

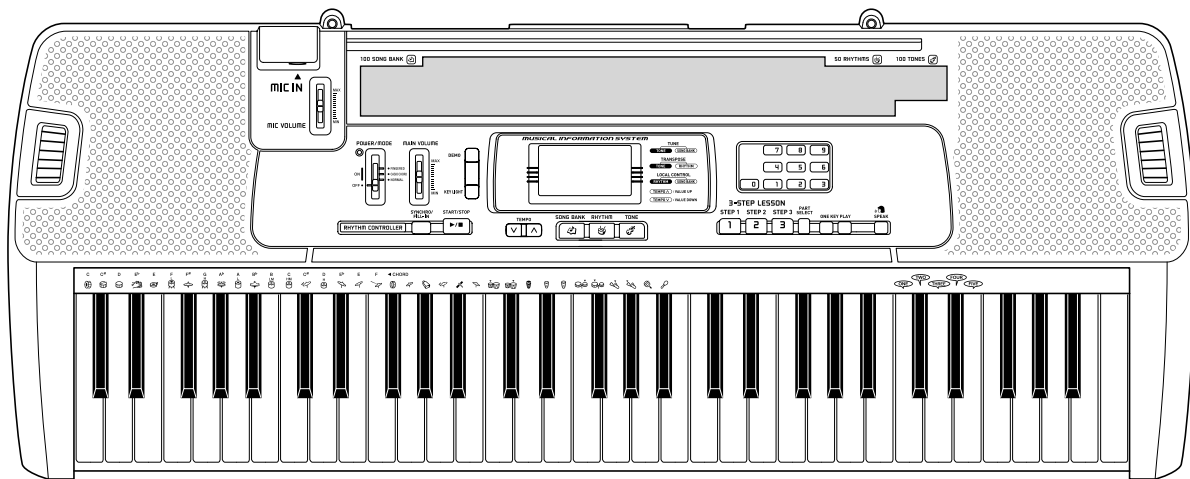
CASIO®

Service Manual

(without price)

LK-100

MAY. 2006



LK-100

ELECTRONIC KEYBOARD

Ver.1 : Dec. 2007

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SPECIFICATIONS

GENERAL

Keyboard:	61 standard-size keys; 5 octaves
Key Light System:	Can be turned on and off (up to 4 keys can be lit at the same time)
Tones:	100 presets
Polyphony:	12 notes maximum
3-Step Lesson System:	Number of simultaneously lit keys; 4 3-Steps
Playback:	1 tune repeat playback
Voice Fingering Guide:	On/Off
Auto-accompaniment	
Rhythm patterns:	50 presets
Tempo:	Adjustable, (216 steps, ♩ = 40 to 255), initial value; 120
Chords:	Two systems; CASIO CHORD, FINGERED
Other:	Fill-in pattern, Synchro start
Song Bank tunes:	100 tunes
Musical Information	
Function:	Tone, Auto Accompaniment, Song Bank numbers and names; tempo, 3 step lesson display, chord name, fingering, timing indicator, key lighting, voice fingering
Other Functions	
Transpose:	F# to C to F: half-note
Tuning:	Adjustable A4 = Approx. 440 Hz ±50 cents, Initial value: A4 = Approx. 440 Hz
MIDI:	5 multi-timbre receive
Speakers:	10 cm diameter x 2 (Output: 2W+2W)
I/O Terminals	
MIDI Terminals:	IN, OUT
Sustain:	Standard jack
Power Supply:	DC 9V jack
Headphones/Output:	Stereo standard jack (Output is monaural.) [output impedance: 78Ω, output voltage: 4V (RMS) MAX]
Microphone In:	Standard jack (with microphone volume slider) Input impedance: 2KΩ Input sensitivity: 10mV
Power Supply:	2-way
Batteries:	6 AA-size
Battery life:	Approximately 4 hours continuous operation on alkaline batteries Approximately 1 hour continuous operation on manganese batteries
AC adaptor :	AD-5
Auto Power Off:	Approximately 6 minutes after the last operation (Operates during battery use only)
Power Consumption:	9 V ∴ 7.7 W
Dimensions:	94.5 x 37.3 x 13.5 cm (37 1/4" x 14 11/16" x 5 5/16")
Weight:	Approximately 4.7 kg (10.4 lbs) (without batteries)

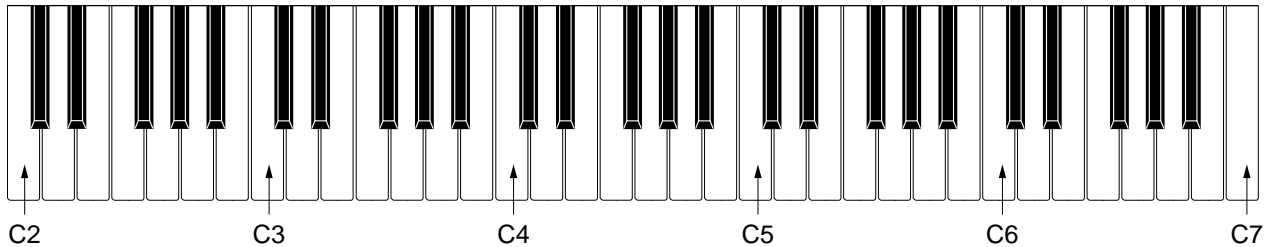
* Designs and specifications are subject to change without notice.

CIRCUIT DESCRIPTION

KEY LED MATRIX

	KI0	KI1	KI2	KI3	KI4	KI5	KI6	KI7
KO0	C2	G2#	E3	C4	G4#	E5	C6	G6#
KO1	C2#	A2	F3	C4#	A4	F5	C6#	A6
KO2	D2	A2#	F3#	D4	A4#	F5#	D6	A6#
KO3	D2#	B2	G3	D4#	B4	G5	D6#	B6
KO4	E2	C3	G3#	E4	C5	G5#	E6	C7
KO5	F2	C3#	A3	F4	C5#	A5	F6	–
KO6	F2#	D3	A3#	F4#	D5	A5#	F6#	–
KO7	G2	D3#	B3	G4	D5#	B5	G6	–

NOMENCLATURE OF KEYS

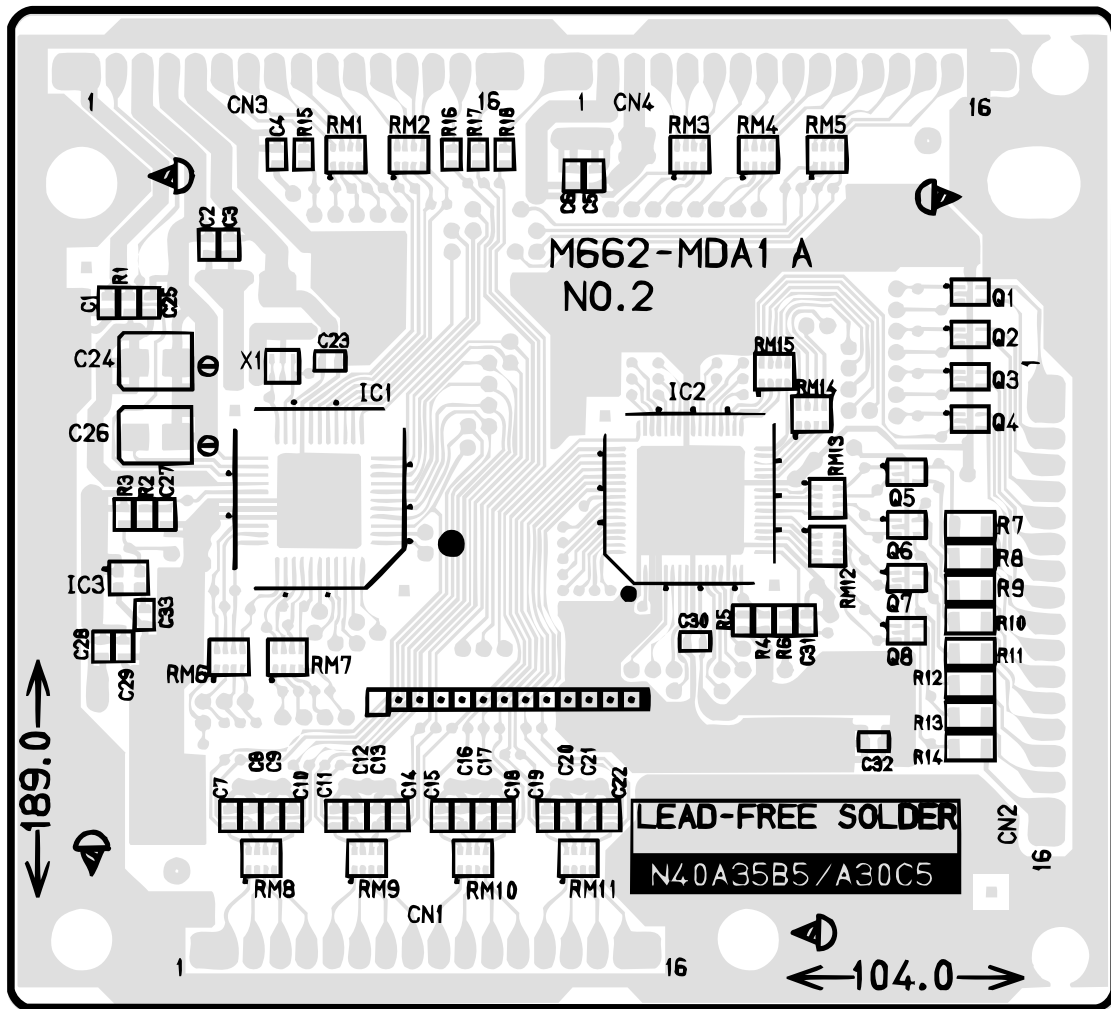


BUTTON MATRIX

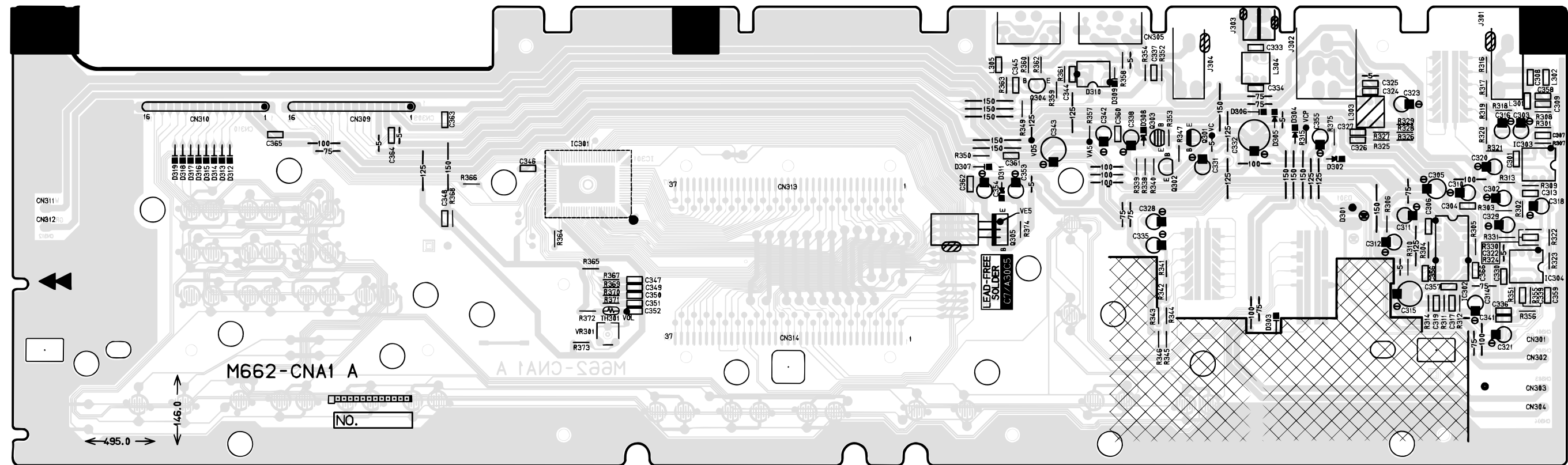
	KI0	KI1	KI2	KI3	KI4	KI5	KI6	KI7
KO8	0	1	2	3	4	START/ STOP	TEMPO ▲	
KO9	5	6	7	8	9	TEMPO ▼		SYNCHRO
KO10	TONE	RHYTHM	SONG BANK	PART SELECT	ONE KEY PLAY (L)	ONE KEY PLAY (R)	KEY LIGHT	DEMO
KO11	STEP1	STEP2	STEP3	SPEAK				

PRINTED CIRCUIT BOARDS

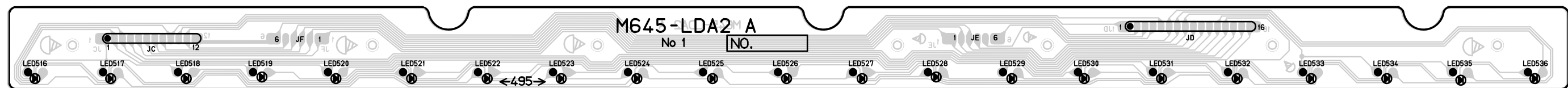
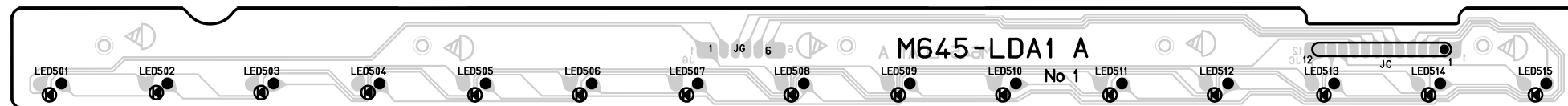
MAIN PCB M662-MDA1



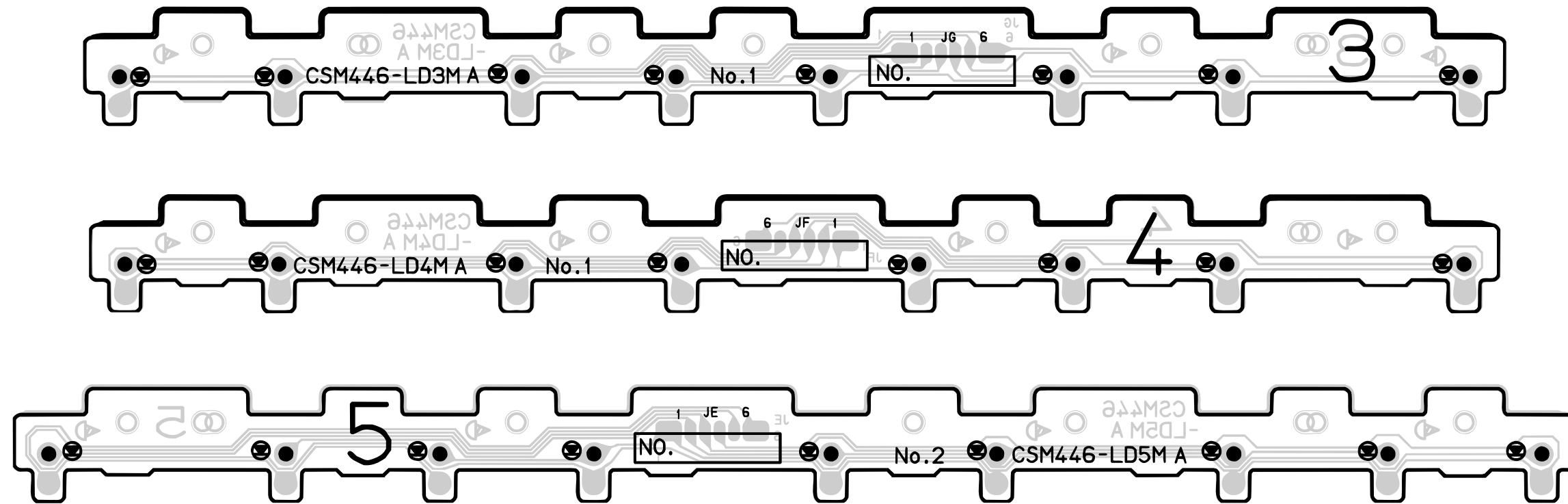
CONSOLE PCB M662-CNA1



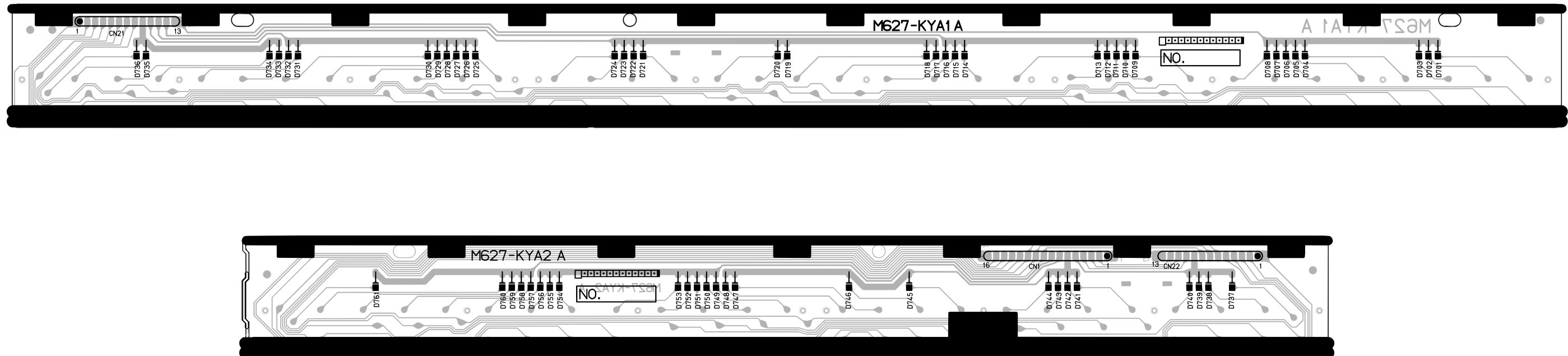
LED PCBs M645-LDA1/LDA2



LED PCBs CSM446-LD3M/LD4M/LD5M



Keyboard PCBs M627-KYA1/KYA2



DIAGNOSTIC PROGRAM

■ Initial Setup

1. Connect an AC adaptor.
2. "MODE" switch: OFF
3. "VOLUME": MAX.

■ How to start diagnostic program

1. Press and hold "0" and "START/STOP" buttons.
2. "POWER/MODE" switch "NORMAL"
3. The message "662 TEST" is appears on LCD.
4. Release "0" and "START/STOP" buttons.

■ Diagnostic program

1. MODE Switch check

- ① Set to "CASIO CHORD" position.
- ② Set to "FINGERED" position.
- ③ Set to "NORMAL" position.

Message on LCD

CASIO
FINGER
NORMAL

2. ROM check

- ① Press "2" button.
* Confirmation sound sounds.

ROM TEST
↓
ROM OK

3. D/A check

- ① Press “4” button.
* When standing in the center, the judge hears the minimum test sound in an equal volume from both right and left speakers
- ② Press “5” button. When standing in the center, the judge hears the minimum test sound in an equal volume from both right and left speakers
* When standing in the center, the judge hears the medium test sound in an equal volume from both right and left speakers.
- ③ Press “6” button.
* When standing in the center, the judge hears the maximum test sound in an equal volume from both right and left speakers.

Message on LCD

MIN

MID

MAX

4. MIDI check (IN – OUT)

- ① Connect MIDI IN and MIDI OUT terminals with a MIDI cable.
- ② Press “9” button.
* Confirmation sound sounds.

MIDI OK

5. AC adaptor check

- ① Press “SONG BANK” button.
* Confirmation sound sounds.

AC JACK

6. LED check

- ① Press “TONE” button.
* The key lights with confirmation sound in the following order.
* There must not be remarkable difference in the LED brightness of the adjacent key.

KEY LED

- 1) C1, D1, E1, F1,
- 2) G1, A1, B1, C2,
- 3) D2, E2, F2, G2
- 4) A2, B2, C3, D3
- 5) E3, F3, G3, A3
- 6) B3, C4, D4, E4
- 7) F4, G4, A4, B4

- 8) C5, D5, E5, F5
- 9) G5, A5, B5, C6
- 10) C1#, D1#
- 11) F1#, G1#, A1#
- 12) C2#, D2#
- 13) F2#, G2#, A2#
- 14) C3#, D3#

- 15) F3#, G3#, A3#
- 16) C4#, D4#
- 17) F4#, G4#, A4#
- 18) C5#, D5#
- 19) F5#, G5#, A5#

Message on LCD

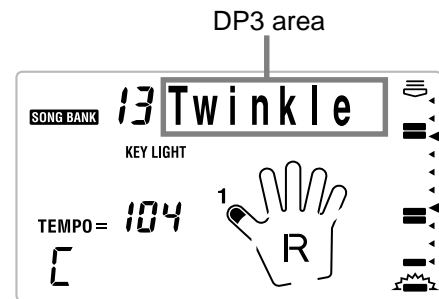
7. Version check

- ① Press “1” button.
* Confirmation sound sounds.

662VR100

8. LCD check

- ① Press the "STEP1" button.
 - * All dots and characters of LCD turn on.
 - * There is no lack of the dot and the character.
 - * See all dots from lower view angle(38.7°).
 - * See all dots from upper view angle(66.7°).
- ② Press the "STEP2" button.
 - * LCD no display.
- ③ Press the "STEP3" button.
 - * Block of LCD turns on by sequential.
 - * There is no lack of the dot and the character.
- ④ Press the "ONE KEY(Left side)" button.
 - * Half dots on DP3 area of LCD turn on.
 - * There is no lack of the dot and the character.
- ⑤ Press the "ONE KEY(Left side)" button.
 - * Another half dots on DP3 area of LCD turn on.
 - * There is no lack of the dot and the character.
- ⑥ Press the "ONE KEY(Right side)" button.
 - * Half segments of LCD turn on exclude DP3.
 - * There is no lack of the dot and the character.
- ⑦ Press the "ONE KEY(Right side)" button.
 - * Another half segments of LCD turn on exclude DP3.
 - * There is no lack of the dot and the character.

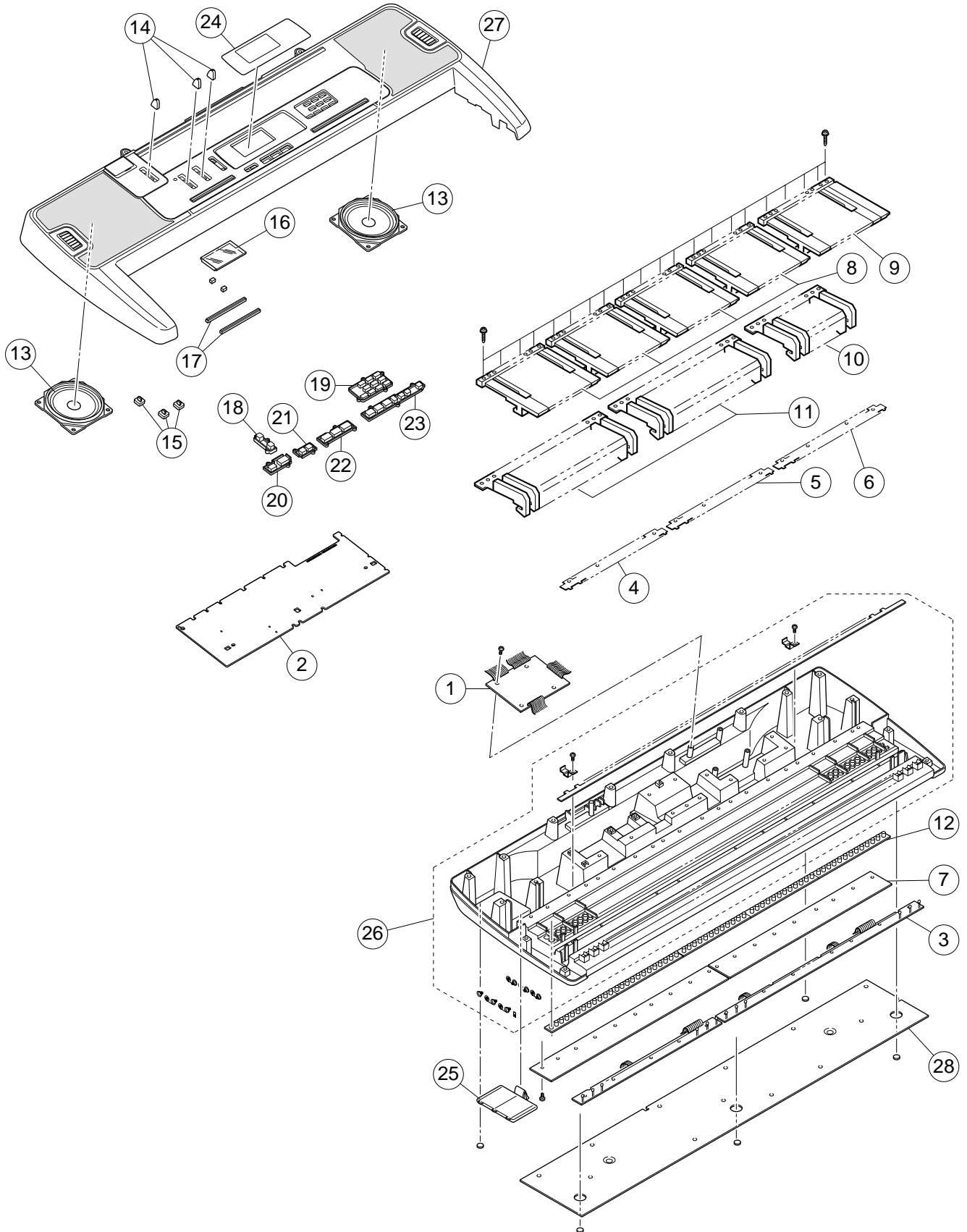


9. APO check

- ① Press the "PART SELECT" button.
 - * Go out from TEST mode (Power off).
 - * The LCD turns off.
 - * Disconnect the MIDI cable.
 - * Disconnect an AC adaptor.
 - * "MODE" switch: OFF

DIAGNOSTIC PROGRAM IS FINISHED.

EXPLODED VIEW



PARTS LIST

LK-100

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 seperately.
3. The numbers in item column correspond to the same numbers in drawing.

N	Item	Parts code	Parts name	Specification	Q	Price Code	R	Remarks
Main PCB								
N	1	10243441	PCB ASSY/MAIN	TK-RJM506876*001	1	BY	A	
N	IC3	10240586	IC	XC6109N40ANR	1	AE	C	
	X1	10070555	CERAMIC OSCILLATOR	CSTCW20M0X51-R0	1	AC	C	
N	Q1-4	10207076	TRANSISTOR	KTC601U-GR-RTK/P	4	AA	X	
	Q5-8	10209018	TRANSISTOR	KTA501U-GR-RTK/P	4	AA	X	
Console PCB								
N	2	10243440	PCB ASSY/CNA	TK-RJM506875*001	1	CD	C	
	D301	10104646	LED	1154HD-B5/10-90	1	AA	C	
	D310	10201501	IC	PC900V0NSZXF	1	AG	C	
	IC302	10189501	IC	LA4227-E	1	AF	C	
	D303,306,307,309, 312-319	10079928	DIODE	1SS133TA	12	AA	C	
	IC303,304	10206677	IC	NJM2068D-D	1	AH	C	
N	J303	10209462	JACK	DJ-0702O*015	1	AA	C	
	J304	10206815	CONNECTOR	JY-6314*01-030	1	AA	X	
	J301	10206816	CONNECTOR	JY-6314*01-130	1	AA	X	
	J302	10213695	JACK	JY-6316*01-070	1	AC	X	
N	L303	10231919	COIL	RB53-856396NP	1	AA	X	
N	L304	10231920	COIL	RB53-856397NP	1	AA	X	
	Q305	10206676	TRANSISTOR	KTC2026-Y-U/P	1	AB	X	
	VR301	69304870	VOLUME	EVND8AA03B53	1	AA	X	
	D305	10080347	DIODE	1A2TA	1	AA	X	
	D302	10079931	DIODE	DZ5.1BSCTA	1	AA	X	
	D308,311	10085189	ZENER	DZ5.6BSBTA	2	AA	X	
	D304	10079929	DIODE	SRT14TA	1	AA	X	
N	L301,302,305	10222984	COIL	CNSS-823465NP	3	AA	X	
N	Q301	10206675	TRANSISTOR	KTA1273-Y-AT/P	1	AA	X	
	Q302,304	10206673	TRANSISTOR	KTC3199-GR-AT/P	2	AA	X	
	Q303	10209015	TRANSISTOR	KTD863-GR-AT/P	1	AA	X	
LED PCBs								
	3	10133541	PCB ASSY/LDA	TK-RJM503432*001	1	BL	C	
	4	10059364	PCB ASSY/LD3M	TK-M240428*1(M478)	1	BA	C	
	5	10036271	PCB ASSY/LD4M	TK-M240429*1(M475)	1	AT	C	
	6	10036272	PCB ASSY/LD5M	TK-M240430*1(M475)	1	AT	C	
	LED501-536	23701408	LED	SLI-332URCTJ2	36	AA	X	
Keyboard unit								
N	7	10243430	PCB ASSY/KYA	TK-RJM503929*004	1	AR	C	
	D701-D761	10079928	DIODE	1SS133TA	61	AA	X	
	8	10014608	KEY SET/WHITE/CB	M340489A*3	4	AU	C	
	9	10014609	KEY SET/WHITE/CS	M340489A*4	1	AV	C	
	10	69251730	KEY SET/BLACK/5P	M140369-2	1	AM	C	
	11	69251720	KEY SET/BLACK/10P	M140369-1	2	BN	C	
N	12	10243429	RUBBER/CONTACT	TK-RJM503856*001	1	AQ	C	

Notes **N**-New parts

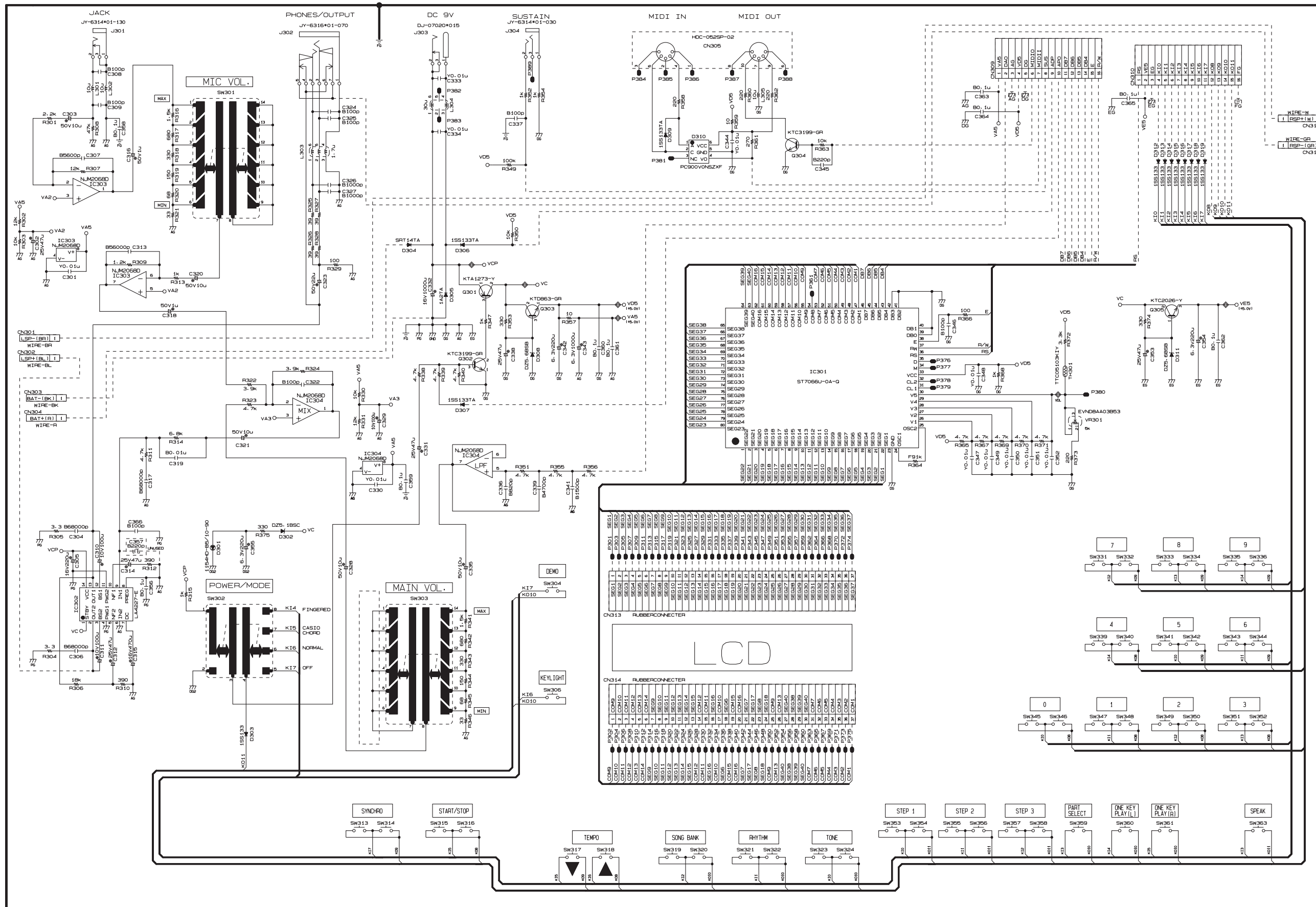
Q-Quantity used per unit

N	Item	Parts code	Parts name	Specification	Q	Price Code	R	Remarks
Case unit								
N	13	10228219	SPEAKER	C10JB25	2	AH	C	
	14	10240416	KNOB/SLIDE	RJM503803-004V01	3	AA	C	
	15	19153667	CONTACT/SLIDE	CSB-08D	3	AD	C	
N	16	10240401	LCD	D050703	1	AX	C	
N	17	10203056	CONNECTOR	RJM505826-001V01	2	AA	C	
N	18	10240390	RUBBER/KEY/A	RJM506947-001V01	1	AC	C	
N	19	10240391	RUBBER/KEY/C	RJM506948-001V01	1	AH	C	
N	20	10240392	RUBBER/KEY/D	RJM506949-001V01	1	AB	C	
N	21	10240393	RUBBER/KEY/E	RJM506950-001V01	1	AA	C	
N	22	10240395	RUBBER/KEY/F	RJM506951-001V01	1	AD	C	
N	23	10240396	RUBBER/KEY/G	RJM506952-001V01	1	AF	C	
N	24	10240384	PLATE/DISPLAY	RJM506607-001V01	1	AN	C	
	25	10098012	COVER ASSY/BATTERY	TK-M340884*006	1	BH	C	
	26	10243433	CASE ASSY/MIDDLE	TK-RJM506789*001	1	BZ	C	
N	27	10240417	CASE/UPPER	RJM506573-001V01	1	BY	C	
N	28	10240385	PLATE/LOWER	RJM506608-001V01	1	AW	C	
ACCESSORY								
	-	69208690	STAND/MUSIC	M311760-1	1	AI	C	
	-	10083548	BATTERY	R6UW/2STA	3	AC	C	Only DI
	-							

Notes **N**-New parts

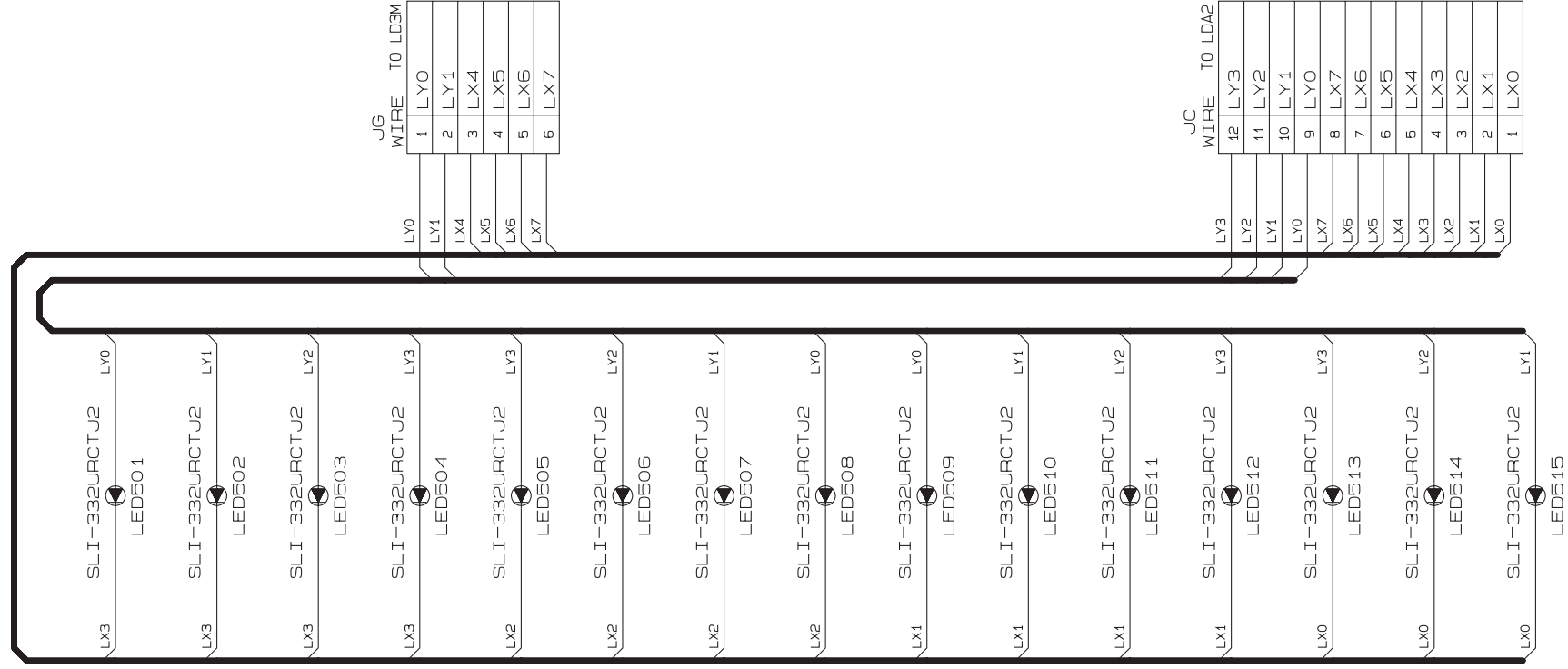
Q-Quantity used per unit

CONSOLE PCBs M662-CNA1

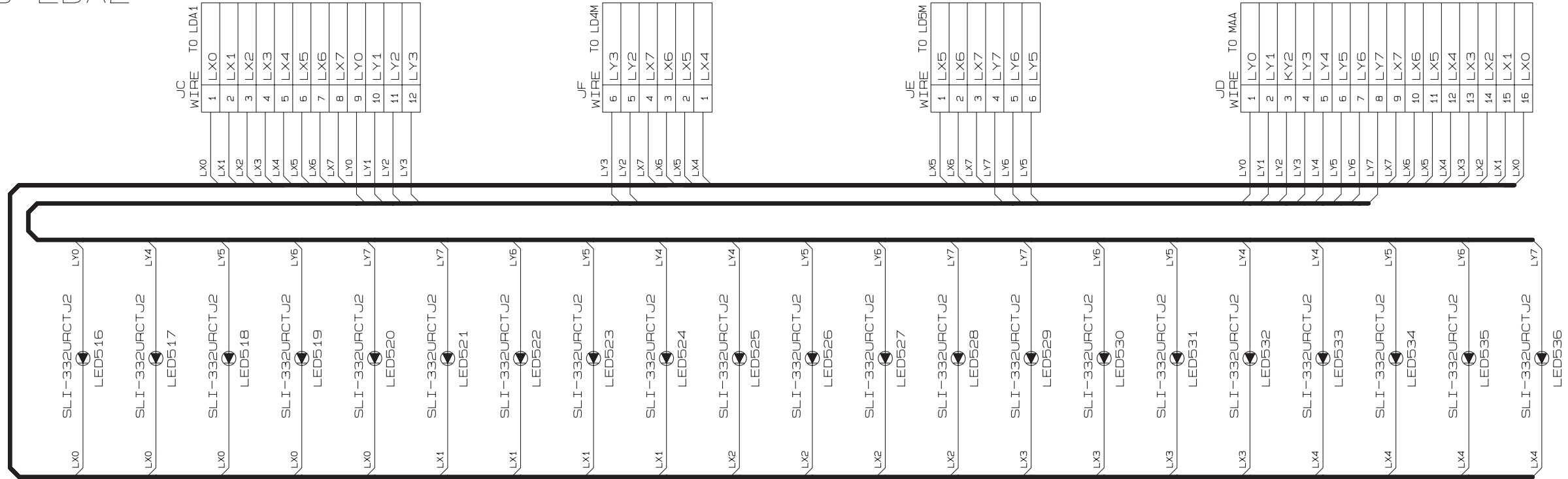


LED PCBs M645-LDA1/LDA2

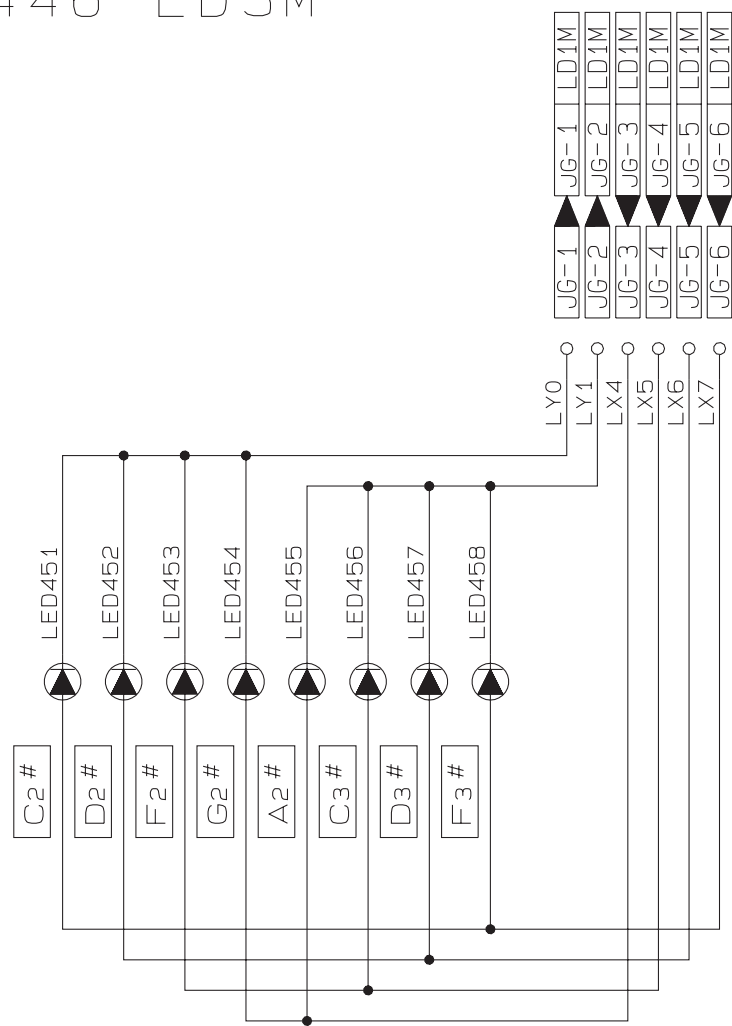
M645-LDA1



M645-LDA2



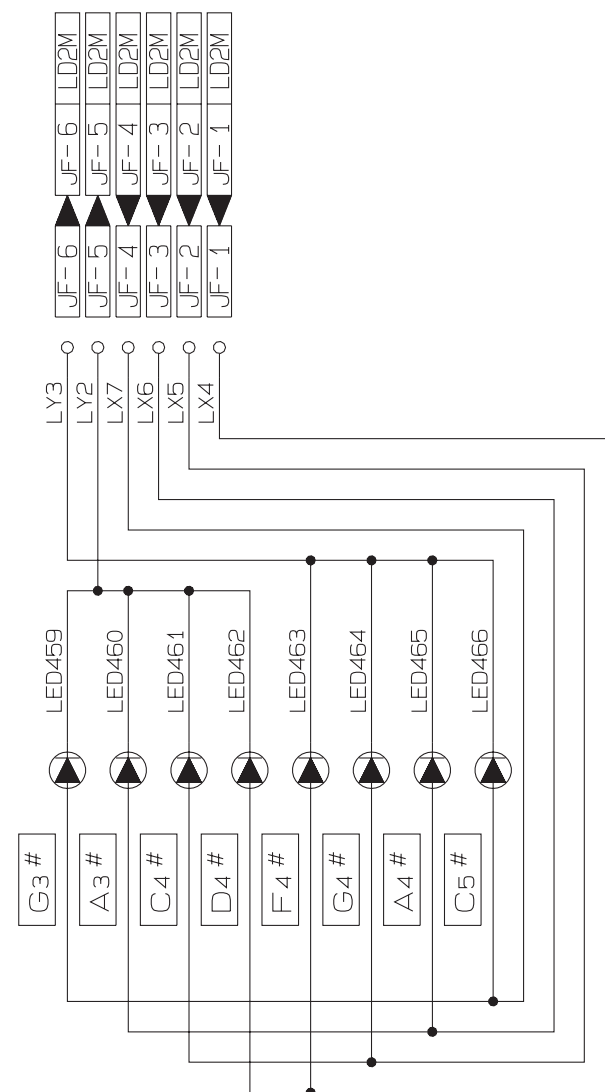
CSM446-LD3M



NOTE

⬆️: KR3302X-J345K

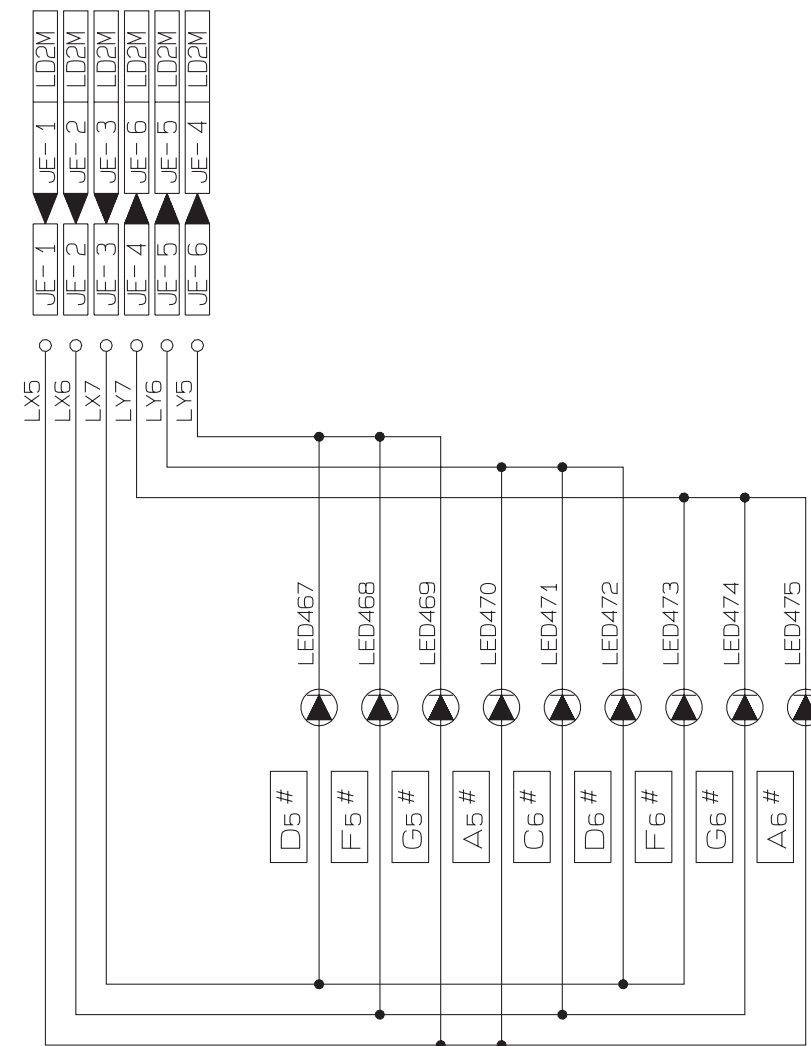
CSM446-LD4M



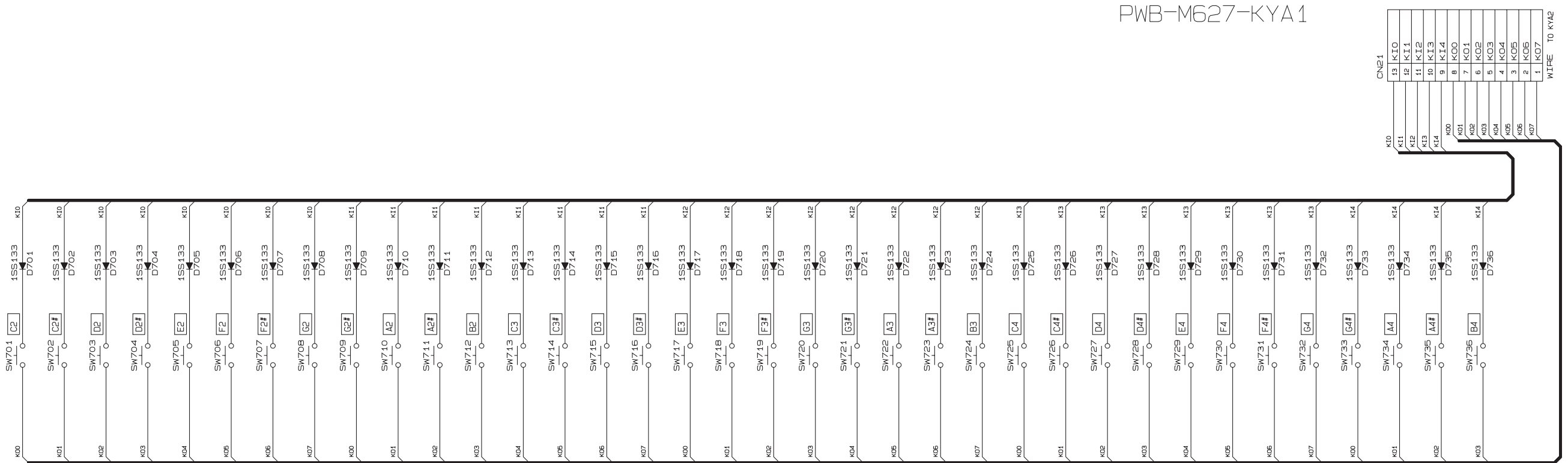
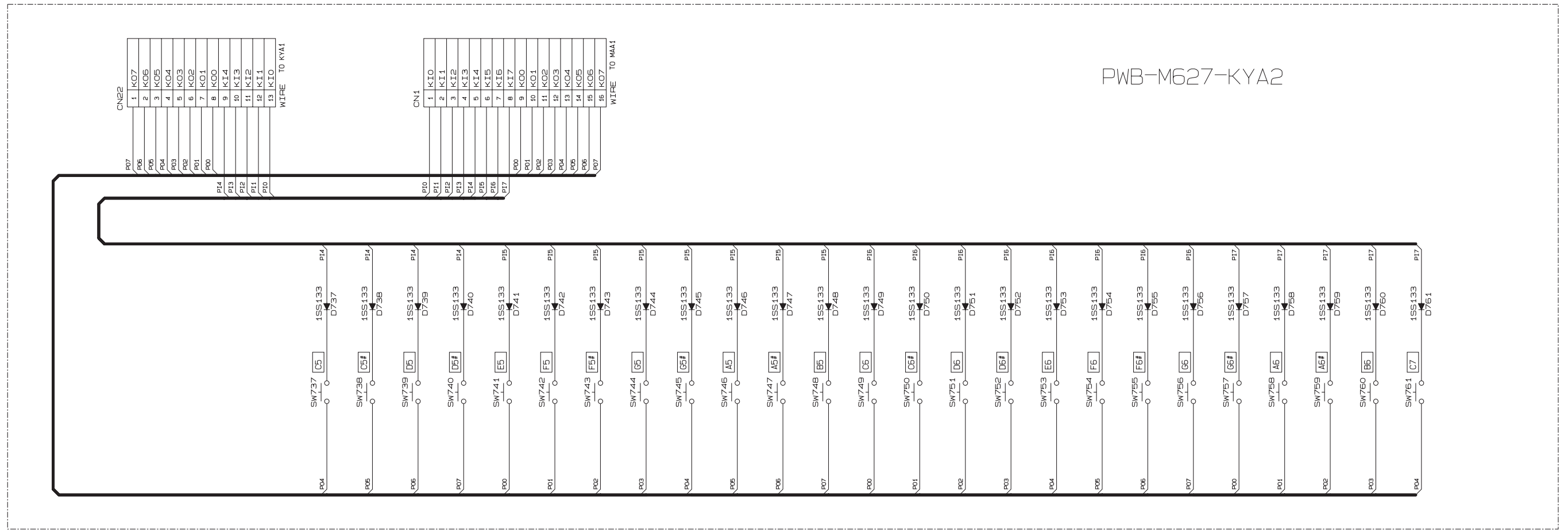
NOTE

⬆️: KR3302X-J345K

CSM446-LD5M



Keyboard PCBs M627-KYA1/KYA2



Ver.1 : Dec. 2007

- Correction of the DIAGNOSTIC PROGRAM (P6 to P8)

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