

Service Manual

SP-250

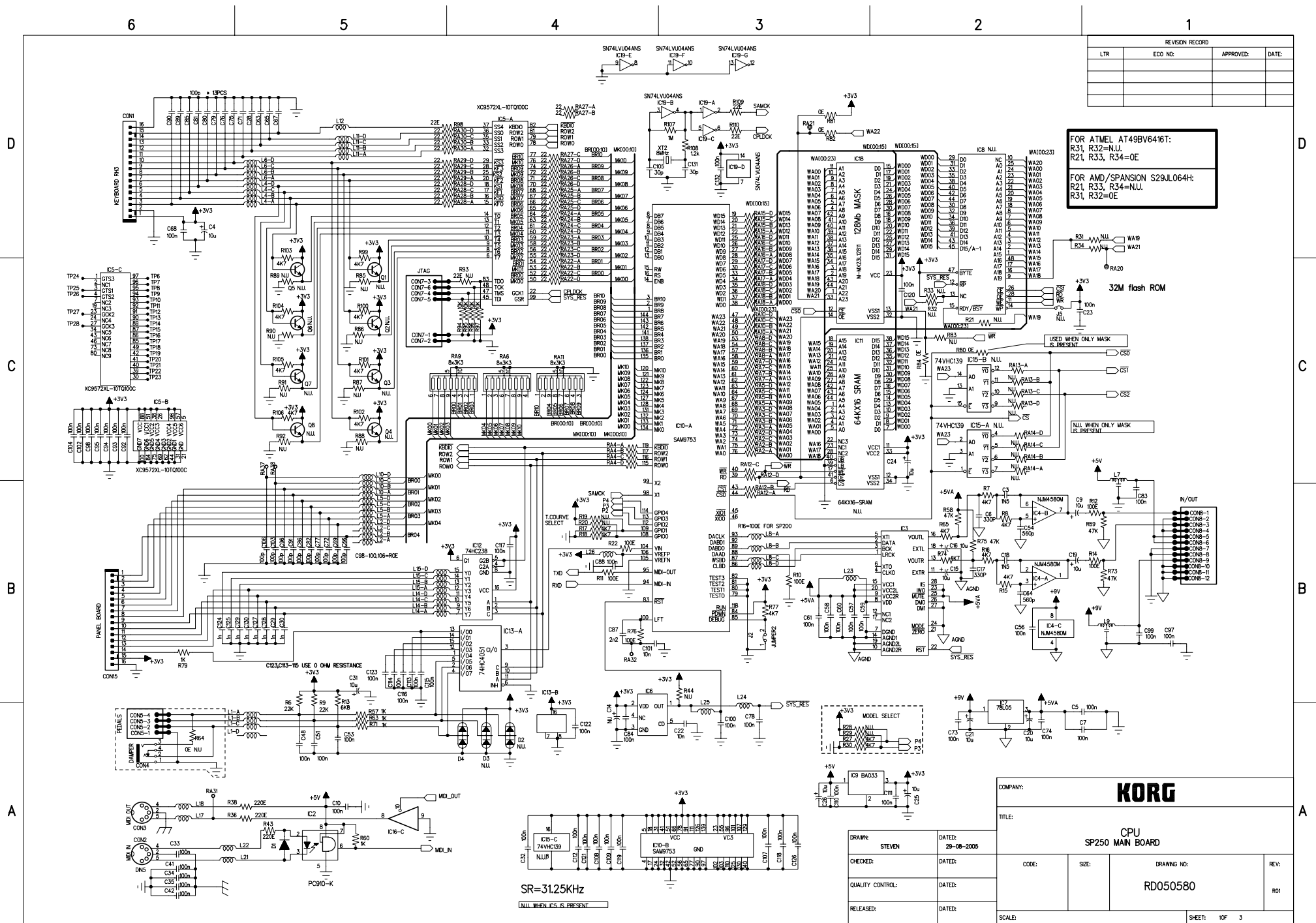
CONTENTS

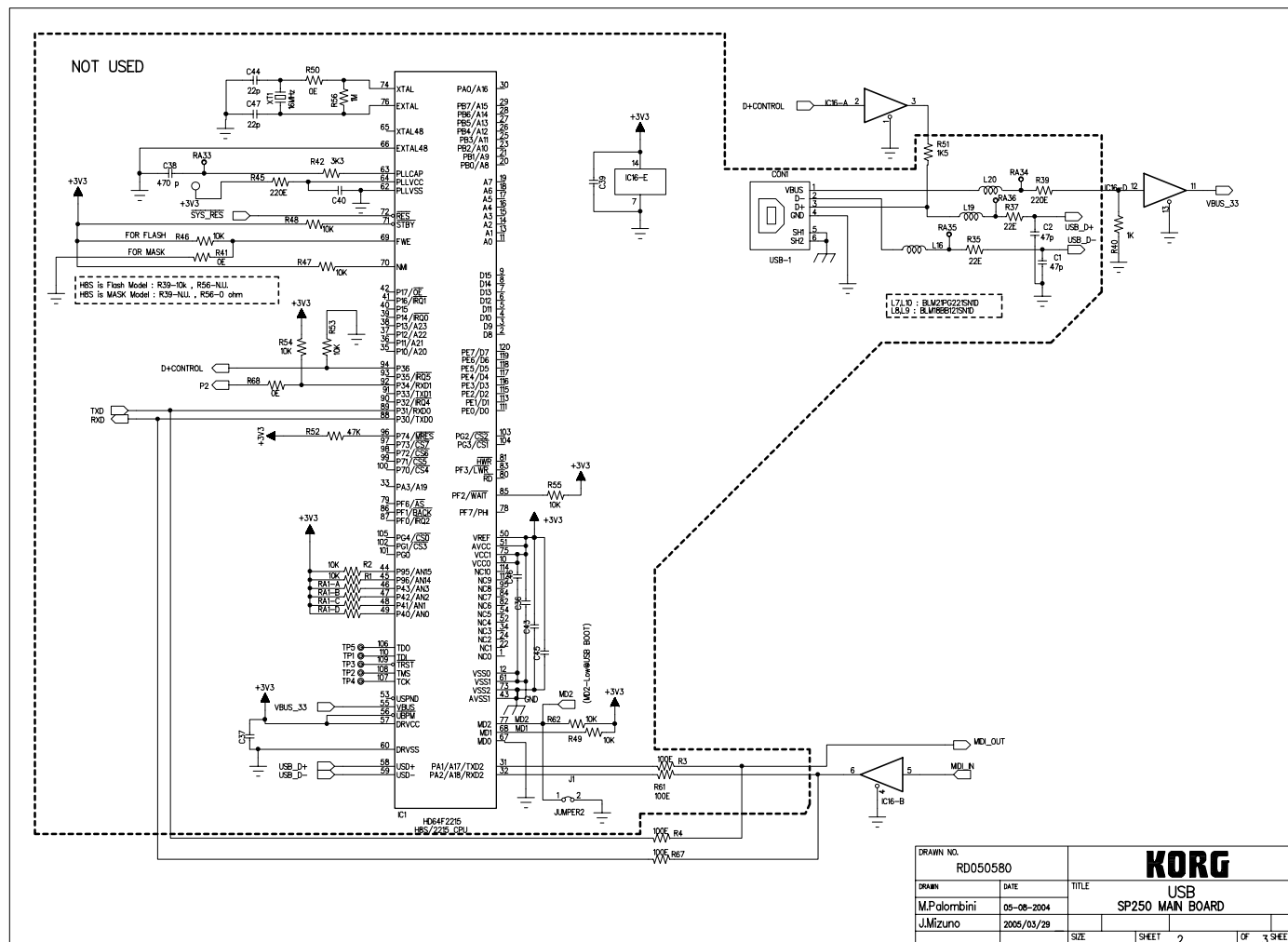
- 1) Circuit Diagrams : Page 2 - 6
- 2) Disassembly : Page 7 - 20
- 3) Test Mode : Page 21 - 29
- 4) Parts List : Page 30 - 34

1st Edition

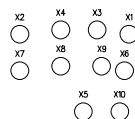
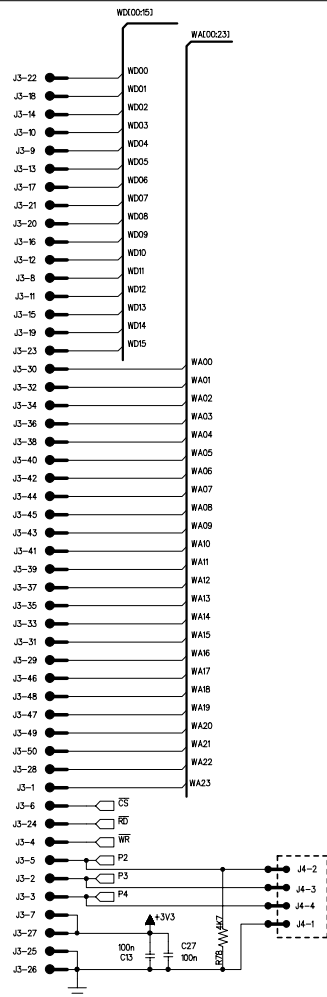
Issued date: March 30, 2006

Issued by: KORG INC.





DRAWIN NO. RD050580		KORG	
DRAWIN	DATE	TITLE	
M.Palombini	05-08-2004	USB SP250 MAIN BOARD	
J.Mizuno	2005/03/29		
		SIZE	SHEET 2 OF 3 SHEET



Assembled resistors on bracket ()

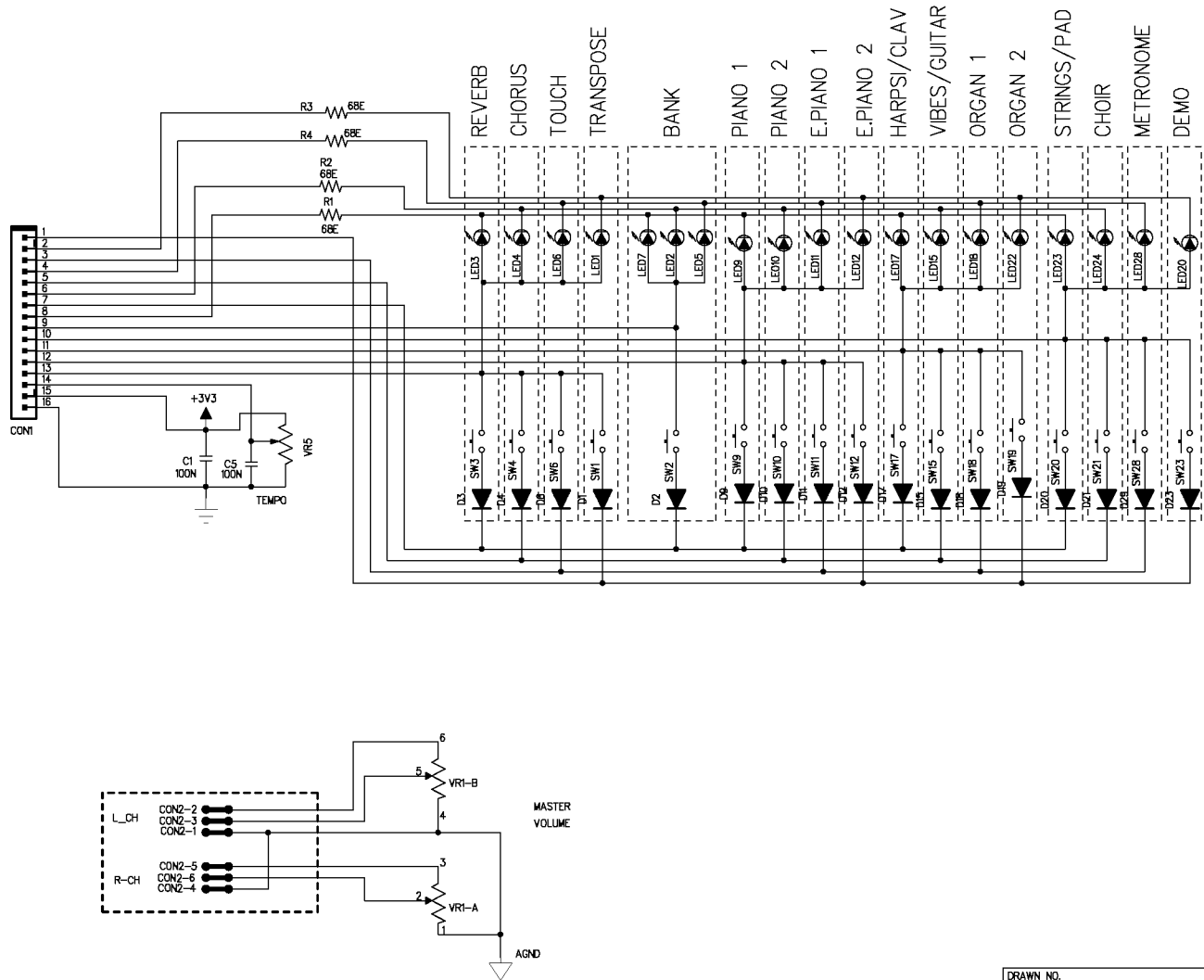
GPI01	GPI00	T. COURVE
0(R23)	0(R24)	TP30
0(R23)	1(R26)	TP31
1(R25)	0(R24)	TP10
1(R25)	1(R26)	TP9

Assembled resistors on bracket ()

GPI03	GPI04	TESTED PEDALS	TEST PC/HOST
0(R43)	0(R40)	DAMPER	NO
0(R43)	1(R41)	DAMP/SOST/SOFT	NO
1(R42)	0(R40)	DAMPER	YES
1(R42)	1(R41)	DAMP/SOST/SOFT	YES



DRAWN NO. RD050580		KORG	
DRAWN M.Palombini J.Mizuno	DATE 05-08-2004 2006/03/29	TITLE DEBUG CONNECTOR SP250 MAIN BOARD	
SIZE		SHEET 3	OF 3 SHEETS



DRAWN NO. RD050582		KORG SP250 PANEL BOARD	
DRAWN	DATE		
SUNJING	2005-4-9	REV: 00	
Steven	2005-8-25		
SIZE		SHEET 1	OF 1 SHEETS

6

5

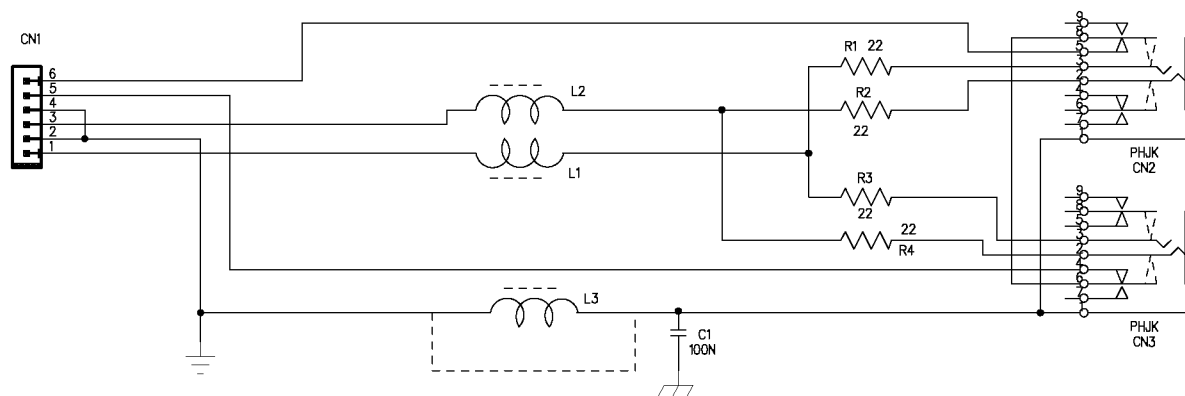
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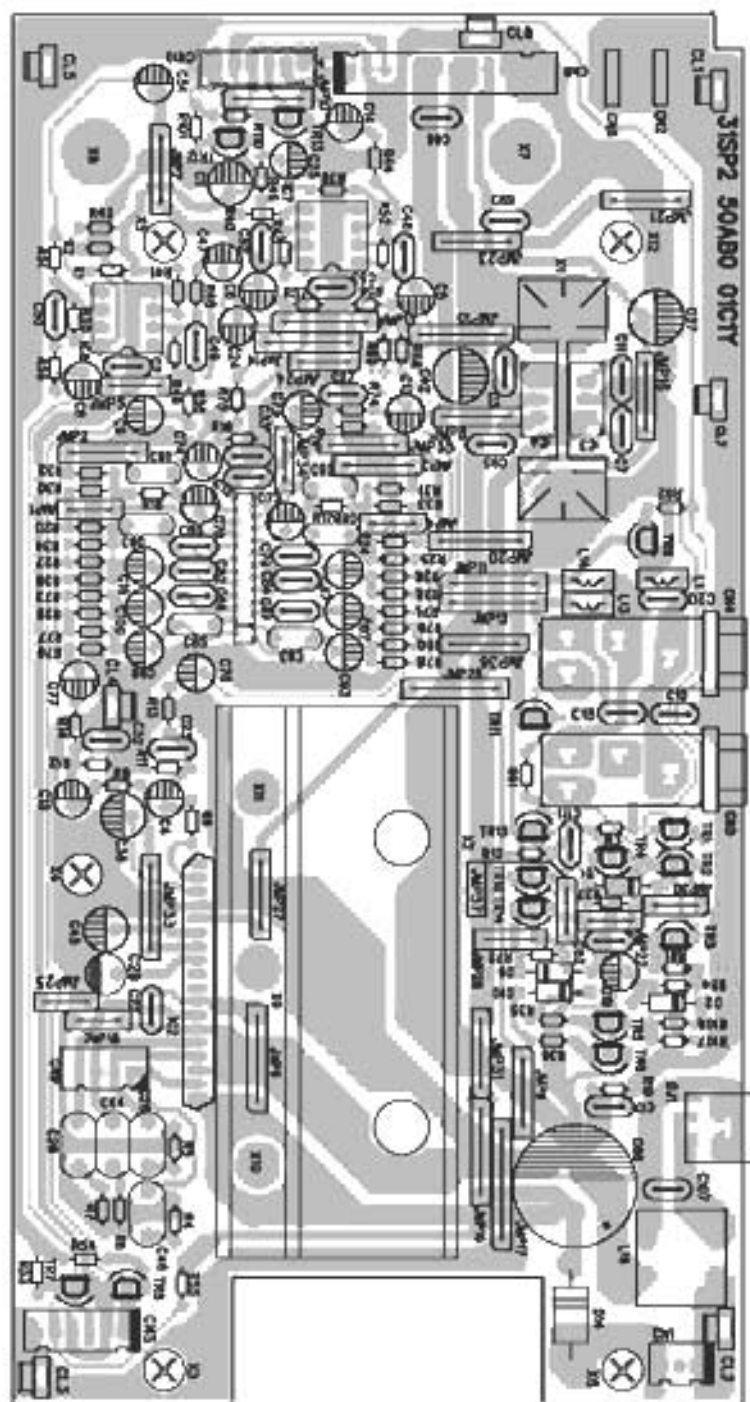
2

1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

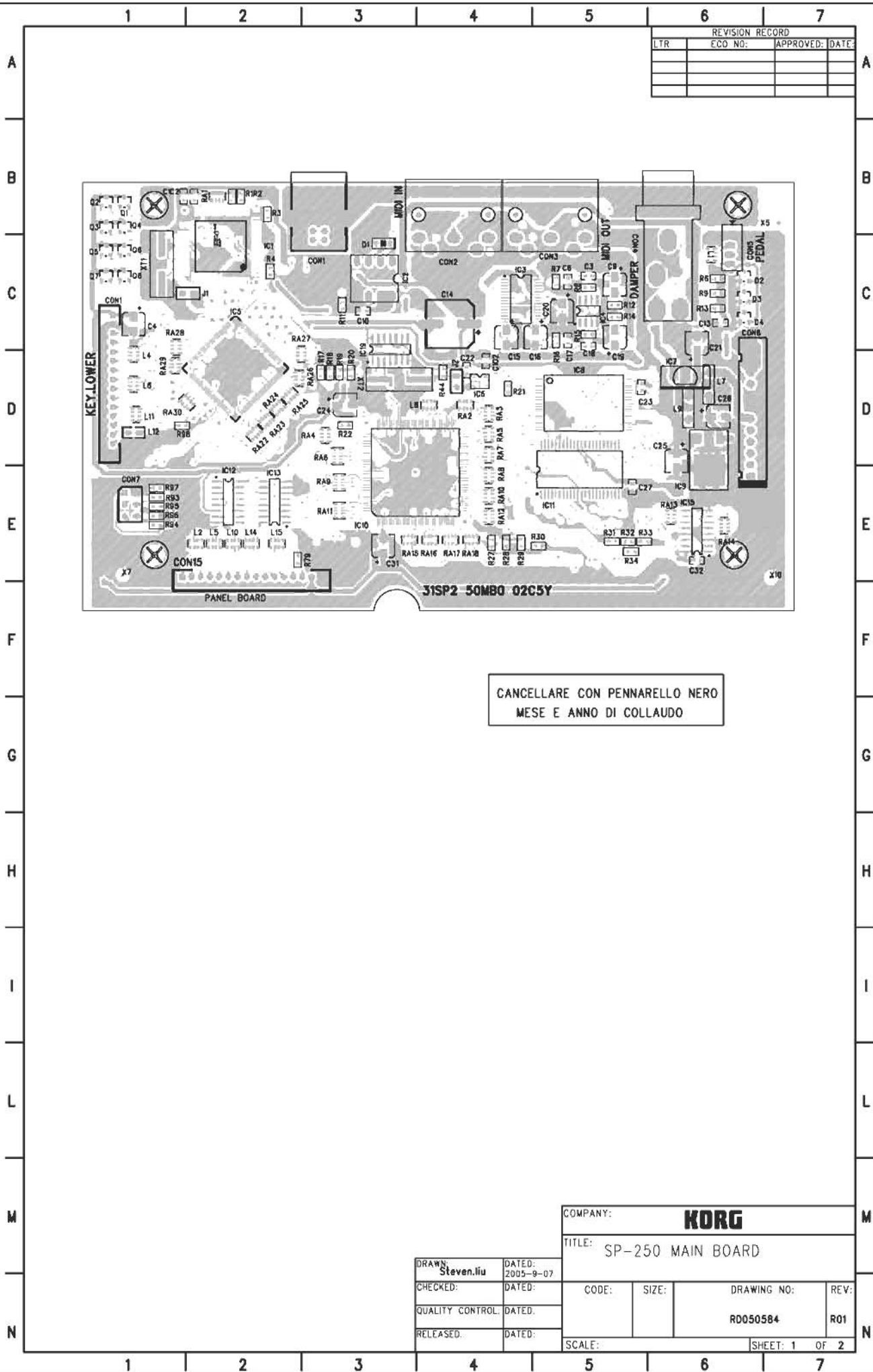


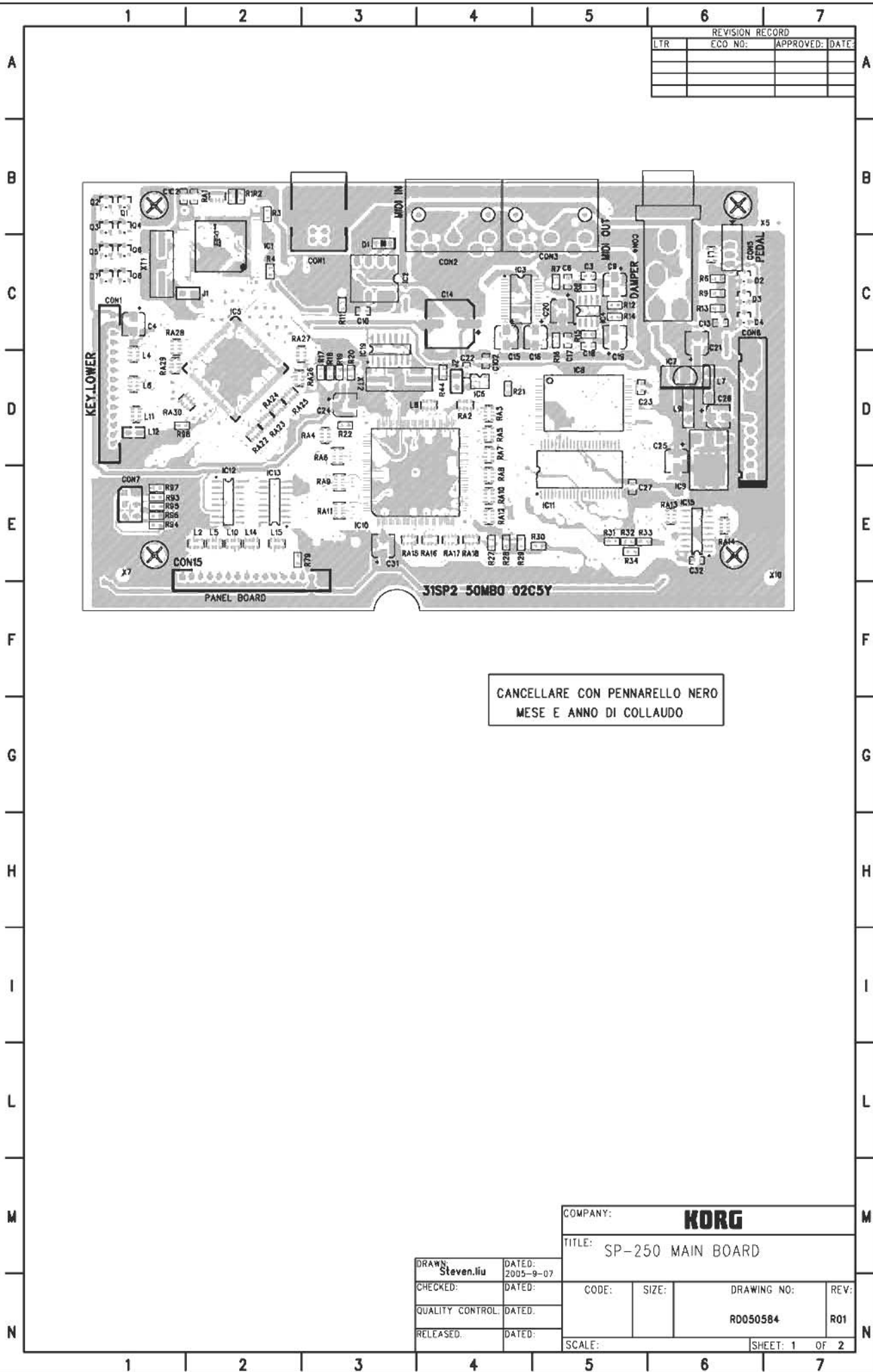
DRAWN: STEVEN		DATED: 2005-8-25		SP-250 PHONES BOARD								
CHECKED:		DATED:		CODE:		SIZE:		DRAWING NO: RD050581			REV: R01	
QUALITY CONTROL:		DATED:										
RELEASED:		DATED:										
				SCALE:					SHEET: 1 of 1			



COMPANY		KORG			
TITLE		SP230 AMP. BOARD			
CODE	SIZE	DRAWING NO		REV	
	A4	R0050583		R01	
SCALE		SHEET		OF	

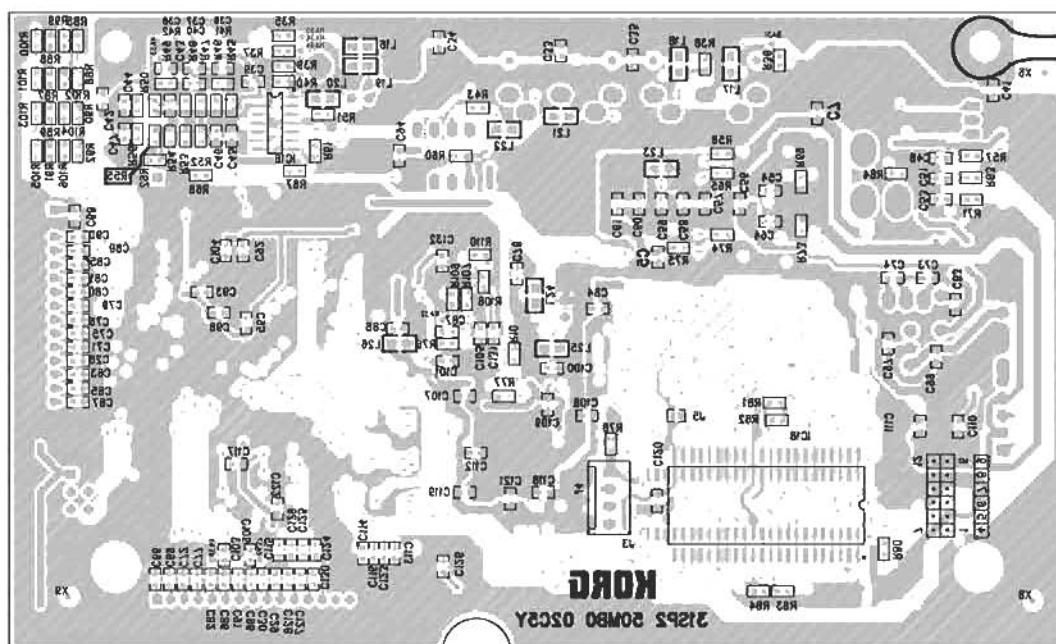
DRAWN	STEVEN LIU	DATED	2005-11-02
CHECKED		DATED	
QUALITY CONTROL		DATED	
RELEASED		DATED	





1 2 3 4 5 6 7

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



CANCELLARE CON PENNARELLO NERO
MESE E ANNO DI COLLAUDO

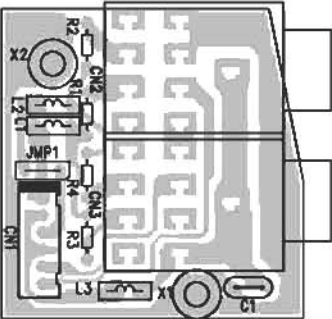
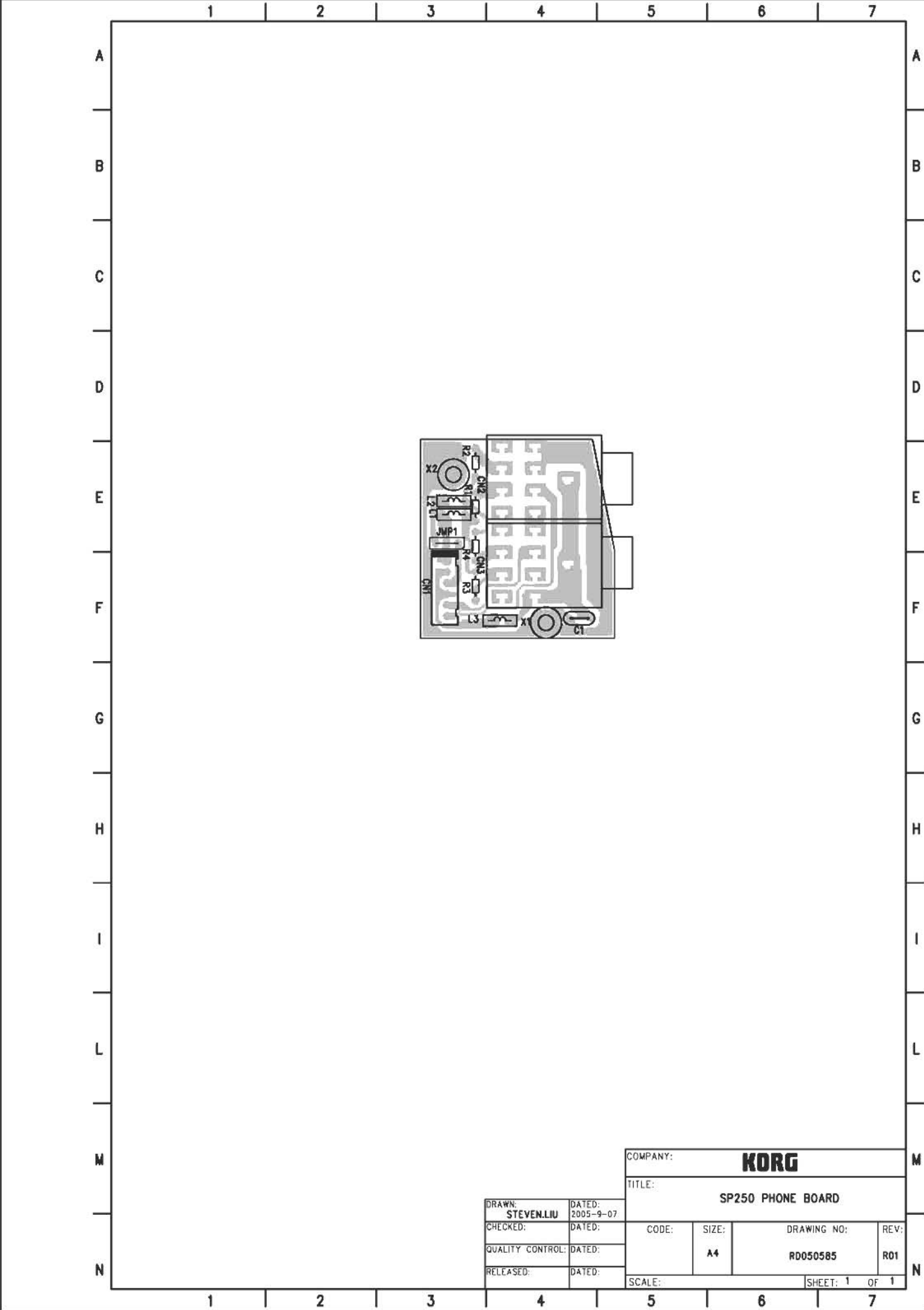
COMPANY: KORG			
TITLE: SP-250 MAIN BOARD			
CODE:	SIZE:	DRAWING NO:	REV:
		R0050584	R01
SCALE:		SHEET: 2 OF 2	

DRAWN: Steven.liu	DATED: 2005-9-07
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

1 2 3 4 5 6 7

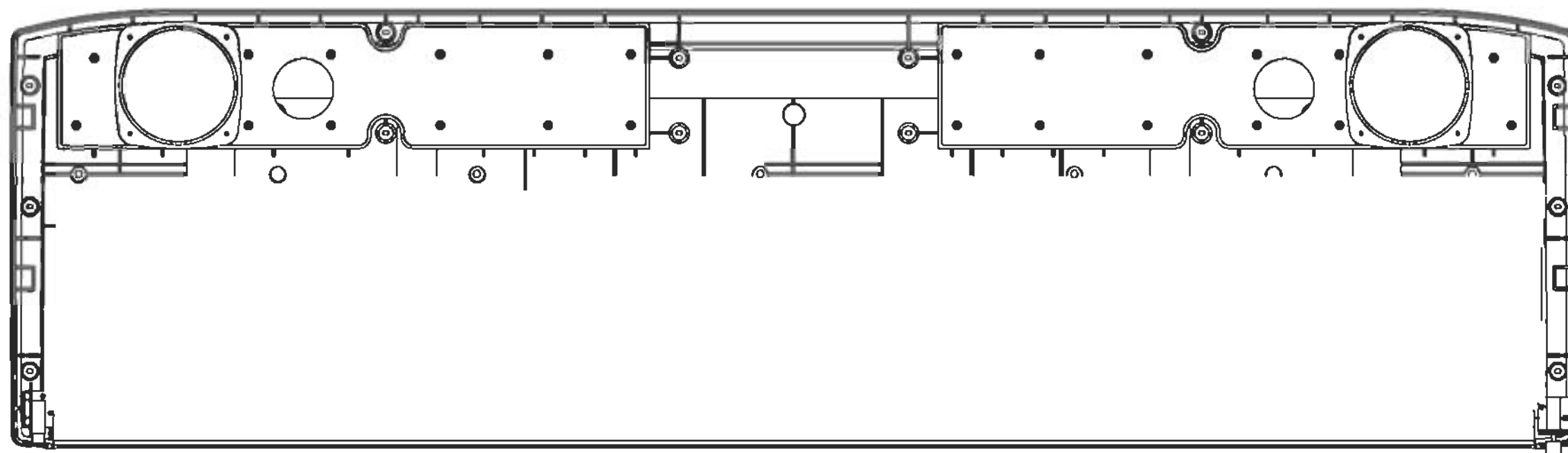
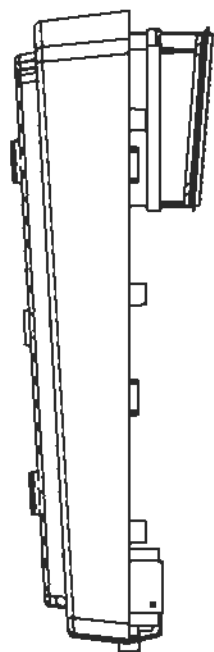


KORG	
60300 FUNCTION BOARD	
DATE	REV
1984	1.0



COMPANY:				KORG	
TITLE:				SP250 PHONE BOARD	
CODE:	SIZE:	DRAWING NO:	REV:		
	A4	RD050585	R01		
SCALE:				SHEET: 1	OF 1

DRAWN:	DATED:
STEVEN.LIU	2005-9-07
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

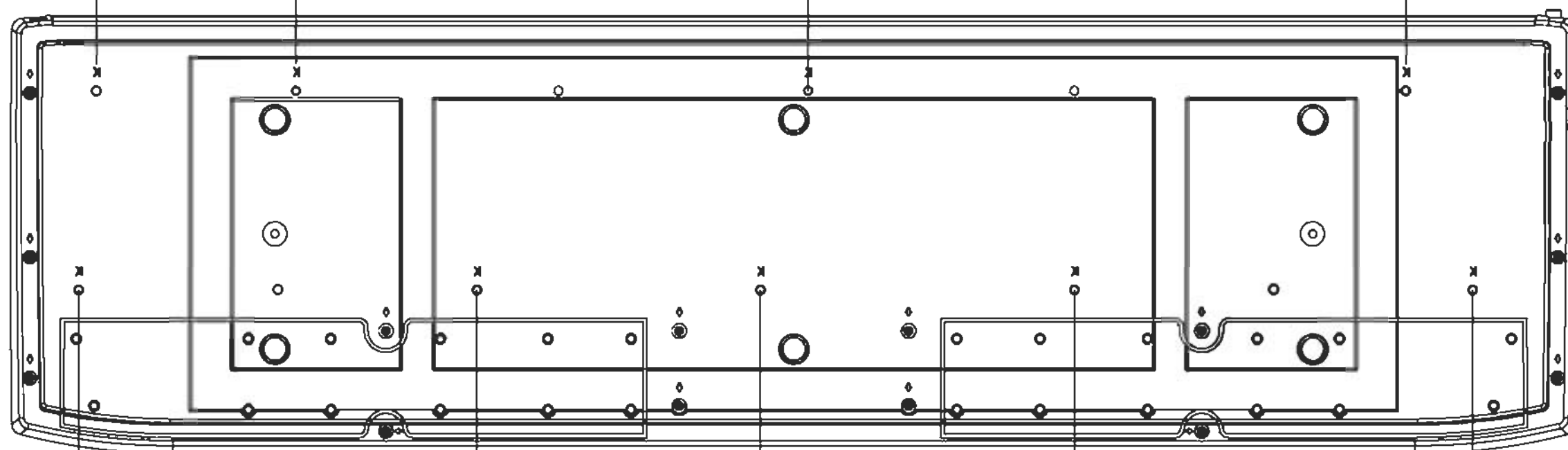


5SWXM050200C2BY

5SWXM050100C2BY

5SWXM050100C2BY

5SWXM050200C2BY



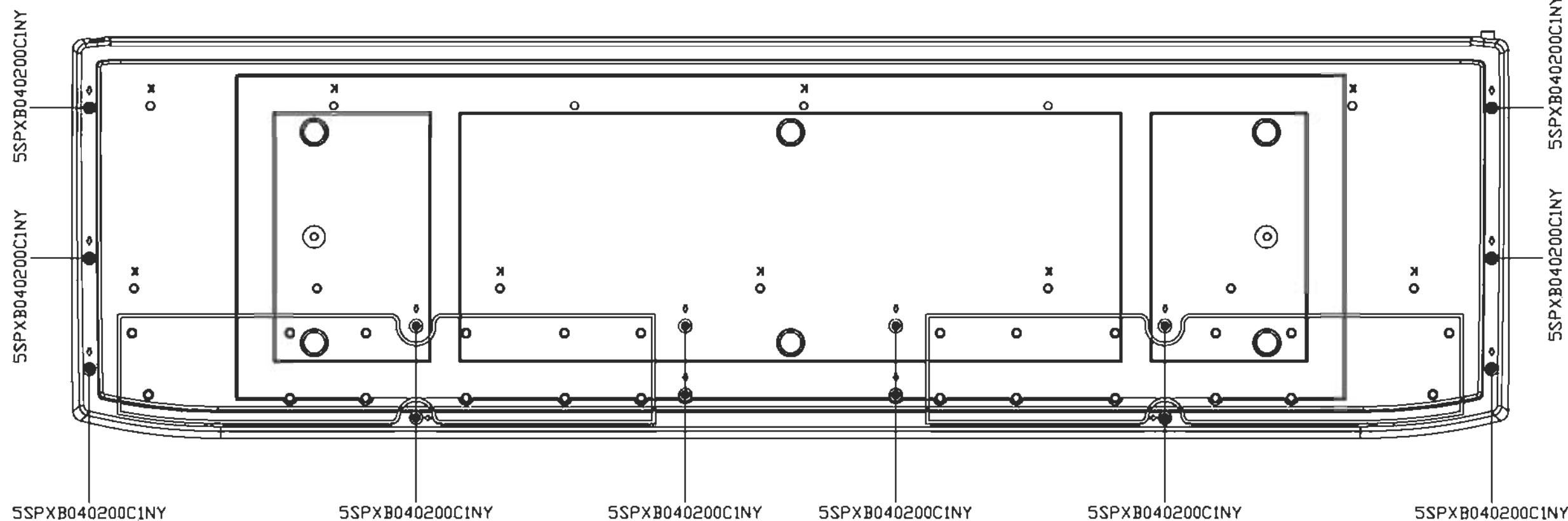
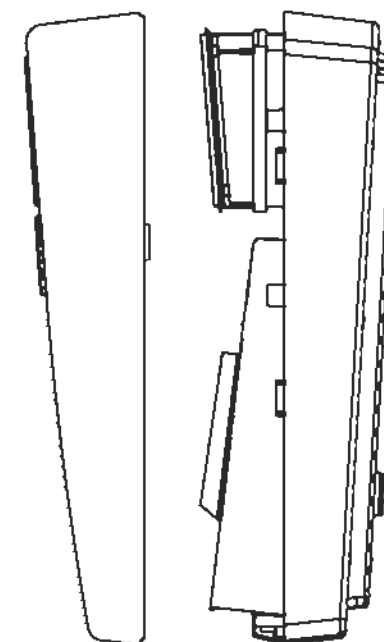
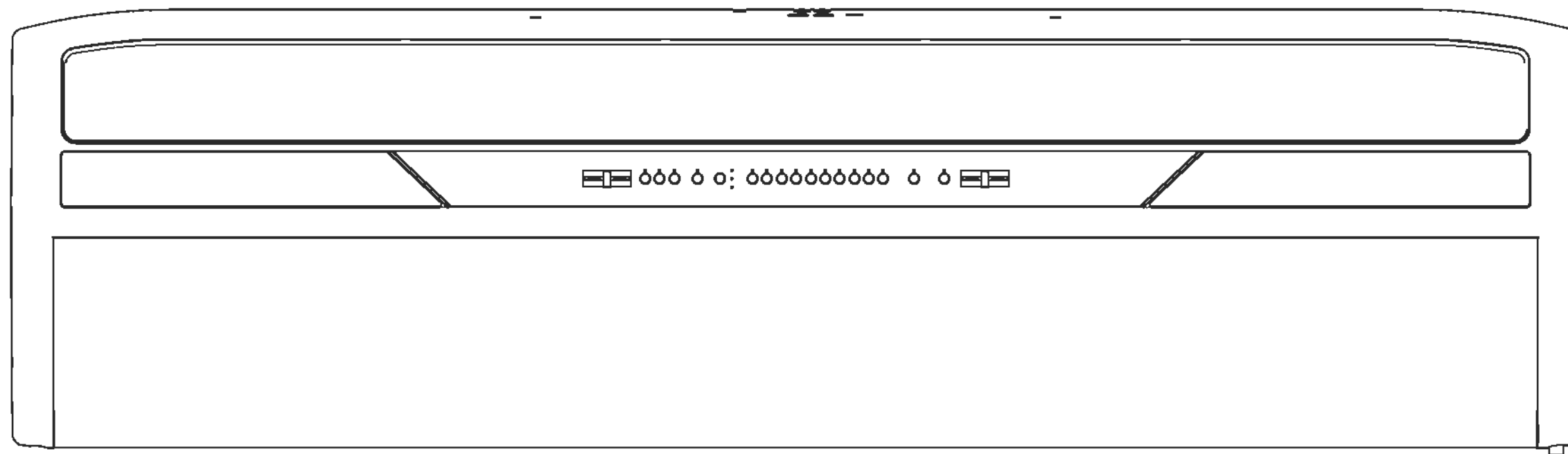
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5SWXM050200C2BY

5SWXM050200C2BY

5SWXM050200C2BY

5SWXM050200C2BY



5SPXB040200C1NY

5SPXB040200C1NY

5SPXB040200C1NY

5SPXB040200C1NY

5SPXB040200C1NY

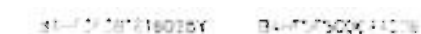
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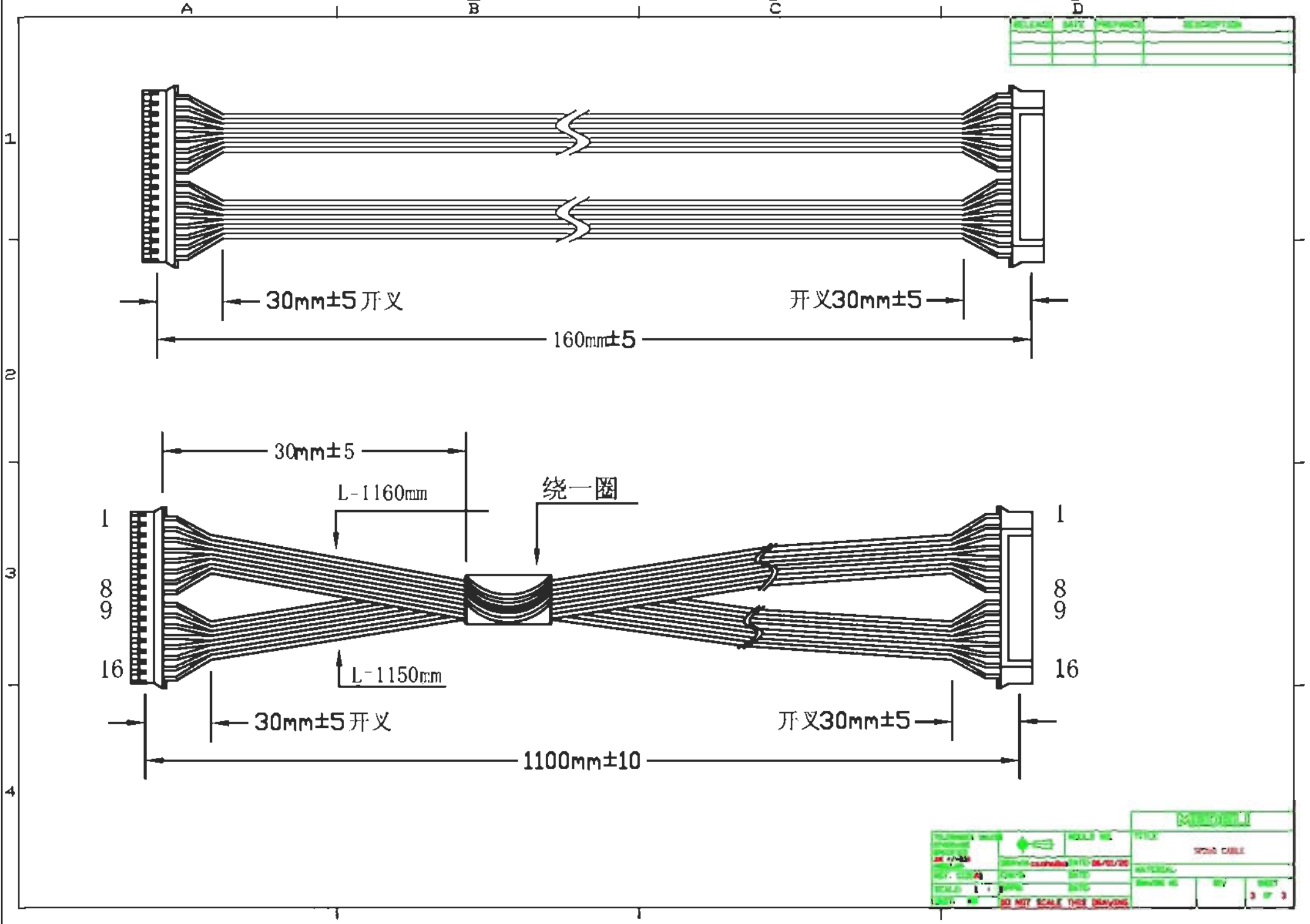
5SPXB040200C1NY

5SPXB040200C1NY

5SPXB040200C1NY

5SPXB040200C1NY





TEST MODE

Connection: 12V direct-current power supply.

POWER ON while pressing both [REVERB] and [TRANSPOSE] to enter TEST MODE.

<Internal Check>

MASK ROM Check ⇨ MIDI IN/OUT CHECK

*Internal Check OK ⇨ {METRONOME} LED Flashing then go to next test.

*Internal Check NG ⇨ Following LED flashing and stop test.

MASK ROM :	PIANO 1 LED Flashing
MIDI Loop :	PIANO 2 E.PIANO2 <*1>LED Flashing

<Max Output Level / Distortion Ratio Check>

Press [METRONOME] ⇨ {PIANO2} LED ON Enter this test.

Check Max Output level/Distortion Ratio in order of OUTPUT/PHONES1/PHONES2 by pressing [METRONOME].

Acceptable Range:

OUTPUT L/R : xx.x - yy.y

PHONES1 L/R : xx.x - yy.y

PHONES2 L/R : xx.x - yy.y

*On Checking Output L/Mono, Dummy Plug is inserted in Output R

*On Checking Output R, Dummy Plug is inserted in Output L/Mono

*On checking Phones1/2, 33ohm loading is inserted.

*Master Volume should be MAX.

After finishing this test/measurement, press [METRONOME] and go to next test.

< NOISE CHECK>

LED {E.PIANO1} ON.

Check Noise Level in order of OUTPUT/PHONES1/PHONES2 by pressing [METRONOME].

Acceptable Range:

OUTPUT L/R : xx.x - yy.y

PHONES1 L/R : xx.x - yy.y

PHONES2 L/R : xx.x - yy.y

*On Checking Output L/Mono, Dummy Plug is inserted in Output R

*On Checking Output R, Dummy Plug is inserted in Output L/Mono

*On checking Phones1/2, 33ohm loading is inserted.

*Master Volume should be MAX.

After finishing this test/measurement, press [METRONOME] and go to next test.

<SPEAKER CHECK>

LED {E.PIANO2} ON.

Please press [METRONOME] twice. ~~and go to~~ <*1> {HARPSI} LED ON.

Then Press [METRONOME] and check the speakers. Sine Wave Output comes from in order of Left Bass Sound/Right Bass Sound/Left Treble/Right Treble.

(BASS : 120Hz)

(Treble: 3kHz)

*The order of output sound should be important.

*Master Volume should be MAX.

*There are no Vibration Noise, distortion from speakers.

*Left and Right volume should be even.

After finishing this test, ~~measurement~~ <*1> , press [METRONOME] and go to next test.

<KEYBOARD CHECK>

LED {VIBES} ON.

Pressing key from highest end key sequentially with middle force and check if sound comes correctly.

If the key is stroke correctly, the sound comes from speakers.

Check it whether the sounds from L and R have the same Phase by hearing.

If the pressing is not admitted, the sound does not come out. In the case of no sound, return to one octave higher key and press and check again. If sound does not come out at the same key several times, the key is "NG".

<SW & LED Check>

After pressing final key, all LED are ON. Confirm if the all LED are ON correctly.

Press [METRONOME]. The left end LED {REVERB} only ~~ON~~ flashing<*1>. Press SWs from left to right sequentially. In this case, LED is also ~~on~~ flashing <*1> one by one.

*Press SW lightly. If the sensitive is low, the SW is NG.

*Adequate Click Feeling is necessary.

After finishing this test, ~~press [METRONOME] and go to next test.~~ SP-250 goes to next test automatically.<*1>

<SLIDE VR CHECK>

LED {ORGAN2} : ON

"TEMPO" VR moving from Left edge to Right edge: {Bank} LED lights from above to under sequentially

"TEMPO" VR moving from Right edge to Left edge: {Bank} LED lights from under to above sequentially

*The Slider should move smoothly and should be checked.

After finishing this test, ~~press [METRONOME] and go to next test.~~ SP-250 goes to next test automatically.<*1>

<PEDAL CHECK>

LED {STRINGS} : ON

When stepping the pedal lightly, {Bank} LEDs light from above to under sequentially.

After completion of Pedal Check, SP-250 goes to Normal Operation automatically.

<From Test Mode to Normal Operation>

{REVERB}/{PIANO}/{BANK1} LEDs ON

<Consumption Currency measurement>

Consumption Currency should be measured under normal operation .

Acceptable Range:

XX.X - YY.Y [mA]

<Speaker Noise Output Check>

Master VR : Max Without Sound

Make ear close to L and R Speaker in order and check if abnormal noise does not come from speakers (Click Noise, Hum Noise and etc)

<MIDI Synchronization check>

Connect from SP250 MIDI OUT to MIDI IN of another MIDI unit.by using MIDI cable.

Play the SP-250 and check if the MIDI unit moves correctly.

<Demo Performance check and Master VR Inspection>

Press [DEMO] and check if the demo song is performed correctly.

During this check, check whether output volume is changed smoothly and the feeling of movement of potentiometer is normal.

And check the output sound while shaking the knob of master VR to the vertical direction lightly. <*1>

<Bad Soldering Check>

During Demo Performance, the unit should be shaking in order to check internal soldering.

Do not drop the unit from height more than 5cm. <*1>

<Headphone SW Check>

PHONE1 plugged: In this case, no sound comes from speakers.

PHONE1 unplugged: In this case, sound comes from speakers

PHONE2 plugged: In this case, no sound comes from speakers.

PHONE2 unplugged: In this case, sound comes from speakers

FQC COMPLETION

<*1> 01 Sep. 2005 Error correction / Addition of inspection item and attention

<PREPARATION FOR INSPECTION>

- 1 MIDI cable is connected with MIDI OUT and MIDI IN to enter LOOP condition.

<APPEARANCE CHECK>

- 1 There are no abnormalities or problems on paintings and silk printings.
Especially color of painting parts should be within the range of acceptance that was decided between KORG and Medeli.
- 2 There are no abnormalities or problems of float or ETC on SWs, Jacks, Potentiometers and etc
- 3 Gap between Aluminum Front Bar and Point of Keybed from the lowest key to highest key should be more than 2mm.
- 4 Aluminum Front Bar should not be go out of Top Panel on forward.
- 5 There are no sink marks due to bosses on Control Panel.
- 6 There are no convex by screws on the surface of wooden parts located next to control panel.
- 7 There are no waving, irregularities, paint stuck on surface/in punching holes, attachment of foreign stuffs in the appearance of the speaker net.
- 8 All screws of bottom should be screwed correctly.
- 9 Rubber Legs (8 pcs.) of bottom should be attached correctly.
- 10 Nuts should be installed correctly inside of Lower Case.
Check Method: Screwing butterfly Bolts bundled with Stand into holes (2 parts) to fix stand.
- 11 Metal Parts as Stopper for the nuts to fix the stand for Stopper should be assembled.
- 12 The extrusion Length of Key Felt from Upper Case should be 2 - 3mm from the lowest key to highest key.
- 13 There are no abnormalities on appearance such as Scratches, dirt and so on.

<KEYBED MECHANICAL NOISE CHECK>

- 1 In silent condition, press key one by one (Middle Force) and check if strange noise or Key Mechanical noises are not come from. This test should be done while Power of Unit is OFF.
*Noise from contact of adjoining keys toward pressing direction is acceptable.

<DREAM IC CHECK>

1. Power ON -> Normal Operation Start -> Play some keys and confirm if sound comes from Speakers.
2. Repeat this method 10 times. Even if problem happens even once, the result is "NG".
*This test is to avoid that Defect IC is used for production and delivered (This problem was found in Final Sample). Medeli should ask Vender to analyze the IC Defect. Depending on their reply, we will consider this method again.

TEST MODE

Connection: 12V direct-current power supply.

POWER ON while pressing both [REVERB] and [TRANSCOPE] to enter TEST MODE.

<Internal Check>

MASK ROM Check ⇨ MIDI IN/OUT CHECK

*Internal Check OK ⇨ {METRONOME} LED Flashing then go to next test.

*Internal Check NG ⇨ Following LED flashing and stop test.

[	MASK ROM :	PIANO 1 LED Flashing
	MIDI Loop :	PIANO 2 E.PIANO2<*1> LED Flashing
]		

<SPEAKER CHECK>

After Internal Check completion, press [METRONOME] Button till LED {HARPSI} is ON.

Then Press [METRONOME] and check the speakers. Sine Wave Output comes from in order of Left Bass Sound/Right Bass Sound/Left Treble/Right Treble

(BASS : 120Hz)

(Treble: 3kHz)

*The order of output sound should be important.

*Master Volume should be MAX.

*There are no Vibration Noise, distortion from speakers.

*Left and Right volume should be even.

After finishing this test/~~measurement~~<*1>, press [METRONOME] and go to next test.

<KEYBOARD CHECK>

LED {VIBES} ON.

Pressing key from highest end key sequentially with middle force and check if sound comes correctly.

If the key is stroke correctly, the sound comes from speakers.

Check it whether the sounds from L and R have the same Phase by hearing.

In addition, Phase Inversion Check should be also checked.

If the pressing is not admitted, the sound does not come out. In the case of no sound, return to one octave higher key and strike and check again. If sound does not come out at the same key several times, the key is "NG".

<SW & LED Check>

After pressing final key, all LED are ON. Confirm if the all LED are ON correctly.

Press [METRONOME]. The left end LED {REVERB} only ~~ON~~ flashing<*1>. Press SWs from left to right sequentially. In this case, LED is also ~~on~~ flashing<*1> one by one.

*Press SW lightly. If the sensitive is low, the SW is NG.

*Adequate Click Feeling is necessary.

After finishing this test, ~~press [METRONOME] and go to next test.~~ SP-250 goes to next test automatically.<*1>

<SLIDE VR CHECK>

LED {ORGAN2} : ON

"TEMPO" VR moving from Left edge to Right edge: {Bank} LED lights from above to under sequentially

"TEMPO" VR moving from Right edge to Left edge: {Bank} LED lights from under to above sequentially

*The Slider should move smoothly and should be checked.

After finishing this test, ~~press [METRONOME] and go to next test.~~ SP-250 goes to next test automatically.<*1>

<PEDAL CHECK>

LED {STRINGS} : ON

When stepping the pedal lightly, {Bank} LEDs light from above to under sequentially.

After completion of Pedal Check, SP-250 goes to Normal Operation automatically.

<From Test Mode to Normal Operation>

{REVERB}/{PIANO}/{BANK1} LEDs ON

<Speaker Noise Output Check>

Master VR : Max Without Sound

Make ear close to L and R Speaker in order and check if abnormal noise does not come from speakers (Click Noise, Hum Noise and etc)

<Demo Performance check and Master VR Inspection>

Press [DEMO] and check if the demo song is performed correctly.

During this check, check whether output volume is changed smoothly and the feeling of movement of potentiometer is normal.

And check the output sound while shaking the knob of master VR to the vertical direction lightly. <*1>

<LINE OUT CHECK>

Connect External Monitor to LINE L/R and confirm that sound comes from External Monitor normally.

<Headphone SW Check>

PHONE1 plugged: In this case, no sound comes from speakers.

PHONE1 unplugged: In this case, sound comes from speakers

PHONE2 plugged: In this case, no sound comes from speakers.

PHONE2 unplugged: In this case, sound comes from speakers

<Bad Soldering Check>

During Demo Performance, the unit should be shaking in order to check internal soldering.

Do not drop the unit from height more than 5cm.<*1>

<PRESS KEY CHECK>

Select {PIANO} and {BANK1}.

Press all keys weakly: Check if the sound comes according to adequate velocity

Press all keys strongly: Check if the sound comes according to adequate velocity

QA Full Inspection COMPLETION

<*1> 01 Sep. 2005 Error correction / Addition of inspection item and attention

SP-250 FQC Instruction Manual (Ver.2)

<PREPARATION FOR INSPECTION>

- 1 MIDI cable is connected with MIDI OUT and MIDI IN to enter LOOP condition.
- 2 Audio Analyzer ATS-2 : POWER ON -> ENTER Inspection Program -> Connection of cables

<APPEARANCE CHECK>

- 1 There are no abnormalities or problems on paintings and silk printings.
Especially color of painting parts should be within the range of acceptance that was decided between KORG and Medeli.
- 2 There are no abnormalities or problems of float or ETC on SWs, Jacks, Potentiometers and etc
- 3 Gap between Aluminum Front Bar and Point of Keybed from the lowest key to highest key should be more than 2mm.
- 4 Aluminum Front Bar should not be go out of Top Panel on forward.
- 5 There are no sink marks due to bosses on Control Panel.
- 6 There are no convex by screws on the surface of wooden parts located next to control panel.
- 7 There are no waving, irregularities, paint stuck on surface/in punching holes, attachment of foreign stuffs in the appearance of the speaker net.
- 8 All screws of bottom should be screwed correctly.
- 9 Rubber Legs (8 pcs.) of bottom should be attached correctly.
- 10 Nuts should be installed correctly inside of Lower Case.
Check Method: Screwing butterfly Bolts bundled with Stand into holes (2 parts) to fix stand.
- 11 Metal Parts as Stopper for the nuts to fix the stand should be assembled.
- 12 The extrusion Length of Key Felt from Upper Case should be 2 - 3mm from the lowest key to highest key.
- 13 There are no abnormalities on appearance such as Scratches, dirt and so on.

<KEYBED MECHANICAL NOISE CHECK>

- 1 In silent condition, pressing key one by one (Middle Force) and checking if strange noise or Key Mechanical noise are not come from. This test should be done while Power of Unit is OFF.
*Noise from contact of adjoining keys toward pressing direction is acceptable.

<DREAM IC CHECK>

1. Power ON -> Normal Operation Start -> Play some keys and confirm if sound comes from Speakers.
2. Repeat this method 10 times. Even if problem happens even once, the result is "NG".
*This test is to avoid that Defect IC is used for production and delivered (This problem was found in Final Sample). Medeli should ask Vender to analyze the IC Defect. Depending on their reply, we will consider this method again.

KORG SP-250 Parts List

Part Code	Parts Name	Location	Reference	QTY
530000000315	SP250 PIANO STAND PART			1
530000000316	SP250 MUSIC STAND,HIPS 428C			1
530000000317	SP250 PEDAL			1
530000000318	SP250 TOP CABINET PART FULL			1
530000000319	SP250 TOP CABINET PART BASIC			1
530000000320	MC-500 POWER SWITCH KNOB			1
530000000321	PA-50 MUSIC STAND BRACKET			2
530000000322	PA-50 VOLUME SWITCH CAP			2
530000000323	SP250 FUNCTION BOARD ASSY	FUNCTION BRD		1
530000000324	SP250 CIRCLE SILICA GEL BUTTON	FUNCTION BRD		17
530000000325	SP250 FUNCTION PANEL	FUNCTION BRD		1
530000000326	ROW OF LINE,16PIN 28#		FROM MAIN TO FUNCTION	1
530000000327	SP250 AMP.BOARD ASSY	AMP BOARD		1
500404000200	BL02RN2R1P1A	AMP BOARD	L1	1
530000000328	DC JACK DS-210 3PIN DIP	AMP BOARD	DJ1	1
530000000329	STEREO JACK ST-015 4PIN DIP	AMP BOARD	CN4,CN5	2
530000000330	CORE COIL,TBC-451530-20UH	AMP BOARD	L13,L14	2
530000000331	TR BC558C PNP TO-92 DIP	AMP BOARD	TR3	1
530000000332	DIGITAL TR C114 E.S.X NPN DIP	AMP BOARD	TR2,TR4,TR5,TR6,TR10	5
530000000333	TR 2SD2144S NPN BIPOLAR DIP	AMP BOARD	TR7-TR9,TR11-TR14	7
500304050240	DTA114ESATP	AMP BOARD	TR1	1
500320009057	NJM7805FA	AMP BOARD	IC4	1
530000000334	IC REGULATOR 7809 DIP TYPE	AMP BOARD	IC3	1
530000000335	IC LA4708 DIP TYPE	AMP BOARD	IC2	1
510320520502	NJM4556AD (D)	AMP BOARD	IC8	1
530000000336	IC NJM4580 DIP8	AMP BOARD	IC7	1
530000000337	IC BA3823LS ZIP TYPE	AMP BOARD	IC1	1
530000000338	CHOKE COIL,PLT09H-2003R-004	AMP BOARD	L16	1
530000000339	PIN(MALE),DIP 3PINS/2.54MM	AMP BOARD	CN1	1
530000000340	PIN(MALE),DIP 4PINS/2.54MM	AMP BOARD	CN9	1
530000000341	PIN(MALE),DIP 6PINS/2.54MM	AMP BOARD	CN3,CN10, CON2	3
530000000342	PIN(MALE),DIP 12PINS/2.54MM	AMP BOARD	CN8	1
530000000343	LED SHINE PIPE,RED WEJ-2114D	AMP BOARD	LED1-7,9-12,15,17-18,20,22-24,28	19
530000000344	TACT SWITCH,TC-00102(A)-02	AMP BOARD	SW1-4,6,9-12,15,17-21,23 , 28	17
530000000345	45*8MM 10K OHM(30MM)SLIDE POT	AMP BOARD	VR5	1
530000000346	45*8MM 10KOHMX2(30MM)SLIDE POT	AMP BOARD	VR1	1
530000000347	PIN(M)HEADER CONNECTOR,DIP 16P	AMP BOARD	CON1	1
530000000348	SP250 MAIN BOARD ASSY	MAIN BOARD		1
530000000349	FERRITE BEAD 2012D102B SMD0805	MAIN BOARD	L12,L17,L18,L21-26,	9
530000000350	FERRITE BEAD SMBG3216K4-102	MAIN BOARD	L1,L2,L4,L5,L6,L8,L10,L11,L14,L15	10
530000000329	STEREO JACK ST-015 4PIN DIP	MAIN BOARD	CON4	1
500330003100	PC910LKNSZ0F	MAIN BOARD	IC2	1
510320520507	NJM78L05L02A#ZZZD (D)	MAIN BOARD	IC7	1
500320019001	SAM9753 "DREAM CHIP" (S)	MAIN BOARD	IC10	1
500324004080	HD74HC238FPEL-E	MAIN BOARD	IC12	1
530000000351	IC 74LVU04 3.3V SO14 PHILIPS	MAIN BOARD	IC19	1
500324007009	BA033FP-E2	MAIN BOARD	IC9	1

KORG SP-250 Parts List

Part Code	Parts Name	Location	Reference	QTY
500324007027	BU4327G-TR	MAIN BOARD	IC6	1
500324009039	NJM4580M-TE1	MAIN BOARD	IC4	1
500324036008	PCM1716E/2K	MAIN BOARD	IC3	1
500320040117	MX23L12811MC-10G(X-4350A)	MAIN BOARD	IC18	1
500324004166	HD74HC4051FPEL-E	MAIN BOARD	IC13	1
530000000352	IC 74LVC125A 3.3V SOP TYPE	MAIN BOARD	IC16	1
500320001616	XC9572XL-10TQG100C(X-4350)	MAIN BOARD	IC5	1
530000000353	MIDI JACK,DIN-503 5PIN DIP	MAIN BOARD	CON2 , CON3	2
530000000354	CRYSTAL 8MHZ (HC-49S-SMD)	MAIN BOARD	XT2 ,	1
530000000355	FILTER,DSS6NF31C223Q55B DIP	MAIN BOARD	L7 , L9	2
530000000356	PIN(MALE),DIP 12PINS/2.54MM	MAIN BOARD	CON8	1
530000000357	PIN(MALE),DIP 16PINS/2.00MM	MAIN BOARD	CON1,CON15	2
530000000358	ROW OF LINE,12P 20# RED 120MM		FROM M.B TO A.B	1
530000000359	SHIELD LINE,6P COLOR 26#L440MM		FROM AMP.B TO F.B	1
530000000360	YELLOW GREEN WIRE,1P UL1015#18		FROM M.B TO AMP.B	1
530000000361	SP250 BOTTOM CABINET PART			1
530000000362	SPEAKER,4 OHM 15W 4"(105MM)			2
530000000363	CONDUCTION SOUND TUBE EVA			2
530000000364	SP250 EVA HARD FOAM RUBBER		FOR SPEAKER	2
530000000365	SOUND BOX(EVA),1250*10*1MM BLK		FOR BOTTOM	2
530000000366	BLACK VELVET,SIZE15*15*0.3MM		1 FOR PHONE LINE,4 FOR KBD	5
530000000367	MK-2501 BLACK FLET W/A		FOR KEYBOARD	4
530000000368	SP250 BLACK VELVET , 500*30*0.2			2
530000000369	PA-50 RUBBER STAND,D18.5 T4MM			6
530000000370	SP250 RUBBER STAND,18.5*9*4MM			2
530000000371	STAND MOUNDING METAL			2
530000000372	SP250 FRONT NAR,ALUMI L:1227MM			1
530000000373	SP250 LOWER CABINET ,			1
530000000374	SP250 LOWER CABINET ,			1
530000000375	SP250 TRANSMIT SOUND CANISTER			2
530000000376	SP250 RIGHT SOUND COVER,BLACK			1
530000000377	SP250 LEFT SOUND COVER, BLACK			1
530000000378	SP250 HEADPHONE BOARD ASSY			1
500404000200	BL02RN2R1P1A	HEADPHONE	L1,L2	2
530000000379	RP800 JACK,9P MSJ-064-04B	HEADPHONE	CN2,CN3	2
530000000341	PIN(MALE),DIP 6PINS/2.54MM	HEADPHONE	CN1	1
530000000380	SP250 SWITCH BOARD PART	SWITCH		1
530000000381	SP250 POWER SWITCH HOB,	SWITCH		1
530000000382	POWER SWITCH,KDC-A04-10(B)	SWITCH		1
530000000383	ROW OF LINE,2P 18# RED/YELLOW			1
530000000384	SP250 KEYBOARD ,88 KEY			1
530000000385	ROW OF LINE (SP LINE) ,4P 20#			1
530000000386	ROW OF LINE,16P 28# PALM		FROM KBD TO MAIN BOARD	1
530000000387	ROW OF LINE,6PIN 24# COLOR		FROM PHONE BOARD TO AMP	1
530000000388	Y/G 2CLR SINGLE CORE WIRE 10CM			1
530000000389	Y/G 2CLR SINGLE CORE WIRE,20CM			1
530000000390	SP250 ADAPTER 12V DC 3500MA			1

KORG SP-250 Parts List

Part Code	Parts Name	Location	Reference	QTY
530000000391	AC CORD 1.5M CCC CHINA 220CH			1
530000000392	AC CORD 023-B001 UK (BSI)230UK			1
530000000393	AC CORD 023-S022 SAA 240AU			1
530000000394	AC CORD 023-V019 FOR VDE 230V			1
530000000395	AC CORD 023-U087 FOR 120V			1
530000000001	AC CORDSET 100JP			1
500540028903	CONVERTER SOCKET YL-212			1

KORG SP-250 Parts List (comparative table with numbers on illustrated parts breakdown)

(NOTE) Please use the following table to refer the numbers shown on illustrated parts breakdown

Part Code	Parts Name	Location	Reference	QTY	Code#	
530000000315	SP250 PIANO STAND PART			1	12SP250HX0Y	Assembled
530000000316	SP250 MUSIC STAND,HIPS 428C			1	5PSP250A1276E0X	Assembled
530000000317	SP250 PEDAL			1	B12SP250PD0Y	
530000000318	SP250 TOP CABINET PART FULL			1	B12SP250PF0X	Assembled
530000000319	SP250 TOP CABINET PART BASIC			1		Assembled
530000000320	MC-500 POWER SWITCH KNOB			1	5PC0500UP0L00AY	
530000000321	PA-50 MUSIC STAND BRACKET			2	5PPA050HMO00SY	
530000000322	PA-50 VOLUME SWITCH CAP			2	5PPA050USOL00AY	
530000000323	SP250 FUNCTION BOARD ASSY	FUNCTION BRD		1	B12SP250PF0Y	Assembled
530000000324	SP250 CIRCLE SILICA GEL BUTTON	FUNCTION BRD		17	5C000390432CZZY	
530000000325	SP250 FUNCTION PANEL	FUNCTION BRD		1	5PSP250B1267G0X	
530000000326	ROW OF LINE,16PIN 28#		FROM MAIN TO FUNCTION	1	B4HF0F0B1616028Y	
530000000327	SP250 AMP.BOARD ASSY	AMP BOARD		1	B11SP250AB1Y	Assembled
500404000200	BL02RN2R1P1A	AMP BOARD	L1	1	3FB000BL02RN20Y	
530000000328	DC JACK DS-210 3PIN DIP	AMP BOARD	DJ1	1	3JDD0300DS2100Y	
530000000329	STEREO JACK ST-015 4PIN DIP	AMP BOARD	CN4,CN5	2	3JDE0400ST0150Y	
530000000330	CORE COIL,TBC-451530-20UH	AMP BOARD	L13,L14	2	3LDQ53020UH030X	
530000000331	TR BC558C PNP TO-92 DIP	AMP BOARD	TR3	1	3TD0000BC558C0Y	
530000000332	DIGITAL TR C114 E.S.X NPN DIP	AMP BOARD	TR2,TR4,TR5,TR6,TR10	5	3TD000C114ESX0Y	
530000000333	TR 2SD2144S NPN BIPOLAR DIP	AMP BOARD	TR7-TR9,TR11-TR14	7	3TD002SD2144S0Y	
500304050240	DTA114ESATP	AMP BOARD	TR1	1	3TD0DTA114ESA0Y	
500320009057	NJM7805FA	AMP BOARD	IC4	1	B3ID00007805000Y	
530000000334	IC REGULATOR 7809 DIP TYPE	AMP BOARD	IC3	1	B3ID00007809000Y	
530000000335	IC LA4708 DIP TYPE	AMP BOARD	IC2	1	B3ID00LA4708000Y	
510320520502	NJM4556AD (D)	AMP BOARD	IC8	1	B3ID0NJM4556000Y	
530000000336	IC NJM4580 DIP8	AMP BOARD	IC7	1	B3ID0NJM4580000Y	
530000000337	IC BA3823LS ZIP TYPE	AMP BOARD	IC1	1	B3IDBA3823LS000Y	
530000000338	CHOKE COIL,PLT09H-2003R-004	AMP BOARD	L16	1	B3LDCH2003R0040Y	
530000000339	PIN(MALE),DIP 3PINS/2.54MM	AMP BOARD	CN1	1	B4CPD103000254VY	
530000000340	PIN(MALE),DIP 4PINS/2.54MM	AMP BOARD	CN9	1	B4CPD104000254VY	
530000000341	PIN(MALE),DIP 6PINS/2.54MM	AMP BOARD	CN3,CN10, CON2	3	B4CPD106000254VY	
530000000342	PIN(MALE),DIP 12PINS/2.54MM	AMP BOARD	CN8	1	B4CPD112000254VY	
530000000343	LED SHINE PIPE,RED WEJ-2114D	AMP BOARD	LED1-7,9-12,15,17-18,20,22-24,28	19	3GLR0WEJ2114D0Y	
530000000344	TACT SWITCH,TC-00102(A)-02	AMP BOARD	SW1-4,6,9-12,15,17-21,23 , 28	17	B3SDKTC00102A00Y	
530000000345	45*8MM 10K OHM(30MM)SLIDE POT	AMP BOARD	VR5	1	B3VDHPA05045081X	
530000000346	45*8MM 10KOHMX2(30MM)SLIDE POT	AMP BOARD	VR1	1	B3VDHPA05045081Y	
530000000347	PIN(M)HEADER CONNECTOR,DIP 16P	AMP BOARD	CON1	1	B4CPD116000200V0	
530000000348	SP250 MAIN BOARD ASSY	MAIN BOARD		1	B11SP250MB1Y	Assembled
530000000349	FERRITE BEAD 2012D102B SMD0805	MAIN BOARD	L12,L17,L18,L21-26	9	3FBS2012D102B0Y	
530000000350	FERRITE BEAD SMBG3216K4-102	MAIN BOARD	L1,L2,L4,L5,L6,L8,L10,L11,L14,L15	10	3FBSMBG3216K40Y	
530000000329	STEREO JACK ST-015 4PIN DIP	MAIN BOARD	CON4	1	3JDE0400ST0150Y	
500330003100	PC910LKN20F	MAIN BOARD	IC2	1	B3ID00PC910K000Y	
510320520507	NJM78L05L02A#ZZZD (D)	MAIN BOARD	IC7	1	B3ID0LM78L05000Y	
500320019001	SAM9753 "DREAM CHIP" (S)	MAIN BOARD	IC10	1	B3IQ0SAM9753000Y	
500324004080	HD74HC238FPEL-E	MAIN BOARD	IC12	1	B3IS074HC238000Y	
530000000351	IC 74LVJ04 3.3V SO14 PHILIPS	MAIN BOARD	IC19	1	B3IS074LVU04000Y	
500324007009	BA033FP-E2	MAIN BOARD	IC9	1	B3IS0BA033FP000Y	
500324007027	BU4327G-TR	MAIN BOARD	IC6	1	B3IS0BU4327G000Y	
500324009039	NJM4580M-TE1	MAIN BOARD	IC4	1	B3IS0NJM4580000Y	
500324036008	PCM1716E/2K	MAIN BOARD	IC3	1	B3IS0PCM1716000Y	
500320040117	MX23L12811MC-10G(X-4350A)	MAIN BOARD	IC18	1	B3IS23L12811000Y	
500324004166	HD74HC4051FPEL-E	MAIN BOARD	IC13	1	B3IS74HC4051000Y	
530000000352	IC 74LVC125A 3.3V SOP TYPE	MAIN BOARD	IC16	1	B3IS74LVC125000Y	
500320001616	XC9572XL-10TQG100C(X-4350)	MAIN BOARD	IC5	1	B3ISXC9572XL000Y	
530000000353	MIDI JACK,DIN-503 5PIN DIP	MAIN BOARD	CON2 , CON3	2	B3JDM050DIN5030Y	
530000000354	CRYSTAL 8MHZ (HC-49S-SMD)	MAIN BOARD	XT2	1	B3YCS8M0000049SY	
530000000355	FILTER,DSS6NF31C223Q55B DIP	MAIN BOARD	L7 , L9	2	B3YFDD56NF31C22Y	
530000000356	PIN(MALE),DIP 12PINS/2.54MM	MAIN BOARD	CON8	1	B4CPD112000254HY	
530000000357	PIN(MALE),DIP 16PINS/2.00MM	MAIN BOARD	CON1,CON15	2	B4CPD116000200HY	
530000000358	ROW OF LINE,12P 20# RED 120MM		FROM M.B TO A.B	1	B4HF5F5B1212020Y	
530000000359	SHIELD LINE,6P COLOR 26#L440MM		FROM AMP.B TO F.B	1	B4HF5F5C0644026Y	
530000000360	YELLOW GREEN WIRE,1P UL1015#18		FROM M.B TO AMP.B	1	B4HTRTJS0112018Y	
530000000361	SP250 BOTTOM CABINET PART			1	B12SP250PH0Y	
530000000362	SPEAKER,4 OHM 15W 4"(105MM)			2	2SQ10500415000Y	
530000000363	CONDUCTION SOUND TUBE EVA			2	5FE00600500011Y	
530000000364	SP250 EVA HARD FOAM RUBBER		FOR SPEAKER	2	5FE031507F02F1Y	
530000000365	SOUND BOX(EVA),1250*10*1MM BLK		FOR BOTTOM	2	5FE12500100011Y	
530000000366	BLACK VELVET,SIZE15*15*0.3MM		1 FOR PHONE LINE,4 FOR KBD	5	5FP001501500D1Y	
530000000367	MK-2501 BLACK FLET W/A		FOR KEYBOARD	4	5FP00603000D1Y	
530000000368	SP250 BLACK VELVET, 500*30*0.2			2	5FP050003000B1Y	
530000000369	PA-50 RUBBER STAND,D18.5 T4MM			6	5FR018F0040001Y	
530000000370	SP250 RUBBER STAND,18.5*9*4MM			2	5FR018F0090041Y	

1. Top cabinet(with hole peocessed)
2. Speaker Mesh With Sponge
3. Side Wood Panel L/R
4. Function Panel with PCB and Buttons
5. Tie Band
1. Top cabinet (with hole peocessed)
2. Speaker Mesh With Sponge
3. Side Wood Panel L/R

KORG SP-250 Parts List (comparative table with numbers on illustrated parts breakdown)

(NOTE) Please use the following table to refer the numbers shown on illustrated parts breakdown

Part Code	Parts Name	Location	Reference	QTY	Code#	
530000000371	STAND MOUNDING METAL			2	5MC0180AK0S200Y	
530000000372	SP250 FRONT NAR,ALUMI L:1227MM			1	5MSP25050148K0Y	
530000000373	SP250 LOWER CABINET,			1	5PSP250A1266E0Y	
530000000374	SP250 LOWER CABINET,			1	5PSP250A126600Y	
530000000375	SP250 TRANSMIT SOUND CANISTER			2	5PSP250A131400Y	
530000000376	SP250 RIGHT SOUND COVER,BLACK			1	5PSP250B126800X	
530000000377	SP250 LEFT SOUND COVER, BLACK			1	5PSP250B126800Y	
530000000378	SP250 HEADPHONE BOARD ASSY			1	B11SP250IB1Y	Assembled
500404000200	BL02RN2R1P1A	HEADPHONE	L1,L2	2	3FB000BL02RN20Y	
530000000379	RP800 JACK,9P MSJ-064-04B	HEADPHONE	CN2,CN3	2	3JDE09J06404B0Y	
530000000341	PIN(MALE),DIP 6PINS/2.54MM	HEADPHONE	CN1	1	B4CPD106000254VY	
530000000380	SP250 SWITCH BOARD PART	SWITCH		1	B11SP250SB1Y	
530000000381	SP250 POWER SWITCH HOB,	SWITCH		1	5MSP2505014500Y	
530000000382	POWER SWITCH,KDC-A04-10(B)	SWITCH		1	B3SDKSKDCA04100Y	
530000000383	ROW OF LINE,2P 18# RED/YELLOW			1	B4H00F5B02B1518Y	
530000000384	SP250 KEYBOARD ,88 KEY			1	B12SP250KB0Y	
530000000385	ROW OF LINE (SP LINE) ,4P 20#			1	B4H00F5B04A0020Y	
530000000386	ROW OF LINE,16P 28# PALM		FROM KBD TO MAIN BOARD	1	B4HF0F0B16B0028Y	
530000000387	ROW OF LINE,6PIN 24# COLOR		FROM PHONE BOARD TO AMP	1	B4HF5F5B06A0024Y	
530000000388	Y/G 2CLR SINGLE CORE WIRE 10CM			1	B4HTRTCS0110018Y	
530000000389	Y/G 2CLR SINGLE CORE WIRE,20CM			1	B4HTRTJS0120018Y	
530000000390	SP250 ADAPTER 12V DC 3500MA			1	B2AS24012350000X	
530000000391	AC CORD 1.5M CCC CHINA 220CH			1	4WP24012D150000	
530000000392	AC CORD 023-B001 UK (BSI)230UK			1	B4WP24012B150000	
530000000393	AC CORD 023-S022 SAA 240AU			1	B4WP24012G150000	
530000000394	AC CORD 023-V019 FOR VDE 230V			1	B4WP24012T150000	
530000000395	AC CORD 023-U087 FOR 120V			1	B4WP24012U150000	
530000000001	AC CORDSET 100JP			1	4WP24012U15000Y	
500540028903	CONVERTER SOCKET YL-212			1	B3JDC0200SP2500Y	