

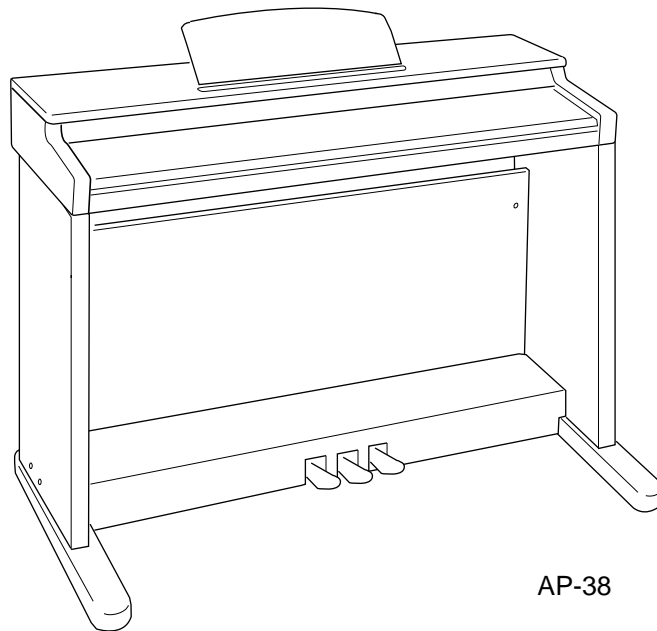
CASIO®

Service Manual

(without price)

AP-38

SEP. 2002



AP-38

ELECTRONIC KEYBOARD

Ver.2 Nov/ 2004

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SAFETY NOTICE

CAUTION!

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended
by the appliance manufacturer. Discard used batteries
according to manufacturer's instructions.

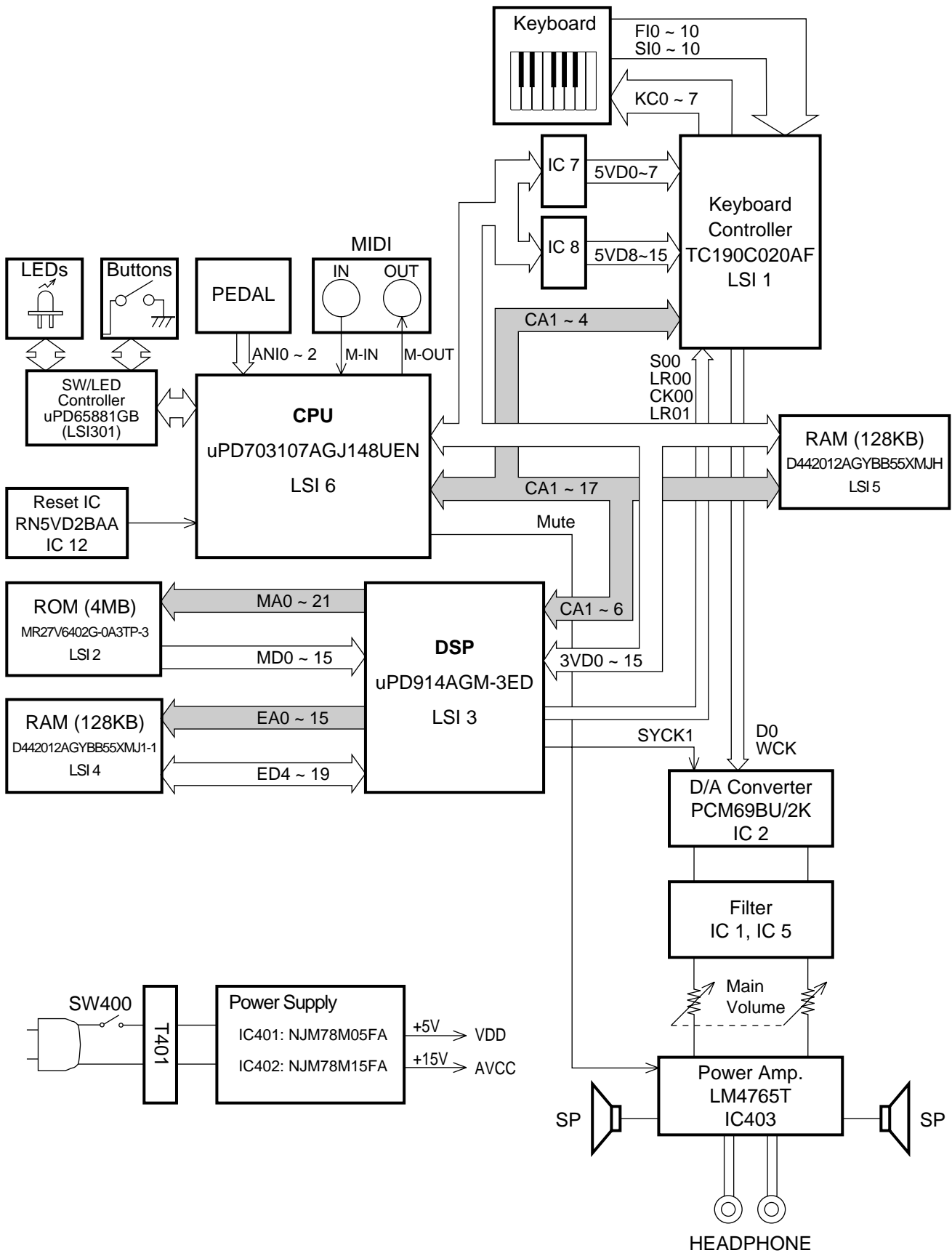
SPECIFICATIONS

GENERAL

Models:	AP-38/AP-38V
Keyboard:	88 piano keys (with touch response)
Polyphony:	64 notes, maximum
Tones:	16 Layer: Adjustable volume Split: Split point, adjustable volume
Digital Effects:	Reverb (8 types), Chorus (8 types), Brilliance
Demo Tunes:	<ul style="list-style-type: none">• Number of Tunes: 16• Playback: Repeat (all tunes, one tune)
Song Memory:	<ul style="list-style-type: none">• Operations: Real-time recording, playback• Number of Tracks: 2 (Track A, Track B)• Capacity: Approximately 8,000 notes (total of 2 tracks)• Memory Backup: Built-in lithium battery (Battery Life: Approximately 5 years)
Music Library:	<ul style="list-style-type: none">• Number of Tunes: 50• Playback: All song repeat, specific song• Part Off: L, R
Pedals:	Damper, Soft, Sostenuto
Other Functions:	<ul style="list-style-type: none">• Metronome: Beat (6 types), Tempo (\downarrow = 30 to 255)• Touch Select: 3 types, off• Transpose: 1 octave (F# to C to F)• Tuning: A4 = 440 Hz \pm 50 cents (adjustable)• Temperament: 7 types• Baroque pitch
MIDI:	16 multi-timbre receive
Input/Output:	<ul style="list-style-type: none">• Headphones: Stereo standard jacks \times 2• LINE OUT (R, L / MONO): standard jacks \times 2 Output Impedance; 1.1 KΩ Output Voltage; 1.3 V (RMS) MAX• MIDI (OUT) (IN)
Speakers:	\varnothing 16 cm \times 2, \varnothing 5 cm \times 2 (Output: 20 W + 20 W)
Power Supply:	AP-38: 120V AP-38V: 220-240V
Power Consumption:	AP-38: 60W AP-38V: 60W
Dimensions:	<ul style="list-style-type: none">• CELVIANO (without stand): 138.0 \times 47.2 \times 22.2 cm (54 $\frac{3}{8}$ \times 18 $\frac{5}{8}$ \times 8 $\frac{3}{4}$ inch)• CELVIANO: 138.0 \times 47.2 \times 83.9 cm (54 $\frac{3}{8}$ \times 18 $\frac{5}{8}$ \times 33 $\frac{1}{16}$ inch)
Weight:	<ul style="list-style-type: none">• CELVIANO (without stand): approximately 39.0 kg (86.0 lbs)• CELVIANO: approximately 51.0 kg (112.4 lbs)

- Design and specifications are subject to change without notice.
- AP-38 has hardwired power cords.
- AP-38V has detachable power cords.

BLOCK DIAGRAM



DIAGNOSTIC PROGRAM

■ Initial Setup

1. Connect an AC adaptor.
2. Connect a Sustain pedal.
3. Connect a MIDI cable (In-Out).
4. "Main" volume: MAX.
5. Turn the BRILLIANCE knob to the center.
6. Have the headphones ready.

NOTE: If there is no pedal or MIDI cable, pedal or MIDI check can be skipped.

■ How to start diagnostic program

1. Press the "POWER" button while pressing the "CHORUS key" and "GRAND PIANO1 key" buttons.
2. Release the "CHORUS" key and the "GRAND PIANO1" key.
All the LEDs turn on once.

■ Diagnostic program

1. RAM/ROM check

- ① RAM/ROM check starts automatically after the diagnostic program is booted.
- ② A confirmation tone of C4, E4 and G4 sounds after ROM/RAM check normally ends.

2. LED check

- ① The following groups of 9 LEDs turn on one after another.
GROUP1: REVERB, CHORUS, GRAND PIANO1, GRAND PIANO2, ELEC PIANO1,
HARPSICHORD, PIPE ORGAN1, STRINGS1, CHIOR
GROUP2: ACOUSTIC BASS, VARIATION, SPLIT, SONG MEMORY, RECORD, TRACK A,
TRACK B, MUSIC LIBRARY, METRONOME
- ② Press "CONTROL" button.
A confirmation tone of C4, E4 and G4 sounds.

3. SLIDER check

- ① "PIPE ORGAN1" LED turns on.
- ② Select "MELLOW".
- ③ "GRAND PIANO 1" LED turns on.
- ④ Select "BRIGHT"
- ⑤ "VARIATION" LED turns on.
- ⑥ Turn the "BRILLIANCE" knob to the center.
- ⑦ Press "CONTROL" button.
A confirmation tone of C4, E4 and G4 sounds.

4. SWITCH check

- | | | |
|--|--|--|
| ① Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑧ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑮ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ② Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑨ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑯ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ③ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑩ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑰ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ④ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑪ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑱ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ⑤ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑫ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑲ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ⑥ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑬ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑳ Press "CONTROL" button.
A confirmation tone of C4 sounds. |
| ⑦ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ⑭ Press "CONTROL" button.
A confirmation tone of C4 sounds. | ㉑ Press "CONTROL" button.
A confirmation tone of C4, E4
and G4 sounds. |

5. PEDAL check

- ① Press "CONTROL" button.
A confirmation tone of C4, E4 and G4 sounds.
- ② Press "DAMPER" PEDAL.
A confirmation tone of C4 sounds.
"RECORD" LED turns on.
- ③ Press "SOSTENUTE" PEDAL.
A confirmation tone of E4 sounds.
"SONG MEMORY" LED turns on.
- ④ Press "SOFT" PEDAL.
A confirmation tone of G4 sounds.
"SPLIT" LED turns on.

6. PHONS JACK check

- ① Press "CONTROL" button.
A confirmation tone of C4, E4 and G4 sounds.
- ② "GRAND PIANO 1" LED turns on.
- ③ Plug the headphones into the left phone jack.
- ④ "GRAND PIANO 2" LED turns on.
- ⑤ Unplug the headphones.
- ⑥ "GRAND PIANO 1" LED turns on.
- ⑦ Plug the headphones into the right phone jack.
- ⑧ "GRAND PIANO 2" LED turns on.
- ⑨ Unplug the headphones.

7. MIDI check

- ① Press "CONTROL" button.
A confirmation tone of C4, E4 and G4 sounds.
- ② Press A4 key.
A confirmation tone of C4 sounds.
A confirmation tone of C4, E4 and G4 sounds twice.

8. Ending the diagnostic program

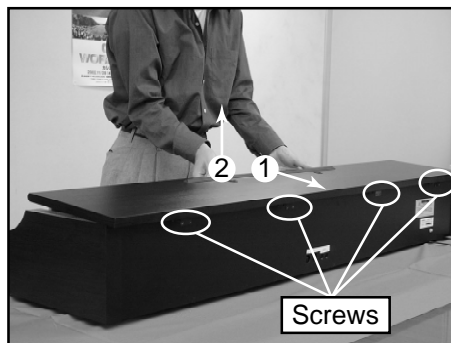
- ① Press "POWER" button.
- ② POWER LED turns off.

DIAGNOSTIC PROGRAM IS FINISHED.

DISASSEMBLY INSTRUCTIONS

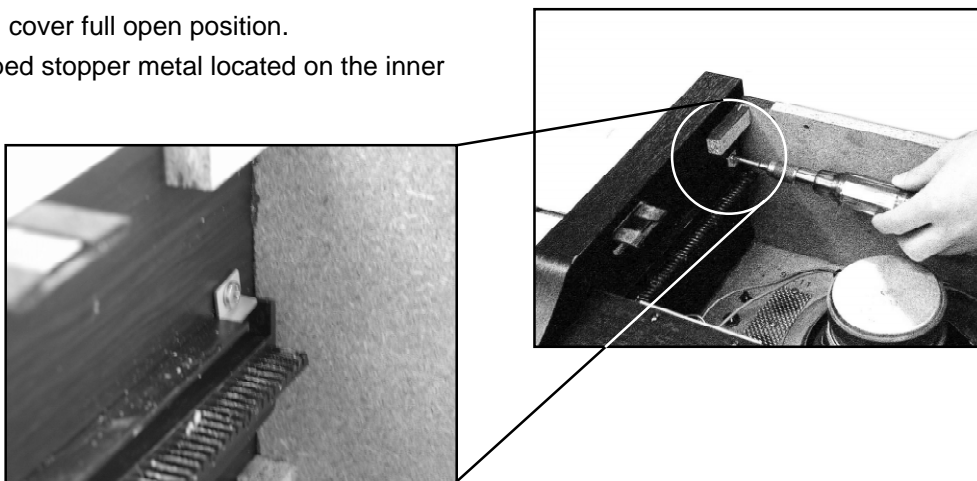
1. Removal of top board

- 1-1. Remove 8 screws affixing the top board on the back.
- 1-2. Slide the top board forward and remove it from the main unit.

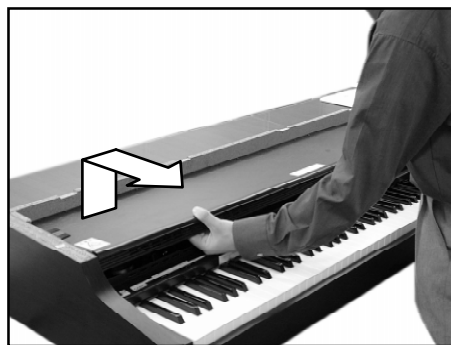


2. Removal of keyboard cover

- 2-1. Lift up the keyboard cover full open position.
- 2-2. Unscrew the L-shaped stopper metal located on the inner left corner.



- 2-3. Lift up the keyboard cover gear from the opening where stopper metal is fixed, then remove the keyboard cover.

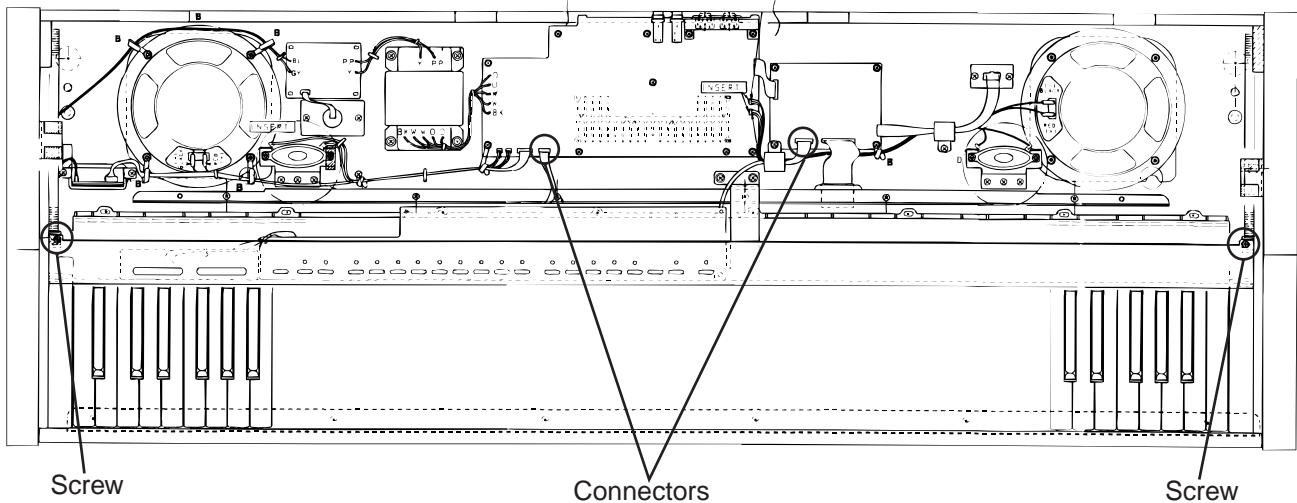


3. Removal of console panel

3-1. Remove 2 connectors.

3-2. Lift the console panel and turn it over and remove the power switch, which is affixed by 2 screws. Then remove the side panel.

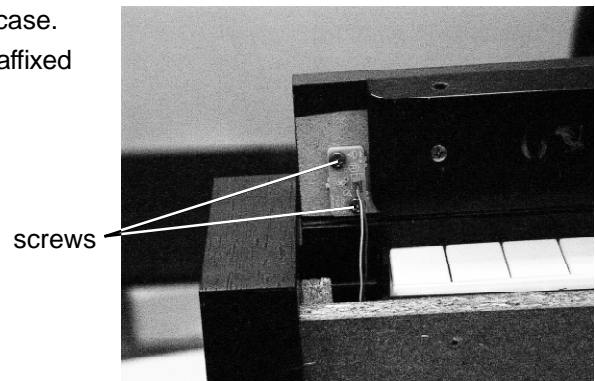
Caution: Be careful not to scratch the side panels.



4. Removal of front cover

4-1. Remove 6 screws from the front end of the lower case.

4-2. Lift the front cover and remove the pilot lamp that is affixed by 2 screws. Then remove the front cover.

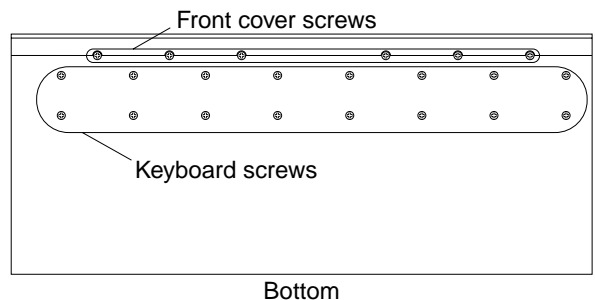
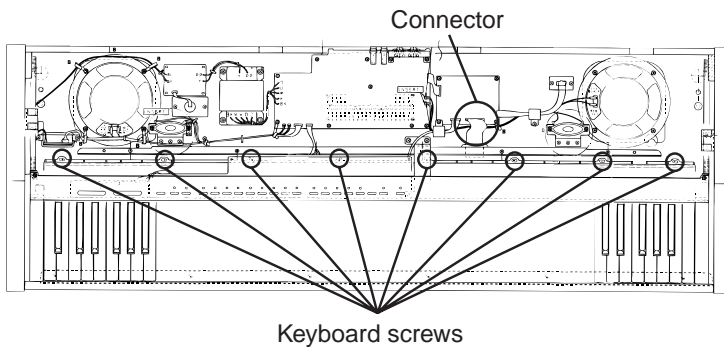


5. Removal of keyboard unit

5-1. Remove the connectors.

5-2. Remove 24 screws that affix the keyboard unit (16 on the bottom of the case and 8 on the keyboard unit).

5-3. Lift and remove the keyboard unit.



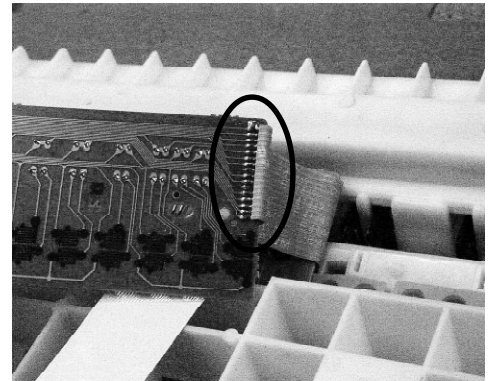
6. Removal of keys

- 6-1. While prying the side partition plastics with tweezers, lift the edge of the key toward front.



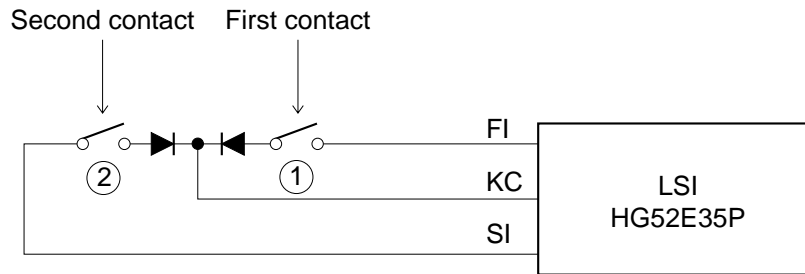
7. Removal of keyboard PCB

- 7-1. Lay the keyboard so that keyboard PCBs face upward.
- 7-2. Remove screws on keyboard PCBs (10 screws on PCBs KY1M and KY3M, 12 screws on KY2M).
- 7-3. Unsolder the cable.



CIRCUIT DESCRIPTION

KEY MATRIX



	KC0	KC1	KC2	KC3	KC4	KC5	KC6	KC7
FI0	A0 (1)	A0 # (1)	B0 (1)	C1 (1)	C1 # (1)	D1 (1)	D1 # (1)	E1 (1)
SI0	A0 (2)	A0 # (2)	B0 (2)	C1 (2)	C1 # (2)	D1 (2)	D1 # (2)	E1 (2)
EI1	F1 (1)	F1 # (1)	G1 (1)	G1 # (1)	A1 (1)	A1 # (1)	B1 (1)	C2 (1)
SI1	F1 (2)	F1 # (2)	G1 (2)	G1 # (2)	A1 (2)	A1 # (2)	B1 (2)	C2 (2)
FI2	C2 # (1)	D2 (1)	D2 # (1)	E2 (1)	F2 (1)	F2 # (1)	G2 (1)	G2 # (1)
SI2	C2 # (2)	D2 (2)	D2 # (2)	E2 (2)	F2 (2)	F2 # (2)	G2 (2)	G2 # (2)
FI3	A2 (1)	A2 # (1)	B2 (1)	C3 (1)	C3 # (1)	D3 (1)	D3 # (1)	E3 (1)
SI3	A2 (2)	A2 # (2)	B2 (2)	C3 (2)	C3 # (2)	D3 (2)	D3 # (2)	E3 (2)
FI4	F3 (1)	F3 # (1)	G3 (1)	G3 # (1)	A3 (1)	A3 # (1)	B3 (1)	C4 (1)
SI4	F3 (2)	F3 # (2)	G3 (2)	G3 # (2)	A3 (2)	A3 # (2)	B3 (2)	C4 (2)
FI5	C4 # (1)	D4 (1)	D4 # (1)	E4 (1)	F4 (1)	F4 # (1)	G4 (1)	G4 # (1)
SI5	C4 # (2)	D4 (2)	D4 # (2)	E4 (2)	F4 (2)	F4 # (2)	G4 (2)	G4 # (2)
FI6	A4 (1)	A4 # (1)	B4 (1)	C5 (1)	C5 # (1)	D5 (1)	D5 # (1)	E5 (1)
SI6	A4 (2)	A4 # (2)	B4 (2)	C5 (2)	C5 # (2)	D5 (2)	D5 # (2)	E5 (2)
FI7	F5 (1)	F5 # (1)	G5 (1)	G5 # (1)	A5 (1)	A5 # (1)	B5 (1)	C6 (1)
SI7	F5 (2)	F5 # (2)	G5 (2)	G5 # (2)	A5 (2)	A5 # (2)	B5 (2)	C6 (2)
FI8	C6 # (1)	D6 (1)	D6 # (1)	E6 (1)	F6 (1)	F6 # (1)	G6 (1)	G6 # (1)
SI8	C6 # (2)	D6 (2)	D6 # (2)	E6 (2)	F6 (2)	F6 # (2)	G6 (2)	G6 # (2)
FI9	A6 (1)	A6 # (1)	B6 (1)	C7 (1)	C7 # (1)	D7 (1)	D7 # (1)	E7 (1)
SI9	A6 (2)	A6 # (2)	B6 (2)	C7 (2)	C7 # (2)	D7 (2)	D7 # (2)	E7 (2)
FI10	F7 (1)	F7 # (1)	G7 (1)	G7 # (1)	A7 (1)	A7 # (1)	B7 (1)	C8 (1)
SI10	F7 (2)	F7 # (2)	G7 (2)	G7 # (2)	A7 (2)	A7 # (2)	B7 (2)	C8 (2)

BUTTON MATRIX

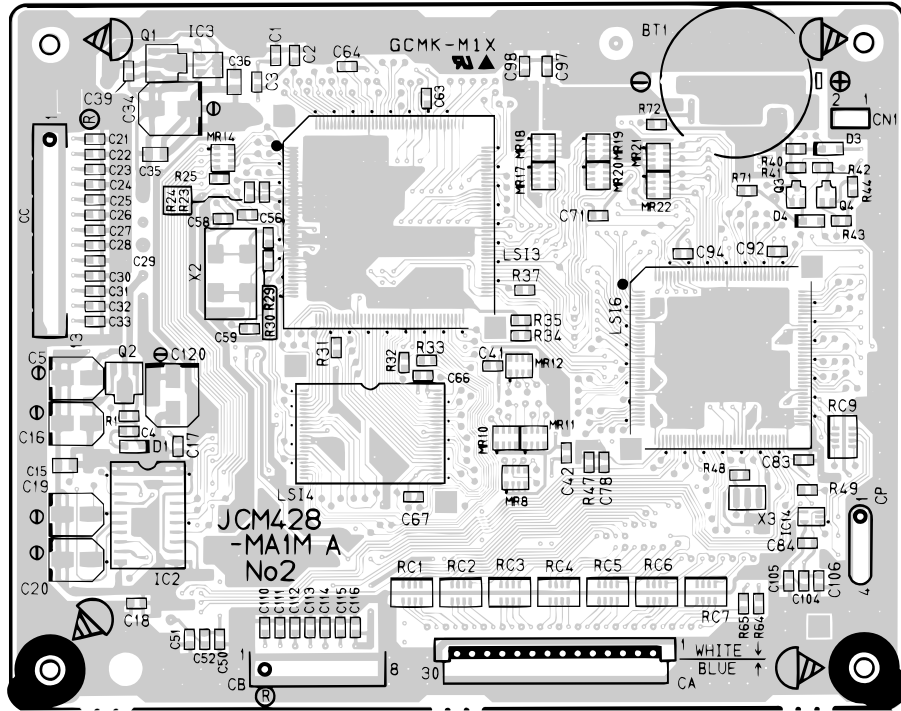
	SC0	SC1	SC2	SC3
SI0	Control	Reverb	Chorus	Piano1
SI1	Piano2	Ele Piano1	Harpichord	Pipe Organ1
SI2	Sirings1	Synth Pad1	Acoustic Bass	Variation
SI3	Split	Memory	Record	TrackA
SI4	TrackB	Start/stop	Song	Metronome

LED MATRIX

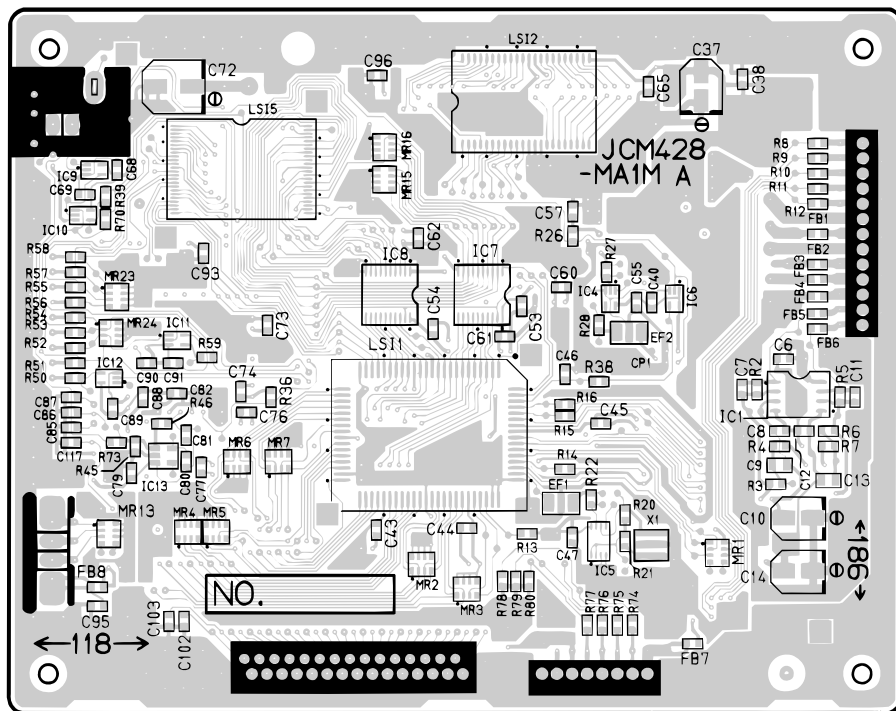
	LDH0	LDH1	LDH2	LDH3	LDH4	LDH5
LDL0	Reverb	Piano2	Pipe Organ1	Acoustic Bass	Memory	TrackB
LDL1	Chorus	Ele Piano1	Strings1	Variation	Record	Song
LDL2	Piano1	Hapshichord	Synth Pad1	Split	TrackA	Metronome

PRINTED CIRCUIT BOARDS

MAIN PCB JCM428-MA1M



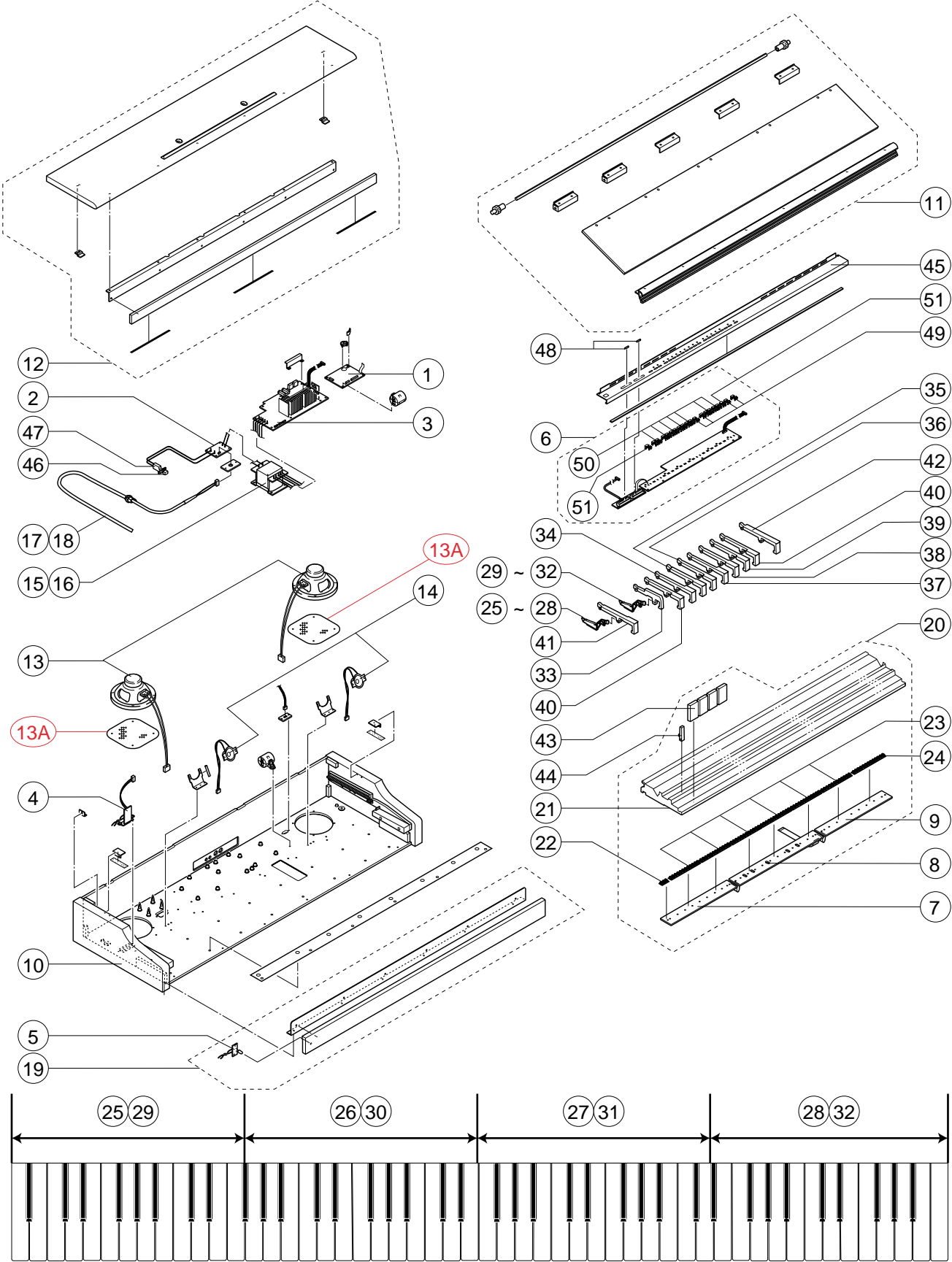
Top view



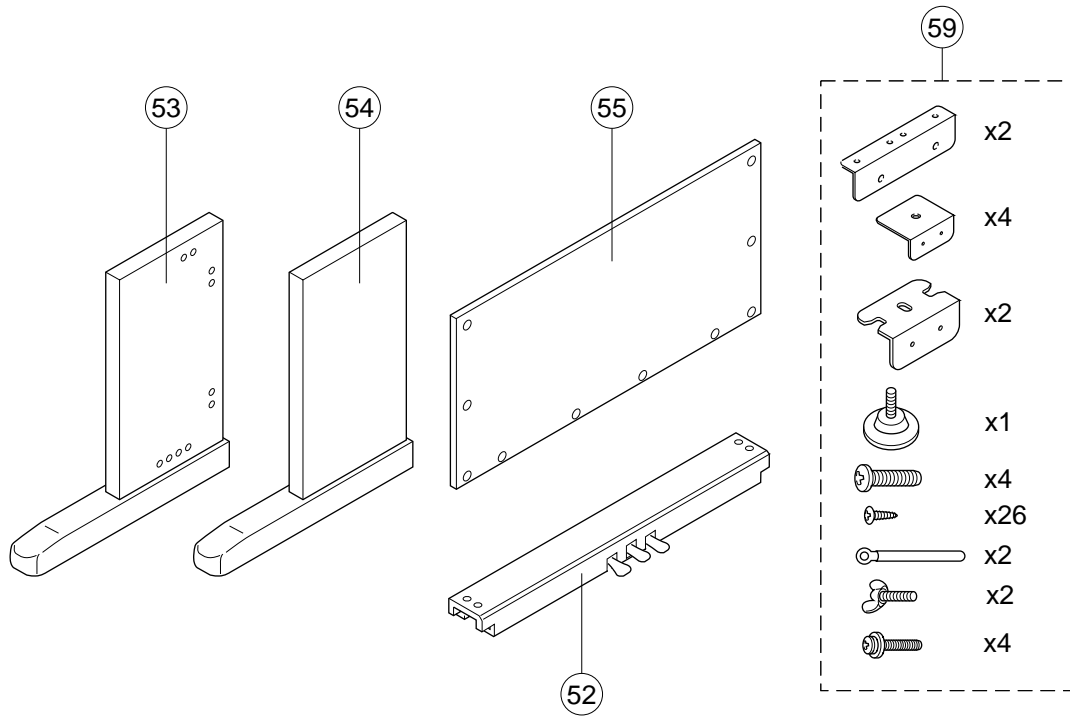
Bottom view

EXPLODED VIEW

CABINET



STAND



PARTS LIST

AP-38

Notes: This parts list does not include the cosmetic parts, which parts are marked with item No. "R-X" in the exploded view.

Contact our spare parts department if you need these parts for refurbish.

1. Prices and specifications are subject to change without prior notice.
2. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published separately.
3. The numbers in item column correspond to the same numbers in drawing.

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R	Remark
MAIN PCB								
N	1	1009 8415	PCB ASSY/M428-MA1M	TK-RJM502154*001	1	DZ	A	
N	LSI4,LSI5	1008 7835	LSI	D442012AGYBB55XMJH	2	BI	A	
N	LSI2	1008 7836	LSI	MR27V6402G-OA3TP-N	1	BQ	A	
	IC2	1000 8350	LSI	PCM69BU/2K	1	BA	A	
	LSI1	2012 5987	LSI	TC190C020AF-001	1	BC	A	
N	LSI6	1008 7837	LSI	UPD703107AGJ133UEM	1	CC	A	
	LSI3	1005 4502	LSI	UPD914AGM-3ED	1	CK	A	
	IC1	1004 7445	IC/MONOLITHIC	NJM2068MD(T1)	1	AC	B	
	IC7, IC8	2105 6576	IC/C-MOS	TC74LCX245FT(EL)	2	AF	B	
	IC3	6932 4101	IC/MOS	RN5RF33BA-TR	1	AN	B	
	IC13	1004 7449	IC/MOS	RN5VD28AA-TR	1	AC	B	
	IC14	2105 5712	IC/L-MOS	TC7S04FU(TE85L)	1	AB	B	
	IC4	2105 6389	IC/L-MOS	TC7SET04FU-TE85L	1	AD	B	
	IC6	6930 9991	IC/L-MOS	TC7SET08FU(TE85L)	1	AC	B	
	IC12	2105 3696	IC/L-MOS	TC7SH04FU-TE85L	1	AB	B	
	IC11	2105 3773	IC/L-MOS	TC7SH08FU-TE85L	1	AB	B	
	IC5	2105 6083	IC/L-MOS	TC7WU04FU(TE12L)	1	AD	B	
	X3	1004 7438	OSCILLATOR/CERAMIC	CSTCR5M00G35-R0	1	AC	C	
	X1	1004 7439	OSCILLATOR/CERAMIC	CSTCV16.00MXJ0C4-T	1	AC	C	
	X2	1002 1357	OSCILLATOR/CERAMIC	DSX151GA-22.5792M	1	AS	C	
	Q3	2250 1162	TRANSISTOR/CHIP	2SA1576AT106R	1	AA	B	
	Q1	2259 2764	TRANSISTOR/CHIP	2SB1188T100Q	1	AB	B	
	Q4	6930 0298	TRANSISTOR/CHIP	2SC4081T106R	1	AA	B	
	Q2	2253 0715	TRANSISTOR/CHIP	2SD1664T100R	1	AA	B	
	D4	1004 7442	DIODE/ZENER	HZU2.7B2TRF	1	AA	C	
	D1	2360 2856	DIODE/ZENER	UDZTE-175.6B	1	AA	C	
	D3	2390 2576	DIODE/CHIP SCHOTTKY	RB501V-40TE-17	1	AB	C	
	EF1/EF2	3025 1862	FILTER/EMI	NFM51R00P206	2	AC	B	
	BT1	1005 2229	LITHIUM BATTERY	CR2032/1HF1	1	AG	C	
PS1 PCB								
	2	1005 4068	PCB ASSY/M437-PS1	TK-M341450*2	1	BO	B	120V area
	2	1005 4069	PCB ASSY/M437-PS1	TK-M341450*3	1	BP	B	230V area
	F400	1004 7505	FUSE	51MS050L	1	AC	A	120V area
	F400	1004 7508	FUSE	50T025H	1	AC	A	230V area
PS2M PCB								
N	3	1009 8414	PCB ASSY/M428-PS2M	TK-RJM502159*001	1	DB	B	120V area
N	3	1009 8934	PCB ASSY/M428-PS2M	TK-RJM502159*002	1	DB	B	230V area
	IC403	1004 3418	IC/MONOLITHIC	LM4765T	1	BC	B	
	IC405/IC406	2121 0072	IC/MONOLITHIC	NJM2068DD	2	AD	B	
	IC401	2114 5796	IC/MONOLITHIC	NJM78M05FA	1	AE	B	
	IC402	2114 5794	IC/MONOLITHIC	NJM78M15FA	1	AE	B	
	IC404	2114 1421	IC/PHOTOCOUPLER	PC900VONSZX	1	AK	B	
	Q401-Q405	2250 1592	TRANSISTOR	2SC1740STPR	5	AA	B	
	Q406, Q407	1002 5042	TRANSISTOR	2SD1468STPR	2	AA	B	
	D409-D412, D414, D415	2315 3132	DIODE	1SS133T-77	6	AA	C	
	D419	2390 3018	DIODE	1T2	1	AA	C	
	D401-D404	1003 6785	DIODE	2A02B	4	AA	C	
	D405-D408	1004 7403	DIODE	1N5401-EP	4	AA	C	
	D416, D420	2390 2828	DIODE	RB441Q-40T-77	2	AA	C	
	D413	1003 8115	DIODE/ZENER	MTZJT-775.6B	1	AA	C	
	D417, D418	1004 7557	DIODE/ZENER	MTZJT-778.2B	2	AA	C	
	J402	3612 0789	JACK	YKB21-5010	1	AC	A	
	J403	3612 0584	JACK	YKB21-5012	1	AD	A	
	J401	3501 4816	JACK/DIN	YKF51-5051	1	AH	B	
	F401	1005 4029	FUSE	50T010H	1	AC	A	230V area
	F401	1005 2231	FUSE	51MS010L	1	AC	A	120V area
	F402,F403	1005 4030	FUSE	50T040H	2	AC	A	230V area
	F402,F403	1005 2230	FUSE	51MS040L	2	AC	A	120V area

Notes : Q - Quantity per unit

R - Rank

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R	Remark
PS3M PCB								
N	4	1009 8420	PCB ASSY/M428-PS3M	TK-RJM502160*001	1	DZ	B	
	J404, J405	1004 7514	JACK/PHONE	YKB22-5078	2	AG	A	
PS4M PCB								
N	5	1009 8417	PCB ASSY/M428-PS4M	TK-RJM502161*001	1	BC	B	
	D400	2370 1417	LED	SLP-135B-51	1	AA	B	
CONSOL PCB								
N	6	1009 8418	PCB ASSY/M428-CN1M,CN2M	RJM502165*001	1	CR	B	
	LSI301	6932 4293	LSI	UPD65881GK-062-9ET	1	AT	A	
	Q307-Q309	1004 7532	TRANSISTOR	2SC5720(TPE4)	3	AA	B	
	Q301-Q306	1004 7535	TRANSISTOR	RN2205(TPE4)	6	AA	B	
	D301-D318	2370 1416	LED	SLZ-190B-03-T2	18	AA	B	
	X301	2529 2032	OSCILLATOR/CERAMIC	CSB1000J	1	AC	C	
	VR301	2765 0280	VOLUME	EWA-NAXCH1B14	1	AI	B	
	VR302	2765 2187	VOLUME	EWA-NFECH1B54	1	AG	B	
KEYBOARD PCB								
	D701-D876	2315 3132	DIODE	1SS133T-77	176	AA	B	
	7	6928 5460	PCB ASSY/M887T-KY1M	M240951A*1	1	BO	C	
	8	6928 5470	PCB ASSY/M887T-KY2M	M240952*1	1	BT	C	
	9	6928 5480	PCB ASSY/M887T-KY3M	M241019A:1	1	BM	C	
MAIN CASE UNIT								
N	10	1009 8935	MAIN CASE ASSY	TK-RJM502025*001	1	DO	X	
N	11	1009 8936	COVER ASSY/KEYBOARD	TK-RJM502084*001	1	DH	X	
N	12	1009 8937	BOARD ASSY/FRONT	TK-RJM502023*001	1	DA	X	
	13	1004 7602	SPEAKER	S16J75A	2	BL	B	
	13A	1004 7589	NET	M441191-1	2	AD	C	
	14	3831 1075	SPEAKER	S05JH37A	2	AR	B	
	15	1005 4031	TRANSFORMER	TE-427-1M1	1	CW	B	120V area
	16	1005 4032	TRANSFORMER	TE-427-2M1	1	CW	B	230V area
	17	1005 4071	CORD ASSY/AC	TK-M341449*2(M427)	1	AW	C	120V area
	18	1005 4067	2P AC INLET ASSY	TK-M341448*1	1	AT	B	230V area
N	19	1009 8938	F BRD ASSY	TK-RJM502089*001	1	DI	X	
KEYBOARD UNIT								
	20	1004 6083	KY ASSY	M141175*1 TK(MLMP2)	1	EM	B	
N	21	1009 6229	CHASSIS SUB ASSY	M140831*003V09	1	CW	C	
	22	6928 4470	RUBBER/CONTACT	M240957-2	1	AE	A	
	23	6928 4480	RUBBER/CONTACT	M240958-2	6	AH	A	
	24	6928 4490	RUBBER/CONTACT	M240959-2	1	AH	A	
	25	1005 2296	HAMMER ASSY/WHITE KEY (R)	M341434*1 TK(MLMP)	13	BH	B	
	26	1005 2297	HAMMER ASSY/WHITE KEY (G)	M341435*1 TK(MLMP)	13	BH	B	
	27	1005 2298	HAMMER ASSY/WHITE KEY (BK)	M341436*1 TK(MLMP)	13	BH	B	
	28	1005 2299	HAMMER ASSY/WHITE KEY (BL)	M341437*1 TK(MLMP)	13	BH	B	
	29	1005 2300	HAMMER ASSY/BLACK KEY (R)	M341438*1 TK(MLMP)	9	BH	B	
	30	1005 2301	HAMMER ASSY/BLACK KEY (G)	M341439*1 TK(MLMP)	9	BH	B	
	31	1005 2309	HAMMER ASSY/BLACK KEY (BK)	M341440*1 TK(MLMP)	9	BH	B	
	32	1005 2310	HAMMER ASSY/BLACK KEY (BL)	M311441*1 TK(MLMP)	9	BH	B	
	33	6927 4030	BLACK KEY	M140784-1	36	AG	B	
N	34	1008 3392	WHITE KEY/C	M140783-007V04	7	AF	B	
N	35	1008 3394	WHITE KEY/D	M140785-007V04	7	AG	B	
N	36	1008 3408	WHITE KEY/E	M140786-007V04	7	AF	B	
N	37	1008 3411	WHITE KEY/F	M140787-007V04	7	AF	B	
N	38	1008 3452	WHITE KEY/G	M140788-007V04	7	AF	B	
N	39	1008 3454	WHITE KEY/A	M140789-007V04	7	AF	B	
N	40	1008 3456	WHITE KEY/B	M140790-007V04	8	AF	B	
N	41	1008 3475	WHITE KEY/SA	M140792-007V04	1	AJ	B	
N	42	1008 3473	WHITE KEY/SC	M140791-007V04	1	AJ	B	
	43	6927 4011	CAP GUIDE/WHITE KEY	M340958-1	13	AE	C	
	44	6927 4020	CAP GUIDE/BLACK KEY	M340959-1	36	AA	C	

Notes : Q - Quantity per unit

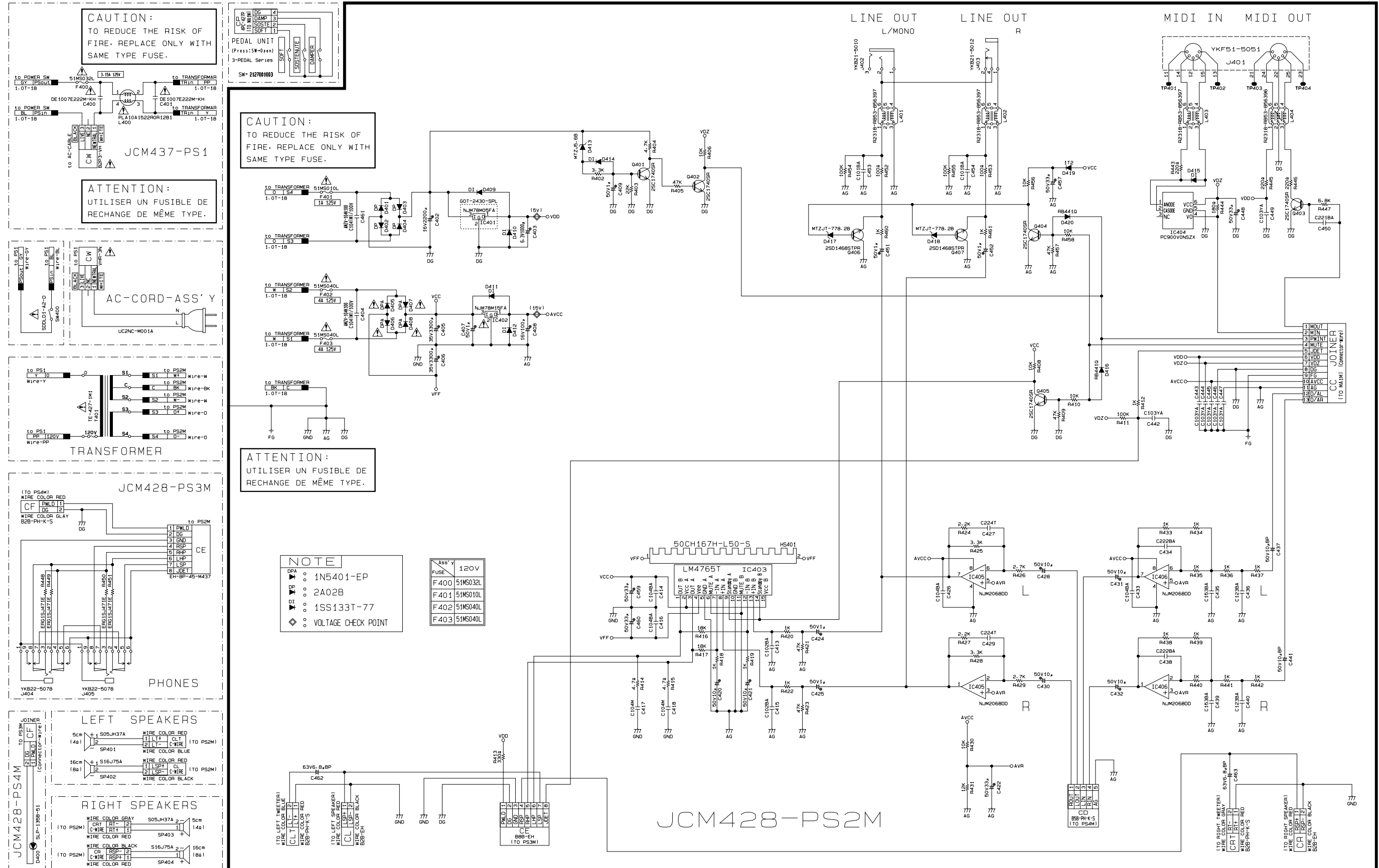
R - Rank

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R	Remark
CONSOLE PANEL ASSY								
N	45	1009 8421	CONSOLE PANEL ASSY	TK-RJM502032*001	1	CX	X	
	46	6924 5260	BUTTON/POWER	M340318-1	1	AA	B	
N	47	1009 8419	POWER SWITCH ASSY	TK-M341447*003V01	1	AU	B	
	48	6919 3240	KNOB/SLIDE	M311405-1	2	AB	A	
	SW301-SW320	1004 7536	SWITCH/TACT	SKQNAED010	20	AA	A	
N	49	6927 7140	TACT BUTTON 425	M340978-1	4	AA	B	
N	50	6927 7150	TACT BUTTON 425	M340978-2	7	AB	B	
N	51	6927 7160	TACT BUTTON 425	M340978-3	2	AA	B	
AC CORD								
	56	1004 5706	CORD-SET	EC2NC-M001A	1	AM	C	OTERS: 230V
	57	1004 5707	CORD-SET	BC2NC-M001A	1	BD	C	UK: 230V
STAND								
N	52	1009 8939	ST-PDL-ASSY2	TK-RJM502011*001	1	DK	C	
N	53	1009 8940	ST-BRD-L-ASSY	TK-RJM502010*001	1	CO	C	
N	54	1009 8941	ST-BRD-R-ASSY	TK-RJM502046*001	1	CO	C	
N	55	1009 4129	ST-BRD-BK-M428	RJM501890-001v01	1	CO	C	
N	58	1009 8942	MST-ASSY	TK-RJM502108*001	1	CP	C	
N	59	1009 8423	ACC-BAG-ASSY	TK-RJM502026*001	1	CR	C	

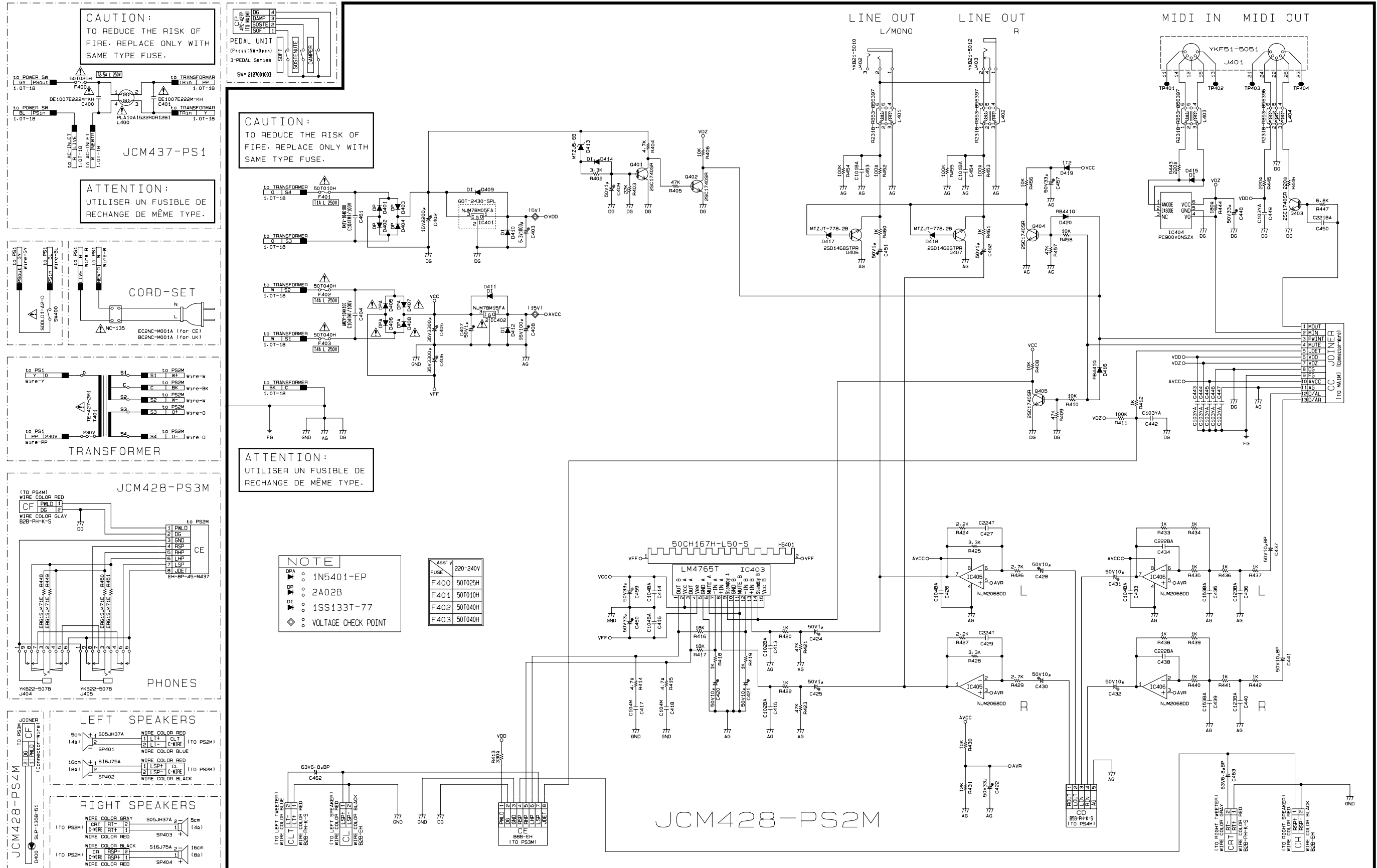
Notes : Q - Quantity per unit

R - Rank

I/O and POWER SUPPLY(120V) PCBs JCM428-PS2M/PS3M/PS4M



I/O and POWER SUPPLY(230V) PCBs JCM428-PS2M/PS3M/PS4M



CAUTION:
TO REDUCE THE RISK OF
FIRE, REPLACE ONLY WITH
SAME TYPE FUSE.

ATTENTION:
UTILISER UN FUSIBLE DE
RECHANGE DE MÊME TYPE.

CAUTION:
TO REDUCE THE RISK OF
FIRE, REPLACE ONLY WITH
SAME TYPE FUSE.

ATTENTION:
UTILISER UN FUSIBLE DE
RECHANGE DE MÊME TYPE.

NOTE

- ▷ DPA ○ 1N5401-EP
- ▷ D400 ○ 2A02B
- ▷ D401 ○ 1SS133T-77
- ◇ VOLTAGE CHECK POINT

Ass'y	220-240V
F400	50T025H
F401	50T010H
F402	50T040H
F403	50T040H

JCM437-PS1

CORD-SET

TRANSFORMER

JCM428-PS3M

PHONES

LEFT SPEAKERS

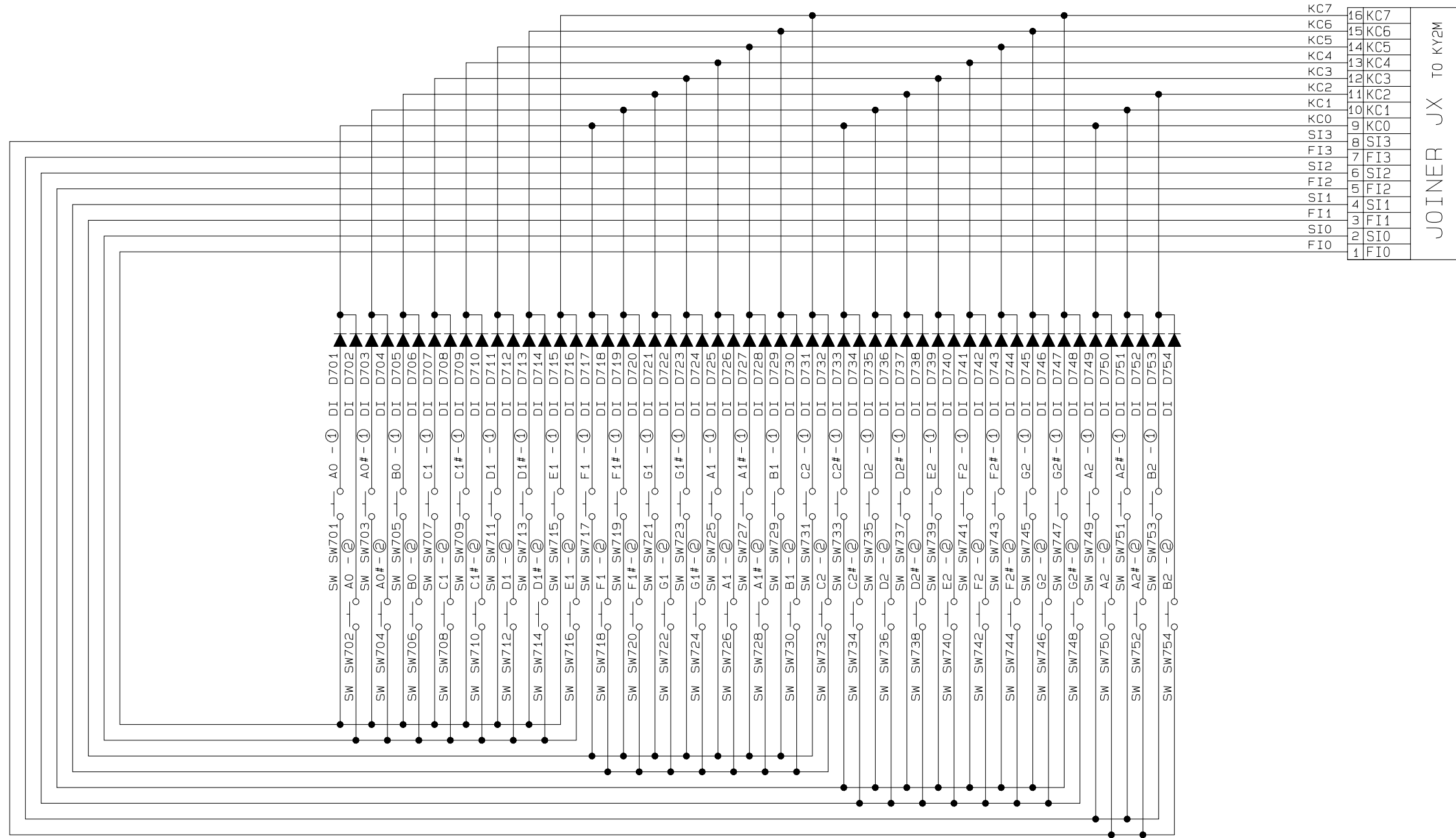
RIGHT SPEAKERS

JCM428-PS2M

KEYBOARD PCB JCM887T-KT1M

JCM887T-KY1M

NOTE	
DI	1S2076TE



KC7	16 KC7
KC6	15 KC6
KC5	14 KC5
KC4	13 KC4
KC3	12 KC3
KC2	11 KC2
KC1	10 KC1
KC0	9 KC0
SI3	8 SI3
FI3	7 FI3
SI2	6 SI2
FI2	5 FI2
SI1	4 SI1
FI1	3 FI1
SI0	2 SI0
FI0	1 FI0

JOINER JX TO KY2M

KEYBOARD PCB JCM887T-KT2M

NOTE
 DI : 1S2076TE

JCM887T-KY2M

CONNECTOR CA701 TO MA1M

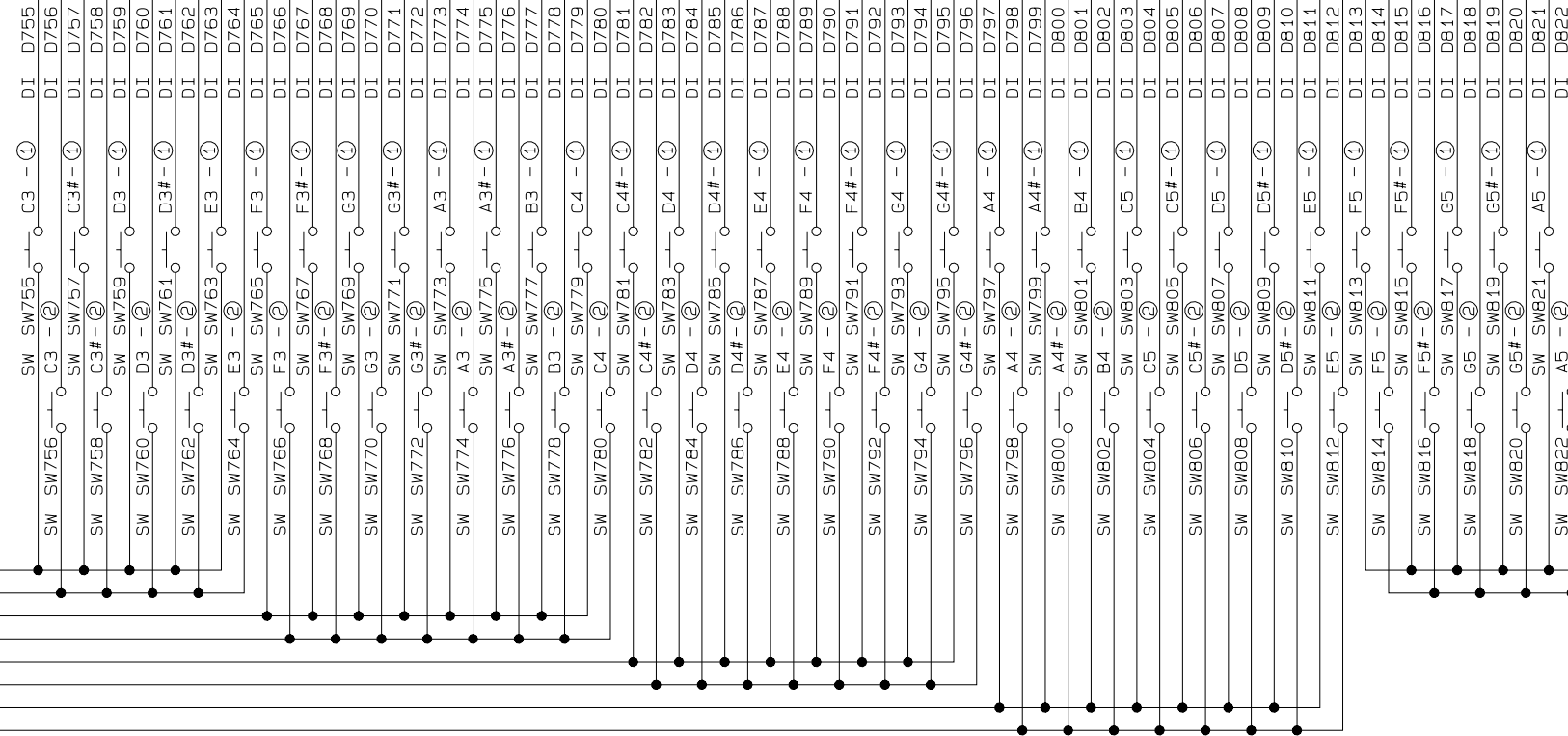
30	FI0
29	SI0
28	FI1
27	SI1
26	FI2
25	SI2
24	FI3
23	SI3
22	FI4
21	SI4
20	KI0
19	KI1
18	KC2
17	KC3
16	KC4
15	KC5
14	KC6
13	KC7
12	SI5
11	FI5
10	SI6
9	FI6
8	SI7
7	FI7
6	SI8
5	FI8
4	SI9
3	FI9
2	SI10
1	FI10

JOINER JX TO KY1M

1	FI0
2	SI0
3	FI1
4	SI1
5	FI2
6	SI2
7	FI3
8	SI3
9	KC0
10	KC1
11	KC2
12	KC3
13	KC4
14	KC5
15	KC6
16	KC7

JOINER JY TO KY3M

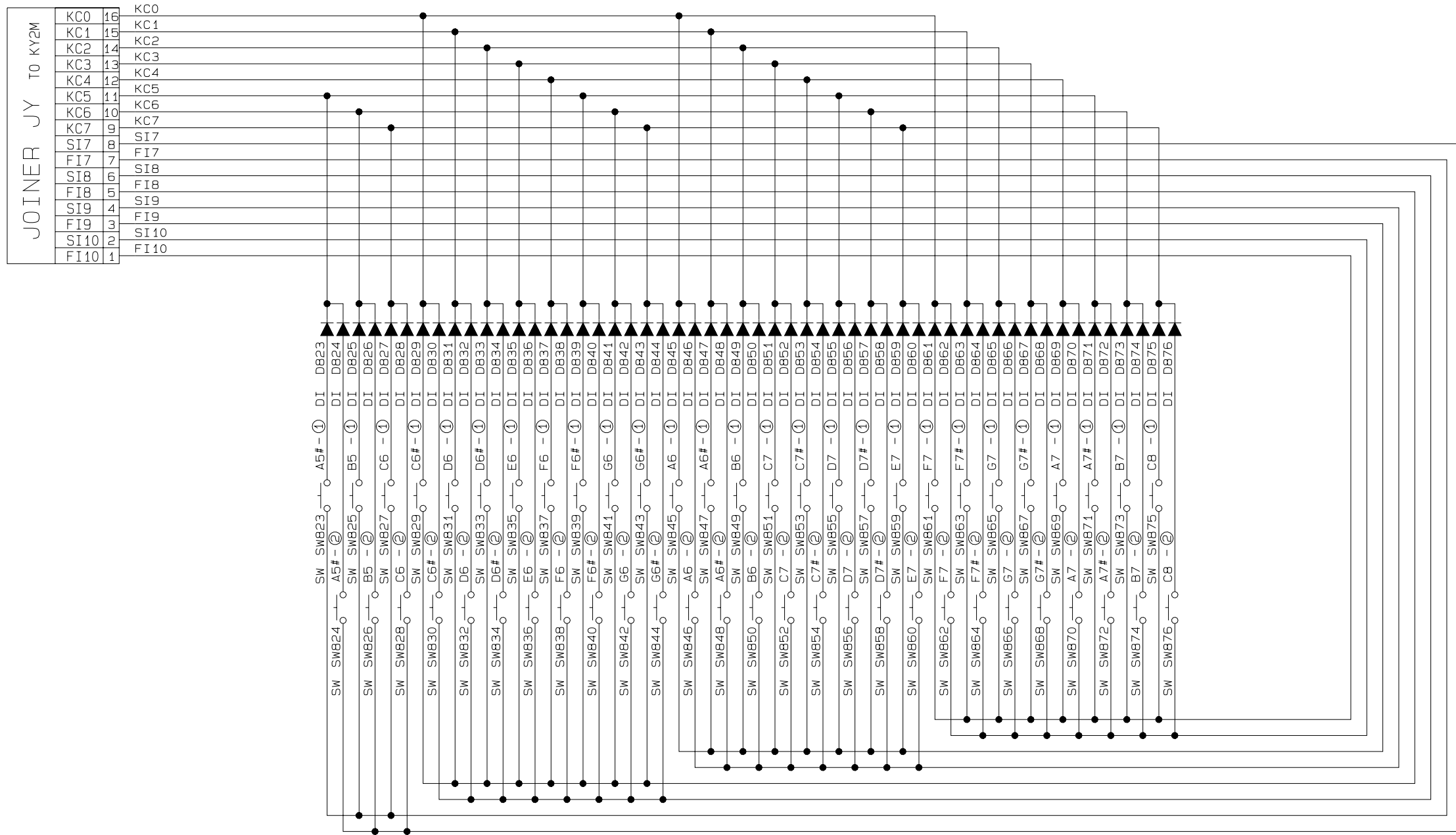
1	FI10
2	SI10
3	FI9
4	SI9
5	FI8
6	SI8
7	FI7
8	SI7
9	KC7
10	KC6
11	KC5
12	KC4
13	KC3
14	KC2
15	KC1
16	KC0



KEYBOARD PCB JCM887T-KT3M

JCM887T-KY3M

NOTE
 : 1S2076TE



Ver.1 : Sep. 2003

Addition of a diagnostic program item

Ver.2 : Nov. 2004

Correction of the EXPLODE VIEW (page 12) and PART LIST (page 16)

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