

MUSIC WORKSTATION KROME-61/73/88 SERVICE MANUAL



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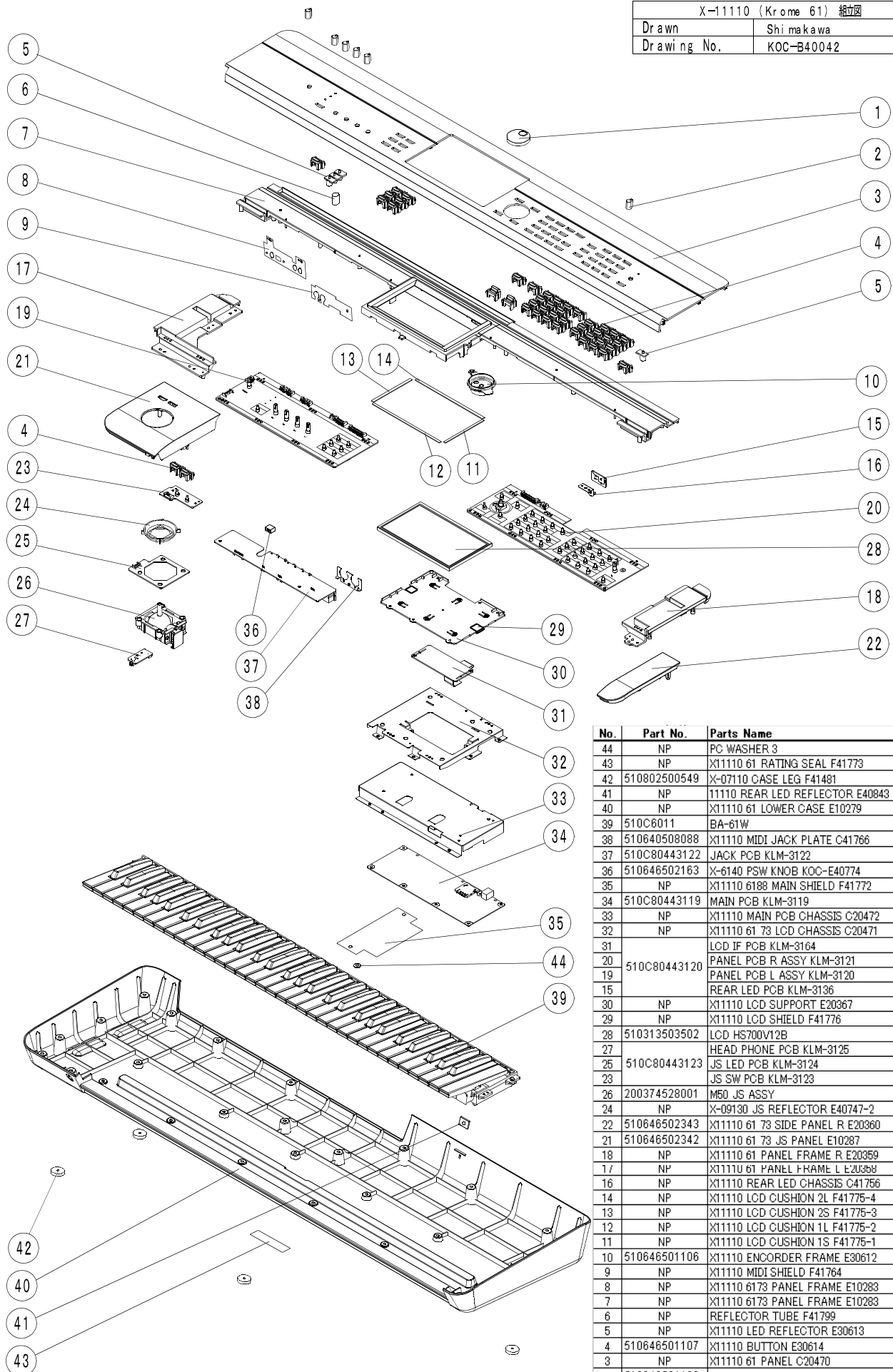
KORG

Issued: Oct. 29, 2012

Ver. 1.0

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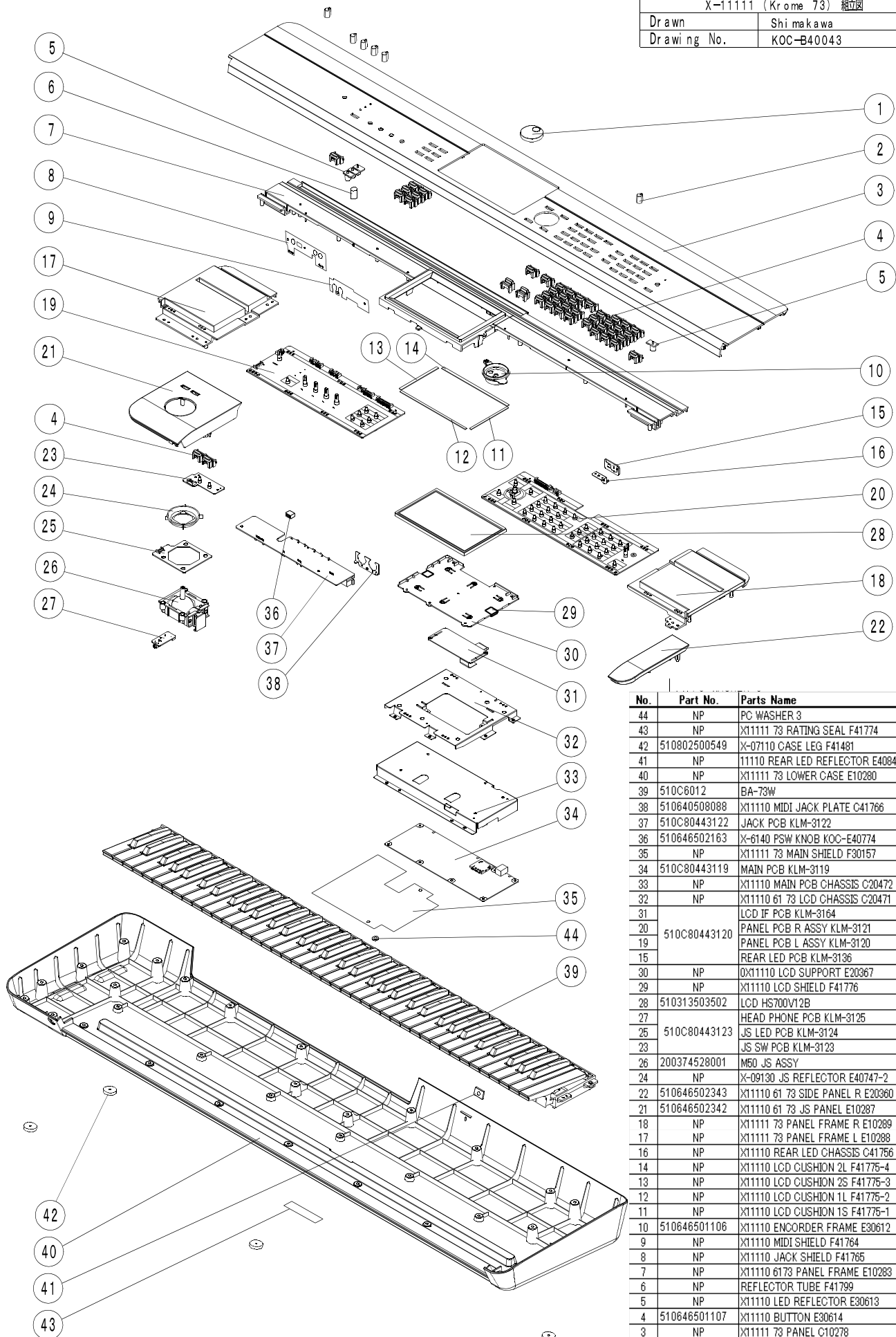
X-11110 (Krome 61) 組立図	
Drawn	Shi makawa
Drawing No.	KOC-B40042



No.	Part No.	Parts Name	QTY
44	NP	PC WASHER 3	1
43	NP	X11110 61 RATING SEAL F41773	1
42	510802500549	X-07110 CASE LEG F41481	5
41	NP	11110 REAR LED REFLECTOR E40843	1
40	NP	X11110 61 LOWER CASE E10279	1
39	510C6011	BA-61W	1
38	510640508088	X11110 MIDI JACK PLATE C41766	1
37	510C80443122	JACK PCB KLM-3122	1
36	510646502163	X-6140 PSW KNOB KOC-E40774	1
35	NP	X11110 6188 MAIN SHIELD F41772	1
34	510C80443119	MAIN PCB KLM-3119	1
33	NP	X11110 MAIN PCB CHASSIS C20472	1
32	NP	X11110 61 73 LCD CHASSIS C20471	1
31	510C80443120	LCD IF PCB KLM-3164	1
20		PANEL PCB R ASSY KLM-3121	
19		PANEL PCB L ASSY KLM-3120	
15		REAR LED PCB KLM-3136	
30	NP	X11110 LCD SUPPORT E20367	1
29	NP	X11110 LCD SHIELD F41776	2
28	510313503502	LCD HS700V12B	1
27	510C80443123	HEAD PHONE PCB KLM-3125	1
25		JS LED PCB KLM-3124	
23		JS SW PCB KLM-3123	
26	200374528001	M50 JS ASSY	1
24	NP	X-09130 JS REFLECTOR E40747-2	1
22	510646502343	X11110 61 73 SIDE PANEL R E20360	1
21	510646502342	X11110 61 73 JS PANEL E10287	1
18	NP	X11110 61 PANEL FRAME R E20369	1
17	NP	X11110 61 PANEL FRAME L E20368	1
16	NP	X11110 REAR LED CHASSIS C41766	1
14	NP	X11110 LCD CUSHION 2L F41775-4	1
13	NP	X11110 LCD CUSHION 2S F41775-3	1
12	NP	X11110 LCD CUSHION 1L F41775-2	1
11	NP	X11110 LCD CUSHION 1S F41775-1	1
10	510646501106	X11110 ENCODER FRAME E30612	1
9	NP	X11110 MIDI SHIELD F41764	1
8	NP	X11110 6173 PANEL FRAME E10283	1
7	NP	X11110 6173 PANEL FRAME E10283	1
6	NP	REFLECTOR TUBE F41799	1
5	NP	X11110 LED REFLECTOR E30613	1
4	510646501107	X11110 BUTTON E30614	11
3	NP	X11110 61 PANEL C20470	1
2	510646501109	X11110 VOL KNOB E30615	6
1	510646502154	X-610 ENCODER KNOB(CH) E40727-2	1

NP: Service part not provided

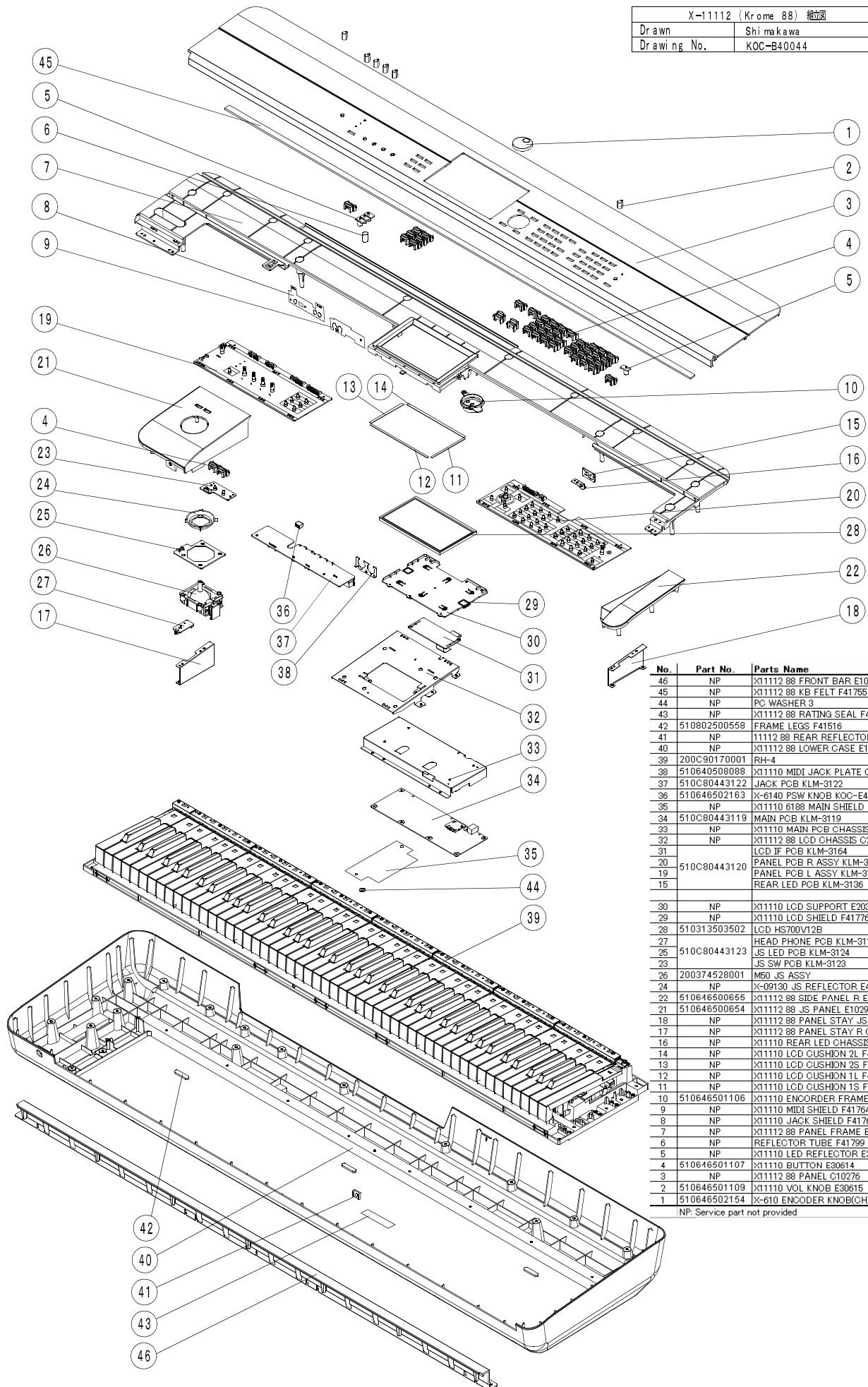
X-11111 (Krome 73) 組立図		
Drawn	Shi makawa	
Drawing No.	KOC-B40043	



No.	Part No.	Parts Name	QTY
44	NP	PC WASHER 3	1
43	NP	X11111 73 RATING SEAL F41774	1
42	510802500549	X-07110 CASE LEG F41481	5
41	NP	11110 REAR LED REFLECTOR E40843	1
40	NP	X11111 73 LOWER CASE E10280	1
39	510C6012	BA-73W	1
38	510640508088	X11110 MIDI JACK PLATE C41766	1
37	510C80443122	JACK PCB KLM-3122	1
36	510646502163	X-6140 PSW KNOB KOC-E40774	1
35	NP	X11111 73 MAIN SHIELD F30157	1
34	510C80443119	MAIN PCB KLM-3119	1
33	NP	X11110 MAIN PCB CHASSIS C20472	1
32	NP	X11110 61 73 LCD CHASSIS C20471	1
31	510C80443120	LCD IF PCB KLM-3164	1
20		PANEL PCB R ASSY KLM-3121	
19		PANEL PCB L ASSY KLM-3120	
15		REAR LED PCB KLM-3136	
30	NP	0X11110 LCD SUPPORT E20367	1
29	NP	X11110 LCD SHIELD F41776	2
28	510313503502	LCD HS700V12B	1
27	510C80443123	HEAD PHONE PCB KLM-3125	1
25		JS LED PCB KLM-3124	
23		JS SW PCB KLM-3123	
26	200374528001	M50 JS ASSY	1
24	NP	X-09130 JS REFLECTOR E40747-2	1
22	510646502343	X11110 61 73 SIDE PANEL R E20360	1
21	510646502342	X11110 61 73 JS PANEL E10287	1
18	NP	X11111 73 PANEL FRAME R E10289	1
17	NP	X11111 73 PANEL FRAME L E10288	1
16	NP	X11110 REAR LED CHASSIS C41765	1
14	NP	X11110 LCD CUSHION 2L F41775-4	1
13	NP	X11110 LCD CUSHION 2S F41775-3	1
12	NP	X11110 LCD CUSHION 1L F41775-2	1
11	NP	X11110 LCD CUSHION 1S F41775-1	1
10	510646501106	X11110 ENCODER FRAME E30612	1
9	NP	X11110 MIDI SHIELD F41764	1
8	NP	X11110 JACK SHIELD F41765	1
7	NP	X11110 6173 PANEL FRAME E10283	1
6	NP	REFLECTOR TUBE F41799	1
5	NP	X11110 LED REFLECTOR E30613	1
4	510646501107	X11110 BUTTON E30614	11
3	NP	X11111 73 PANEL C10278	1
2	510646501108	X11110 VOL KNOB E30615	6
1	510646502154	X-610 ENCODER KNOB(CH) E40727-2	1

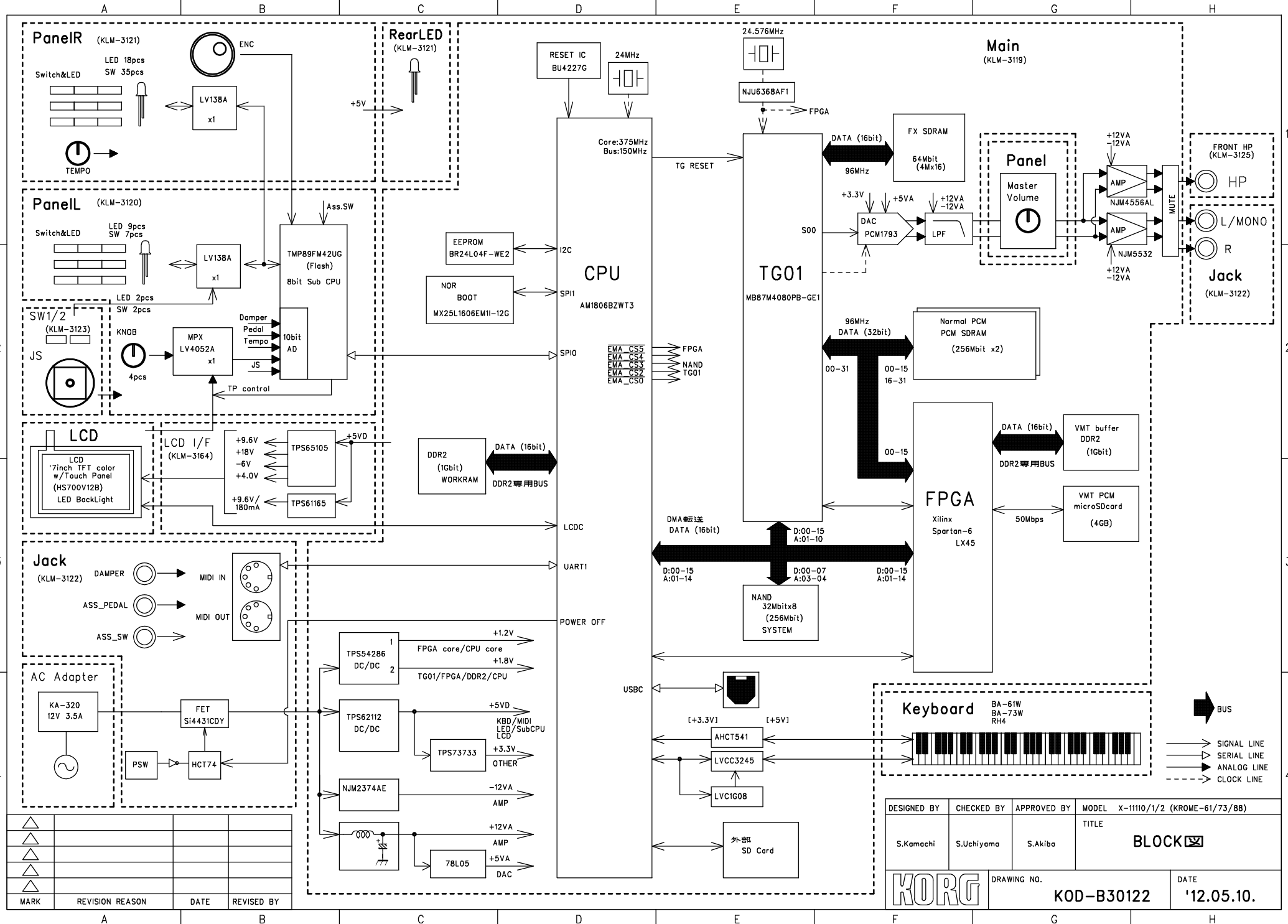
NP: Service part not provided

X-11112 (Krome 88) 組立図		
Drawn	Shi makawa	
Drawing No.	KOC-B40044	

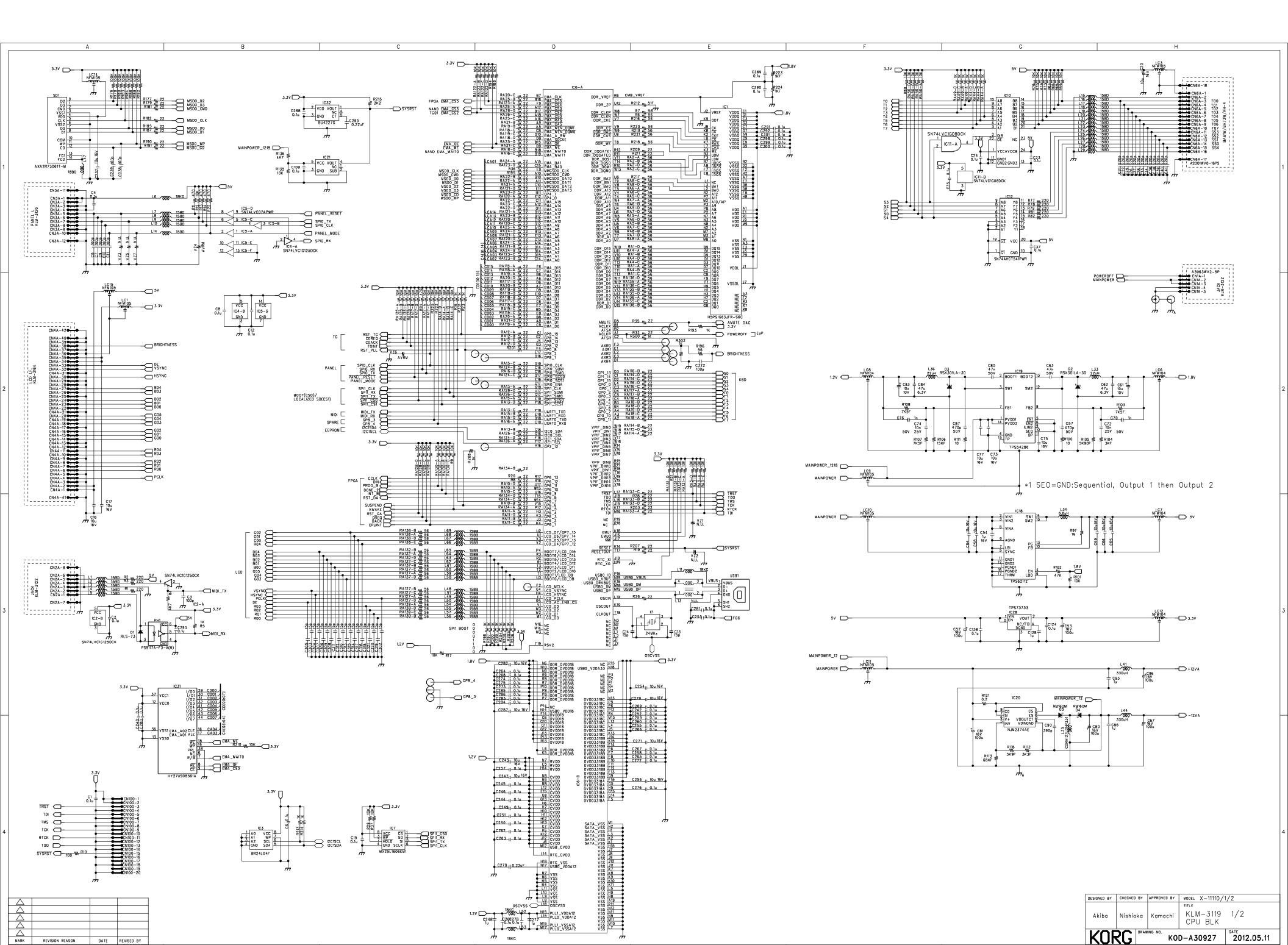


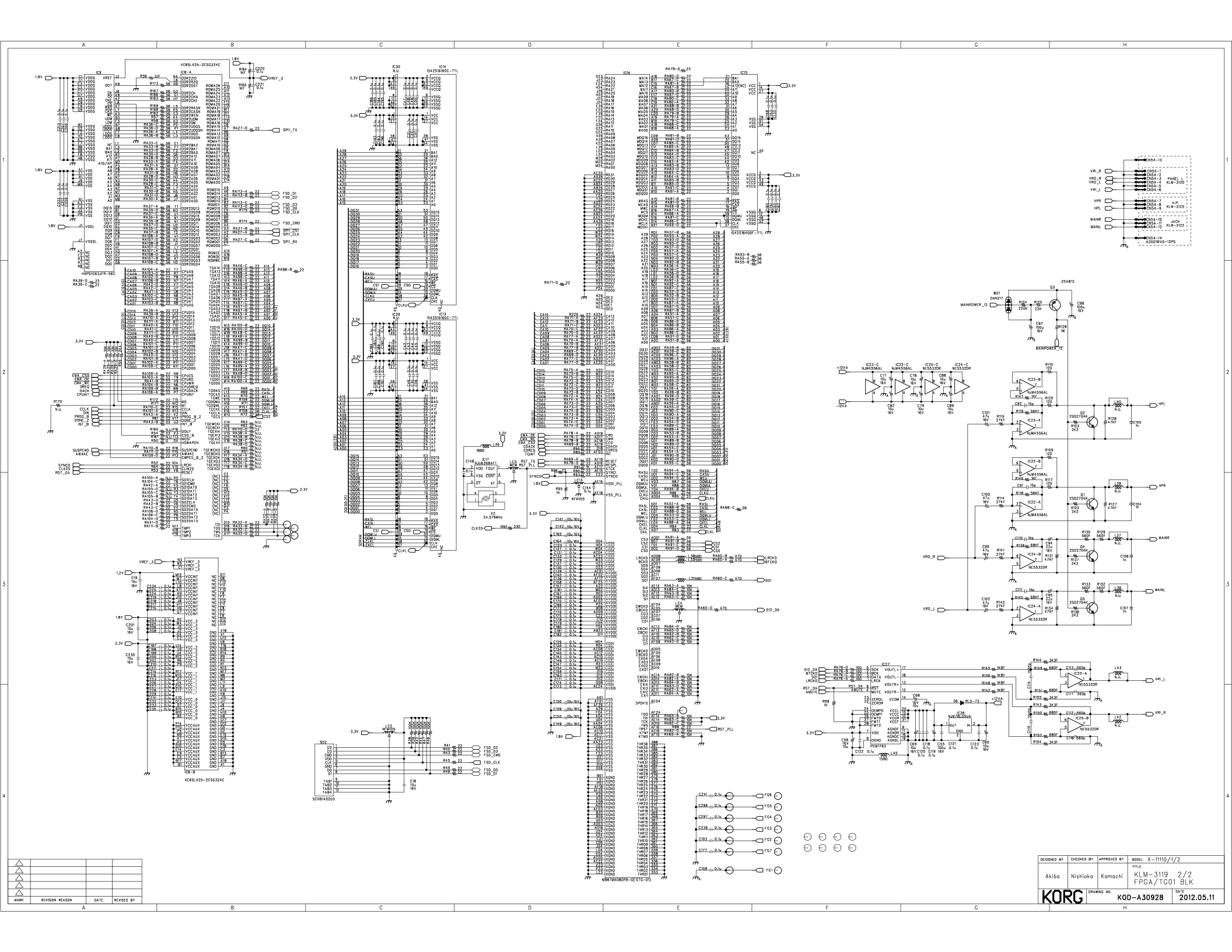
No.	Part No.	Parts Name	QTY
46	NP	X11112 88 FRONT BAR E10282	1
45	NP	X11112 88 KB FELT F41765	1
44	NP	PC WASHER 3	1
43	NP	X11112 88 RATING SEAL F41804	1
42	510802500558	FRAME LEGS F41516	3
41	NP	11112 88 REAR REFLECTOR E40844	1
40	NP	X11112 88 LOWER CASE E10281	1
39	200C90170001	RH-4	1
38	510640508088	X11110 MIDI JACK PLATE C41766	1
37	510C80443122	JACK PCB KLM-3122	1
36	510646502163	X-6140 PSW KNOB KOC-E40774	1
35	NP	X11110 6188 MAIN SHIELD F41772	1
34	510C80443119	MAIN PCB KLM-3119	1
33	NP	X11110 MAIN PCB CHASSIS C30472	1
32	NP	X11112 88 LCD CHASSIS C20473	1
31	NP	LCD IF PCB KLM-3164	1
20	510C80443120	PANEL PCB R ASSY KLM-3121	1
19		PANEL PCB L ASSY KLM-3120	
15		REAR LED PCB KLM-3136	
30	NP	X11110 LCD SUPPORT E20367	1
29	NP	X11110 LCD SHIELD F41776	2
28	510313503502	LCD HS700V12B	1
27	510C80443123	HEAD PHONE PCB KLM-3125	1
26		JS LED PCB KLM-3124	
23		JS SW PCB KLM-3123	1
26	200374528001	M50 JS ASSY	1
24	NP	X-09130 JS REFLECTOR E40747-2	1
22	510646500655	X11112 88 SIDE PANEL R E20361	1
21	510646500654	X11112 88 JS PANEL E10292	1
18	NP	X11112 88 PANEL STAY JS C41760	1
17	NP	X11112 88 PANEL STAY R C41769	1
16	NP	X11110 REAR LED CHASSIS C41766	1
14	NP	X11110 LCD CUSHION 2L F41775-4	1
13	NP	X11110 LCD CUSHION 2S F41775-3	1
12	NP	X11110 LCD CUSHION 1L F41775-2	1
11	NP	X11110 LCD CUSHION 1S F41775-1	1
10	510646501106	X11110 ENCODER FRAME E30612	1
9	NP	X11110 MIDI SHIELD F41764	1
8	NP	X11110 JACK SHIELD F41765	1
7	NP	X11112 88 PANEL FRAME E10284	1
6	NP	REFLECTOR TUBE F41799	1
5	NP	X11110 LED REFLECTOR E30613	1
4	510646501107	X11110 BUTTON E30614	11
3	NP	X11112 88 PANEL C10276	1
2	510646501109	X11110 VOL KNOB E30615	6
1	510646502154	X-610 ENCODER KNOB(CH) E40727-2	1

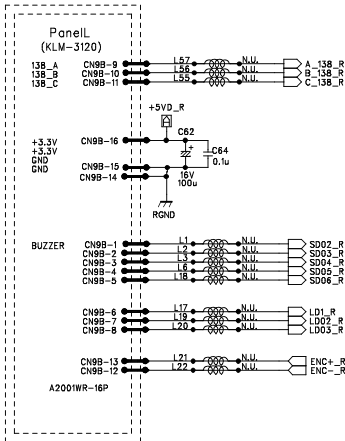
NP: Service part not provided



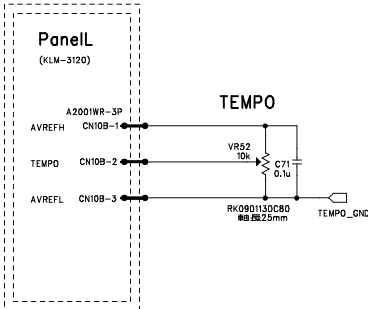
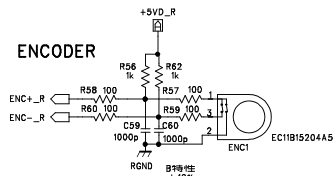
DESIGNED BY	CHECKED BY	APPROVED BY	MODEL	X-11110/1/2 (KROME-61/73/88)
S.Kamachi	S.Uchiyama	S.Akiba	TITLE	BLOCK
DRAWING NO.			KOD-B30122	
DATE			'12.05.10.	



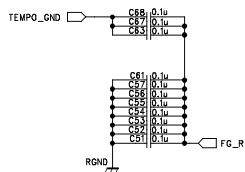
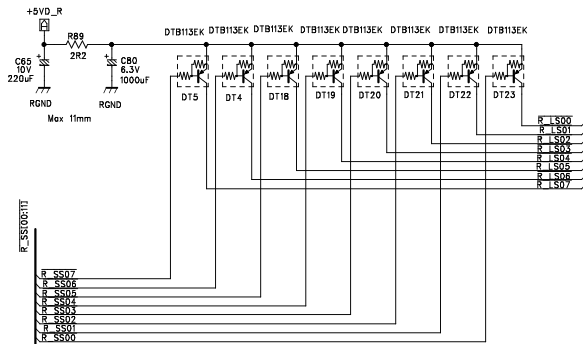




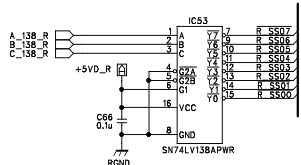
ENCODER



TEMPO



Panel R (KLM-3121)



Main
(KLM-3119)

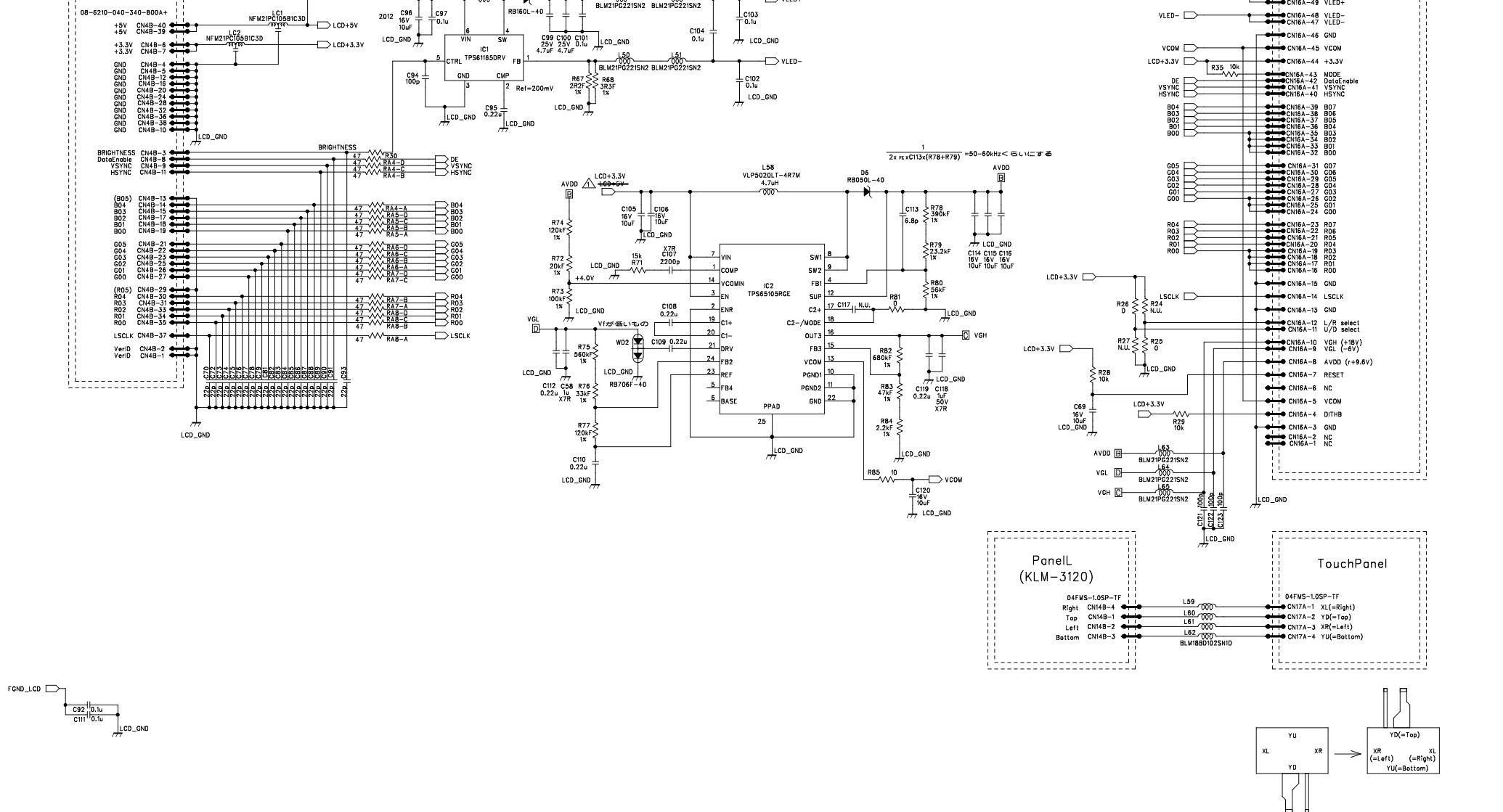
LCD I/F
(KLM-3164)

LED BackLight Supply

	HongSheng (HS700V12A)	URT
AVDD	B +9.6V	+10.4V
VGH	C +18V	+16V
VGL	D -6V	-7V
VCOM	+4.0V	+4.0V
VLED+	+9.6V	+9.3V

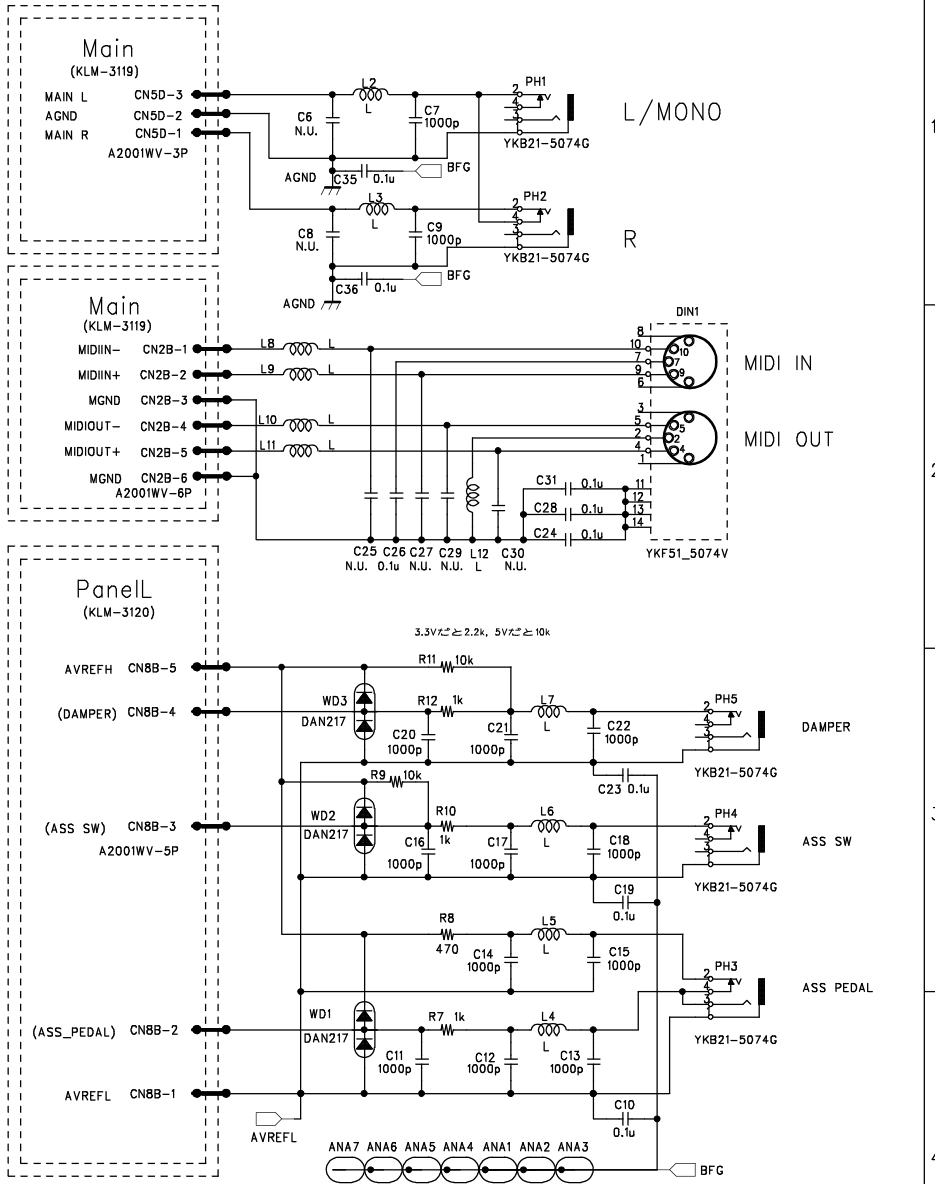
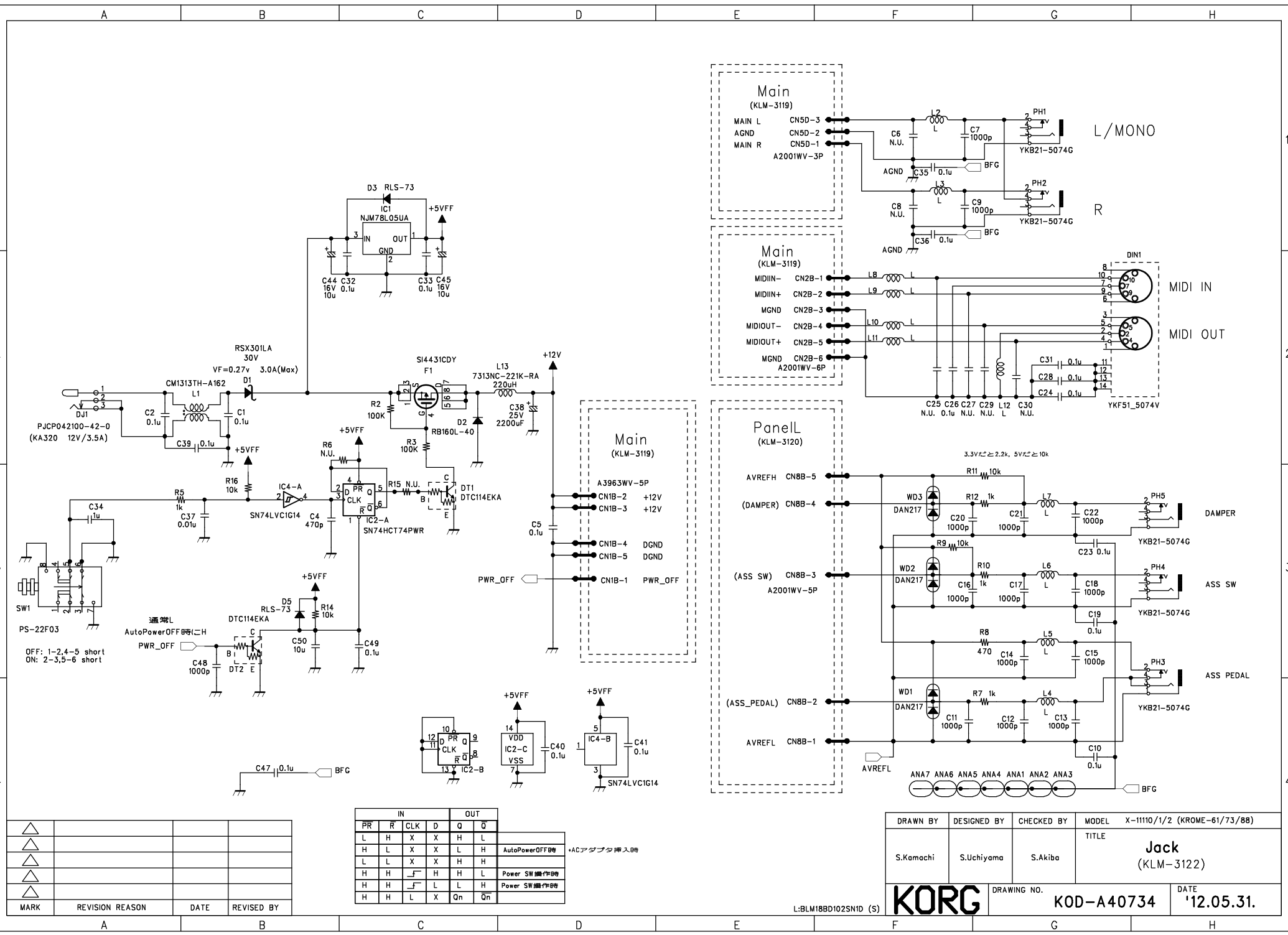
LCD
(HS700V12A)

04-6800-650-012-846+



△			
△			
△			
△	Improvement of Power Sequence	'12.06.15.	S.Komachi
MARK	REVISION REASON	DATE	REVISED BY

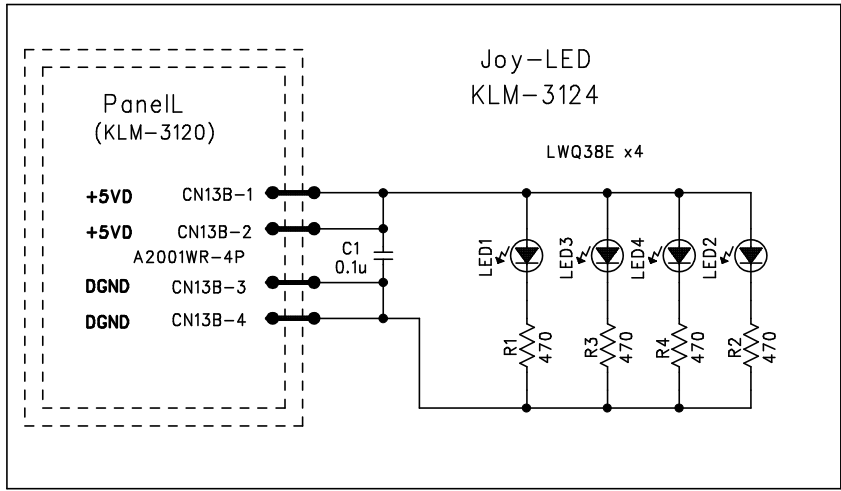
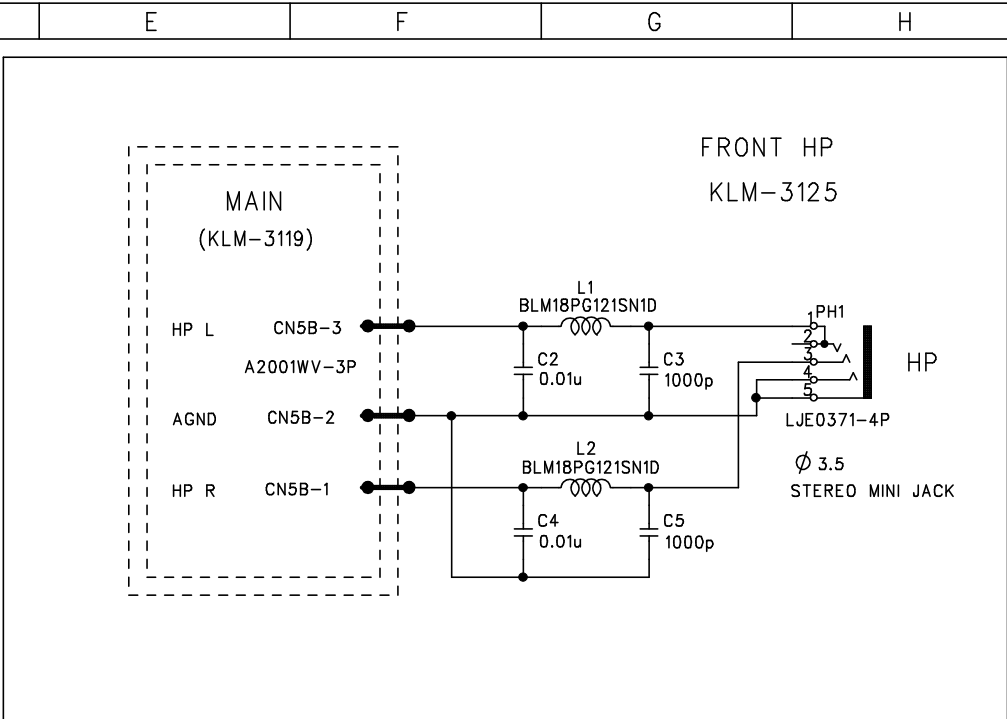
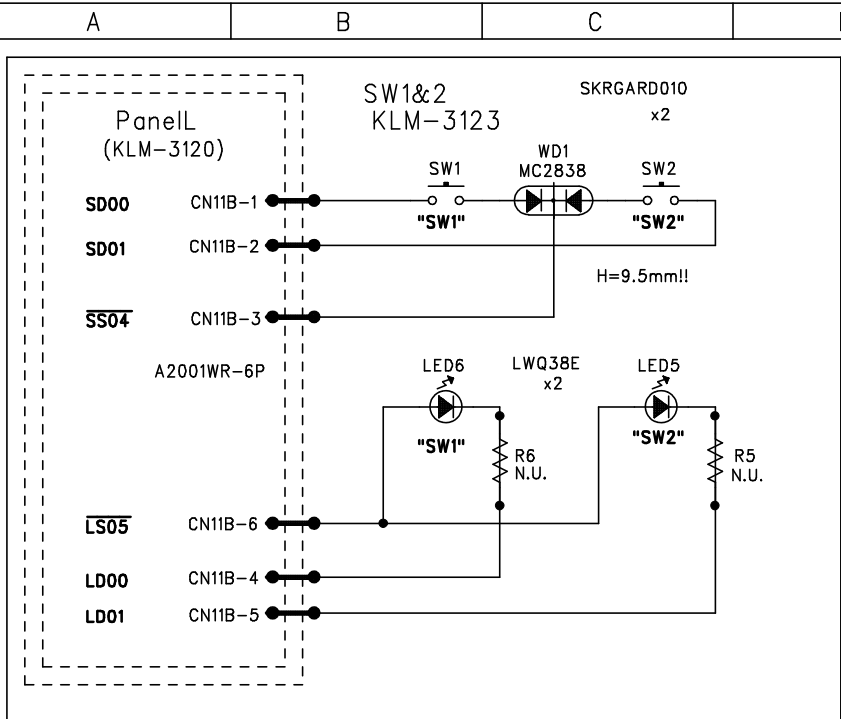
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	KROME-61/73/88 (X-11110/1/2)
S.Komachi	S.Uchiyama	S.Akabe	TITLE	LCD I/F (KLM-3164)
KORG			DRAWING NO.	KOD-A30931
			DATE	'12.05.31.



△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

IN				OUT		
PR	R	CLK	D	Q	Q	
L	H	X	X	H	L	
H	L	X	X	L	H	AutoPowerOFF時
L	L	X	X	H	H	
H	H		H	L	L	Power SW操作時
H	H		L	L	H	Power SW操作時
H	H	L	X	Qn	Qn	

DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	X-1110/1/2 (KROME-61/73/88)	
S.Kamachi	S.Uchiyama	S.Akiba	TITLE	Jack (KLM-3122)	
KORG		DRAWING NO.	KOD-A40734		DATE
L:BLM18BD102SND (S)					'12.05.31.



△			
△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

DESIGNED BY	CHECKED BY	APPROVED BY	MODEL KROMA-61/73/88 (X-11110/1/2)
S.Kamachi	S.Uchiyama	S.Akiba	TITLE KLM-3123/3124/3125 SW1,2/Joy-LED/FrontHP
KORG		DRAWING NO. KOD-A40735	DATE '12.05.31.

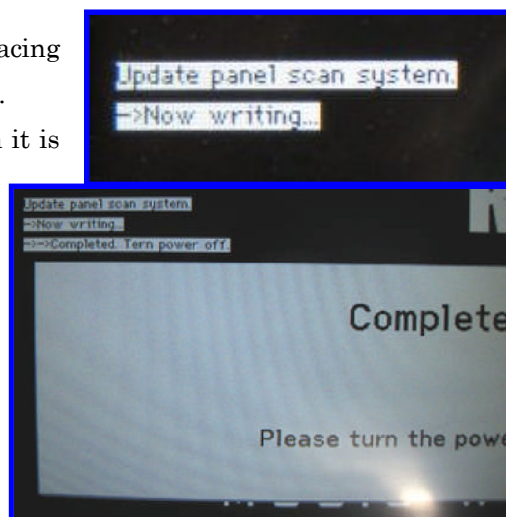
KROME Test mode

Notes) The system is automatically written when replacing the panel board(KLM-3120) which has no system.

Appear as shown in the figure to the right when it is written.

Do not turn off the power until the end of the writing.

"Complete" is displayed as shown on the right after it end.



How to enter the TEST MODE

Following table shows each static test mode.

The instruments enters the each test mode when turning on power while pressing the switch in the SWITCH column of the table below.

SWITCH	TEST MODE	Applicable requirement
[2] + [ENTER]	Skip internal test	Repair or exchange other than KLM-3119
[5] + [ENTER]	Full test	Repair or exchange KLM-3119

(Notes) Connect "MIDI IN" and "MIDI OUT" with MIDI cable.

USB inspection will be NG.

Basic operation

[ENTER]: Proceed to the next check .

[DEC], [INC]: Select item number

[REW], [FF]: Select step

Preparation

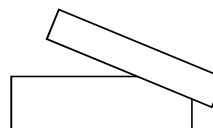
1) Set "VOLUME" knob to MAX position.

2) Set following knobs to CENTER position.

 KNOB1, KNOB2, KNOB3, KNOB4, TEMPO

3) Down the front of the EXP-2 pedal to the full position.

note) Do not insert SD card yet.



1. Rear LED

Check that the blue LED is illuminated from a hole in the "R" printed characters "KORG" of the rear side.

Check that the reflector assembled in this hole.



2. JOYSTICK LED

Check that the white LED is lit up, down, left and right through the JS COVER.



3. Internal Test

note1) When starting up while holding down the [2] and [ENTER] this item is skipped.

note2) There is a need to re-write system If the following screen Figure1. is displayed.

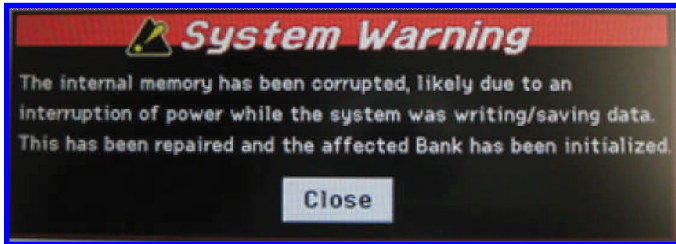


Figure 1

1) SD-Card Check

Insert the SD card if the following screen figure2 is displayed.

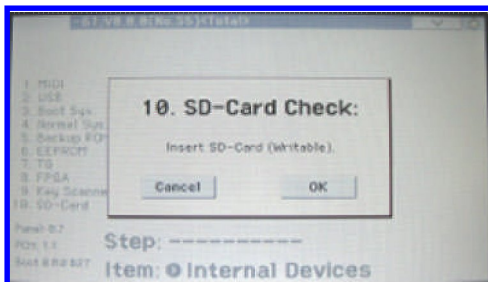


Figure 2

Proceed to the next step by touching the “OK” button

2) Internal test results

The results are displayed as shown in Figure 3.

If all items are OK, check the system version , PCM version and Boot System version..

If there is NG , “Error Occured” dialog is opened as shown in Figure 4.(see 2-1)

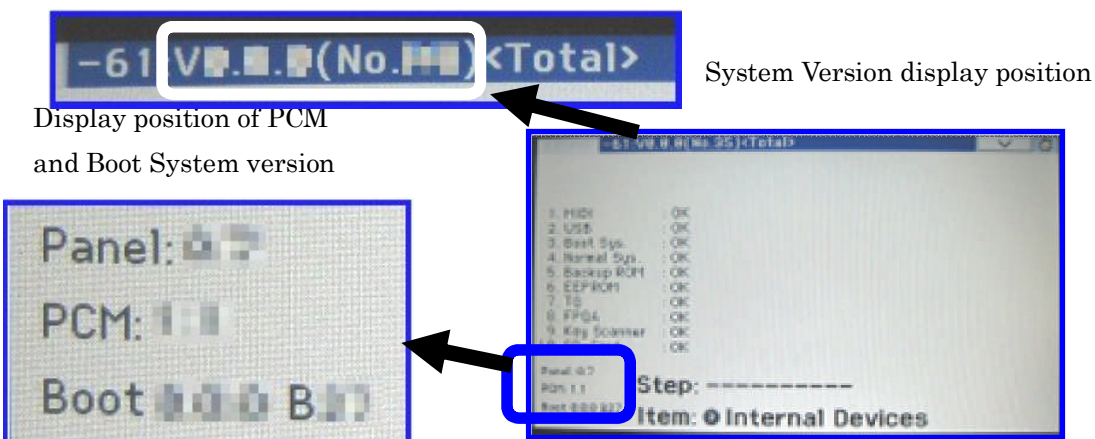


Figure 3

Note) Version of PanelCPU no need for check.(It include “Nomal Sys” item)

Pull out the SD card
 Press [ENTER] to proceed to item 4

2-1) NG case
 Dialog of "Error Occurred" opens.
 Touch "Close" button to check result.
 Repair NG item.
 Please try again from the start of the test mode.

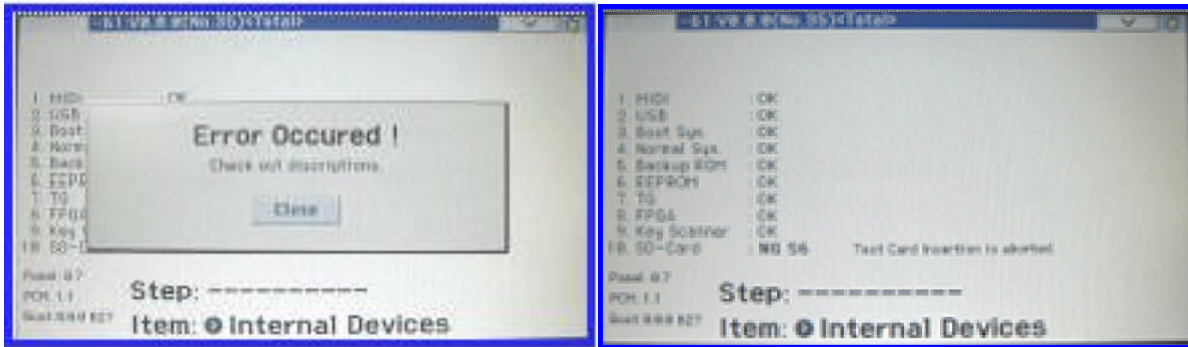


Figure 4

4. Audio level check

The signal comes out as shown in the following table every time switch [ENTER] is pressed.

Item on the display	Step on the display	SIN wave frequency	OUTPUT
Output Level	L	1KHz	L/MONO
	R		R
	Phone L		Phone Left
	Phone R		Phone Right
Low/High	Low	Low frequency	All
	High	High frequency	All
D/A Mute	DAC Mute	1KHz	All mute
Noise Level	L	no signal	L/MONO
	R	no signal	R
	L	no signal	Phone Left
	R	no signal	Phone Right

Press [ENTER] and start next check.

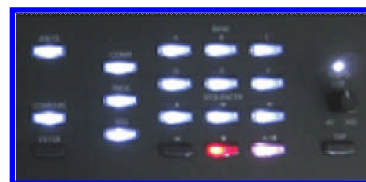
5. Panel SW & LED check

5-1 All LED check

Check all red LED turn on.

LED lights point						
SW1	SW2	TONE	USER	ARP	MEDIA	GLOBAL
MASTER FX	TOTAL FX	ARP	DRUM TRACK	COMPARE	COMBI	PROG
SEQ	A	B	C	D	E	F
⏏	! ⏮	⏭	●	▶ / ■	TEMPO	

Color of LED: ▶ / ■ is white and red, ● is red, the other white.



Current consumption is less than 0.9620A

Press [ENTER] and start next check.

5-2 SW & LED check

Press the switch to LED is lit

If the switch does not have LED, LED all lights.

Switch name is displayed on the LCD.

If you do not know the switch to be pressed according to the LCD display

Check turn on the LED that had been shown in the following table.

If the LED is OK , press the switch displayed on LCD.

LED	SW	LED	SW	LED	SW
SW1	SW1	all lights	8	SEQ	SEQ
SW2	SW2	all lights	9	A	A
TONE	SELECT	WRITE	WRITE	B	B
USER	SELECT	all lights	4	C	C
ARP	SELECT	all lights	5	D	D
MEDIA	MEDIA	all lights	6	E	E
GLOBAL	GLOBAL	all lights	1	F	F
MASTER FX	MASTER FX	all lights	2	⏏	⏏
TOTAL FX	TOTAL FX	all lights	3	⏮	⏮
ARP	ARP	COMPARE	COMPARE	⏭	⏭
DRUM TRACK	DRUM TRACK	all lights	-	⏮	⏮
all lights	DEC	all lights	0	● (Red)	●
all lights	INC	all lights	—	▶ / ■ (White)	▶ / ■
all lights	EXIT	all lights	▪	▶ / ■ (Red)	▶ / ■
all lights	PAGE	COMBI	COMBI	TEMPO	TAP
all lights	7	PROG	PROG		

6. LCD,Touch Panel,BUZZER and Brightness check

6-1 Dead LCD screen pixels check(1).

Make sure the entire screen is black.
Press [ENTER] and start next check.

6-2 Dead LCD screen pixels check(2).

Make sure the entire screen is white.
Press [ENTER] and start next check.

6-3 Calibration of touch screen

Calibrate the touch screen with a stylus pen or toothpick.

Appears that the first point on the screen as shown in Figure 5.

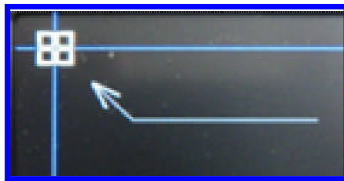


Figure 5

Please tap with the stylus to display the intersection of "+" in the square frame display.

Note) The calibration data will be in the first position when you tap-and-hold. Does not change the position data even if you drag. Please tap again when you want to change the calibration position.

Press [ENTER] to input the next position.

Enter in order of position in Figure 6, 7, 8 in the same way.



Figure 6 (step2)



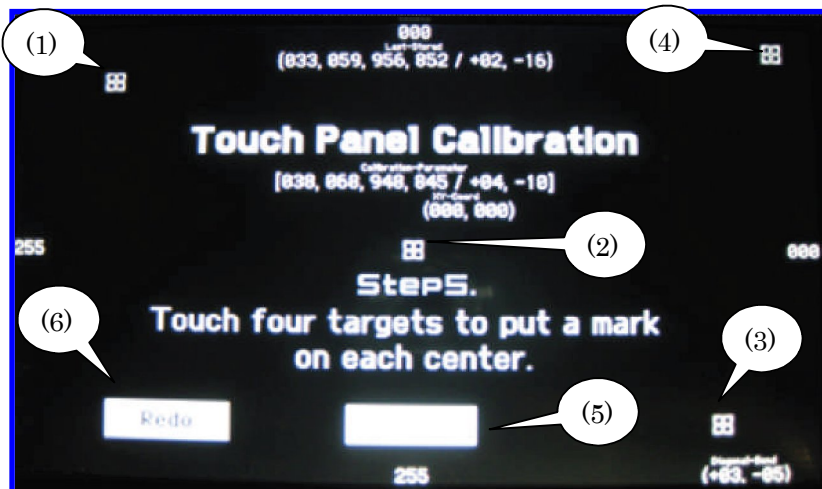
Figure 7 (step3)



Figure 8 (step4)

Proceed to the next operation check the calibration in step 4 is finished.

6-4. Confirmation of the results of the calibration



Appears that the check point on the screen as shown in Figure 9.

Please stylus to tap the "+" (1) (2) (3) (4).

Tap position is correct, the display "+" changes to display the ball.



Figure10

Figure 9

(1),(2),(3),(4) is changed in all ball, the (6) button changes to OK button.

Touch "OK" button to proceed to next ,BUZZER check.

note) When the "+" even if you try 5 or 6 times the ball does not change, press the "Redo" button (6) and calibrate again.]

6-5. BUZZER check

Please check that the buzzer will continue to sound, the sound is not extremely small.

Press [ENTER] and start next check.

6-6. Brightness check

Pattern shown in Figure 11 is displayed on the screen.

Please make sure that black will darken gradually becomes bright again afterwards.

Check that the display color pattern, not a red, green, blue, and yellow.

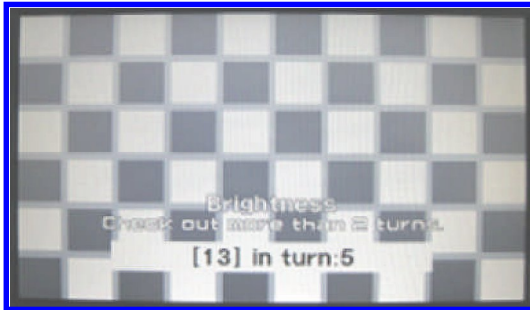


Figure 11

It is not pass if it is not darken.

It is not pass if afterimage appears to be not completely black.

Press [ENTER] and start next check.

Note) [ENTER] is ignored numeric value to the right of the "Turn" until it becomes greater than or equal to 3.

7.A/D converter

If the operator other than the test object is moved during the inspection test is aborted.

Operator name was moved at this time is displayed on the LCD.

Re-examination is to start the press [close] on the touch panel.

7-1. JOYSTICK X axis

Note) If the display "o" changes to "×" during inspection JOYSTICK.

If the joystick does not return to O also be returned to the center may have a problem in assembling.

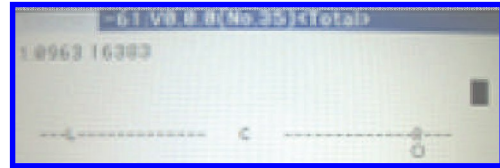
"■" almost in the center of the operating range of the X axis is displayed on the LCD display when the lever is moved.

Please perform the following checks, making sure that the "■" in the direction in which you operate the lever is moved.

1) Confirm that JOY moves smoothly while doing the following all check.

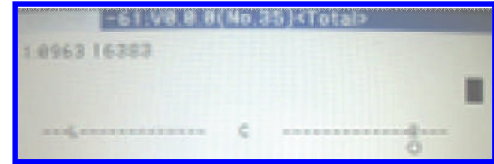
Check displaying “o” right side when JOYSTIC is moved to a right edge
(see Figure 12)

Figure 12



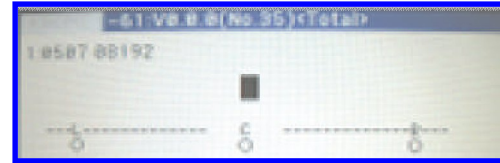
- 2) Check displaying “o” right side when JOYSTIC is moved to a left edge.

Figure 13



- 3) Check displaying “o” center when JOYSTIC is return to the center.

Figure 14



- 4) Confirm that movement is smooth moves smoothly while moving JOYSTIC up and down and right and left.
- 5) Release JOYSTIC after knocking down to the left end, and it returns it to the center by the power of the spring.
Check displaying “o” center.

Press [ENTER] and start next check.

7-2. JOYSTICH Y axis

Note) If the display “o” changes to “×” during inspection JOYSTICK.

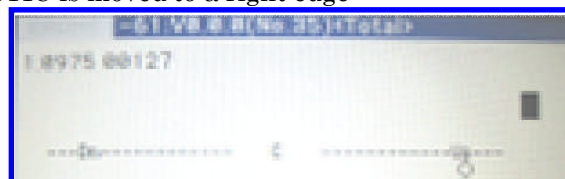
If the joystick does not return to O also be returned to the center may have a problem in assembling.

"■" almost in the center of the operating range of the Y axis is displayed on the LCD display when the lever is moved.

Please perform the following checks, making sure that the "■" in the direction in which you operate the lever is moved.

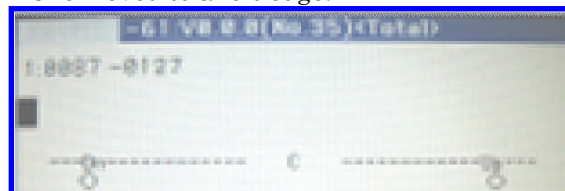
- 1) Confirm that JOY moves smoothly while doing the following all check.
Check displaying “o” right side when JOYSTIC is moved to a right edge
(see Figure 15)

Figure 15



- 2) Check displaying “o” right side when JOYSTIC is moved to a left edge.

Figure 16



3) Check displaying “o” center when JOYSTIC is return to the center.

Figure 17



4) Confirm that movement is smooth moves smoothly while moving JOYSTIC up and down and right and left.

5) Release JOYSTIC after knocking down to the left end, and it returns it to the center by the power of the spring.

Check displaying “o” center.

Press [ENTER] and start next check.

7-3. Rotary VR Check

Note) If you have forgotten, please set to the center position Rotary VR is supposed to have been set in the item of preparation.

If message “Not terminated a check” is displayed after setting center, press [Close] on the screen.

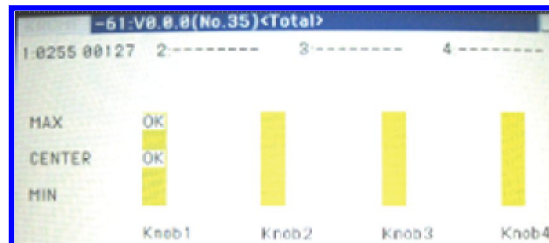
Confirm rotate smoothly while doing all Rotary Volume Check.

1) Turn the knob to the maximum clockwise.

Check “OK” is displayed on the bar of MAX position. (see Fugure 18)

note) OK in the center may not be displayed in this step.

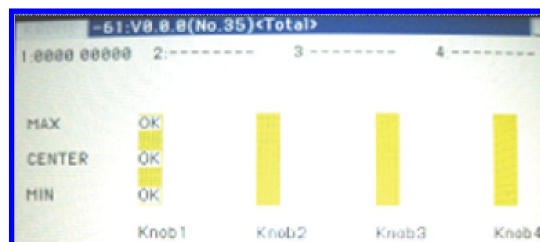
Figure 18



Turn the knob to the maximum ounterclockwise

Check “OK” is displayed on the bar of MIN position. (see Fugure 19)

Figure 19

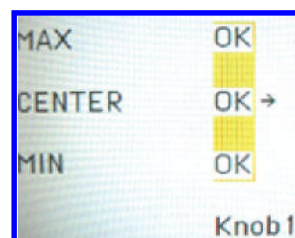


Turn the knob to the center position.

Check “->” is displayed right side of Center “OK”.

(see Figure 20)

Figure 20



2) Check KNOB2,NKOB3,KNOB4 according to the same procedure as KNOB1

note) Proceed to the next step in testing the timing display "->" appears on the KNOB4.

7-4. Rotary Encoder Check

To make it easier to make sure that the Rotary Encoder has one rotation, adjust the position of the knob

Press [7] to reset counter after positioning.

1) Make one rotation clockwise.

Check counter value is +30.

Check "OK" is displayed.

(note) The result is NG even if OK is displayed when the knob does not start position.

Press[7] to reset counter and check is displayed check mark.(see Figure 21)

2) Make one rotation counterclockwise.

Check counter value is -30.

Check "OK" is displayed.

(note) The result is NG even if OK is displayed when the knob does not start position.

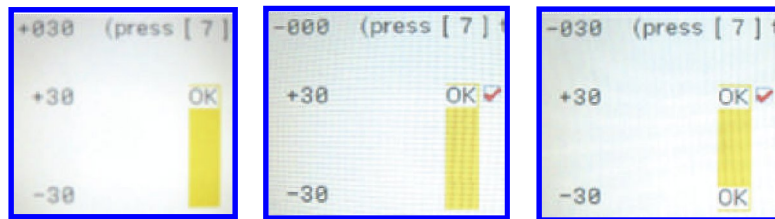


Figure 21

Press[7] to reset counter to proceed next test.

7-4. TEMPO VR Check

Confirm rotate smoothly while doing all Rotary Volume Check.

check the same as 7-3 Rotary VR check.

Turn the knob to the maximum clockwise.

Check "OK" is displayed on the bar of MAX position. (see Fugure 22)

note) OK in the center may not be displayed in this step.

Turn the knob to the maximum ounterclockwise

Check "OK" is displayed on the bar of MIN position. (see Fugure 22)

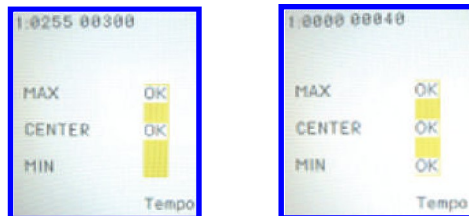


Figure 22

Turn the knob to the center proceed to the next inspection.

7-5. Pedal Check

- 1) Press EXP-2 slowly.

Check "OK" is displayed on CENTER of the Pedal BAR 1st.

Check "OK" is displayed on MAX on the BAR when pedal is pressed to max. position.

Check "OK" is displayed on MIN when pedal is return to min. position.

- 2) Press PS-1

Check "OK" is displayed on "ON" of the Switch BAR.

Release PS-1.

Check "OK" is displayed on "OFF" of the Switch BAR.

- 3) Press DS-1H slowly.

Check "OK" is displayed on CENTER of the Damper BAR 1st.

Check "OK" is displayed on MAX on the BAR when DS-1H is pressed to max. position.

Check "OK" is displayed on MIN when DS-1H is released to min. position and proceed next test.

8. Keyboard check

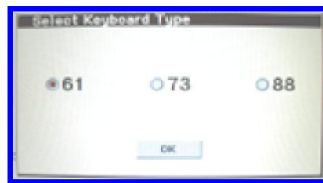
8-1 Keyboard select

Select the number of keyborad and press "OK" button.

(see Figure 24)

note) The radio button is not select in default after system 1.0.1 or 1.0.1.

Figure 24



8-2 Velocity check

Hit the key medium touch from right edge to left edge.

If all key pass, proceed to next test.

note) Selected key number is incorrect or keyboard is defect if following problem occure

No sound or sound from the keyboard in the middle.

note) The case of NG

- 1) It doesn't advance to the next key number except hit hard touch.

- 2) It doesn't advance to the next key number except hit weak touch.

note) How to hit or play keyboard .

Push right edge key and keep pushing it.

Keep pushing right edge key and push 2nd key from the right edge.

Keep pushing 2nd key from the right and release right edge key.

Keep pushing 2nd key from the right and push 3rd key from the right.

In the same way, push the 4th key from the right .

9. Preload

Note) This step only running if it start by pressing [ENTER] and [5].

The screen display as shown Figure 25

Press [ENTER] to preload.

note) Keyboard Noise is not need to check.

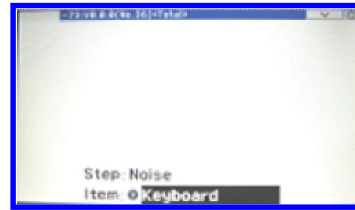


Figure 25

The screen appear as shown Figure 26.

The screen appear as shown Figure 27 when preload is completed.

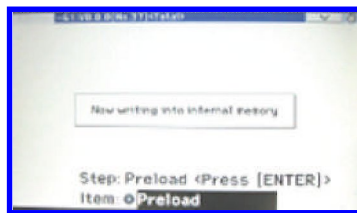


Figure 26

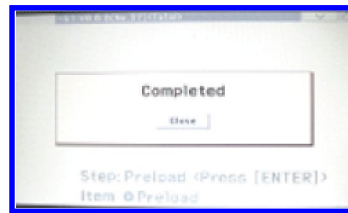


Figure 27

Press [Close] on Touch Panel

9. AUTO POWER OFF check

If the screen display as shown Figure 28, press [Please turn the power off] button on touch panel.



Figure 28

Make sure that current consumption is less than 0.0050A

Internal test error step list

Item	NG Step	Contents
MIDI	S1	Time Out Error
	S2	Verify Error
USB Device	S1	PC Connect Error
Boot System	S1	Check sum Error (System)
Normal System	S1	Check sum Error (MAINAPP.BIN)
	S2	Panel CPU Version is incorrect
Backup ROM	S1	Preload Error
EEPROM	S1	Erase/Write/Verify Error
TG	S1	Initialize flag check Error
	S2	Data bus Error
	S3	Address bus Error
	S4	FX SDRAM data bus Error(IC15)
	S5	FX SDRAM address bus Error (IC15)
	S6	PCM SDRAM Low data bus Error(IC13)
	S7	PCM SDRAM Hi data bus Error(IC14)
	S8	PCM SDRAM Low address bus Error(IC13)
	S9	PCM SDRAM Hi address bus Error(IC14)
FPGA	S1	Address bus Error
	S2	DDR2 data bus Error
	S3	DDR2 address bus Error
	S4	Check ID of PCM data on SD CARD
	S5	TG01 Aata bus Error
	S6	TG01 Address bus Error
Keyscan	S1	Either S1-S4 is low when S0 is low
	S2	Either S0, S2,S3,S4 is low when S1 is low
	S3	Either S0, S1,S3,S4 is low when S2 is low
	S4	Either S0-S3 is low when S3 is low
	S5	Either S0, S2-S4 is low when S4 is low
	S6	Either T1-T7 is low when T0 is low
	S7	Either T0,T2-T7 is low when T1 is low
	S8	Either T0,T1,T3-T7 is low when T2 is low
	S9	Either T0-T2,T4-T7 is low when T3 is low
	S10	Either T0-T3,T5-T7 is low when T4 is low
	S11	Either T0-T4,T6,T7 is low when T5 is low
	S12	Either T1-T5,T7 is low when T6 is low
	S13	Either T0-T6 is low when T7 is low
SD CARD	S1	Detect SD card before insert test step
	S2	Detect write protect on before insert test step.
	S3	Short test error of detection terminal.
	S4	Short test error of write protect terminal.
	S5	SD card can not detect
	S6	SD card is write protect on
	S7	SD card can not mount
	S8	SD card can not open
	S9	SD card can not write
	S10	SD card can not read even if it is mouted.
	S11	File can not be found in mounted SD card.
	S12	SD card can not read even if it is opend.
	S13	SD card can not read.
	S14	Verify error

KORG KROME Parts List

Part Number	Category	Part Name	Location	Reference	QTY		
					61	73	88
510310520505	SCHOTTKY DIODE	RSX301LA-30-TR	KLM-3119	[TOP] D2-3 [BOT]	2	2	2
510310511514	SCHOTTKY DIODE	RB160M-40 (S)	KLM-3119	[TOP] D4-5 [BOT]	2	2	2
510320514055	RESET IC	BD4746G-TR	KLM-3119	[TOP] [BOT] IC21	1	1	1
510320514030	RESET IC	BU4227G-TR	KLM-3119	[TOP] [BOT] IC32	1	1	1
510324021160	OPAMP	NE5532DR (TS)	KLM-3119	[TOP] [BOT] IC24-25	2	2	2
510320511033	DC-DC Converter	NJM2374AE-TE1-#ZZZB	KLM-3119	[TOP] IC20 [BOT]	1	1	1
510320511026	OPAMP	NJM4556AL-#ZZZB	KLM-3119	[TOP] [BOT] IC22-23	2	2	2
510320511009	REGULATOR IC	NJM78L05UA-TE2 (TS)(S)	KLM-3119	[TOP] [BOT] IC26	1	1	1
510320511045	ASSP IC	NJU6368AF1-TE1#ZZZB MTP-6	KLM-3119	[TOP] IC17 [BOT]	1	1	1
510320516098	D/A Converter	PCM1793DBR	KLM-3119	[TOP] [BOT] IC27	1	1	1
510320516111	REGULATOR IC	TPS73733DCQ	KLM-3119	[TOP] [BOT] IC28	1	1	1
510476502503	CONNECTOR	SCHB1A0205	KLM-3119	[TOP] [BOT] SD2	1	1	1
510474527501	USB CONNECTOR	QT-6301-004	KLM-3119	[TOP] USB1 [BOT]	1	1	1
510200515521	VARISTOR	AVR-M1608C270MTABB	KLM-3119	[TOP] VZ4 [BOT] VZ6	2	2	2
510335522018	CRYSTAL	RT3-24000F081515	KLM-3119	[TOP] X1 [BOT]	1	1	1
510335522019	CRYSTAL	RT3-24576F081515	KLM-3119	[TOP] X2 [BOT]	1	1	1
510C80443119	PCB Assy	KROME KLM-3119 ASSY			1	1	1
510200517515	Chip CERAMIC C	0603B105K160NT	KLM-3120/21/36/64	[TOP] C31 C58	2	2	2
510200517562	Chip CERAMIC C	0805B475K250NT	KLM-3120/21/36/64	[TOP] C99-100	2	2	2
510200517563	Chip CERAMIC C	0805B106M160NT	KLM-3120/21/36/64	[TOP] C69 C96 C105-106 C114-116 C120	8	8	8
510200517578	Chip CERAMIC C	0805B105K500NT	KLM-3120/21/36/64	[TOP] C118	1	1	1
510310511505	SCHOTTKY DIODE	RB706F-40 (T106) (S)	KLM-3120/21/36/64	[TOP] WD2	1	1	1
510310511518	SCHOTTKY DIODE	RB160L-40TE25	KLM-3120/21/36/64	[TOP] D5	1	1	1
510310520506	SCHOTTKY DIODE	RB050L-40TE25	KLM-3120/21/36/64	[TOP] D6	1	1	1
510312525001	LED	LWQ38E-Q1S2-3K6L-1-5-R18-Z	KLM-3120/21/36/64	[TOP] LED1-4 LED6-15 LED19-21 LED51-52 LED55-57 LED62-63 LED67	25	25	25
510312512014	Chip LED	SML-D12V8WT86	KLM-3120/21/36/64	[TOP] LED5 LED59	2	2	2
510360520031	ROTARY VR	RK12L12C0C0H	KLM-3120/21/36/64	[TOP] VR6	1	1	1
510360520051	VR	RK09D1130C80	KLM-3120/21/36/64	[TOP] VR2-5 VR52	5	5	5
510370520002	ENCODER SWITCHS	EC11B15204A5(F2779745M)	KLM-3120/21/36/64	[TOP] ENC1	1	1	1
510374520027	TACT SW	SKRGARD010	KLM-3120/21/36/64	[TOP] SW1-2 SW4-8 SW11 SW13 SW19 SW51-52 SW54-83	42	42	42
510402547002	LED	SDPB31C0C0000(BULK)	KLM-3120/21/36/64	[TOP] LED16	1	1	1
510410521002	BUZZERS	PKM17EPP-2002-B0	KLM-3120/21/36/64	[TOP] BUZZ2	1	1	1
510C80443120	PCB Assy	KROME KLM-3120/21/36/64 ASSY	KLM-3120/21/36/64	0	1	1	1
510200521557	AEC	LHK22225V1321	KLM-3122	[TOP] C38	1	1	1
510306510503	POWER MOS FET	SI4431CDY-T1-E3	KLM-3122	[BOT] F1	1	1	1
510310520505	SCHOTTKY DIODE	RSX301LA-30-TR	KLM-3122	[BOT] D1	1	1	1
510320511037	REGULATOR IC	NJM78L05UA-TE1-#ZZZB	KLM-3122	[BOT] IC1	1	1	1
510374510004	SW	PS-22F03 (NON-LOCKED)	KLM-3122	[TOP] SW1	1	1	1
510450522504	DC JACK	PJCP042100-42-0 (D)	KLM-3122	[TOP] DJ1	1	1	1
510450521503	PHONE JACK	YKB21-5074G (PHONE JACK) (D)	KLM-3122	[TOP] PH1-5	5	5	5
510C80443122	PCB Assy	KROME KLM-3122 ASSY	KLM-3122	0	1	1	1
510374520027	TACT SW	SKRGARD010	KLM-3123/24/25	(TOP)SW1-2	2	2	2
510450524506	PHONE JACK	LJE0371-4P	KLM-3123/24/25	(TOP)PH1	1	1	1
510312525001	LED	LWQ38E-Q1S2-3K6L-1-5-R18-Z	KLM-3123/24/25	(TOP)LED1-6	6	6	6
510C80443123	PCB Assy	KROME KLM-3123/24/25 ASSY	KLM-3123/24/25		1	1	1
510470524555	HARNESS	HNS-4157	HARNESS		1	1	1
510470524556	HARNESS	HNS-4158	HARNESS		1	1	1
510470524557	HARNESS	HNS-4159	HARNESS		1	1	1
510470524558	HARNESS	HNS-4160	HARNESS		1	1	1
510470524559	HARNESS	HNS-4161	HARNESS		1	1	1
510470524560	HARNESS	HNS-4162	HARNESS		1	1	1
510470524578	HARNESS	HNS-4187	HARNESS		1	1	1
510470524561	HARNESS	HNS-4163	HARNESS		1	0	0
510470524562	HARNESS	HNS-4164	HARNESS		1	0	0
510470524563	HARNESS	HNS-4165	HARNESS		1	0	0
510470524564	HARNESS	HNS-4166	HARNESS		1	0	0
510470524565	HARNESS	HNS-4167	HARNESS		1	0	0
510470524566	HARNESS	HNS-4168	HARNESS		0	1	0
510470524567	HARNESS	HNS-4169	HARNESS		0	1	0
510470524568	HARNESS	HNS-4170	HARNESS		0	1	0
510470524569	HARNESS	HNS-4171	HARNESS		0	1	0
510470524570	HARNESS	HNS-4172	HARNESS		0	1	0
510470524571	HARNESS	HNS-4175	HARNESS		0	0	1
510470524572	HARNESS	HNS-4176	HARNESS		0	0	1
510470524573	HARNESS	HNS-4177	HARNESS		0	0	1
510470524574	HARNESS	HNS-4178	HARNESS		0	0	1
510470524575	HARNESS	HNS-4179	HARNESS		0	0	1
510470524579	HARNESS	HNS-4225	HARNESS		1	1	1
510470524576	HARNESS	HNS-4180	HARNESS		1	1	0
510470524577	HARNESS	HNS-4181	HARNESS		0	0	1
510405540505	AC ADAPTER	KA320EUP II:DSA42D-12 1 120350	OTHER		1	1	1
510C6011	KEYBOARD UNIT	BA-61W	OTHER		1	0	0
510C6012		BA-73W	OTHER		0	1	0
200C90170001		RH-4 KEYBOARDUNIT	OTHER		0	0	1
510313503502	LCD	HS700V12B	OTHER		1	1	1
510476503502	microSD card	RBU-T2A-SDC10/4GB(X-11110/1/2)	OTHER		1	1	1
510646502342		X11110 61 73 JS PANEL E10287	Mechanical		1	1	0
510646500654		X11112 88 JS PANEL E10292	Mechanical		0	0	1
510646502343		X11110 61 73 SIDE PANEL R E20360	Mechanical		1	1	0

510646500655		X11112 88 SIDE PANEL R E20361	Mechanical		0	0	1
510640508088		X11110 MIDI JACK PLATE C41766	Mechanical		1	1	1
510646501106		X11110 ENCODER FRAME E30612	Mechanical		1	1	1
510646501107		X11110 BUTTON E30614	Mechanical		11	11	11
510646501109		X11110 VOL KNOB E30615	Mechanical		6	6	6
510646502154		X-610 ENCODER KNOB(CH)E40727-2	Mechanical		1	1	1
510646502312		X-09130 JS REFLECTOR E40747-2	Mechanical		1	1	1
200374528001	JOY STICK	M50 JS ASSY	Mechanical		1	1	1
510646502163		X-6140 PSW KNOB KOC-E40774	Mechanical		1	1	1
510802500549		X-07110 Case Leg F41481	Mechanical		5	5	0
510802500558		FRAME LEGS F41516	Mechanical		0	0	3
510600540006	AC CABLE	EC-652-E03(VDE) W/PE-BAG	Allocation	230G	1	1	1
510600540502		UC-953-J01 W CSA LABEL		120E	1	1	1
510600540501		LY230BSH05VVFBSLY13 B #UK		230U	1	1	1
510600005800		SC-111-J01		240A	1	1	1
510600006508		LY100JPVCTFLY35LY37(JP)		100J	1	1	1