29,R30,R57,R217,R219,R216 on MB	7
00567378	RPC05T 473 J	MTL.FILM RESISTOR	R171 on MB	1
00567123	RPC05T 561 J	MTL.FILM RESISTOR	R123,R162,R157,R150,R145,R136,R118,R131 on MB	8
00567256	RPC05T 562 J	MTL.FILM RESISTOR	R108,R101 on MB	2
00567267	RPC05T 682 J	MTL.FILM RESISTOR	R109,R102 on MB	2
00567001	RPC05T 750 J	MTL.FILM RESISTOR	R173 on MB	1
00567278	RPC05T 822 J	MTL.FILM RESISTOR	R147,R158,R146,R133,R132,R120,R119,R159 on MB	8
01897912	RR0816Q-330-D	MTL.FILM RESISTOR	R184,R181 on MB	2
01457145	EXBE10C103J	RESISTOR ARRAY	RA7,RA10,RA12,RA14,RA15,RA17,RA19,RA23, RA25,RA52,RA57 on MB	11
02453089	EXBE10C472J	RESISTOR ARRAY	RA21 on MB	1
01906678	MNR14 EOAB J 103	RESISTOR ARRAY	RA27,RA48,RA62 on MB	4
02780323	RA4C1632-220-J	RESISTOR ARRAY	RA13,RA44,RA43,RA40,RA37,RA31,RA71,RA70, RA45,RA75,RA26,RA11,RA9,RA8,RA6,RA5,RA4, RA3,RA2,RA72,RA24,RA65,RA69,RA68,RA67, RA66,RA49,RA64,RA63,RA60,RA59,RA50,RA51, RA58,RA53,RA54,RA55,RA56,RA76,RA73,RA74 on MB	41
02679323	RA4C1632-330-J	RESISTOR ARRAY	RA61 on MB	1

POTENTIOMETER

13289209	RK0971214 10KBX2 (W/SWITCH)	9M/M ROTARY POT.	VR1 on PHB	1
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CAPACITOR

01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C117,C15,C74,C250,C242,C73,C72,C71,C70,C234, C233,C116,C252,C22,C115,C118,C230,C228,C227, C221,C220,C219,C69,C216,C107,C68,C64,C215, C23,C114,C106,C94,C92,C86,C84,C83,C82,C108, C111,C122,C112,C251,C5,C66,C128,C123,C126, C127,C262,C81,C258,C121,C80,C79,C78,C77,C76, C75,C113,C1,C6,C11,C190,C119,C188,C44,C42, C41,C40,C29,C28,C202,C187,C198,C3,C186,C185, C181,C176,C167,C161,C160,C155,C143,C142, C129,C4,C24,C26,C57,C210,C207,C205,C120, C211,C212,C209,C59,C208,C55,C61,C10,C9,C54, C53,C45,C63,C8,C214 on MB. C231,C229 on PHB	111 +2
02456778	ECJ1VB1C104K	CERAMIC CAPACITOR	C238 on MB	1
01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C224,C49,C50,C51,C52 on MB. C246,C245 on PHB	5
01674512	ECJ1VB1H222K	CERAMIC CAPACITOR	C95 on MB	1
01674301	ECJ1VC1H680J	CERAMIC CAPACITOR	C237,C241 on PHB	2
01674712	ECJ1VF1A105Z	CERAMIC CAPACITOR	C47,C98,C96,C31,C30,C32,C97,C144 on MB	8
01674167	ECUV1H100DCV	CERAMIC CAPACITOR	C38,C101,C247 on MB	3
01674334	ECUV1H101JCV	CERAMIC CAPACITOR	C132,C37,C226 on MB	7+2
01674189	ECUV1H120JCV	CERAMIC CAPACITOR	C248,C249 on MB	2
01674190	ECUV1H150JCV	CERAMIC CAPACITOR	C140,C89,C90,C134,C135,C136,C137,C138,C139 on MB	9
01674212	ECUV1H220JCV	CERAMIC CAPACITOR	C33,C27 on MB	2
01674389	ECUV1H221JCV	CERAMIC CAPACITOR	C131 on MB	1
01674423	ECUV1H471JCV	CERAMIC CAPACITOR	C25,C225,C223 on MB	3
01674445	ECUV1H681JCV	CERAMIC CAPACITOR	C182,C203,C235,C195,C173 on MB	1
02014912	RA2-25V100MT2	CERAMIC CAPACITOR	C191,C169,C168,C192 on MB	4
02127812	RA2-25V470MT2	CERAMIC CAPACITOR	C58,C62 on MB	2
00568323	10SA100M+T	CHEMICAL CAPACITOR	C272 on MB	1
01455845	16CV22NP	CHEMICAL CAPACITOR	C222 on MB	1
01902867	RA2-25V101M-T2	CHEMICAL CAPACITOR	C164,C171,C172,C179,C180,C194,C201,C213, C157 on MB. C273,C236 on PHB	9+2
02236701	RA2-25V221MC-T2	CHEMICAL CAPACITOR	C269,C270 on MB	2
# 02894390	RA2-25V330MC-T2	CHEMICAL CAPACITOR	C261,C260 on MB	2
02345101	RV2-16V100M-R	CHEMICAL CAPACITOR	C7,C2,C20,C67,C254,C265,C87,C232,C146,C141, C110,C109,C93 on MB	13

CAPACITOR					
	02345134	RV2-16V470M-R	CHEMICAL CAPACITOR	C43,C46 on MB	2
#	02345090	RV2-25V330M-R	CHEMICAL CAPACITOR	C218 on MB	1
	02344978	RV2-50V2R2M-R	CHEMICAL CAPACITOR	C243 on MB	1
	00239412	AMZV0050J122 0200	POLYEST. CAPACITOR	C170,C178,C193,C200 on MB	4
	00239390	AMZV0050J561 0200	POLYEST. CAPACITOR	C175,C197,C184,C204 on MB	4
INDUCTOR, COIL, FILTER					
	01787056	N1608Z102T01	FERRITE-BEAD	L15,L14 on MB	2
	01565578	N1608Z601T01	FERRITE-BEAD	L6,L5,L4,L7,L2,L22,L3,L8,L9,L16,L18,L23,L24, L25,L26,L17,L1 on MB. L21,L20,L19 on PHB	21 +3
CRYSTAL, RESONATOR					
	01126267	MA-406 7.056MHZ	CRYSTAL	X1 on MB	1
	02673134	MA-406 16.9344MHZ	CRYSTAL	X2 on MB	1
	00891801	MA-406 24.000MHZ TE24	CRYSTAL	X3 on MB	1
ENCODER					
	01785790	RK09710EL-5R4611 (W/N&W)	ROTARY ENCODER	EN1 on MB	1
CONNECTOR					
	13429294	51048-0500(5P)	CABLE HOLDER	CN14 on PHB	1
	01908656	18FE-BT-VK-N	CONNECTOR	CN10 on MB. CN11 on SB	1+1
	02010123	20FMN-BMTTN-TFT	CONNECTOR	CN8 on MB	1
	02454234	20FMN-SMT-TF	CONNECTOR	CN9 on LB	1
	13369541	B10B-PH-K-S JST	CONNECTOR	CN12 on MB. CN15 on PHB	1+1
	13369592	B7B-XH-A(7P) JST	CONNECTOR	CN5 on MB	1
	02010078	TX25-80P-6ST-E1	CONNECTOR	CN6,CN7 on MB	2
	13369600	52147-0510(5P)	WIRE TRAP	CN1 on MB	1
WIRING, CABLE					
△	02012634	7x410-P2.5-XHP-XHP-F	WIRING		1
#	02343801	10x100-P2.0-PHR-PHR-F	WIRING		1
	02120690	BNCD-P=1.00-K-20-130	BAN CARD		1
	02673223	BNCD-P=1.25-K-18-90	BAN CARD		1
TRANSFORMER					
	02019478	(7KQ5) 19832A	PULSE TRANS	T1 on MB	1
SCREW					
	40011090	SCREW 3x6	BINDING TAPTITE B BZC		9+4
	40011145	SCREW 3x6	FLAT TAPTITE B BZC		6
	40013056	SCREW M3x6	PAN MACHINE W/SW+PW ZC		12
	40011312	SCREW 3x8	BINDING TAPTITE P BZC		4
	40013067	SCREW M3x8	PAN MACHINE W/ SW+SMALL PW ZC		2
	40238501	SCREW 4x8	BINDING TAPTITE P BZC		2
	40012345	SCREW 4x10	BINDING TAPTITE B BZC		6
	40011745	HEX NUT M4	SPRING NUT FE ZC		1
	12199556	JACK SNAP	MET41-0105		1
PACKING					
	02238323	PAD			1
#	02890878	PACKING CASE			1
#	02890956	OUTER PACKING CASE			1
MISCELLANEOUS					
△ #	40122934	DOUBLE FACED ADHESHIVE TAPE	#501F W5MM 20M (CM)		1
	02894367	INSULATING COVER	SW-PS		1
	40122612	NITTO ACETATE TAPE #5	BLACK W10MM 30M 20P		1
	12359137	RUBBER FOOT	SJ-5012 BLK		4

ACCESSORIES (STANDARD)

#	71905145	OWNER'S MANUAL SET	JAPANESE	1
#	72010056	OWNER'S MANUAL SET	ENGLISH	1
△	02670401	AC CORD SET	100V YA-101/YP-3N/YC-13	1
△	00894378	AC CORD SET	120V SP301+IS14 SJT18/3	1
△	00894389	AC CORD SET	230V SP22+IS14 H05VV-F3G1.0	1
△	23495124	AC CORD SET	240VA SC-144-JO1 ES303-10HMA	1
△	00907001	AC CORD SET	240VE KP-610 GTTBS-3 KS-31A	1
#	03011101	CD-ROM	USB DRIVER & EDITER SOFT	1
	71346223	RACKMOUNT WASHER SET	W/POLICA	1
	40232334	WARRANTY CARD	(JAPAN ONLY)	1

IDENTIFYING VERSION NUMBER

Turn on the unit while pressing the [EDIT] and [TONE4] buttons.
The test mode title screen appears, and the version numbers for the CPU and ROM are displayed.

```
TEST MODE (SD)
CPU:1.00 ROM:1.01
```

USERS DATA SAVE AND LOAD

You can transmit sound generator or System settings that are in the XV-5050's memory to an external MIDI device or to the XV-5050's USER memory.

SAVING THE USER DATA

The act of transmitting Patch, Performance, Rhythm Set or System data to an external MIDI device is called a "Bulk Dump."

1. Press [UTILITY] to make its indicator light.
2. Press [< CURSOR] a few times to move the cursor to the upper left of the display.
3. Turn [VALUE] to select "XFER TO MIDI."

```
XFER TO MIDI [ENTR]
Type: ALL
```

4. Use [< CURSOR] + [CURSOR >] and [VALUE] to select the data to be transmitted.
5. Press [ENTER] to execute the data transmission.
* To interrupt the transmission of data, press [EXIT].

6. Press [EXIT] to return to the previous screen.

Type (Data Type)

Specifies the type of data to be transmitted.

ALL	Performance, Patch, and Rhythm Set
PERFORM	Performance
PATCH	Patch
RHYTHM	Rhythm Set
SETUP	Setup
SYSTEM	System

Block (Source Block)

Specifies the source of the data to be transmitted.

USER	Data from USER memory will be transmitted.
TEMP	Data in Temporary memory will be transmitted.
CTRL	The status of Performances, including Performance Bank Selects and Program Changes, are not sent as Exclusive messages, but rather as MIDI Channel messages. Select the data to be transmitted by choosing one of the combinations shown below. For example, if you wish to transmit the USER group Patches 001-020, you would specify "Type: PATCH, Block: USER, From: 1, To: 20."

Type	Block	From/To
ALL	USER TEMP	
PERFORM	USER TEMP (*1) TEMP+PATCH (*2) CTRL	1-64
PATCH	USER TEMP	1-128
RHYTHM	USER TEMP	1-4
SETUP	USER	
SYSTEM	USER	

*1: The current Performance

*2: The current Performance and the Patch or Rhythm Set assigned to each Part of the Performance

LOADING THE USER DATA

1. Connect the MIDI IN terminal of the XV-5050 to the MIDI OUT terminal of the sequencer with a MIDI cable.
2. Send the user data from the sequencer.

TEST MODE

Required items

- Headphone
- Powered Monitor Speaker (MA-12 etc) x2
- Audio Cable x4
- MIDI Cable
- Coaxial Cable
- Optical Cable
- USB Cable
- Wave Expansion Board SRX-series x2
- An instrument that can input digital audio signals from the Optical connector.
- An instrument that can input digital audio signals from the Coaxial connector.
- A PC with the USB driver for the XV-5050 installed.

Precautions for the test

- The user data may be deleted during the test mode .
Always back up your data. (Saving and loading user data reference)
- Some test items may produce verification sound.
- Mount the wave expansion board prior to turning the unit's power on.

Test items

The XV-5050 provides the following tests:

See each item for details of each test.

1. Test Mode Title
2. Memory Test
3. USB Test
4. MIDI Test
5. LCD & Encoder Test
6. SW & LED Test
7. Sound Test
8. Effect Test
9. Factory Reset, DEMO Play

Operating buttons

How to enter test mode:

Turn on the unit while pressing the [EDIT] and [TONE4] buttons simultaneously to display the title screen of the test mode.

How to end the test mode

Turn off the unit's power.

* Do not turn off the power during Factory Reset.

Turn off the power after Factory Reset is completed.

To proceed to the next test item.

The unit proceeds to the next test item when the [VALUE] knob is turned even during a test.

Press the [SHIFT] and [VALUE] buttons for the Memory, USB, MIDI and SW & LED Tests.

If no error occurs during the Memory, MIDI and SW & LED tests, the system proceeds to the next test item.

Press the [PREVIEW] button to move within the test item.

Moving through test items

The following button operation allows you to move through each test item directly.

[SHIFT]+[BANK LEFT]	1. Test Mode Title
[SHIFT]+[BANK RIGHT]	2. Memory Test
[SHIFT]+[EDIT]	3. USB Test
[SHIFT]+[SYSTEM]	4. MIDI Test
[SHIFT]+[UTILITY]	5. LCD & Encoder Test
[SHIFT]+[TONE1]	6. SW & LED Test
[SHIFT]+[TONE2]	7. Sound Test
[SHIFT]+[TONE3]	8. Effect Test
[SHIFT]+[TONE4]	9. Factory Reset, DEMO Play

Details of test items

```
TEST MODE (SC)
CPU:1.00  ROM:1.01
```

1. Test Mode Title
 - Check the version number of the CPU and the Program ROM.
Update if the version number is not the right one.
See "PROCEDURE FOR UPDATING THE SOFTWARE" for the updating procedure.
 - Check that the LCD backlight illuminates evenly.

Check the following parts if backlighting is uneven.

MAIN BOARD L7,CN8

LCD BOARD R85-R88,LED1-LED8,CN9

- Press the [ENTER] button to start the test mode.

2. Memory Test

```
CPU:--- ROM:---
CPU:1.00  ROM:1.01
```

- This test checks the version number of the CPU and the Program ROM.
- [OK] is displayed if no errors occur, and will automatically proceed to the next test.

- Check the following parts if NG is displayed.
CPU NG : MAIN BOARD IC2,X1,R14,R15,C24,C25
ROM NG : MAIN BOARD IC1,IC3,IC5,IC6,IC7,IC9,
IC11,IC14,IC59,IC61,R11

```
DRAM:--- EEPROM:---
CPU:1.00  ROM:1.01
```

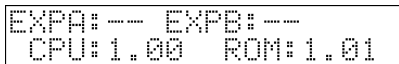
- The unit checks the version number of the DRAM and the EEPROM.
- [OK] is displayed if no errors occur, and will automatically proceed to the next test.

- Check the following parts if NG is displayed.
DRAM NG : MAIN BOARD IC1,IC7,IC8,IC9,IC11,IC14,IC61
EEPROM NG : MAIN BOARD IC10,R16,R17

```
WROM:--- DSP:---
CPU:1.00  ROM:1.01
```

- The system checks the version number of the WAVE ROM and the DSP.
- [OK] is displayed if no errors occur, and will automatically proceed to the next test.

- Check the following parts if NG is displayed.
WAVE ROM NG : MAIN BOARD IC28,IC29,IC30,IC31,IC32,IC33,
IC36,IC38
DSP NG : MAIN BOARD IC20,IC23,IC60,X2,R60,R61,R62,R63,
C89,C90,C95

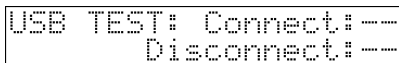


- The slot test of the expansion board is performed.
Mount expansion boards in all slots prior to entering this test item.

If you are mounting an expansion board at this point, turn off the unit's power, mount the board and reenter the test mode.
The board may be destroyed if mounted with the power on.

- Each slot is automatically checked.
A/B : OK No error.
- If "OK" is displayed for all slots the system automatically proceeds to the next test item.
- Check the following parts if NG is displayed.
MAIN BOARD IC28-IC32,IC34,IC35,IC37,CN6,CN7

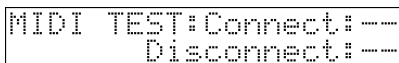
3. USB Test



* Turn on the PC's power prior to this test.

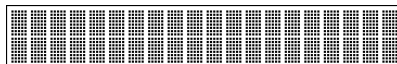
- Connect the PC and the XV-5050 using a USB cable.
Confirm that Connect: "OK" is displayed.
- Disconnect the USB cable.
Confirm that DisConnect: "OK" is displayed.
- Disconnecting the USB cable automatically moves it to the next test item.
- If the display is incorrect, check the following parts.
MAIN BOARD IC54,IC55,IC56,X3,R177,C234,C235,C238,CN1,CN14,JK7

4. MIDI Test



- Connect MIDI IN and MIDI OUT with a MIDI cable.
Confirm that Connect: "OK" is displayed.
- Disconnect the MIDI cable.
Confirm that DisConnect: "OK" is displayed.
- If the display is incorrect, check the following parts.
MAIN BOARD IC18,IC19,Q5,JK1
- Disconnecting the USB cable automatically moves it to the next test item.

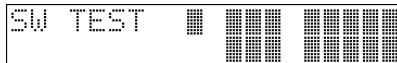
5. LCD & Encoder Test



- Confirm that all LCD dots come on when the [VALUE] knob is turned (once).
- Confirm that all LCD dots go out when the [VALUE] knob is turned (second time).
- Confirm that half of the LCD dots for the come on (staggered) when the [VALUE] knob is turned (third time).
- Confirm that the LCD contrast can be adjusted when the [VALUE] knob is turned.
Turn the [VALUE] knob to proceed to the next test item.

- If all on and off, pattern display or adjustment of the contrast cannot be made, check the following parts.
MAIN BOARD IC20,L8,L9,Q6,CN8,IC17,EN1
LCD BOARD IC40(LCD),CN9

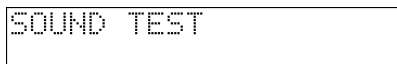
6. SW & LED Test



- Confirm that all LEDs are on.
- When a switch is pressed, the switch name appears on the screen.
- When a switch with an LED is pressed, the LED goes out, and the entire 5x8 dot range on the LCD screen corresponding to the switch arrangement on the panel comes on.

- If the LEDs do not come on or go out, or if the LCD screen display is incorrect, check the following parts.
LCD BOARD LED22,LED23
MAIN BOARD IC20,IC41,Q7-Q14,Q24,R92-R100,RA61,RA62,L23-L26,CN10

7. Sound Test



- Connect Optical/Coaxial OUT of the XV-5050 to an instrument with an Optical/Coaxial input.
- Set the instrument with Optical/Coaxial input so that it is externally synchronized with the Optical/Coaxial output.
- Sound is output in the following order when the [PREVIEW] button is pressed.

* Since the connectors used vary, re-connect an appropriate audio cable.

- 1) Optical OUT L/R (L: sine wave R: rectangular wave)
- 2) Coaxial OUT L/R (L: sine wave R: rectangular wave)
- 3) ANALOG OUT A-L (sine wave)

Disconnect ANALOG OUT A-L from the XV-5050, and confirm that the signals are output from ANALOG OUT A-R.

- 4) ANALOG OUT A-R (rectangular wave)

Disconnect ANALOG OUT A-R from the XV-5050, and confirm that the signals are output from ANALOG OUT A-L.

5) ANALOG OUT B-L/R (L: sawtooth wave R: triangular wave)

Turn the [VALUE] knob to proceed to the next test item.

- If the sound is not output properly, check the following parts corresponding to your output location.

ANALOG OUT All not output:

MAIN BOARD IC50,Q15--Q23,CN12

ANALOG OUT A & Headphone L&R :

MAIN BOARD IC42,IC44--IC46,CN12. PHONES BOARD IC53,CN15

ANALOG OUT A :

MAIN BOARD IC44--IC46,CN12

ANALOG OUT A-L only :

MAIN BOARD C171,172,Q17. PHONES BOARD C236

ANALOG OUT A-R only :

MAIN BOARD C179,180,Q18. PHONES BOARD C273

ANALOG OUT B :

MAIN BOARD IC47--IC49

ANALOG OUT B-L only :

MAIN BOARD C194,Q19

ANALOG OUT B-R only :

MAIN BOARD C201,Q20

PHONES L&R :

MAIN BOARD IC42

PHONES L only :

MAIN BOARD C157,Q15

PHONES R only :

MAIN BOARD C164,Q16

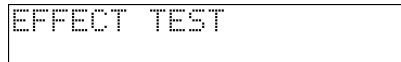
Optical OUT :

MAIN BOARD IC51,CN13

Coaxial OUT :

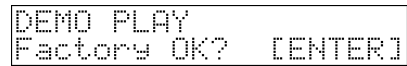
MAIN BOARD IC51,52,T1,C222,JK6

8. Effect Test



- The test sound is output from OUTPUT A and headphones L and R. Check the connection of the monitor speaker and the headphones.
- The rim shot sound with the reverb applied is output from ANALOG OUT A-L/R when the [PREVIEW] button is pressed. Confirm that the reverb is applied to the rim shot sound. Press the [PREVIEW] button to repeat the sound output.
- Turn the [VALUE] knob to proceed to the next test item.
- If the sound is not output properly, check the following parts
MAIN BOARD : IC20,IC60

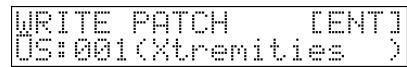
9. Factory Reset, DEMO Play



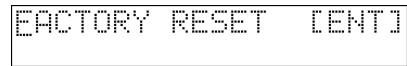
- Press the [ENTER] button to play the demonstration song after Factory Reset.
The demonstration song is played from ANALOG OUT A and PHONES. To stop the demonstration song, press the [EXIT] button.
If no errors occur, turn the unit's power off and complete the test mode.

RESTORING THE FACTORY SETTINGS

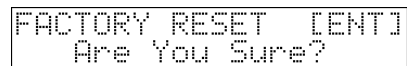
1. Press [UTILITY] to make its indicator light.
The UTILITY screen appears in the display.



2. Press [< CURSOR] a few times to move the cursor to the upper left of the display.
3. Turn [VALUE] to choose "FACTORY RESET."



4. Press [ENTER].
The confirmation message "Are You Sure?" appears in the display.



* To cancel, press [EXIT]

5. Press [ENTER] to execute the factory reset.
The PLAY screen returns to the display.

* If the following display appears, turn [VALUE] to change the displayed ON to OFF.
After pressing [ENTER] to turn off the protect, press [ENTER] again to save the settings.



PROCEDURE FOR UPDATING THE SOFTWARE

The XV-5050 uses a Flash Memory for the program ROM.
The version may be updated by externally sending the MIDI data.
Whenever updating is performed, Factory Reset is necessary.
If you have important data in the user memory, save it before updating.

Required items

- XV-5050 UPDATE DISK (2HD : 3 disks) (P/No.17041122)
- A sequencer that can play an SMF (a synthesizer with a sequencer such as the FANTOM may be used)
- MIDI cable

1. Connect MIDI OUT of the external sequencer to MIDI IN of the XV-5050 with the MIDI cable.
2. Turn on the unit while pressing the [`<` CURSOR] and [`CURSOR >`] buttons simultaneously.
The following MIDI update screen appears.

```
Update by MIDI
Press [PATCH FINDER]
```

3. The following display appears when the [PATH FINDER] button is pressed, then MIDI data reception waiting status is entered.

```
Waiting...          1 / 48
```

4. After confirming the display shown in step 3., play all '*.mid' files on the XV-5050 Update Disks 1,2 and 3 from the external sequencer. (Play in p00001.mid -- p00048.mid order).
The [PATCH FINDER] button blinks during MIDI data reception and the "Waiting" message is replaced with "Receiving."
Upon completion of data transfer from a file, the message returns to "Waiting," prompting you to play back the next file.

When updating is completed without an error, the checksum is displayed, and LEDs [1], [2], [3], [4] and [TONE] blink.

Confirm that the three values of the upper row coincide, and that the two values (the checksum of the program ROM data) on the left and in the center of the bottom row coincide.

(Ignore the rightmost value on the bottom row).

Updating has failed if the values do not coincide.

Repeat updating from the beginning.

```
INT 2909 (2909 2909)
EXT 4427 (4427) 74BD
```

When the checksum is confirmed, re-enter the power and perform Factory Reset.

(Refer to "TESTMODE 9.Factory Reset").

Check the version number of the updated Flash ROM. (Refer to "IDENTIFYING VERSION NUMBER")

Notes

About SMF File numbers

One SMF is created for each Flash Memory block.

48 SMFs, p00001.mid -- p00048.mid, are created.

Depending on the program size, some in-between files may drop out.

Since the checksum data is placed on the p00048.mid file, it will always be created.

Completing updating

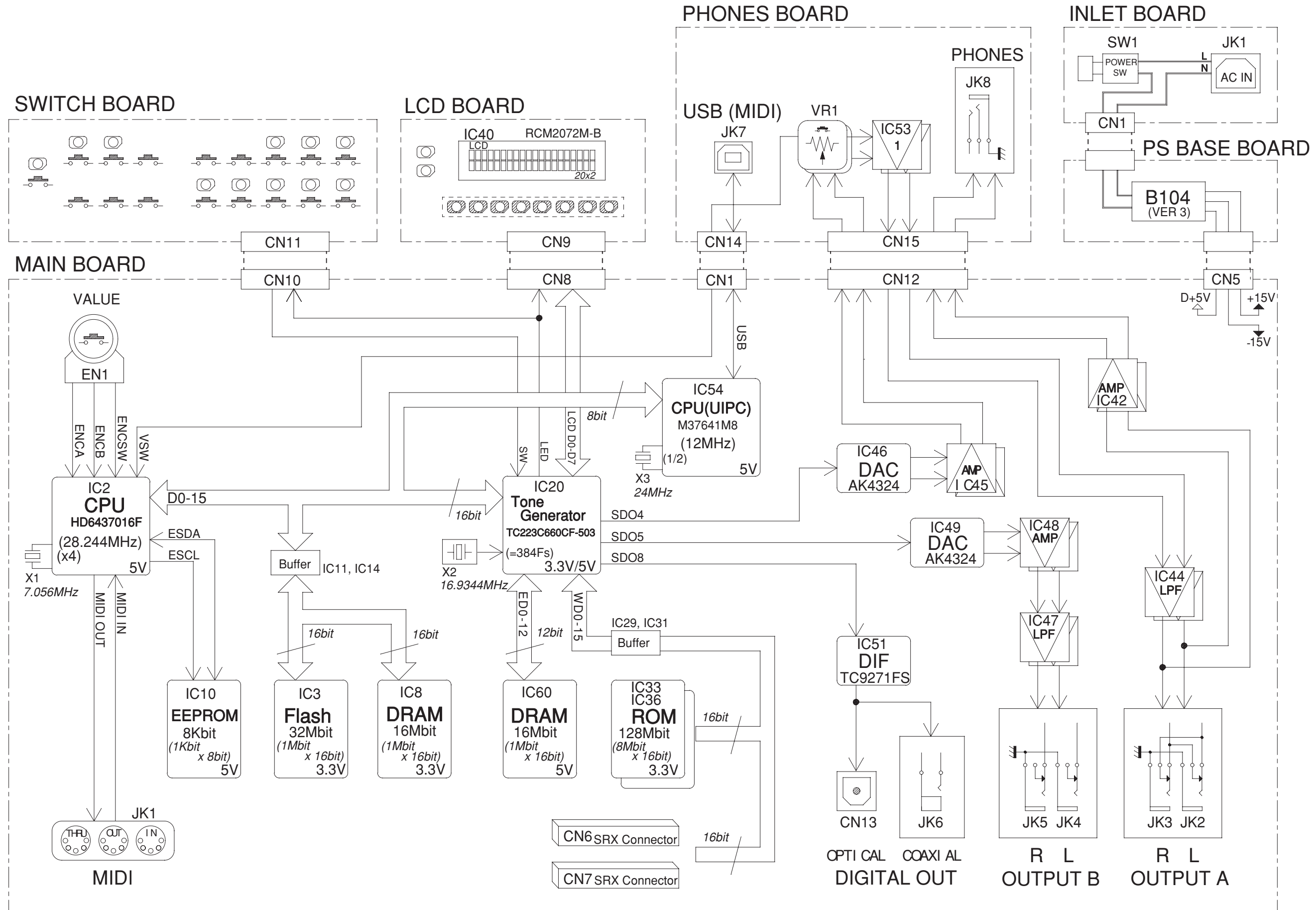
The system determines that all updating data are received when p00048.mid is received.

Blocks that are not updated are deleted at this point.

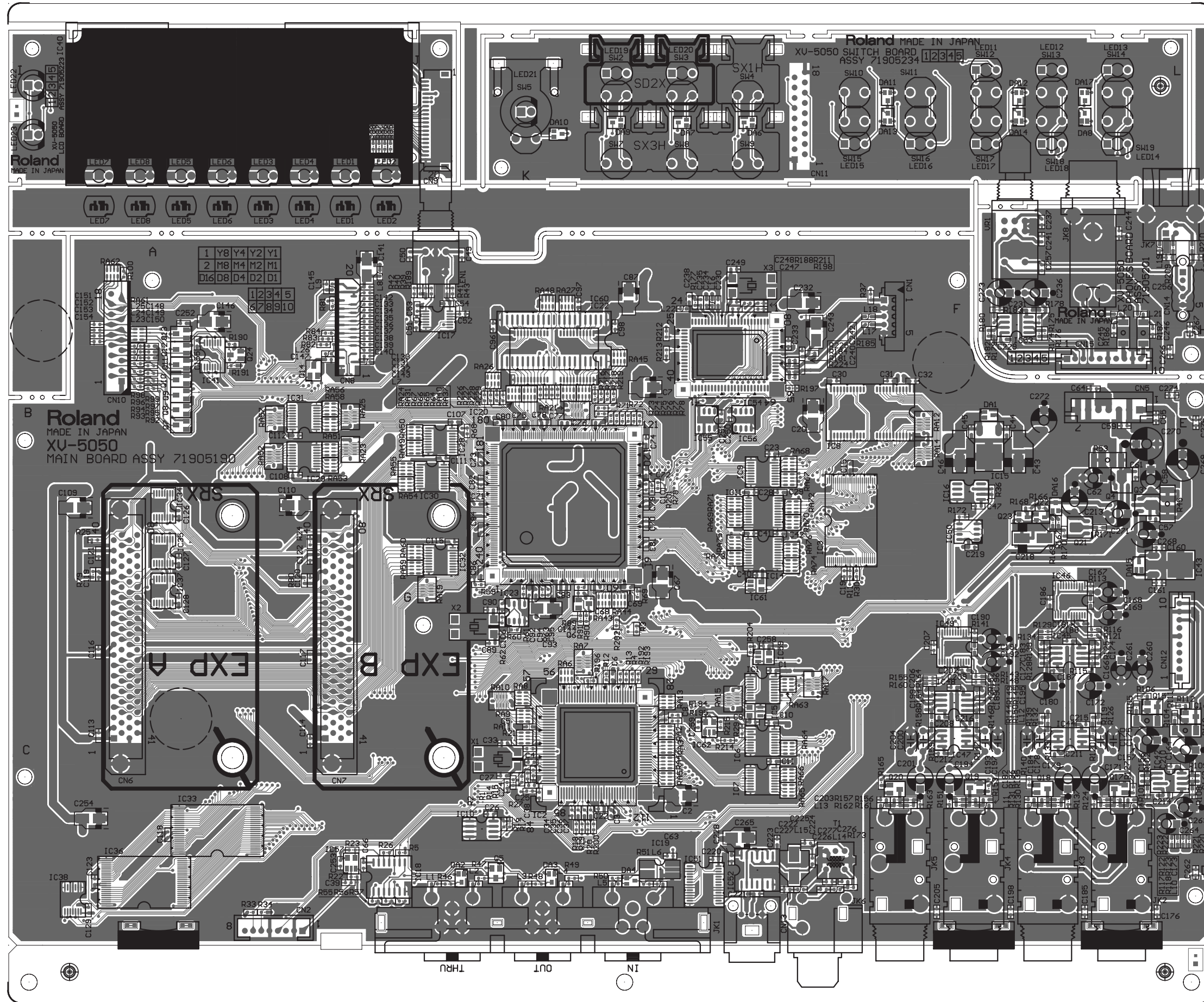
Since they are deleted to properly manage the checksum data of the Flash ROM, partial updating of the block cannot be made.

If the power is turned off while writing to the Flash ROM, start the updating from the beginning.

BLOCK DIAGRAM

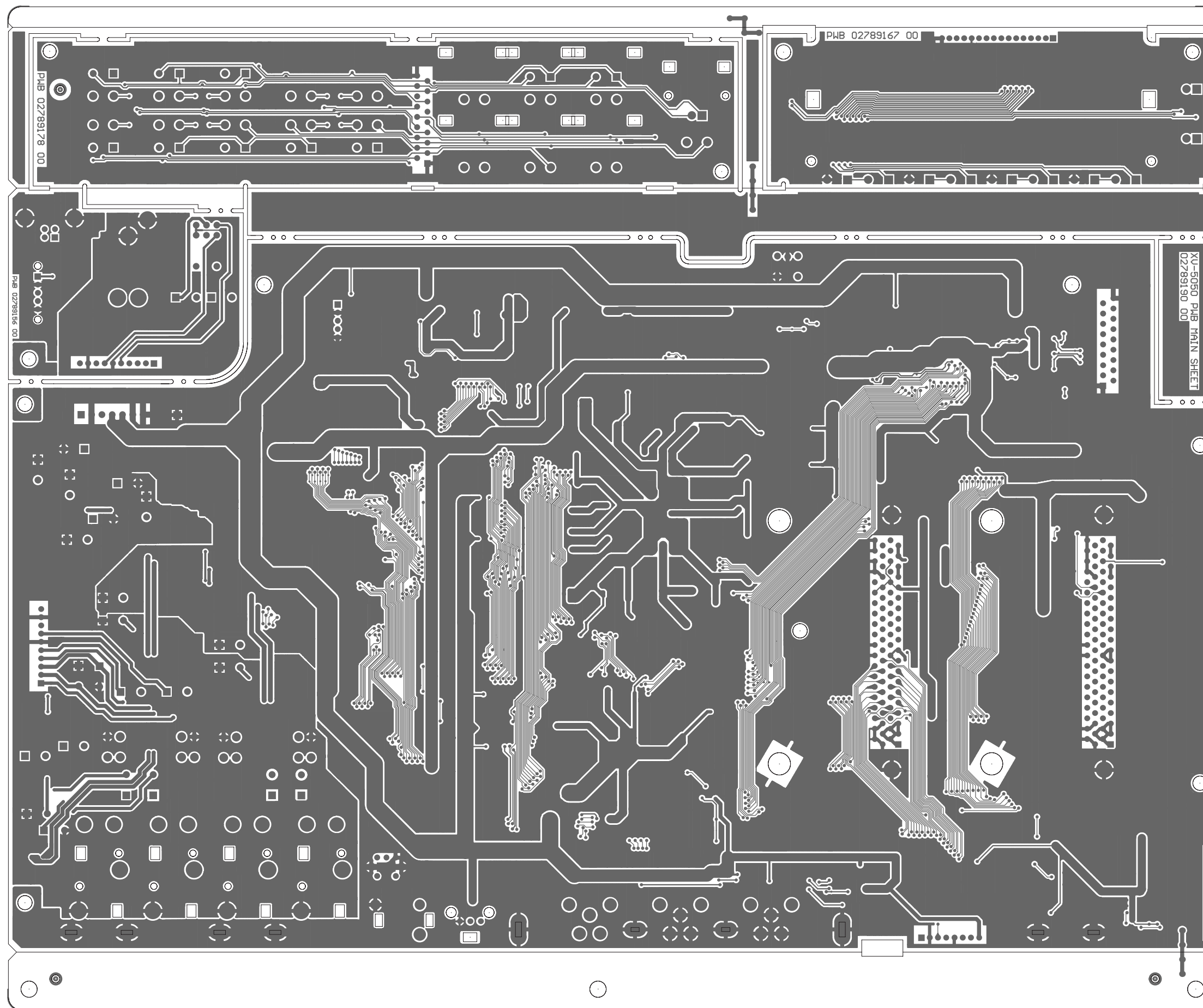


CIRCUIT BOARD (MAIN)



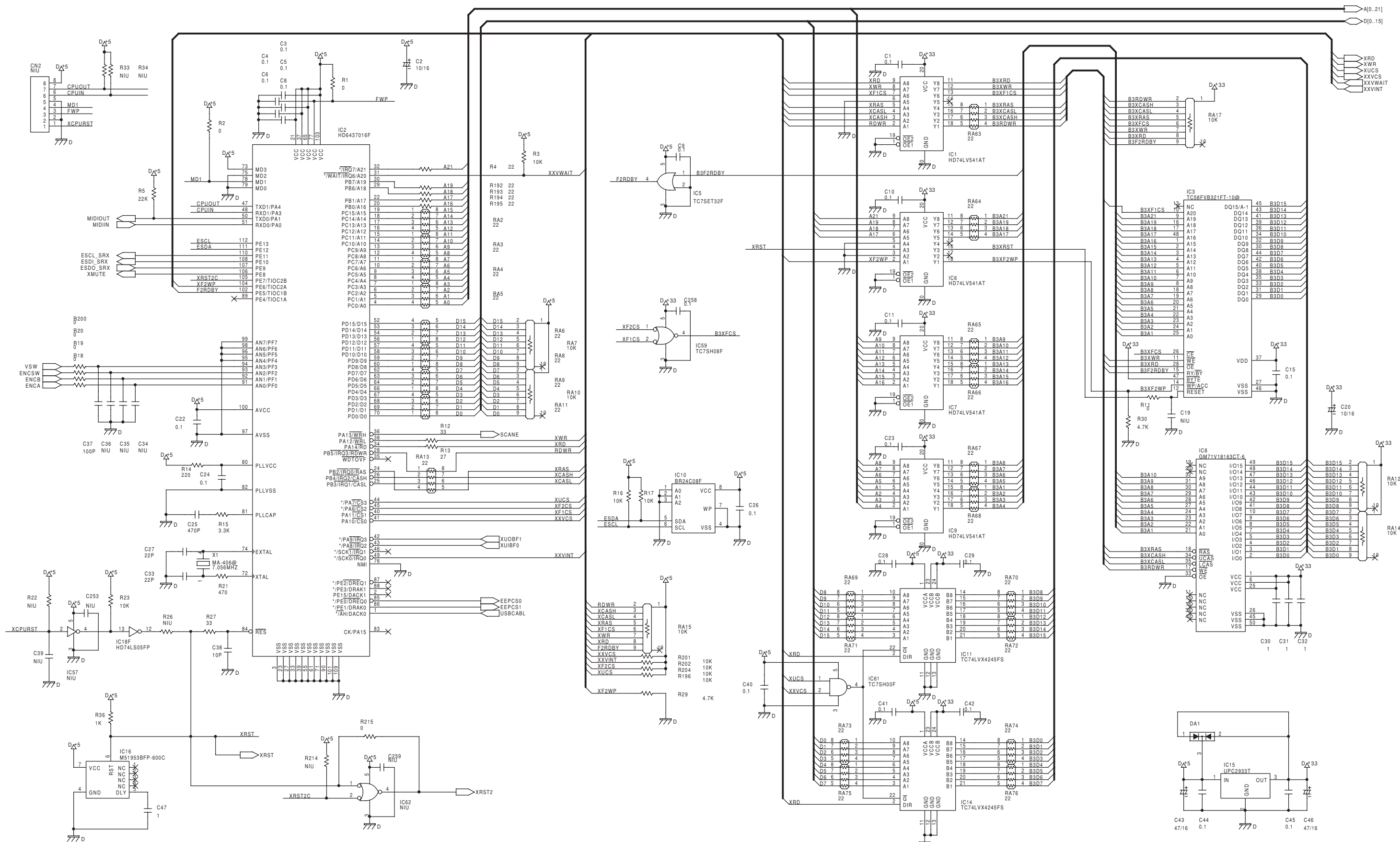
View from components side

CIRCUIT BOARD (MAIN)

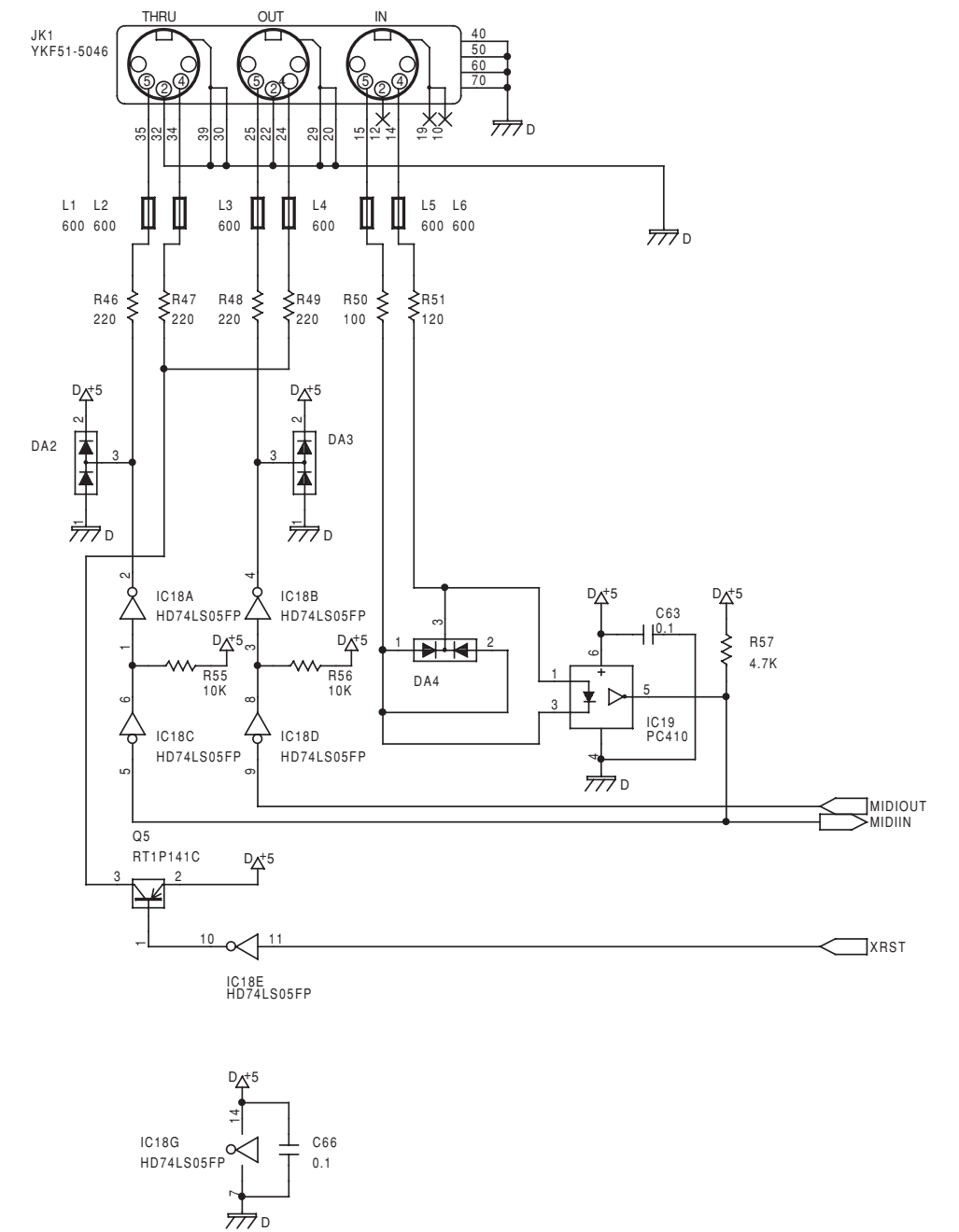
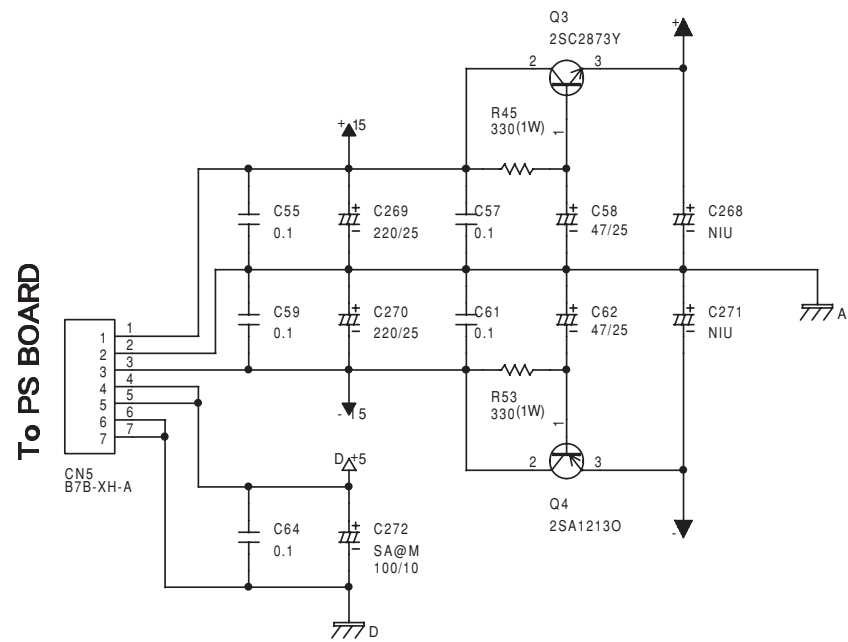
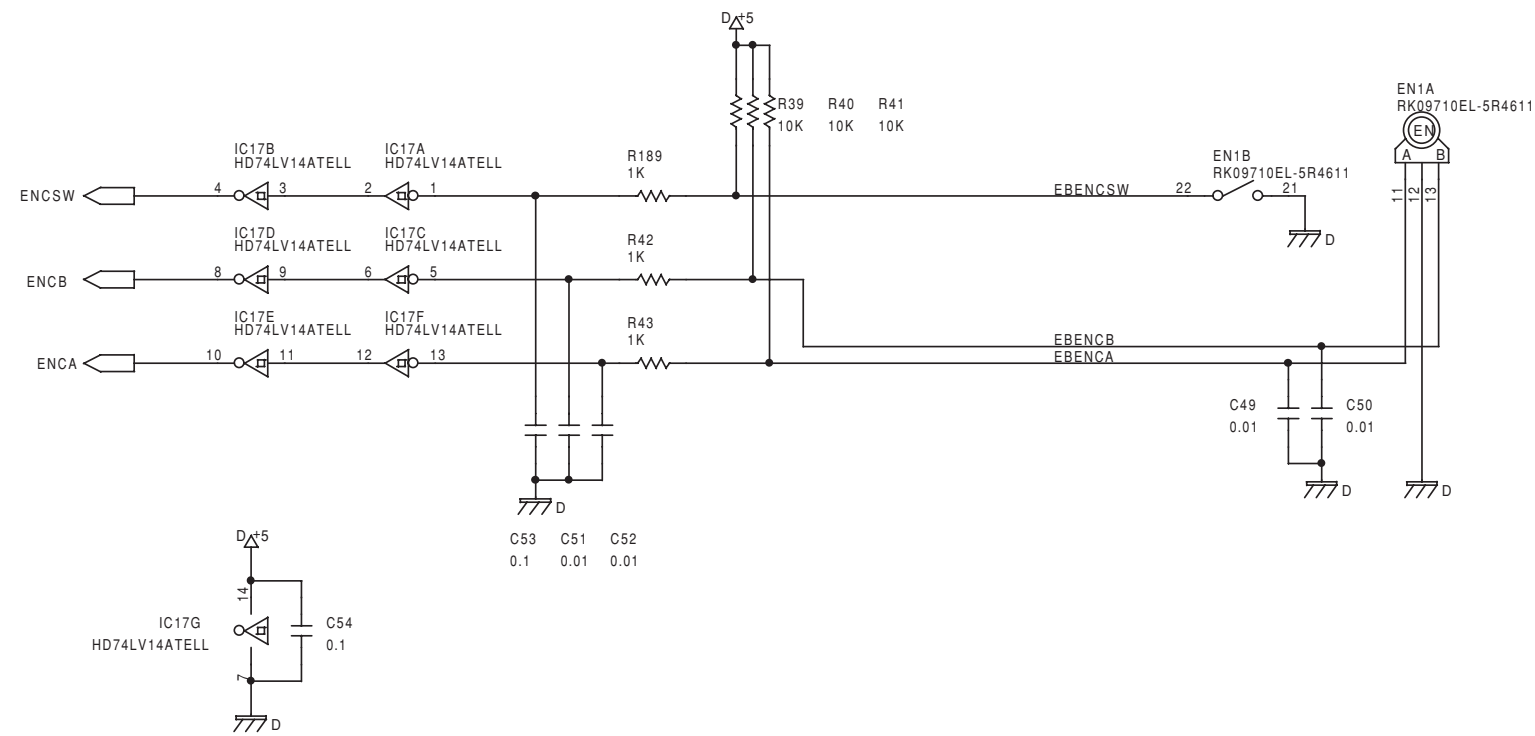


View from foil side

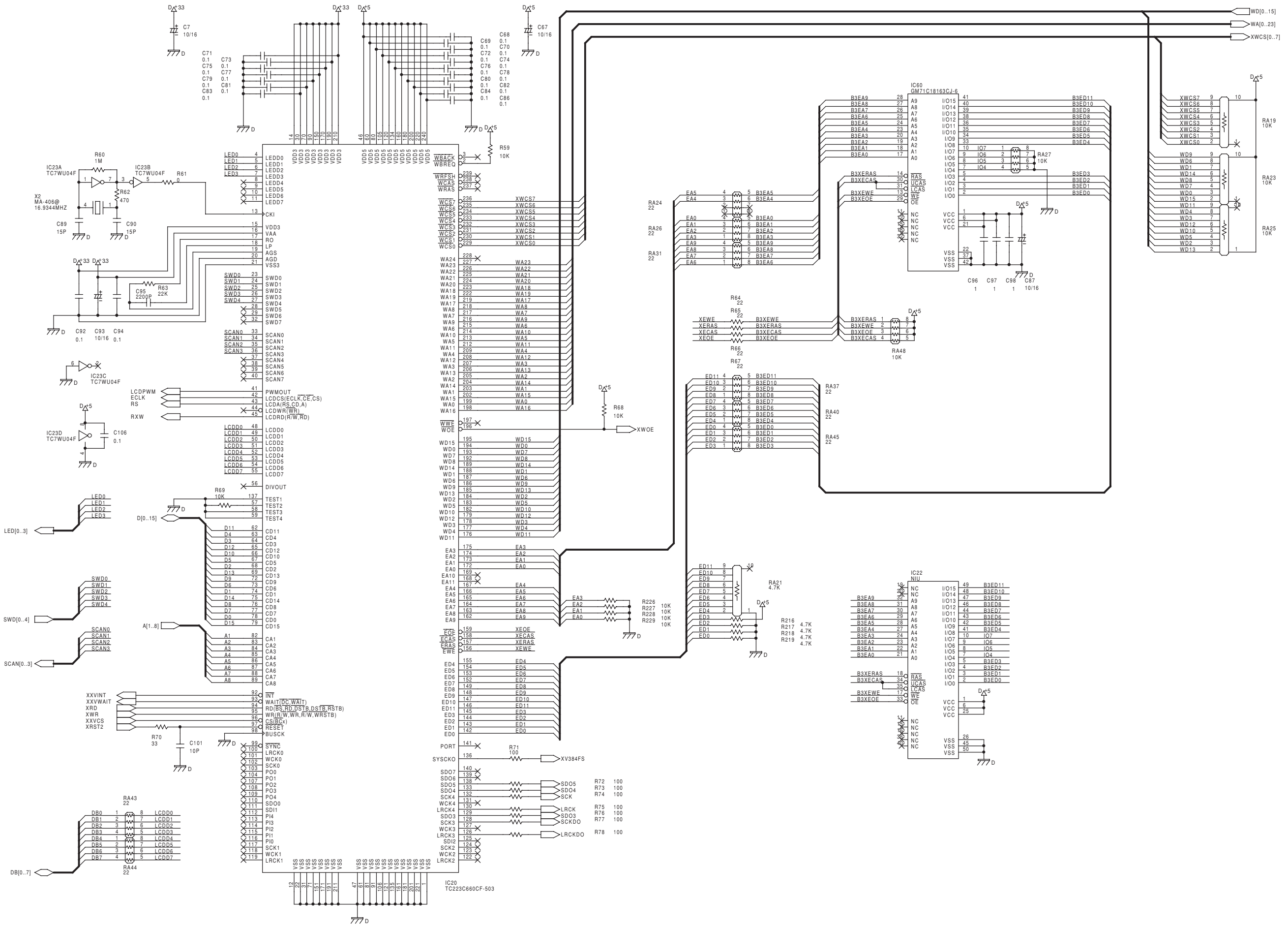
CIRCUIT DIAGRAM (MAIN 1/7)



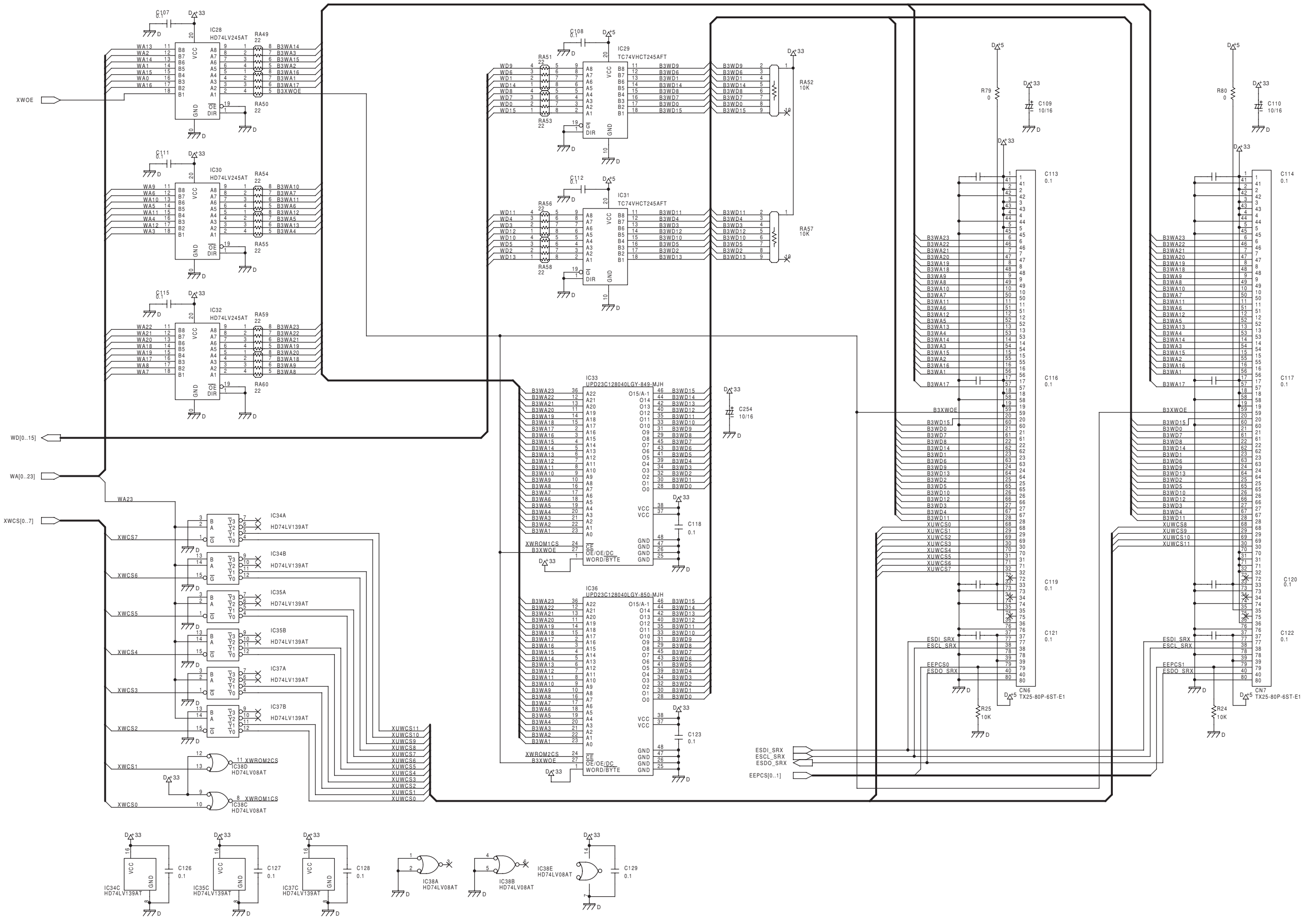
CIRCUIT DIAGRAM (MAIN 2/7)



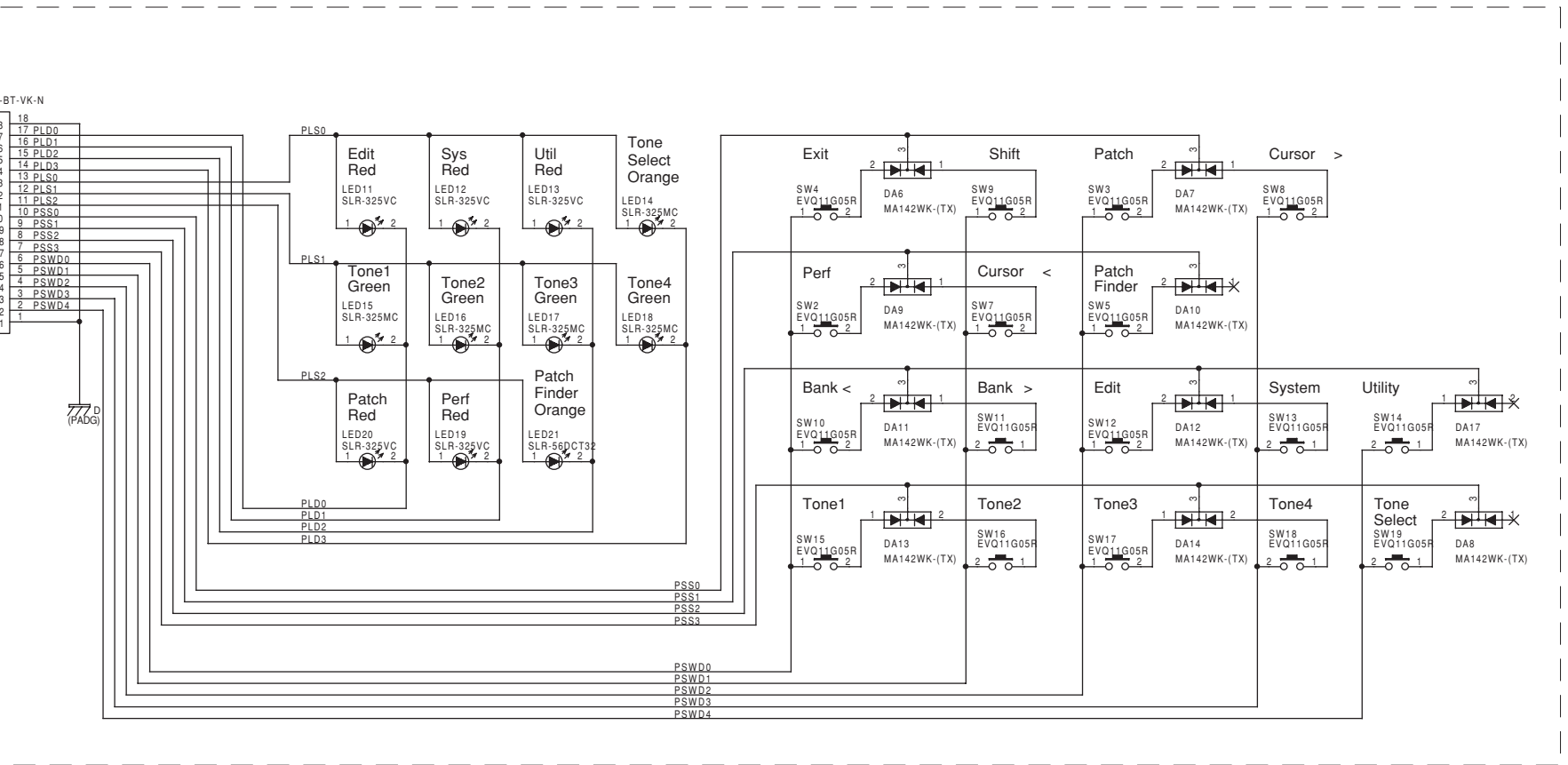
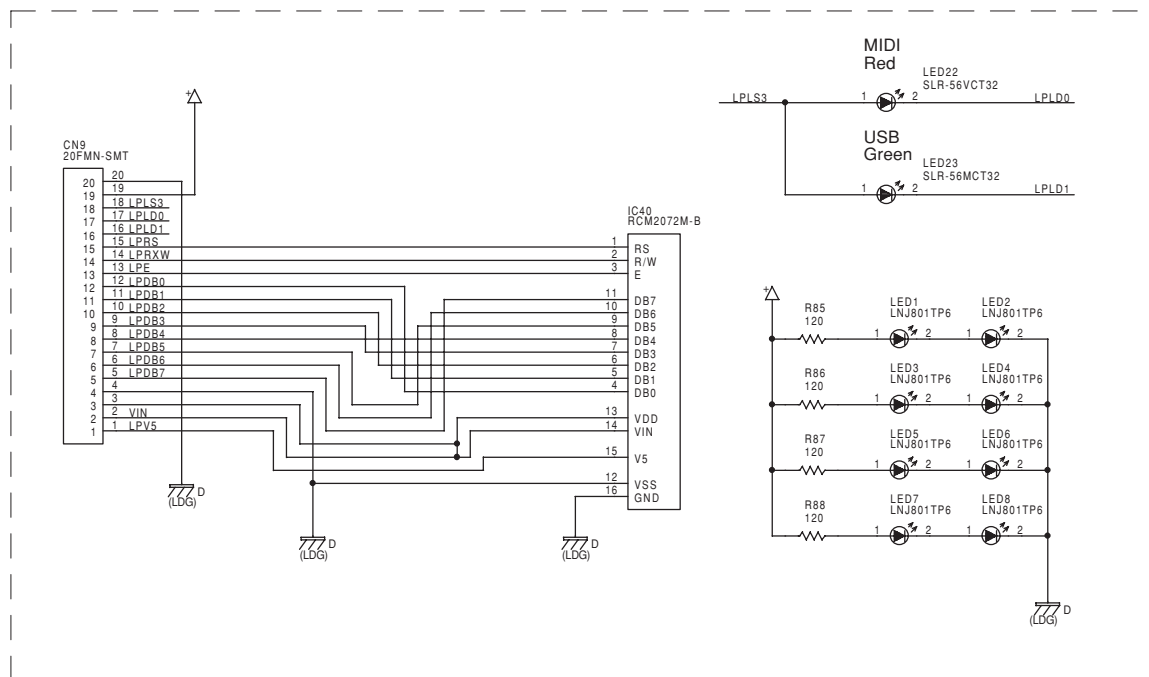
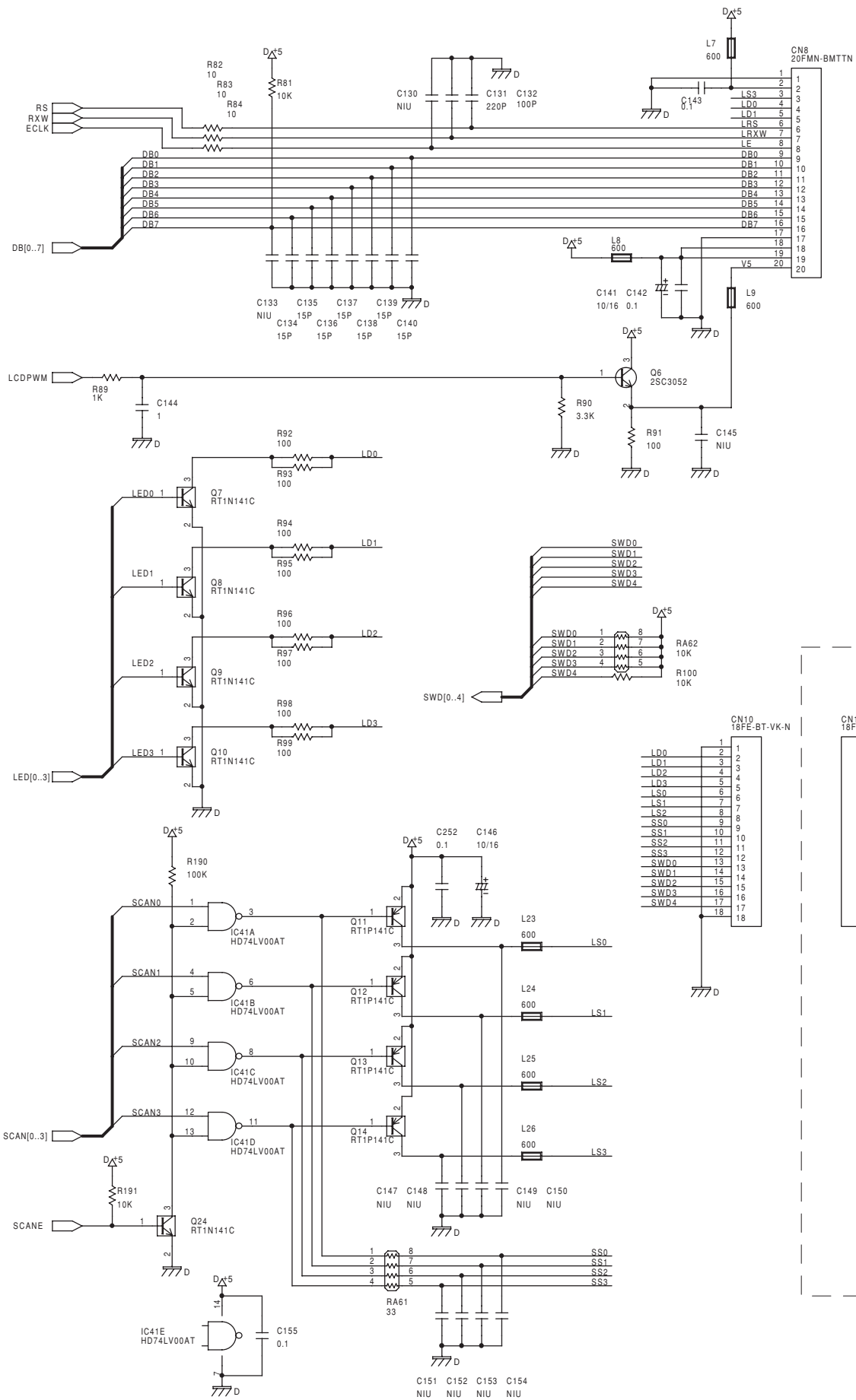
CIRCUIT DIAGRAM (MAIN 3/7)



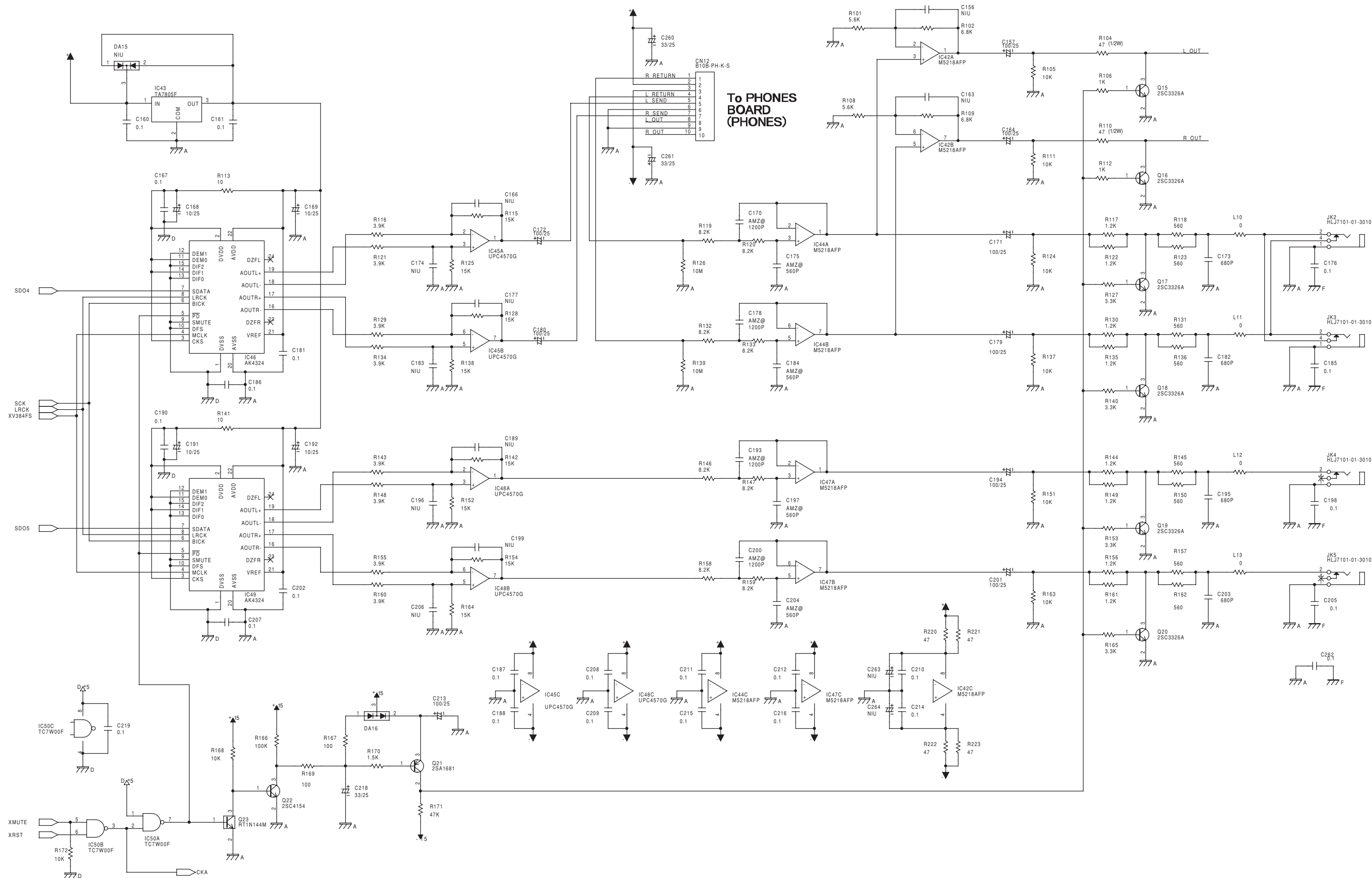
CIRCUIT DIAGRAM (MAIN 4/7)



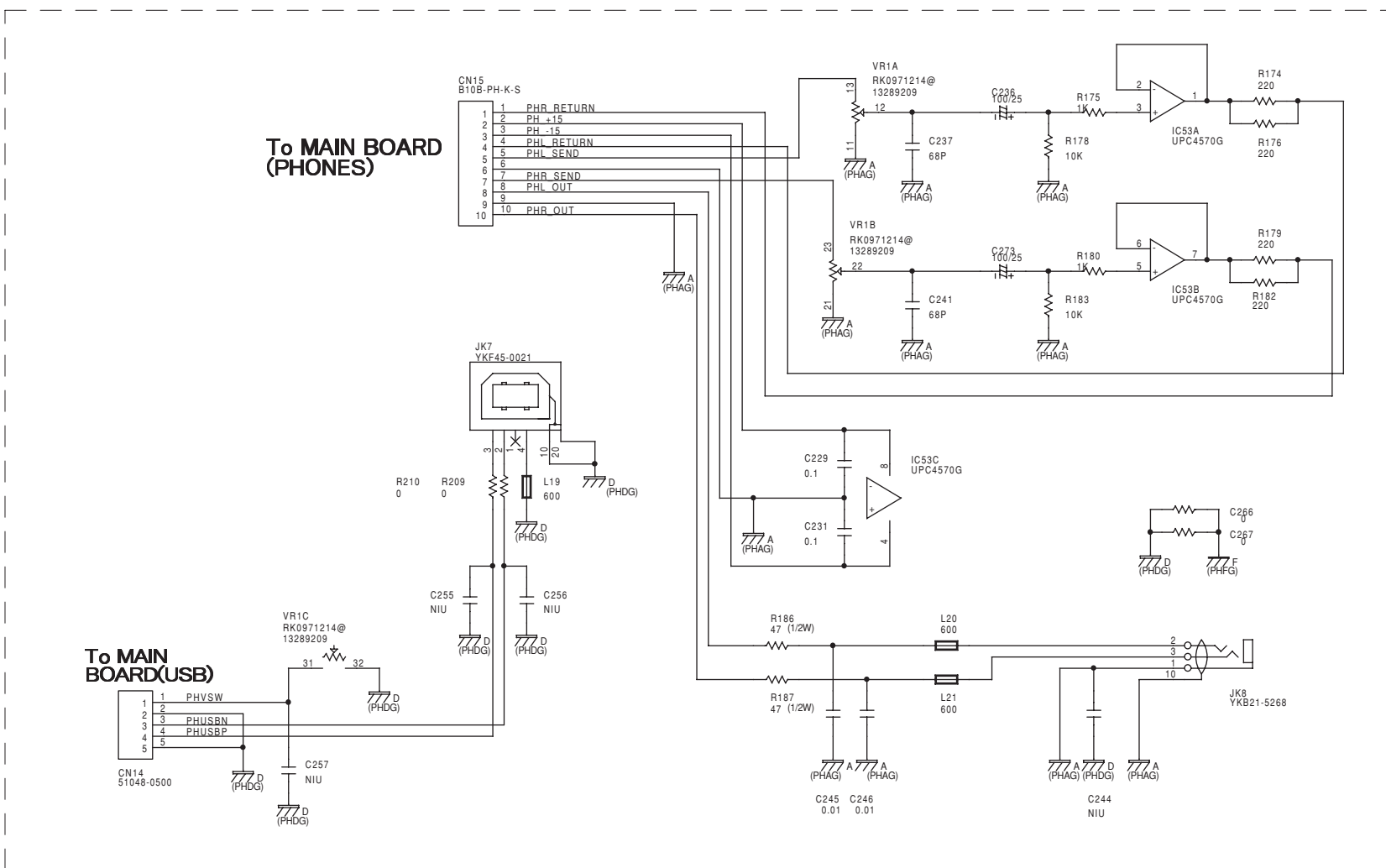
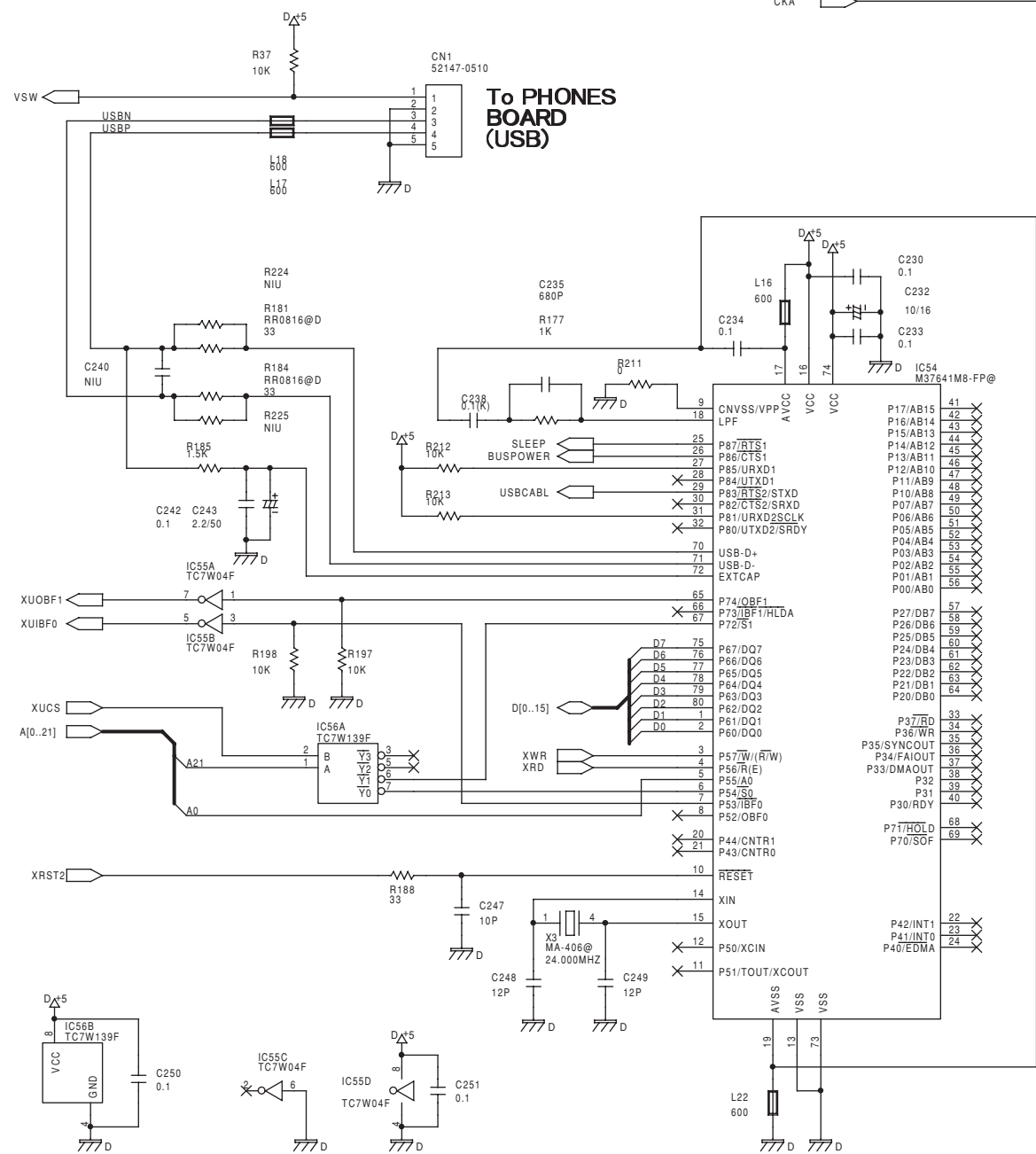
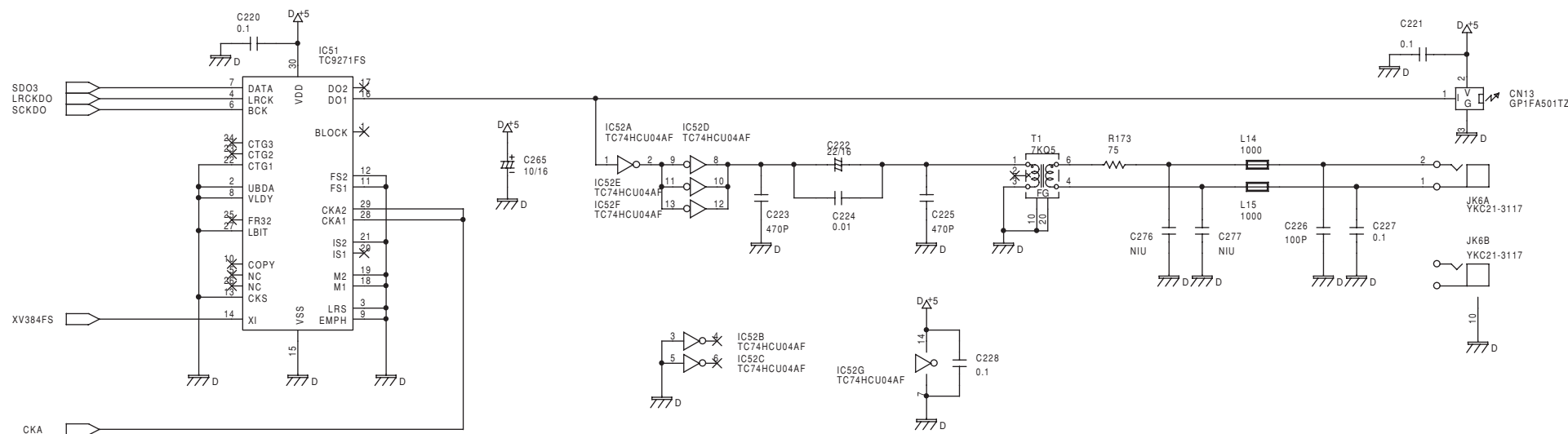
CIRCUIT DIAGRAM (MAIN 5/7)



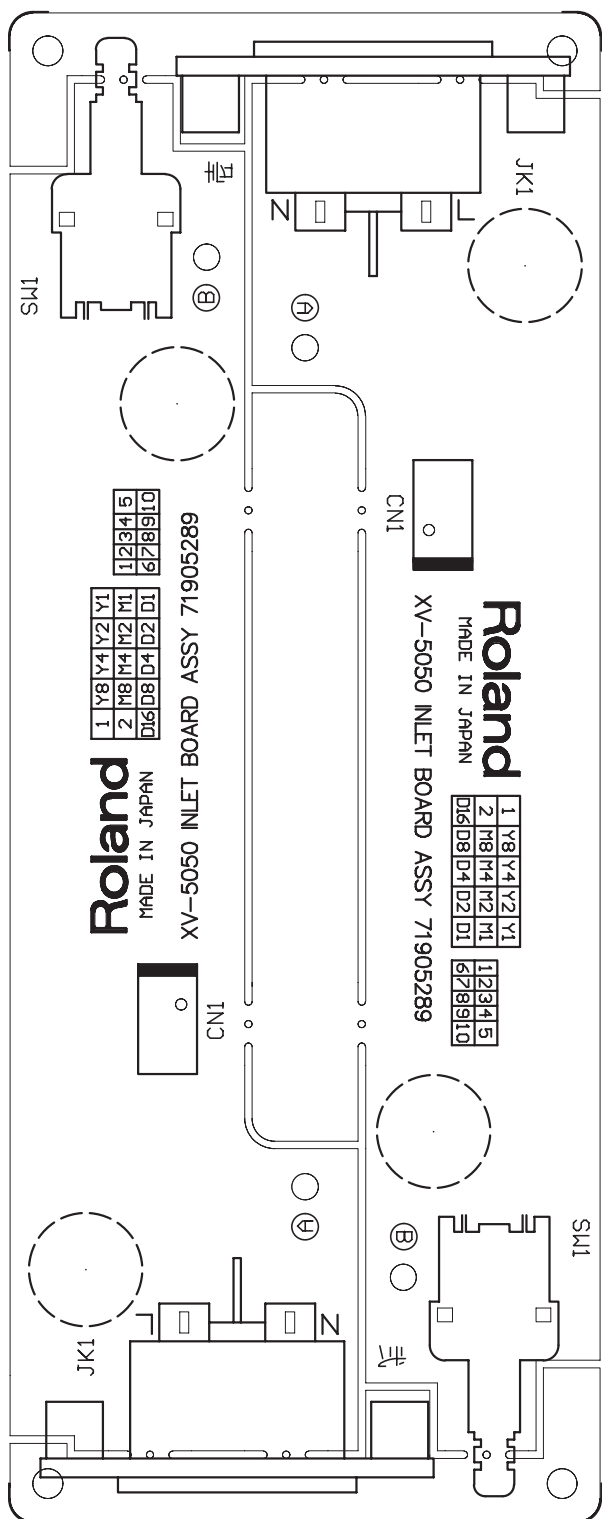
CIRCUIT DIAGRAM (MAIN 6/7)



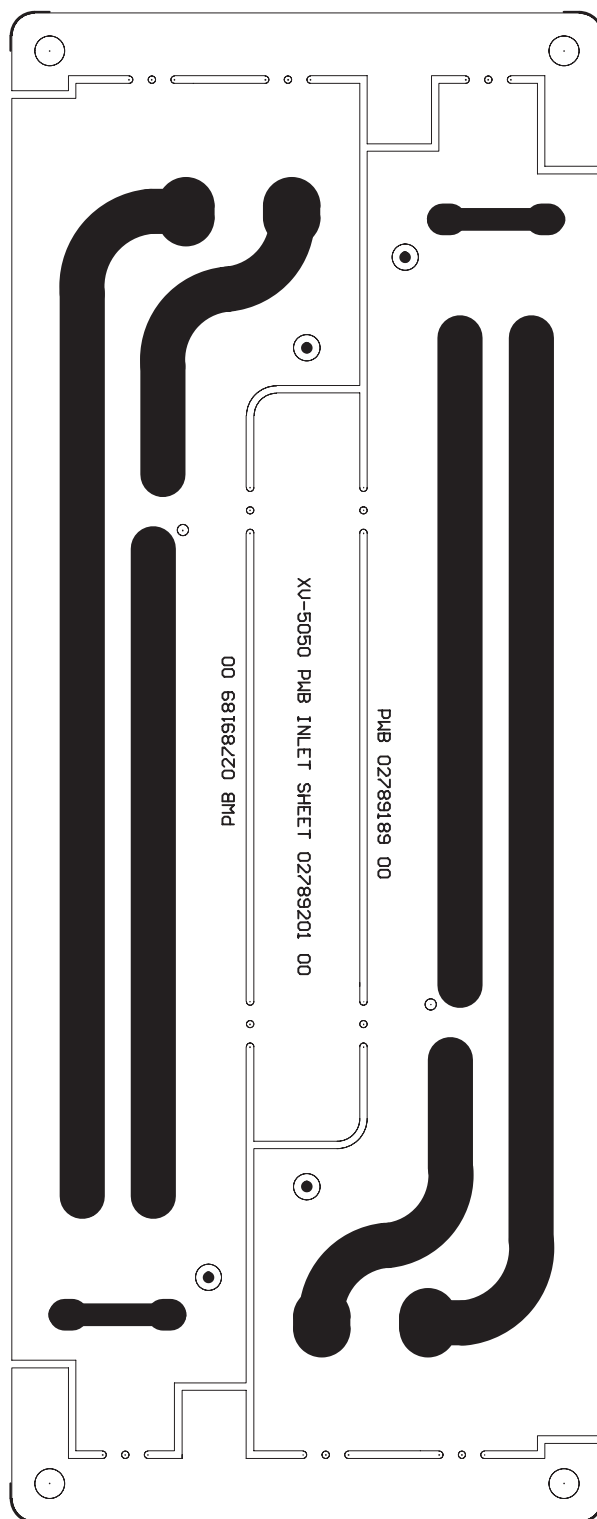
CIRCUIT DIAGRAM (MAIN 7/7)



CIRCUIT BOARD (INLET)

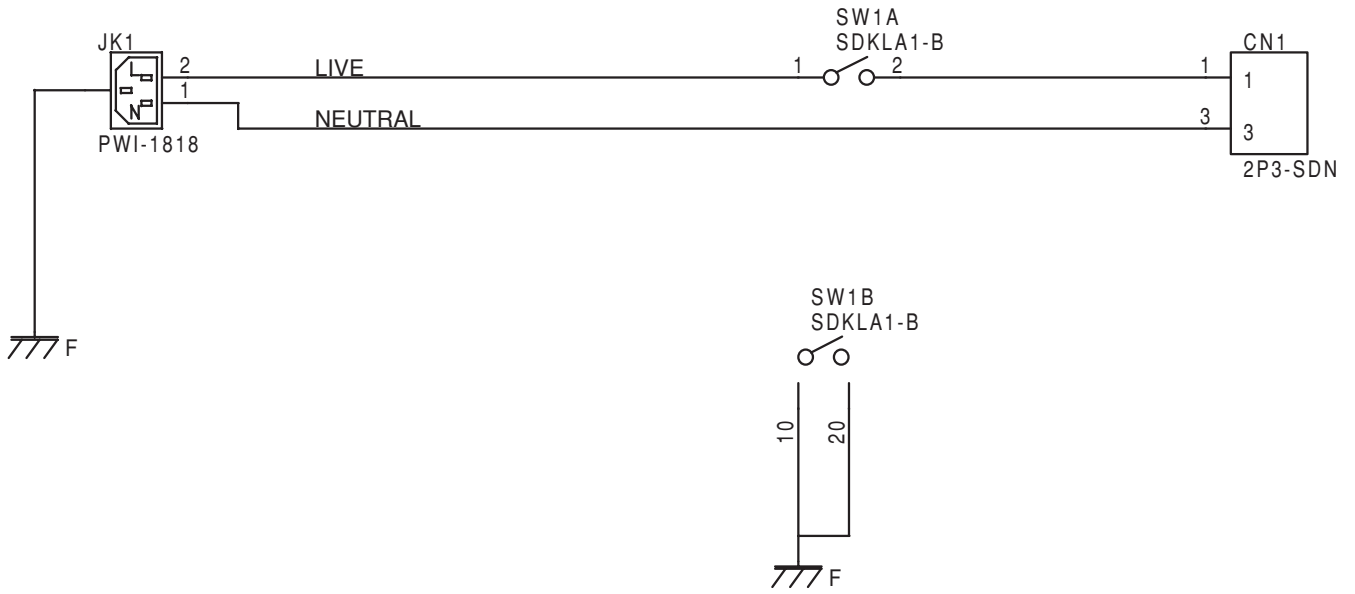


View from components side



View from foil side

CIRCUIT DIAGRAM (INLET)



ERROR MESSAGES

This section gives the error messages in alphabetical order.

MIDI Buffer Full

Situation : Due to an inordinate volume of MIDI messages received, the XV-5050 has failed to process them properly.

Action : Reduce the amount of MIDI messages to be transmitted.

MIDI Communication Error

Situation : It is possible that the power has been turned off for the MIDI device connected to the XV-5050's MIDI IN connector.

Action : Check the power of the connected MIDI device.

It is possible that a MIDI cable has been pulled out or has a short. Check the MIDI cable.

Receive Data Error

Situation : A MIDI message was received incorrectly.

Action : If the same error message is displayed repeatedly, there is a problem with the MIDI messages that are being transmitted to the XV-5050.

USB Off Line

Situation : It is possible that the power has been turned off for the computer connected to the XV-5050's USB connector.

Action : Check the power of the connected computer.

It is possible that a USB cable has been pulled out or has a short. Check the USB cable.

User Memory Damaged

Situation : The data in user memory has been lost.

Action : Use the Factory Reset function to initialize the memory to the factory settings.

User Memory Write Protected

Situation : The Internal parameter is turned ON.

Action : Turn the Internal parameter OFF.

The Exclusive parameter is turned ON, and Exclusive messages cannot be received.

Turn the Exclusive parameter OFF.