

Fantom XR

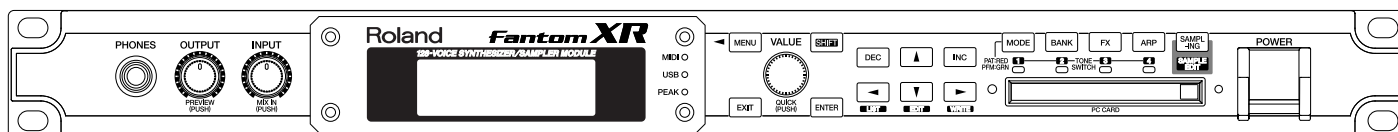
128-VOICE SYNTHESIZER/SAMPLER MODULE

SERVICE NOTES

Issued by RJA

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SPECIFICATIONS

Fantom-XR:
128 Voices Synthesizer/Sampling Module
(Conforms to General MIDI 2 System)

Sound Generator Section

Maximum Polyphony

128 voices (shared with the sampling section)

Parts

16 parts

Wave Memory

128 M bytes (16-bit linear equivalent)

Waveforms

1,480

Preset Memory

Patches: 1,024 + 256 (GM2)

Rhythm Sets: 40 + 9 (GM2)

Performances: 64

User Memory

Patches: 256

Rhythm Sets: 32

Performances: 64

Card Memory (PC card)

Patches: 256

Rhythm Sets: 32

Performances: 64

Effects

Multi-Effects: 3 systems, 78 types

Chorus: 3 types

Reverb: 5 types

Input Effect: 6 types

Mastering Effect: 3 bands Compressor

Sampling Section

Data Format

16-bit linear (File Type: .WAV / .AIFF)

Sampling Frequency

44.1 kHz (fixed)

Maximum Sampling Time

When sampling memory isn't expanded (16 MB)

mono: 180 sec. approx., stereo: 90 sec. approx.

When sampling memory is expanded with DIMM (528 MB)

mono: 104 min. approx., stereo: 52 min. approx.

Number of Samples

User memory: 2,000 (maximum total approximately 16 MB)

Card memory: 7,000 (PC card)

Others

Arpeggio

Preset: 128

User: 128

Rhythm Pattern

Preset: 256 (32 groups)

User: 256 (32 groups)

Chord Memory

Preset: 64

User: 64

Display

Graphic 160 x 48 dots backlit LCD

Connectors

Headphones Jack

A (MIX) Output Jacks (L/MONO, R): 1/4 inch phone type

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

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

MIDI Connectors (IN, OUT, THRU)

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

Digital Audio Interface (COAXIAL INPUT/OUTPUT)

AC Inlet

Expansion Slots

- Expansion of waveforms and patches for the internal sound generator
SRX expansion boards: 6 slots
- Expansion of sampling memory
DIMM: 1 slot (supports 128 MB, 256 MB, 512 MB (3.3 V))

External Storage Device

PC Card: 1 slot (supports SmartMedia and CompactFlash using a PC card adapter)

Power Supply

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

AC 220 V (60 Hz)

Power Consumption

13 W

Dimensions

481 (W) x 335 (D) x 44 (H) mm

18-15/16 (W) x 13-3/16 (D) x 1-3/4 (H) inches

Weight

3.75 kg / 8 lbs 5 oz

Accessories

Owner's Manual ENGLISH:(#72567634)

JAPANESE(#72566356)

Sample Data (Audio) CD:(#*****)

CD-ROM (Editor, USB MIDI driver):(#03674712)

PC Card Protector(#03566612) (and 2 screws):(#40012456)

Power Cord 120V:(#00894378)

230V:(#00894389)

240V A:(#23495124)

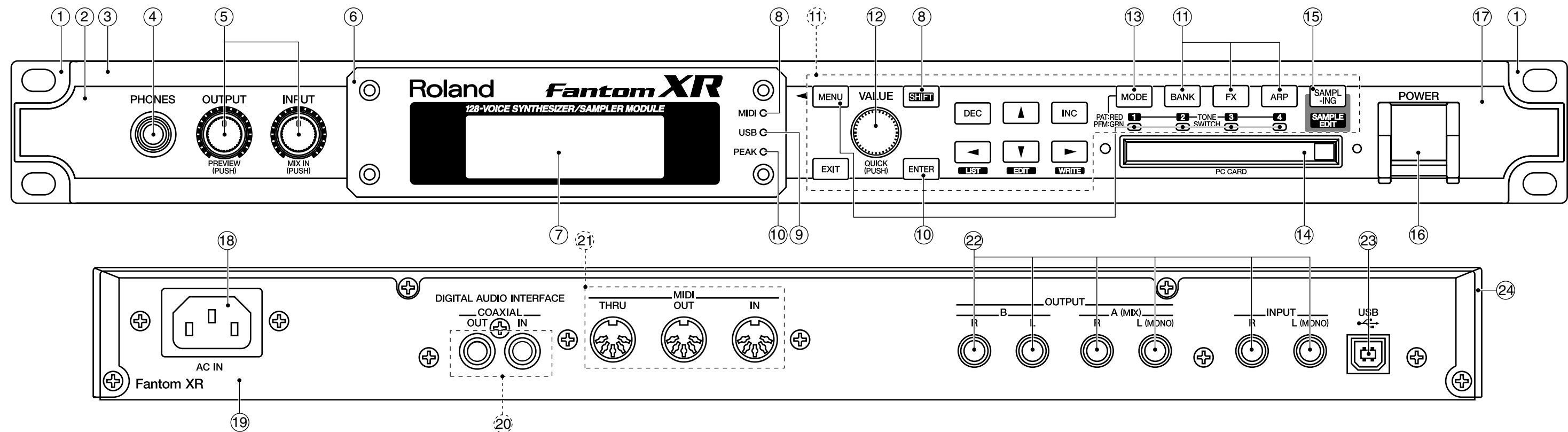
240V E:(#00907001)

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 prior notice.*

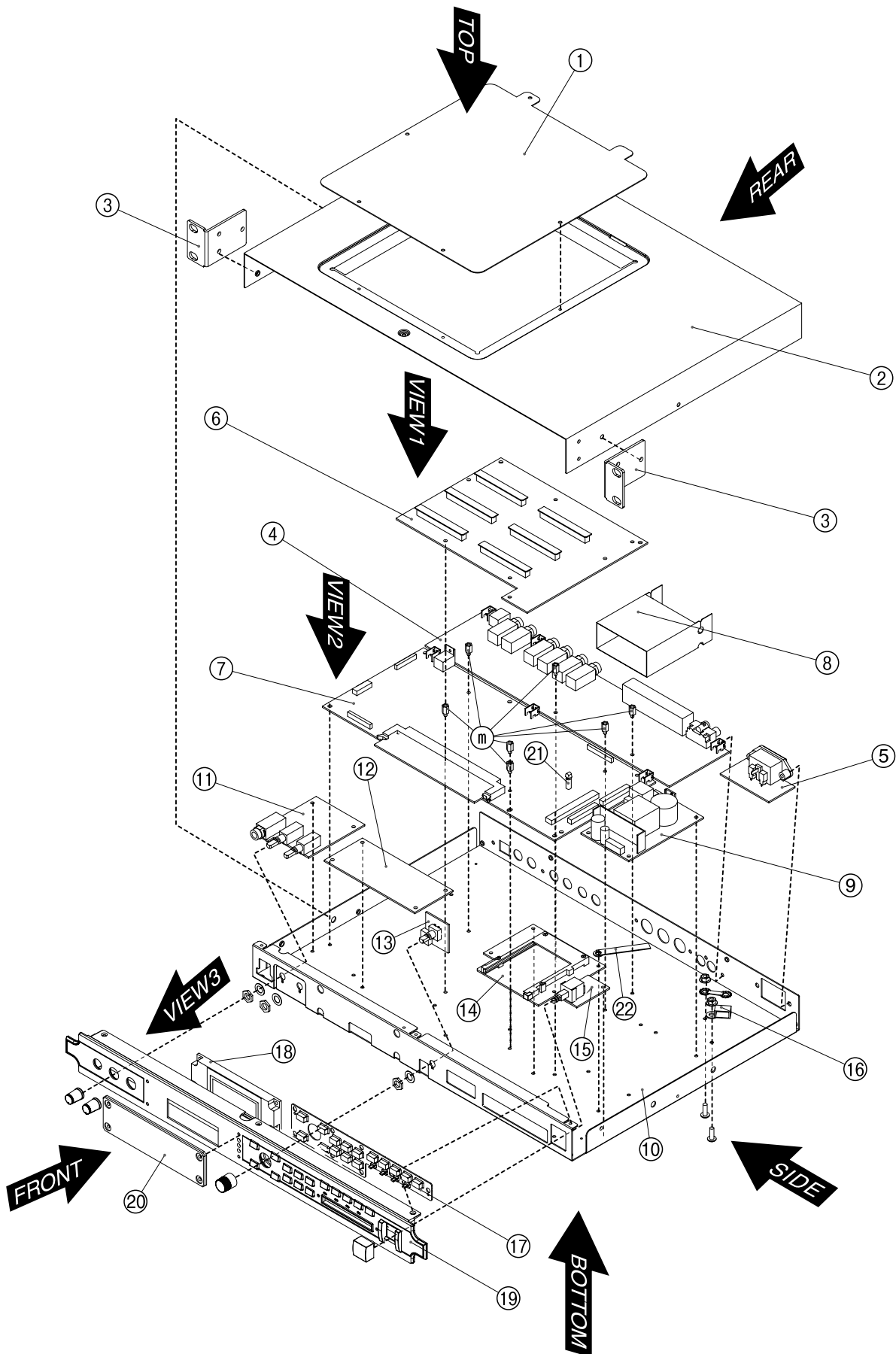
LOCATION OF CONTROLS



LOCATION OF CONTROLS PARTS LIST

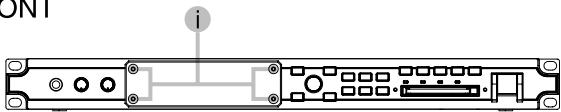
No	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	22123568	CASING	RACK MOUNT ANGLE 1U	212-568	2
2	03564556	MISCELLANEOUS	FRONT PLATE L		1
3	03564545	CASING	FRONT PANEL		1
4	13449172	JACK,EXT TERMINAL	6.5MM JACK	HLJ7000-01-3010	1
5	03565778	KNOB,BUTTON	M R-KNOB	MF-ELA-A BLK/LCG	2
5	03561378	POTENTIOMETER	ROTARY POTENTIOMETER	ROTARY POT. RK0971214Z08	2
6	03564623	CASING	DISPLAY COVER		1
7	03560912	DISPLAY UNIT	LCD	SCLCMEAMNI0076	1
8	03560890	DIODE	LED	SML-310MTT86	2
9	03345667	DIODE	LED	SML-310YTT86	1
10	02671245	DIODE	LED	SML-310LTT86	10
11	03564612	KNOB,BUTTON	RUBBER SW	KEY UNIT 15KEY	1
12	03231912	ENCODER	ROTARY ENCODER W/SW	R-ENCODER EVQB15SZ1720B	1
12	03565789	KNOB,BUTTON	M R-KNOB	LF-ELA BLK	1
13	03349789	DIODE	LED	LNJ115W8PRA	1
14	02900867	JACK,EXT TERMINAL	CARD EJECTOR	SCAB1A5600	1
15	03560901	DIODE	LED	SML-311BBT86	1
16	22495565	KNOB,BUTTON	F S-BUTTON	MX BLK	1
17	03564567	MISCELLANEOUS	FRONT PLATE R		1
18	72567578	PWB ASSY	INLET BOARD		1
19	03564578	CHASSIS	BOTTOM CHASSIS		1
20	03231812	JACK,EXT TERMINAL	RCA(PIN)	YKC21-4173	1
21	13429273	JACK,EXT TERMINAL	MIDI CONNECTOR	YKF51-5046 (TRIPRET)	1
22	13449283	JACK,EXT TERMINAL	6.5MM JACK	HLJ7101-01-3010	6
23	02781189	JACK,EXT TERMINAL	USB CONNECTOR	YKF45-0021	1
24	03564589	CASING	TOP COVER		1

EXPLODED VIEW 1

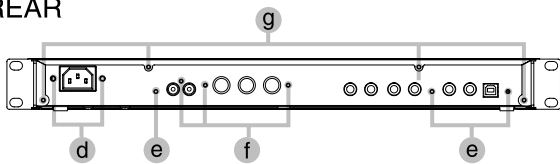


EXPLODED VIEW 2

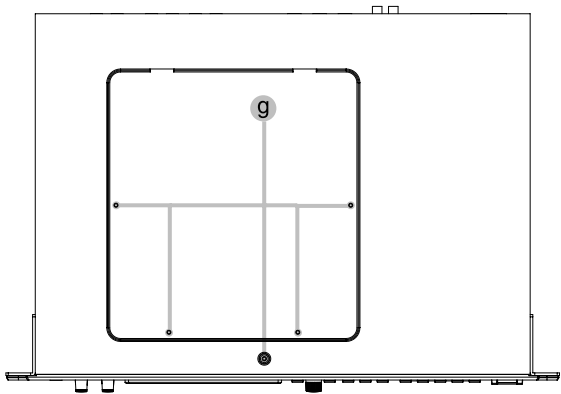
FRONT



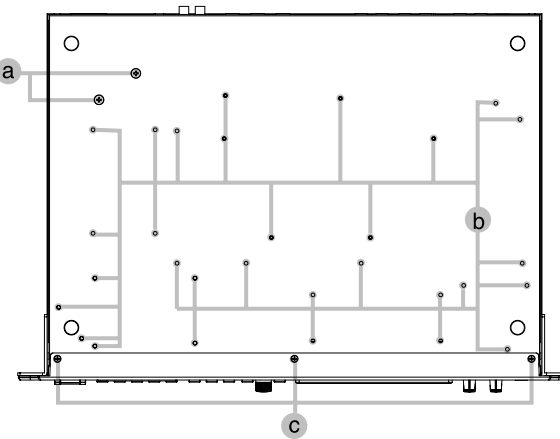
REAR



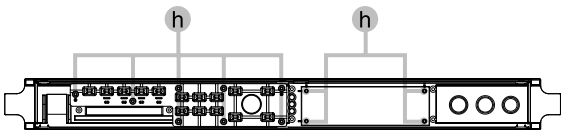
TOP



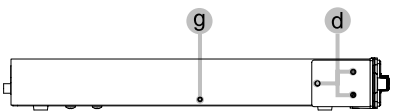
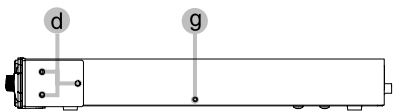
BOTTOM



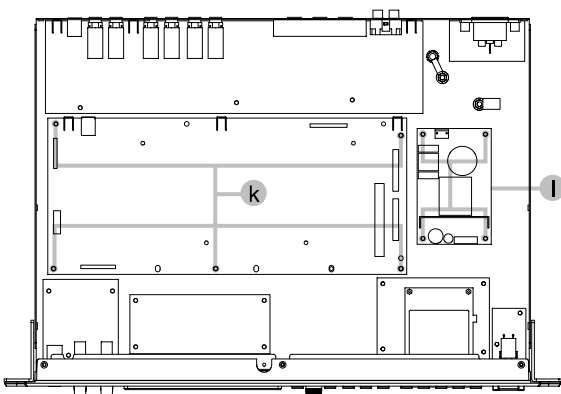
VIEW 3



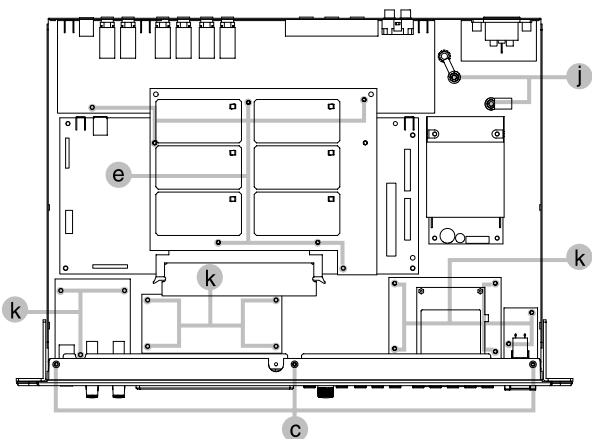
SIDE



VIEW 1



VIEW 2



EXPLODED VIEW PARTS LIST

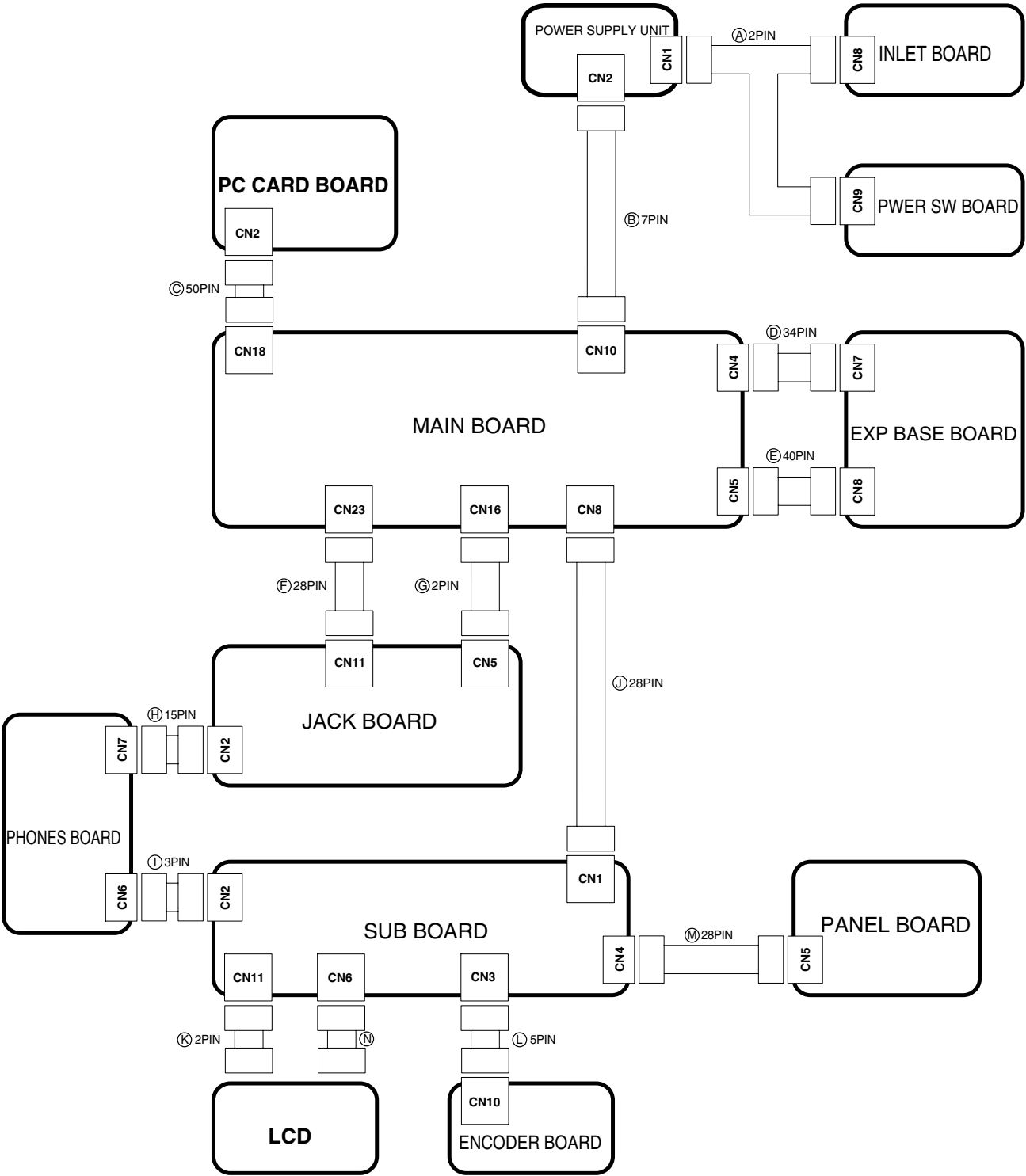
[PARTS]

No	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	03564601	CASING	EXP COVER		1
2	03564589	CASING	TOP COVER		1
3	22123568	CASING	RACK MOUNT ANGLE 1U	212-568	2
4	72566290	PWB ASSY	JACK BOARD ASSY		1
5	72567578	PWB ASSY	INLET BOARD		1
6	72567589	PWB ASSY	EXP BASE BOARD		1
7	72566267	PWB ASSY	MAIN BOARD ASSY		1
8	02894367	MISCELLANEOUS	INSULATING COVER	DA-2496 SW-PS	1
9	01785823	POWER SUPPLY UNIT	SWITCHING REGULATOR	A1DU2L3B034	1
10	03564578	CHASSIS	BOTTOM CHASSIS		1
11	72566312	PWB ASSY	PHONES BOARD ASSY		1
12	72566289	PWB ASSY	SUB BOARD ASSY		1
13	72567556	PWB ASSY	ENCODER BOARD ASSY		1
14	72567590	PWB ASSY	PC CARD BOARD		1
15	72567567	PWB ASSY	POWER SW BOARD		1
16	40016545	MISCELLANEOUS	LOCKING TOOL FOR INSULOK TIE	SKM-1	1
17	72566278	PWB ASSY	PANEL BOARD ASSY		1
18	03560912	DISPLAY UNIT	LCD	SCLCMEAMNI0076	1
19	03564545	CASING	FRONT PANEL		1
20	03564623	CASING	DISPLAY COVER		1
21	03672556	MISCELLANEOUS	SPACER	RSPS-8L	1
22	40120967	MISCELLANEOUS	COATING CLIP	CS-3	1

[SCREW]

No	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40010334	SCREW M4X8	BINDING MACHINE FE BZC	1
b	40011489	SCREW M3X4	PAN MACHINE W/SW BZC	30
c	40011145	SCREW 3X6	FLAT TAPTITE B BZC	6
d	40011123	SCREW 4X8	BINDING TAPTITE B BZC	8
e	40011490	SCREW M3X6	PAN MACHINE W/SW BZC	3
f	40011312	SCREW 3X8	BINDING TAPTITE P BZC	3
g	40011090	SCREW 3X6	BINDING TAPTITE B BZC	11
h	40011223	SCREW 2.6X6	BINDING TAPTITE P NI	12
i	40454045	SCREW 3X8	FLAT TAPTITEB NI FLANGE SOCKET	4
j	40011745	HEX NUT M4	SPRING NUT FE ZC	2
k	40013056	SCREW M3X6	PAN MACHINE W/SW+PW ZC	25
l	40017934	SCREW M3X6	PAN MACHINE W/SW+PW FE ZC	4
m	03566623	BOSS NUT	M3-L5.5-H8-A5-B4-N3	6

WIRING DIAGRAM



NO	PART CODE	PART NAME	DESCRIPTION
A.	03566634	WIRING W1	
B.	03565889	WIRING W2	
C.	03565934	BAN CARD	BNCD-S-P=0.50-K-50-500
D.	03565967	BAN CARD	BNCD-P=1.00-K-34-50
E.	03565956	BAN CARD	BNCD-P=1.00-K-40-50
F.	03453667	BAN CARD	BNCD-P=1.00-K-28-50
G.	03565901	WIRING W4	
H.	03565890	WIRING W3	
I.	02341723	WIRING	3X50-P2.0-PHR-PHR-F
J.	03565945	BAN CARD	BNCD-P=1.00-K-28-120
K.	03565912	WIRING	2X80-P2.0-PHR-PHR-F
L.	03565923	WIRING	5X60-P2.0-PHR-PHR-F
M.	03565945	BAN CARD	BNCD-P=1.00-K-28-120

NO	PART CODE	PART NAME	DESCRIPTION
N.	This wiring is incuded LCD UNIT		

PARTS LIST

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

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

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

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

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

CASING					
	22123568	RACK MOUNT ANGLE 1U	212-568		2
#	03564623	DISPLAY COVER			1
#	03564545	FRONT PANEL			1
#	03564601	EXP COVER			1
#	03564589	TOP COVER			1
CHASSIS					
#	03564578	BOTTOM CHASSIS			1
KNOB, BUTTON					
	22495565	F S-BUTTON	MX BLK		1
#	03565778	M R-KNOB	MF-ELA-A BLK/LCG		2
#	03565789	M R-KNOB	LF-ELA BLK		1
#	03564612	RUBBER SW	KEY UNIT 15KEY		1
JACK, EXT TERMINAL					
	13429273	MIDI CONNECTOR	YKF51-5046 (TRIPRET)	JK1 on Jack board	1
	03231812	RCA(PIN)	YKC21-4173	JK2 on Jack board	1
	02781189	USB CONNECTOR	YKF45-0021	JK12 on Jack board	1
	13449283	6.5MM JACK	HLJ7101-01-3010	JK6,JK7,JK5,JK4,JK8,JK3 on Jack board	6
	13449172	6.5MM JACK	HLJ7000-01-3010	JK13 on Phones board	1
	02900867	CARD EJECTOR	SCAB1A5600		1
	02900834	CARD CONECTR	SCAA1A2300		1
DISPLAY UNIT					
#	03560912	SCLCMEAMNI0076	LCD		1
	NOTE: Replacement SCLCMEAMNI0076 should be made on a unit base.				
POWER SUPPLY UNIT					
△	01785823	A1DU2L3B034	SWITCHING REGULATOR		1
	NOTE: Replacement A1DU2L3B034 should be made on a unit base.				
PCB ASSY					
#	72566290	JACK BOARD ASSY			1
#	72566312	PHONES BOARD ASSY			1
#	72567556	ENCODER BOARD ASSY			1
△	#	72567567	POWER SW BOARD		1
△	#	72567578	INLET BOARD		1
#	72566289	SUB BOARD ASSY			1
#	72566278	PANEL BOARD ASSY			1
#	72567590	PC CARD BOARD			1
	NOTE: 'PC CARD BOARD' includes the following parts.				
	40343367	SCREW M2X14	PAN MACHINE W/SW+SMALL PWZC		4
#	72567589	EXP BASE BOARD			1
	NOTE: 'EXP BASE BOARD' includes the following parts.				
	01902756	PWB SPACER	RSPS-12L		6
	02019034	PWB SPACER	RSPLS-12L		6
#	72566267	MAIN BOARD ASSY			1
	NOTE: 'MAIN BOARD ASSY' includes the following parts.				
#	03672556	SPACER	RSPS-8L		1

IC					
#					
	15269219H0	HD74LS05FPEL	IC (TTL)	IC2 on Jack board	1
	03560778	SN74LV04ANSR	IC (CMOS)	IC3 on Jack board	1
	15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	IC5,IC4,IC7 on Jack board,	3
				IC59,IC71,IC68,IC64,IC61 on Main board,	+1
				IC8 on Phones board	+5
	03122589	PC910LKNSZ	IC (PHOTO CUPLR)	IC1 on Jack board	1
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC10,IC9 on Phones board,	2
				IC7 on Sub board	+1
	01675023	TC74VHC139FT(EL)	IC (CMOS)	IC109,IC108,IC110,IC107 on Main board,	1
				IC2 on Sub board	+4
	02675689	HD74LV245ATELL	IC (CMOS)	IC1,IC5,IC4,IC2,IC3 on Exp Base board,	1
				IC7,IC44,IC8,IC5,IC3,IC40 on Main board,	+5
				IC3 on Sub board	+6
	03120856	TC74VHC273AFT(EL)	IC (CMOS)	IC6,IC5,IC4 on Sub board	3
	02451712	HD74LV14ATELL	IC (CMOS)	IC1 on Sub board	1
	02675667	HD74LV21ATELL	IC (CMOS)	IC7,IC6 on Exp Base board,	2
				IC91 on Main board	+1
	02903723	HD6417706	IC (32BIT CPU)	IC1 on Main board	1
	02900978	M66291GP	IC (USB CONTROLLER)	IC56 on Main board	1
	03566067	T6TV2TBG-0002(WX)	IC (CUSTOM)	IC102 on Main board	1
	03124978	UPD23C128040ALGY-536-MJH	IC (MASK ROM)	IC28 on Main board	1
	03124989	UPD23C128040ALGY-535-MJH	IC (MASK ROM)	IC33 on Main board	1
	03562223	UPD23C128040BLGY-819-MJH	IC (MASK ROM)	IC104 on Main board	1
	03562234	UPD23C128040BLGY-818-MJH	IC (MASK ROM)	IC103 on Main board	1
#	03341601	TC58DVM82A1TG00	IC (FLASH EMORY)	IC53 on Main board	1
	*****	MBM29LV160BE70TN-K	IC (FLASH MEMORY)	IC19 on Main board	1
	03237689	M12L64164A-7T	IC (MEMORY DRAM)	IC106,IC24,IC20,IC6,IC2 on Main board	5
	03017590	UDA1351TS	IC (DIR DAC)	IC75 on Main board	1
	03231701	AK4527BVQ	IC (AD/DA)	IC60 on Main board	1
	03346267	HD74LV273ATELL-E	IC (CMOS)	IC90 on Main board	1
	03459745	HD74LVC540ATELL-E	IC (CMOS)	IC111 on Main board	1
	01458401	TC74LVX4245FS(EL)	IC (TTL)	IC114,IC112 on Main board	2
	01901623	TC74LVXC3245FS	IC (CMOS)	IC127 on Main board	1
	03015390	TC74HCT273AF(EL)	IC (CMOS)	IC54 on Main board	1
	01349590	TC7WU04FU(Te12L)	IC (CMOS)	IC26,IC16 on Main board	2
	01677689	HD74HC238FPEL	IC (CMOS)	IC96 on Main board	1
	03015234	HD74LV32ATELL	IC (CMOS)	IC130,IC14,IC113,IC50 on Main board	4
	01348945	TC7SH32FU(Te85L)	IC (CMOS)	IC132 on Main board	1
	01675034	TC74VHC138FT(EL)	IC CMOS	IC99,IC98 on Main board	2
	01783523	TC74VHCT245AFT(EL)	IC (CMOS)	IC129,IC117,IC119,IC118 on Main board	4
	01348956	TC7SH00FU(Te85L)	IC (CMOS)	IC105 on Main board	1
	01455312	TC7WH74FU	IC (CMOS)	IC115 on Main board	1
	01890367	TC74VHC175FT(EL)	IC (CMOS)	IC52 on Main board	1
	02129334	TC7WH08FU(Te12L)	IC (CMOS)	IC120 on Main board	1
	02451690	HD74LV08ATELL	IC (CMOS)	IC94 on Main board	1
	02451912	HD74LV00ATELL	IC (CMOS)	IC74,IC116 on Main board	2
	02456756	TC74VHCT04AFT(EL)	IC (CMOS)	IC9 on Main board	1
	02675645	HD74LV04ATELL	IC (CMOS)	IC17,IC10 on Main board	2
	02675656	HD74LV11ATELL	IC (CMOS)	IC92 on Main board	1
	00344390	TA7805F(Te16L)	IC (REGULATOR)	IC58 on Main board	1
	02671545	PQ070XZ01ZP	IC (REGULATOR)	IC57,IC101 on Main board	2
	03125089	PQ1CY1032ZP	IC (SWITCHING REGULATOR)	IC100 on Main board	1
	01785178	TC9271FS	IC (DIGITAL OUT IF)	IC62 on Main board	1
	02900690	P2027A-08TR	IC	IC89 on Main board	1
	15199937	M51953BFP-600C	IC (RESET)	IC18 on Main board	1

TRANSISTOR					
	15309101	2SA1037AKT146R	TRANSISTOR	Q11,Q2 on Jack board,	4
				Q12,Q11 on Main board	
	02671023	2SC3052-T12-1E	TRANSISTOR	Q13,Q12 on Jack board	2
	15319115	2SC4213-A(Te85L)	TRANSISTOR	Q6,Q5,Q7,Q8 on Jack board,	4
				Q17,Q18,Q16,Q15 on Phones board	+4
	15139123	2SK184-GR(TPE4)	TRANSISTOR	Q4 on Jack board	1
	02671256	RT1P141C-T12-1	TRANSISTOR	Q1 on Jack board	1
	02905856	UNR5211-(TX)	TRANSISTOR	Q3,Q14 on Jack board	2
	15319101	2SC2412KR T146	TRANSISTOR	Q2,Q7,Q10 on Sub board	3
	02900778	PW MOSFET XP132A1275SR	TRANSISTOR	Q17 on Main board	1
	15329103T0	2SK880-GR(Te85R)	FET	Q10,Q8,Q9,Q7 on Main board	4
	00239812	DTC114EUT106	TRANSISTOR	Q13,Q15,Q18,Q16 on Main board	4

DIODE					
	01121334	DAN202U T106	ARRAY DIODE	DA4,DA2,DA1,DA5 on Jack board	4
	01121323	DA204U T106	DIODE ARRAY	DA3 on Jack board	1
#	03560789	UDZS TE-17 10B	ZENER DIODE	D1 on Jack board	1
	15339130	MA142WK-(TX)	ARRAY DIODE	DA7,DA6,DA9,DA8 on Main board,	2
				DA6,DA2,DA5,DA7,DA8,DA9,DA10,DA11	+9
				,DA3 on Panel board,	+4
				DA4,DA1 on Sub board	

DIODE					
	02671245	SML-310LTT86	LED	LED4,LED8,LED9,LED10,LED12,LED13,LED15,LED6,LED3,LED14 on Panel board	10
	03345667	SML-310YTT86	3ED	LED2 on Panel board	1
#	03560890	SML-310MTT86	LED	LED5,LED1 on Panel board	2
#	03560901	SML-311BBT86	LED	LED11 on Panel board	1
#	03349789	LNJ115W8PRA	LED	LED7 on Panel board	1
	01780045	RB051L-40	SCHOTTKY DIODE	D4 on Main board	1
	01897189	MA147-(TX)	ARRAY DIODE	DA5,DA3,DA4,DA2 on Main board	4
RESISTOR					
	00567001	RPC05T 750 J	MTL.FILM RESISTOR	R13,R15 on Jack board	2
	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R49,R3,R9,R21,R37,R50,R62,R87,R32 on Jack board, R375,R316,R51,R54,R57,R58,R182,R187,R245,R378,R315,R183,R317,R318,R320,R321,R331,R369,R370,R371,R372,R246,R181 on Main board	9 +23
	00567034	RPC05T 121 J	MTL.FILM RESISTOR	R2 on Jack board	1
	00567067	RPC05T 221 J	MTL.FILM RESISTOR	R4,R52,R34,R14,R11,R8,R5 on Jack board, R421,R422 on Main board, R35 on Sub board	7 +1 +2
	00567134	RPC05T 681 J	MTL.FILM RESISTOR	R61,R48,R36,R20 on Jack board, R158,R55,R101 on Main board	4 +3
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R83,R51,R33,R85 on Jack board, R185,R191,R198,R206,R319,R322,R91 on Main board, R6,R3 on Sub board	4 +2 +7
	00567178	RPC05T 152 J	MTL.FILM RESISTOR	R7 on Jack board, R148 on Main board	1 +1
	00567190	RPC05T 222 J	MTL.FILM RESISTOR	R1 on Jack board, R133 on Main board	1 +1
	00567201	RPC05T 272 J	MTL.FILM RESISTOR	R27,R28,R44,R45 on Jack board, R197,R205,R184,R190 on Main board	4 +4
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R43,R35,R60,R58,R29,R19,R47,R65 on Jack board, R53 on Main board , R104,R99,R90,R92,R107,R97 on Phones board	8 +6 +1
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R10,R6,R82,R86 on Jack board, R196,R163,R159,R200,R161,R171,R180,R189,R193,R194 on Main board	4 +10
	00567289	RPC05T 103 J	MTL.FILM RESISTOR	R2,R4,R3,R1 on Exp Base board , R59,R80,R31,R17,R46 on Jack board, R247,R244,R248,R266,R243,R358,R363,R364,R365,R381,R313,R384,R387,R388,R390,R392,R393,R395,R396,R413,R241,R109,R428,R414,R118,R430, R25,R39,R40,R42,R43,R44,R80,R82,R84,R114,R110,R238,R119,R134,R139,R150,R164,R165,R166,R174,R175,R176,R188,R195,R105,R436,R437,R438,R445,R446,R13,R431 on Main board ,R93,R96,R100,R101,R102,R103,R105,R106 on Phones board ,R2,R62,R5 on Sub board	5 +8 +3 +4 +58
	00567323	RPC05T 223 J	MTL.FILM RESISTOR	R40,R56,R57,R39 on Jack board	4
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R12,R16,R18,R25,R81,R84 on Jack board,R408,R234,R231,R229 on Main board	6 +4
	00567389	RPC05T 563 J	MTL.FILM RESISTOR	R30 on Jack board, R256,R255 on Main board	1 +2
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R24,R64,R54,R42,R63,R53 on Jack board, R172,R420,R416,R418,R168,R186,R192,R199,R208,R211,R222,R415,R417 on Main board , R98,R91 on Phones board	6 +2 +13
	00567556	RPC05T 105 J	MTL.FILM RESISTOR	R22 on Jack board, R156,R50,R99 on Main board	1 +3
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	R112 on Jack board, R419,R473,R464,R450,R449,R429,R427,R237,R87,R403,R73,R136,R141,R68,R144,R147,R460,R214,R113,R239,R304,R305,R41,R306,R307,R308,R309,R389,R397,R157 on Main board ,L20 on Phones board ,R65,R66,R21 on Sub board	1 +1 +3 +30
	15399708	MCR25 JZH J 470	MTL.FILM RESISTOR	R89,R94,R95,R88 on Phones board	4
	00567045	RPC05T 151 J	MTL.FILM RESISTOR	R25,R22,R8 on Sub board	3
	00567056	RPC05T 181 J	MTL.FILM RESISTOR	R26 on Sub board	1
	00567078	RPC05T 271 J	MTL.FILM RESISTOR	R30,R23,R17,R9,R31,R34 on Sub board	6
	00567089	RPC05T 331 J	MTL.FILM RESISTOR	R44,R43,R40,R38 on Sub board	4
	00567145	RPC05T 821 J	MTL.FILM RESISTOR	R13 on Sub board	1
	00566989	RPC05T 560 J	MTL.FILM RESISTOR	R57 on Sub board	1
	00567312	RPC05T 183 J	MTL.FILM RESISTOR	R235 on Main board, R63 on Sub board	1 +1
#	00567578	RPC05T 155 J	MTL.FILM RESISTOR	R61 on Sub board	1
	00567490	RPC05T 394 J	MTL.FILM RESISTOR	R60 on Sub board	1

RESISTOR					
#	01457145	EXBE10C103J	RESISTOR ARRAY	RA42,RA39,RA63,RA51,RA74,RA22,RA29,RA1,RA24,RA61,RA78,RA14,RA5,RA17,RA16,RA19,RA7,RA13,RA11 on Main board,RA1,RA2 on Sub board	2 +19
	02904445	EXB2HV330JV	RESISTOR-ARRAY	RA6 on Exp Base board,RA21,RA10,RA4,RA28 on Main board	5 +1 +4
	02678534	EXB2HV103V	RESISTOR-ARRAY	RA2,RA3 on Exp Base board	2
	03346145	R-ARRAY EXB2HV100JV	RESISTOR-ARRAY	RA11,RA10,RA8,RA7,RA5,RA1,RA4 on Exp Base board	7
	15409113	EXBV8V103JV	RESISTOR ARRAY	RA12,RA13,RA14,RA15,RA16,RA17 on Exp Base board	6
	00909590	EXBV8V330JV	RESISTOR ARRAY	RA9 on Exp Base board	1
	03018878	RR0816P-471-D	MTL.FILM RESISTOR	R356 on Main board	1
	03239523	RR0816Q-390-D	MTL.FILM RESISTOR	R355 on Main board	1
	03239556	RR0816Q-100-D	MTL.FILM RESISTOR	R354 on Main board	1
	03342845	RR0816P-151-D	MTL.FILM RESISTOR	R360 on Main board	1
	00567112	RPC05T 471 J	MTL.FILM RESISTOR	R179,R177,R167,R169 on Main board	4
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R293,R282,R401,R400,R399,R338,R337,R294,R79,R292,R291,R290,R289,R288,R287,R286,R285,R284,R283,R327 on Main board	20
	00566934	RPC05T 330 J	MTL.FILM RESISTOR	R447,R448,R457,R345,R432,R434,R433,R435,R76,R1,R2,R3,R4,R6,R7,R8,R63,R71,R72,R347,R75,R368,R314,R323,R325,R326,R335,R343,R344,R70,R346,R348,R349,R350,R74,R10 on Main board	36
	00566923	RPC05T 270 J	MTL.FILM RESISTOR	R145,R146 on Main board	2
	00566912	RPC05T 220 J	MTL.FILM RESISTOR	R342,R298,R34,R45,R100,R130,R297,R367,R302,R339,R341,R426,R366,R425,R424,R423,R300,R340 on Main board	18
	00566867	RPC05T 100 J	MTL.FILM RESISTOR	R260,R261,R262,R263,R441,R442 on Main board	6
	00567445	RPC05T 184 J	MTL.FILM RESISTOR	R212,R170 on Main board	2
	00567467	RPC05T 274 J	MTL.FILM RESISTOR	R230 on Main board	1
	00567478	RPC05T 334 J	MTL.FILM RESISTOR	R216,R173 on Main board	2
	01896278	MCR18EZHJ 2R2	MTL.FILM RESISTOR	R273 on Main board	1
	01904945	RR0816P-120-D	MTL.FILM RESISTOR	R359 on Main board	1
	01904956	RR0816P-821-D	MTL.FILM RESISTOR	R361 on Main board	1
	02014945	MCR50 JZH J 0R0	MTL.FILM RESISTOR	R407,R312 on Main board	2
	02673401	RR0816P-102-D	MTL.FILM RESISTOR	R357,R353 on Main board	2
	02673423	RR0816P-162-D	MTL.FILM RESISTOR	R351 on Main board	1
	02904601	EXB2HV104JV	RESISTOR-ARRAY	RA108 on Main board	1
	03015056	EXB2HV470JV	RESISTOR-ARRAY	RA12,RA15,RA23,RA18 on Main board	4
	03015278	EXB28V220JX	RESISTOR-ARRAY	RA114,RA100,RA98 on Main board	3
	03015289	EXB28V103JX	RESISTOR-ARRAY	RA90,RA116,RA95,RA102,RA94,RA91,RA92 on Main board	7
	03015290	EXB28V104JX	RESISTOR-ARRAY	RA109 on Main board	1
	03015301	EXB28V330JX	RESISTOR-ARRAY	RA88,RA93,RA89 on Main board	3
	03232623	EXB28V0R0JX	RESISTOR-ARRAY	RA101 on Main board	1
	02456878	EXB2HV220JV	RESISTOR-ARRAY	RA37,RA3,RA34,RA33,RA27,RA20,RA43,RA8,RA40,RA9,RA115,RA122,RA121,RA120,RA119,RA36,RA117,RA50,RA111,RA110,RA107,RA105,RA103,RA54,RA118,RA52,RA99,RA56,RA60,RA62,RA77,RA96,RA97,RA73 on Main board	34
	02898923	EXBE10C104J	RESISTOR-ARRAY	RA104,RA106 on Main board	2
POTENTIOMETER					
#	03561378	ROTARY POT. RK0971214Z08	ROTARY POTENTIOMETER	VR2,VR1 on Phones board	2
CAPACITOR					
#	01674334	ECUV1H101JCV	CERAMIC CAPACITOR	C8 on Jack board,C447,C61,C99,C139,C232,C234,C243,C265 on Main board	1 +7
	01674423	ECUV1H471JCV	CERAMIC CAPACITOR	C21,C35,C29,C20,C12,C30 on Jack board,C25,C24 on Main board	6 +2
	01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C5 on Jack board,C7,C2,C1 on Sub board	1 +3

CAPACITOR					
#	01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C25,C30,C27,C28,C29,C26,C31,C32,C37,C35 ,C24,C14,C33,C36,C1,C9,C10,C11,C16,C13,C22,C15,C38,C17,C18,C19,C20,C21,C12,C49 ,C39,C34,C48,C47,C45,C44,C43,C42,C41,C40 on Exp Base board , C100,C102,C67,C65,C63,C901,C902,C101,C7 ,C4,C1,C62,C9,C14,C22,C23,C31,C32,C59,C37,C39,C43,C47,C49,C53,C56,C3,C36 on Jack board, C385,C387,C350,C372,C276,C353,C297,C252,C257,C259,C261,C267,C270,C272,C275,C280,C279,C348,C6,C299,C307,C333,C334,C336,C338,C340,C343,C344,C346,C422,C449,C427,C420,C429,C430,C431,C432,C433,C434,C435,C438,C439,C442,C388,C444,C461,C122,C248,C472,C465,C443,C462,C425,C460,C455,C454,C453,C452,C451,C450,C463,C407,C390,C391,C392,C393,C394,C396,C399,C400,C401,C402,C403,C404,C428,C406,C415,C423,C421,C419,C418,C405,C416,C424,C414,C413,C412,C411,C410,C409,C408,C417,C98,C63 ,C131,C65,C66,C68,C69,C70,C73,C74,C77,C93,C119,C97,C57,C100,C101,C124,C103,C247,C120,C121,C123,C125,C127,C128,C129,C130,C96,C34,C49,C48,C47,C45,C43,C42,C41,C40,C39,C38,C37,C64,C35,C56,C33,C30,C23 ,C21,C20,C19,C18,C50,C51,C52,C53,C54,C55,C36,C202,C17,C16,C15,C14,C191,C192,C196,C199,C190,C201,C231,C230,C132,C233,C102,C236,C237,C238,C241,C245,C246,C200,C141,C134,C186,C137,C135,C136,C133,C140,C142,C143,C144,C173,C183,C181,C178,C138,C175,C167,C171,C170,C169 on Main board ,C85,C80,C81,C84,C86,C87,C89,C82 on Phones board ,C9,C38,C37,C34,C20,C8,C6,C5,C4,C3 on Sub board	32 +10 +10 +1 +40 +19 4
	01900823	RA2-16V100M-T2	CHEMICAL CAPACITOR	C40,C38,C44,C18,C70,C28,C48,C50,C69,C6,C54 on Jack board, C74,C77 on Phones board	11 +2
	01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C66,C64,C68 on Jack board , C76,C72,C71,C73 on Phones board	3 +4
	02014923	RA2-35V470MT2	CHEMICAL CAPACITOR	C17,C19,C26,C27,C34,C11 on Jack board	6
	03560578	RA2-6V331MC-T2	CHEMICAL CAPACITOR	C61 on Jack board	1
	01674301	ECJ1VC1H680J	CERAMIC CAPACITOR	C75,C78,C79,C83 on Phones board	4
	01454889	RA2-16V470MT2 470UF/16V	CHEMICAL CAPACITOR	C88,C90 on Phones board	2
	01674167	ECUV1H100DCV	CERAMIC CAPACITOR	C35 on Sub board	1
	01674712	ECJ1VF1A105Z	CERAMIC CAPACITOR	C290,C75 on Main board, C19,C17,C15,C16,C18 on Sub board	5 +2
	02345101	RV2-16V100M-R	CHEMICAL CAPACITOR	C6,C46,C23,C7,C5,C4,C3,C2,C8 on Exp Base board, C10,C33 on Sub board	2 +9
	03343045	EEE0JA101SP	CHEMICAL CAPACITOR	C358,C375,C398,C397,C395,C464,C360 on Main board	1 +7
	01674190	ECUV1H150JCV	CERAMIC CAPACITOR	C72,C263,C264,C440,C441,C165,C164,C27,C26,C71 on Main board	10
	02129534	ECJ1VB1H102K	CERAMIC CAPACITOR	C386 on Main board	1
	02566945	ECJ1VB1C473K 1608 0.047UF	CERAMIC CHIP CAPACITOR	C283,C318 on Main board	2
	03346089	ECHU1C682JX5	POLYEST. CAPACITOR	C316,C303,C295,C289 on Main board	4
	01899223	ECHU1H102JX5	POLYEST. CAPACITOR	C277,C285 on Main board	2
	02126434	ECHU1H821JX5	POLYEST. CAPACITOR	C291,C286,C300,C310 on Main board	4
	03454912	EEE1HA2R2SR	CHEMICAL CAPACITOR	C292 on Main board	1
	03458790	EEE1CS100SR	CHEMICAL CAPACITOR	C149,C150,C145,C94,C31,C166,C339,C180,C188,C239,C266,C168,C313,C271,C335,C354,C349,C347,C345,C337,C315,C309,C308,C302,C298,C296,C294,C288,C282,C281,C278,C273,C324 on Main board	33
	03454789	EEE1CA220WR	CHEMICAL CAPACITOR	C284,C274 on Main board	2
	03454790	EEE1CA221P	CHEMICAL CAPACITOR	C253,C258 on Main board	2
	03454812	EEE1CA470SP	CHEMICAL CAPACITOR	C363,C365 on Main board	2
	03564345	EEE1AA102P	CHEMICAL CAPACITOR	C445,C457 on Main board	2
	02345145	RV2-16V101M-R	CHEMICAL CAPACITOR	C437 on Main board	1
	02783412	6SVP150 OS-CON	CHEMICAL CAPACITOR	C244,C254 on Main board	2
	01896589	SK4-0J106MZ4-RA	TANTALUM CAPACITOR	C456,C448,C426,C384,C126,C118,C104,C95,C59,C46,C44,C29,C13,C22 on Main board	14
INDUCTOR, COIL, FILTER					
	01565578	N1608Z601T01	FERRITE-BEAD	L6,L5,L4,L3,L1,L9,L2,L10,L11,L12,L13,L14,L15,L16,L7,L8 on Jack board, L17,L18,L34,L19,L20,L5,L36,L21,L37,L16,L33,L32,L35,L30,L38,L22,L23,L24,L25,L26,L27,L28,L29,L31 on Main board ,L21,L19 on Phones board	16 +2 +24
	03125167	SLF12565T-470M2R4	CHOKO COIL	L1 on Main board	1
	01909645	EXCML16A270U	FERRITE-BEAD	L4,L3 on Main boards	2

CRYSTAL, RESONATOR					
	15299170	MC-406 32.768KHZ	CRYSTAL	X1 on Main board	1
	00894034	MA-406 16.000MHZ TE24	CRYSTAL	X2 on Main board	1
	01340745	MA-406 12MHZ	CRYSTAL	X4 on Main board	1
	02673134	MA-406 16.9344MHZ	CRYSTAL	X3 on Main board	1
ENCODER					
	03231912	R-ENCODER EVQB1SZ1720B	ROTARY ENCODER W/SW	EN1 on Encoder board	1
CONNECTOR					
#	02012056	CONNECTOR 28FMN-BTK-A	CONNECTOR	CN1 on Jack board	1
	03014001	B5B-PH-K-S JST(PB FREE)	CONNECTOR	CN5 on Jack board,CN16 on Main board	2
	13369562	B15B-PH-K-S JST	CONNECTOR	CN2 on Jack board ,CN7 on Phones board	2
	03013978	B3B-PH-K-S JST(PB FREE)	CONNECTOR	CN6 on Phones boar	1
	13369665	S5B-PH-K-S(5P)	CONNECTOR	CN10 on Encoder board	1
	02454245	28FMN-SMT-TF	CONNECTOR	CN23 on Main board,	3
				CN1,CN4 on Sub board	
#	03125201	CONNECTOR B3B-PH-SM3-TB	CONNECTOR	CN2 on Sub board	1
	02906534	CONNECTOR B5B-PH-SM3-TB	CONNECTOR	CN3 on Sub board	1
#	03459590	CONNECTOR B2B-PH-SM3-TB	CONNECTOR	CN11 on Sub board	1
#	03454678	CONNECTOR 24FLT-SM1-TB	CONNECTOR	CN6 on Sub board	1
#	03125278	CONNECTOR 28FMN-BMTTN-A-TFT	CONNECTOR	CN8 on Main board,CN5 on Panel board	1
	03230623	54104-5092	CONNECTOR	CN18 on Main board	1
	03126090	40FMN-SMT-A-TF	CONNECTOR	CN8 on Exp Base board	1
	02010078	TX25-80P-6ST-E1	CONNECTOR	CN1,CN4,CN3,CN2,CN6,CN5 on Exp Base board	6
#	03563401	CONNECTOR 34FMN-SMT-A-TF	CONNECTOR	CN7 on Exp Base board	1
	03126089	40FMN-BMTTN-A-TFT	CONNECTOR	CN17 on Main board	1
	03345856	34FMN-BMTTN-A-TFT	CONNECTOR	CN4 on Main board	1
	13369592	B7B-XH-A(7P) JST	CONNECTOR	CN10 on Main board	1
WIRING, CABLE					
#	03565889	WIRING W2			1
#	03565890	WIRING W3			1
#	03565901	WIRING W4			1
#	03565912	WIRING	2X80-P2.0-PHR-PHR-F		1
#	03565923	WIRING	5X60-P2.0-PHR-PHR-F		1
#	03565934	BAN CARD	BNCD-S-P=0.50-K-50-500		1
#	03565945	BAN CARD	BNCD-P=1.00-K-28-120		2
#	03565956	BAN CARD	BNCD-P=1.00-K-40-50		1
#	03565967	BAN CARD	BNCD-P=1.00-K-34-50		1
△ #	03566634	WIRING W1			1
	02341723	WIRING	3X50-P2.0-PHR-PHR-F		1
	03453667	BAN CARD	BNCD-P=1.00-K-28-50		1
TRANSFORMER					
	02019478	(7KQ5) 19832A	PULSE TRANS	T1 on Jack board	1
SCREW					
	40561090	SCREW M3X6	HEX SOCKET HEAD SPW NI		4
	40454045	SCREW 3X8	FLAT TAPTITEB NI FLANGE SOCKET		4
	40011123	SCREW 4X8	BINDING TAPTITE B BZC		8
	40011090	SCREW 3X6	BINDING TAPTITE B BZC		10
	40011145	SCREW 3X6	FLAT TAPTITE B BZC		6
	40011312	SCREW 3X8	BINDING TAPTITE P BZC		3
	40011223	SCREW 2.6X6	BINDING TAPTITE P NI		10
	40017934	SCREW M3X6	PAN MACHINE W/SW+PW FE ZC		4
	40013056	SCREW M3X6	PAN MACHINE W/SW+PW ZC		25
	40011490	SCREW M3X6	PAN MACHINE W/SW BZC		3
#	03566623	BOSS NUT	M3-L5.5-H8-A5-B4-N3		6
	40011745	HEX NUT M4	SPRING NUT FE ZC		2
	40010334	SCREW M4X8	BINDING MACHINE FE BZC		1
	40011489	SCREW M3X4	PAN MACHINE W/SW BZC		30
PACKING					
#	03672601	UPPER PAD			1
#	03672590	SIDE PAD			2
#	03672589	PACKING CASE			1
MISCELLANEOUS					
	02894367	INSULATING COVER	DA-2496 SW-PS		1
	12359137	RUBBER FOOT	SJ-5012 BLK		4
#	03564567	FRONT PLATE R			1



MISCELLANEOUS

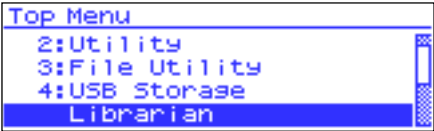
#	03564556	FRONT PLATE L			1
	40016512	INSULOK TIE	80M/M T-18S		1
	40016545	LOCKING TOOL FOR INSULOK TIE	SKM-1		1
	12199584	GROUNDING TERMINAL	M1698	TER3,TER2,TER1 on Jack board	3
#	03459734	IC SOCKET	88638-61102	CN2 on Main board	1
	40014589	WARNING SEAL	102-103		1
	40120967	COATING CLIP	CS-3		1

ACCESSORIES (STANDARD)

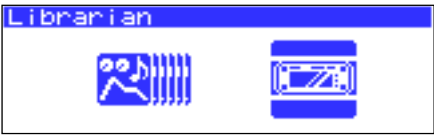
△	03340956	AC CORD SET	100V YA-101/YP-3NB		1
△	00894378	AC CORD SET	120V SP301+IS14 SJT18/3		1
△	00894389	AC CORD SET	230V SP22+IS14 H05VV-F3G1.0		1
△	23495124	AC CORD SET	240VA SC-144-JO1 ES303-10HMA		1
△	00907001	AC CORD SET	240VE KP-610 GTTBS-3 KS-31A		1
	40012456	SCREW M2.6X8	BINDING TAPTITE P FE NI		2
#	03566612	CARD PROTECTOR			1
	03674712	CD-ROM	V1.01		1
#	72566356	OWNER'S MANUAL	JAPANESE		1
#	72567634	OWNER'S MANUAL	ENGLISH		1
	*****	LEAFLET USER TOUROKU ANNAI			1
	*****	SAMPLING CD			1
	40232334	WARRANTY CARD	MOCHIKOMI JAPAN ONLY		1





CHECKING THE VERSION NUMBER

- 1. Power-on the Fantom-XR.
- 2. Press  .
- 3. Turn [VALUE] to select “5:librarian,” and press  .

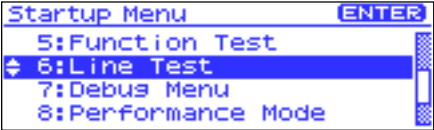


- 4. While the following screen is displayed, perform the following operations.

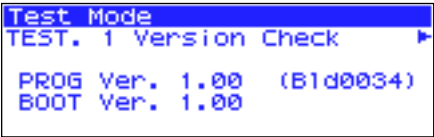


Press the buttons in the order of [VALUE],  ,  ,  , and  .

- 5. The START UP MENU will appear. Select “6:Librarian.”



- 6. Version number will appear.



- 7. Turn off the power.

USERS DATA SAVE AND LOAD

Backing Up User Data (User Backup)

Here’s how all user data in the user area can be saved on a memory card.

The following user data will be saved.

- Performances
- Patches
- Rhythm sets
- Rhythm Patterns
- Rhythm Groups
- Multisamples
- Samples
- Pattern sets
- RPS sets
- Arpeggio styles
- Chord forms
- System settings
- Standard MIDI files

* In order to execute User Backup, the memory card must have approximately 16 MB or more free area.

Restoring User Data that You Backed Up (User Restore)

- 1. Insert a memory card into the slot.
- 2. Select “User Backup” in the Utility Menu screen, and press [ENTER].
- 3. A message will ask you for confirmation.
- 4. To execute the backup, press [ENTER].

* To cancel, press [EXIT].

Here’s how user data saved on a memory card by the User Backup operation can be reloaded back into the user memory of the Fantom-XR.

When you execute User Restore, the current contents of the user area will be completely erased.

- 1. Into the slot, insert the memory card on which user data has been saved.
 - 2. Select “User Restore” in the Utility Menu screen, and press [ENTER].
 - 3. A message will ask you for confirmation.
 - 4. To execute the restoration, press [ENTER].
- * To cancel, press [EXIT].
- 5. When the display indicates “Power Off,” turn the power off, then on again.

TEST MODE

Required items

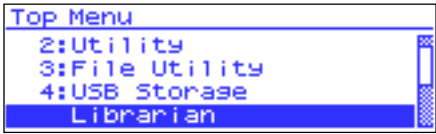
- 1. Monitor speakers
- 2. MIDI cables
- 3. Audio cables
- 4. Coaxial (phono) cables
- 5. USB cable
- 6. PC card (memory)
- 7. 512MB DIMM (For the DIMM specifications, refer to Main Specifications.)
- 8. Wave expansion boards: SRX series, 6 pcs.
- 9. Computer (with USB connector; Windows Me, Windows 2000, or Windows XP operating system)

Test mode procedure

Before you begin test mode, make sure that the power is turned off, then remove the EXP COVER located on the top of the unit and insert the DIMM and expansion boards you prepared.

Entering test mode

- 1. Power-on the Fantom-XR.
- 2. Press **MENU**.
- 3. Turn [VALUE] to select "5:librarian," and press **ENTER**.

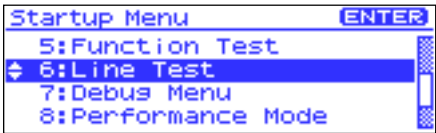


- 4. While the following screen is displayed, perform the following operations.



Press the buttons in the order of [VALUE], **▲**, **▼**, **◀**, and **▶**.

- 5. The START UP MENU will appear. Select "6:Librarian."



Exiting test mode

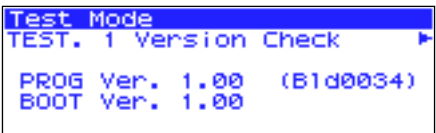
Turn off the power.

Test items

- 1. Version Check
- 2. Mute
- 3. Device
- 4. DIMM
- 5. Expansion Board
- 6. MIDI
- 7. Card
- 8. Encoder
- 9. Switch1 & LED
- 10. Switch2
- 11. LCD
- 12. Sound
- 13. USB
- 14. Noise
- 15. Factory Reset
- 16. (Completed)

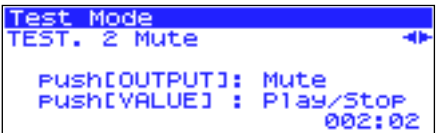
Test procedure

1: Version Check



- Check the version.
- Press **▶** to proceed to the next test item.

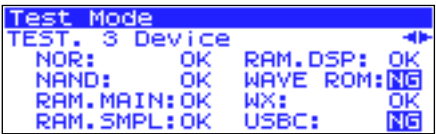
2: Mute



- Verify that the demo song is played correctly.
- Verify that the audio output is muted while the [OUTPUT] knob is pressed.
- Press **▶** to proceed to the next test item.

3: Device

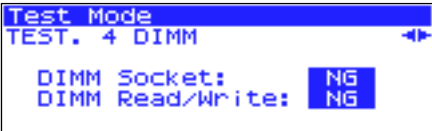
This checks the operation of the parts on the mainboard. If any problems are detected, an indication of NG will be displayed for the corresponding part.



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

4: DIMM

This checks the DIMM socket and performs a DIMM read/write test. Install the DIMM before you proceed. The Fantom-XR must be powered-off when installing the DIMM.



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

5: Expansion Board

This checks the expansion board slots, and performs a Read test on the expansion boards.

You must have installed all six expansion boards before you proceed.

The Fantom-XR must be powered-off when installing or removing expansion boards.



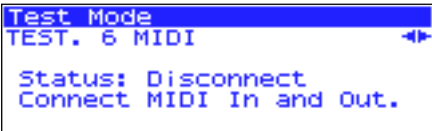
- If the test result is OK for all expansion board slots, you will automatically proceed to the next test item.

6: MIDI

This checks the MIDI connection.

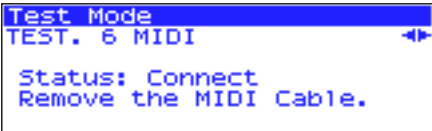
This test is performed by directly connecting (shorting) the MIDI IN and MIDI OUT connectors.

(a) If the MIDI IN connector and MIDI OUT connector are not connected



- Connect the MIDI IN connector to the MIDI OUT connector
- If the test result is OK, an indication of "Status: Connected" will appear, and you will proceed to the next test item.

(b) If the MIDI IN connector and MIDI OUT connector are connected



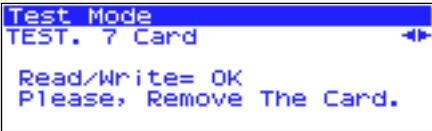
- Break the connection between the MIDI IN connector and MIDI OUT connector
- If the test result is OK, an indication of "Status: Disconnect" will appear, and you will automatically proceed to the next test item.

7: Card

This checks the PC CARD slot, and performs a Read/Write test on the memory card.

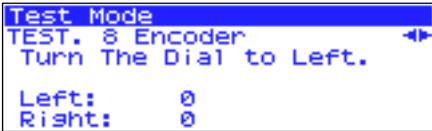


- As directed by the display, insert a memory card into PC CARD slot.



- If the test result is OK, a display like the one shown will appear.
- Remove the memory card from the PC CARD slot.
- When you remove the card, you will automatically proceed to the next test item.

8: Encoder



- Turn the [VALUE] knob toward the left (30 counts)
- Turn the [VALUE] knob toward the right (30 counts)
- If the test result is OK, you will automatically proceed to the next test item.

9: Switch1 & LED

This checks the switches that have built-in LEDs, and also checks the other LEDs.



Press button	Display
MENU	MENU LED dark, MIDI LED lit
MENU	MIDI LED dark, USB LED lit
MENU	USB LED dark, PEAK LED lit
MENU	PEAK LED dark, SHIFT LED lit
SHIFT	SHIFT LED dark, ENTER LED lit
ENTER	ENTER LED dark, MODE LED (red) lit
MODE	MODE LED (red) dark, MODE LED (green) lit
MODE	MODE LED (green) dark, TONE SWITCH 1 LED lit
MODE	TONE SWITCH 1 LED dark, GROUP LED lit
BANK	GROUP LED dark, TONE SWITCH 2 LED lit
BANK	TONE SWITCH 2 LED dark, FX LED lit
FX	FX LED dark, TONE SWITCH 3 LED lit
FX	TONE SWITCH 3 LED dark, ARP LED lit
ARP	ARP LED dark, TONE SWITCH 4 LED lit
ARP	TONE SWITCH 4 LED dark, SAMPLING LED lit
SAMPLING	SAMPLING LED dark

- When all checks have been completed, you will automatically proceed to the next test item.

The following illustration shows the screen during this test; the right of the screen shows all switches that need to be operated, and the switches that have already been operated are grayed-out.

- * * You can move to the previous or next test item by holding down and pressing or .
- * You can move to the 1:Version Check item by holding down and pressing .

10: Switch2

This checks the switches that do not have built-in LEDs, and also checks the

VALUE, INPUT, and OUTPUT push switches.



- One by one, press , , , , , , and . You may press the buttons in any order.
- Press [VALUE], the [INPUT] knob, and the [OUTPUT] knob. You may press these in any order.
- When all of these have been checked, you will automatically proceed to the next test item.

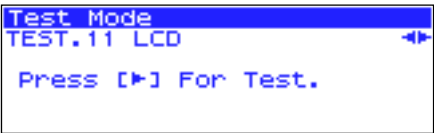
The following illustration shows the screen during this test; the lower right of the screen shows the switches that have been operated. Switches that have already been operated are grayed-out.



- * You can move to the previous or next test item by holding down and pressing or .
- * You can move to the 1:Version Check item by holding down and pressing .

11: LCD

This checks the LCD display and the contrast adjustment function.



- Press . The following pattern will be displayed.



- Press . The black and white of the previous pattern will be reversed.
- Press . All pixels will light. Verify that there are no missing pixels.
- Press . All pixels will go off. Verify that there are no lit pixels.
- Press . The following contrast adjustment screen will appear.



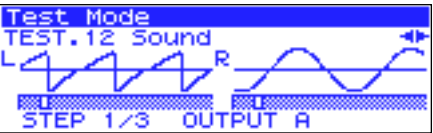
- Turn [VALUE] toward the left to the minimum value, and verify that the display becomes lighter.
- Turn [VALUE] toward the right to the maximum value, and verify that the display becomes darker.

- Press to proceed to the next test item.

12: Sound

This checks the audio input/output jacks.

- Connect AUDIO INPUT to OUTPUT A (connect both L and R jacks).
- Set the OUTPUT and INPUT volumes to the maximum setting.
- The following waveform will be displayed.



- Verify that a sawtooth wave is output to L and a sine wave is output to R.
- Press to proceed to the next step.
- Connect AUDIO INPUT to OUTPUT B (connect both L and R jacks)
- The following waveform will be displayed.



- Verify that a sawtooth wave is output to L and a sine wave is output to R.
- Press to proceed to the next step.
- Connect DIGITAL IN to DIGITAL OUT
- The following waveform will be displayed.



- Verify that a sawtooth wave is output to L and a sine wave is output to R.
- Press to proceed to the next test item.

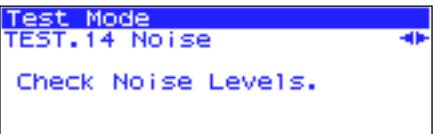
13: USB



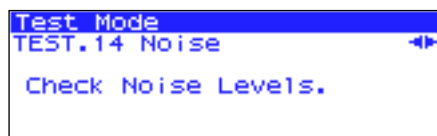
- Use a USB cable to connect the Fantom-XR to your PC. If the test result is OK, the following display will appear.




- Operate your PC to remove the drive. You will automatically proceed to the next test item.



14: Noise




1. This check for noise during silence.
Set the INPUT and OUTPUT volumes to the maximum position, and verify that no noise is heard from the following output jacks.
 - Headphones
 - OUTPUT A
 - OUTPUT B

2. Press  to proceed to the next test item.

15: Factory Reset

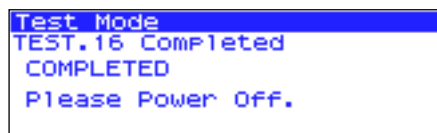


- Press  to execute Factory Reset.



- When Factory Reset is completed, you will automatically proceed to the next test item.

16: (Completed)



- All tests have been completed. Turn off the power.

RESTORING THE FACTORY SETTINGS



If there is important data you've created that's stored in the Fantom-XR's internal memory, all such data is discarded when a Factory Reset is performed (**the data of the internal user memory will be lost**). If you want to keep the existing data, save it on a memory card or save it on via USB to your computer.

1. Select "Factory Reset" in the Utility Menu screen, and press [ENTER].
A message will ask you for confirmation.
 2. Press [ENTER] to execute the Factory Reset.
- * To cancel, press [EXIT].
3. When the display indicates "Power Off," turn the power off, then on again.

SYSTEM SOFTWARE UPDATE PROCEDURE

The Fantom-XR uses flash memory for its program ROM, and can be updated using either of the following two methods.

1. Updating from a PC card using the Fantom-XR's PC card slot

2. Updating from a computer via a USB cable connected to the Fantom-XR

Required items

1. UPDATE DATA FOR SERVICE CD-ROM (#17041429)
2. Computer (with USB connector; Windows Me, Windows 2000, or Windows XP operating system)
3. One PC card (with 32MB or more free space)
4. USB cable

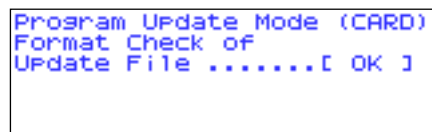
If user memory contains important data, please save the data (see Saving and Loading User Data) before you perform the update.

1. Updating from a PC card using the Fantom-XR's PC card slot

1. Obtain the update file "fanx.bin" and use a PC card reader etc. to place the file on the card in the following folder hierarchy relative to the root directory of the card.

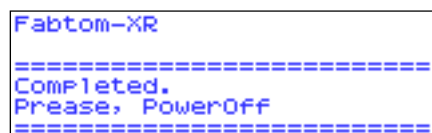
/ROLAND/LINE/fanx.bin

2. Insert the card and turn on the power; the update will begin.





* Never turn off the power while the update is occurring.






3. When the update is completed, the following display will appear.



Turn off the power and remove the card.

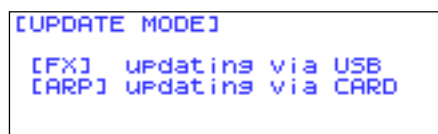
2. Updating from a computer via a USB cable connected to the Fantom-XR

1. Download the update file fanx.bin onto your computer.
Before you continue, you should also save the contents of the Fantom-XR's user memory on a memory card or on your computer via USB.
2. Power-on the Fantom-XR without the USB cable connected.
3. Go to the System USB screen, and set USB Mode to "STORAGE."
4. Press , and then press  to select System Write.
5. Power-off the Fantom-XR, then use a USB cable to connect the Fantom-XR to your PC, and power-on the Fantom-XR.
6. While the System Version Info screen (shown below) is displayed,

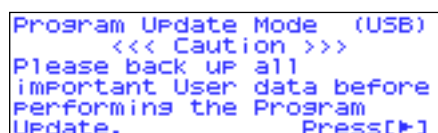
consecutively press , , , , and .



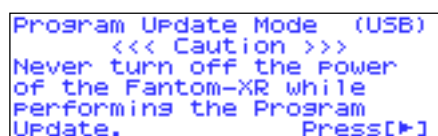
The [UPDATE MODE] screen will appear.



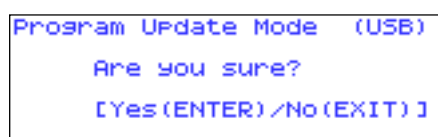
7. Press .
- A warning will appear, reminding you to back up the user memory before updating.



8. Press .
- A warning will appear, reminding you not to power-off the Fantom-XR during the update.



9. Press . When the display asks "Are you sure?" press [ENTER].



Windows Me/2000 users

A drive named "Removable Disk" will appear in My Computer.

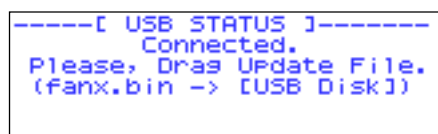
Macintosh and Windows XP users

A drive icon named "FANX USER" will appear on the desktop.

10. Copy the downloaded update file fanx.bin to the above "Removable Disk" or "FANX USER."
- The [USB Status] area will indicate "Receiving..." It will take several minutes for processing to be completed.



11. When the display indicates "Please, Disconnect From PC Side .A`", end the USB connection on your computer.



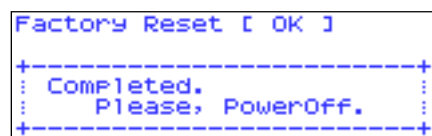
Windows users

Execute the Safely Remove Hardware command shown in the taskbar.

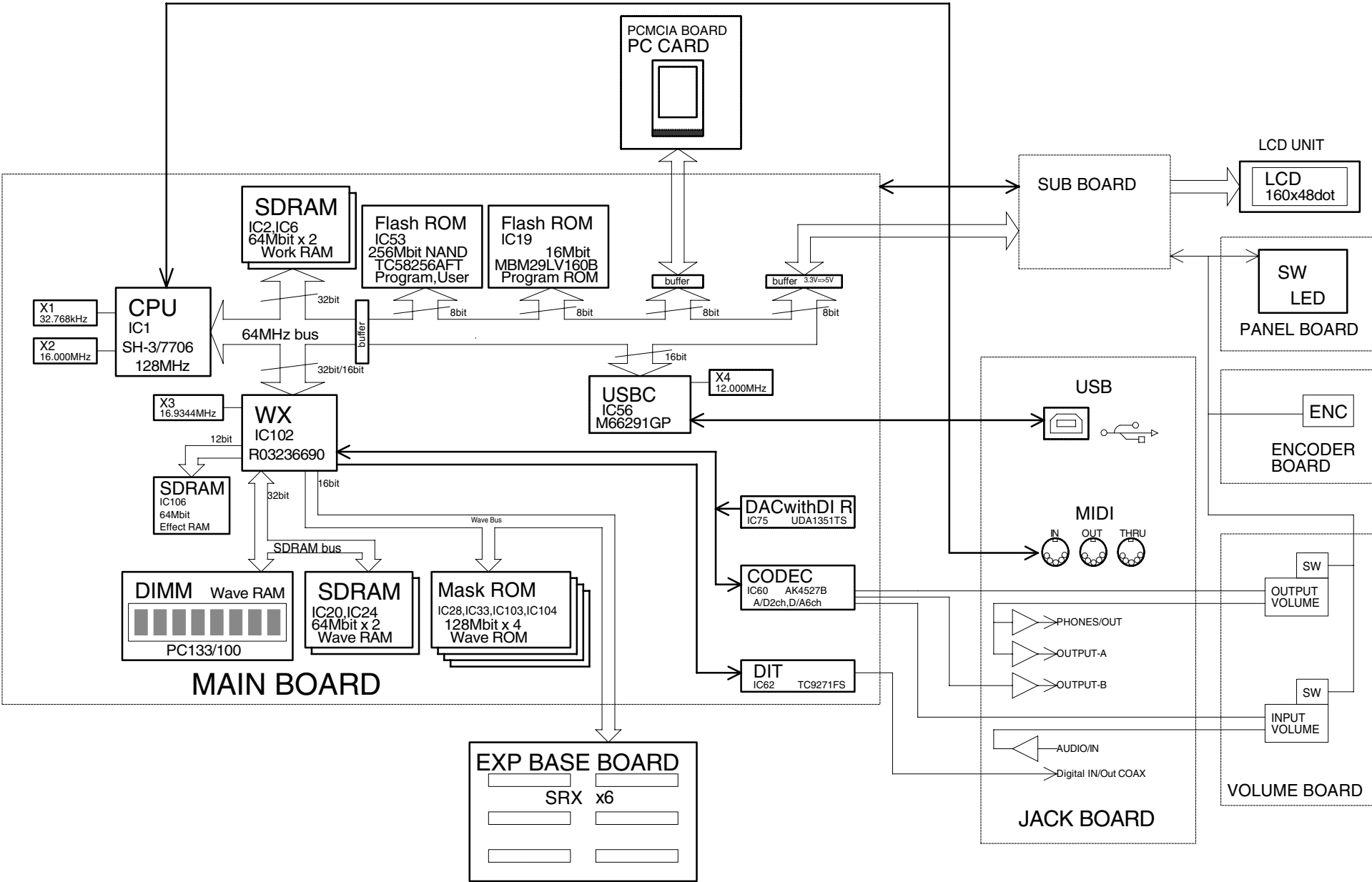
Macintosh users

Drag the "FANX USER" drive icon into the trash.

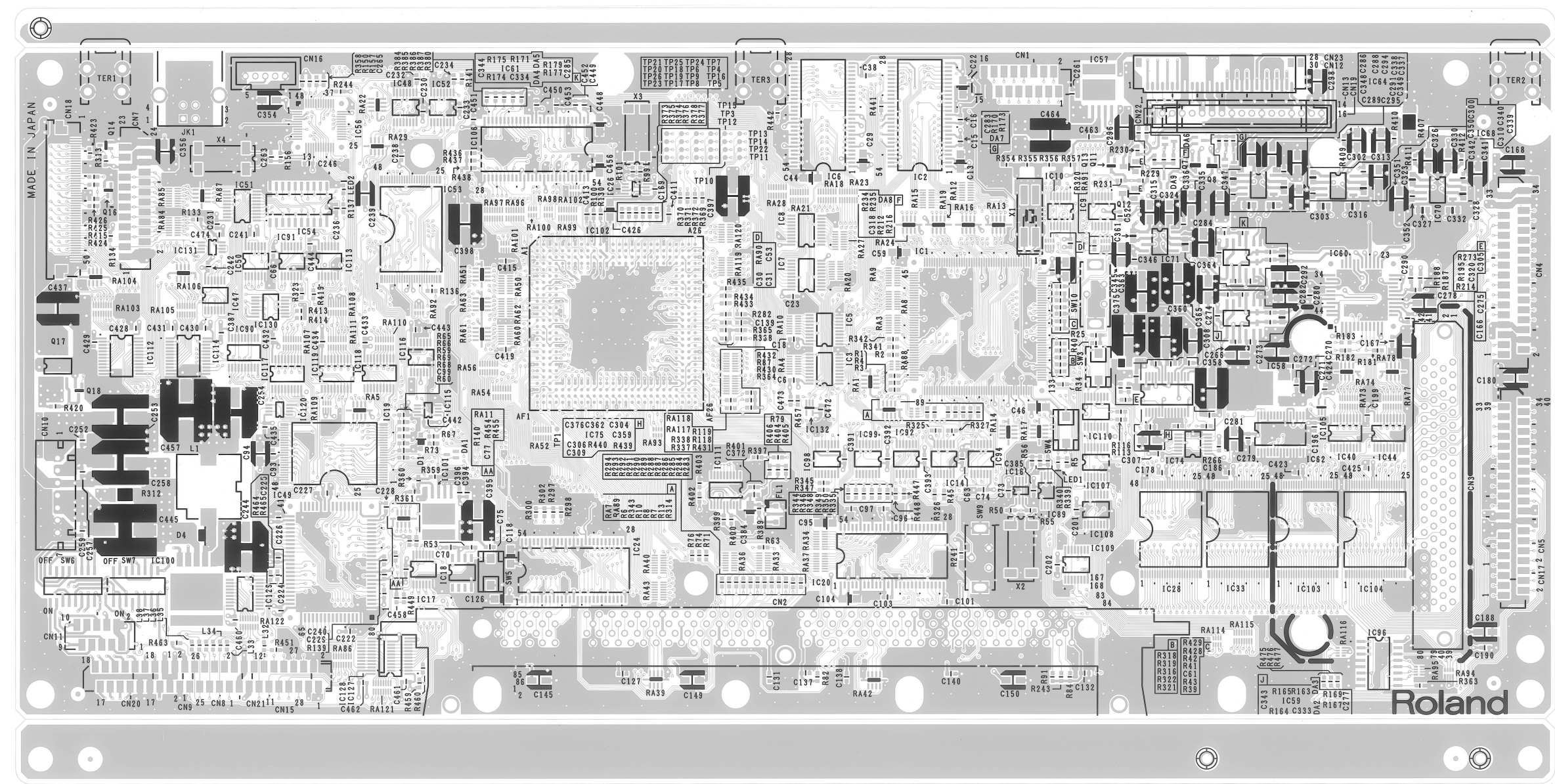
12. Press .
13. When the display indicates "Completed. Please, PowerOff." turn off the power of the Fantom-XR and disconnect the USB cable.



BLOCK DIAGRAM

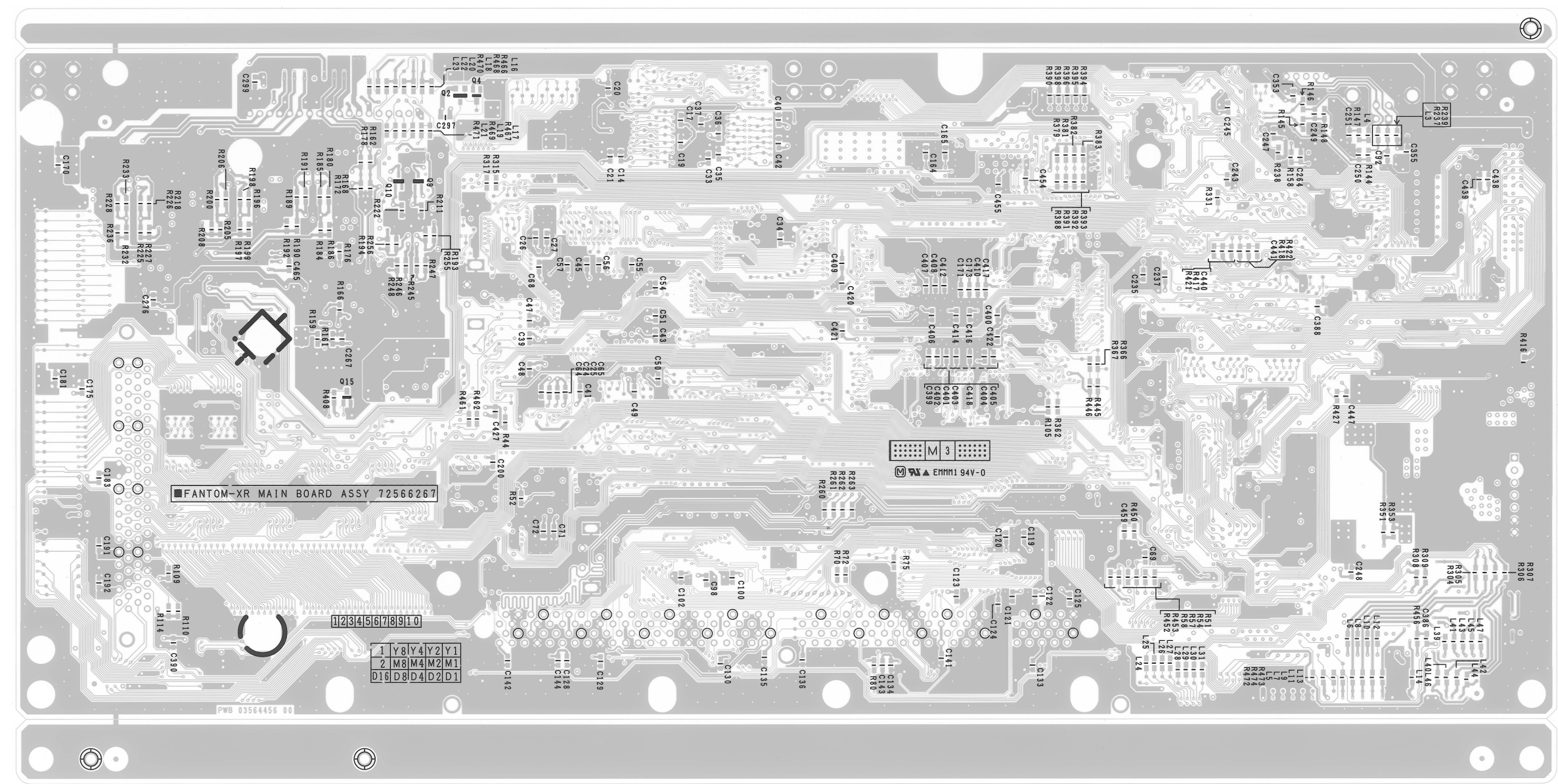


CIRCUIT BOARD(MAIN 1)



View from components side

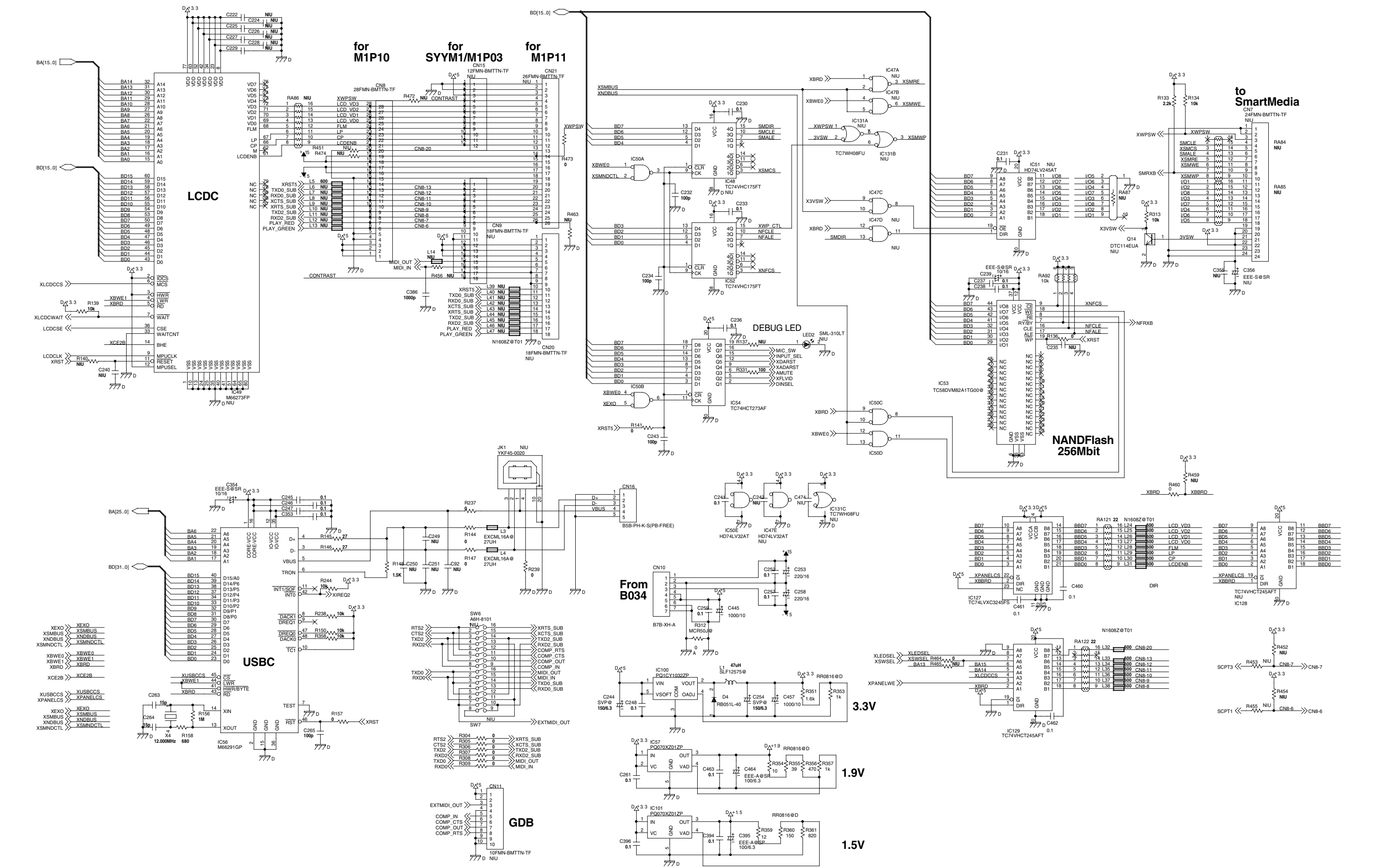
CIRCUIT BOARD(MAIN 2)



View from foil side



CIRCUIT DIAGRAM(MAIN 2)

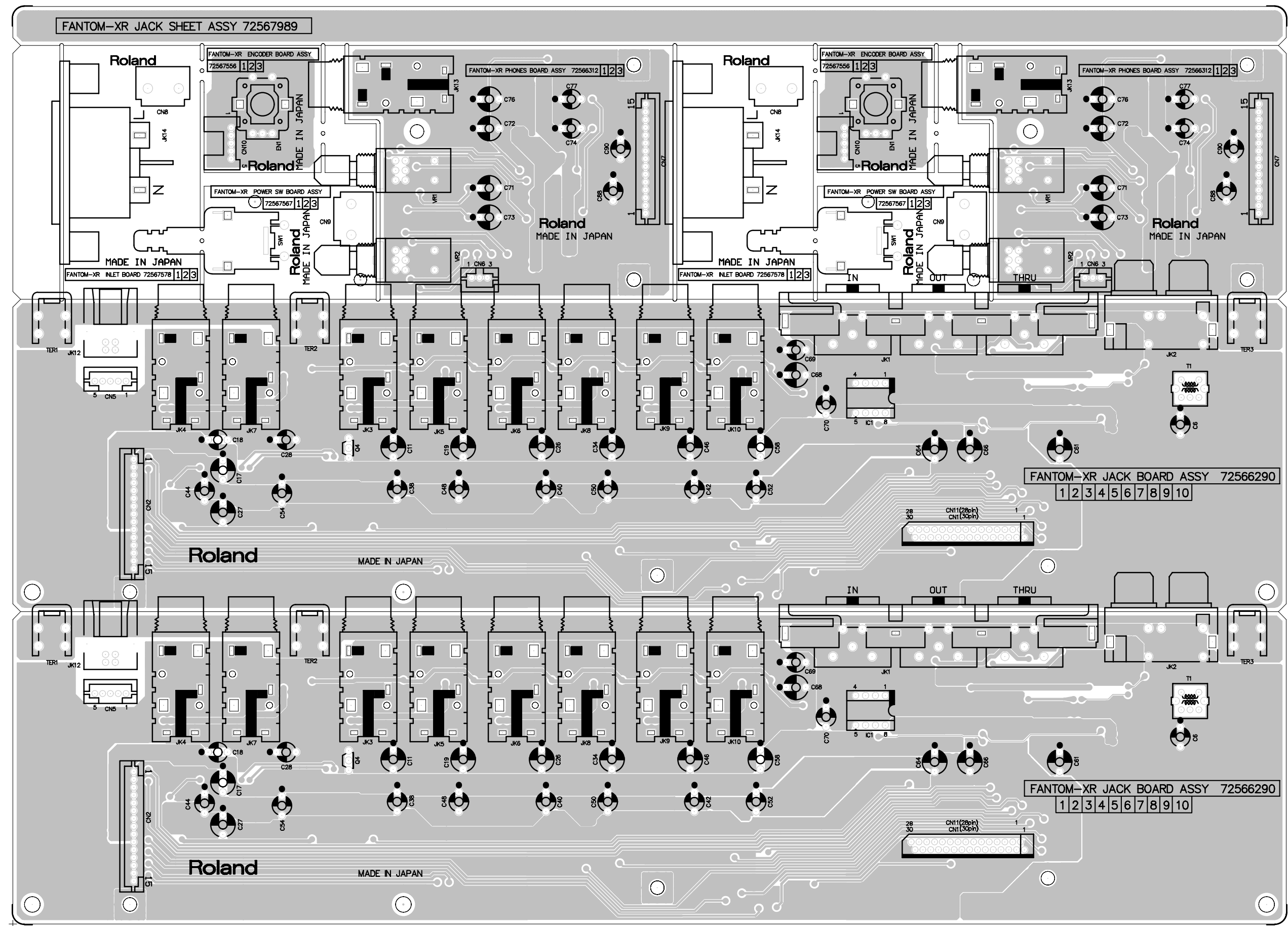








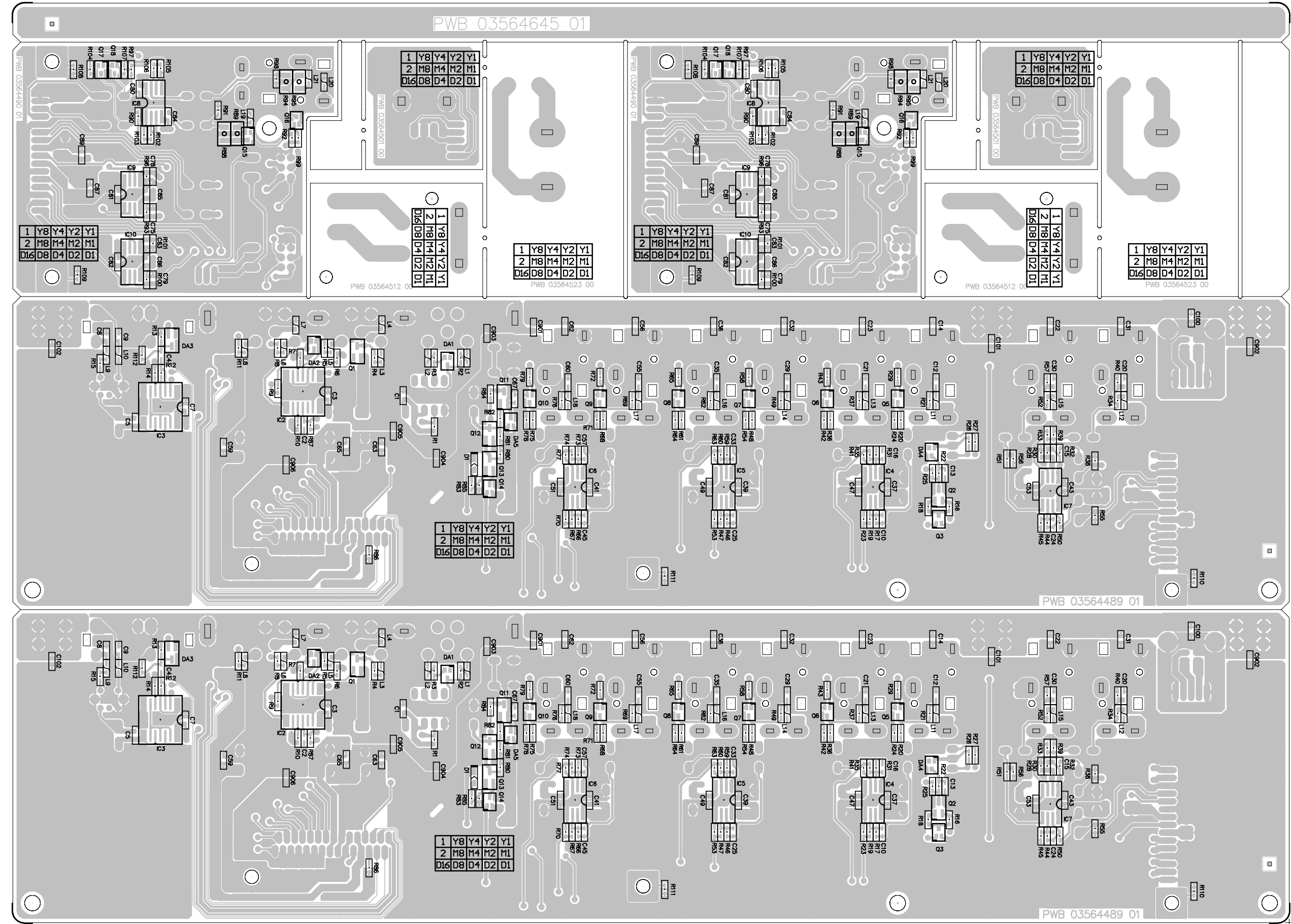
CIRCUIT BOARD(JACK SHEET 1)



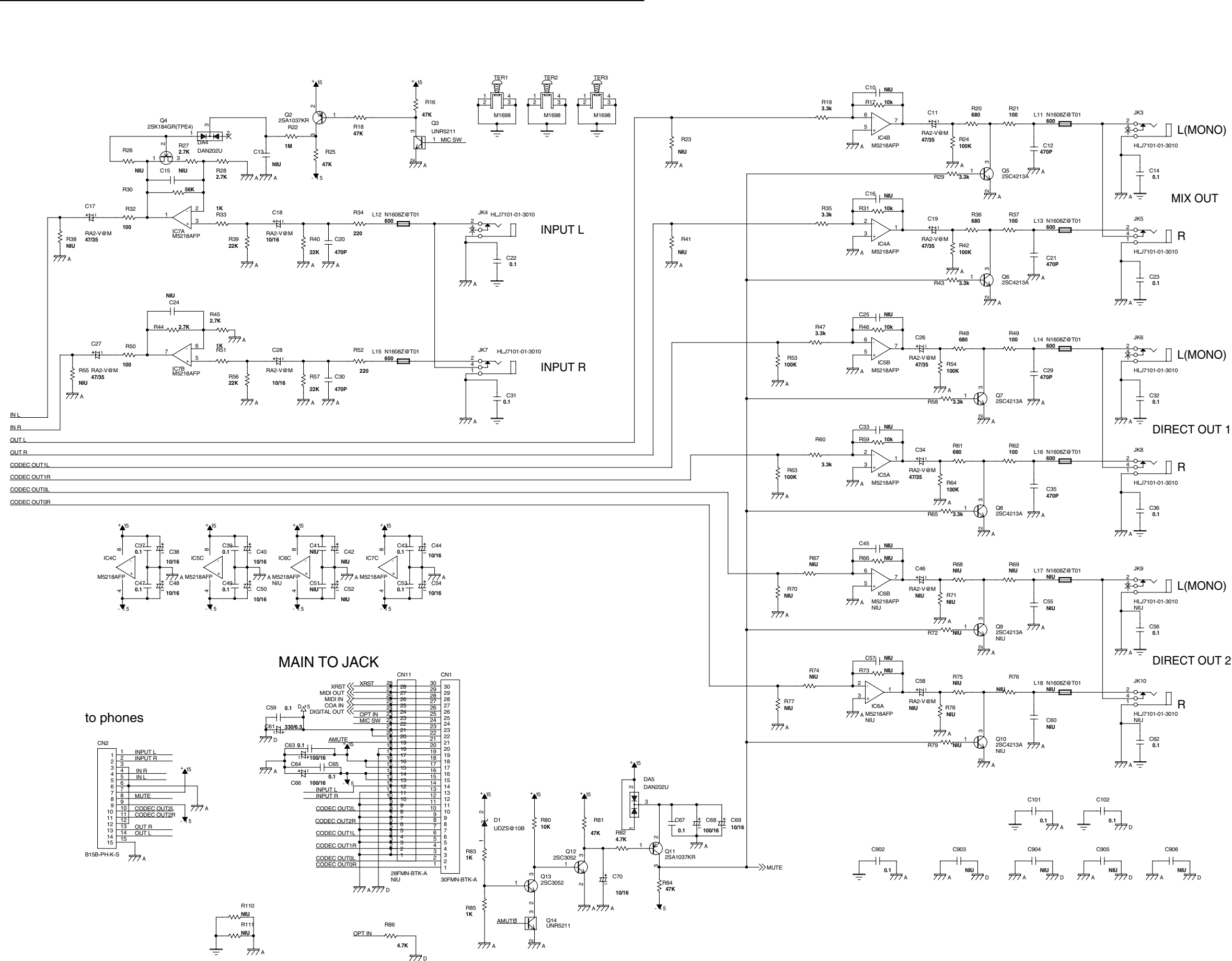
View from components side

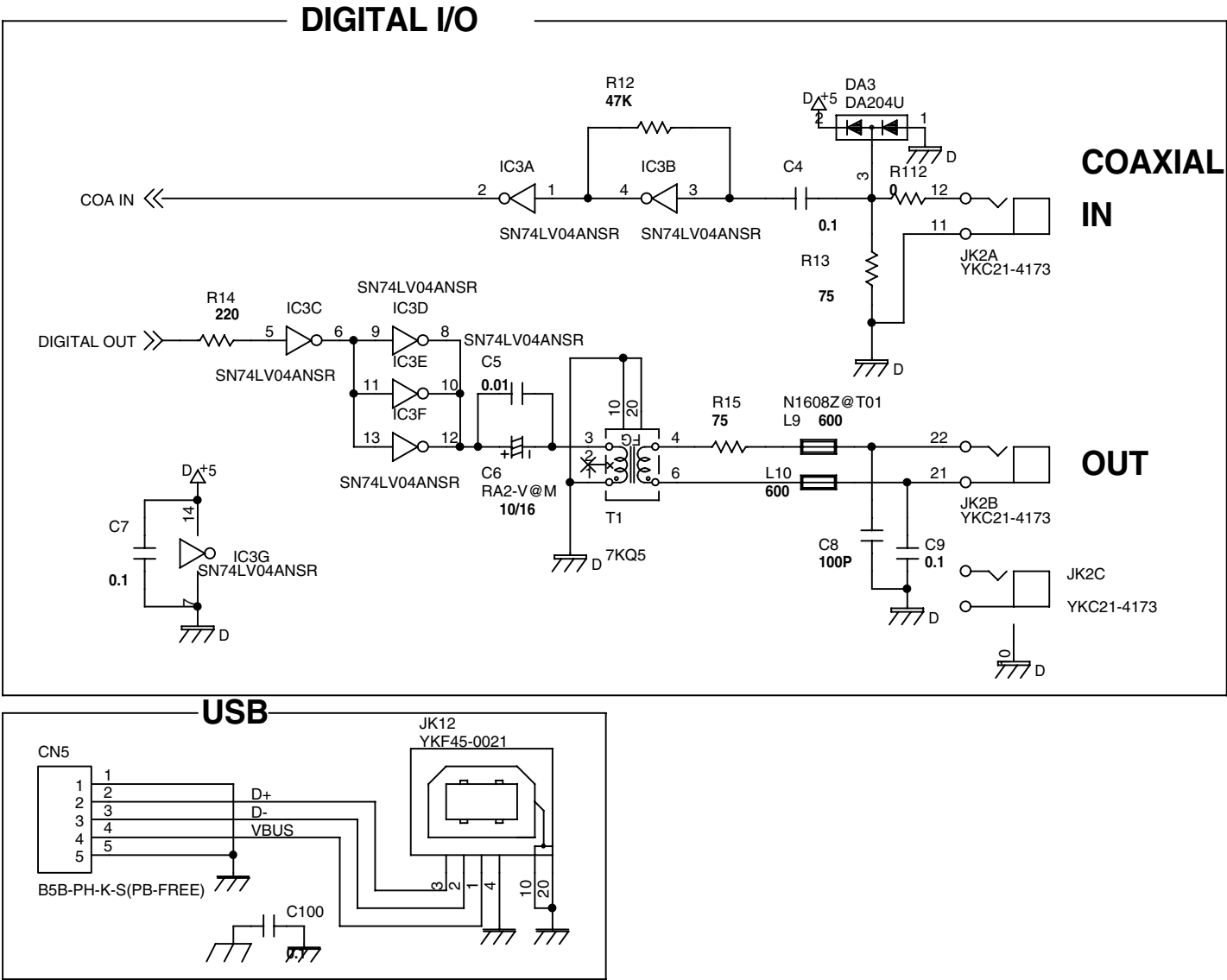
"scale=0.95"

CIRCUIT BOARD(JACK SHEET 2)

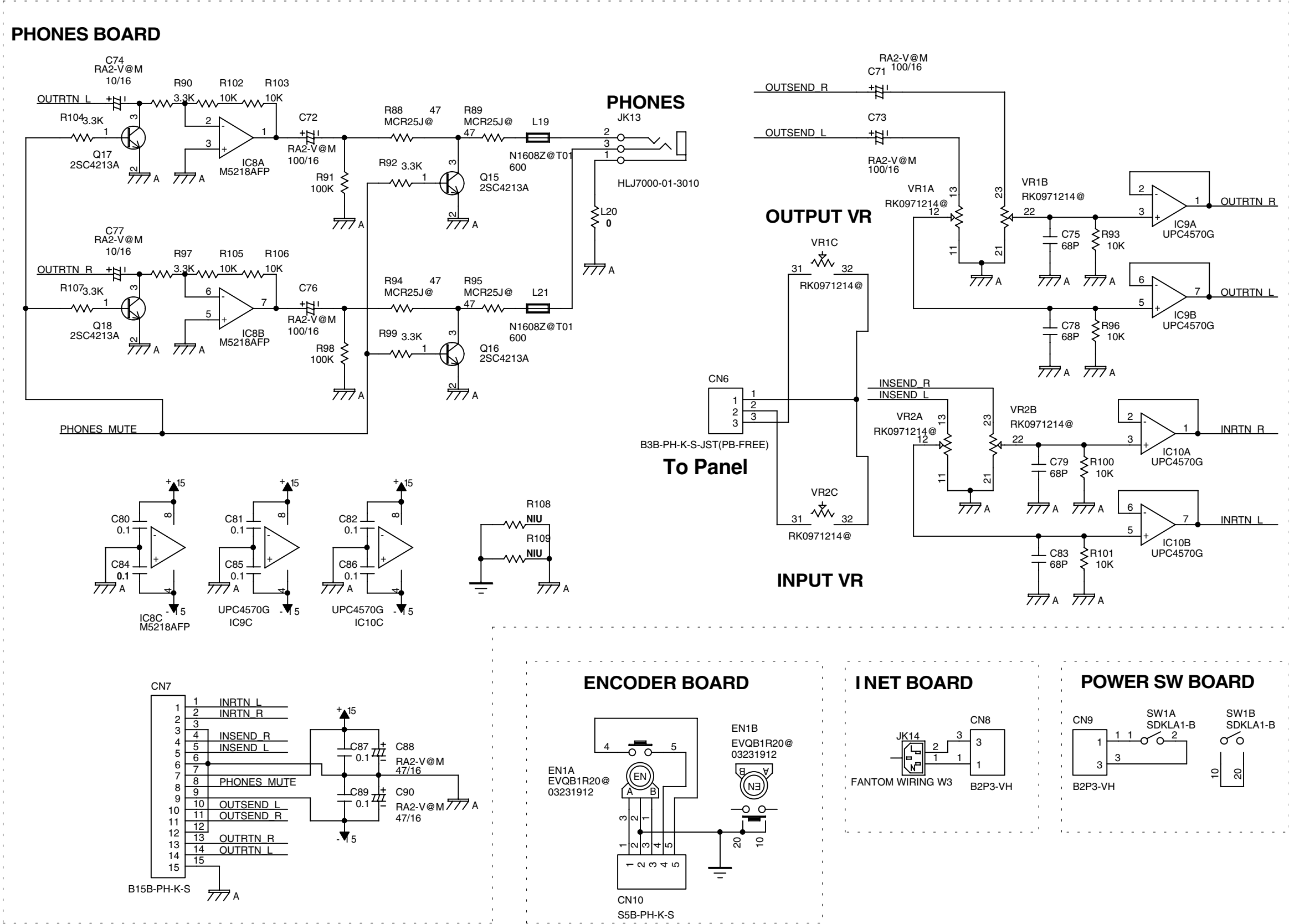


View from foil side
"scale=0.95"

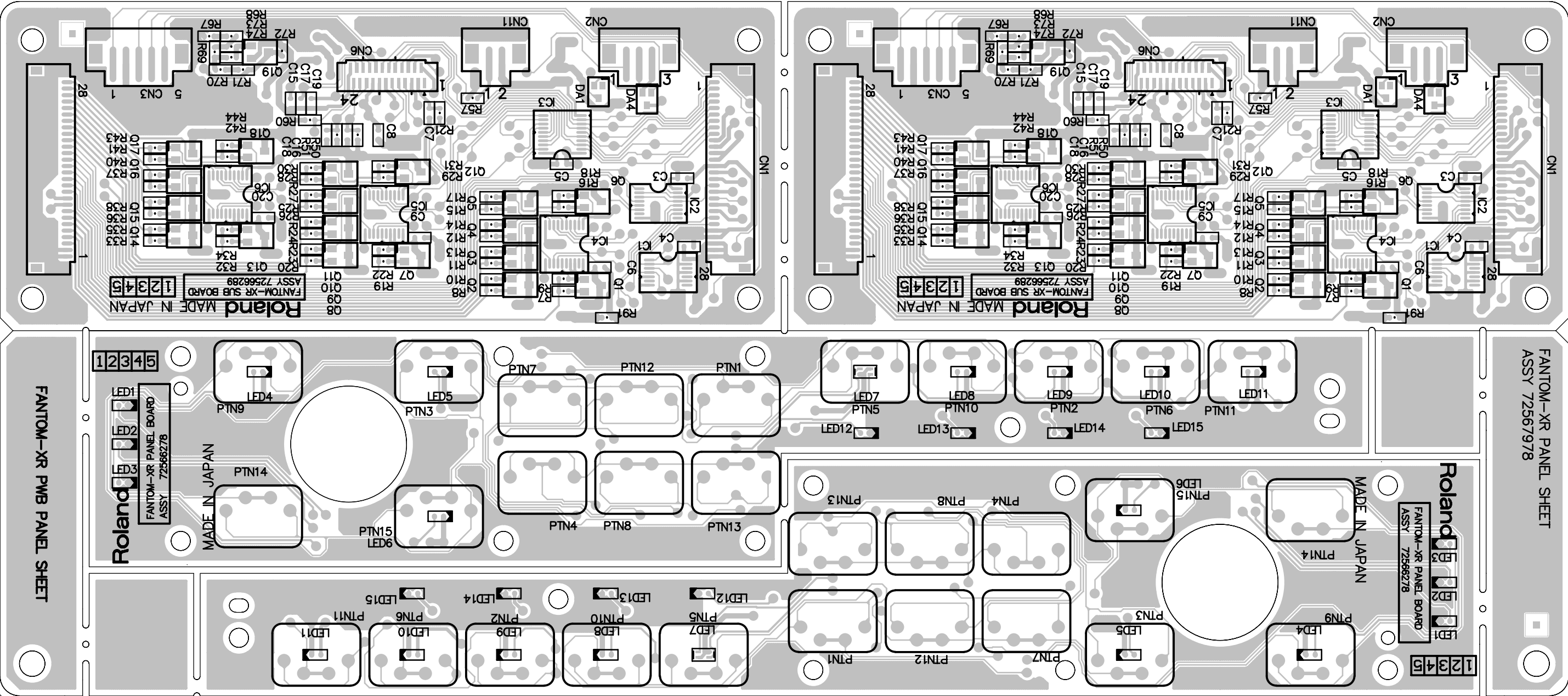




CIRCUIT DIAGRAM(PHONES,ENCODER,POWER SW,INLET)



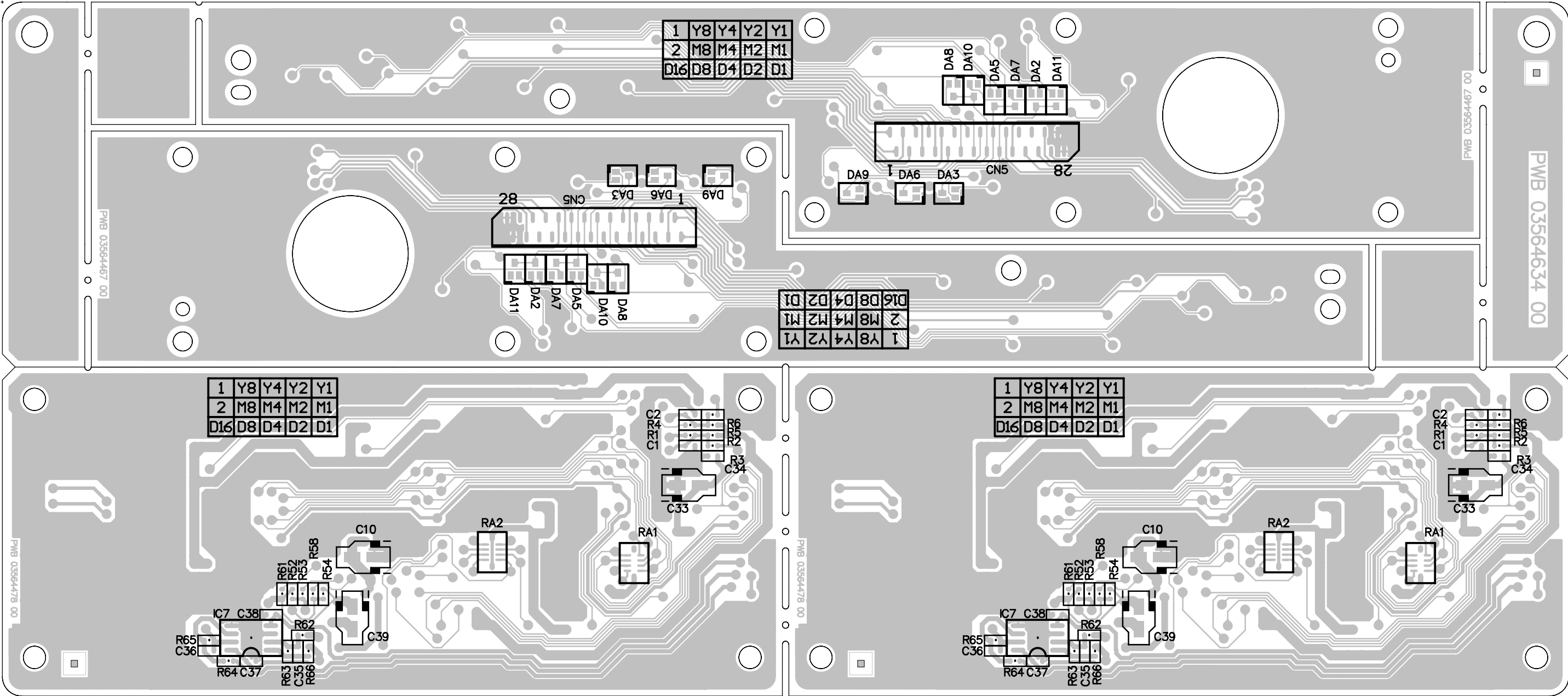
CIRCUIT BOARD(PANEL SHEET)



View from components side

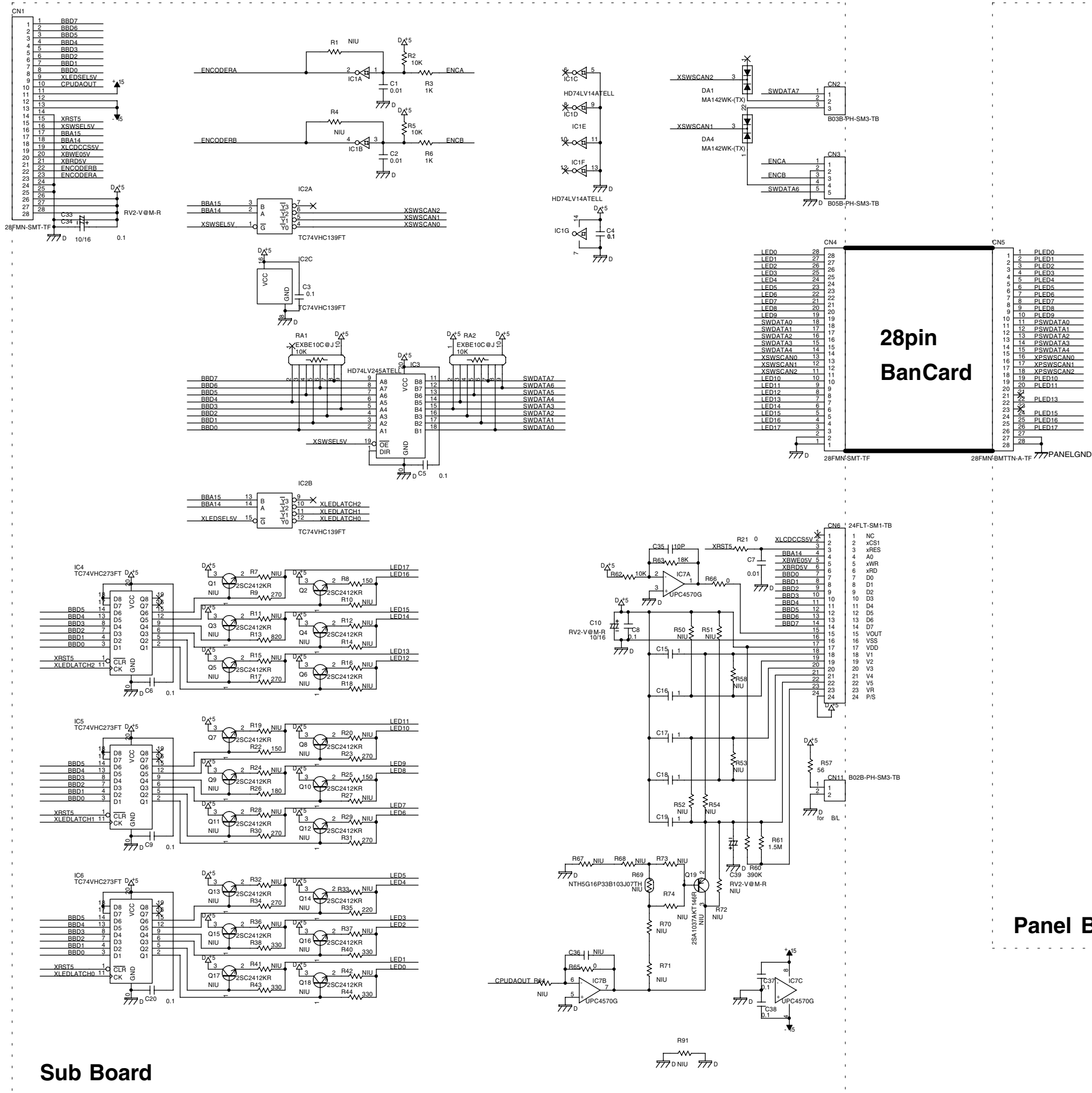
"scale=0.95"

CIRCUIT BOARD(PANEL SHEET)

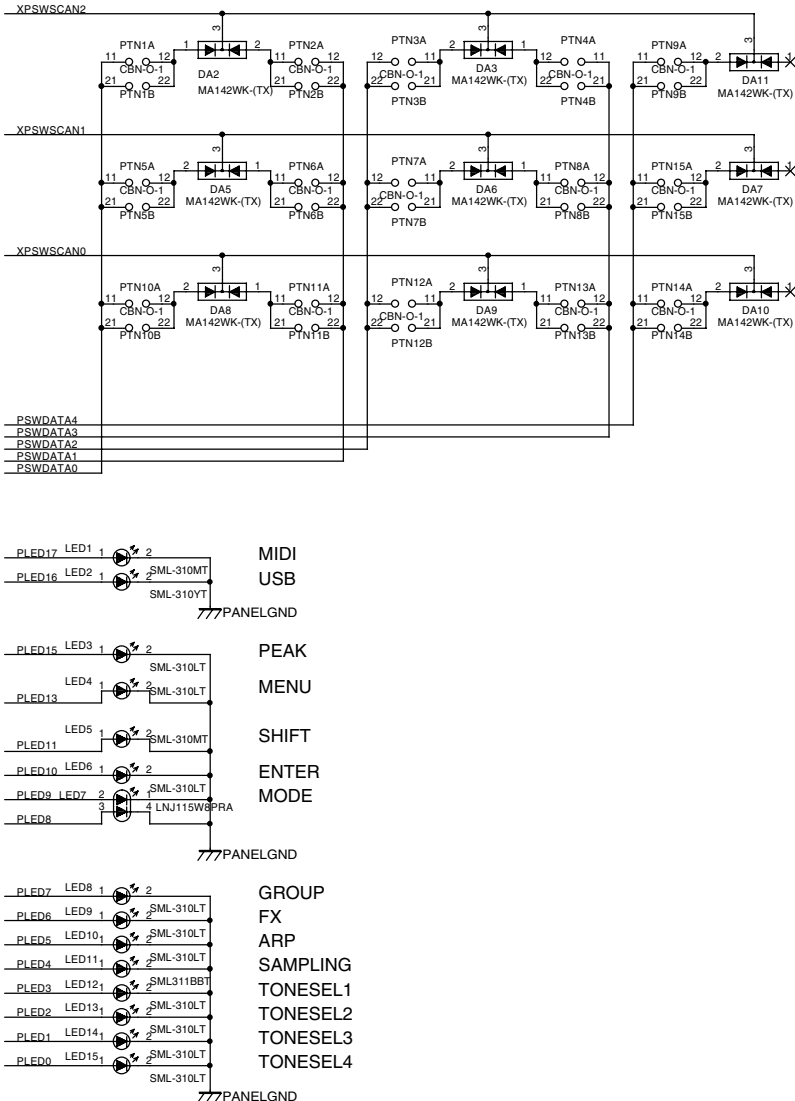


View from foil side
"scale=0.95"

CIRCUIT DIAGRAM(PANEL,SUB)

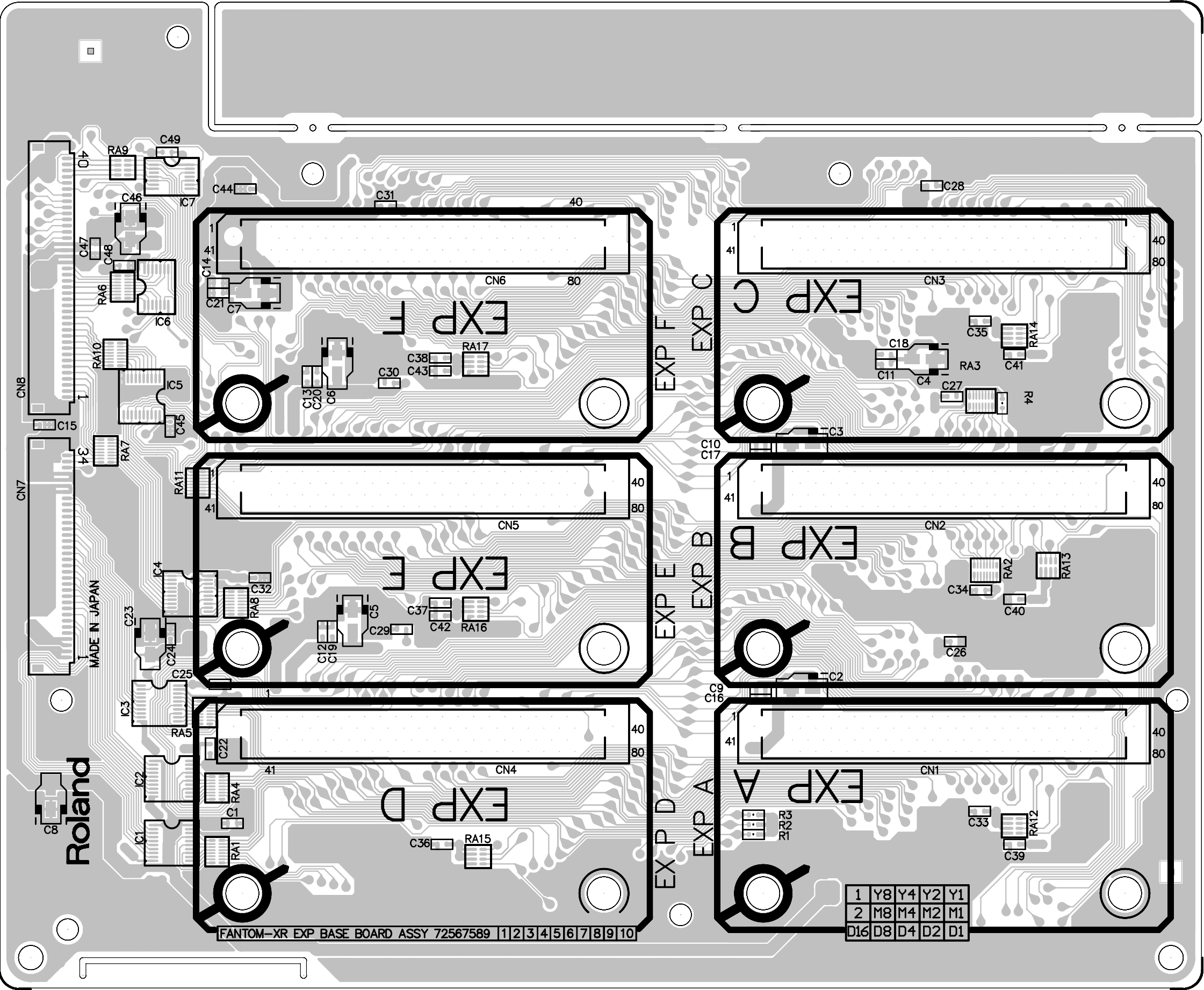


Sub Board



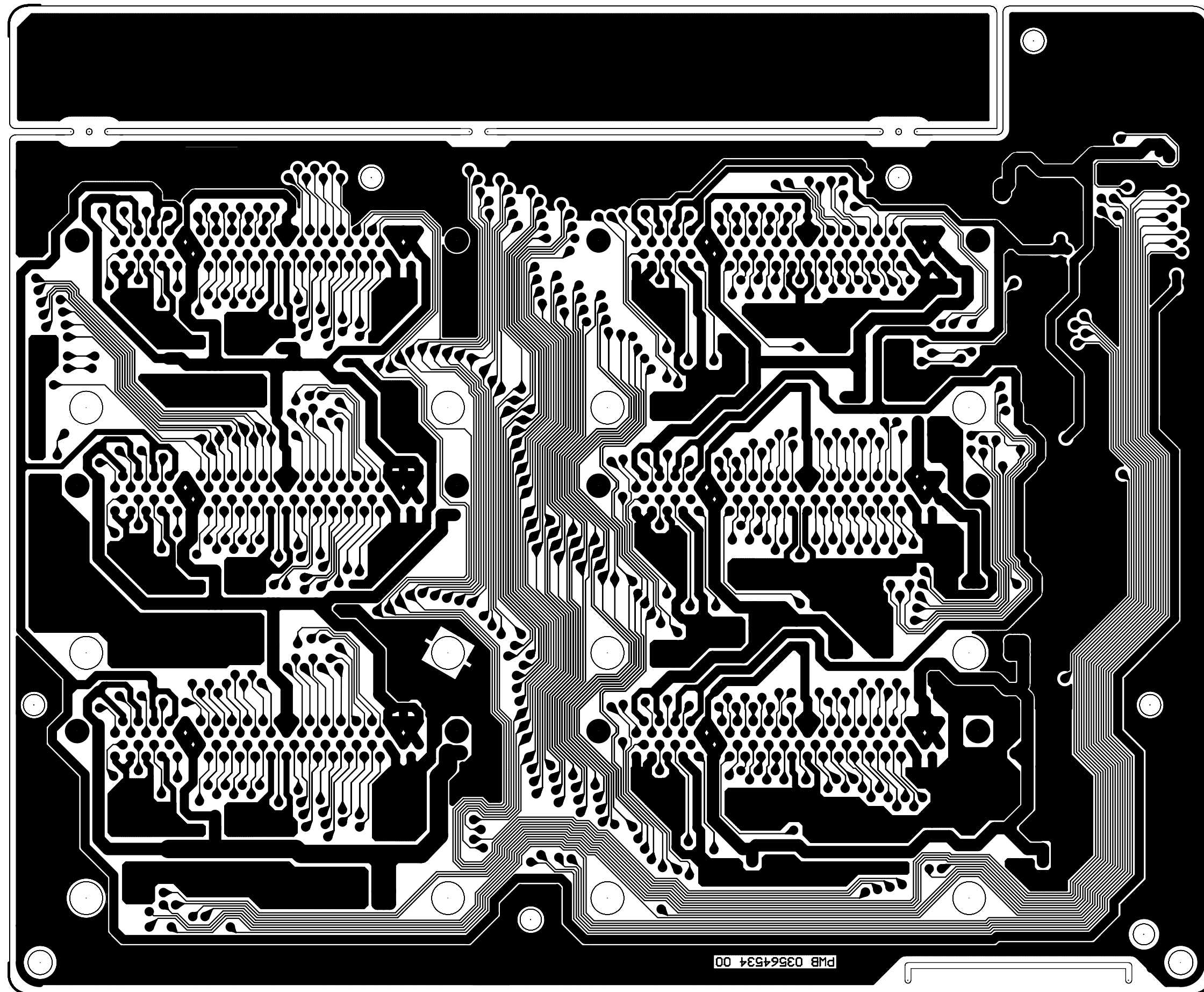
Panel Board

CIRCUIT BOARD(EXP-BASE)



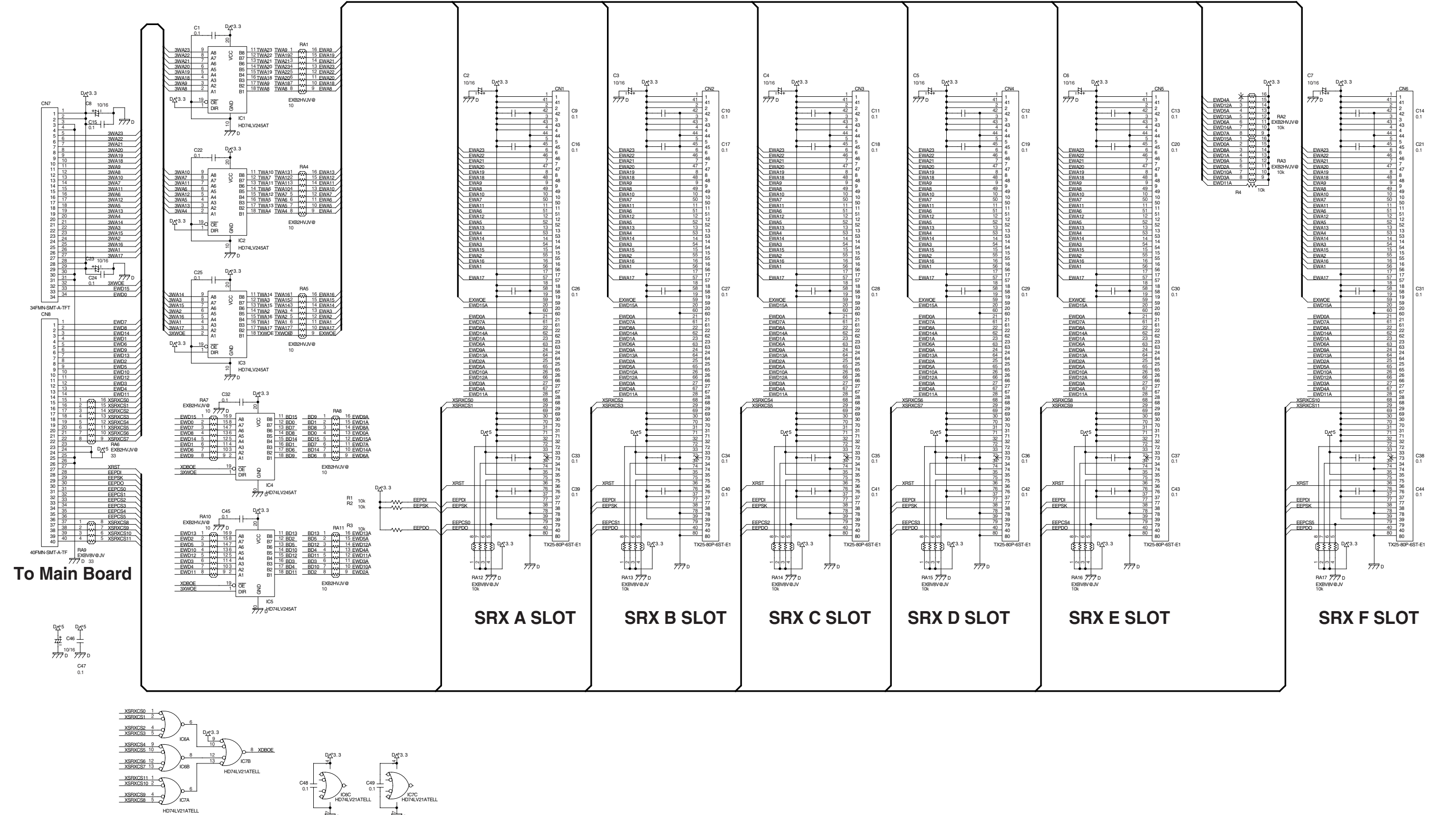
View from components side

CIRCUIT BOARD(EXP-BASE)

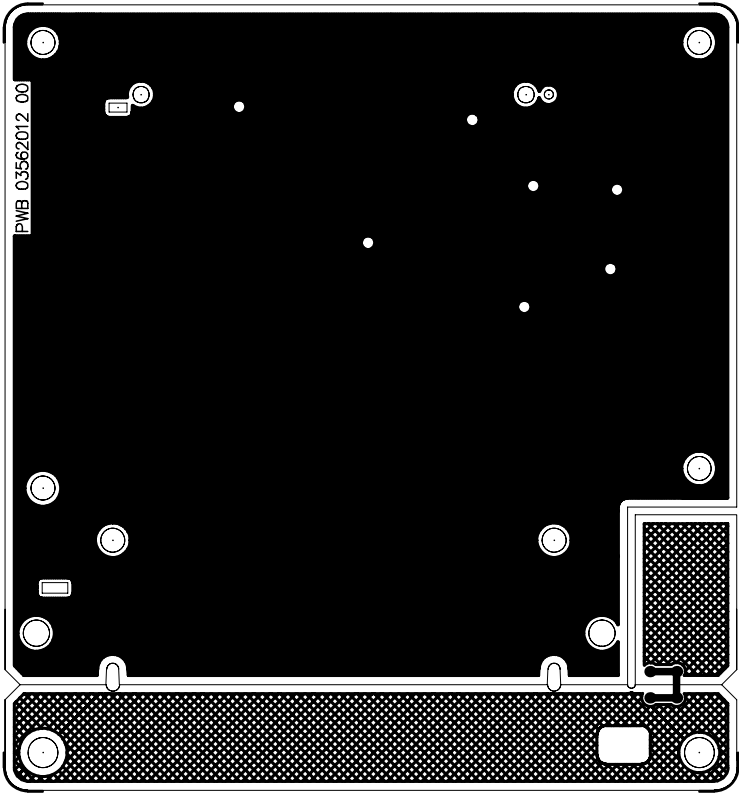


View from foil side

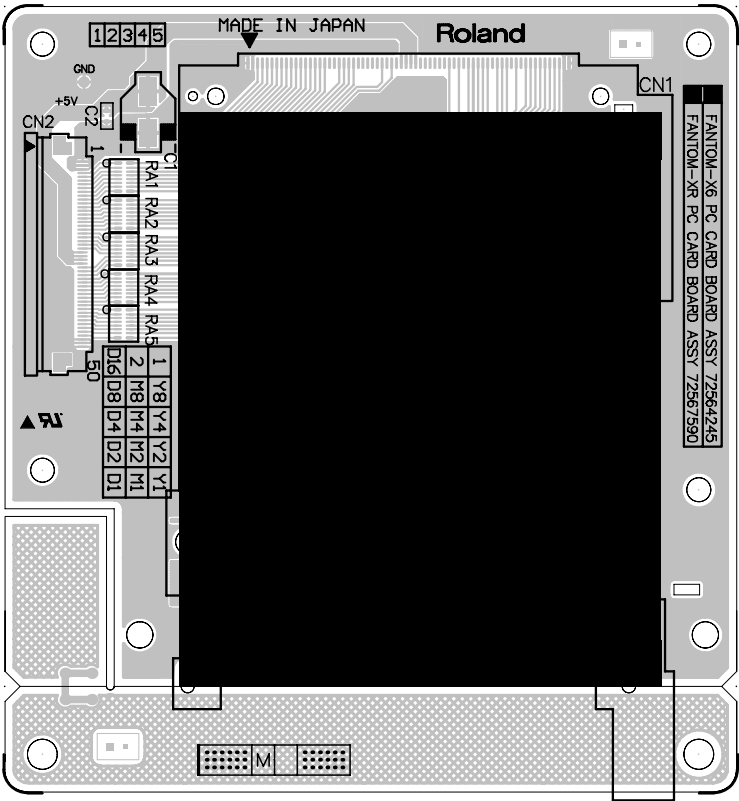
CIRCUIT DIAGRAM(EXP-BASE)



CIRCUIT BOARD(PC CARD)

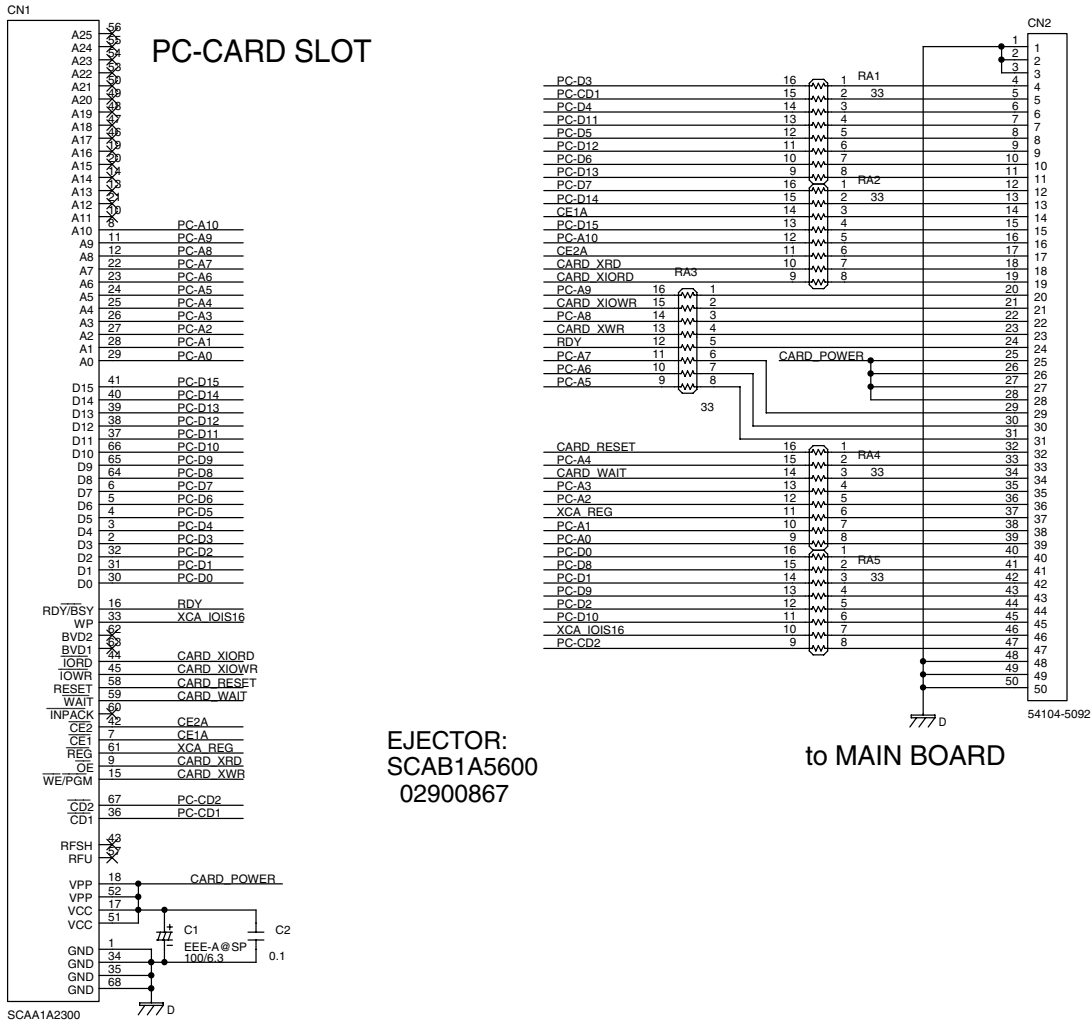


View from foil side



View from components side

CIRCUIT DIAGRAM(PC CARD)



ERROR MESSAGES

Message	Meaning	Action
Cannot Edit Preset Sample!	This is a preset sample, and therefore cannot be edited.	—
Cannot Edit GM Patch	This is a GM patch, and therefore cannot be edited.	—
Cannot Write GM Patch	This is a GM patch, and therefore cannot be saved.	—
Card Not Ready!	A memory card is not inserted in the slot.	Insert a memory card into the slot.
Empty Sample!	The sample contains no data.	Select a sample that contains data.
File Name Duplicate	A file with the same name already exists.	Delete the file bearing the same name from the disk, and if overwriting and saving the data, merely save the file. If you do not want to delete the file with the same name from the disk, either save the file with a different name.
Illegal File!	The Fantom-XR cannot use this file.	—
Memory Damaged!	The contents of memory may have been damaged.	Please perform the Factory Reset operation. If this does not resolve the problem, please contact your dealer or the nearest Roland Service Center.
Memory Full!	Saving is not possible because there is insufficient space in the user area or memory card.	Delete unneeded data.
MIDI Offline!	There is a problem with the MIDI cable connection.	Check that the MIDI cable has not been disconnected or broken.
No More Sample Numbers!	The sample cannot be divided any further. Since fewer than 256 consecutive sample numbers are vacant, no further sampling is possible.	Erase unneeded samples in order to allocate 256 or more consecutive sample numbers.
Permission Denied!	The file is protected.	—
Sample Length Too Short!	The sample is too short, and cannot be edited correctly.	If the sample is extremely short, editing may not produce the desired result.
Sample Memory Full!	Since there is insufficient sample memory, no further sampling or sample editing is possible.	Erase unneeded samples.
Too Many Sample Selected!	The operation cannot be executed, since marks are assigned to more than one sample.	Either clear the marks, or mark only one sample.
Unformatted!	The memory card is in an unsupported format.	Format the memory card.