

EXR-7

INTERACTIVE ARRANGER

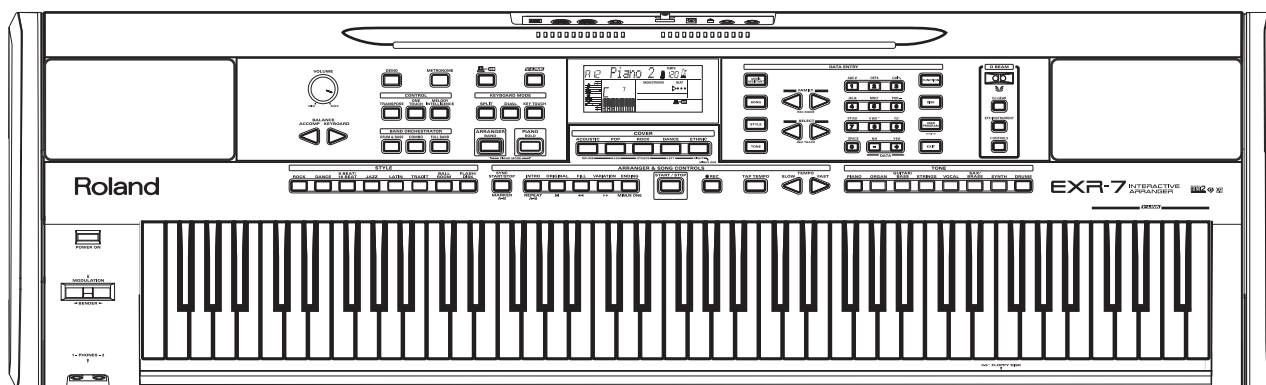
SERVICE NOTES

First edition

Issued by RES

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SPECIFICATIONS

EXR-7 Interactive Arranger

Keyboard: 76 keys, velocity sensitive

Sound source: PCM samples

Max polyphony: 64 voices

Tones: 551 panel sounds + 542 XG compatible voices + 256 GM2 compatible sounds

Drum Kits: 20 Drum Kits, 11 XG-compatible Drum Kits + 9 GM2 compatible Drum Kits

Multitimbral parts: 19

Compatibility: GM2, GS, XG Lite

Display type: New large backlit custom display

Panel controls: VOLUME knob, D BEAM controller, ACCOMP/KEY BOARD BALANCE buttons, TEMPO buttons, DATA buttons, BENDER/MODULATION lever, FAMILY buttons, SELECT buttons, numeric buttons [0]~[9], 8 assignable TONE family buttons, STYLE buttons

Music Styles: 103 Styles in Flash memory (84 factory+19 changeable)

One Touch: 2 x 84

Orchestrator: 3 levels: Drum&Bass, Combo, Full Band

Style Cover: 5: Acoustic, Pop, Rock, Dance, Ethnic

Songs: Realtime SMF player 16-track Recorder: 4 easy modes (ALL, Keyboard, Single, Punch In/Out)

Song Cover: 5: Acoustic, Pop, Rock, Dance, Ethnic

Flash Memory: For Music Styles and Songs

User Programs: 100

Effects: Reverb: 8 types, Chorus: 8 types, Multi-FX: 47 types

Data storage: FDD 3.5" 2HD/2DD (Styles, Songs/SMF, User Programs)

File save & load from PC via USB (Style, Song)

Metronome: Time Signature setting (1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 6/8, 9/8), Volume setting

Other functions: 3 easy modes (Piano Solo, Piano mode, Arranger/Band),

Music Assistant: 126 settings, Split (2 Tones: Split [L] + Main [R]), Dual (2 Tones: Main + Dual),

Melody Intelligence: 18 types, Octave (-4~4), Transpose (-12~12), V-Link

System updates: Yes

Connections: USB: file transfer, MIDI IN, OUT

Outputs: L/Mono, Right (1/4" phone jacks), Phones 1/2, DC IN (adapter)

Others: Output Power: 10W+10W with "Digital Bass Enhancer", Stereo Speakers: 2x ø13cm, Bass Reflex

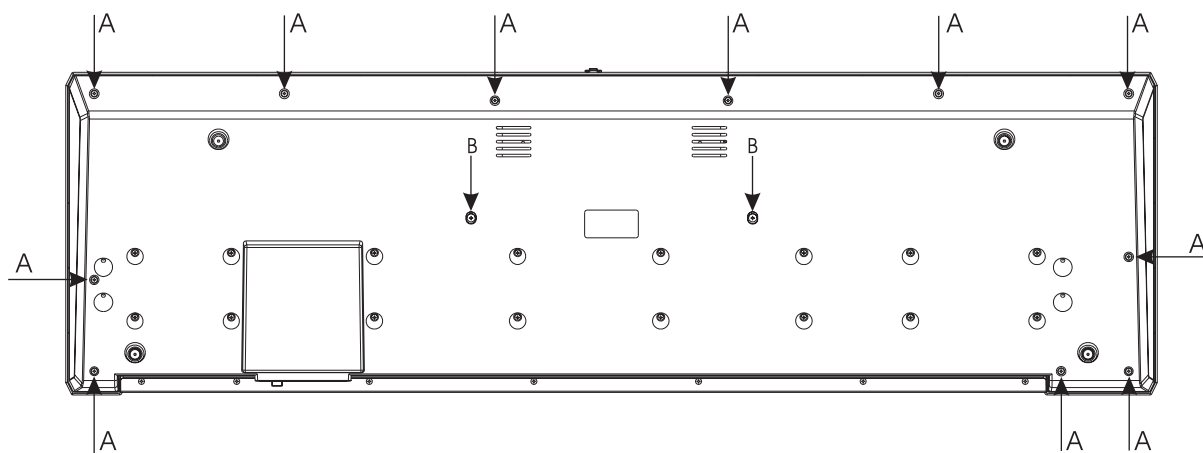
Power supply: 12V/3.5A

Dimensions: 1260 x 374 x 139 mm

Weight: 12kg

Supplied accessories: Owner's Manual, PSB-4U adapter, music rest, USB cable

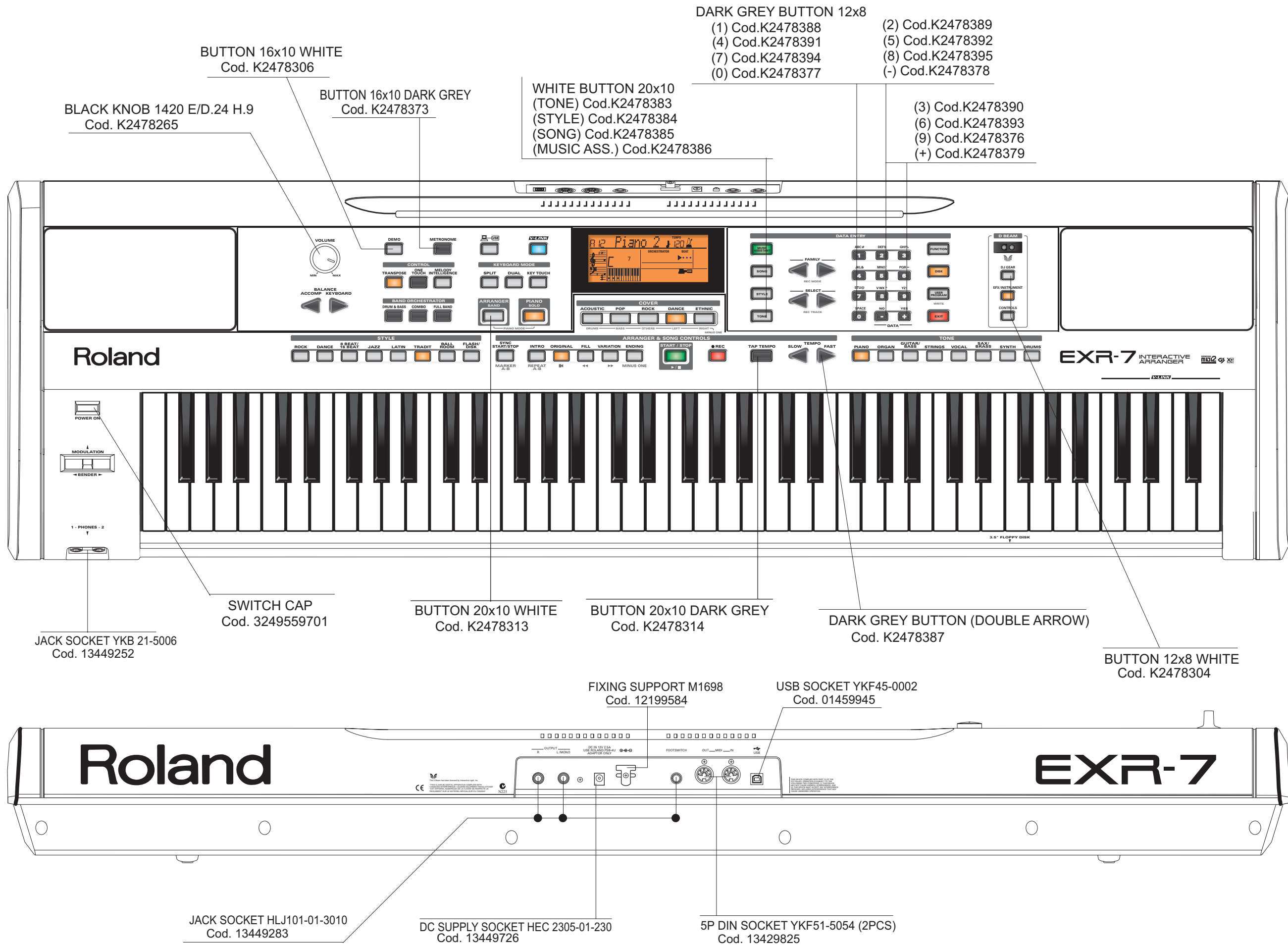
Note: Specifications are subject to change without prior notice.

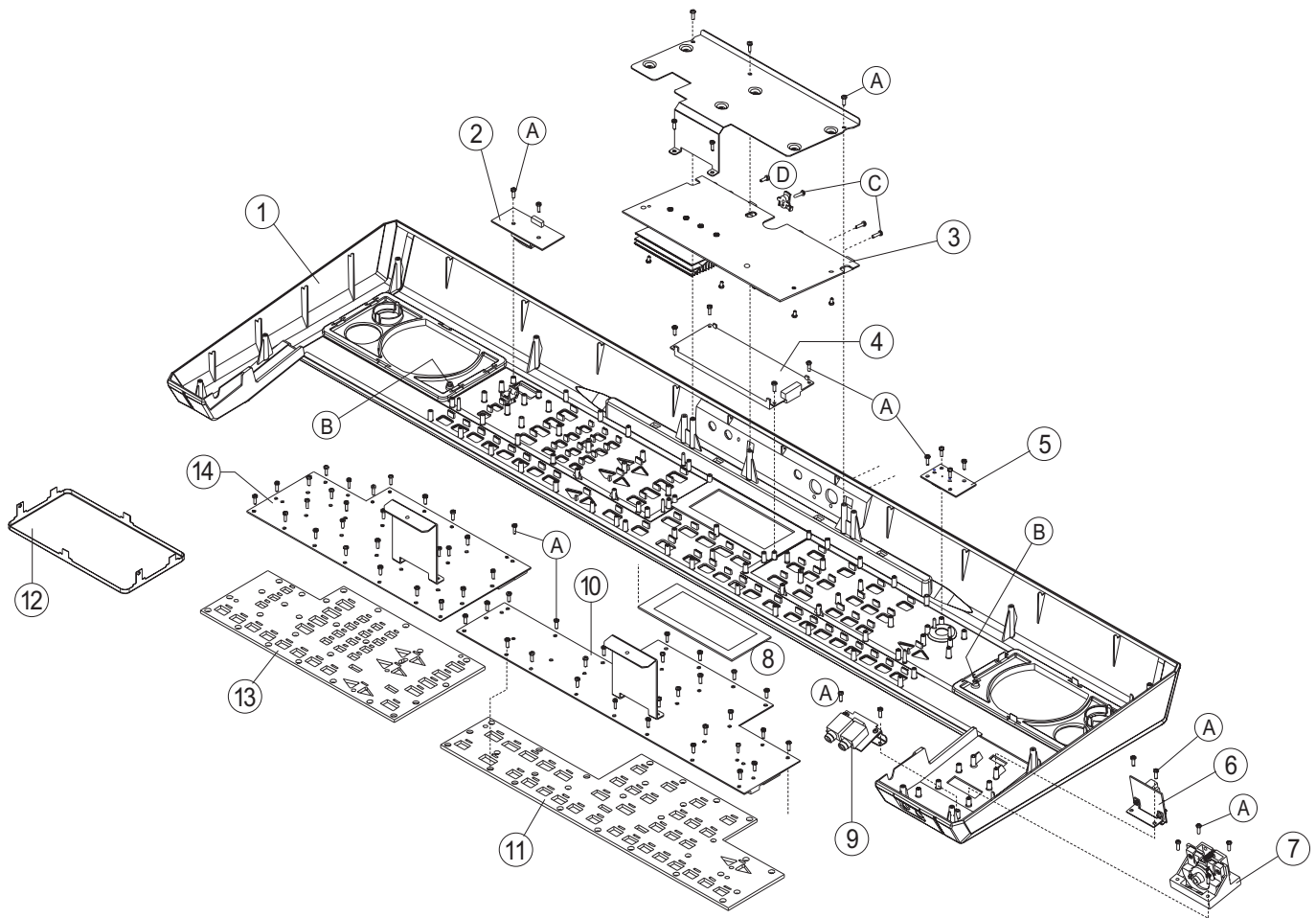
DISASSEMBLY

(SCREW)

- | | | |
|---|----------|------------------------------------|
| A | J2289150 | SCREW 2,9X16 tTC PR TFR H.7 |
| B | J2289221 | SELFLOCK. SCREW M4x10 TCTC TFR 9,5 |

LOCATION OF CONTROLS



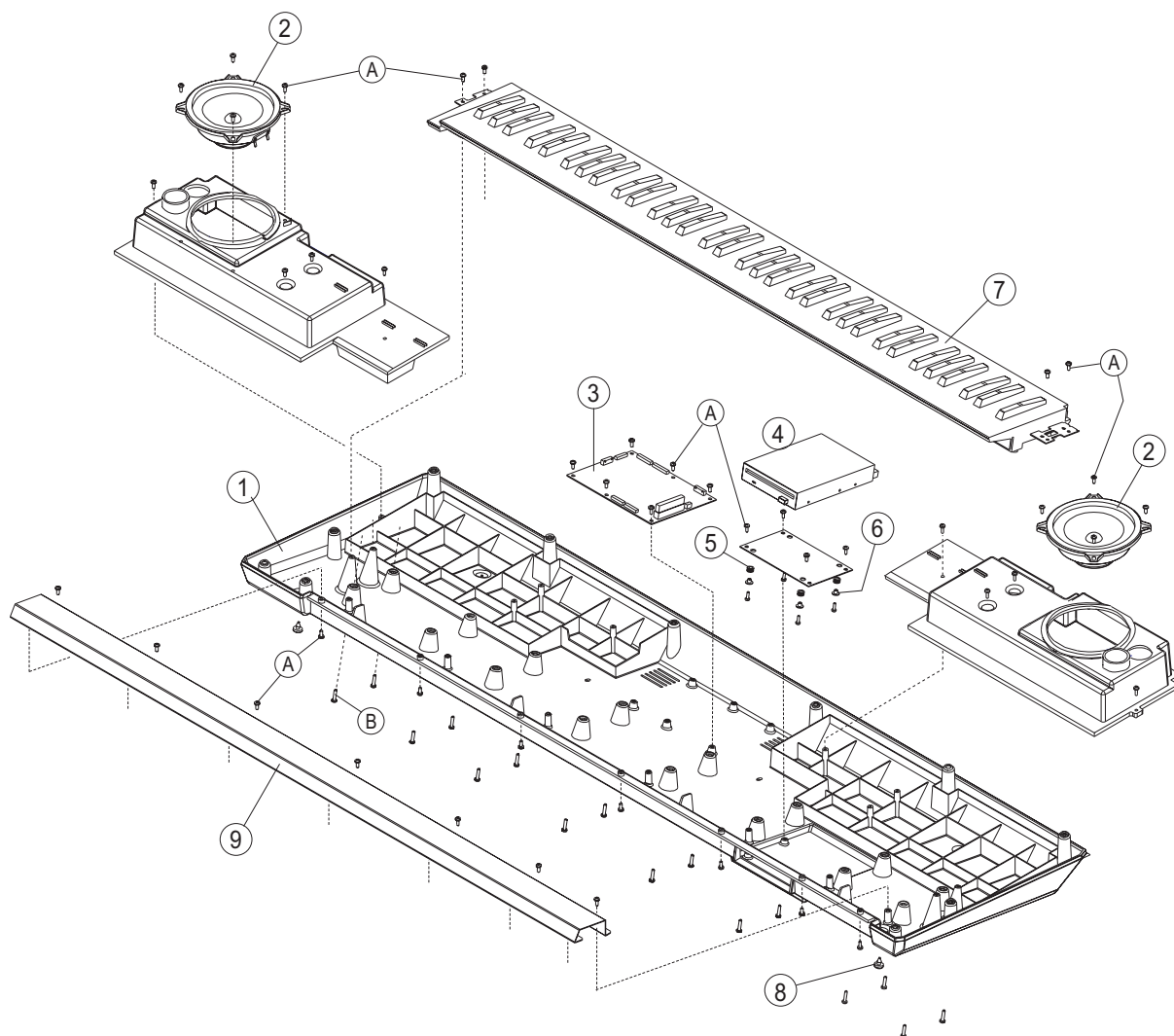
EXPLODED VIEW - TOP

No.	Part No.	Description
1	7775711000	VARN.+SILK TOP CBNT EXR-7
2	7775703000	D.BEAM PCB ASSY EXR-7
3	7775708000	JACK PCB ASSY EXR-7
4	7775712000	LCD ASSY+CONNECT. EXR-7
5	7775707000	VOLUME PCB ASSY EXR-7
6	7775706000	SWITCH PCB ASSY EXR-7
7	K3278112	PITCH BENDER SW+CABLE (36)+1C.
8	7775310000	SILKSCREENED PLEXIGLASS EXR-3/5
9	7775705000	PHONES PCB ASSY EXR-7
10	7775702000	RIGHT CONTROL PCB ASSY EXR-7
11	K2268188	RIGHT VIBRATION DUMPER HLC/30 GREY EXR-7
12	K2248187	RIGHT/LEFT LOUDSPEAKER GRILL EXR-5
13	K2268189	LEFT VIBRATION DUMPER HLC/30 GREY EXR-7
14	7775704000	LEFT CONTROL PCB ASSY EXR-7

(SCREW)

A	J2289125	SCREW 2,9X10 TC TC PR TROP
B	J2289126	SELF TAP. SCREW 2,9x8 TCTC PR BZ
C	J2289160	SELF TAP. SCREW 2,9x13 TCTCPR BR
D	J2289108	SELF LOCK. SCREW M3x10 TCTC H.6

EXPLODED VIEW - BOTTOM

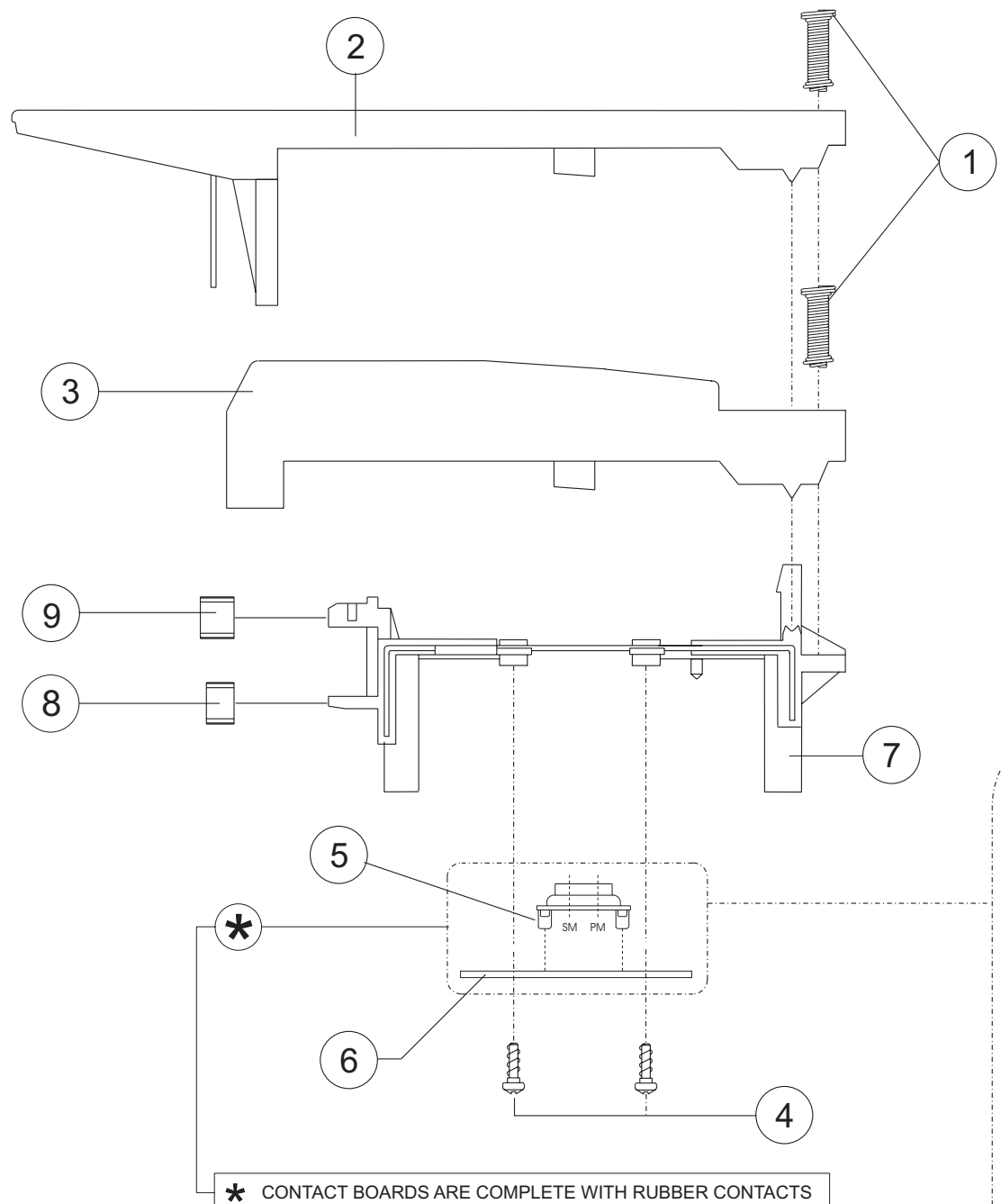


No.	Part No.	Description
1	7775710000	BLACK VARN+CONDUCTIVE BOTTOM CBNT
2	K2418125	LOUDSPEAKER MM.130 4OHM RIF.2313
3	7775701000	CPU PCB ASSY EXR-7
4	J240910601	FLOPPY D.DRIVER JU-257A167P
5	22165134	BRASS BUSHING
6	22265242	RUBBER GUIDE BUSHING
7	7775720000	76 KEY KEYBOARD TP/9S
8	K2358105	PRESSURE RUBBER
9	7775709000	VARN+SILK. KEYBOARD BLIND EXR-7

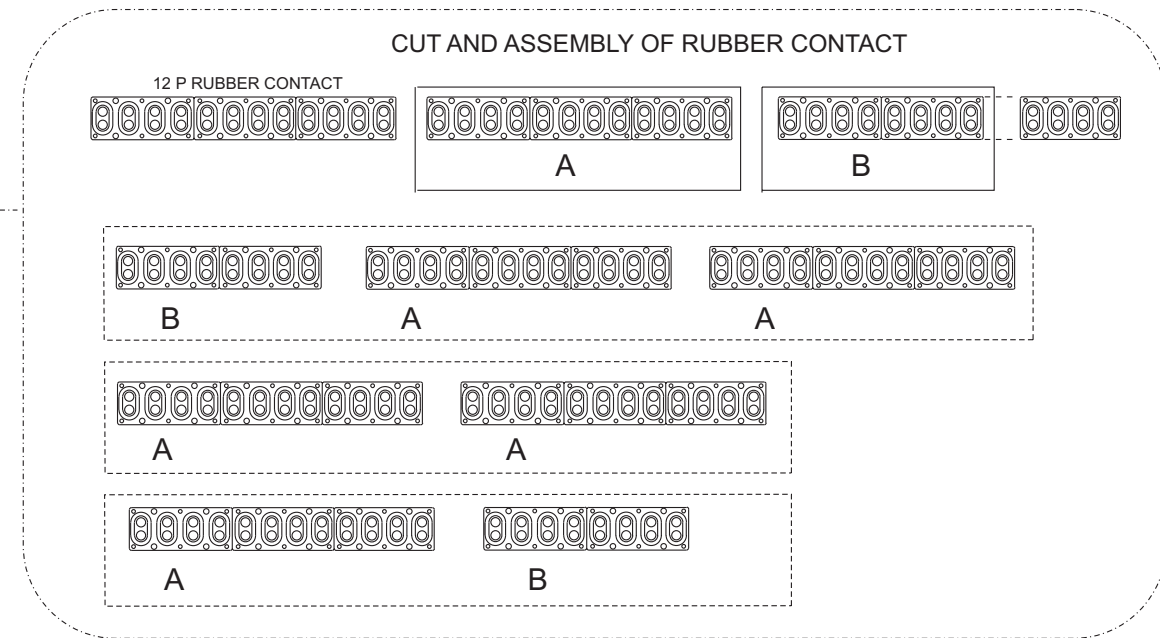
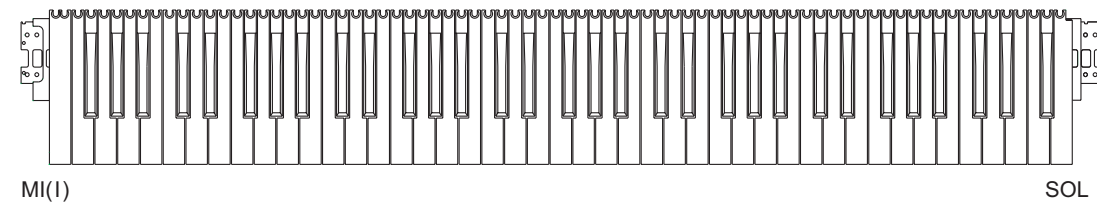
(SCREW)

A	J2289212	SCREW 3,5X10 TC TC PR BRUN
B	J2289131	SELF TAP. SCREW 3,5x16 TCTC PR BZ

KEYBOARD PARTS LIST
76 KEY TP/9S KEYBOARD ASSY code 7775720000




No.	PARTS NAME	CODE
1	KEY SPRING	22178233
2	NATURAL KEY C5 DO	22578319
	NATURAL KEY D6 RE	22578328
	NATURAL KEY E7 MI	22578329
	NATURAL KEY F1 FA	22578330
	NATURAL KEY G2 SOL	22578331
	NATURAL KEY A3 LA	22578332
	NATURAL KEY B4 SI	22578333
	NATURAL KEY C8 MI (1)	22578334
3	SHARP KEY	22578335
4	SELF TAP SCREW 2.9x8 TCTCPRBZ	J2289126
5	12P RUBBER CONTACT	2218523802
6	CONTACT BOARD W/RUBBER ASSY	7773405000
7	PLASTIC CHASSIS	J2589101
8	GUIDE BUSHING INFERIOR	J2359104
9	GUIDE BUSHING SUPERIOR	22158789



PARTS LIST

SAFETY PRECAUTIONS :

The parts marked  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).

A The parts marked "A" are new (Initial Parts) for RES but already used by RJA

 The parts marked  have Safety - Related characteristics. Use only listed parts for replacement.

<< EMI >> Component for EMC.

Note : Replacement should be made on a unit basis. No replacements available for individual parts. Replacement only be a unit.

CASING
Q.ty

	K2248187	RIGHT/LEFT LOUDSPEAKER GRILL EXR-5		2
	K2198114	PLASTIC MUSIC REST EXR-5		1
#	7775709000	VARN+SILK. KEYBOARD BLIND EXR-7		1
#	7775710000	BLACK VARN. + CUNDUCTIVE BOTTOM CBNT		1
#	7775711000	VARN.+SILK TOP CBNT EXR-7		1

KNOB BUTTON

	K2478265	BLACK KNOB	1420 E/D. 24 H.9		1
	K2478304	BUTTON	12X8 WHITE		3
	K2478306	BUTTON	16X10 WHITE		31
	K2478313	BUTTON	20X10 WHITE		8
	K2478314	BUTTON	20X10 DARK GREY		1
	K2478373	BUTTON	16X10 DARK GREY		5
	3249559701	SWITCH CAP			1
	K2478376	DARK GREY BUTTON	12/08 (9)	EXR-5	1
	K2478377	DARK GREY BUTTON	12X8 (0)	EXR-5	1
	K2478378	DARK GREY BUTTON	12X8 (-)	EXR-5	1
	K2478379	DARK GREY BUTTON	12X8 (+)	EXR-5	1
	K2478380	WHITE BUTTON	20X10 (USER PROGRAM)	EXR-5	1
	K2478381	WHITE BUTTON	20X10 (DISK)	EXR-5	1
	K2478382	WHITE BUTTON	20X10 (FUNCTION)	EXR-5	1
	K2478383	WHITE BUTTON	20X10 (TONE)	EXR-5	1
	K2478384	WHITE BUTTON	20X10 (STYLE)	EXR-5	1
	K2478385	WHITE BUTTON	20X10 (SONG)	EXR-5	1
	K2478386	WHITE BUTTON	20X10 (MUSIC ASSISTANT)		1
	K2478387	DARK GREY BUTTON	(DOUBLE ARROW)	EXR-5	4
	K2478388	DARK GREY BUTTON	12X8 (1)	EXR-5	1
	K2478389	DARK GREY BUTTON	12X8 (2)	EXR-5	1
	K2478390	DARK GREY BUTTON	12X8 (3)	EXR-5	1
	K2478391	DARK BUTTON	12X8 (4)	EXR-5	1
	K2478392	DARK GREY BUTTON	12X8 (5)	EXR-5	1
	K2478393	DARK GREY BUTTON	12X8 (6)	EXR-5	1
	K2478394	DARK GREY BUTTON	12X8 (7)	EXR-5	1
	K2478395	DARK GREY BUTTON	12X8 (8)	EXR-5	1
#	K2478410	WHITE BUTTON	20X10 (EXIT)		1

SWITCH

	01676512	PUSH SWITCH	SDKLA1-B		1
	J3169105	SWITCH	TP-1101A / EVQ-PAE 05 R		76

JACK, SOCKET

	13449252	JACK SOCKET	YKB 21-5006		2
	13449283	JACK SOCKET	HLJ7101-01-3010		3
	13429825	5P DIN SOCKET	YKF51-5054 (2PCS)		1
	01459945	USB SOCKET	YKF45-0002		1

DISPLAY UNIT

#	7775712000	LCD ASSY+WIRING	EXR-7		1
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DISK DRIVE UNIT

	J240910601	FLOPPY D.DRIVER	JU-257A167P		1
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BENDER UNIT

#	Note : K3278112	PITCH BENDER SW + CABLE (36)+1C.			1
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SPEAKER

	K2418125	LOUDSPEAKER MM.130	4OHM RIF.2313		2
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KEYBOARD ASSY

#	7775720000	76 KEY KEYBOARD TP/9S		1
		NOTE: For details, refer to KEYBOARD PARTS LIST (Page 8)		

PCB ASSY

#	7775701000	CPU PCB ASSY	EXR-7	1
#	7775702000	RIGHT CONTROL PCB ASSY	EXR-7	1
#	7775704000	LEFT CONTROL PCB ASSY	EXR-7	1
#	7775705000	PHONES PCB ASSY	EXR-7	1
#	7775707000	VOLUME PCB ASSY	EXR-7	1
#	7775706000	SWITCH PCB ASSY	EXR-7	1
#	7775703000	D.BEAM PCB ASSY	EXR-7	1
#	7775708000	JACK PCB ASSY	EXR-7	1
	7773405000	CONTACT PCB ASSY		1

IC

	15229718RI	I.C. 6N 137	PHOTO-COUPLER	1
	K525818510	I.C. K525818510	EXR-5/EXR-3	1
	15169550RI	I.C. 74 HC138	DIP CMOS	3
	J5159107	I.C. 74 HC574	CMOS	1
	15249111	I.C. TC7WU04 F	FLAT CMOS	1
	J5259127	I.C. 74 HC 10	FLAT	1
	J5259102	I.C. 74 HC 273	FLAT CMOS	1
	J5259128	I.C. 74 HC 393	FLAT	1
	00129278	I.C. SSC1080 FOB	(CUSTOM IC)	1
	01342978	I.C. TC160G22AF-1253	FLAT	1
	J5259120	I.C. HM5118160CJ-6	FLAT	1
	J5259155	I.C.M11B416256A-35J		1
	J5259160	I.C. AM29F160DB-75EC 16M	FLASH	3
	15199780	I.C. HD63266FP-64A	FLAT	1
	01679978	I.C. RA09-002 (XP6)	CUSTOM	1
	J5259161	I.C. M66291GP	USB CONTROLLER	1
	03344445	IC MX3000AS		1
	15259884	I.C. TC7S08F	MOS CMOS	1
	15259885	I.C. TC7S32F	CMOS	2
	K5258146	I.C. TC74VHC139F	FLAT	1
	15249121	I.C. TC7W04F		1
	J5259148	I.C. TC 74VHCT32AF	FLAT	1
	J5259162	I.C. TC 74VHCT00AF		2
	02340756	I.C. TC7WH32FU	(FLAT)	1
	02565212	I.C. SN74LV245A-PW		3
	J5169106	I.C. 74LS04 TTL		1
	15189250	I.C. M5218 AL	(STANDING)	3
	15189189	I.C. UPC 4570HA VERT.	(OP.AMP.)	2
	J5189102	I.C. TD 62593 AP	DIP	1
	15199937	I.C. M51953 BFP	FLAT	1
	15289141	I.C. M5223FP-600D		2
	01451578	I.C. AK4324-VF-E2	DAC	1
	15189261	I.C. BA 5218 AFP-600E	FLAT	1
	J5199110	I.C. L4940V5		1
	01670890	I.C. PQ3DZ53U	REGULATOR	1
	J5259133	I.C. TA7805 AF		1
	J5259163	I.C. LP2950 CZ-3.3		1
	00562601	POWER AMP LA4705		1
#	7775716000	I.C. FLEX ROM IC26 CPU EXR-7		1
#	7775717000	I.C. FLEX ROM IC51 CPU EXR-7		1

TRANSISTOR

	15129114	TRANSISTOR	2SC-1815GR	3
	15129136	TRANSISTOR	2SC-2878-A/B	4
	15129602	TRANSISTOR	2SD-667C	1
	15309101	TRANSISTOR	2SA-1037KR	1
	15129427	TRANSISTOR	2SC-2235Y	1
	15129164	TRANSISTOR	DTC-114ES	3
	15119163	TRANSISTOR	RN2227	8
	15329104	TRANSISTOR	2SK-368GR FET CHIP	1
	15119141	TRANSISTOR	DTA-114 ESATP	1

DIODE

	15019159RI	DIODE	1N-4148	231
	15119126	DIODE	1SS-133T REDUCED PITCH	5
	15339105	DIODE	DAN-202K	3
	15339108	DIODE	DA-204K	2
	15339109	DIODE	DAP 202K CHIP	2
	00019356	DIODE	1SR139-400 T-32	2
	01905134	SCHOTTKY DIODE	MA7D49	1
	01341623	DIODE LED	TLN 201	1
	01342578	PHOTO DIODE	TPS 708	1
	J5029112	LED DIODE	5 L-53 SRD-D / RED	2
	J5019118	LED DIODE	SLI-343DC 3F/UV ORANGE	45
	J5019119	LED DIODE	SLA 560EBT XM GREEN	2
	J5019120	LED DIODE SLA 560BBT3F XJ (BLUE)		1

#	J5339104	ZENER DIODE EDZ7.5B 7,5V CHIP		1
RESISTOR				
	J3709119	RESISTOR	4.7K OHM 1/8W 5%	6
	J3919104	RESISTOR ARRAY	EXB-A10E-103-J	12
	J3919107	RESISTOR ARRAY	EXB-V8V-101-JV	4
	J3919108	RESISTOR ARRAY	EXB-V8V-103-JV	5
	J3919109	RESISTOR ARRAY	EXB-V8V-470-JV	10
	J3919116	RESISTOR ARRAY	EXB-V8V-220-JV	1
	J3919115	RESISTOR ARRAY	EXB-V8V-223-JV	3
	J3809127	UNINFL. RES.	22 OHM 1/4W	1
	J3809158	ININF. RESISTOR	3.3 0.6W 5%	1
	J3809150	UNINFL.RES.	33 OHM 1/4W 5%	8
	J3809156	UNINFL. RES.	47 OHM 0.6W 5%	4
	J3809139	OXIDE RESISTOR	2.2 OHM 3W	2
	01783623	RESIST. 2010	10 OHM1/2W 5%	4
POTENTIOMETER				
	00459901	ROT. POT.	10KB 14K 1230	1
	13299206	TRIMMER POT.	EVND 8AA03B24	1
CAPACITOR				
	J3549105	POLY.COND.	10NF 5% P.5	4
	J3549106	POLY.COND.	100NF 5% P.5	9
#	J3549125	POLY.COND.	68NF 5% P.5	2
	J3629164	POLY. COND.	680N 5% P.5	3
	J3629165	CONDENSER	820N 5% P.5 POLIE	1
	J5369110	CONDENSER	0603 150P NP0 5%	1
	J3629144	ELCTRL.COND.	470UF 16V AX	1
	J3469156	ELECTR. COND.	33U 35V P.5	8
	J3629122	ELECTRL.COND.-V	1000UF 25V	4
	J3629103	ELECTRL.COND.	100U 25V P5	12
	J3629104	ELECTRL.COND.	10U 50V P5	7
	J3629105	ELECTRL.COND.	47U 50V P5	1
	J3629107	ELECTRL.COND.	1UF 100V P5	3
	J5369103	ELECTR.CAPACITOR RV2	100U 16V (SMD)	3
	J5369104	ELECTR. COND. RV2	10U 16V (SMD)	23
	J5369105	ELECTR.CAPACITOR RV3	33U 16V (SMD)	15
	J5369106	ELECTR. COND. RV2	1U 50V (SMD)	3
	J3629149	ELECTR.COND. 100U	16V H.7	1
	J3629143	ELECTR. COND. 10U	16V H.7	2
	J3629137	ELECTR. COND. 33U	16V H.7	3
	J3629142	ELECTR. COND. 1U	63V H.7	1
	13649103J0	UNPOL.COND.	10U 50 P5	4
INDUCTOR, COIL, FILTER				
<<EMI>>	12449382RI	NOISE SUP.	PLT1-R53C	1
<<EMI>>	12449380	NOISE SUP.	EXC-ELDR25V	2
<<EMI>>	00452034	CHIP NOISE SUP.	BK2125HM102	38
<<EMI>>	12449355	NOISE SUP.	FBR07H850TB00	3
<<EMI>>	01340834	FERRITE BEAD	EXCML 20A390	4
<<EMI>>	J2399109	NOISE SUP.	ELKE471FA CHIP	1
CRYSTAL, RESONATOR				
	00894034	X-TAL	16 MHZ MA-406	1
	00901912	X-TAL	24.576 MHZ MA-406	1
	01340745	XTAL MA-406	12MHZ	1
	01126267	X-TAL	7.056 MHZ MA-406	1
	J2389104	RESONATOR	CSTLS4M00G53-BO (4MHZ)	1
CONNECTOR				
	13419677RI	16P FEM. CONNECTOR AMP 1.27		3
	13369689RI	20P FEM. CONNECTOR AMP 1.27		3
	J3429122	14P FEM. CONNECTOR AMP 1.27		4
	J3429129	FEMALE CONNECTOR 18P AMP1.27		1
	J3429130	8P FEMALE CONNECTOR PHR-8 P.2 JST		2
	13369688RI	4P MALE CONN. P 2.5 M		2
	J3439120	4P MALE CONN. P.2 M		1
	J3439121	6P MALE CONN. P.2 M		1
	J3439143	34P MALE CONN. P. 1.27 M		1
	J3439123	6P MALE CONN. P. 2 M 90		2
	J3439148	7P MALE CONNECTOR P.2 M		4
	J3439184	4P MALE CONNECTOR 90 P.2.5M 5046-04		1
	J3439189	8P MALE CONNECTOR B8B-PH-K-S P.2 JST		2
WIRING, CABLE				
#	K3468283	4P CABLE ASSY	(86) -2C D/R	1
	K3468264	14P FLAT CABLE	(12) -2C D/R	1
	K3468207	34P FLAT CABLE	(60) + FERRITE	1
	J3469159	AWG18 CBL	(12) GREEN + FASTON (2)	2
#	7775713000	3P CABLE ASSY 2V/1R	(52) -4P 2C D/D	1
#	7775714000	2P COAXIAL CABLE ASSY	(36) -2C P.2 D/R	1
	7712023000	7P CABLE ASSY	(72) -2C P.2 D/R	1

#	7775715000	7P CABLE ASSY	(48) -2C P.2 D/R	1
	7775312000	8P CABLE ASSY	(40) -2C P.2 JST D/R	1
	7771708000	16P CABLE ASSY	(38)+ALUM. -2C D/R	1
#	7775723000	20P CABLE ASSY	(22)+ALL. -2C D/R	1

AC INLET

13449726	DC SUPPLY SOCKET	HEC 2305-01-230	1
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SCREW

J2289122	SCREW	2.2X6 TC TC BRUN	2
J2289101	SELF TAP.SCREW	2.9X 6 TC TC	8
J2289125	SCREW	2.9X10 TC TC PR TROP	75
J2289130	SCREW	2.9X13 TC TC PR TROP	9
J2289131	SELF TAP.SCREW	3.5X16 TCTCPRBZ	16
J2289160	SELF TAP.SCREW	2.9X13 TCTCPR BR	3
J2289212	SCREW	3.5X10 TC TC PR BRUN	12
J2289108	SELF LOCK.SCREW	M3X10 TCTC H.6	7
J2289221	SELFLOCK. SCREW	M4X10 TC TC TFR 9.5	2
J2289193	SELF LOCK.SCREW	M3X6 TC TC H.6	4
K2288107	SCREW	3.9X13.5 TC PR TFR H.8	7
J2289186	SCREW	3.5X16 TCPR TFR H.8 BRUN	23
J2289274	SCREW	2.9X13 TC BZ TFR T.7 TROP HILO	11

PACKING

K2678119	CARTENE ENVELOPE HD CM.170X56	1	
K2678106	POLYETH.ENVELOPE 40X55	1	
#	K2638304	CENTRAL LDPE SIDE EXR-7	1
#	K2638305	RIGHT LDPE END SIDE EXR-7	1
#	K2638306	LEFT LDPE END SIDE EXR-7	1
#	K2618303	OUTER CARTON (BROWN) EXR-7	1

MISCELLANEOUS

J2289113	NUT 3MA H.3	2	
J2139102	TOOTHED WASHER I/D 3	2	
22165134	BRASS BUSHING	4	
00453223	LED SPACER H. 7 E.D. 5	2	
#	K2268188	RIGHT VIBRATION DUMPER HLC/30 GREY EXR-7	1
#	K2268189	LEFT VIBRATION DUMPER HLC/30 GREY EXR-7	1
22265242	RUBBER GUIDE BUSHING	4	
K2358105	PRESSURE RUBBER	4	
12199584	FIXING SUPPORT M1698	1	
1342982301	POWER SUPPLY SOCKET HOLDER N2	1	
22365708	HOLDER F/POWER SUPPLY CBL	1	
01343089	D-BEAM CONTROLLER ESCT BLK	1	

ACCESSORIES

K2448115	SWITCHING ADAPTER MOD.SA165A-1250U-3-40W	for 230V/117V/230VE/240VA	1	
#	⚠ J3439188	AC CORD 230V FOR ADAPT.SA165A-1250U	for 230V	1
#	⚠ J3439190	AC CORD 117V FOR ADAPT.SA165A-1250U	for 117V	1
#	⚠ J3439192	AC CORD 230VE FOR ADAPT.SA165A-1250U	for 230VE	1
#	⚠ J3439191	AC CORD 240VA FOR ADAPT.SA165A-1250U	for 240VA	1
K3468279	USB CABLE M.2 BLACK	EXR-5	1	
#	K6018547	TONES & STYLES SHEET	EXR-7	1
#	K6018549	OWNER'S MANUAL (E/SP/F)	EXR-7	1
#	K6018550	OWNER'S MANUAL (D/IT/OL)	EXR-7	1
#	K601853401	SONGS SHEET	EXR-7/5/3	1

HOW TO SAVE HOW TO VERSION UP

Since EXR-7 has a flash memory for the System Program registration, you can update it by floppy disk.

Items Required:

SOFTWARE UPDATE DISK 1 EXR-7 (Code: 7775721000)
SOFTWARE UPDATE DISK 2 EXR-7 (Code: 7775722000)

HOW TO VISUALIZE THE SOFTWARE VERSION

In order to visualize the instrument's software version, turn the power on while keeping the buttons FUNCTION and 1 pressed at the same time.

The display visualizes:

VER X.XX

To exit, turn the power off.

HOW TO SAVE THE SOFTWARE ON A FLOPPY DISK

NOTE: Use unprotected formatted HD floppy disk

Turn the instrument on while keeping the buttons FUNCTION and 3 pressed. The display visualizes:

Save Sys

Then:

Ins Dsk #1

Insert disk 1 into the Floppy Disk Drive:

When this step is completed, the display visualizes:

Ins Dsk # 2

Insert disk 2 into the floppy disk drive.

When the software saving is completed, the display visualizes:

COMPLETE

The saving procedure is completed. Turn the power off.

HOW TO UPDATE THE SOFTWARE

Turn the power on while keeping the buttons FUNCTION and 0 pressed. The display visualizes:

Ins Dsk#1

Insert Disk 1 into the Floppy Disk Drive. Then the display visualizes:

Loading

When this step has been completed, the display visualizes:

Ins Dsk #2

Insert Disk 2 into the Floppy Disk Drive. When the software loading is completed, the display visualizes:

COMPLETE

The flash loading is completed.

Remove Disk 2 from FDD, turn the power off and, after a few seconds, turn it on again while keeping the button USER PROGRAM pressed. This way, the system will carry out the factory set-up automatically.

[IMPORTANT NOTE]

To make sure that the updating procedure has been carried out correctly, please run the "Pg" test (Program test) contained in the "Memory Test" section (refer to page 23)

HOW TO CARRY OUT THE FACTORY SETUP

Turn the instrument on while keeping the button USER PROGRAM pressed. The factory set-up is carried out automatically.

CAUTION !!

When the FACTORY SETUP is carried out, all the user's personal settings will be lost and replaced by factory settings.

TEST MODE

The general test menu has a hierarchical structure. You can get back to each menu page or up to the **MAIN MENU** page. The button **0** (0 = EXIT) allows you to interrupt any test except for:

Rom Test
Ram Test
WR Test

To enter TEST MODE turn the power on while keeping button 1 pressed.

At first, the display visualizes the test software version (i.e.: 1.02)

TEST V. X . XX

After a few seconds, it shows:

P K A M

Pressing the following buttons, you will enter the relative tests.

- 1** Control Panel Test (P1: first step, P2: second step, P3: third step, FDD: fourth step)
- 2** Keyboard Test
- 3** Audio Test
- 4** Memory Test

CONTROL PANEL TEST

By pressing button 1, the display visualizes:

p1 p2 p3 FD

Press button 1	P1	Control Panel Test
Press button 2	P2	Rear panel Test
Press button 2	P3	Pitch Bender/Modulation and D-Beam Test
Press button 3	FD	Floppy Disk Test

(P1) Control Panel Test

Pressing button 1, you enter the Control panel test and the display visualizes:

Sw Led Lcd

Pressing the button 1, you select Sw (SWITCH TEST);
Pressing the button 2, you select Led (LED TEST);
Pressing the button 3, you select Lcd (LCD TEST);

Press 0 to get back to the main menu.

SWITCH TEST

Pressing the button 1, you enter the Switch test:

Press the buttons on the control panel one by one in sequence. The display visualizes the name of the button pressed and you hear a sound.

After pressing each button the corresponding led lights up.

The switch test finishes when all the control panel's buttons have been pressed and the system goes automatically back to the main menu (Sw, Led, Lcd).

If you want to exit before pressing all the buttons, you can go back to the main menu (Sw, Led, Lcd) by keeping the buttons 1 and 0 pressed at the same time.

LED TEST

Pressing button 2, the display visualizes :



The LEDs light up in sequence. At the end of the sequence they are all on.

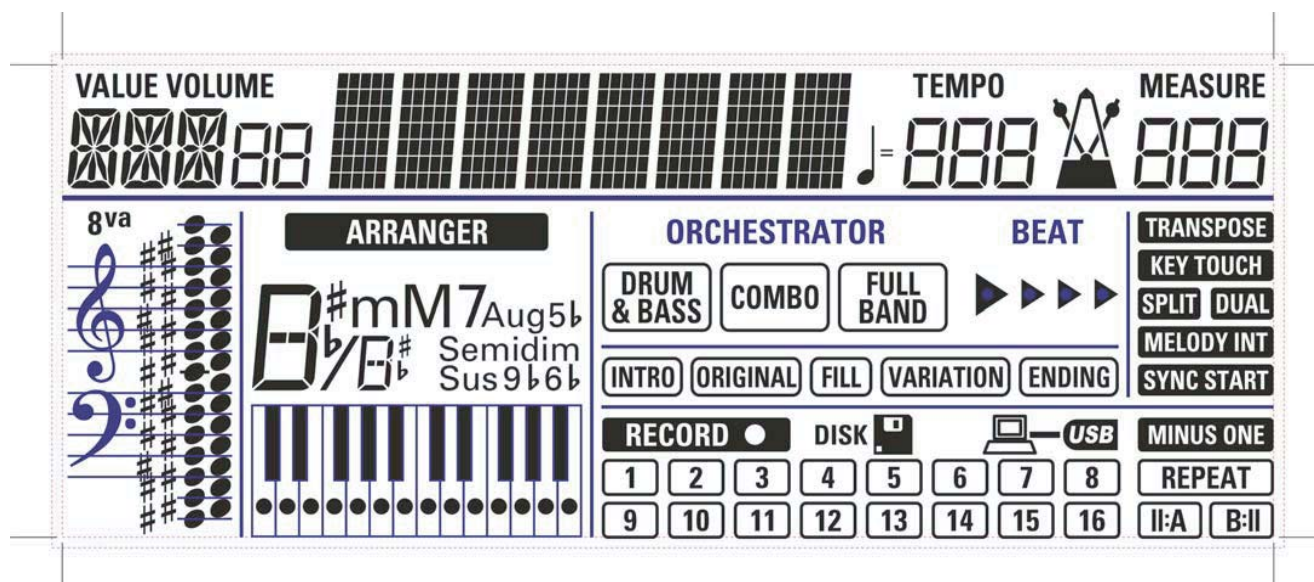
To exit, press button 0 (Exit).

LCD TEST

Pressing button 3, the display visualizes:



Pressing button 1 (ON), the display visualizes:



Press button 0 (Exit) to get back to the previous menu page.

Pressing button 2, the display shows the characters and symbols that are visualized when off.

Press 0 (Exit) 3 times to go back to the main menu.

(P2) Rear Panel Test

NOTE:

In this test you cannot test the USB port. To carry out the USB test, you can connect the EXR-7 to your computer and check if the computer recognises the EXR-7 as an external drive.

Go to main menu and press button 2. The display visualizes:

Foot MIDI

Connect a Sustain Pedal (ie.:DP-2) to EXR-7 FOOT SWITCH output.

Press button 1 to select the pedal test. Nothing is visualized on the display. Press and release the pedal. The display visualizes:

Sus XXX

XXX: ON if the pedal is full pressed; OFF if the pedal is released.

To exit, press button 0 (Exit).

MIDI Test

Pressing button 2, the display visualizes:

IN < - > OUT

After connecting the Midi cable by short-circuiting the IN / OUT sockets, the display visualizes:
OK (successful connection) or
ER (connection failed).

To exit press button 0 (Exit) twice.

(P3) Pitch Bender/Modulation and D-Beam

Go to main menu and press button 3. The display visualizes:

BendMod Db

:

(BendMod) PITCH BENDER and Modulation TEST

Pressing button 1, the display visualizes:

OFF 0

Moving the Pitch Bender lever onwards, the value changes from OFF to ON. When releasing it, the value changes from ON to OFF.

Moving the lever all leftwards, the display visualizes -128; moving the lever all rightwards, the display visualizes 127. Releasing the lever in central position, the display visualizes 0.

Press 0 (Exit) to go back

(Db) D-Beam Test

Press button 2 to select the D-Beam Test. The display visualizes:

0

Moving your hand vertically above the D-Beam, the value shown on the display changes from 0 to 127. When your hand is not on the D-Beam the value must be 0.

XXX

XXX= 0 to 127

Press 0 (Exit) twice to go back to the main menu.

(FD) Floppy Disk Test

Pressing button 4, the display visualizes:

FD TEST

Then:

Insert Disk

Insert an unprotected and formatted HD floppy disk into the floppy disk driver.
After a few seconds the display visualizes:

OK or Er

The system automatically writes and reads the disk.

Wait for the test result before leaving test mode:

- OK : if the test is successful;
- Disk Error: if there are any writing or reading problems;
- WRProt: if a protected disk has been inserted.

Once the test has been completed, extract the disk.

To exit press the button 0 (Exit) twice.

KEYBOARD TEST

Pressing button 2 on the main menu, the display visualizes:

YY XXX

When you press the keys, the display visualizes the number of the key pressed and its velocity value.

YY: Key (from 28 to 103)

XXX: Velocity value

To exit press the button 0 (Exit).

AUDIO TEST

CAUTION: Make sure the instrument is powered by an adaptor SA165A-1250U-3.

Pressing button 3 on the main menu, the display visualizes:

Si Ft Ef

Pressing button 1, the display visualizes:

SINE

Test procedure:

1. Insert a stereo jack into the headphones socket;
2. Put the volume potentiometer at max;
3. Check by an oscilloscope that the signals at the stereo jack have the following values (tolerance +/- 5%):

	LEFT	RIGHT
Amplitude	3,10Vpp	3,30Vpp
Frequency	880Hz	1760Hz

To exit press button 0 (Exit).

NOTE:

The audio test can also be carried out when powering on. In order to do it, turn the instrument on while keeping the button 3 pressed.

Frequency test (FT test)

Pressing button 2 you enter **FT** test. The display visualizes:

f 1 f 2 f 3

Pressing button 1, you hear a sine sound of 100 Hz coming from both right and left loudspeakers and the display visualizes:

100 Hz

To exit press button 0 (Exit).

If you press button 2, you hear a sine sound of 1000 Hz coming from both right and left loudspeakers and the display visualizes:

1000 Hz

To exit press button 0 (Exit).

If you press button 3, you hear a sine sound of 5000 Hz coming from both right and left loudspeakers and the display visualizes:

5000 Hz

To exit press the button 0 (Exit) twice.

Effect Test

On Audio Test menu, pressing button 3, the display visualizes:

REV CHO

Pressing button 1, you select REVERB TEST;
Pressing button 2, you select CHORUS TEST;

Reverb test

Pressing button 1, the display visualizes:

Reverber

You hear a reverbered drum sound from the loudspeakers.

To exit press button 0 (Exit).

Chorus test

Pressing button 2, the display visualizes:

Chorus

You hear a square wave sound with chorus effect coming from the loudspeakers.

To exit press button 0 (Exit) 3 times.

MEMORY TEST

Pressing button 4 on the main menu, the display visualizes:

M1 M2

Pressing button 1, the display visualizes:

Pg Ra FI

Pressing button 1 to enter Pg (IC-38), the display visualizes:

WAIT

Then, the display visualizes the test result:

Ok: test succeeded
Er: test failed

To exit press button 0 (Exit).

Pressing button 2 to enter Ra (IC-18), the display visualizes:

Wait

Then, the display visualizes the test result:

Ok: test succeeded
Er: test failed

To exit press button 0 (Exit).

Pressing button 3 to enter FI (IC-36), the display visualizes:

Wait

Then, the display visualizes the test result:

Ok: test succeeded
Er: test failed

Press 0 twice to get back to the **M1 M2** menu.

Press button 2, the display visualizes:

Wr Eram

Pressing button 1 (**Wr**), the display visualizes:

Wave Rom

Once the test is completed, the display visualizes the test result:

Ok: test succeeded
Er: test failed

To exit press button 0 (Exit).

Pressing button 2 (**Eram**), the display visualizes:

Eram Test

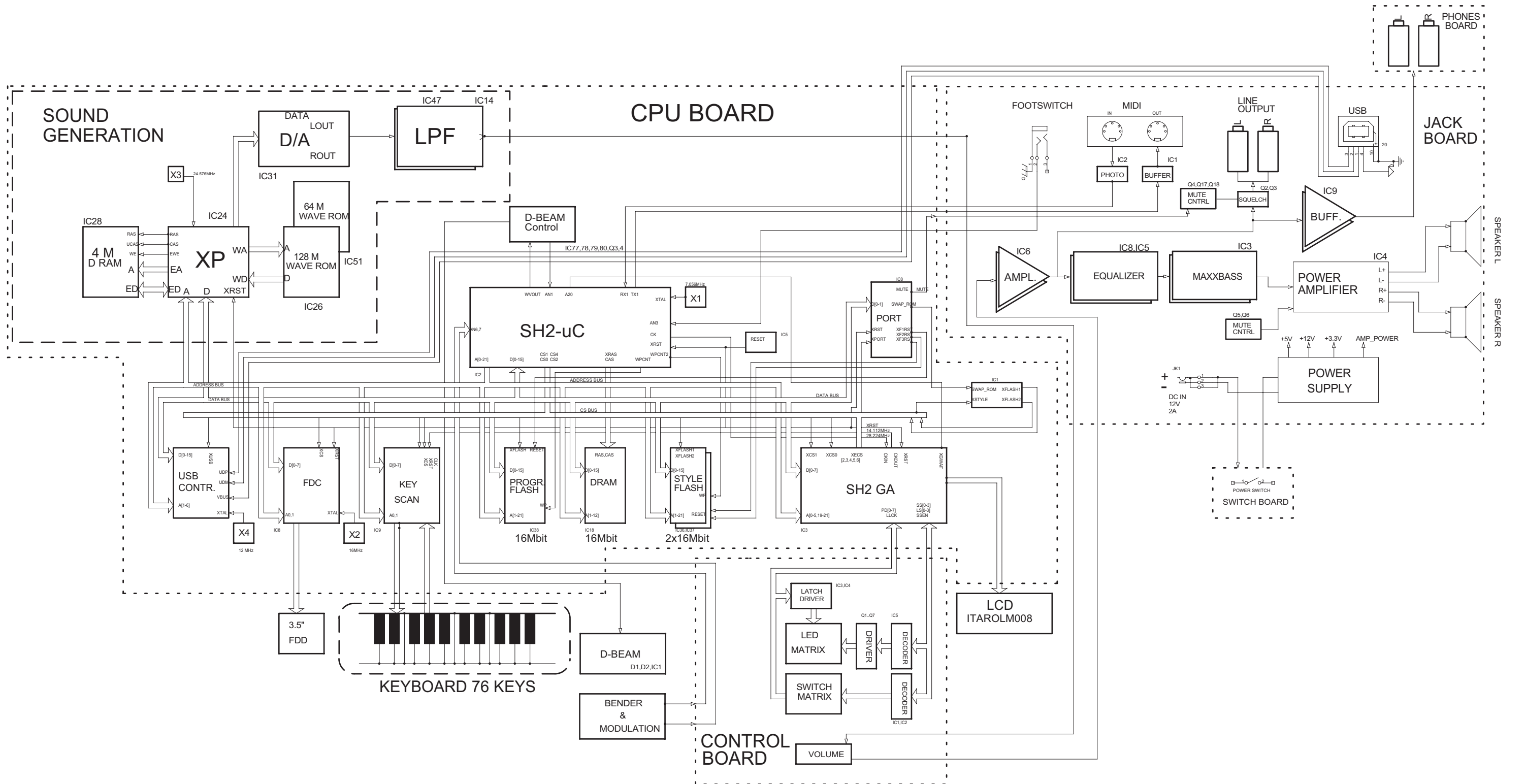
Once the test is completed, the display visualizes the test result:

Ok: test succeeded
Er: test failed

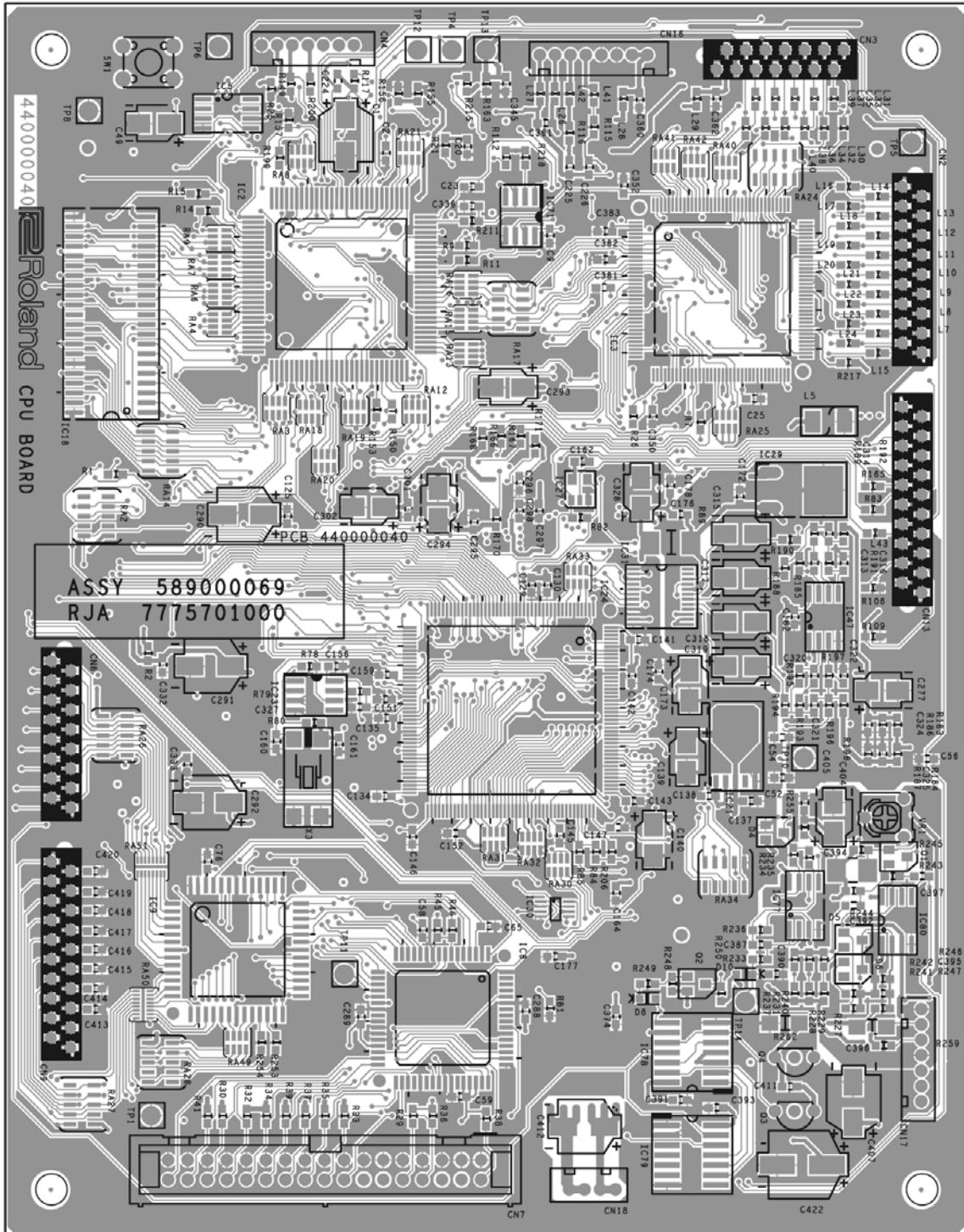
Pressing button 0 (Exit). 3 times to get back to the main menu

To exit, turn the power off.

BLOCK DIAGRAM

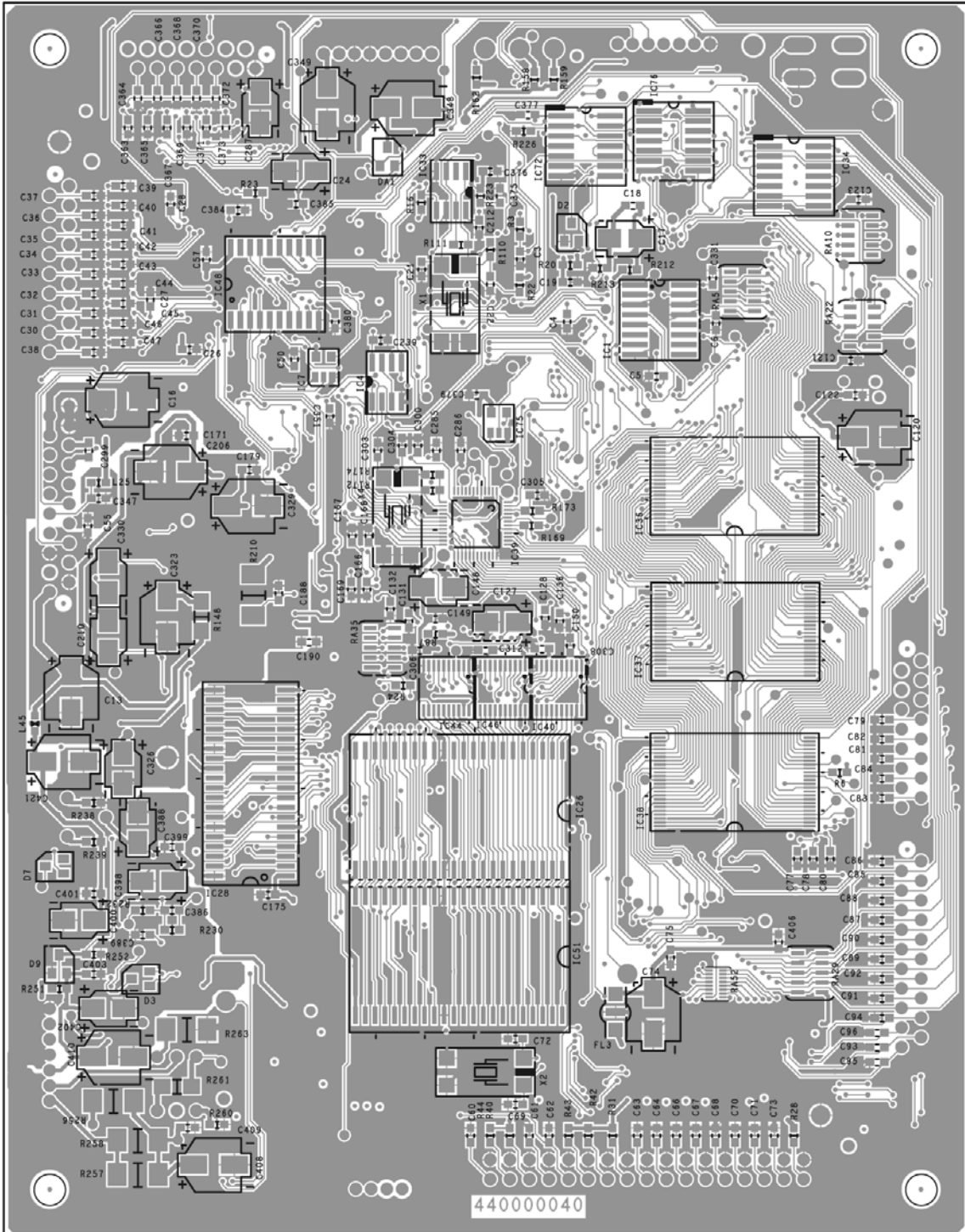


CIRCUIT BOARD (MAIN)



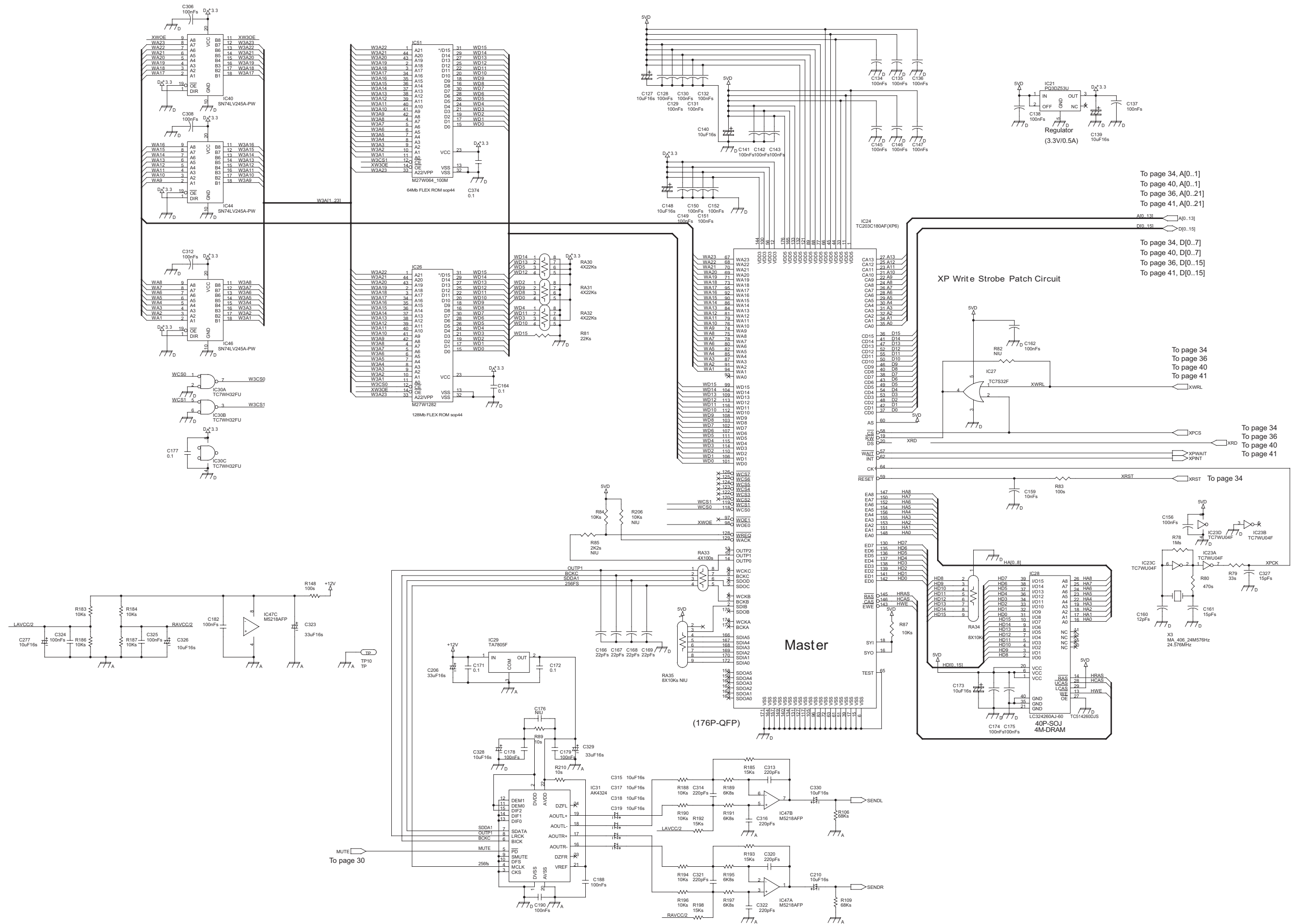
View from component side

CIRCUIT BOARD (MAIN)



View from solder side

CIRCUIT DIAGRAM (MAIN 2/7 - XP SECTION)



To page 34, A[0..1]
 To page 40, A[0..1]
 To page 36, A[0..21]
 To page 41, A[0..21]

To page 34, D[0..7]
 To page 40, D[0..7]
 To page 36, D[0..15]
 To page 41, D[0..15]

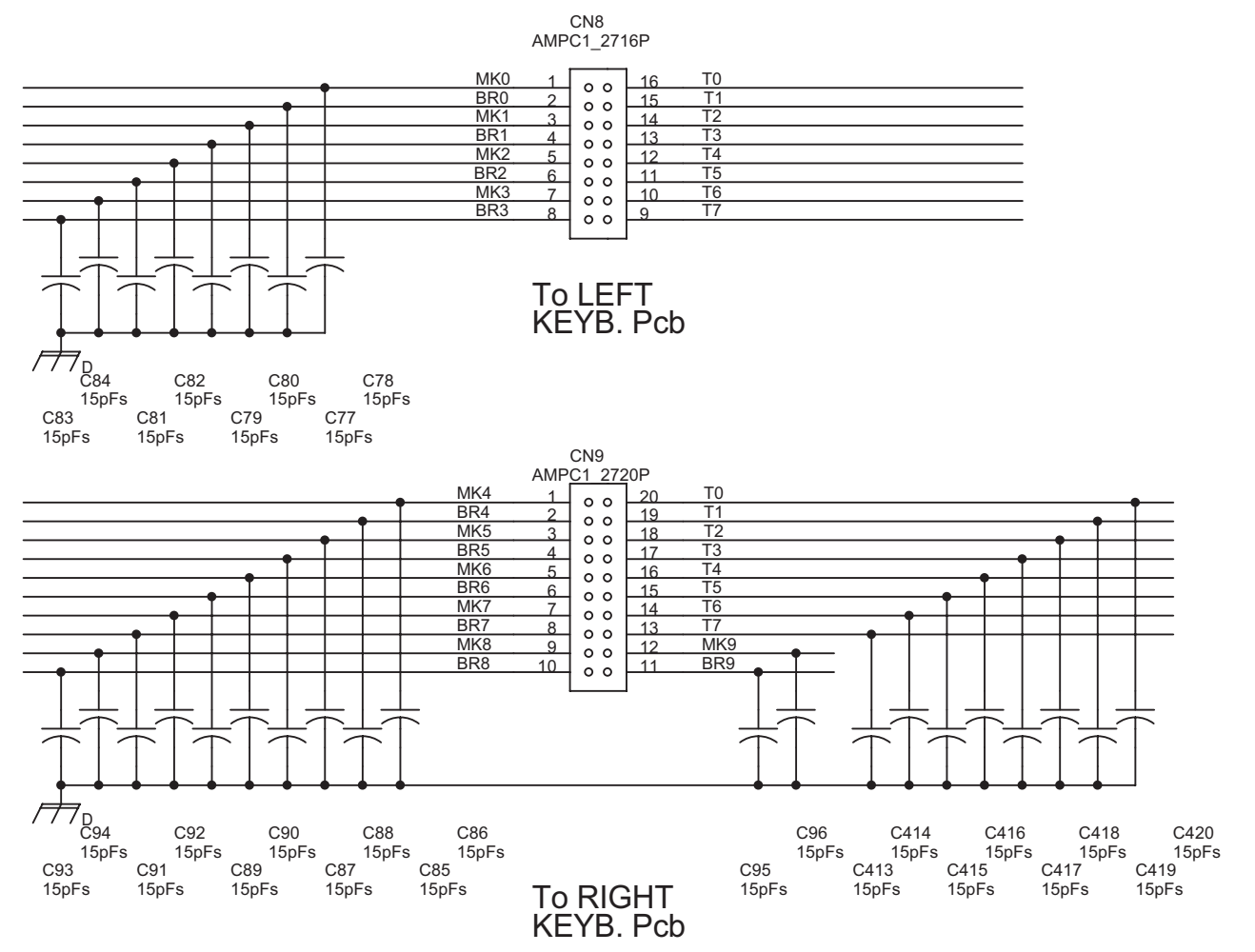
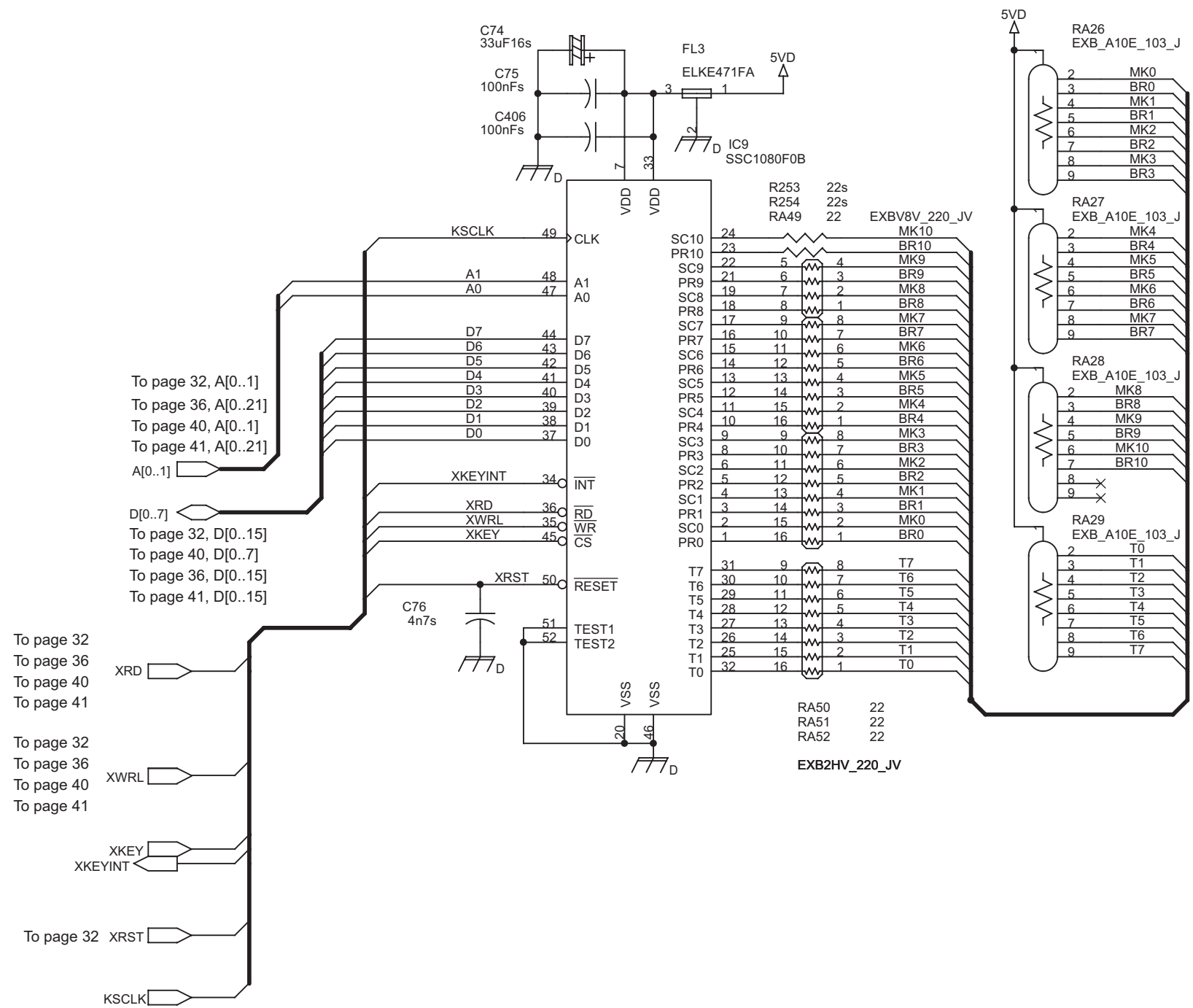
To page 34
 To page 36
 To page 40
 To page 41

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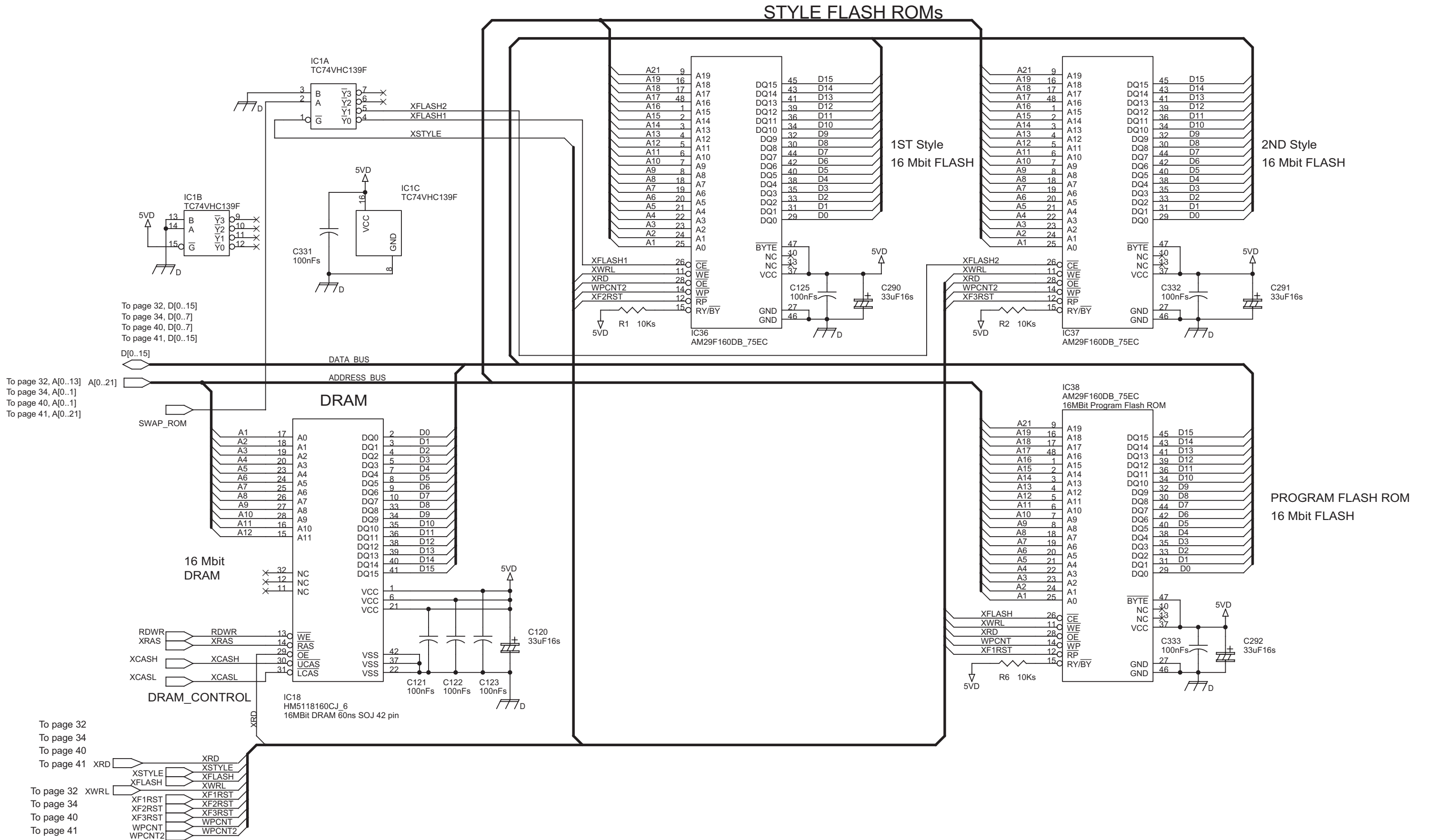
To page 34

XG
 MA 406 24M576Hz
 24.576MHz

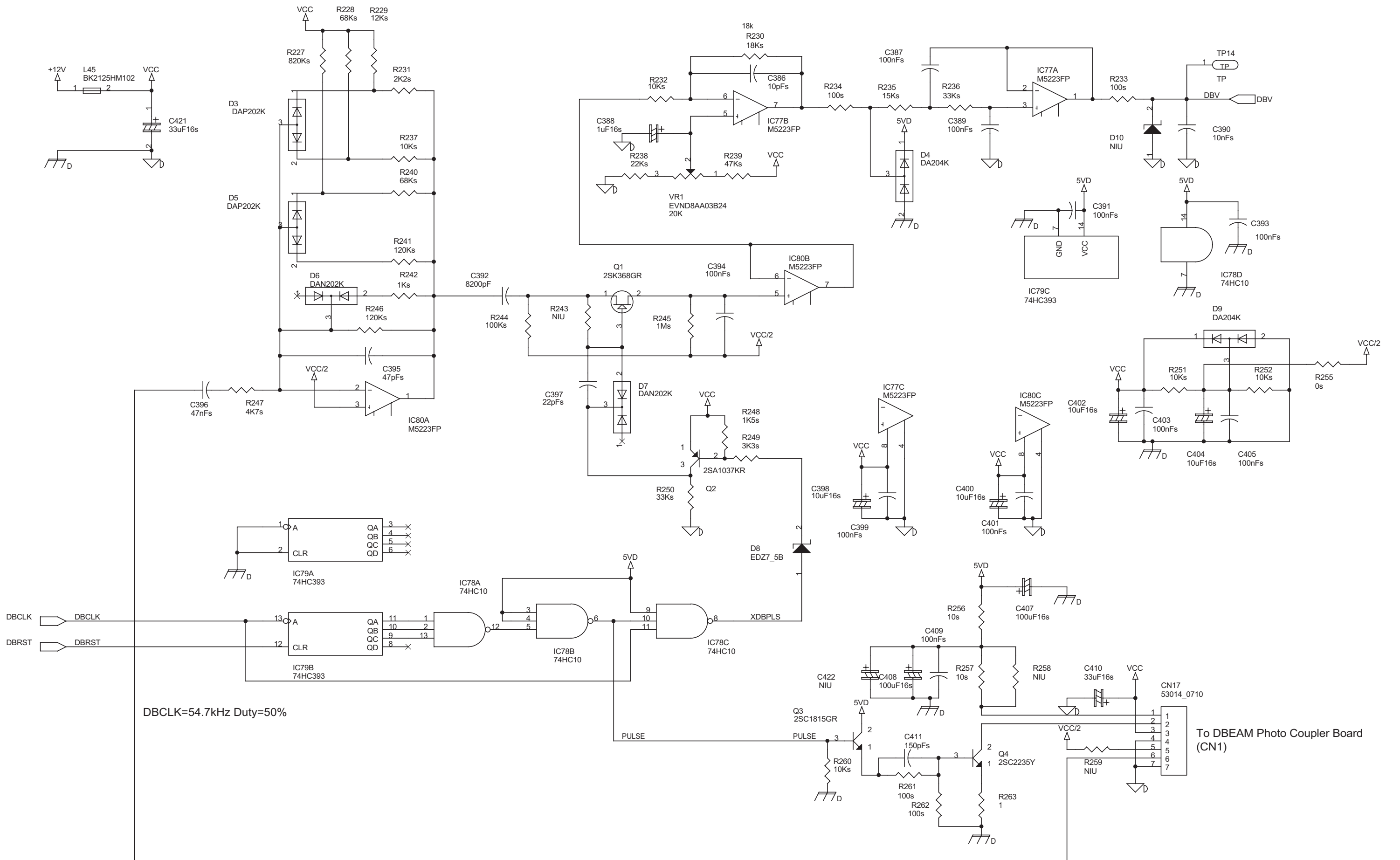
CIRCUIT DIAGRAM (MAIN 3/7 - KEY SECTION)



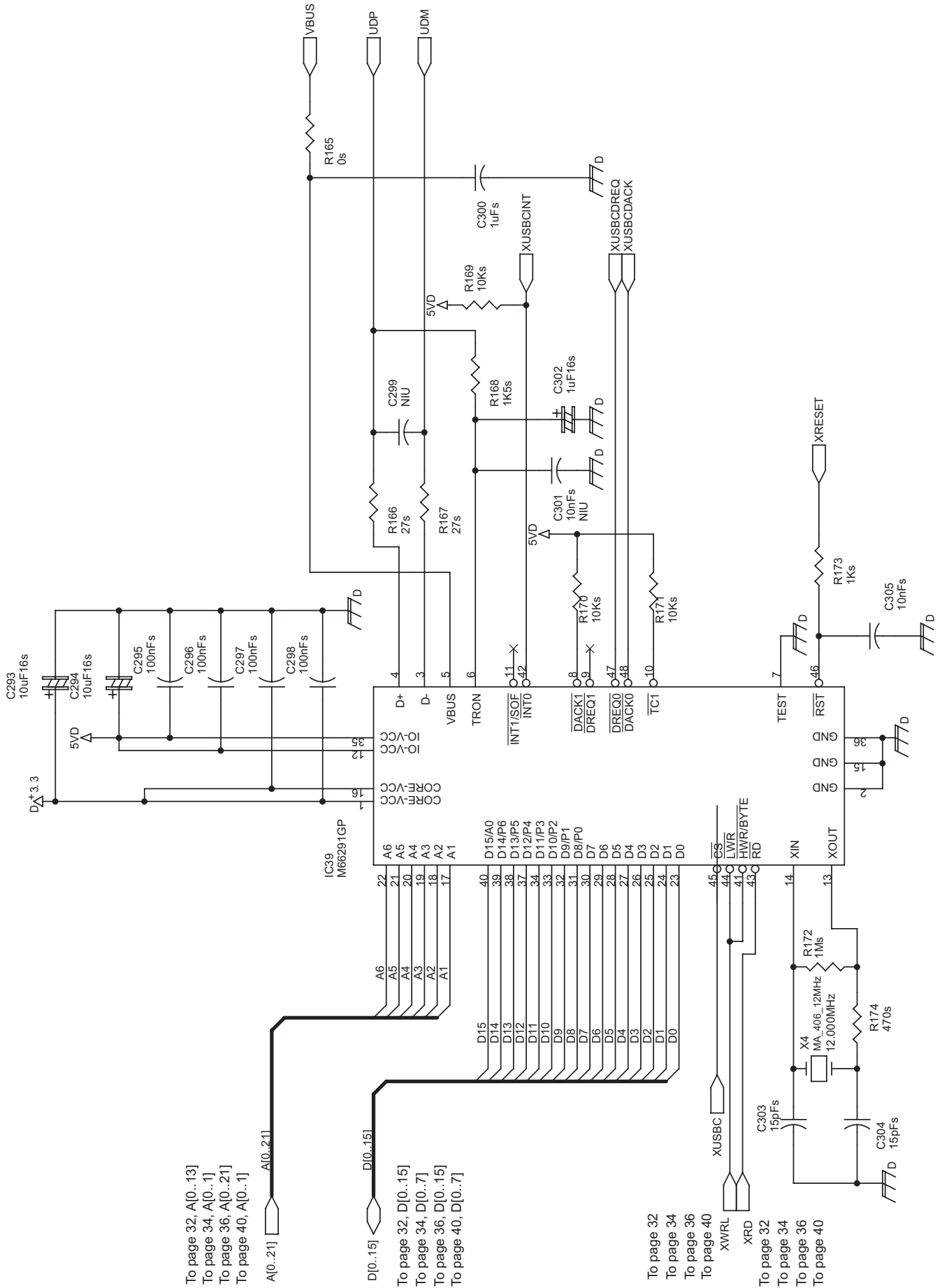
CIRCUIT DIAGRAM (MAIN 4/7 - MEMORY SECTION)



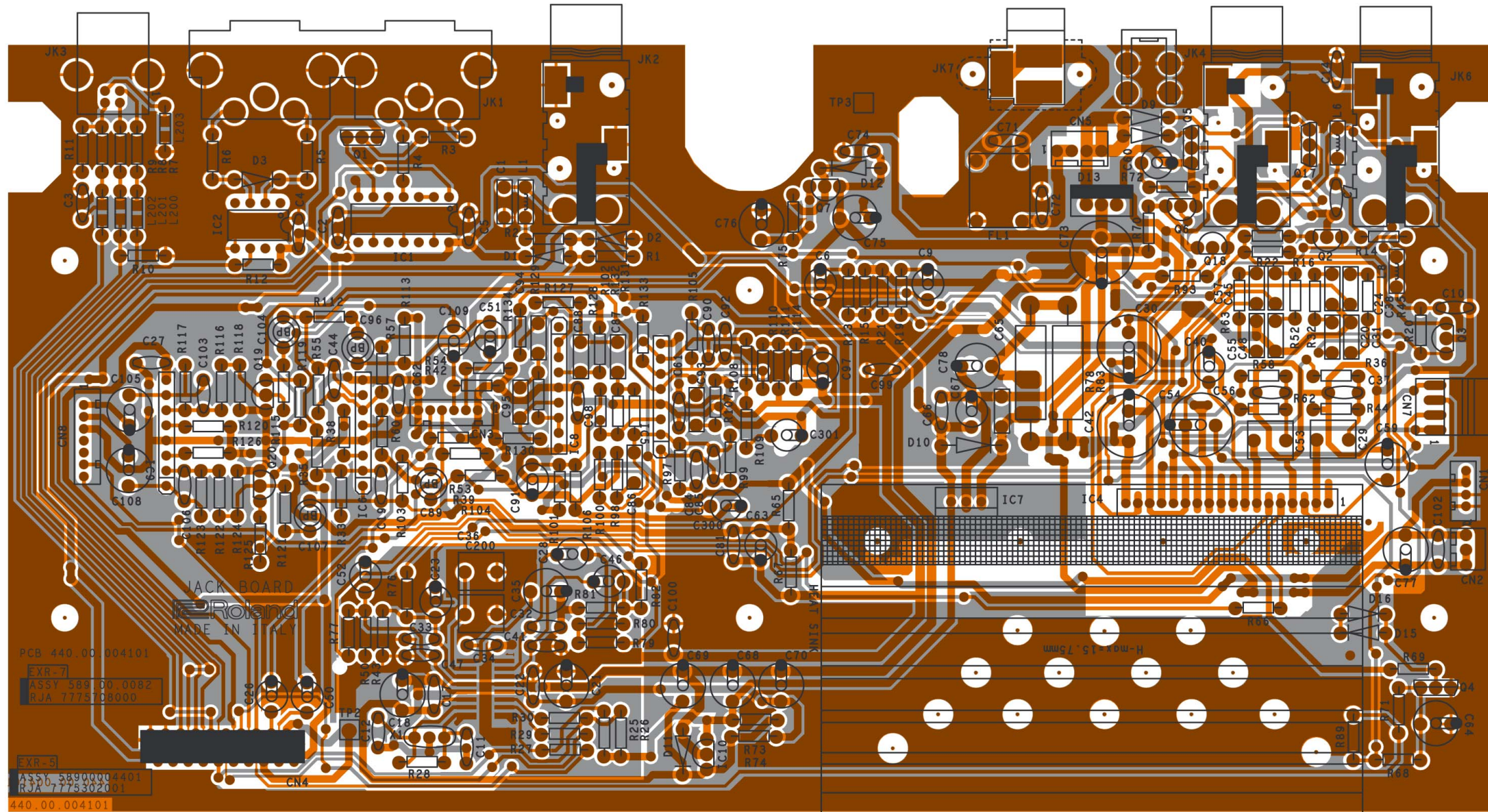
CIRCUIT DIAGRAM (MAIN 5/7 - D-BEAM SECTION)



CIRCUIT DIAGRAM (MAIN 7/7 - USB SECTION)

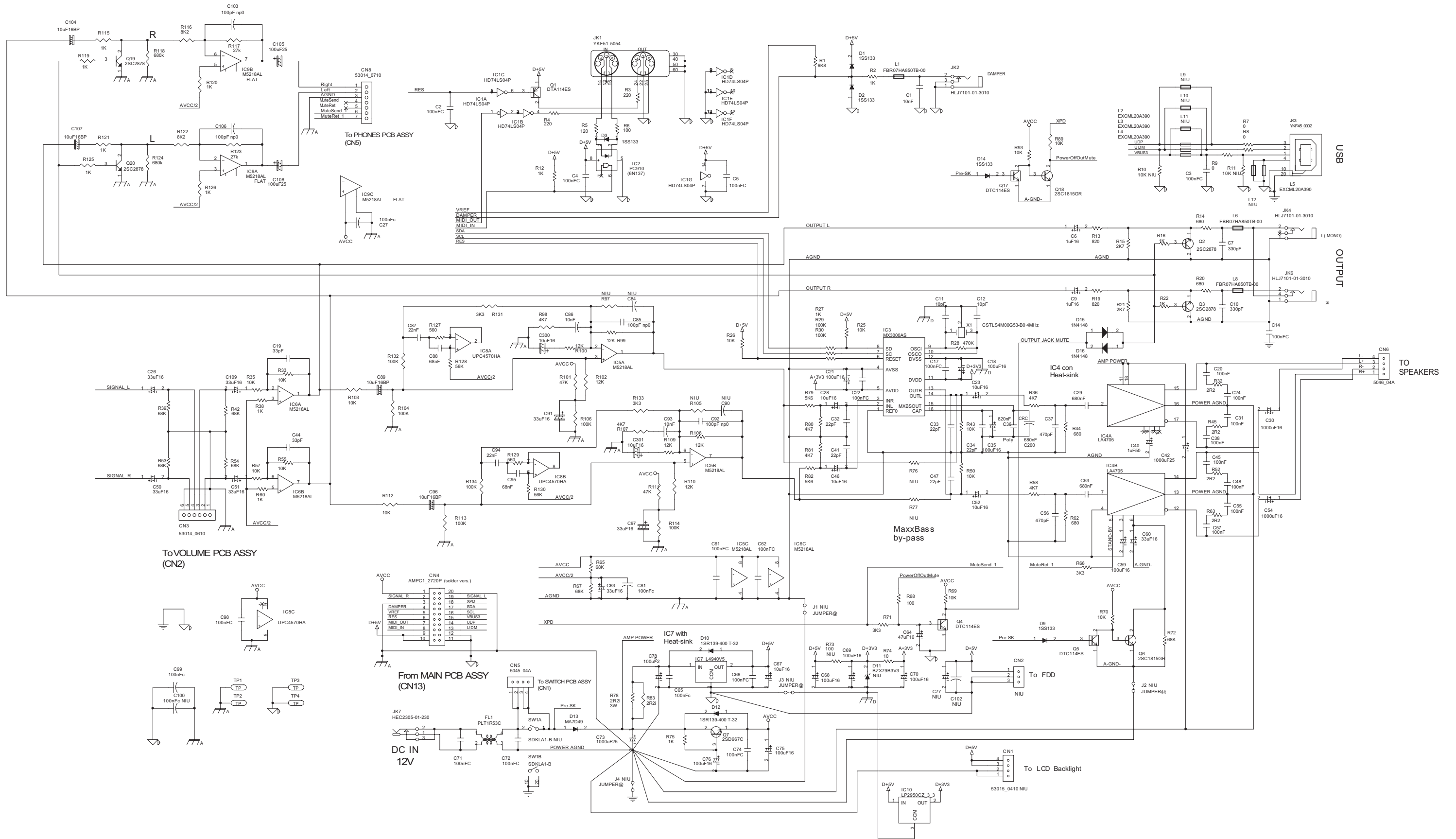


CIRCUIT BOARD (JACK)

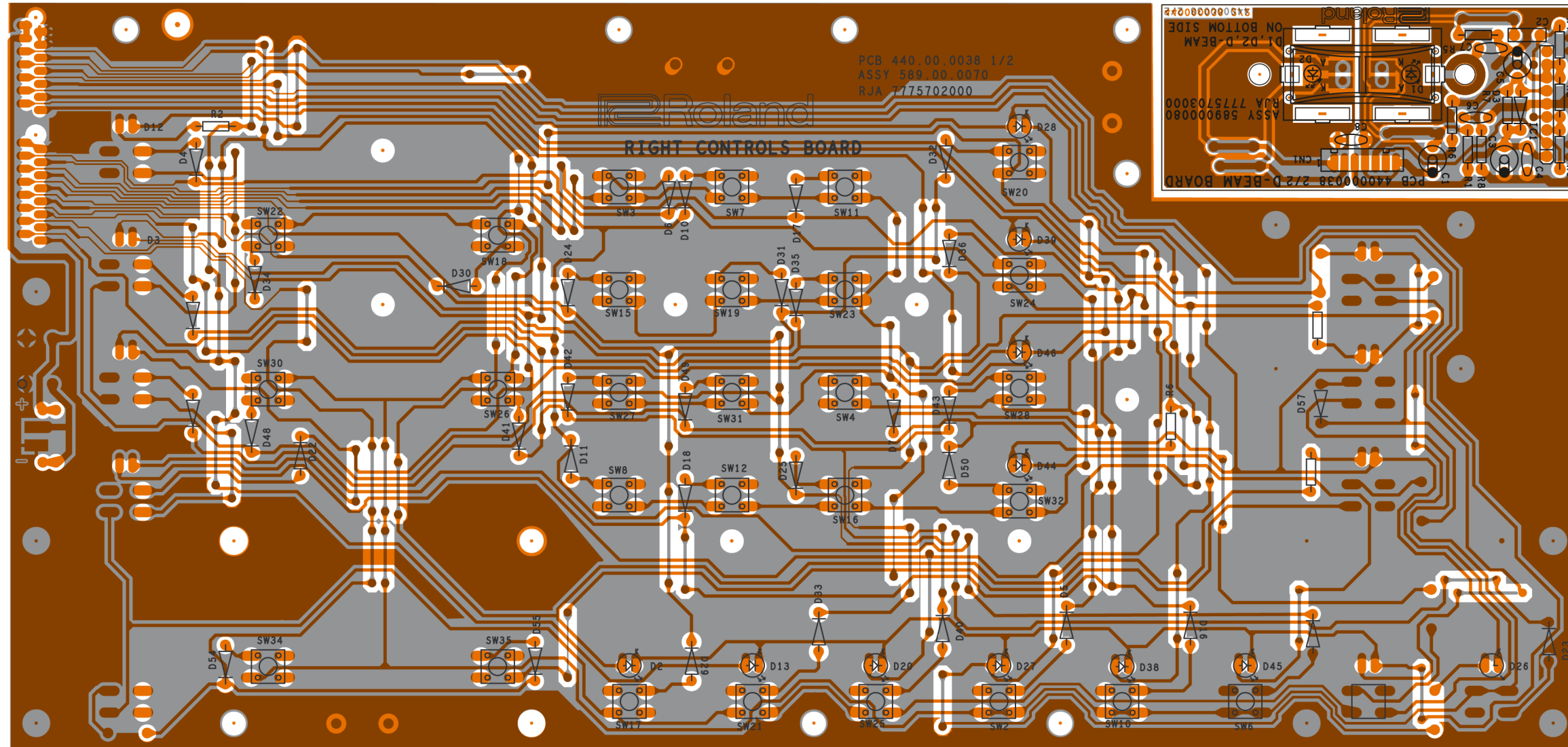


View from component side

CIRCUIT DIAGRAM (JACK)

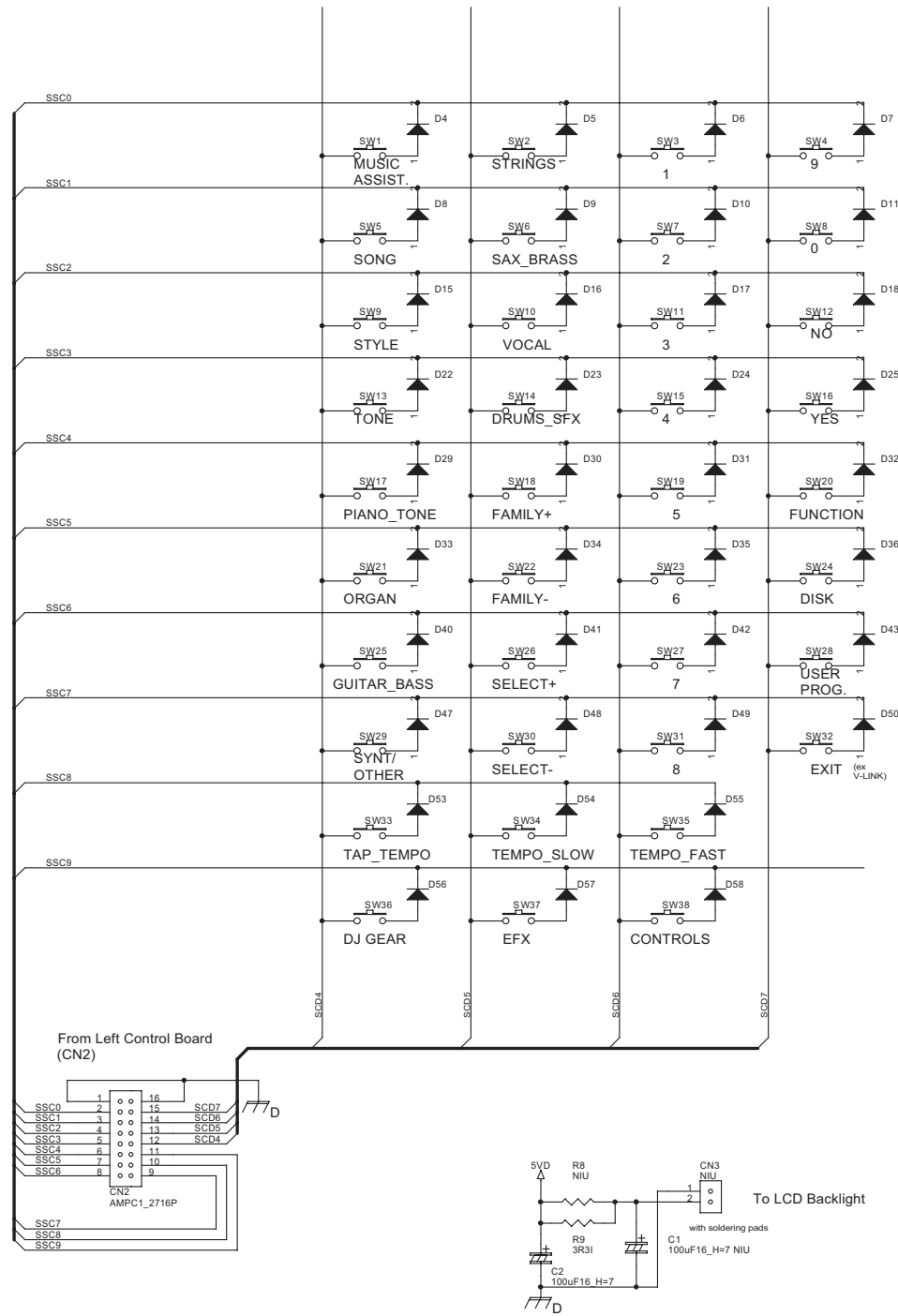


CIRCUIT BOARD (RIGHT CONTROL/ D-BEAM)

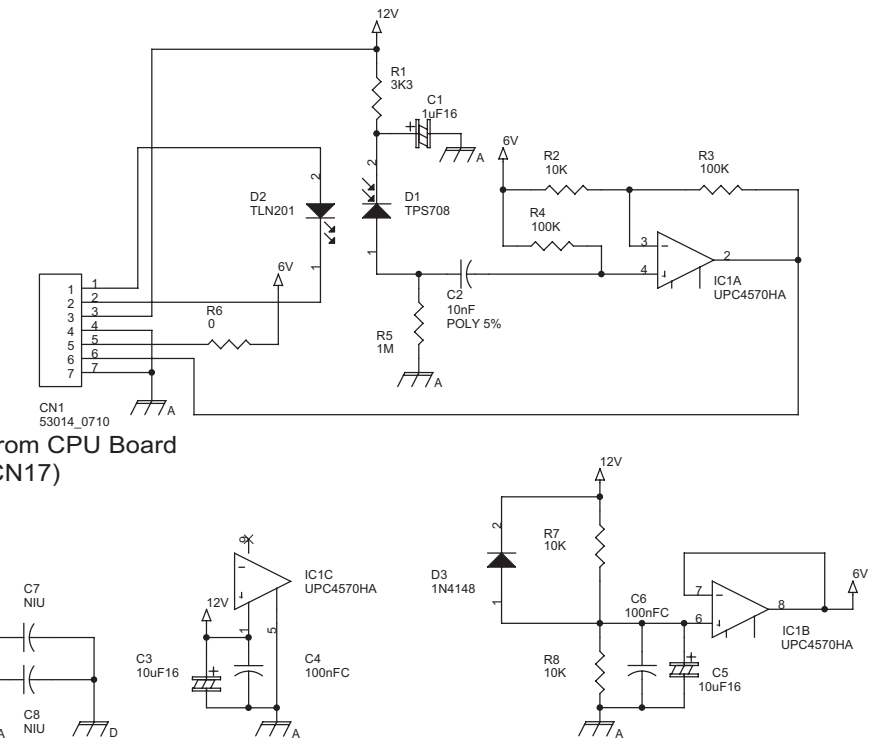
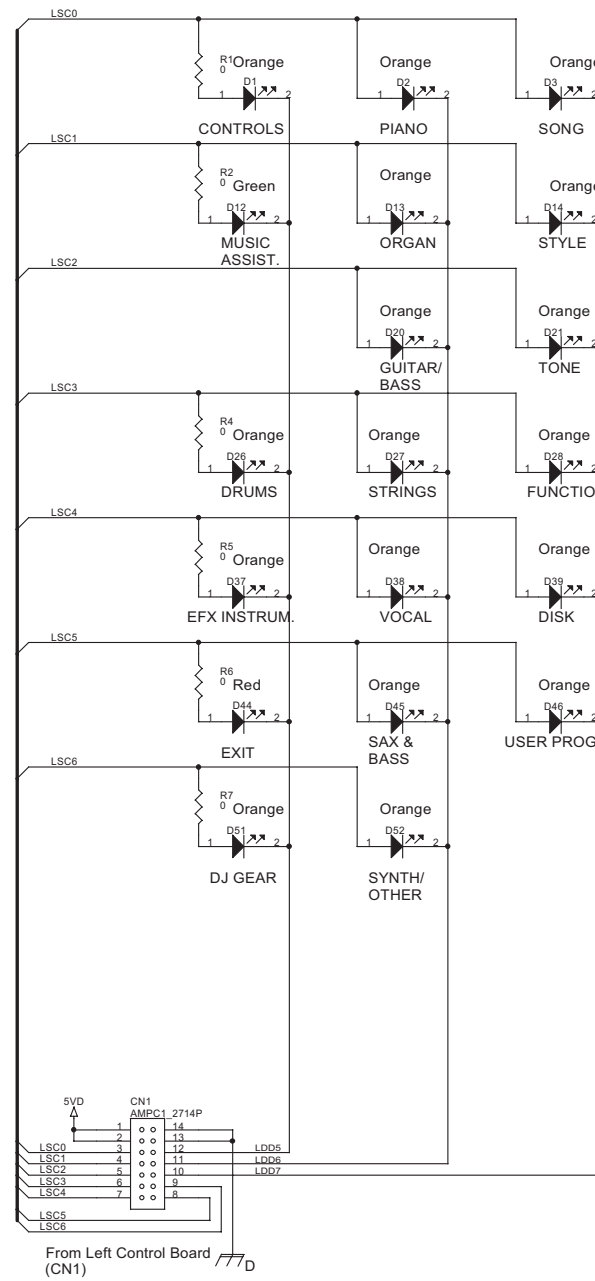


View from component side

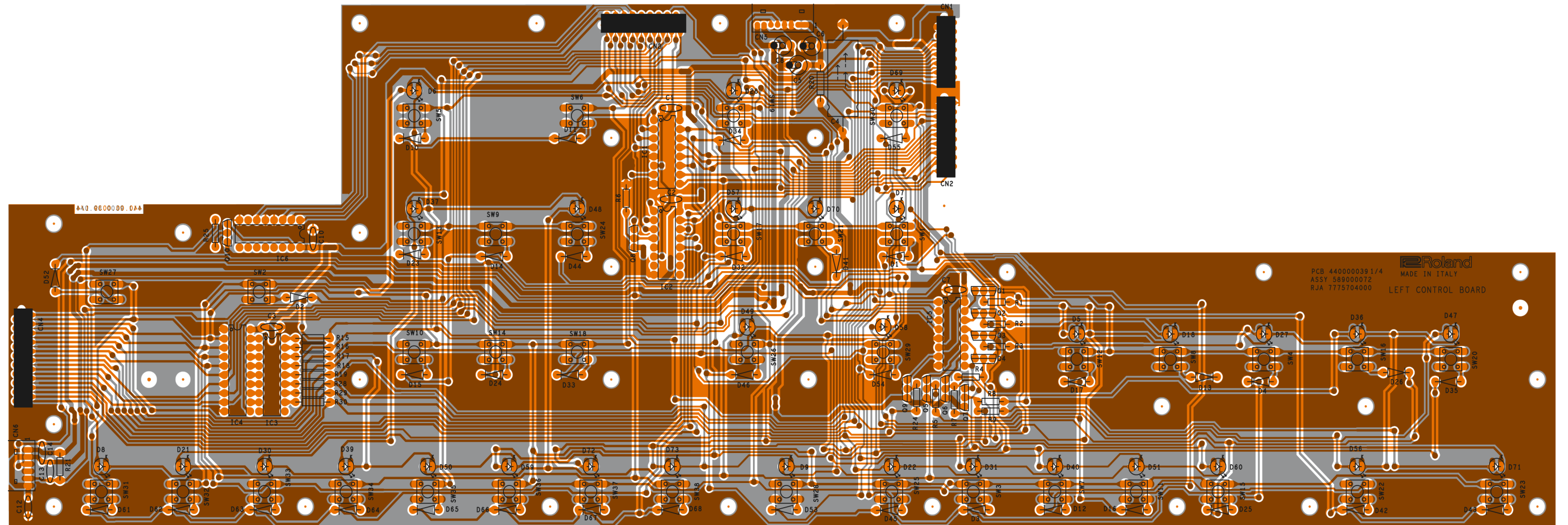
CIRCUIT DIAGRAM (RIGHT CONTROL)



CIRCUIT DIAGRAM (D-BEAM)

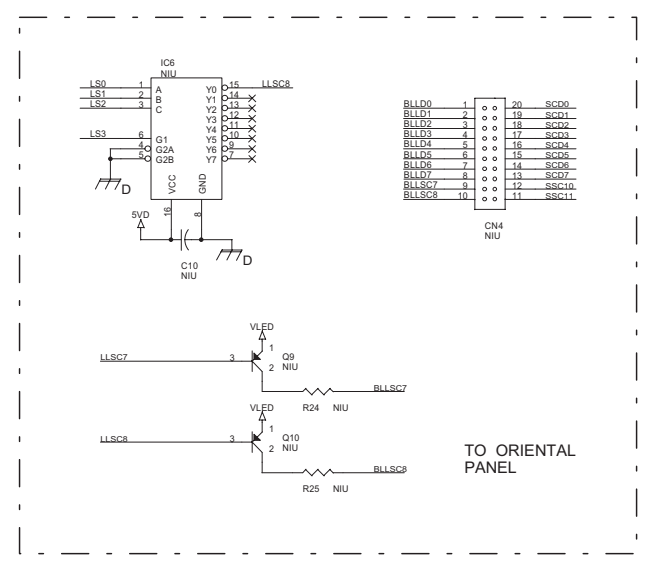
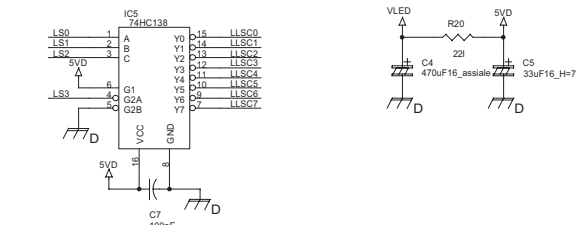
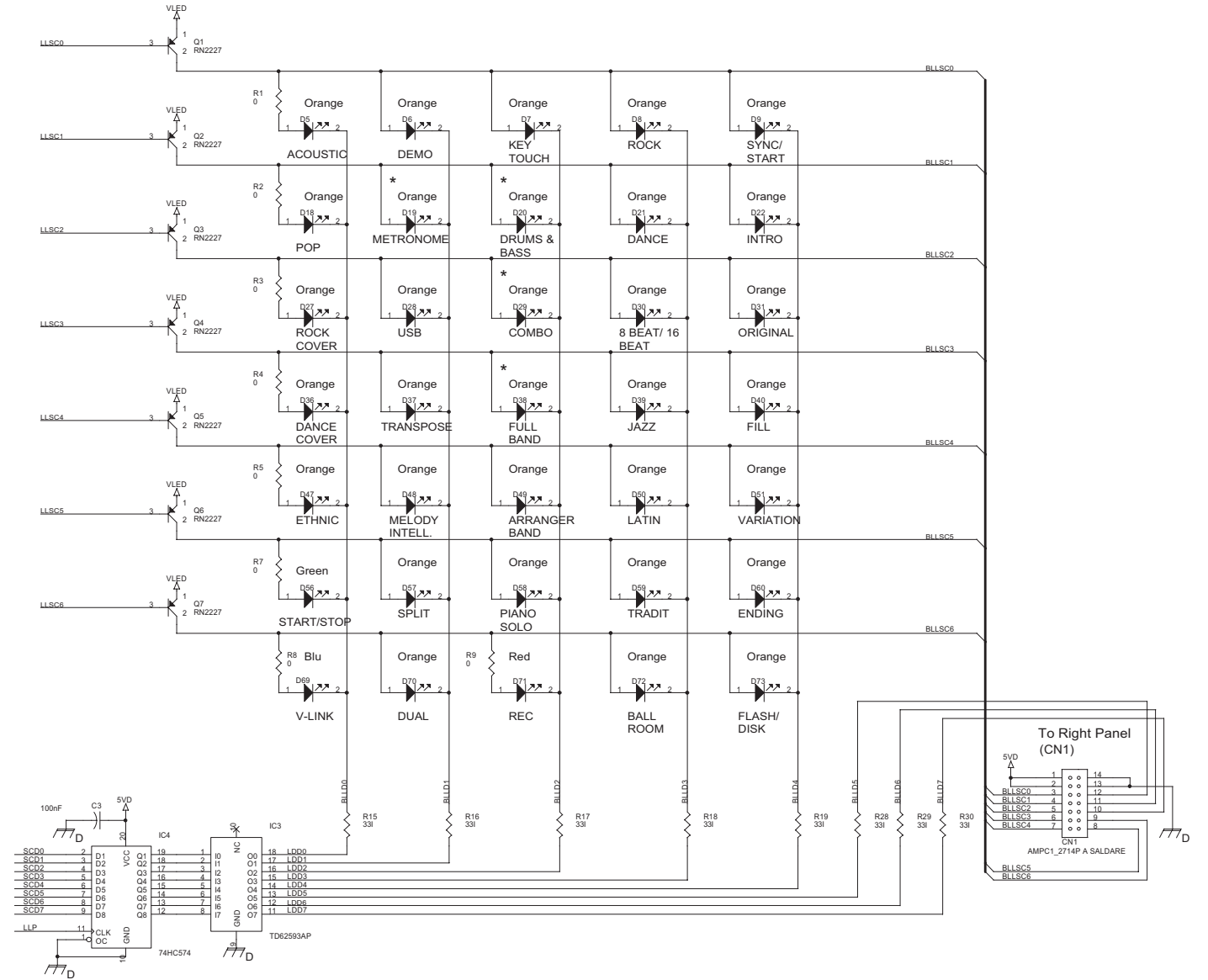
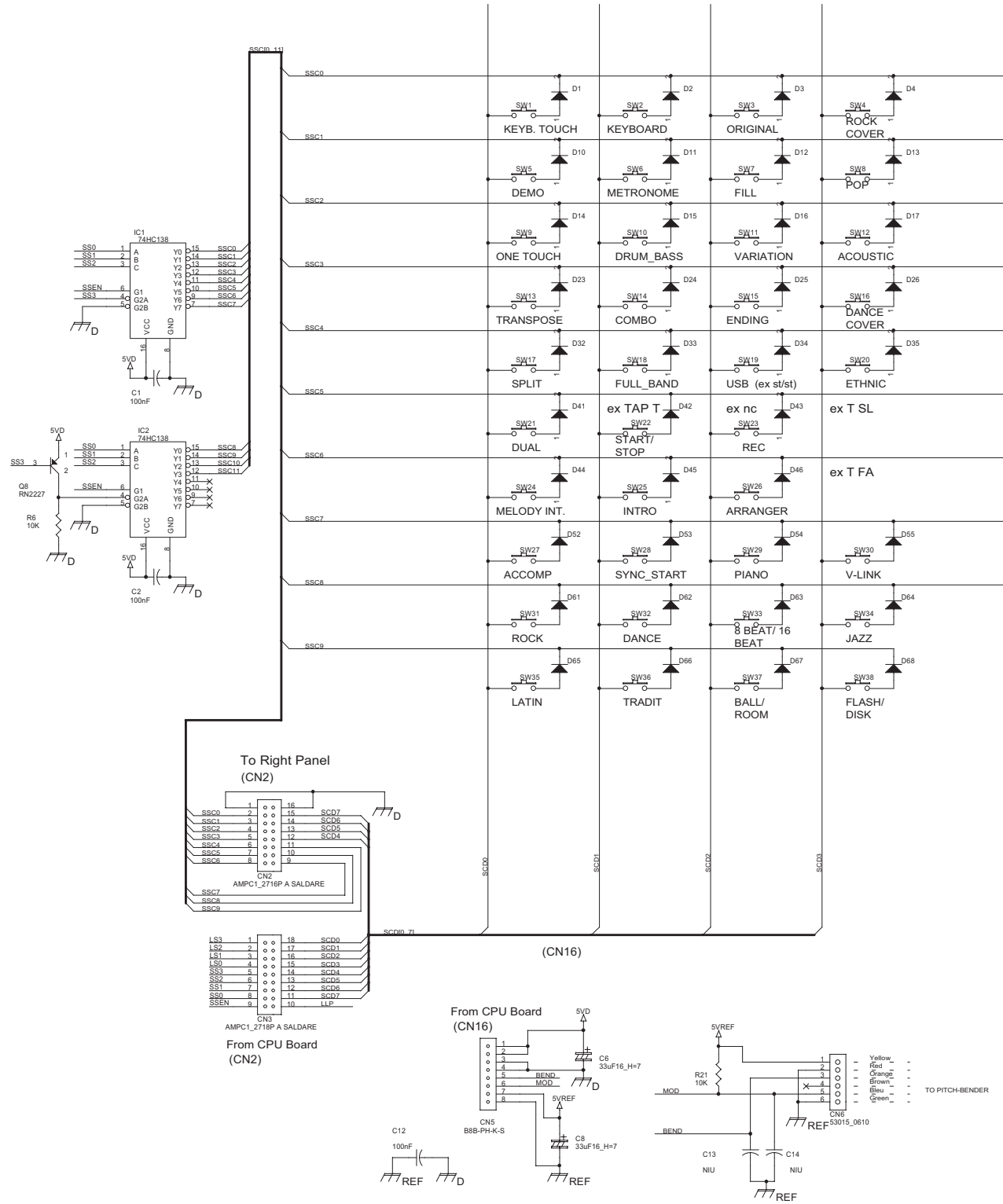


CIRCUIT BOARD (LEFT CONTROL)

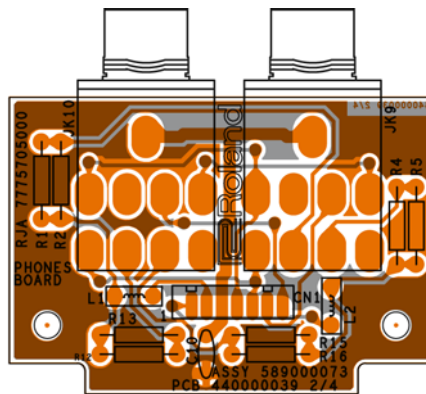


View from component side

CIRCUIT DIAGRAM (LEFT CONTROL)

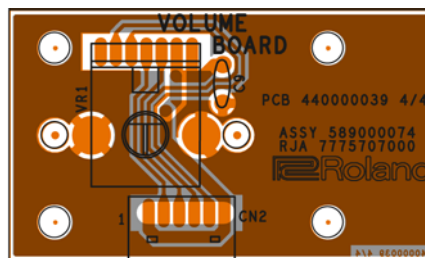


CIRCUIT BOARD (PHONES)



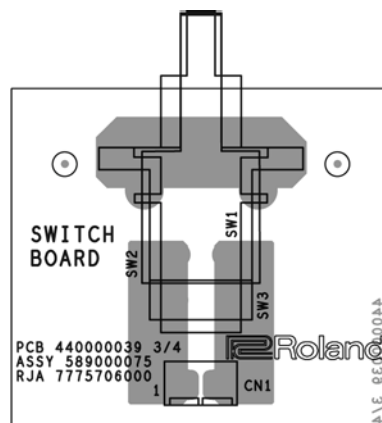
View from component side

CIRCUIT BOARD (VOLUME)



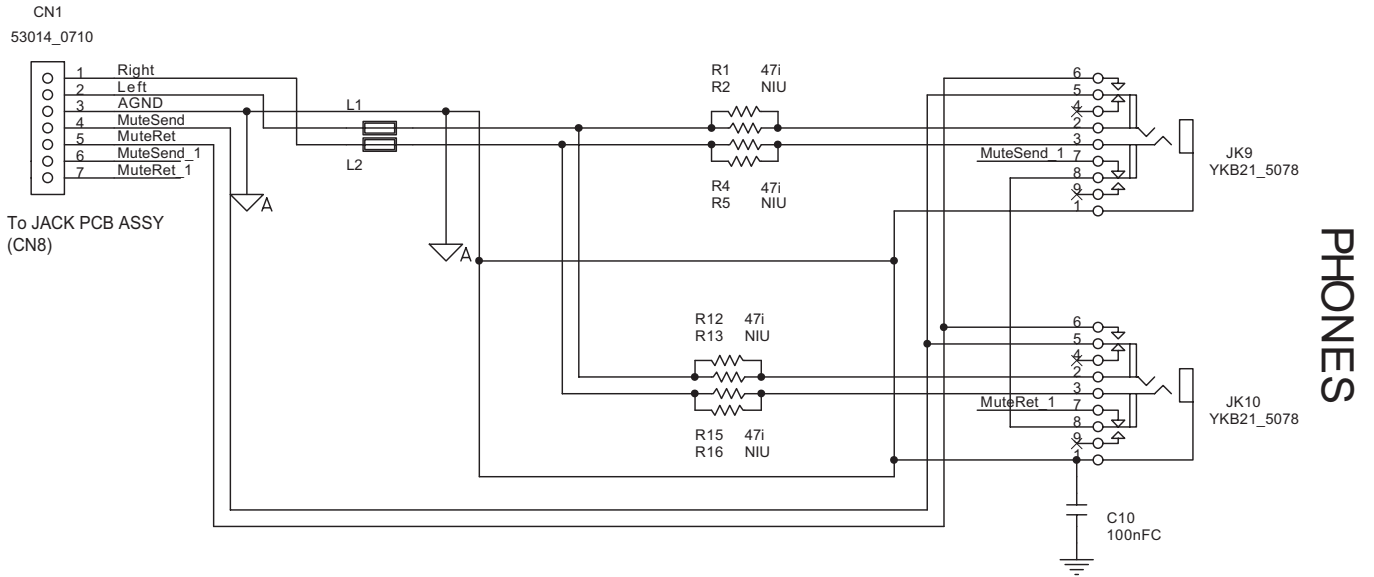
View from component side

CIRCUIT BOARD (SWITCH)



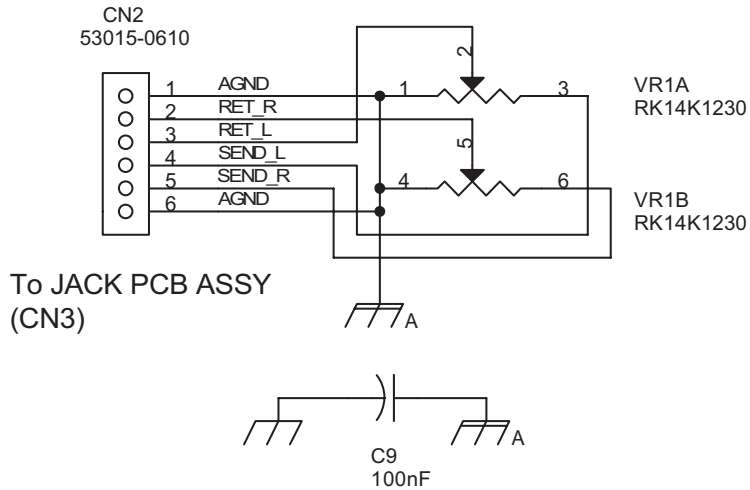
View from component side

CIRCUIT DIAGRAM (PHONES)

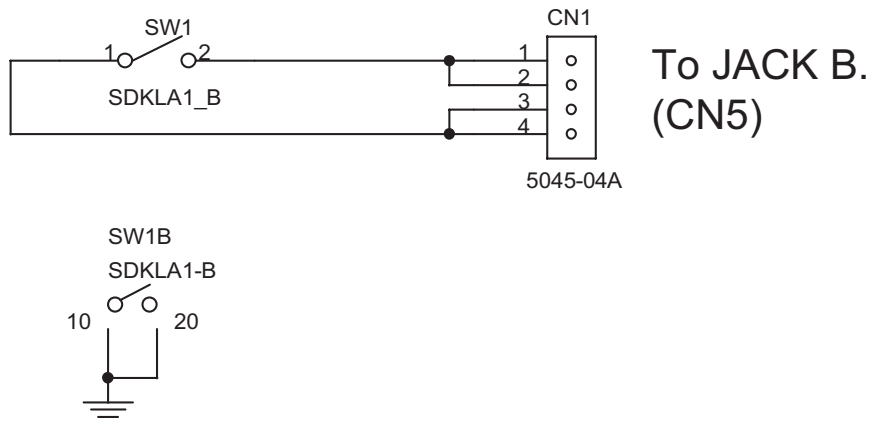


CIRCUIT DIAGRAM (VOLUME)

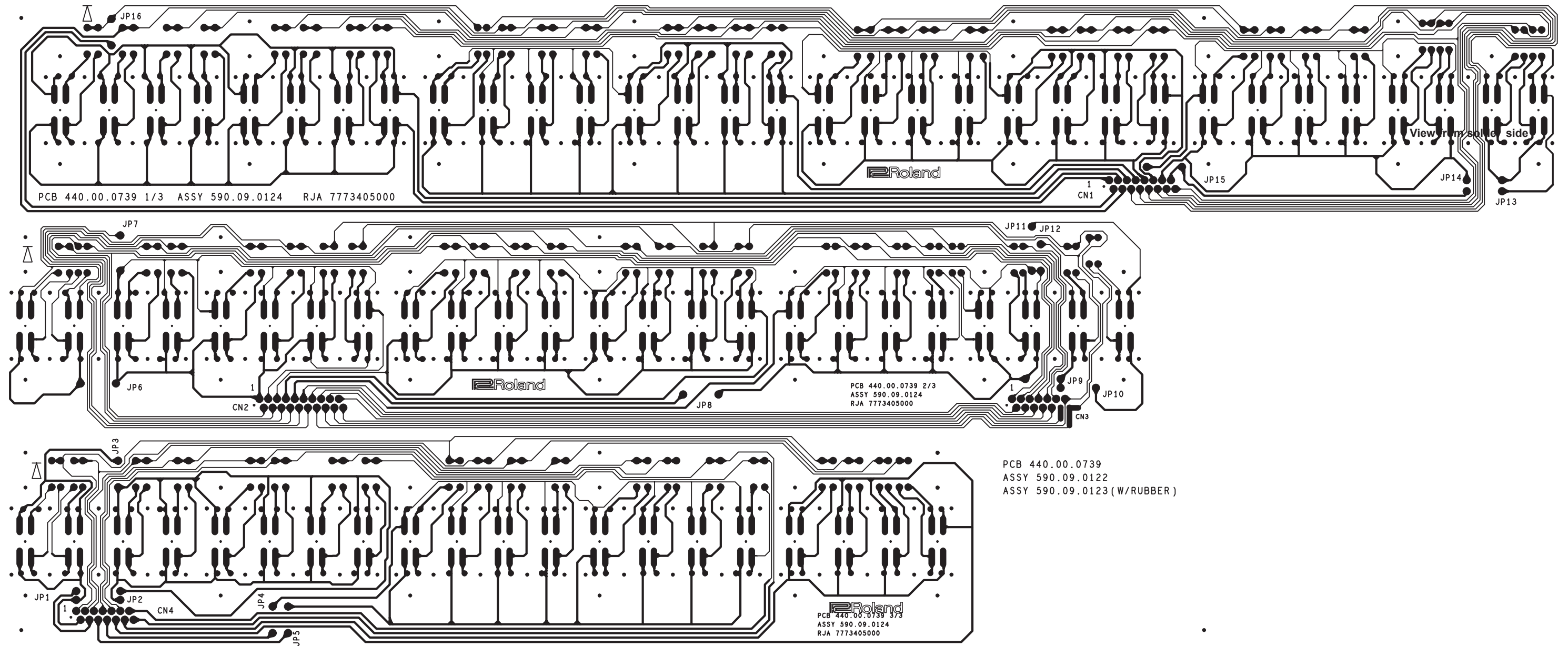
MASTER VOLUME



CIRCUIT DIAGRAM (SWITCH)

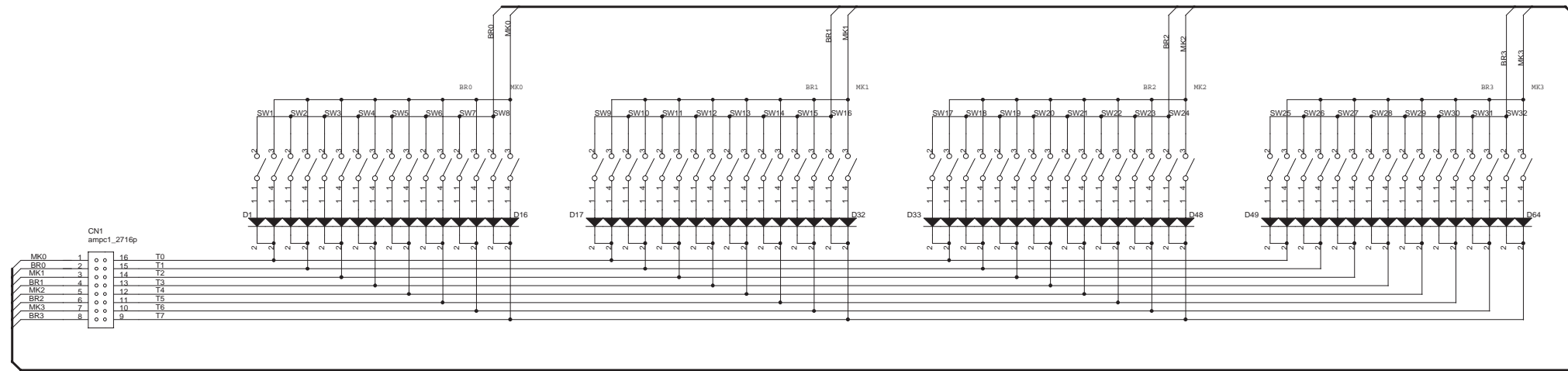


CIRCUIT BOARD (RIGHT - LEFT CONTACT w/RUBBER)

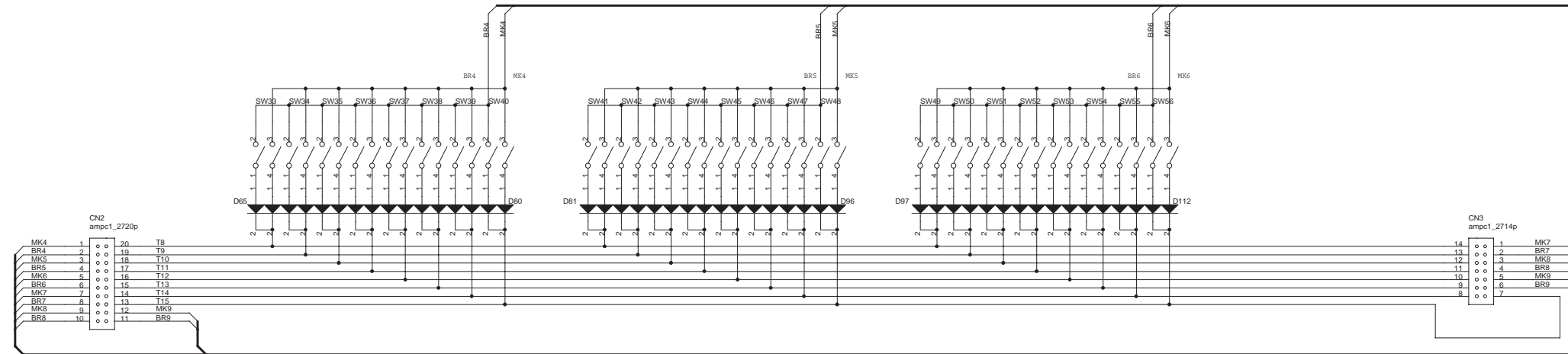


View from solder side

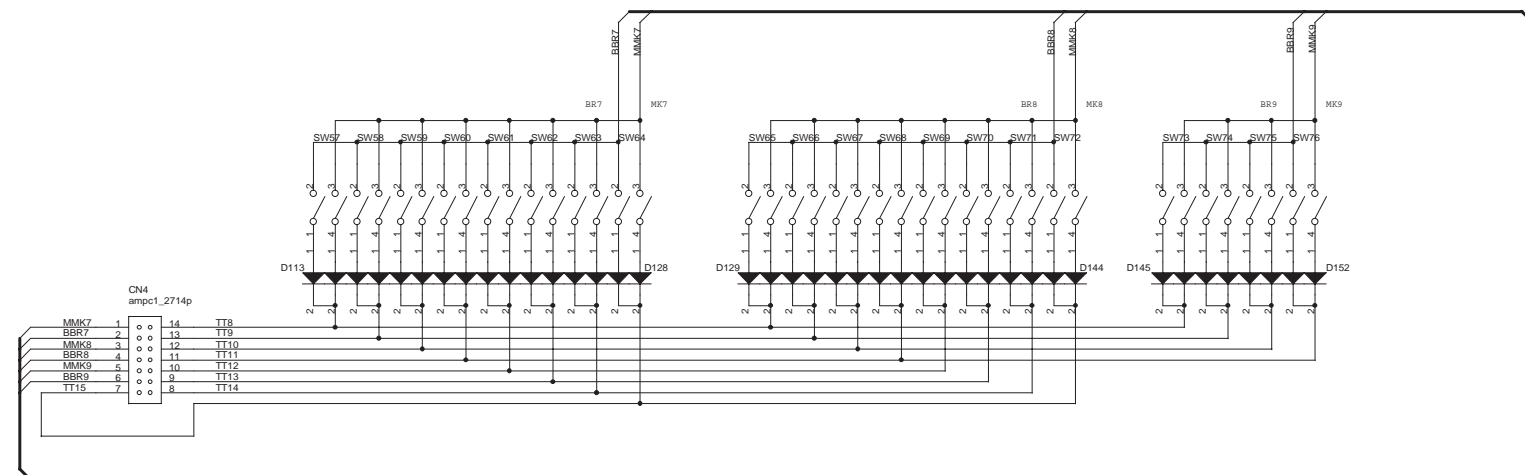
CIRCUIT DIAGRAM (CONTACT BOARD)



LEFT CONTACT PCB ASSY



CENTER CONTACT PCB ASSY



RIGHT CONTACT PCB ASSY