

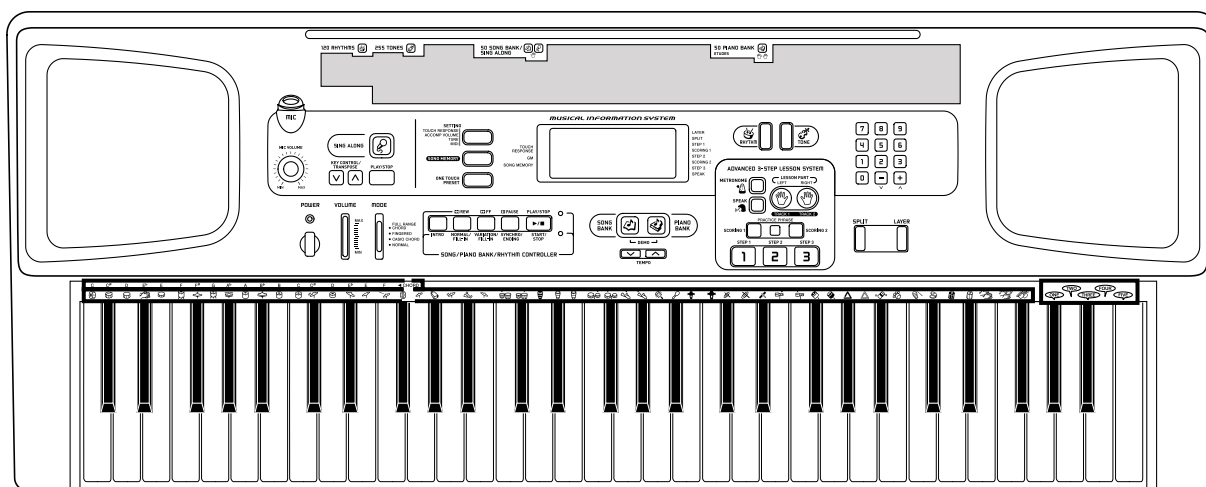
# CASIO®

# Service Manual

(without price)

## CTK-591

APR. 2003



CTK-591

**ELECTRONIC KEYBOARD**

Ver.1 : Dec. 2003

# CONTENTS

	Page
Specifications .....	1
Block Diagram .....	3
Circuit Description .....	4
Adjustment .....	5
Printed Circuit Boards .....	6
Disassemble/Assemble .....	8
Diagnostic program .....	14
Schematic Diagrams .....	17
Exploded View .....	22
Parts List .....	23

## SPECIFICATIONS

### GENERAL

Keyboard:	61 standard-size keys, 5 octaves (with touch response on/off)
Tones:	255 (118 panel tones + 128 General MIDI tones + 9 drum sets); with layer and split
Rhythm Instrument Tones:	61
Polyphony:	24 notes maximum (12 for certain tones)
Auto Accompaniment	
Rhythm Patterns:	120
Tempo:	Variable (216 steps, = 40 to 255)
Chords:	3 fingering methods (CASIO CHORD, FINGERED, FULL RANGE CHORD)
Rhythm Controller:	START/STOP, INTRO, NORMAL/NORMAL FILL-IN, VARIATION/VARIATION FILL-IN, SYNCHRO/ENDING
Accomp Volume:	0 to 127 (128 steps)
One Touch Presets:	Recalls settings for tone, tempo, layer, split, and accompaniment volume in accordance with rhythm.
<Advanced 3-Step Lesson System>	
3-step Lesson:	3 lessons (Step 1, 2, 3)
Playback:	Repeat play of a single tune
Evaluation Mode:	Scoring 1, Scoring 2, Phrase Practice
Voice Fingering Guide:	On/Off
Song Bank, Piano Bank	
Number of Tunes:	100 (Song Bank/Sing Along: 50, Piano Bank: 50)
Controllers:	PLAY/STOP, PAUSE, FF, REW, LEFT/RIGHT
Musical Information Function:	Tone, Auto Accompaniment, Song Bank, Piano Bank, Sing Along numbers and names; staff notation, tempo, metronome, measure and beat number, step lesson display, chord name, fingering, pedal operation, Keyboard, Song Bank icon, Piano Bank icon, Sing Along icon, Voice Fingering Guide, Evaluation Mode
Sing Along Mode	
Number of Tunes:	Song Bank/Sing Along: 50
Controllers:	PLAY/STOP, KEY CONTROL (25 steps, -12 semitones to +12 semitones)
Metronome:	On/Off
Beat Specification:	1 to 6
Song Memory	
Songs:	2
Recording Tracks:	2
Recording Method:	Real-time
Memory Capacity:	Approximately 5,100 notes (total for two songs)
MIDI:	16 multi-timbre receive, GM Level 1 standard

## Other Functions

Transpose: 25 steps (-12 semitones to +12 semitones)  
Tuning: 101 steps (A4 = approximately 440Hz ±50Cents)

## Terminals

MIDI Terminals: IN, OUT  
Assignable Jack: Standard jack (sustain, sostenuto, soft, rhythm start/stop)  
Headphone/Output Terminal: Stereo standard jack  
Output Impedance: 100Ω  
Output Voltage: 4V (RMS) MAX  
Microphone In: Standard jack (with microphone volume knob)  
Input impedance: 3KΩ  
Input sensitivity: 10mV

Power Jack: 9V DC  
Power Supply: 2-way  
Batteries: 6 D-size batteries  
Battery Life: Approximately 6 hours continuous operation on manganese batteries  
AC Adaptor: AD-5  
Auto Power Off: Turns power off approximately 6 minutes after last key operation.  
Enabled under batter power only, can be disabled manually.

Speaker Output: 2.5W + 2.5W  
Power Consumption: 9V --- 7.7W  
Dimensions: 96.0 × 37.5 × 14.5 cm (37 <sup>13</sup>/<sub>16</sub> × 14 <sup>3</sup>/<sub>4</sub> × 5 <sup>11</sup>/<sub>16</sub> inch)  
Weight: Approximately 5.3 kg (11.7 lbs)(without batteries)

## ELECTRICAL

Current drain with 9 V DC:

No sound output 175 mA ± 20 %  
Maximum volume 660 mA ± 20 %

with 12 keys from C1 to G2 pressed in 104 SINE LEAD

Volume: maximum, Velocity: maximum

Speaker output level (V<sub>rms</sub> with 4 Ω load each channel):

with key G1 in 104 SINE LEAD

Volume: maximum, Velocity: maximum

L/R: 1400 mV ± 20 %

Phone output level (V<sub>rms</sub> with 32 Ω load each channel):

with key, G1 in 104 SINE LEAD

Volume: maximum, Velocity: maximum

L/R: 293 mV ± 20 %

Output level (V<sub>rms</sub> with 47 Ω load each channel):

with key G1 in 104 SINE LEAD

Volume: maximum, Velocity: maximum

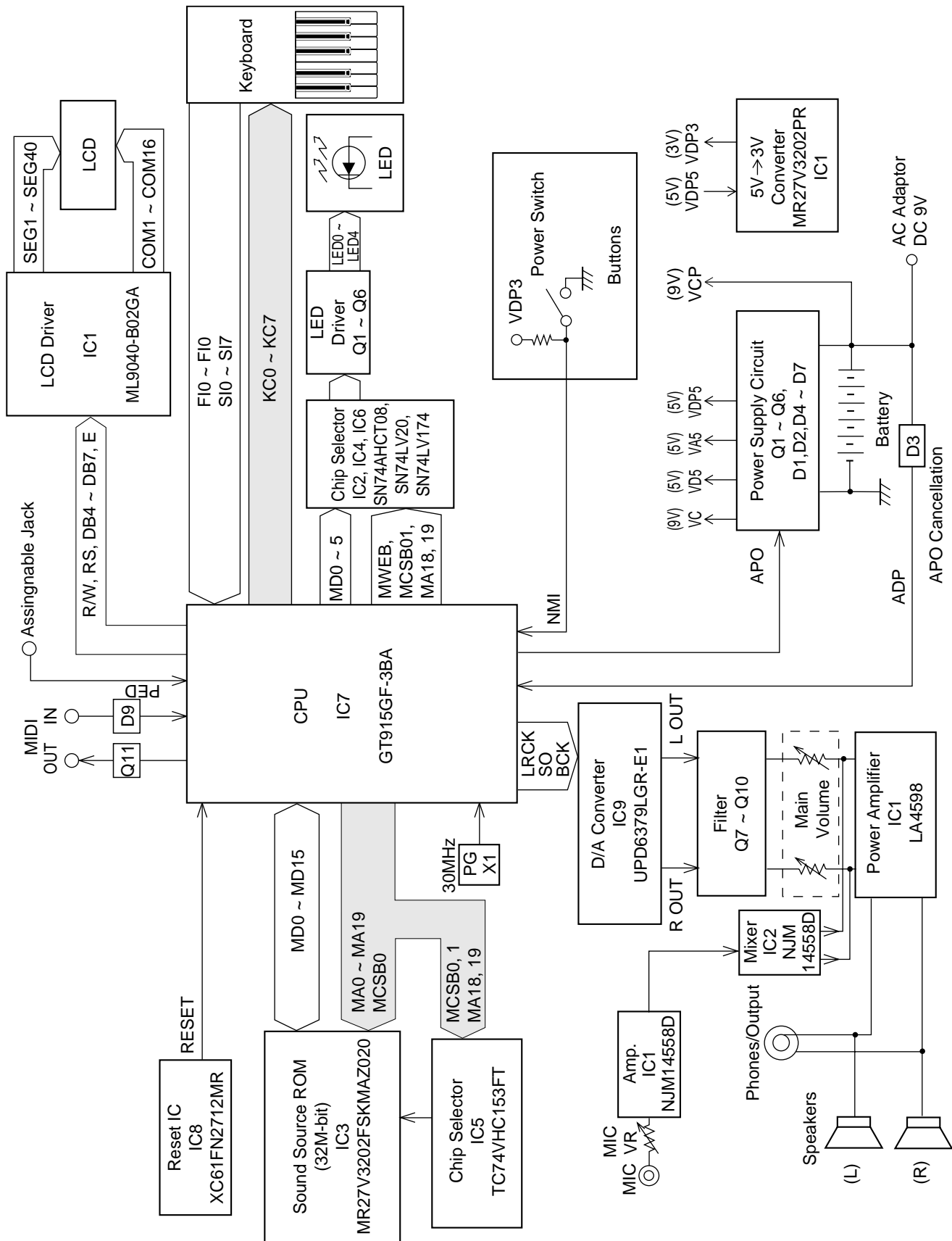
L/R: 1350 mV ± 20 %

### About General MIDI

General MIDI standardizes MIDI data for all sound source types, regardless of manufacturer. General MIDI specifies such factors as tone numbering, drum sounds, and available MIDI channels for all sound sources. This standard makes it possible for all MIDI equipment to reproduce the same nuances when playing General MIDI data, regardless of the manufacturer of the sound source.

This keyboard supports General MIDI, so it can be used to play commercially available pre-recorded General MIDI data and General MIDI data send to it from a personal computer.

# BLOCK DIAGRAM



# CIRCUIT DESCRIPTION

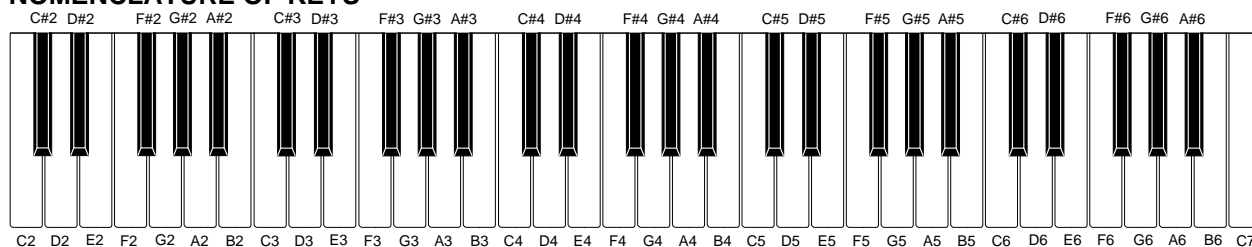
## KEY MATRIX

	KC0	KC1	KC2	KC3	KC4	KC5	KC6	KC7-
<b>FI0</b>	C2 (1)	C#2(1)	D2 (1)	D#2 (1)	E2 (1)	F2 (1)	F#2 (1)	G2 (1)
<b>SI0</b>	C2 (2)	C#2 (2)	D2 (2)	D#2 (2)	E2 (2)	F2 (2)	F#2 (2)	G2 (2)
<b>FI1</b>	G#2 (1)	A2 (1)	A#2 (1)	B2 (1)	C3 (1)	C#3 (1)	D3 (1)	D#3 (1)
<b>SI1</b>	G#2 (2)	A2 (2)	A#2 (2)	B2 (2)	C3 (2)	C#3 (2)	D3 (2)	D#3 (2)
<b>FI2</b>	E3 (1)	F3 (1)	F#3 (1)	G3 (1)	G#3 (1)	A3 (1)	A#3 (1)	B3 (1)
<b>SI2</b>	E3 (2)	F3 (2)	F#3 (2)	G3 (2)	G#3 (2)	A3 (2)	A#3 (2)	B3 (2)
<b>FI3</b>	C4 (1)	C#4 (1)	D4 (1)	D#4 (1)	E4 (1)	F4 (1)	F#4 (1)	G4 (1)
<b>SI3</b>	C4 (2)	C#4 (2)	D4 (2)	D#4 (2)	E4 (2)	F4 (2)	F#4 (2)	G4 (2)
<b>FI4</b>	G#4 (1)	A4 (1)	A#4 (1)	B4 (1)	C5 (1)	C#5 (1)	D5 (1)	D#5 (1)
<b>SI4</b>	G#4 (2)	A4 (2)	A#4 (2)	B4 (2)	C5 (2)	C#5 (2)	D5 (2)	D#5 (2)
<b>FI5</b>	E5 (1)	F5 (1)	F#5 (1)	G5 (1)	G#5 (1)	A5 (1)	A#5 (1)	B5 (1)
<b>SI5</b>	E5 (2)	F5 (2)	F#5 (2)	G5 (2)	G#5 (2)	A5 (2)	A#5 (2)	B5 (2)
<b>FI6</b>	C6 (1)	C#6 (1)	D6 (1)	D#6 (1)	E6 (1)	F6 (1)	F#6 (1)	G6 (1)
<b>SI6</b>	C6 (2)	C#6 (2)	D6 (2)	D#6 (2)	E6 (2)	F6 (2)	F#6 (2)	G6 (2)
<b>FI7</b>	G#6 (1)	A6 (1)	A#6 (1)	B6 (1)	C7 (1)			
<b>SI7</b>	G#6 (2)	A6 (2)	A#6 (2)	B6 (2)	C7 (2)			

## BUTTON MATRIX

	KC0	KC1	KC2	KC3	KC4	KC5	KC6	KC7
<b>KI0</b>	SCORING 1	STEP 2	3	TONE	5	PLAY/ STOP		SYNCHRO/ FILL-IN
<b>KI1</b>	PRACTICE PHRASE	STEP 3	—	7	6	KEY CONTROL /TRANPOSE ▼	KEY CONTROL /TRANPOSE ▲	SING ALONG
<b>KI2</b>	STEP 1	0	+	4	MODE FULL RANGE CHORD	MODE FINGERED	MODE CASIO CHORD	MODE NORMAL
<b>FI8</b>	SCORING 2	SPEAK		METRO- NOME	INTRO	NORMAL /FILL-IN	VAR /FILL-IN	START/STOP
<b>FI9</b>	LAYER	RIGHT /TRACK2	2	RHYTHM	9	SONG MEMORY	OPEN TOUCH PRESET	SETTING
<b>FI10</b>	SPLIT	LEFT /TRACK1	1	SONG BANK	8	TEMPO ▼	TEMPO ▲	PIANO BANK

## NOMENCLATURE OF KEYS



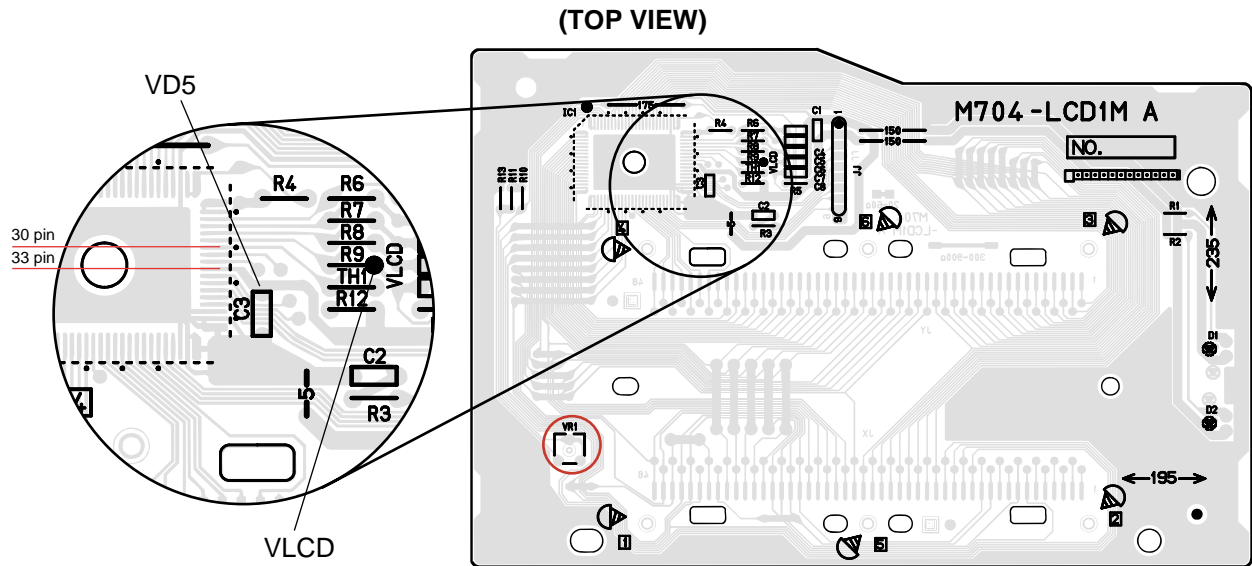
# ADJUSTMENT

## DISPLAY PCB

1) Items to be adjusted:

Item	Measuring Instrument
Vop voltage setting	Voltmeter

2) Adjustment and Test Point Locations

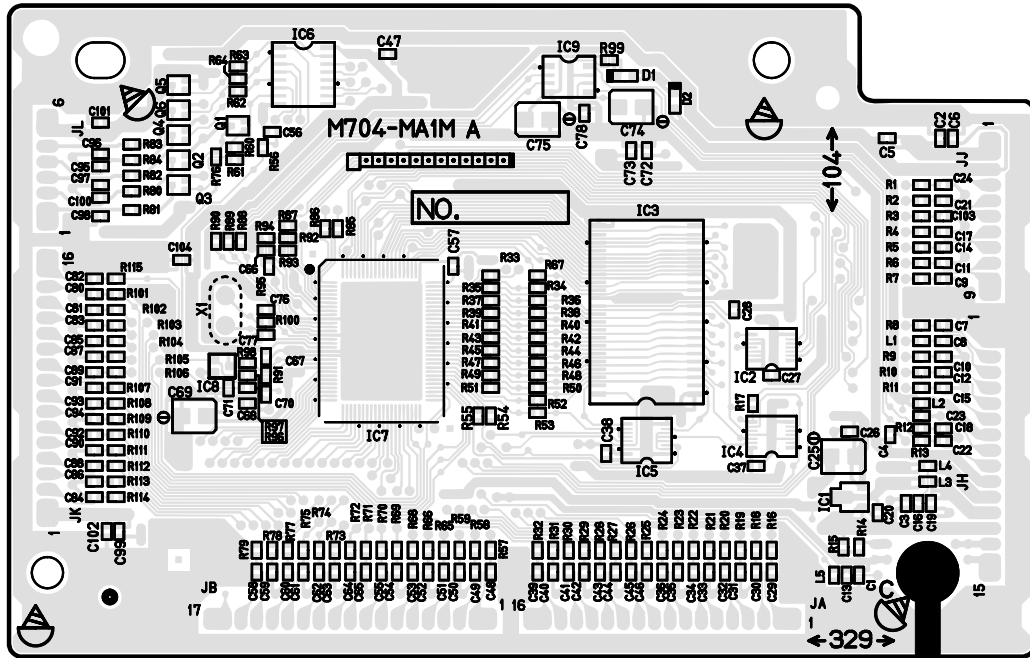


3) Equipment connection/Procedure

Vop voltage setting						
Input Connection	Input Point	Input Signal	Adjust	Output Connection	Output Point	Adjust for
—	—	—	VR1	Voltmeter	VLCD-VD5	Adjust for 4.2 ~ 4.3 V reading on voltmeter under the temperature 20 ~ 25 °C. Make fine adjustment according to the next instruction.
<p>Watching the LCD at a 34.9° angle to the horizontal, adjust Vop voltage so that unenergized segments are seen dimly.</p>						

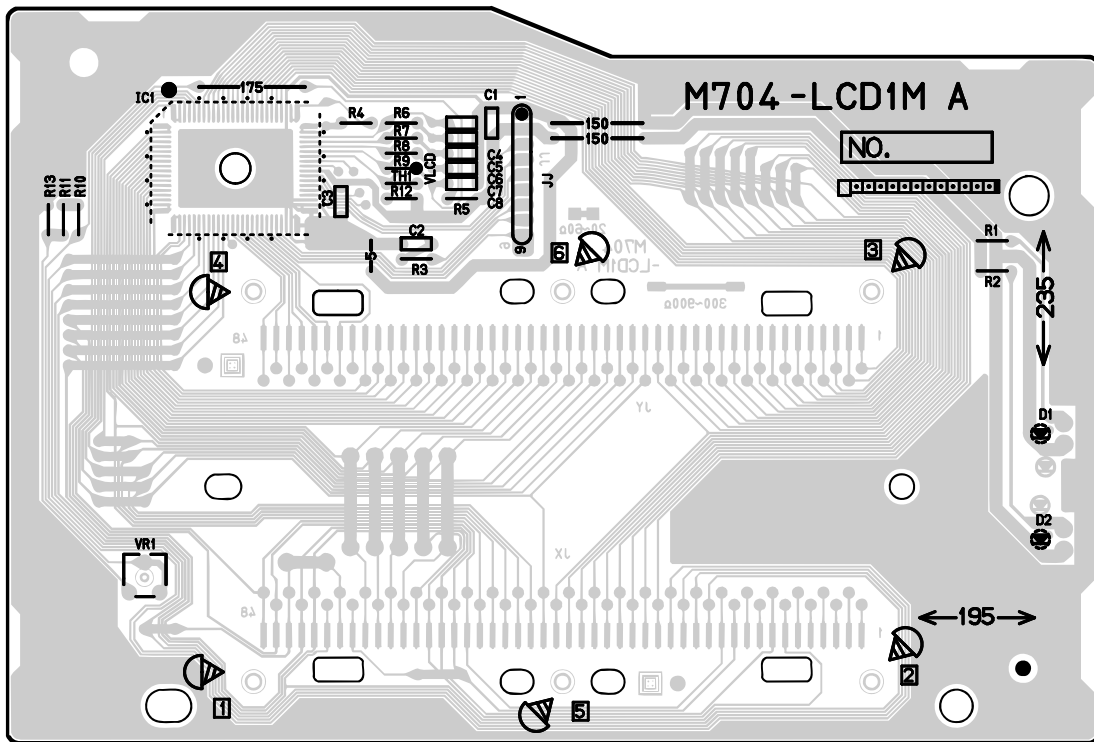
# PRINTED CIRCUIT BOARDS

## Main PCB M704-MA1M



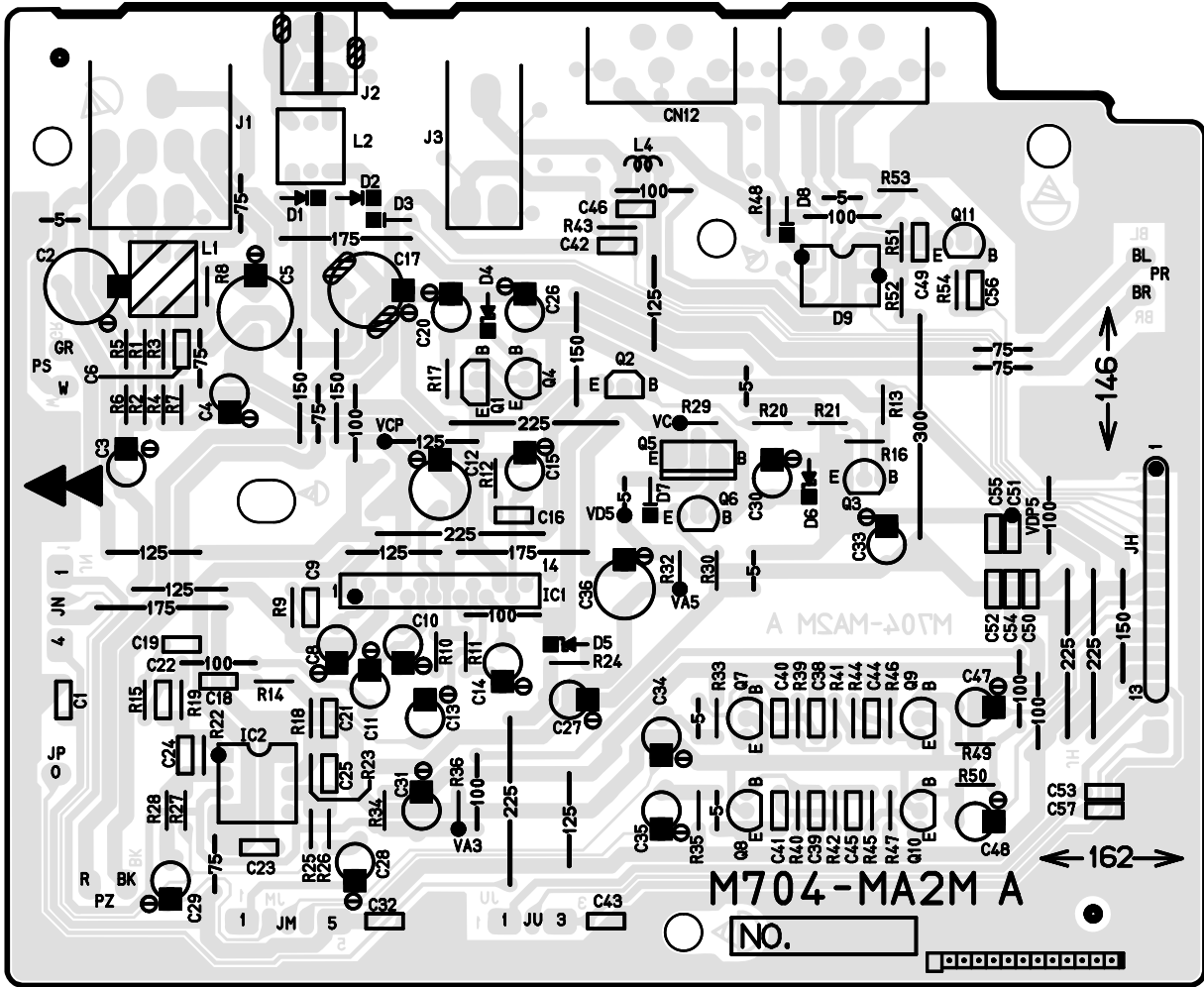
Top View

## LCD PCB M704-LCD1M



Top View

Sub PCB JCM704-MA2M

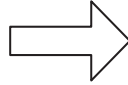


Top View

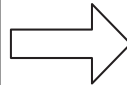
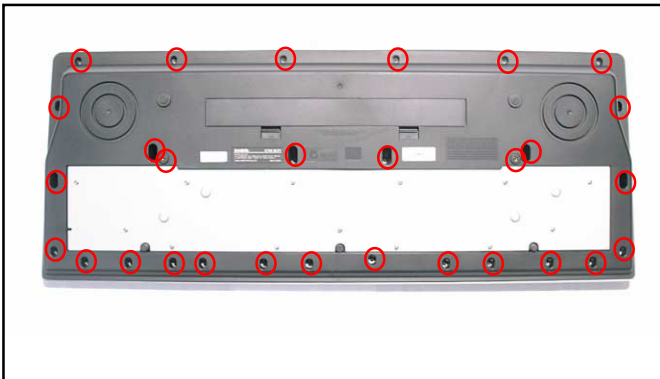


# DISASSEMBLY

1. Remove the battery cover and then the battery.



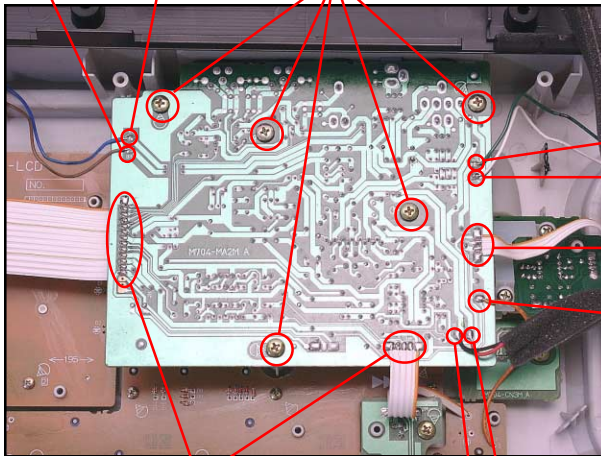
2. Remove 29 screws and then the upper case.



3. Remove 5 screws, 4 speaker cords, 1 power cord, 2 battery cords, 3 connectors (JH, JM, JN) and then the PCB ASSY (MA2M).

Speaker cord (BL)  
Speaker cord (BR)

Screws



Speaker cord (GR)

Speaker cord (W)

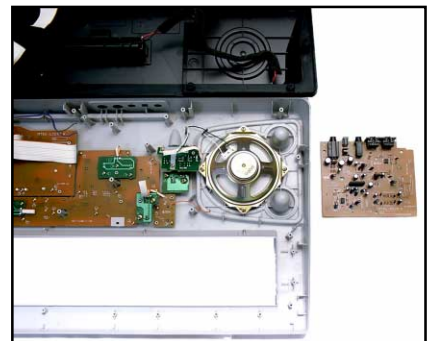
Connector

Wire (Power switch)

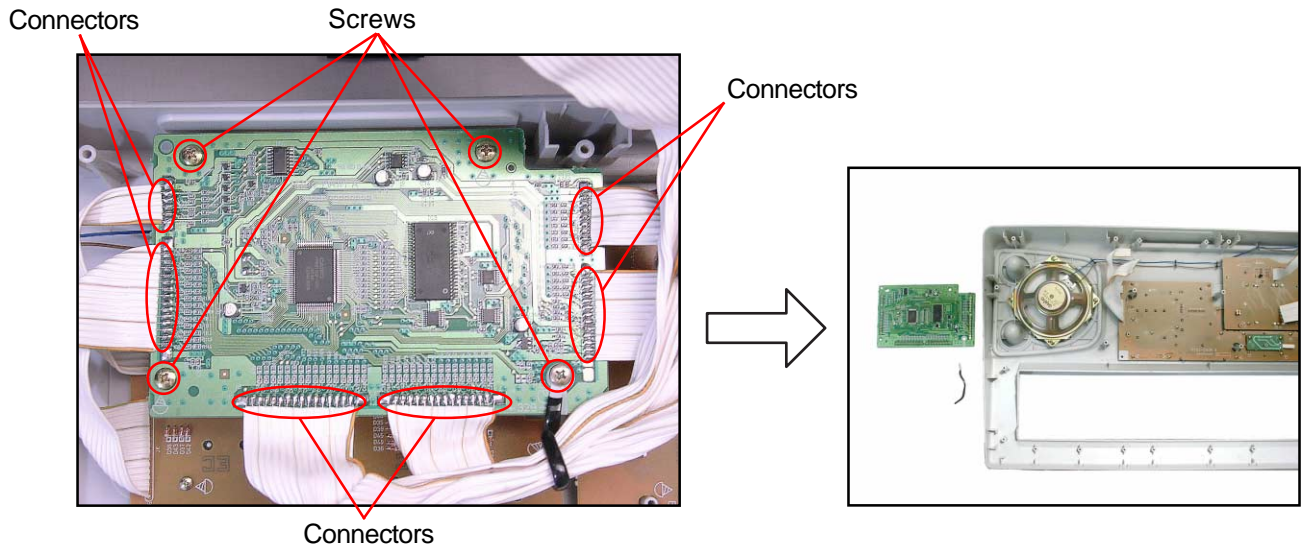
Connectors

Battery cord (R)

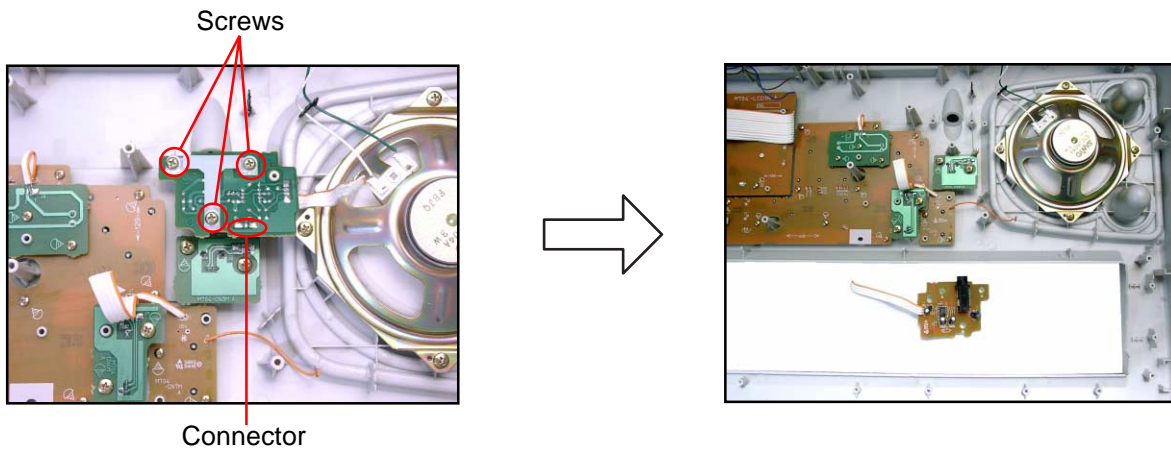
Battery cord (B)



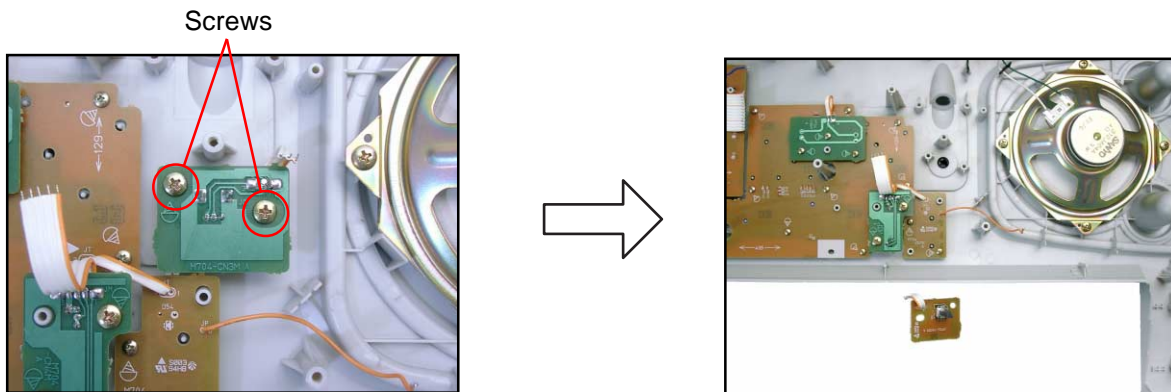
4. Remove 4 screws, 6 connectors (JA, JB, JH, JJ, JK, JL) and then the PCB ASSY (MA1M).



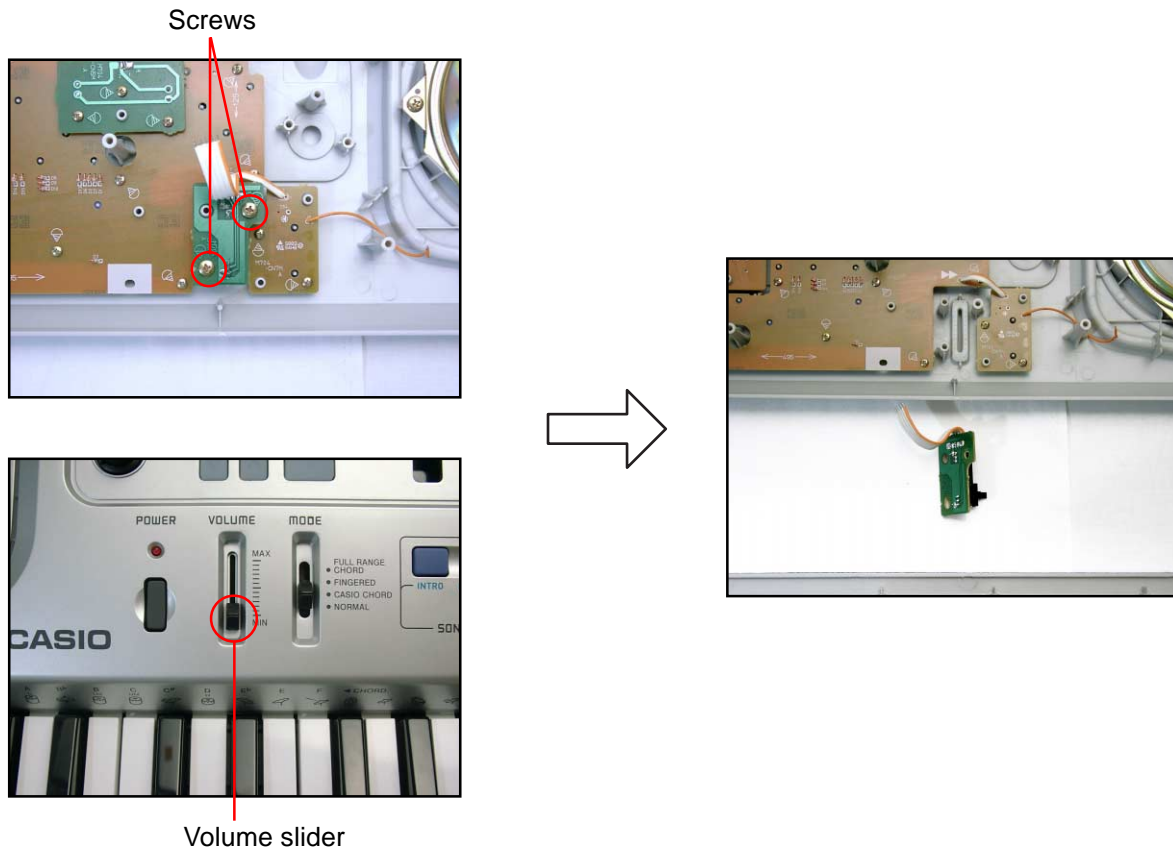
5. Remove 3 screws, 1 connector (JQ) and then the PCB ASSY (CN2M).



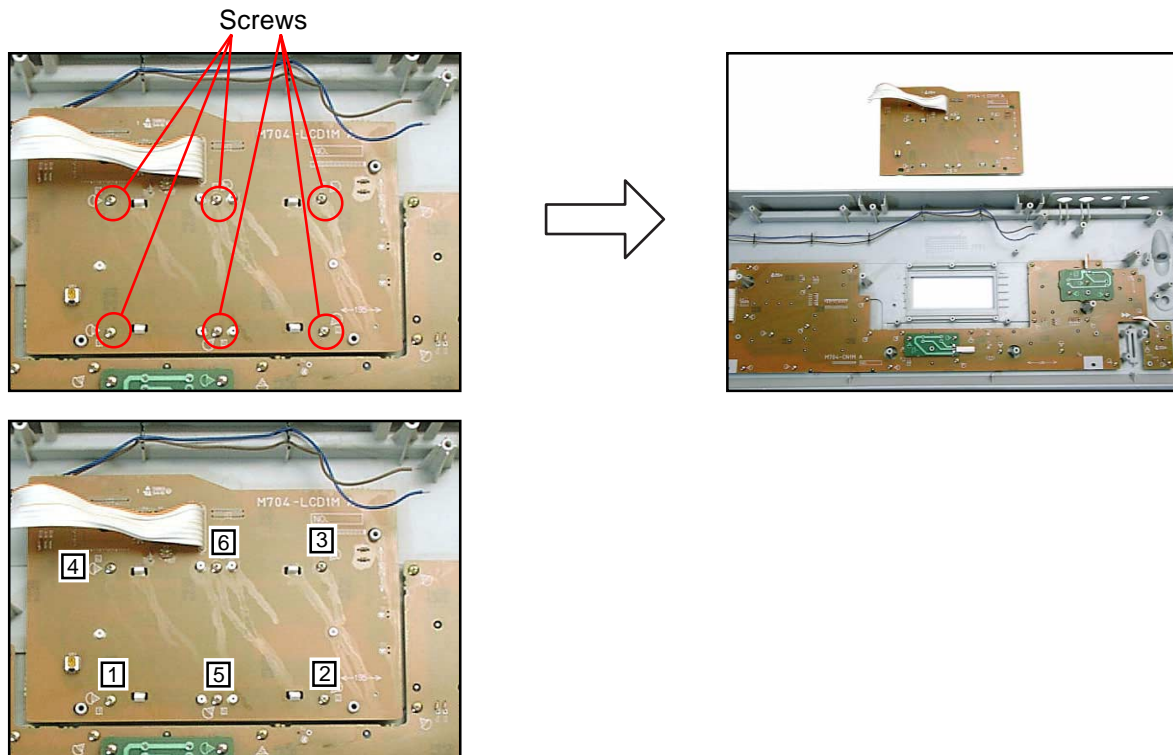
6. Remove 2 screws and then the PCB ASSY (CN3M).



7. Remove 2 screws, the volume slider, and then the PCB ASSY (CN4M).

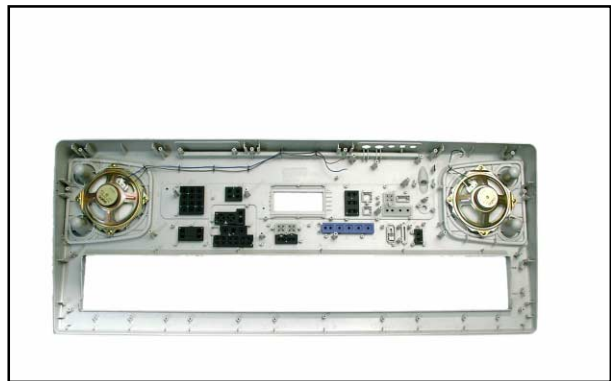
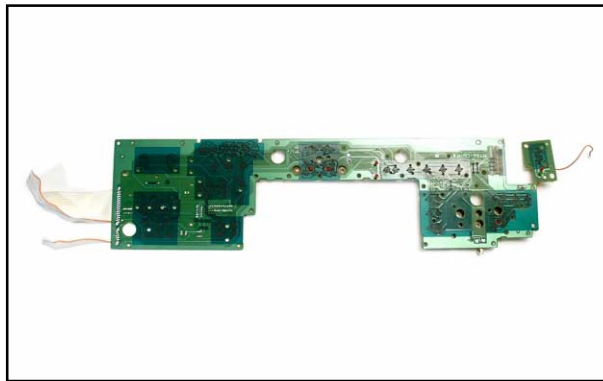
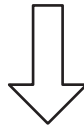
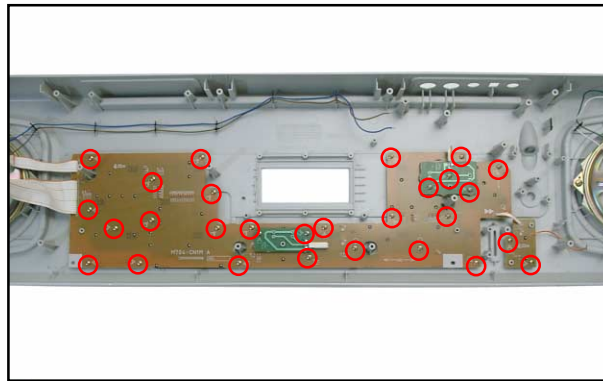


8. Remove 6 screws and then the LCD ASSY (LCD1M).



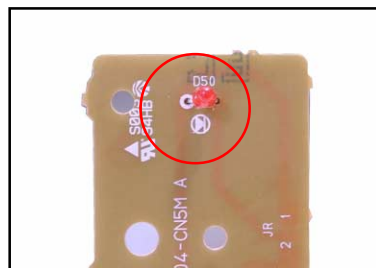
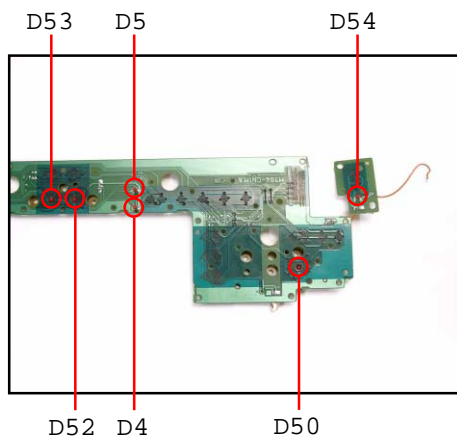
Note: Tighten the screws in the order from 1 to 6 when reassembling.

9. Remove 28 screws and then the PCB ASSY (CN1M).

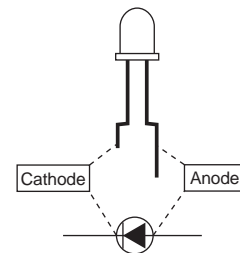
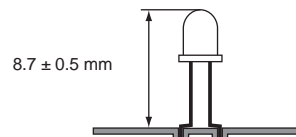


Note: Fix the LED (D4, D5, D50, D53, D54) to the PCB according to the height as shown in the figure below while paying attention to the polarity.

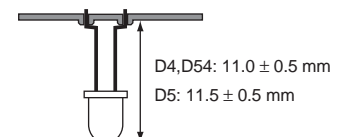
Refer to the illustration on the PCB for the details of the polarity.



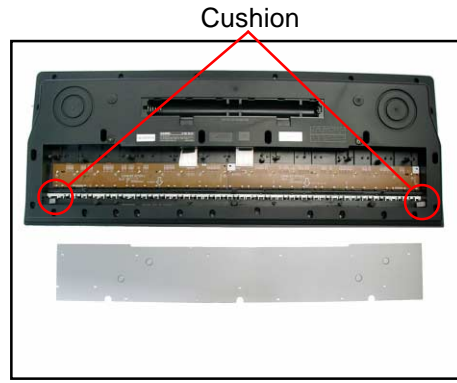
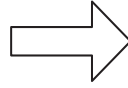
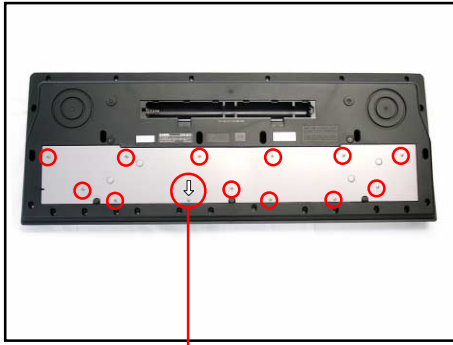
■ D50, D52, D53



■ D4, D54  
■ D5

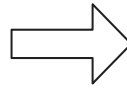
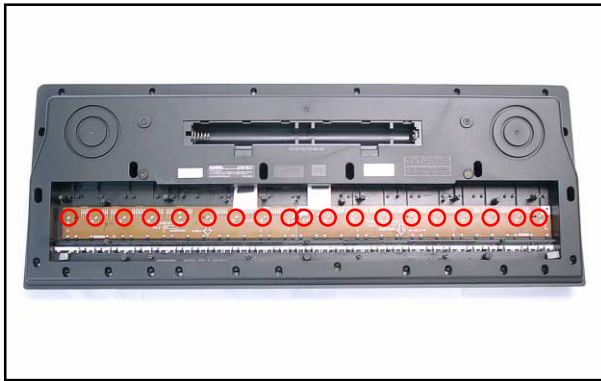


10.Remove 13 screws and then the lower case.

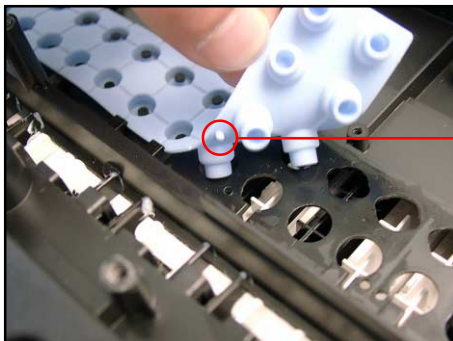
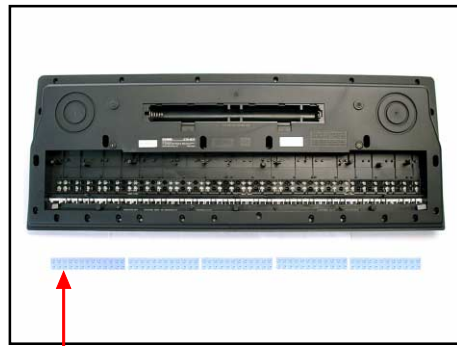
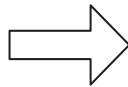
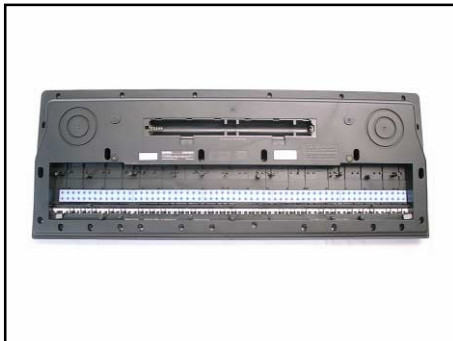


Note: Tighten the screw with the arrow mark in the figure first when reassembling.

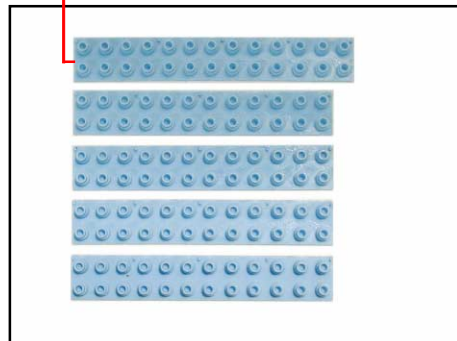
11.Remove 19 screws and then the PCB ASSY (KY1M, KY2M).



12.Remove the rubber keys.



Projection



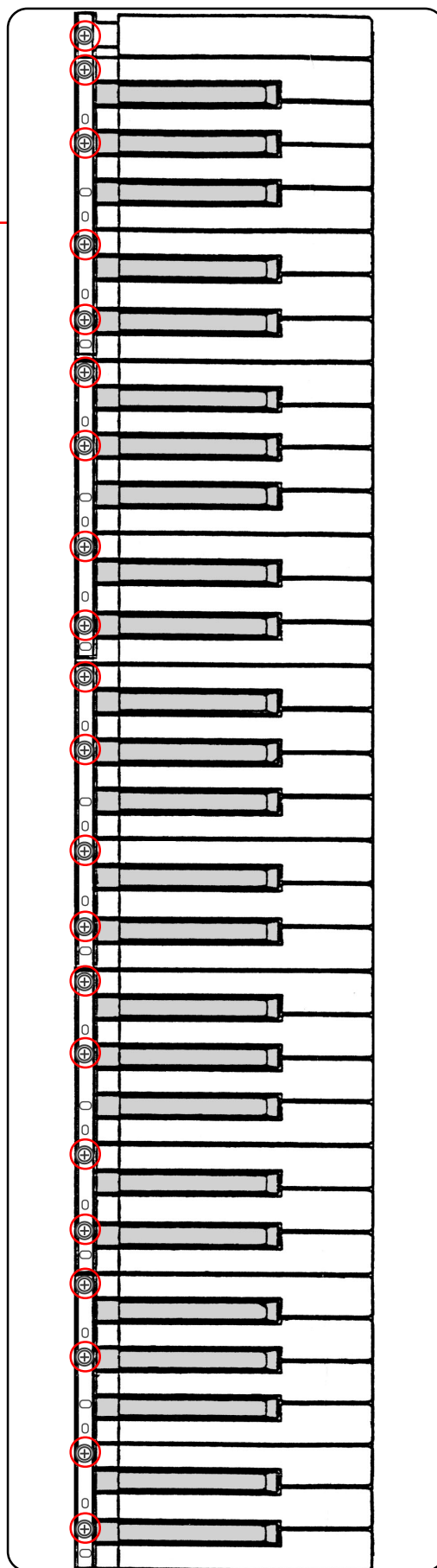
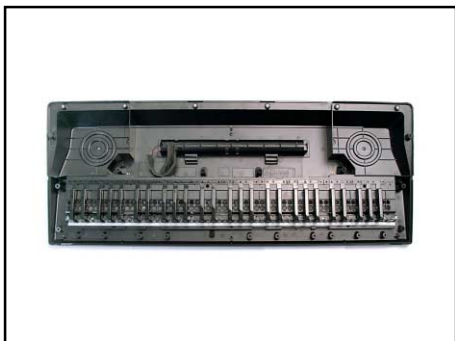
Note: Pay attention to the positions of the rubber keys as one of them has a different length.  
Match the projections of the rubber keys with the holes of the lower case when reassembling.

13.Remove 21 screws and then the white keys.



Note: Pay attention to the positions of the screw holes when reassembling.

14.Remove the black keys.



# DIAGNOSTIC PROGRAM

## ■ Initial Setup

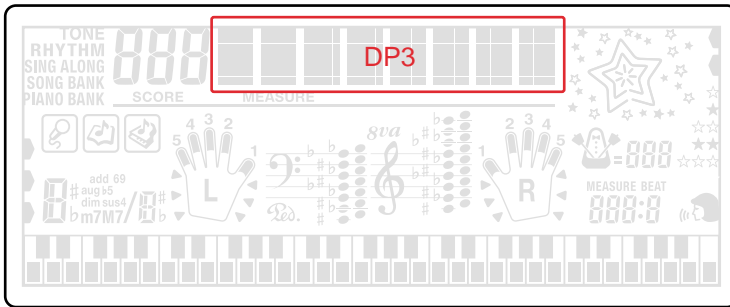
- Connect an AC cord.
  - Connect a Pedal cord.
  - "MODE" switch: NORMAL
  - "Main" volume: MAX
  - Connect a MIDI cable (In-Out).
- Note: If there is no pedal or MIDI cable, pedal or MIDI check can be skipped.

## ■ How to start diagnostic program

- While pressing "0" button, turn "POWER" switch ON.
- Confirm "00" message on top of LCD.
- If everything is OK, release "0" buttons.
- As for the details of each diagnostic procedure, refer to the attached sheets.

### NOTE:

Refer to the figure below for the LCD messages that appear during the diagnostic program.



## ■ Diagnostic program

### Message on LCD

#### 1. Console check

- ① Press "0" button to enter "Console check".

\*Confirmation sound sounds.

DP3: 00

- ② Press buttons in the order from No.1 to No2C.

**NOTE: The button numbers are written in hexadecimal numerals.**

DP3: BUTTON NO.

Press the "SPLIT" button the last.

DP3: COK

\* Confirmation sound sounds.

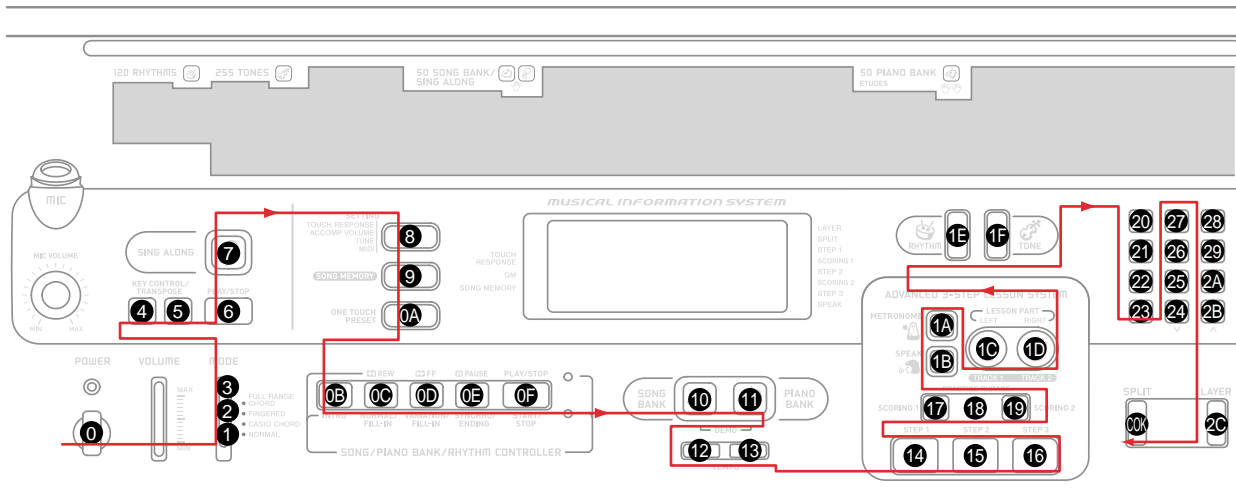
\* The Button number appears on the LCD (DP3).

DP3: BUTTON NO.

\* A buzzer sounds if buttons are pressed in a wrong order, and "CER" appears on LCD (DP3).

DP3: CER

**NOTE: This check cannot be aborted in mid-course.**



### Message on LCD

#### 2. AC adaptor check

- ① Press "-" button to enter "AC adaptor check".

DP3: JOK

#### 3. Pedal check (If no pedal, this check can be skipped)

- ① Press "1" button to enter "Pedal check".
- ② Step on the "SUSTAIN" PEDAL.
- ③ Release the "SUSTAIN" PEDAL.

DP3: TCH

DP3: SUS

#### 4. ROM check

- ① Press "2" button to enter "ROM check".

\* Confirmation sound sounds.

DP3: 111

DP3: OOK



## Message on LCD

### 5. Sound check

- ① Press the "4" button to enter "Sound check".  
\* When standing in the center, the judge hears the minimum test sound in an equal volume from both right and left speakers. DP3: MIN
- ② Press the "5" button.  
\* When standing in the center, the judge hears the medium test sound in an equal volume from both right and left speakers. DP3: MID
- ③ Press the "6" button.  
\* When standing in the center, the judge hears the maximum test sound in an equal volume from both right and left speakers. DP3: MAX
- ④ Press the "7" button.  
\* When standing in the center, the judge hears the maximum test sound from the left speaker. DP3: L
- ⑤ Press the "8" button.  
\* When standing in the center, the judge hears the maximum test sound from the right speaker. DP3: R

### 6. MIDI check (If there is no MIDI cable, this check can be skipped)

- ① Press "9" button to enter "MIDI check". DP3: DOK

### 7. LCD check

- ① Press the "STEP1" button to enter "LCD check".  
\* All dots and characters of LCD turn on.  
\* There is no lack of the dot and the character.

### 8. Corsor LED check

- ① Press the "SPEAK" button to enter "Corsor LED".  
\* Keyboard LED must light in the undermentioned order.
  - 1) PIANO BANK + RHYTHM CONTROLLER
  - 2) SONG BANK + RHYTHM CONTROLLER
  - 3) SING ALONG + RHYTHM CONTROLLER
  - 4) SONG/PIANO BANK CONTROLLER
  - 5) RHYTHM CONTROLLER

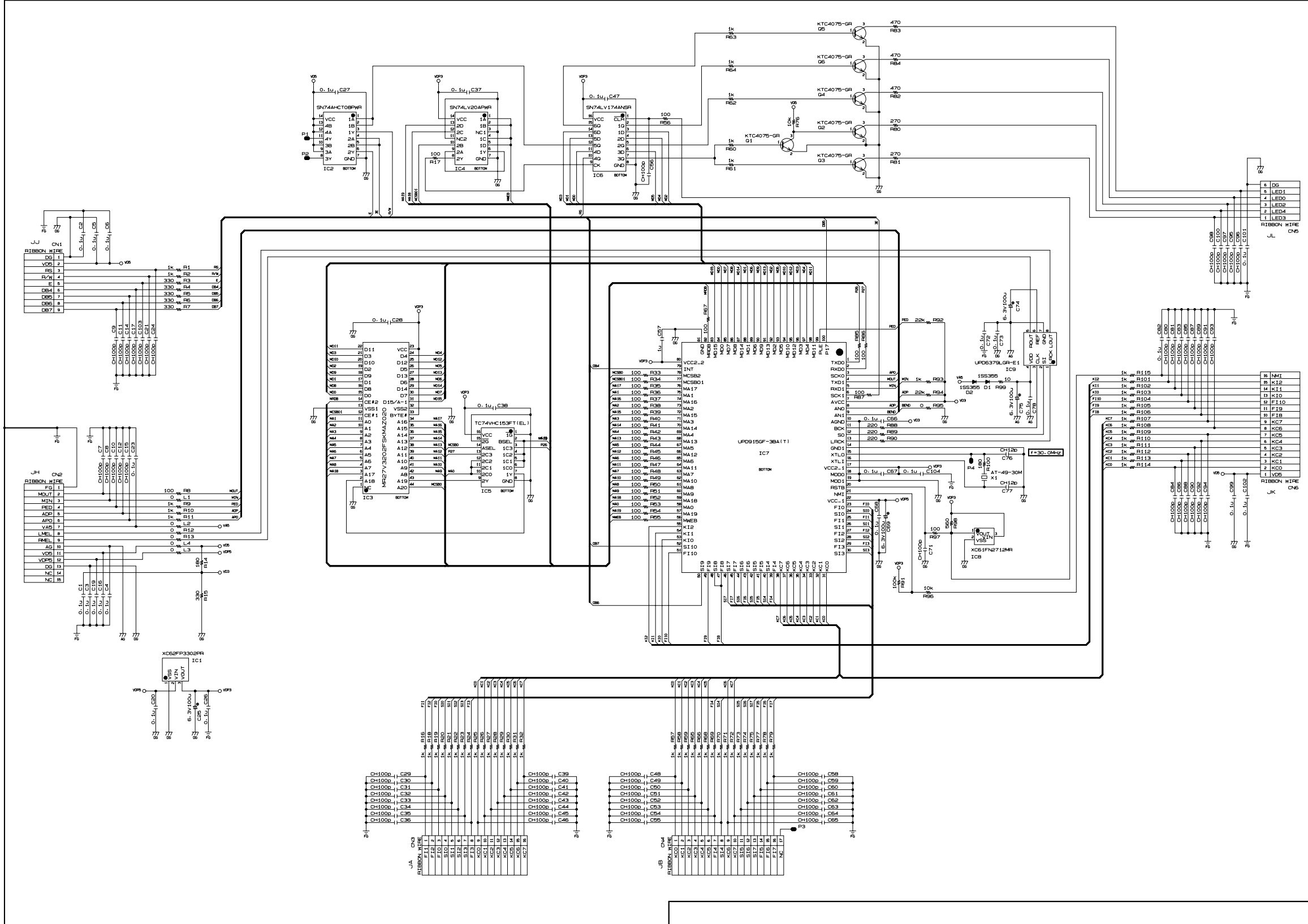
### 9. APO check

- ① Press the "PRACTICE PHRASE" button.  
\* Go out from TEST mode (Power off).  
\* The LCD turns off.

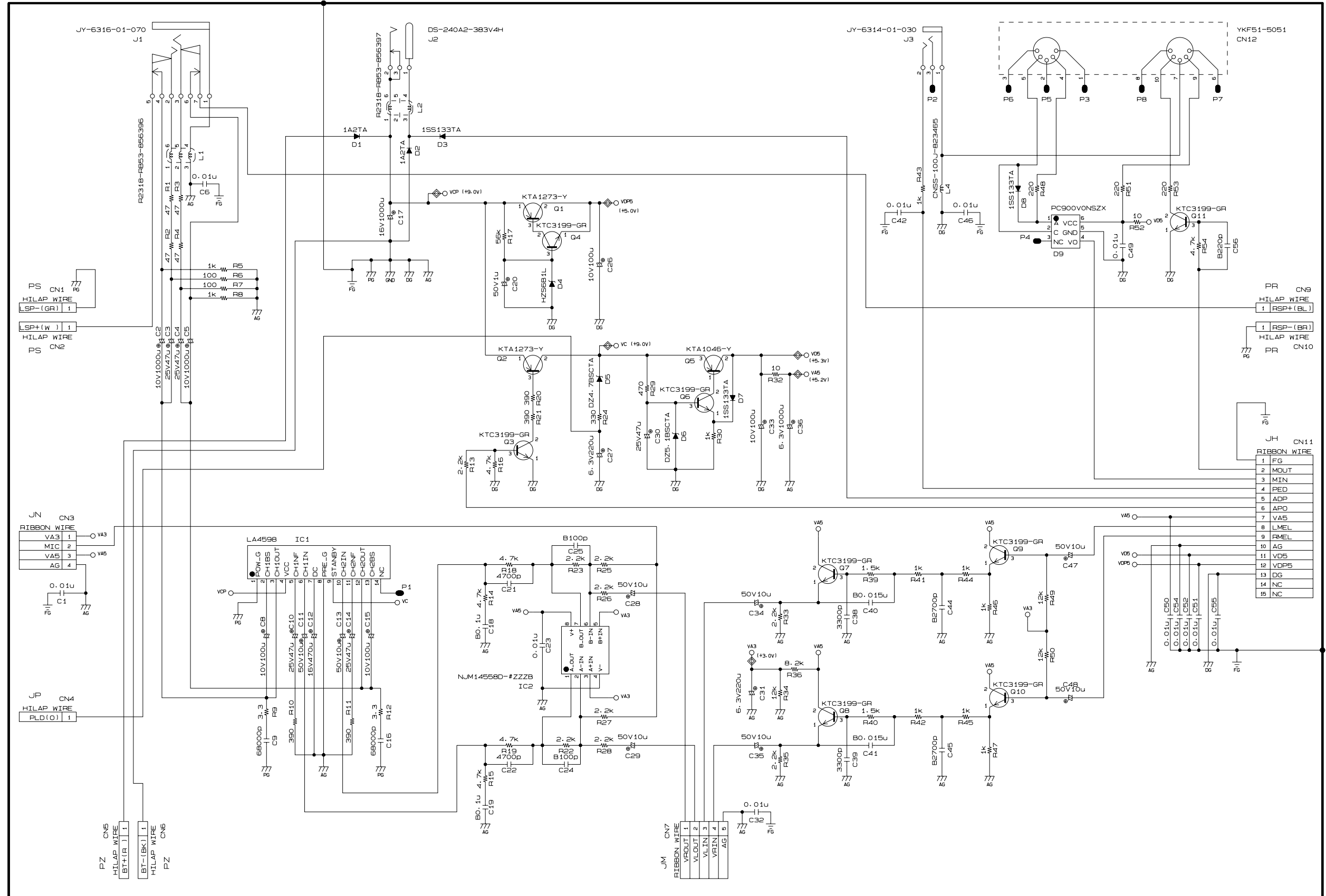
**DIAGNOSTIC PROGRAM IS FINISHED.**

# SCHEMATIC DIAGRAMS

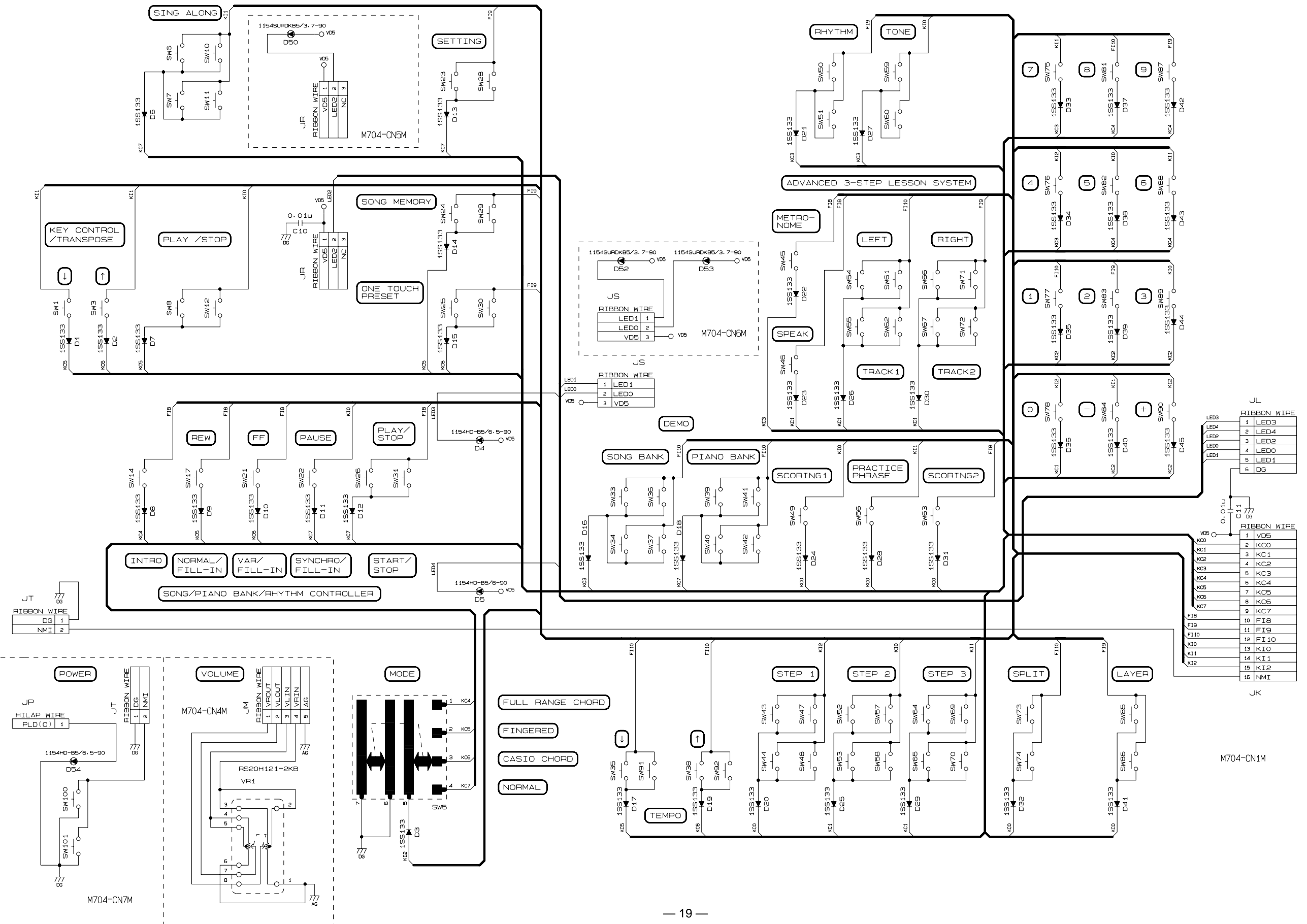
Main PCB M704-MA1M



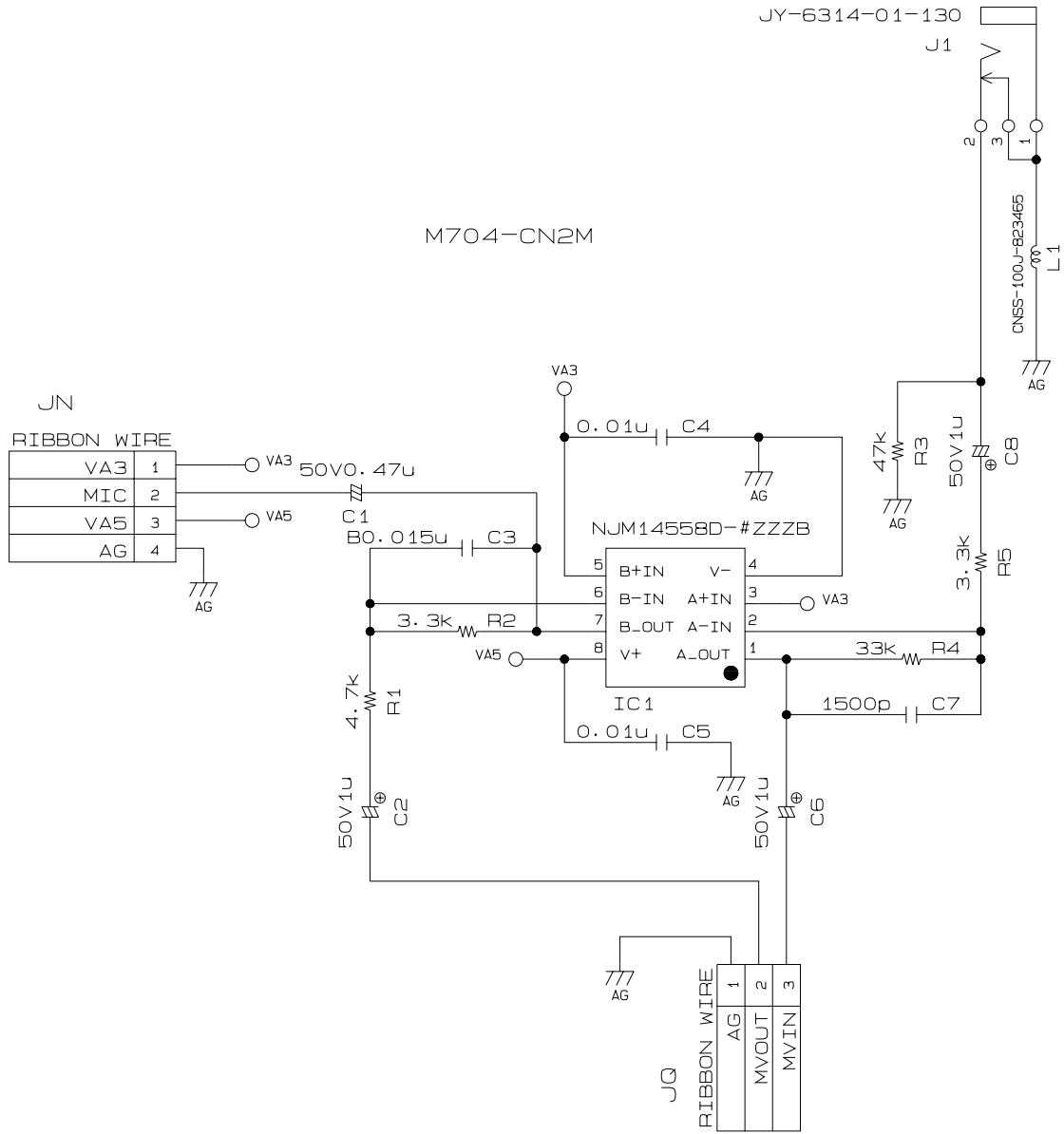
Sub PCB M704-MA2M



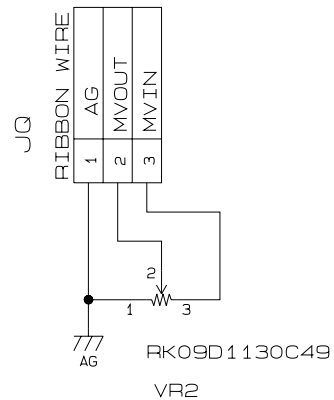
Console PCB M704-CN1M/CN4M/CN5M/CN6M/CN7M



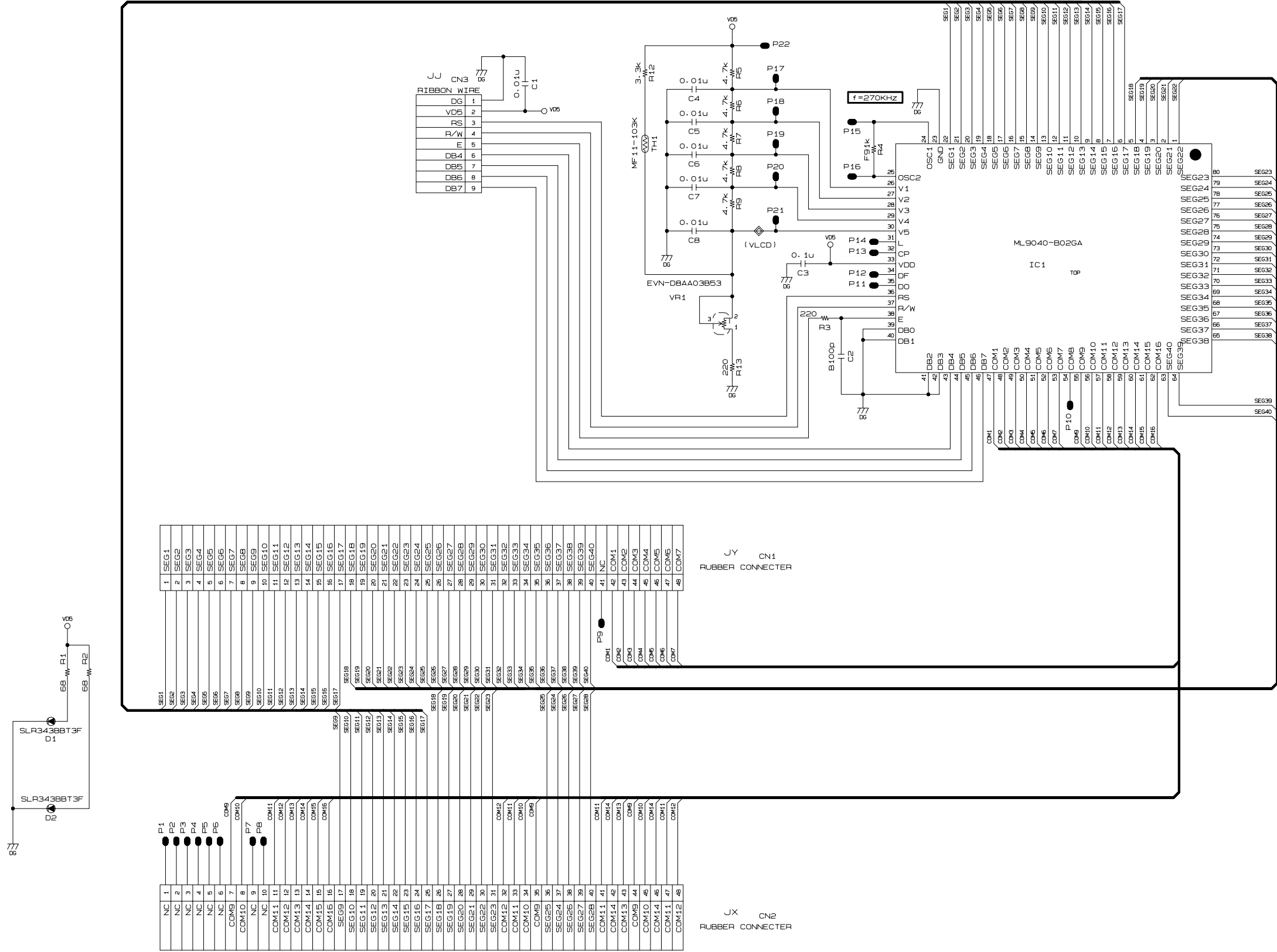
# Console PCB M704-CN2M/CN3M



M704-CN3M



Display PCB M704-LCD1M

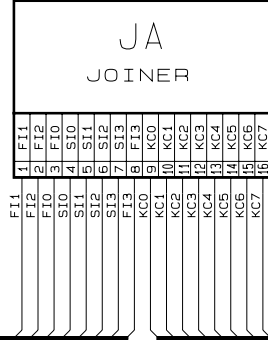


Keyboard PCBs JCM618T-KY1M/KY2M

NOTE

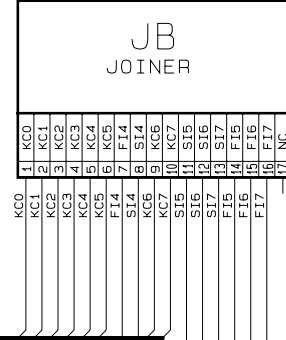
1S2473T-77-T  
 (1SS133T-77-T)

JCM618T-KY1M



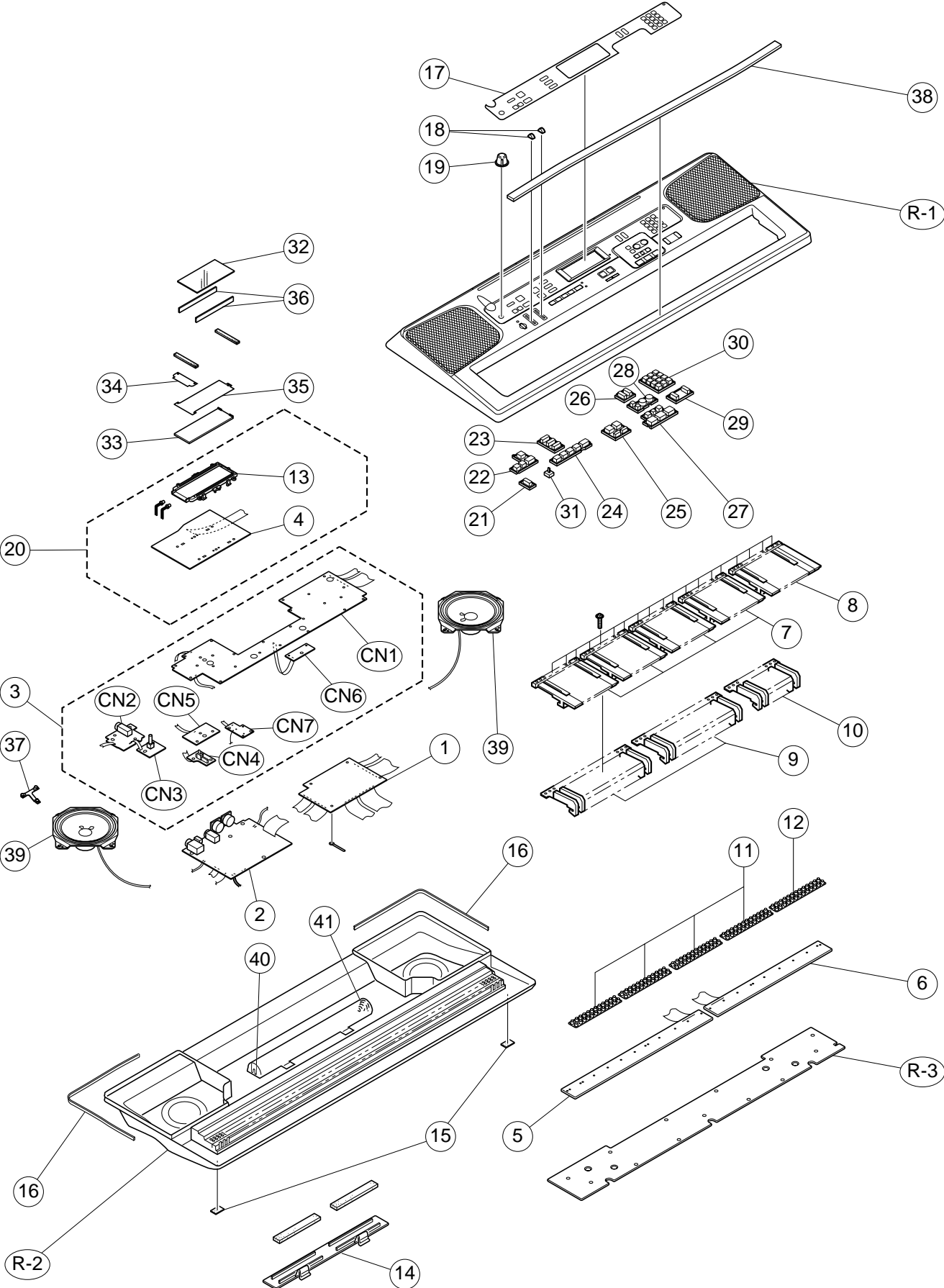
KC0	D501	DI	SM501	C2	-	①	FI0
KC0	D502	DI	SM502	C			SI0
KC1	D503	DI	SM503	C2	-	②	FI0
KC1	D504	DI	SM504	C			SI0
KC2	D505	DI	SM505	C2#	-	②	FI0
KC2	D506	DI	SM506	C			SI0
KC3	D507	DI	SM507	D2	-	②	FI0
KC3	D508	DI	SM508	C			SI0
KC4	D509	DI	SM510	D2#	-	②	FI0
KC4	D510	DI	SM511	C			SI0
KC5	D511	DI	SM512	E2	-	②	FI0
KC5	D512	DI	SM513	C			SI0
KC6	D513	DI	SM514	F2	-	②	FI0
KC6	D514	DI	SM514	C			SI0
KC7	D515	DI	SM516	F2#	-	②	FI0
KC7	D516	DI	SM516	C			SI0
KC0	D517	DI	SM517	G2	-	②	FI1
KC0	D518	DI	SM518	C			SI1
KC1	D519	DI	SM520	G2#	-	②	FI1
KC1	D520	DI	SM520	C			SI1
KC2	D521	DI	SM521	A2	-	②	FI1
KC2	D522	DI	SM522	C			SI1
KC3	D523	DI	SM523	A2#	-	②	FI1
KC3	D524	DI	SM524	C			SI1
KC4	D525	DI	SM525	B2	-	②	FI1
KC4	D526	DI	SM526	C			SI1
KC5	D527	DI	SM527	C3	-	②	FI1
KC5	D528	DI	SM528	C			SI1
KC6	D529	DI	SM529	C3#	-	②	FI1
KC6	D530	DI	SM530	C			SI1
KC7	D531	DI	SM531	D3	-	②	FI1
KC7	D532	DI	SM532	C			SI1
KC0	D533	DI	SM533	D3#	-	②	FI2
KC0	D534	DI	SM534	C			SI2
KC1	D535	DI	SM534	E3	-	②	FI2
KC1	D536	DI	SM536	C			SI2
KC2	D537	DI	SM537	F3	-	②	FI2
KC2	D538	DI	SM538	C			SI2
KC3	D539	DI	SM539	F3#	-	②	FI2
KC3	D540	DI	SM540	C			SI2
KC4	D541	DI	SM541	G3	-	②	FI2
KC4	D542	DI	SM542	C			SI2
KC5	D543	DI	SM543	G3#	-	②	FI2
KC5	D544	DI	SM544	C			SI2
KC6	D545	DI	SM545	A3	-	②	FI2
KC6	D546	DI	SM546	C			SI2
KC7	D547	DI	SM547	A3#	-	②	FI2
KC7	D548	DI	SM548	C			SI2
KC0	D549	DI	SM549	B3	-	②	FI2
KC0	D550	DI	SM550	C			SI2
KC1	D551	DI	SM551	C4	-	②	FI3
KC1	D552	DI	SM552	C			SI3
KC2	D553	DI	SM553	C4#	-	②	FI3
KC2	D554	DI	SM554	C			SI3
KC3	D555	DI	SM555	D4	-	②	FI3
KC3	D556	DI	SM556	C			SI3
KC4	D557	DI	SM557	D4#	-	②	FI3
KC4	D558	DI	SM558	C			SI3
KC5	D559	DI	SM559	E4	-	②	FI3
KC5	D560	DI	SM560	C			SI3
KC6	D561	DI	SM561	F4	-	②	FI3
KC6	D562	DI	SM562	C			SI3
KC7	D563	DI	SM563	F4#	-	②	FI3
KC7	D564	DI	SM564	C			SI3
				G4	-	②	FI3
				C			SI3

JCM618T-KY2M



KC0	D555	DI	SM555	G4#	-	①	FI4
KC0	D556	DI	SM556	C			SI4
KC1	D557	DI	SM557	G4#	-	②	FI4
KC1	D558	DI	SM558	C			SI4
KC2	D559	DI	SM559	A4	-	②	FI4
KC2	D560	DI	SM560	C			SI4
KC3	D571	DI	SM571	A4#	-	②	FI4
KC3	D572	DI	SM572	C			SI4
KC4	D573	DI	SM573	B4	-	②	FI4
KC4	D574	DI	SM574	C			SI4
KC5	D575	DI	SM575	C5	-	②	FI4
KC5	D576	DI	SM576	C			SI4
KC6	D577	DI	SM577	C5#	-	②	FI4
KC6	D578	DI	SM578	C			SI4
KC7	D579	DI	SM579	D5	-	②	FI4
KC7	D580	DI	SM580	C			SI4
KC0	D581	DI	SM581	D5#	-	②	FI5
KC0	D582	DI	SM582	C			SI5
KC1	D583	DI	SM583	E5	-	②	FI5
KC1	D584	DI	SM584	C			SI5
KC2	D585	DI	SM585	F5	-	②	FI5
KC2	D586	DI	SM586	C			SI5
KC3	D587	DI	SM587	F5#	-	②	FI5
KC3	D588	DI	SM588	C			SI5
KC4	D589	DI	SM589	G5	-	②	FI5
KC4	D590	DI	SM590	C			SI5
KC5	D591	DI	SM591	G5#	-	②	FI5
KC5	D592	DI	SM592	C			SI5
KC6	D593	DI	SM593	A5	-	②	FI5
KC6	D594	DI	SM594	C			SI5
KC7	D595	DI	SM595	A5#	-	②	FI5
KC7	D596	DI	SM596	C			SI5
KC0	D597	DI	SM597	B5	-	②	FI6
KC0	D598	DI	SM598	C			SI6
KC1	D599	DI	SM599	C6	-	②	FI6
KC1	D600	DI	SM600	C			SI6
KC2	D601	DI	SM601	C6#	-	②	FI6
KC2	D602	DI	SM602	C			SI6
KC3	D603	DI	SM603	D6	-	②	FI6
KC3	D604	DI	SM604	C			SI6
KC4	D605	DI	SM605	D6#	-	②	FI6
KC4	D606	DI	SM606	C			SI6
KC5	D607	DI	SM607	E6	-	②	FI6
KC5	D608	DI	SM608	C			SI6
KC6	D609	DI	SM609	F6	-	②	FI6
KC6	D610	DI	SM610	C			SI6
KC7	D611	DI	SM611	F6#	-	②	FI6
KC7	D612	DI	SM612	C			SI6
KC0	D613	DI	SM613	G6	-	②	FI7
KC0	D614	DI	SM614	C			SI7
KC1	D615	DI	SM615	G6#	-	②	FI7
KC1	D616	DI	SM616	C			SI7
KC2	D617	DI	SM617	A6	-	②	FI7
KC2	D618	DI	SM618	C			SI7
KC3	D619	DI	SM619	A6#	-	②	FI7
KC3	D620	DI	SM620	C			SI7
KC4	D621	DI	SM621	B6	-	②	FI7
KC4	D622	DI	SM622	C			SI7
				C7	-	②	FI7
				C			SI7

# EXPLODED VIEW





# PARTS LIST

## CTK-591

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.	Part Name	Specification	Q	Price Code	R	Remarks
<b>Main PCB</b>								
N	1	1011 7066	PCB ASSY/MA1M	TK-RJM502710*001	1	DH	A	
	IC1	2105 6350	IC	XC62FP3302PR	1	AC	C	
	IC2	6930 9981	IC	TC74VHCT08AF (EL)	1	AC	C	
N	IC3	1012 1581	LSI	MR27V3202FSKMAZ020	1	BF	B	
	IC4	1008 9487	IC	SN74LV20APWR	1	AB	C	
	IC5	1011 6471	IC	TC74VHC153FT(EL)	1	AH	C	
	IC6	1011 6470	IC	SN74LV174ANSR	1	AE	C	
	IC7	1007 9244	LSI	UPD915GF-3BA(T)	1	BW	B	
	IC8	1011 6473	IC	XC61FN2712MR	1	AE	C	
N	IC9	2012 5495	LSI	UPD6379LGR-E1	1	AO	B	
	Q1-6	6930 0298	TRANSISTOR	2SC4081T106R	6	AA	C	
	D1-2	2390 1820	DIODE	1SS355TE-17	2	AA	C	
	X1	2590 2742	OSCILLATOR/CRYSTAL	AT-49-30M	1	AG	C	
<b>Sub PCB</b>								
N	2	1011 7067	PCB ASSY/MA2M	TK-RJM502714*001	1	CD	A	
	IC1	2114 2891	IC	LA4598	1	AK	B	
N	IC2	1011 6463	IC	NJM14558D-#ZZZB	1	AB	B	
	Q1-2	2250 1591	TRANSISTOR	2SB1237TV2R	2	AB	C	
	Q3-4, Q6-11	2250 1592	TRANSISTOR	2SC1740STPR	8	AA	C	
	Q5	2251 0672	TRANSISTOR	2SB1548-P.CS	1	AD	C	
	D1-2	2390 3018	DIODE	1T2	2	AA	C	
	D3,D7-8	2315 3132	DIODE	1SS133T-77	3	AA	C	
	D4	2360 1085	DIODE/ZENER	HZS6B1LTD-T	1	AA	C	
	D5	1007 9930	DIODE/ZENER	DZ4.7BSCTA	1	AA	C	
	D6	1004 2160	DIODE/ZENER	MTZJT-775.1C	1	AA	C	
	D9	2114 1421	IC/PHOTO COUPLER	PC900V	1	AK	C	
	CN12	3501 4816	JACK/DIN	YKF51-5051	1	AH	C	
	J1	3612 0665	JACK/PHONE	YKB21-5006	1	AG	C	
	J2	3501 7049	JACK/POWER	HEC2305-01-330	1	AC	C	
	J3	3612 0789	JACK	YKB21-5010	1	AC	C	
N	L1	1005 7360	COIL	R2318-RB53-856396	1	BB	C	
N	L2	1005 6228	COIL	R2318-RB53-856397	1	AB	C	
	L4	3841 2051	COIL	LAN02TA100J	1	AA	C	
<b>Console PCBs</b>								
N	3	1011 7069	PCB ASSY/CN1-7M	TK-RJM502706*001	1	DJ	B	
	IC1	1011 6463	IC	NJM14558D-#ZZZB	1	AB	B	
	D1-3, D6-45	2390 1344	DIODE	1SS133T-77	43	AA	C	
N	D4,D54	1011 6453	LED	1154HD-B5/6.5-90	2	AB	C	
N	D5	1010 6131	LED	1154HD-B5/6-90	1	AA	C	
N	D50,D52, D53	1011 6454	LED	1154SURDKB5/3.7-90	3	AA	C	
	J1	3612 0584	JACK/MIC	JYB21-5012	1	AD	C	
	L1	3841 2051	COIL	LAN02TA100J	1	AA	C	
	VR1	2765 2213	VARIABLE RESISTOR	RS20H121-2KB	1	AD	C	
N	VR2	1012 2622	VARIABLE RESISTOR	RK09D1130C49	1	AE	C	
<b>LCD PCB</b>								
N	4	1011 7070	PCB ASSY/LCD1M	TK-RJM502703*001	1	CA	B	
	IC1	1000 6502	LSI	ML9040-B02GA	1	AU	B	
	VR1	2775 0994	VARIABLE RESISTOR	EVN-D8AA03B53	1	AA	C	

Notes: **Q**-Quantity used per unit  
**R**-Rank

**R**- A:Essential  
B:Stock recommended  
C:Others  
X:No stock recommended

N	Item	Code No.	Part Name	Specification	Q	Price Code	R	Remarks
<b>Keyboard PCBs</b>								
	5	1005 3891	PCB ASSY/KY1M	M140687*9	1	BK	B	
	D501 - D564	2301 0101	DIODE	1S2473T-77-T	64	AA	C	
	6	1005 3893	PCB ASSY/KY2M	M140688*9	1	BJ	B	
	D565 - D622	2301 0101	DIODE	1S2473T-77-T	58	AA	C	
<b>Keyboard Unit</b>								
	7	6922 2720	KEY SET/LT WHITE	M312118*1	4	AP	B	
	8	6922 2730	KEY SET/LT WHITE	M312118*2	1	AR	B	
	9	6906 8481	KEY SET/LT BLACK 10P	M140369A-3	2	AS	B	
	10	6906 8591	KEY SET/LT BLACK 5P	M140369A-4	1	AF	B	
	11	6922 2762	RUBBER/CONTACT	M211704B-1	4	AF	C	
	12	6922 2772	RUBBER/CONTACT	M211705B-1	1	AF	C	
<b>Panel Unit</b>								
N	13	1011 6367	REFLECTOR	RJM502392-001V01	1	AC	C	
	14	6930 6970	COVER/BATTERY	M341235*3	1	AT	C	
	15	6927 3030	PACKING/10-20	M440775-1	2	AA	X	
	16	6926 6110	PACKING/7-390	M440621-1	2	AB	X	
N	17	1011 1047	PLATE/DISPLAY	RJM502393-001V01	1	AV	C	
	18	9482 7783	KNOB	M311859-1	2	AA	C	
N	19	1011 6368	KNOB/ROTARY	RJM502394-001V01	1	AA	C	
N	20	1012 0178	BL ASSY	TK-RJM502636*001	1	CY	B	
N	21	1011 1049	RUBBER/KEY/A	RJM502382-001V01	1	AA	C	
N	22	1011 1050	RUBBER/KEY/B	RJM502383-001V01	1	AE	C	
N	23	1011 1051	RUBBER/KEY/C	RJM502384-001V01	1	AB	C	
N	24	1011 1021	RUBBER/KEY/D	RJM502385-001V01	1	AD	C	
N	25	1011 1022	RUBBER/KEY/E	RJM502386-001V01	1	AC	C	
N	26	1011 1023	RUBBER/KEY/F	RJM502387-001V01	1	AA	C	
N	27	1011 1024	RUBBER/KEY/G	RJM502388-001V01	1	AE	C	
N	28	1011 1025	RUBBER/KEY/H	RJM502389-001V01	1	AC	C	
N	29	1011 1026	RUBBER/KEY/J	RJM502390-001V01	1	AA	C	
N	30	1011 1027	RUBBER/KEY/K	RJM502391-001V01	1	AE	C	
	31	6927 0510	SWITCH/SLIDE KNOB	CSB-08D	1	AD	C	
N	32	1011 6352	LCD	CG1930-TTP	1	BD	B	
N	33	1011 6369	PLATE/BACK LIGHT	RJM502395-001V01	1	AJ	C	
	34	1008 1190	PIECE/TOP	RJM501982-001V01	1	AA	C	
	35	1008 1189	FILM	RJM501963-001V01	1	AA	C	
N	36	1011 1048	CONNECTOR	RJM502397-001V01	2	AE	C	
N	37	1011 6370	SPACER/PCB	RJM502396-001V01	1	AA	C	
	38	6922 4480	DUMPER/KEY	M412324-1	1	AE	C	
N	39	1009 8332	SPEAKER	S12JA04A	2	AT	B	
	40	6903 2150	SPRING/BATTERY(+)	M41330-1	1	AA	X	
	41	6902 6141	SPRING/BATTERY(-)	M41226A-1	1	AB	X	
<b>Accessory</b>								
N		1010 7083	STAND/MUSIC	M141071-5	1	AW	X	
<b>Refurbish</b>								
N	R-1	1011 7068	PANEL SUB ASSY	TK-RJM502635*001	1	CX	X	
	R-2	1008 6645	CASE SUB ASSY/M	M141274*008	1	CK	X	
	R-3	6906 9252	PLATE / BOTTOM	M240573-2	1	AS	X	

Notes: Q-Quantity used per unit  
R-Rank

R- A:Essential  
B:Stock recommended  
C:Others  
X:No stock recommended

Ver.1 : Dec. 2003

Replacement of the PARTS LIST (P25 ~ P26)

**CASIO TECHNO CO.,LTD.**  
Overseas Service Division

6-2, Hon-machi 1-Chome  
Shibuya-ku, Tokyo 151-8543, Japan