

# Clavinova<sup>®</sup>

## CLP-150/CLP-150M/ CLP-150C

### SERVICE MANUAL



CLP-150

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This document is printed on chlorine free (ECF) paper with soy ink.

### IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

**WARNING :** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

**IMPORTANT :** This presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit (s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING :** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus).

**IMPORTANT :** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

### WARNING : CHEMICAL CONTENT NOTICE !

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

### IMPORTANT NOTICE FOR THE UNITED KINGDOM

#### Connecting the Plug and Cord

**IMPORTANT .** The wires in this main lead are coloured in accordance with the following code:

BLUE: NEUTRAL

BROWN: LIVE


As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminal that is marked with the letter N (or coloured BLACK).

The BROWN wire must be connected to the terminal that is marked with the letter L (or coloured RED).

Be certain that neither core is connected to the earth terminal of the three pin plug.

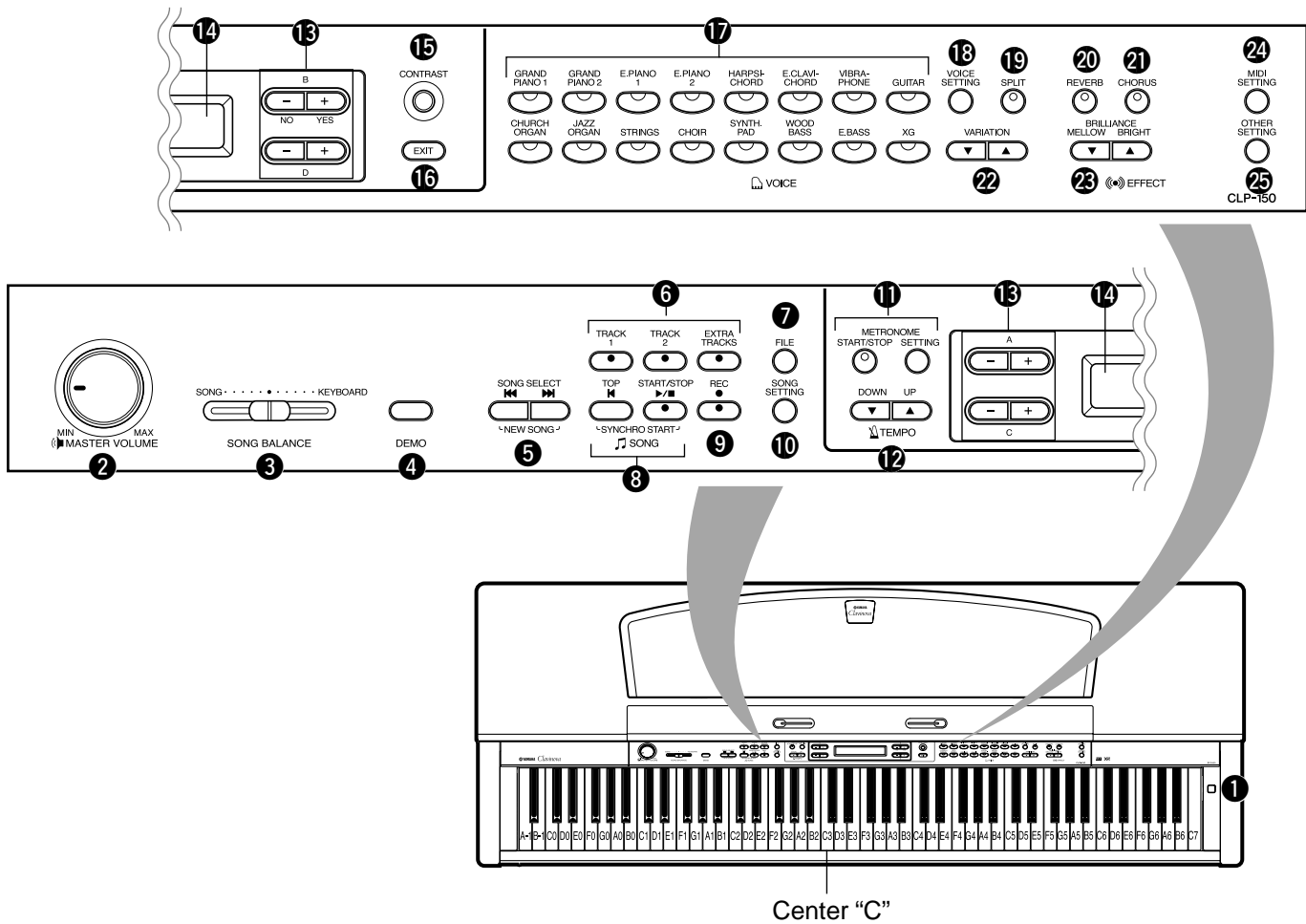
### ■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

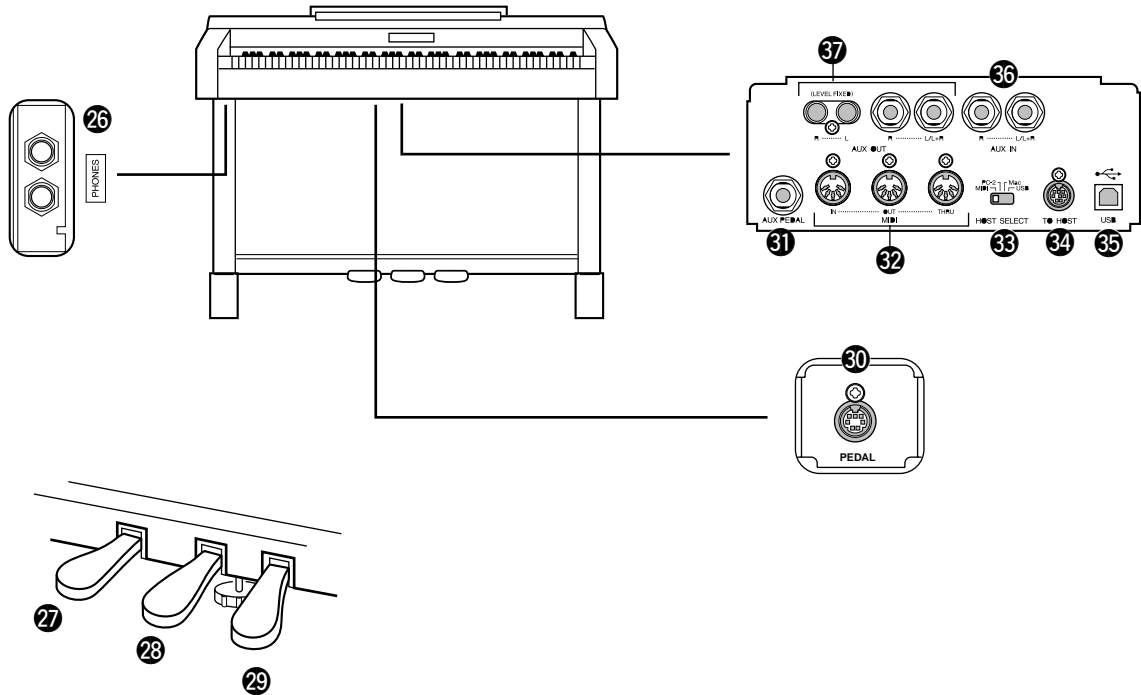
## ■ SPECIFICATIONS

<b>Keyboard</b>	88 keys (A-1–C7)
<b>Sound Source</b>	AWM Dynamic Stereo Sampling
<b>Polyphony</b>	max. 128 voices
<b>Voice Selection</b>	Panel preset for manual performance: 38 voices, XG voices: 480 voices + 12 drum kits
<b>Effect</b>	Reverb, Chorus, Brilliance, Variation effect, Insertion effect x 3
<b>Controls</b>	Dual, Split
<b>Display</b>	LCD
<b>Recording/Playback</b>	16-track recording/playback, tempo adjustment
<b>Pedal</b>	Damper, Sostenuto, Soft
<b>Demo Songs</b>	16 voice demo songs, 50 preset songs
<b>Jacks/Connectors</b>	MIDI (IN/OUT/THRU), PHONES X2, AUX IN, AUX OUT(L/L+R,R), AUX OUT (LEVEL FIXED)(L,R), TO HOST, USB, AUX PEDAL
<b>Main Amplifiers</b>	60W x 2
<b>Speakers</b>	16cm x 2, 5cm x 2
<b>Output Impedance</b>	AUX OUT : about 600 Ω (594 Ω) AUX OUT (Fix) : 680 Ω PHONES : 33 Ω
<b>Dimensions (W x D x H) (with music stand)</b>	1381mm x 513mm x 853mm [54-3/8" x 20-3/16" x 33-9/16"] (1381mm x 513mm x 1022mm [54-3/8" x 20-3/16" x 40-1/4"])
<b>Weight</b>	61.5 kg, 135lbs., 9oz
<b>Attachment</b>	Keyboard Cover, Music Stand
<b>Accessories</b>	Owner's Manual, Reference Booklet, "50 Greats for the Piano" Score Collection

## ■ PANEL LAYOUT



- ❶ [POWER] switch
- ❷ [MASTER VOLUME] knob
- ❸ [SONG BALANCE] knob
- ❹ [DEMO] button
- ❺ SONG SELECT [◀◀] [▶▶] buttons
- ❻ [TRACK1] [TRACK2] [EXTRA TRACKS] buttons
- ❼ [FILE] button
- ❽ SONG [TOP]/[START/STOP] buttons
- ❾ [REC] button
- ❿ [SONG SETTING] button
- ⓫ METRONOME [START/STOP]/[SETTING] buttons
- ⓬ TEMPO [DOWN] [UP] buttons
- ⓭ LCD buttons  
A [-] [+]/B [- (NO)] [+ (YES)]/C [-] [+]/D [-] [+]
- ⓮ LCD screen
- ⓯ [CONTRAST] knob
- ⓰ [EXIT] button
- ⓱ Voice group buttons
- ⓲ [VOICE SETTING] button
- ⓳ [SPLIT] button
- ⓴ [REVERB] button
- ⓵ [CHORUS] button
- ⓶ VARIATION [▼] [▲] buttons
- ⓷ BRILLIANCE [MELLOW] [BRIGHT] buttons
- ⓸ [MIDI SETTING] button
- ⓹ [OTHER SETTING] button



- ②⑥ [PHONES] jacks
- ②⑦ Soft pedal
- ②⑧ Sostenuto pedal
- ②⑨ Damper pedal
- ③⑩ [PEDAL] connector
- ③① [AUX PEDAL] jack
- ③② MIDI [IN] [OUT] [THRU] connectors
- ③③ [HOST SELECT] switch
- ③④ [TO HOST] connector
- ③⑤ [USB] connector
- ③⑥ AUX IN [L/L+R] [R] jacks
- ③⑦ AUX OUT [L/L+R] [R]/ (LEVEL FIXED) [L] [R] jacks

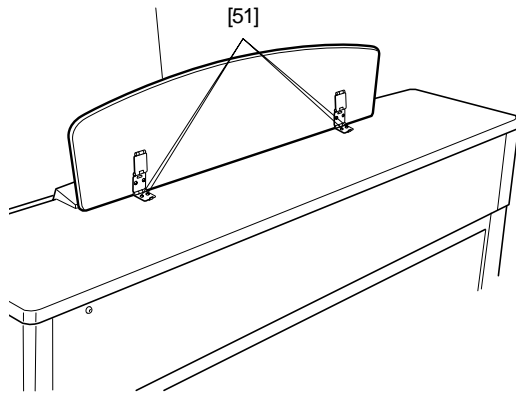
## ■ DISASSEMBLE PROCEDURE

### 1. Music Rest Assembly

(Time required : About 3 minutes)

Remove the four (4) screws marked [51]. The music rest assembly can then be removed. (Fig. 1)

Music rest assembly

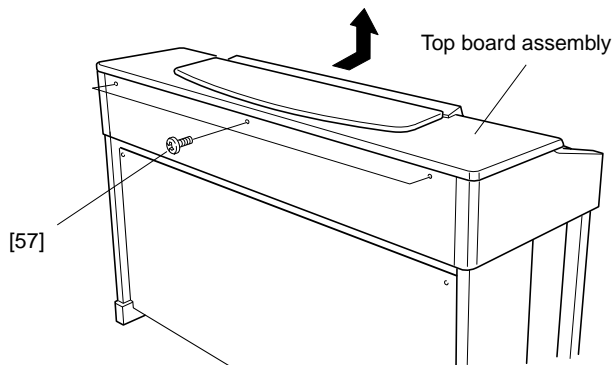


[51]: Bind Head Tapping Screw-1 3.0x16 MFZN2BL (EP030310)  
(Fig. 1)

### 2. Top Board Assembly

(Time required : About 3 minutes)

- 2-1 Remove the three (3) screws marked [57].
- 2-2 Move the top board assembly forward, lift it. (Fig. 2)

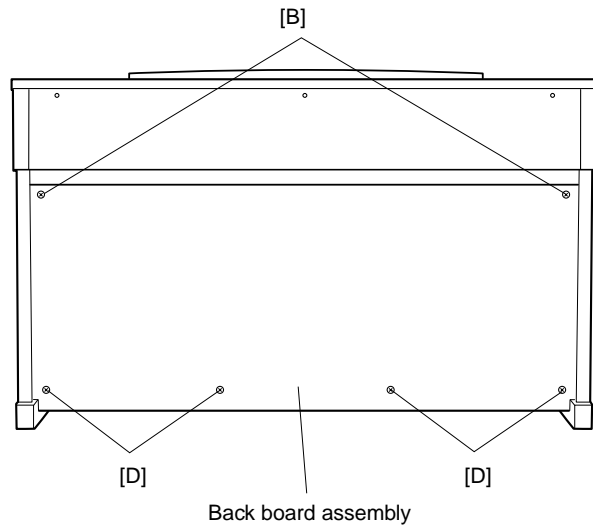


CLP-150/150M  
[57]: Truss Head Screw 4.0x20 MFZN2BL (VB934000)  
CLP-150C  
[57]: Truss Head Screw 4.0x20 MFC2 (V6141100)  
(Fig. 2)

### 3. Back Board Assembly

(Time required : About 3 minutes)

Remove the two (2) screws marked [B] and the four (4) screws marked [D]. The back board assembly can then be removed. (Fig. 3)



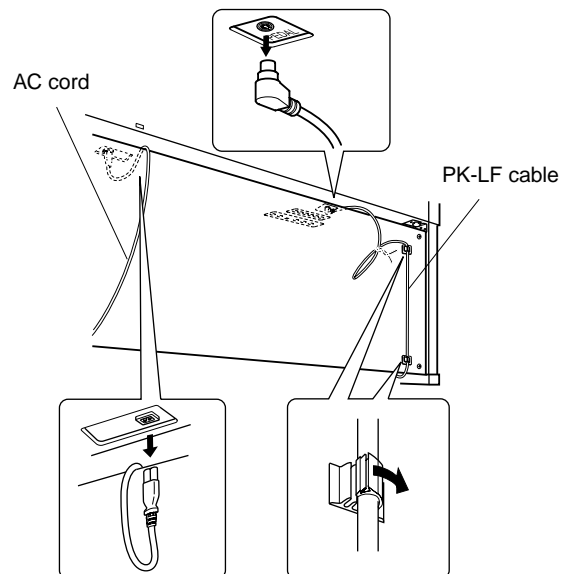
CLP-150/150M

- [B]: Truss Head Screw 4.0x12 MFZN2BL (VP367300)
- [D]: Truss Head Tapping Screw-1 4.0x20 MFZN2BL (03747290)

CLP-150C

- [B]: Truss Head Screw 4.0x12 MFC2 (V6135000)
- [D]: Truss Head Tapping Screw-1 4.0x20 MFC2 (VB164600)

(Fig. 3)



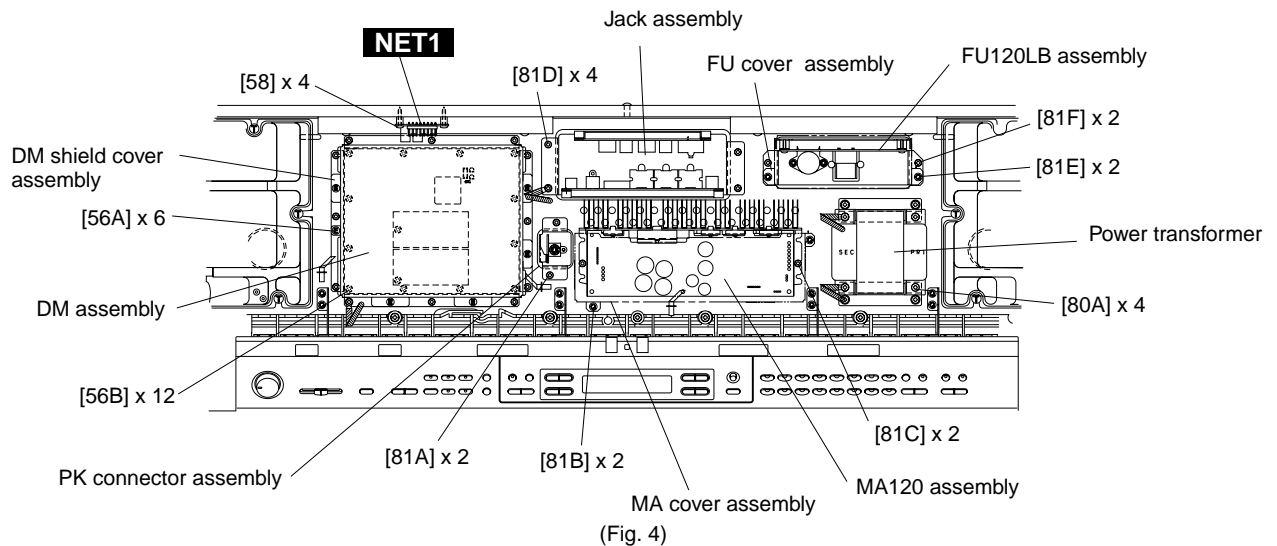
(Fig. 3-1)

#### 4. Circuit Boards & Assemblies Inside of Main Unit

(Time required : About 10 minutes each)

- 4-1 Remove the top board assembly. (See procedure 2)  
 4-2 Each circuit board and assembly can be removed by removing its fixing screws as listed below.

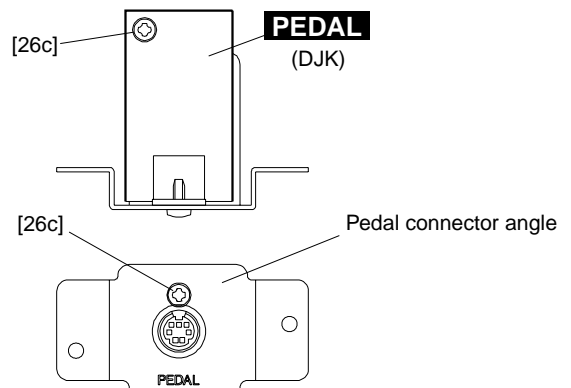
Circuit board and Assembly	Ref. No.	Screw	QTY	Fig.
DM Shield Cover Assembly (U.S.A. model only)	56A	Bind Head Tapping Screw-B 3.0x6 MFZN2Y (EP600130)	6	4
DM Assembly	56B	Bind Head Tapping Screw-B 3.0x6 MFZN2Y (EP600130)	12	4
Network Circuit Board	58	Bind Head Tapping Screw-1 3.5x20 MFZN2Y (EP030470)	4	4
PK Connector Assembly	81A	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	2	4
MA Cover Assembly (U.S.A. model only)	81B	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	2	4
MA120 Assembly	81C	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	2	4
Jack Assembly	81D	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	4	4
FU Cover Assembly (U.S.A. model only)	81E	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	2	4
FU120LB Assembly	81F	Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)	2	4
Power Transformer	80A	Bind Head Tapping Screw-B 4.0x10 MFZN2BL (EP600240)	4	4



#### 5. PEDAL (DJK) Circuit Board

(Time required : About 10 minutes)

- 5-1 Remove the top board assembly. (See procedure 2)  
 5-2 Disconnect the PK-LF cable. (Fig. 3)  
 5-3 Remove the PK connector assembly. (See procedure 4)  
 5-4 Remove the two (2) screws marked [26c]. The pedal connector angle can then be removed from the PEDAL (DJK) circuit board. (Fig. 5)

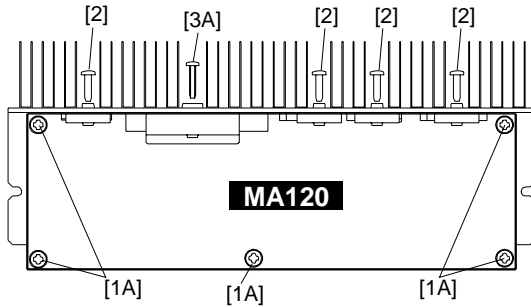


[26c]: Bind Head Tapping Screw-B 3.0x8 MFZN2BL (EP600190)  
 (Fig. 5)

## 6. MA120 Circuit Board

(Time required : About 15 minutes)

- 6-1 Remove the top board assembly. (See procedure 2)
- 6-2 Remove the MA120 assembly. (See procedure 4)
- 6-3 Remove the five (5) screws marked [1A], the four (4) screws marked [2] and the screw marked [3A]. The MA120 circuit board can then be removed. (Fig. 6)



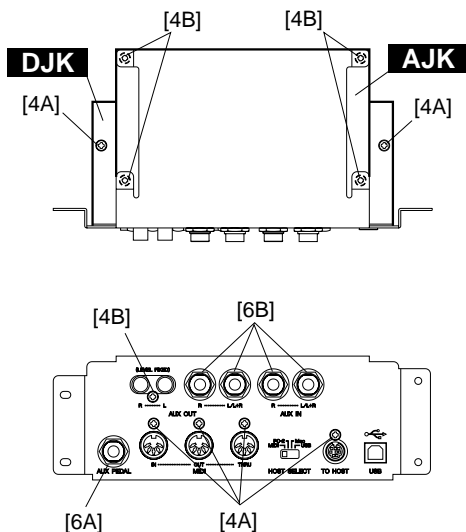
- [1A]: Bind Head Tapping Screw-B 4.0x8 MFZN2Y (EP640410)
- [2]: Bind Head Tapping Screw-B 3.0x10 MFZN2Y (EP600220)
- [3A]: Bind Head Tapping Screw-B 3.0x16 MFZN2Y (EP600390)

(Fig. 6)

## 7. DJK Circuit Board, AJK Circuit Board

(Time required : About 15 minutes)

- 7-1 Remove the top board assembly. (See procedure 2)
- 7-2 Remove the jack assembly. (See procedure 4)
- 7-3 Remove the six (6) screws marked [4A] and the hexagonal nut marked [6A]. The DJK circuit board can then be removed. (Fig. 7)
- 7-4 Remove the five (5) screws marked [4B] and the four (4) hexagonal nuts marked [6B]. The AJK circuit board can then be removed. (Fig. 7)



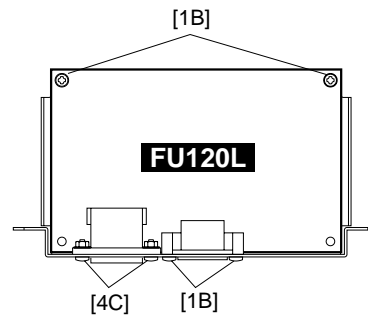
- [4]: Bind Head Tapping Screw-B 3.0x8 MFZN2BL (EP600190)
- [6]: Hexagonal Nut 12.0 14x2 MFZN2BL (VB508600)

(Fig. 7)

## 8. FU120L Circuit Board

(Time required : About 15 minutes)

- 8-1 Remove the top board assembly. (See procedure 2)
- 8-2 Disconnect the AC cord.
- 8-3 Remove the FU120LB assembly. (See procedure 4)
- 8-4 Remove the four (4) screws marked [1B]. The FU120L circuit board can then be removed. (Fig. 8)
- 8-5 Remove the two (2) screws marked [4C]. (Fig. 8)  
(General export model only)



- [1B]: Bind Head Tapping Screw-B 3.0x8 MFZN2BL (EP600190)
- [4C]: Bind Head Screw 3.0x10 MFZN2BL (EG330380)

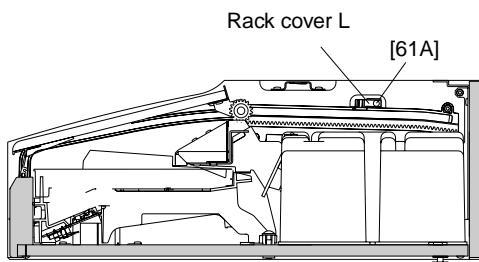
(Fig. 8)



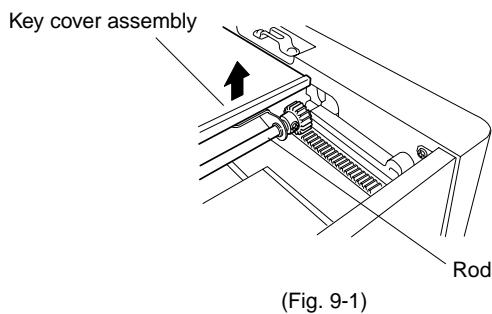
## 9. Key Cover Assembly

(Time required : About 10 minutes)

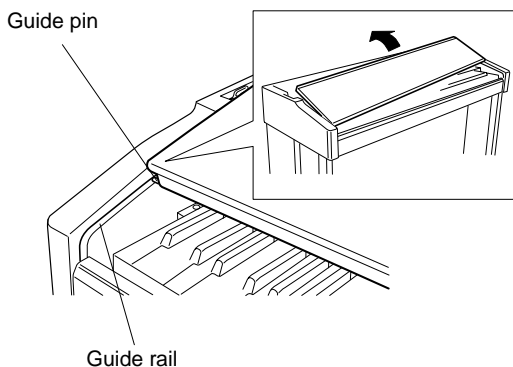
- 9-1 Close the key cover.
- 9-2 Remove the top board assembly. (See procedure 2)
- 9-3 Remove the screw marked [61A]. The rack cover L can then be removed. (Fig. 9)
- \* **The rack cover R can then be removed in the same manner.**
- 9-4 Set the left end of the rod at the slits of the guide and then lift the rear key cover assembly. (Fig. 9-1)
- 9-5 Lean slightly the key cover assembly so that the guide pin can be removed from the guide rail. (Fig. 9-2)
- \* **When removing, be sure not to make scratches on the side cover.**
- \* **When reinstalling the key cover assembly, apply a masking shield tape around the guide rail to prevent from making scratches on the assembly.**



[61A]: Bind Head Tapping Screw-B 3.0x8 MFZN2Y (EP600250)  
(Fig. 9)



(Fig. 9-1)

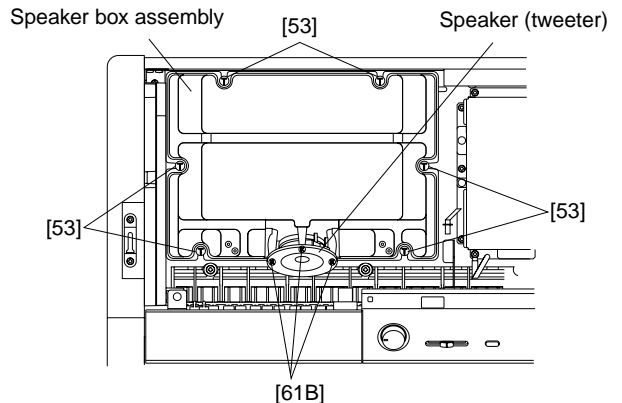


(Fig. 9-2)

## 10. Speaker (Tweeter)

(Time required : About 10 minutes)

- 10-1 Remove the top board assembly. (See procedure 2)
- 10-2 Remove the key cover assembly. (See procedure 9)
- 10-3 Remove the three (3) screws marked [61B]. The speaker (tweeter) can then be removed. (Fig. 10)
- \* **The left and right speaker (tweeter) each can then be removed in the same manner.**



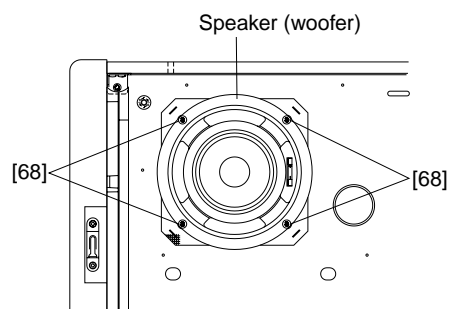
[61B]: Bind Head Tapping Screw-B 3.0x8 MFZN2Y (EP600250)  
[53]: Truss Head Tapping Screw-1 3.5x14 MFZN2Y (EN630230)

(Fig. 10)

## 11. Speaker Box Assembly, Speaker (Woofers)

(Time required : About 15 minutes)

- 11-1 Remove the top board assembly. (See procedure 2)
- 11-2 Remove the key cover assembly. (See procedure 9)
- 11-3 Remove the speaker (tweeter). (See procedure 10)
- 11-4 Remove the six (6) screws marked [53]. The speaker box assembly can then be removed. (Fig. 10)
- \* **The left and right speaker box assembly each can then be removed in the same manner.**
- \* **The phillips type screwdriver used here must be 15cm or longer.**
- 11-5 Remove the four (4) screws marked [68]. The speaker (woofer) can then be removed. (Fig. 11)



[68]: Truss Head Tapping Screw-1 4.0x20 MFZN2Y (20338800)

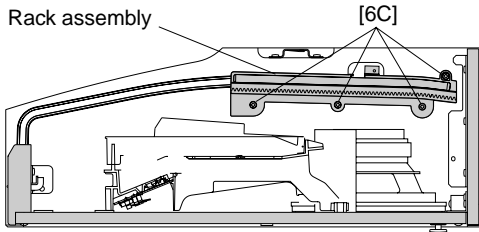
(Fig. 11)

## 12. Rack Assembly

(Time required : About 15 minutes)

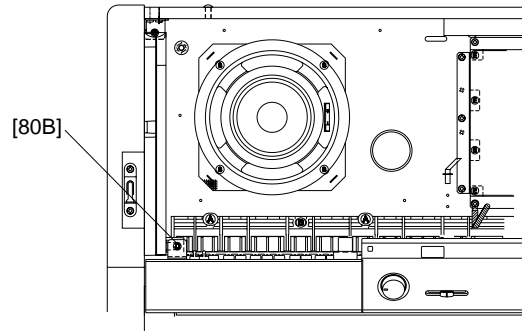
- 12-1 Remove the top board assembly. (See procedure 2)
- 12-2 Remove the key cover assembly. (See procedure 9)
- 12-3 Remove the speaker box assembly. (See procedure 11)
- 12-4 Remove the four (4) screws marked [6C] and the screw marked [80B]. The rack assembly can then be removed. (Fig. 12-1, Fig. 12-2)

\* The left and right rack assembly each can then be removed in the same manner.



[6C]: Bind Head Tapping Screw-1 3.5x16 MFZN2BL (EP030260)

(Fig. 12-1)



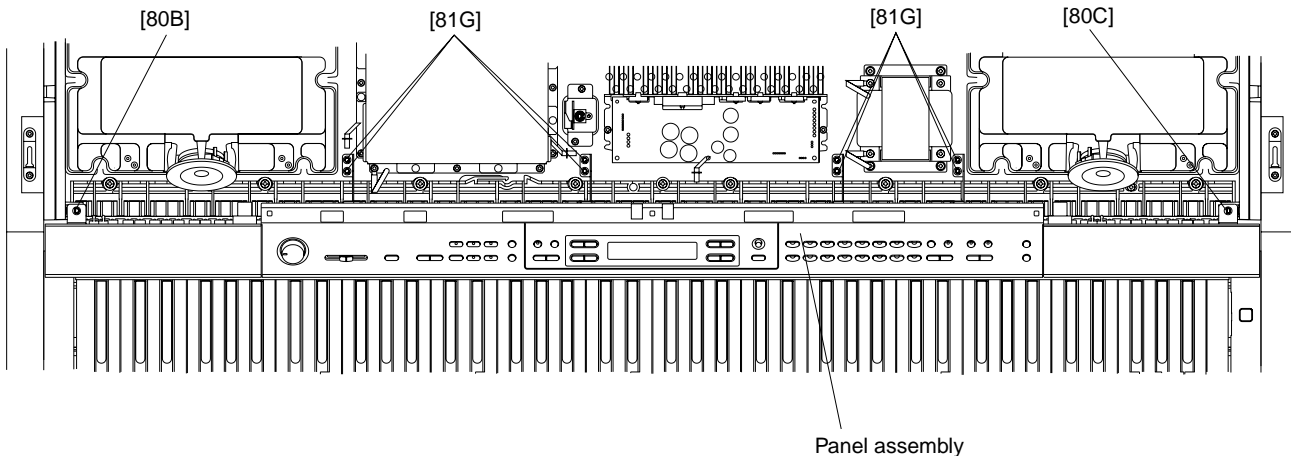
[80B]: Bind Head Tapping Screw-B 4.0x10 MFZN2BL (EP600240)

(Fig. 12-2)

## 13. Panel Assembly

(Time required : About 20 minutes)

- 13-1 Remove the top board assembly. (See procedure 2)
- 13-2 Remove the key cover assembly. (See procedure 9)
- 13-3 Remove the screw marked [80B], the screw marked [80C] and the eight (8) screws marked [81G]. The panel assembly can then be removed. (Fig. 13)



[80]: Bind Head Tapping Screw-B 4.0x10 MFZN2BL (EP600240)

[81G]: Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)

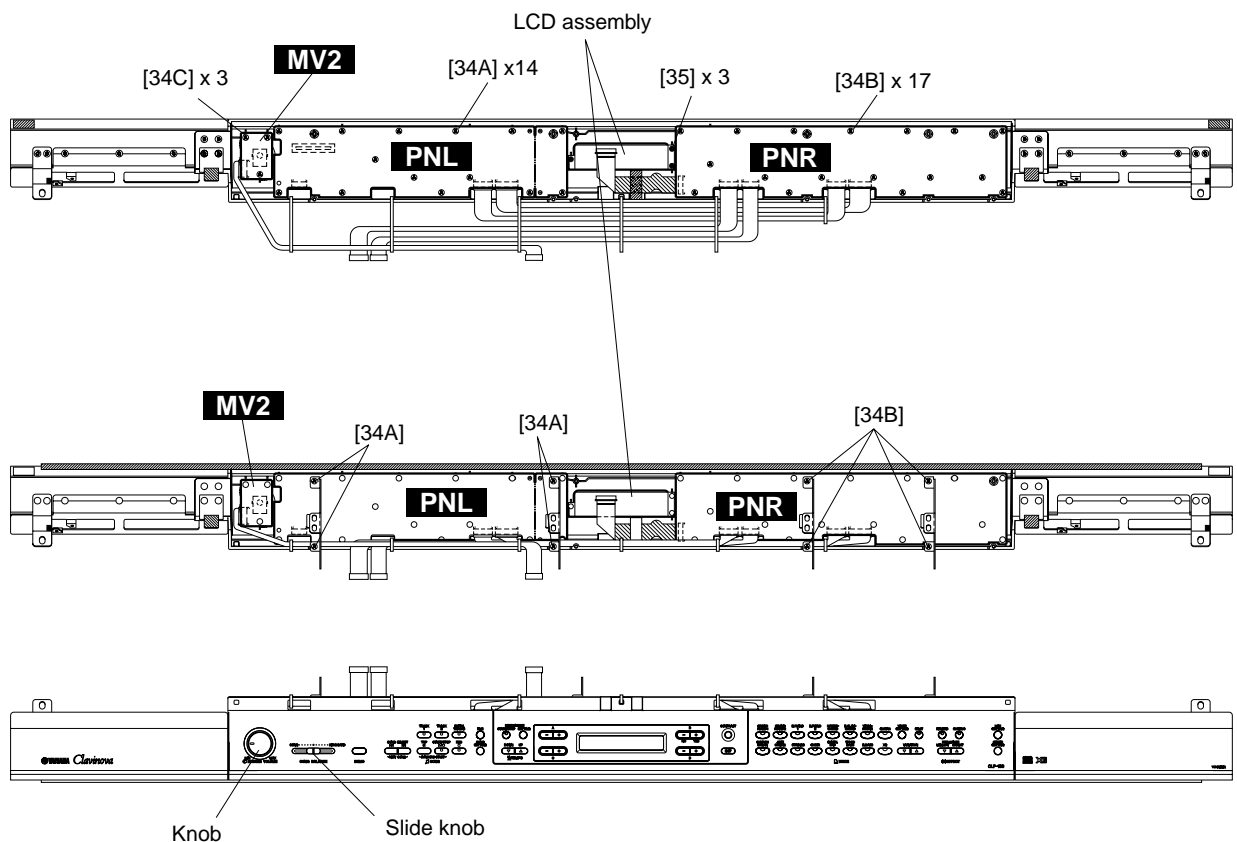
(Fig. 13)

## 14. Circuit Boards & Assemblies of Panel Assembly

(Time required : About 25 minutes)

- 14-1 Remove the top board assembly. (See procedure 2)
- 14-2 Remove the key cover assembly. (See procedure 9)
- 14-3 Remove the panel assembly. (See procedure 13)
- 14-4 Each circuit board and assembly can be removed by removing its fixing screws as listed below.

Circuit board and Assembly	Ref. No.	Screw	QTY	Fig.
LCD Assembly	35	Bind Head Tapping Screw-B 2.6x10 MFZN2Y (VD791000)	3	14
PNL Circuit Board		Slide knob	1	14
	34A	Bind Head Tapping Screw-B 3.0x8 MFZN2Y (EP600250)	18	14
PNR Circuit Board	34B	Bind Head Tapping Screw-B 3.0x8 MFZN2Y (EP600250)	21	14
MV2 Circuit Board		Knob	1	14
	34C	Bind Head Tapping Screw-B 3.0x8 MFZN2Y (EP600250)	3	14



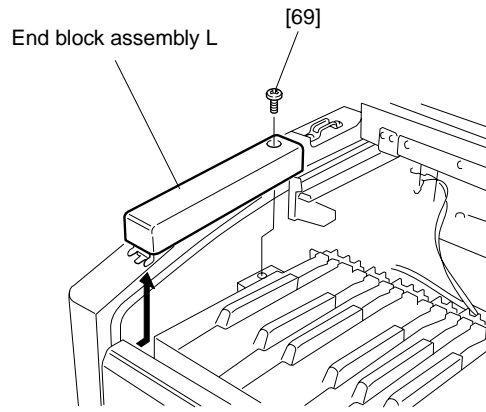
(Fig. 14)

## 15. End Block Assembly

(Time required : About 25 minutes)

- 15-1 Remove the top board assembly. (See procedure 2)
- 15-2 Remove the key cover assembly. (See procedure 9)
- 15-3 Remove the panel assembly. (See procedure 13)
- 15-4 Remove the screw marked [69]. The end block assembly L can then be removed. (Fig. 15)

\* The end block assembly R can then be removed in the same manner.



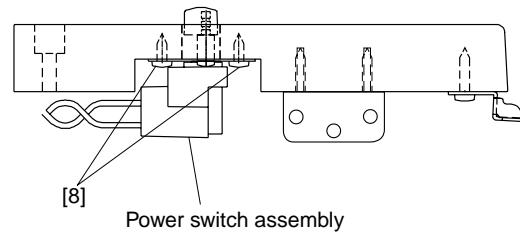
[69]: Truss Head Tapping Screw-1 3.5x30 MFZN2Y (VA076400)

(Fig. 15)

## 16. Power Switch Assembly

(Time required : About 25 minutes)

- 16-1 Remove the top board assembly. (See procedure 2)
- 16-2 Remove the key cover assembly. (See procedure 9)
- 16-3 Remove the panel assembly. (See procedure 13)
- 16-4 Remove the end block assembly R. (See procedure 15)
- 16-5 Remove the two (2) screws marked [8]. The power switch assembly can then be removed. (Fig. 16)



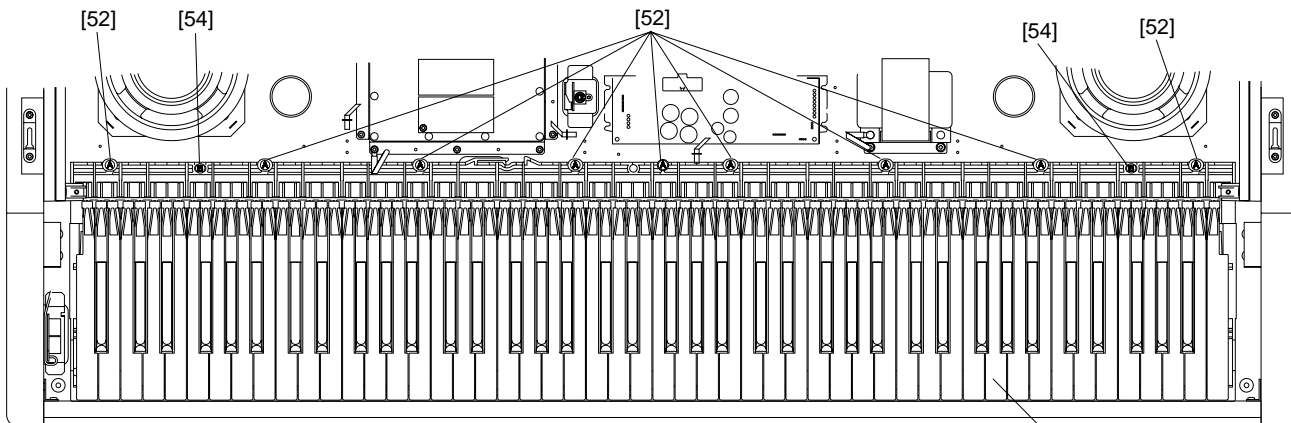
[8]: Bind Head Tapping Screw-1 3.5x10 MFZN2BL (EP030320)

(Fig. 16)

## 17. Keyboard Assembly

(Time required : About 30 minutes)

- 17-1 Remove the top board assembly. (See procedure 2)
- 17-2 Remove the key cover assembly. (See procedure 9)
- 17-3 Remove the speaker box assembly. (See procedure 11)
- 17-4 Remove the rack assembly. (See procedure 12)
- 17-5 Remove the panel assembly. (See procedure 13)
- 17-6 Remove the end block assembly L and R.  
(See procedure 15)
- 17-7 Remove the two (2) screws marked [54] and the nine (9) screws marked [52]. The keyboard assembly can then be removed. (Fig. 17)



[54]: Bind Head Tapping Screw-1 4.0x14 MFZN2Y (EP040230)

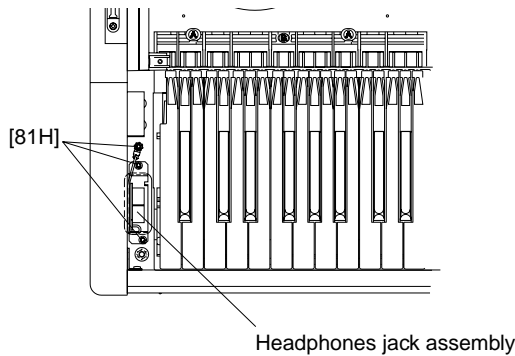
[52]: Pan Head Screw PW5.0x25 MFZN2Y (VV040700)

Keyboard assembly

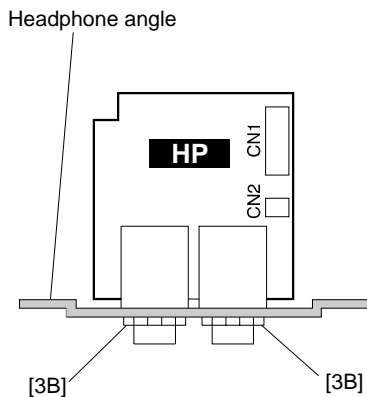
(Fig. 17)

**18. Headphones Jack Assembly, HP Circuit Board (Time required : About 30 minutes)**

- 18-1 Remove the top board assembly. (See procedure 2)
- 18-2 Remove the key cover assembly. (See procedure 9)
- 18-3 Remove the panel assembly. (See procedure 13)
- 18-4 Remove the end block assembly L. (See procedure 15)
- 18-5 Remove the three (3) screws marked [81H]. The headphones jack assembly can then be removed. (Fig. 18)
- 18-6 Remove the two (2) hexagonal nuts marked [3B]. The headphone angle can then be removed from the HP circuit board. (Fig. 18-1)



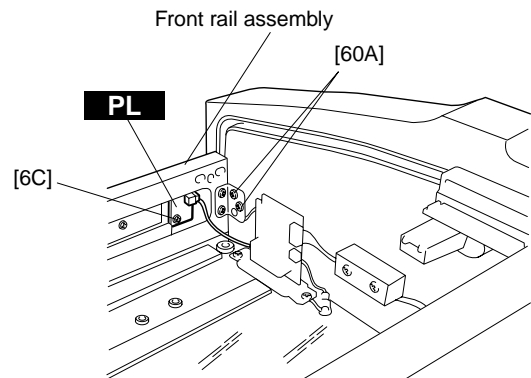
[81H]: Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)  
(Fig. 18)



[3B]: Hexagonal Nut 12.0 14x2 MFZN2BL (VB508600)  
(Fig. 18-1)

**19. PL Circuit Board (Time required : About 30 minutes)**

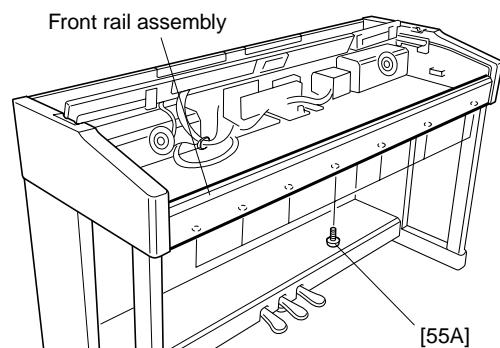
- 19-1 Remove the top board assembly. (See procedure 2)
- 19-2 Remove the key cover assembly. (See procedure 9)
- 19-3 Remove the speaker box assembly. (See procedure 11)
- 19-4 Remove the rack assembly. (See procedure 12)
- 19-5 Remove the panel assembly. (See procedure 13)
- 19-6 Remove the end block assembly L and R. (See procedure 15)
- 19-7 Remove the keyboard assembly. (See procedure 17)
- 19-8 Remove the screw marked [6C]. The PL circuit board can then be removed. (Fig. 19)



[6C]: Bind Head Tapping Screw-1 3.5x12 MFZN2BL (EP030340)  
[60A]: Bind Head Tapping Screw-1 3.5x16 MFZN2Y (EP030190)  
(Fig. 19)

**20. Front Rail Assembly (Time required : About 40 minutes)**

- 20-1 Remove the top board assembly. (See procedure 2)
- 20-2 Remove the key cover assembly. (See procedure 9)
- 20-3 Remove the speaker box assembly. (See procedure 11)
- 20-4 Remove the rack assembly. (See procedure 12)
- 20-5 Remove the panel assembly. (See procedure 13)
- 20-6 Remove the end block assembly L and R. (See procedure 15)
- 20-7 Remove the keyboard assembly. (See procedure 17)
- 20-8 Remove the two (2) screws marked [60A] from both sides of the assembly. (Fig. 19)
- 20-9 Remove the seven (7) screws marked [55A]. The front rail assembly can then be removed. (Fig. 20)

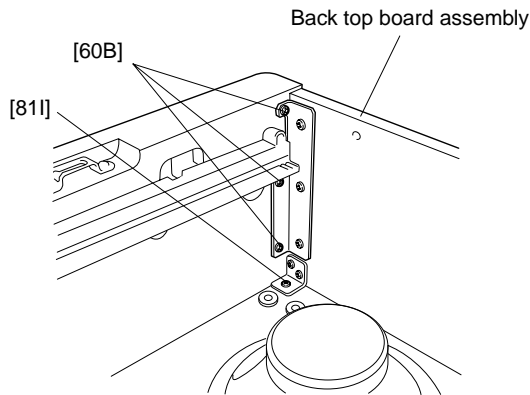


[55A]: Truss Head Tapping Screw-1 3.5x30 MFZN2BL (VU952600)  
(Fig. 20)

## 21. Back Top Board Assembly

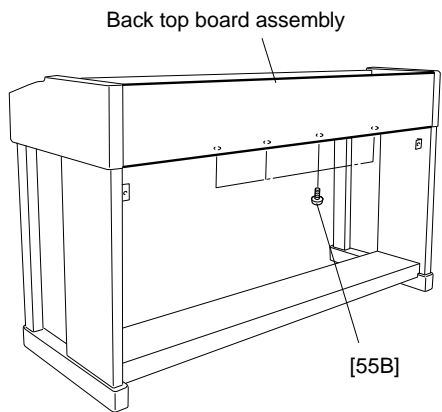
(Time required : About 40 minutes)

- 21-1 Remove the top board assembly. (See procedure 2)
- 21-2 Remove the key cover assembly. (See procedure 9)
- 21-3 Remove the speaker box assembly L and R. (See procedure 11)
- 21-4 Remove the three (3) screws marked [60B] and the screw marked [81I] from both sides of the assembly. (Fig. 21-1)
- 21-5 Remove the four (4) screws marked [55B]. The back top board assembly can then be removed. (Fig. 21-2)



- [60B]: Bind Head Tapping Screw-1 3.5x16 MFZN2Y (EP030190)
- [81I]: Bind Head Tapping Screw-1 3.5x12 MFZN2Y (EP030240)

(Fig. 21-1)



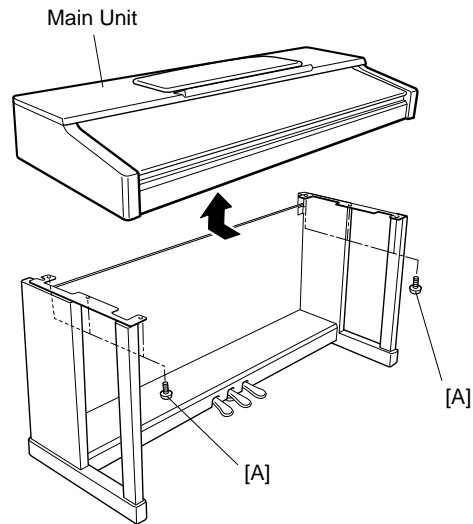
- [55B]: Truss Head Tapping Screw-1 3.5x30 MFZN2BL (VU952600)

(Fig. 21-2)

## 22. Main Unit (Time required : About 15 minutes)

- 22-1 Disconnect the AC cord and the PK-LF cable.
- 22-2 Spread a soft cloth like a blanket on the floor where the main unit is to be placed in advance.
- 22-3 Remove the six (6) screws marked [A]. (Fig. 22)
- 22-4 Move the main unit rearward, lift it and place it on the cloth gently.

- \* **For safety, this work should be done by two persons.**
- \* **When removing the main unit from the stand, use care not to have your finger caught.**



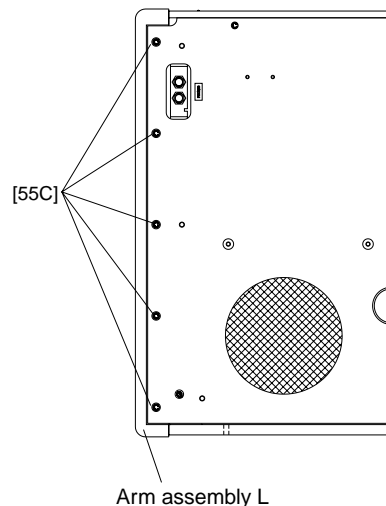
- [A]: Bind Head Screw 6.0x16 MFZN2BL (EG360020) (Fig. 22)

## 23. Arm Assembly

(Time required : About 40 minutes)

- 23-1 Remove the top board assembly. (See procedure 2)
- 23-2 Remove the key cover assembly. (See procedure 9)
- 23-3 Remove the speaker box assembly L and R. (See procedure 11)
- 23-4 Remove the rack assembly. (See procedure 12)
- 23-5 Remove the panel assembly. (See procedure 13)
- 23-6 Remove the end block assembly L and R. (See procedure 15)
- 23-7 Remove the keyboard assembly. (See procedure 17)
- 23-8 Remove the main unit. (See procedure 22)
- 23-9 Remove the two (2) screws marked [60A]. (Fig. 19)
- 23-10 Remove the three (3) screws marked [60B]. (Fig. 21-1)
- 23-11 Remove the five (5) screws marked [55C]. The arm assembly can then be removed. (Fig. 23)

- \* **The left and right arm assembly each can then be removed in the same manner.**



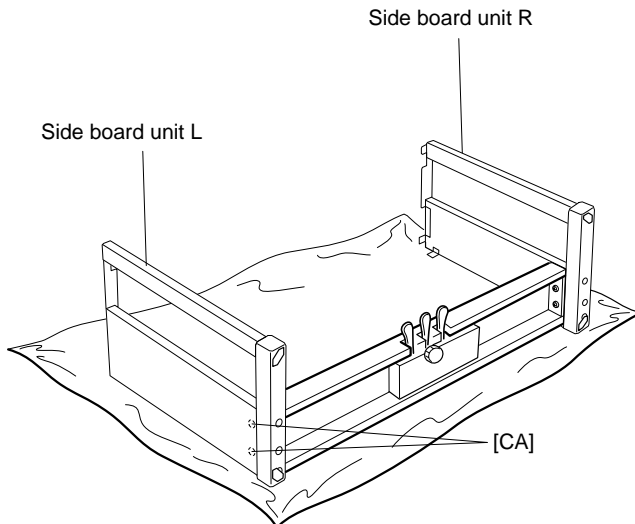
- [55C]: Truss Head Tapping Screw-1 3.5x30 MFZN2BL (VU952600) (Fig. 23)

## 24. Side Board Assembly

(Time required : About 15 minutes)

- 24-1 Remove the back board assembly. (See procedure 3)
- 24-2 Remove the main unit. (See procedure 22)
- 24-3 Remove the two (2) screws marked [CA]. The side board unit can then be removed. (Fig. 24)

\* **The left and right side board unit each can then be removed in the same manner.**



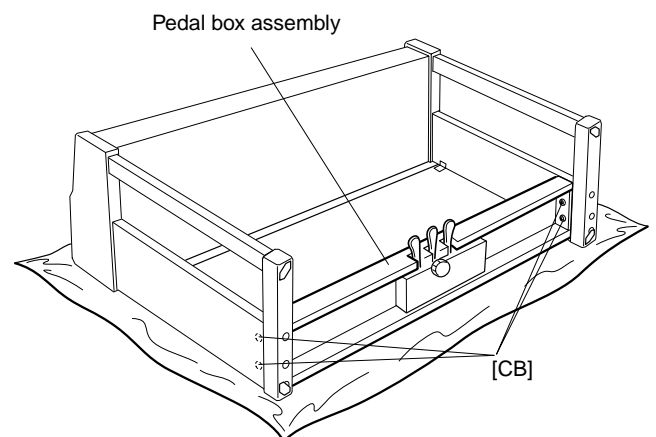
[CA]: Truss Head Screw 6.0x25 MFZN2BL (VQ448400)

(Fig. 24)

## 25. Pedal Box Assembly, Pedal Assembly

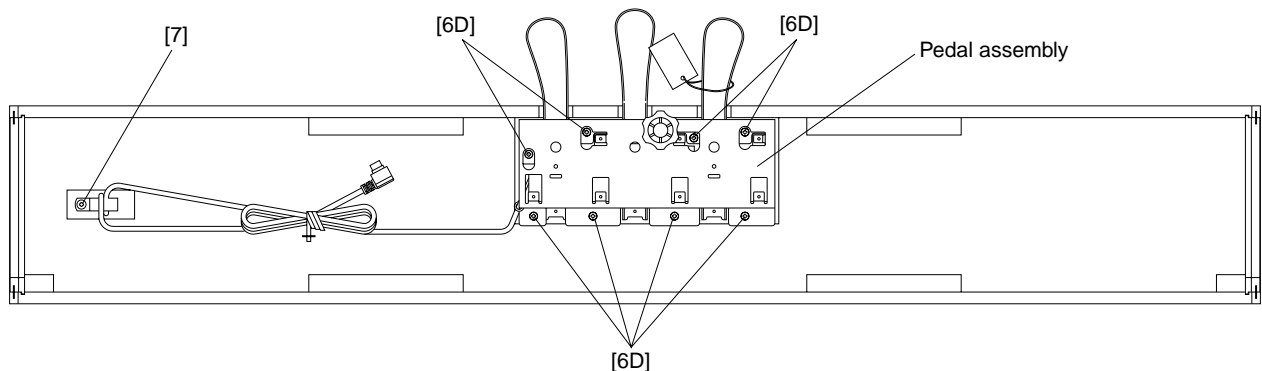
(Time required : About 15 minutes)

- 25-1 Disconnect the PK-LF cable.
- 25-2 With a soft cloth like a blanket placed on the floor, place the main unit on its back board gently. (Fig. 25)
- \* **For safety, this work should be done by two persons.**
- 25-3 Remove the four (4) screws marked [CB]. The pedal box assembly can then be removed. (Fig. 25)
- 25-4 Remove the eight (8) screws marked [6D] and the screw marked [7]. The pedal assembly can then be removed. (Fig. 25-1)



[CB]: Truss Head Screw 6.0x25 MFZN2BL (VQ448400)

(Fig. 25)



[6D]: Bind Head Tapping Screw-1 4.0x14 MFZN2Y (EP040230)

[7]: Truss Head Tapping Screw-1 3.5x20 MFZN2Y (EN630260)

(Fig. 25-1)

## 26. Disassembling the Keyboard

(Time required : About 15 minutes)

- \* After inserting a round stick (Rod: TX000670) between the frame and the keys, remove the circuit boards. (Fig. 26)

### 26-1 GHD EBUS L Circuit Board

Remove the seven (7) screws marked [260A]. The GHD EBUS L circuit board can then be removed. (Fig. 26)

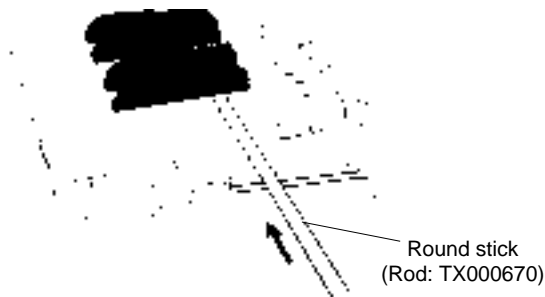
### 26-2 GHD M Circuit Board

Remove the five (5) screws marked [260B] and the screw marked [262]. The GHD M circuit board can then be removed. (Fig. 27)

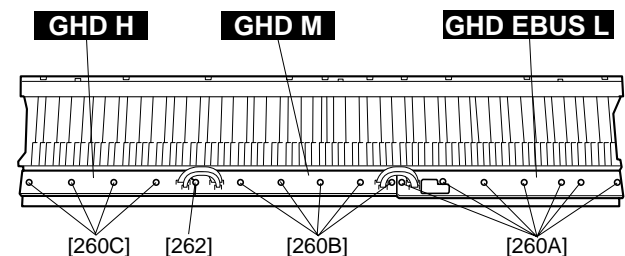
### 33-3 GHD H Circuit Board

Remove the four (4) screws marked [260C] and the screw marked [262]. The GHD H circuit board can then be removed. (Fig. 27)

- \* Keys can be removed without removing the circuit boards.
- \* After removing the GHD EBUS L, GHD M and GHD H circuit boards, and the rubbers can then be removed.

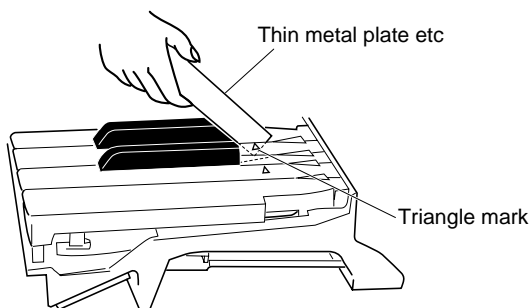


(Fig. 26)



[260]: Bind Head Tapping Screw-P 3.0x10 MFXN2 (VT413400)  
 [262]: PW Head Tapping Screw-P 3.0x10-10 MFC2BL (V8833200)

(Fig. 27)



(Fig. 28)

### 26-4 White key

Insert a thin plate between the white keys, near the triangle mark around the fulcrum of the key, and press down the stopper marked [A] to remove the key.

(Fig. 28, Fig. 29)

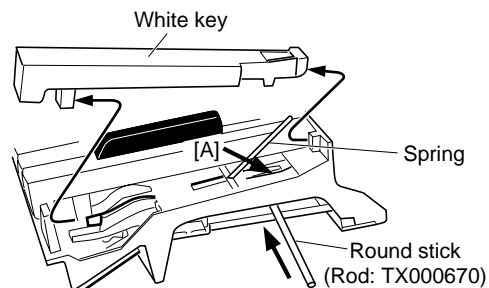
- \* Take care not to damage the key spring when removing a key.
- \* A black key can be removed after the white keys on either side have been removed.

### 26-5 Hammer, White Key

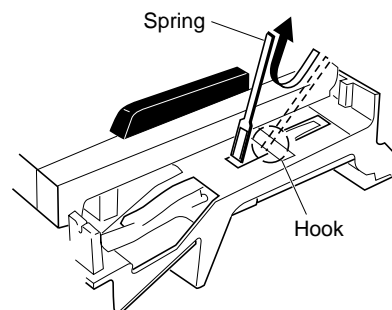
After a key has been removed, push a key spring down once to take it out of the hook.

Place the keyboard assembly upside-down and peel the stopper away. The hammer of the white key can then be removed.

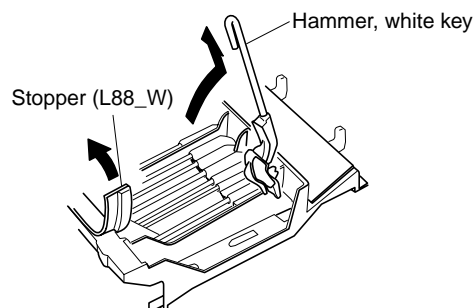
- \* The hammer of the black key can then be removed in the same manner.



(Fig. 29)



(Fig. 30)



(Fig. 31)



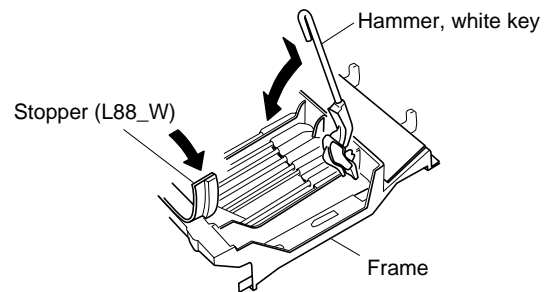
**27. Assembling the Keyboard**

(Time required : About 15 minutes)

**27-1 Hammer, White Key (Hammer, Black Key)**

Place the keyboard assembly upside-down, insert a hammer assembly into the frame, and put the stopper (L88\_W) on. (Fig. 32)

\* There are four (4) kinds of hammers that differ in weight.

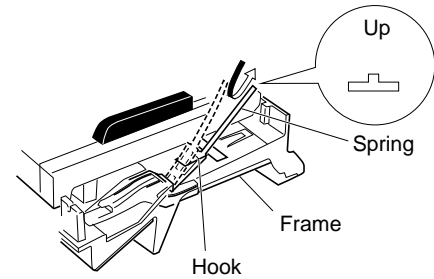


(Fig. 32)

**27-2 Spring**

Place the keyboard assembly rightside up. Fix key springs on the frame by setting one at each slit and pushing down once on each key spring. (Fig. 33)

\* Be careful of the direction of the spring.



(Fig. 33)

**27-3 White Key (Black Key)**

After a key has been fit to part [C] and key guide, make sure that the spring is fixed to the key and then press down part [B] of the key. (Fig. 34)

**27-4 GHD EBUS L Circuit Board**

Tighten the seven (7) screws marked [260A] to fix the GHD EBUS L circuit board. (Fig. 27)

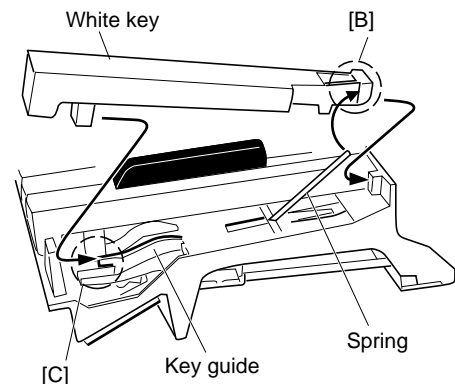
**34-5 GHD M Circuit Board**

Tighten the five (5) screws marked [260B] and the screw marked [262] to fix the GHD M circuit board. (Fig. 27)

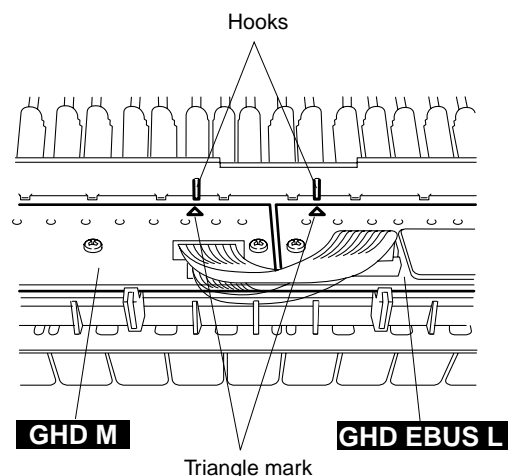
**34-6 GHD H Circuit Board**

Tighten the four (4) screws marked [260C] and the screw marked [262] to fix the GHD H circuit board. (Fig. 27)

\* Install the circuit boards in the keyboard assembly so that the hooks hold it as shown in figure 35.



(Fig. 34)



(Fig. 35)

## ■ LSI PIN DESCRIPTION

**HD6417709SHF200** (X2687A00) **CPU** (SH3) ..... 19

**M66291GP** (X2156A00) **USB Controller** ..... 22

**PCM1730E-1/2K** (X2077A00) **DAC** (Digital to Analog Converter) ..... 22

**T8F02TB-0102** (X0060A00) **SWP50** (Tone Generator) ..... 20

**μPD780031AYGK-N01-9ET** (XZ916100) **LED DRIVER/SWITCH SCAN E-PNS2a** ..... 18

**μPD780031AYGK-N02** (X0031100) **LKS** ..... 18

- **μPD780031AYGK-N01-9ET** (XZ916100) **LED DRIVER/SWITCH SCAN E-PNS2a** PNL: IC010
- **μPD780031AYGK-N02** (X0031100) **LKS** MK SUB: IC001

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	P50/A8	I/O	Port 5 / Higher address bus	33	P10/ANI0	I	Port 1 / A/D converter analog input
2	P51/A9	I/O		34	AVREF	I	A/D converter reference voltage input
3	P51/A10	I/O		35	AVDD	-	Analog power supply
4	P53/A11	I/O		36	RESET	I	System reset input
5	P54/A12	I/O		37	XT2	-	Subsystem clock oscillation
6	P55/A13	I/O		38	XT1	I	
7	P56/A14	I/O		39	IC	-	Internally connected
8	P57/A15	I/O		40	X2	-	Main system clock oscillation
9	Vss0	-	41	X1	I		
10	VDD0	-	42	Vss1	-	Ground	
11	P30	I/O	Port 3	43	P00/INTP0	I/O	Port 0 / External interrupt request input
12	P31	I/O		44	P01/INTP1	I/O	
13	P32/SDA0	I/O	Port 3 / Serial data input/output	45	P02/INTP2	I/O	Port 0 / External interrupt request input / Trigger signal input
14	P33/SCL0	I/O	Port 3 / Serial clock input/output	46	P03/INTP3/ADTRG	I/O	
15	P34	I/O	Port 3	47	P70/TI00/TO0	I/O	Port 7 / External count clock input / 16-bit timer/event counter 0 output
16	P35	I/O		48	P71/TI01	I/O	Port 7 / Capture trigger input
17	P36	I/O		49	P72/TI50/TO50	I/O	Port 7 / External count clock input / 8-bit timer/event counter 50 output
18	P20/SI30	I/O	Port 2 / Serial data input	50	P73/TI51/TO51	I/O	Port 7 / External count clock input / 8-bit timer/event counter 51 output
19	P21/SO30	I/O	Port 2 / Serial data output	51	P74/PCL	I/O	Port 7 / Clock output
20	P22/SCK30	I/O	Port 2 / Serial clock input/output	52	P75/BUZ	I/O	Port 7 / Buzzer output
21	P23RxD0	I/O	Port 2 / Serial data input	53	P64/RD	I/O	Port 6 / Strobe signal output for reading
22	P24/TxD0	I/O	Port 2 / Serial data output	54	P65/WR	I/O	Port 6 / Strobe signal output for writing
23	P25/ASCK0	I/O	Port 2 / Serial clock input/output	55	P66/WAIT	I/O	Port 6 / Wait insertion
24	VDD1	-	Power supply	56	P67/ASTB	I/O	Port 6 / Strobe output
25	AVss	-	Ground	57	P40/AD0	I/O	Port 4 / Lower address/data bus
26	P17/ANI7	I	Port 1 / A/D converter analog input	58	P41/AD1	I/O	
27	P16/ANI6	I		59	P42/AD2	I/O	
28	P15/ANI5	I		60	P43/AD3	I/O	
29	P14/ANI4	I		61	P44/AD4	I/O	
30	P13/ANI3	I		62	P45/AD5	I/O	
31	P12/ANI2	I		63	P46/AD6	I/O	
32	P11/ANI1	I		64	A47/AD7	I/O	

## ● HD6417709SHF200 (X2687A00) CPU (SH3)

DM: IC014

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	MD1	I	Mode control	105	CKE/PTK5	I/O	CK enable / Port K
2	MD2	I		106	RAS3L/PTJ0	I/O	RAS address bus / Port J
3	Vcc(RTC)	-		107	PTJ1	I/O	Port J
4	XTAL2	-	Crystal oscillator	108	CASL/PTJ2	I/O	CAS address bus / Port J
5	EXTAL2	-		109	VssQ	-	Ground
6	Vss(RTC)	-	Non-maskable interrupt request	110	CASU/PTJ3	I/O	CAS address bus / Port J
7	NMI	I		111	VccQ	-	Power supply +3.3 V
8	IRQ0/IRL0/PTH0	I	Interrupt request / Port H	112	PTJ4	I/O	Port J
9	IRQ1/IRL1/PTH1	I		113	PTJ5	I/O	DMA acknowledge / Port D
10	IRQ2/IRL2/PTH2	I		114	DACK0/PTD5	I/O	
11	IRQ3/IRL3/PTH3	I		115	DACK1/PTD7	I/O	RAS address bus / Port E
12	IRQ4/PTH4	I		116	PTE6	I/O	
13	D31/PTB7	I/O	Data bus / Port B	117	PTE3	I/O	RAS address bus / Port E
14	D30/PTB6	I/O		118	RAS3U/PTE2	I/O	
15	D29/PTB5	I/O		119	PTE1	I/O	Test data / Port E
16	D28/PTB4	I/O		120	TDO/PTE0	I/O	Bus acknowledge
17	D27/PTB3	I/O		121	BACK	O	Bus request
18	D26/PTB2	I/O	Ground	122	BREQ	I	Hardware wait request
19	VssQ	-		123	WAIT	I	Manual reset
20	D25/PTB1	I/O	Data bus / Port B	124	RESETM	I	Analog trigger / Port H
21	VccQ	-		125	ADTRG/PTH5	I	Write protect / Port G
22	D24/PTB0	I/O	Data bus / Port B	126	IOIS16/PTG7	I	ASE mode / Port G
23	D23/PTA7	I/O		127	ASEMD0/PTG6	I/O	ASE break acknowledge / Port G
24	D22/PTA6	I/O	Data bus / Port A	128	ASEBRKAK/PTG5	I/O	Port G / Clock output
25	D21/PTA5	I/O		129	PTG4/CKIO2	I/O	AUD data / Port G
26	D20/PTA4	I/O	Ground	130	AUDATA3/PTG3	I/O	
27	Vss	-		131	AUDATA2/PTG2	I/O	AUD data / Port G
28	D19/PTA3	I/O	Data bus / Port A	132	Vss	-	AUD data / Port G
29	Vcc	-		133	AUDATA1/PTG1	I/O	
30	D18/PTA2	I/O	Data bus / Port A	134	Vcc	-	AUD data / Port G
31	D17/PTA1	I/O		135	AUDATA0/PTG0	I/O	Test reset / Port F / Port interruption
32	D16/PTA0	I/O	Ground	136	TRST/PTF7/PINT15	I	Test mode switch / Port F / Port interruption
33	VssQ	-		137	TMS/PTF6/PINT14	I	Test data / Port F / Port interruption
34	D15	I/O	Data bus	138	TDI/PTF5/PINT13	I	Test clock / Port F / Port interruption
35	VccQ	-		139	CK/PTF4/PINT12	I	Interrupt request / Port F / Port interruption
36	D14	I/O	Data bus	140	IRLS3/PTF3/PINT11	I	
37	D13	I/O		141	IRL2/PTF2/PINT10	I	Power supply +1.8 V
38	D12	I/O	Data bus	142	IRLS1/PTF1/PINT9	I	Capacitor
39	D11	I/O		143	IRLS0/PTF0/PINT8	I	Ground
40	D10	I/O	Data bus	144	MDO	I	Ground
41	D9	I/O		145	Vcc(PLL1)	-	Capacitor
42	D8	I/O	Ground	146	CAP1	-	Power supply +1.8 V
43	D7	I/O		147	Vss(PLL1)	-	Capacitor
44	D6	I/O	Ground	148	Vss(PLL2)	-	Power supply +1.8 V
45	VssQ	-		149	CAP2	-	AUD clock / Port H
46	D5	I/O	Data bus	150	VCC(PLL2)	-	Ground
47	VccQ	-		151	AUDCK/PTH6	I	Power supply +1.8 V
48	D4	I/O	Data bus	152	Vss	-	Ground
49	D3	I/O		153	Vss	-	Power supply +1.8 V
50	D2	I/O	Data bus	154	Vcc	-	Crystal oscillator
51	D1	I/O		155	XTAL1	O	
52	D0	I/O	Address bus	156	EXTAL1	I/O	Timer clock / Port H
53	A0	O		157	STATUS0/PTJ6	I/O	Interrupt request output
54	A1	O	Address bus	158	STATUS1/PTJ7	I/O	Ground
55	A2	O		159	TCLK/PTH7	I/O	System clock input / output
56	A3	O	Ground	160	/IRQOUT	O	Power supply +3.3 V
57	VssQ	-		161	VssQ	-	Data transmission / SCI port
58	A4	O	Address bus	162	CKIO	I/O	Serial clock / SCI port
59	VccQ	-		163	VccQ	-	Data transmission / SCI port
60	A5	O	Address bus	164	TXD0/SCPT0	O	Serial clock / SCI port
61	A6	O		165	SK0/SCPT1	I/O	Data transmission / SCI port
62	A7	O	Address bus	166	TXD1/SCPT2	O	Serial clock / SCI port
63	A8	O		167	SK1/SCPT3	I/O	Data transmission / SCI port
64	A9	O	Address bus	168	TXD2/SCPT4	O	Serial clock / SCI port
65	A10	O		169	SK2/SCPT5	I/O	Transmit request / SCI port
66	A11	O	Ground	170	RTS2/SCPT6	I/O	Data reception / SCI port
67	A12	O		171	RXD0/SCPT0	I	
68	A13	O	Address bus	172	RXD1/SCPT2	I	Data reception / SCI port
69	VssQ	-		173	Vss	-	Power supply +1.8 V
70	A14	O	Address bus	174	RXD2/SCPT4	I	Transmit clear / Interrupt request / SCI port
71	VccQ	-		175	Vcc	-	Mask ROM chip select / Port C / Port interruption
72	A15	O	176	CTS2/IRQ5/SCPT7	I/O	Ground	
73	A16	O	177	MCS7/PTC7/PINT	I/O		Standby mode Interrupt request output / Port D
74	A17	O	Address bus	178	7	I/O	Power supply +3.3 V
75	A18	O		179	MCS6/PTC6/PINT	I/O	Reset output / Port D
76	A19	O	Address bus	180	6	I/O	Mask ROM chip select / Port C / Port interruption
77	A20	O		181	MCS5/PTC5/PINT	I/O	
78	A21	O	182	5	I/O	Standby mode Interrupt request output / Port D	
79	Vss	-	Address bus	183	MCS4/PTC4/PINT	I/O	Power supply +3.3 V
80	A22	O		184	4	I/O	Reset output / Port D
81	Vcc	-	Address bus	185	VssQ	-	Mask ROM chip select / Port C / Port interruption
82	A23	O		186	WAKEUP/PTD3	I/O	
83	VssQ	-	Address bus	187	VccQ	-	DMA request / Port D
84	A24	O		188	RESETOUT/PTD2	I/O	
85	VccQ	-	Address bus	189	MCS3/PTC3/PINT	I/O	Chip active
86	A25	O		190	3	I/O	Mode control
87	BS/PTK4	I/O	191	MCS2/PTC2/PINT	I	DRAK0/PTD1	
88	RD	O	192	2	I		Analog ground
89	WE0/DQMLL	O	193	MCS1/PTC1/PINT	I	Analog input / Port L	
90	WE1/DQMLL/WE	O	194	1	I		Analog power supply +3.3 V
91	WE2/DQMLL/WE	O	195	MCS0/PTC0/PINT	I	Analog input / Analog output / Port L	
92	WE3/DQMLL/WE	O	196	0	I		Analog ground
93	RD/WR	I/O	197	DRAK0/PTD1	I	Analog ground	
94	AUDSYNC/PTD7	I/O	198	DRAK1/PTD0	I		Analog ground
95	VssQ	-	199	DREQ0/PTD4	I	Analog ground	
96	CS0/MCS0	O	200	DREQ1/PTD6	I		Analog ground
97	VccQ	-	201	RESETP	I	Analog input / Port L	
98	CS2/PTK0	I/O	202	CA	I		Analog power supply +3.3 V
99	CS3/PTK1	I/O	203	MD3	I	Analog power supply +3.3 V	
100	CS4/PTK2	I/O	204	MD4	I		Analog power supply +3.3 V
101	CS5/CE1A/PTK3	I/O	205	MD5	I	Analog power supply +3.3 V	
102	CS6/CE1B	I/O	206	AVss	I/O		Analog power supply +3.3 V
103	CE2A/PTD4	O	207	AN0/PTL0	I/O	Analog power supply +3.3 V	
104	CE2B/PTD5	O	208	AN1/PTL1	I		Analog power supply +3.3 V

● T8F02TB-0102 (X0060A00) SWP50 (Tone Generator)

DM: IC012

PIN NO.	OUTER NO.	NAME	I/O	FUNCTION	PIN NO.	OUTER NO.	NAME	I/O	FUNCTION
1	E5	VSS2	-	Ground	106	E22	VSS2	-	Ground
2	D4	VDDC	-	Power supply +1.5 V	107	D23	VDDC	-	Power supply +1.5 V
3	C3	CD15	I/O	Data bus of internal register	108	C24	HMA15	O	Wave memory address bus
4	B2	CD13	I/O						
5	A1	CD14	I/O						
6	D5	CD6	I/O						
7	E6	CD2	I/O						
8	C4	CD9	I/O						
9	B3	CD11	I/O						
10	A2	CD12	I/O	113	D24	HMA27	O	Wave memory address bus	
11	A3	CD10	I/O	114	C25	HMA0	O		
12	D6	CD1	I/O	115	B26	HMA23	O		
13	E7	VSS	-	Ground	116	C26	HMA24		O
14	C5	CD5	I/O	Data bus of internal register	117	F23	VDD5	-	Power supply +3 V
15	B4	CD8	I/O		118	G22	HMA26	O	
16	A4	CD7	I/O		119	E24	HMA30	O	
17	D7	VSS2	-	Ground	120	D25	HMA28	O	Wave memory address bus (Lower data memory)
18	C6	CD0	I/O	121	D26	HMA29	O		
19	E8	VSS	-	Ground	122	G23	LMA17	O	
20	D8	VDD5	-	Power supply +3 V	123	F24	LMA19	O	Ground
21	B5	CD4	I/O	Data bus of internal register	124	H22	VSS	-	
22	A5	CD3	I/O		125	H23	VDD5	-	Wave memory address bus (Lower data memory)
23	C7	CA2	I		126	E25	LMA20	O	
24	B6	CA0	I	127	E26	LMA21	O		
25	E9	CA8	I	128	G24	LMA9	O		
26	D9	CA9	I	129	F25	LMA18	O		
27	C8	CA5	I	130	J22	LMA12	O		
28	A6	CA1	I	131	J23	LMA4	O		
29	B7	CA3	I	132	H24	LMA6	O		
30	A7	CA4	I	133	F26	LMA8	O		
31	E10	VSS2	-	Ground	134	G25	LMA7	O	
32	D10	VDDC	-	Power supply +1.5 V	135	G26	LMA10	O	Power supply +1.5 V
33	C9	CA10	I	Address bus of internal register	136	K22	VSS2	-	
34	B8	CA6	I		137	K23	VDDC	-	
35	A8	CA7	I		138	J24	LMA13	O	
36	E9	CA11	I		139	H25	LMA11	O	
37	E11	CA14	I		140	H26	LMA5	O	
38	D11	CA15	I		141	J25	LMA3	O	
39	C10	CA12	I		142	L22	LMA16	O	Wave memory address bus (Lower data memory)
40	A9	CA13	I	143	L23	LMA0	O		
41	B10	CSN0	I	Chip select	144	K24	LMA2	O	
42	A10	CSN1	I		145	J26	LMA14	O	
43	E12	VSS	-	Ground	146	K25	LMA15	O	
44	D12	VDD5	-	Power supply +3 V	147	K26	LMA1	O	Ground
45	C11	WRN	I	148	M22	VSS	-	Power supply +3 V	
46	B11	RDN	I	149	M23	VDD5	-		
47	A11	WAIT0	O	150	L24	LMA22	O	Wave memory address bus (Lower data memory)	
48	C12	IRQ0	O	151	L25	LMA23	O		
49	E13	DREQ0	O	152	L26	LMA24	O		
50	D13	TRST	O	153	M24	LMA27	O		
51	C13	TRST	O	154	M25	LMA28	O		
52	A12	VSS	-	Ground	155	N22	LMA25		O
53	B12	XO	O	156	N23	LMA26	O		
54	E13	XI	O	157	N24	LMA30	O		
55	A13	VDD5	-	Power supply +3 V	158	M26	LMA29		O
56	A14	SLAVE	I	159	X1	MOEN	O		Wave memory output enable
57	E14	TMS	I	160	N26	MWEN	O	Wave memory write enable	
58	D14	TD0	O	161	P26	LMD15	I/O		Wave memory data bus (Lower 16 bit)
59	C14	ICN	O	162	P22	VSS	-	Ground	
60	B14	RFCLK0	O	163	P23	VDD5	-		Power supply +3 V
61	B15	PLL_TSTN	I	164	P24	LMD13	I/O	Wave memory data bus (Lower 16 bit)	
62	C15	PLL_BP	I	165	P25	LMD14	I/O		
63	D15	VDD5	-	Power supply +3 V	166	R25	LMD11		I/O
64	E15	VSS	-	Ground	167	R24	LMD10		I/O
65	A15	RFCLK1	I	168	R23	VDD5	-	Power supply +3 V	
66	A16	VDDC	-	Power supply +1.5 V	169	R22	VSS		-
67	B16	TMODE	I	170	R26	LMD12	I/O	Wave memory data bus (Lower 16 bit)	
68	C16	PLL_AVDD	-	Test pin	171	T26	LMD9		I/O
69	D16	NC	-	Power supply (PLL)	172	T25	LMD8		I/O
70	E16	NC	-	Not used	173	T24	LMD7		I/O
71	A17	PLL_AVSS	-	Power supply (PLL)	174	T23	VSS2	-	Ground
72	B17	TEST1	I	Test pin	175	T22	VSS	-	
73	A18	VSS	-	Ground	176	U26	LMD6	I/O	Wave memory data bus (Lower 16 bit)
74	C17	SY1	I	Sync. clock	177	U25	LMD5	I/O	
75	D17	VDDC	-	Power supply +1.5 V	178	V26	LMD3	I/O	
76	E17	VSS2	-	Ground	179	U24	LMD4	I/O	
77	B18	KONTRG0	O	Key on data	180	U23	VDDC	-	Power supply +3 V
78	A19	KONTRG1	O		181	U22	VSS2	-	
79	C18	CK512	O		182	V25	LMD2	I/O	Wave memory data bus (Lower 16 bit)
80	B19	CK128	O	183	W26	LMD0	I/O		
81	D18	BCLK	O	184	V24	LMD1	I/O		
82	E18	SY0	O	185	W25	DCSL0	O	Power supply +3 V	
83	C19	HMA20	O	186	V23	VDD5	-		Power supply +1.5 V
84	A20	HMA21	O	187	V22	VDDC	-		
85	B20	HMA19	O	188	W24	DCSL1	O	MASK signal	
86	C20	HMA18	O	189	Y26	DQML3	O		
87	D19	VDD5	-	Power supply +1.5 V	190	Y25	DQML1	O	
88	E19	VSS	-	Ground	191	Y24	DMAL14	O	Address bus (DIMM, SDRAM)
89	A21	HMA9	O	192	W23	VDD5	-	Power supply +3 V	
90	B21	HMA7	O	193	W22	VSS	-		Ground
91	A22	HMA6	O	194	AA26	DMAL13	O	Address bus (DIMM, SDRAM)	
92	D20	HMA8	O	195	AA25	DMAL12	O		
93	C21	HMA10	O	196	AB26	DMAL9	O		
94	E20	HMA17	O	197	Y23	VSS	-		Ground
95	D21	VDD5	-	Power supply +1.5 V	198	AA24	DMAL11	O	
96	B22	HMA11	O	199	Y22	VSS	-	Ground	
97	A23	HMA4	O	200	AA23	DMAL10	O		Address bus (DIMM, SDRAM)
98	C22	HMA5	O	201	AB25	DMAL8	O		
99	B23	HMA13	O	202	AC26	DMAL6	O		
100	E21	VSS	-	Ground	203	AB24	DMAL7	O	
101	D22	HMA12	O	204	AC25	DMAL5	O	Address bus (DIMM, SDRAM)	
102	C23	HMA3	O	205	AA22	VSS2	-		Ground
103	A24	HMA14	O	206	AB23	VSS	-		
104	B24	HMA2	O	207	AC24	DMAL4	O	Address bus (DIMM, SDRAM)	
105	A25	HMA1	O	208	AD26	DMAL3	O		
				209	AD25	DMAL2	O		
				210	AE26	DMAL0	O		

PIN NO.	OUTER NO.	NAME	I/O	FUNCTION	PIN NO.	OUTER NO.	NAME	I/O	FUNCTION
211	AB22	VSS2	-	Ground	316	AB5	VSS2	-	Ground
212	AC23	VDDC	-	Power supply +1.5 V	317	AC4	VDDC	-	Power supply +1.5 V
213	AD24	DMAL1	O	Address bus (DIMM, SDRAM)	318	AD3	MELI6	I	MEL wave data input
214	AE25	DCSL2	O		319	AE2	MELI7	I	
215	AF26	DRAS0	O	Power supply +3 V	320	AF1	ADLR	O	Power supply +3 V
216	AC22	DCAS0	O		321	AB4	DITO	O	
217	AB21	VDD5	-	Power supply +3 V	322	AA5	VSS	-	Ground
218	AD23	DCLKIN	I		323	AC3	AFRM	I/O	
219	AE24	DQML2	O	MASK signal	324	AD2	ACLK	I/O	
220	AF25	DCSL3	O		325	AE1	ADIR	O	
221	AF24	DQML0	O	MASK signal	326	AD1	ADAT0	I/O	Data bus (ABUS)
222	AC21	VDD5	-		327	AA4	VDD5	-	
223	AB20	VSS	-	Ground	328	Y5	ADAT9	I/O	
224	AD22	DWEN0	O		329	AB3	ADAT3	I/O	
225	AE23	DCLK0	O	Data bus (ABUS)	330	AC2	ADAT1	I/O	
226	AF23	DCLK1	O		331	AC1	ADAT2	I/O	
227	AC20	DCLKE	O	Wave memory data bus (Upper data memory)	332	Y4	ADAT10	I/O	
228	AD21	HMD13	I/O		333	AA3	ADAT6	I/O	
229	AB19	VSS	-	Ground	334	W5	VSS	-	Ground
230	AC19	VDD5	-		335	W4	VDD5	-	
231	AE22	HMD15	I/O	Wave memory data bus (Upper data memory)	336	AB2	ADAT4	I/O	
232	AF22	HMD14	I/O		337	AB1	ADAT5	I/O	
233	AD20	HMD10	I/O	Power supply +1.5 V	338	Y3	ADAT11	I/O	Data bus (ABUS)
234	AE21	HMD12	I/O		339	AA2	ADAT7	I/O	
235	AB18	VDDC	-	Power supply +3 V	340	V5	ADAT14	I/O	
236	AC18	VDD5	-		341	V4	ADAT15	I/O	
237	AD19	HMD7	I/O	Wave memory data bus (Upper data memory)	342	W3	ADAT13	I/O	
238	AF21	HMD11	I/O		343	AA1	ADAT8	I/O	
239	AE20	HMD9	I/O	Ground	344	Y2	ADAT12	I/O	
240	AF20	HMD8	I/O		345	Y1	TDI	I	
241	AB17	VSS2	-	Power supply +1.5 V	346	U5	VSS2	-	Ground
242	AC17	VDDC	-		347	U4	VDDC	-	
243	AD18	HMD4	I/O	Wave memory data bus (Upper data memory)	348	V3	HRD13	I/O	
244	AE19	HMD6	I/O		349	W2	HRD15	I/O	
245	AF19	HMD5	I/O	Ground	350	W1	HRD14	I/O	
246	AE18	HMD3	I/O		351	V2	HRD12	I/O	
247	AB16	VSS	-	Ground	352	T5	HRD7	I/O	
248	AC16	VSS2	-		353	T4	HRD6	I/O	
249	AD17	HMD1	I/O	Wave memory data bus (Upper data memory)	354	U3	HRD10	I/O	
250	AF18	HMD2	I/O		355	V1	HRD11	I/O	
251	AE17	HMD0	I/O	Ground	356	U2	HRD9	I/O	
252	AF17	DSSH0	I/O		357	U1	HRD8	I/O	
253	AB15	VSS	-	Power supply +3 V	358	R5	VSS	-	Ground
254	AC15	VDD5	-		359	R4	VDD5	-	
255	AD16	DSSH1	O	MASK signal	360	T3	HRD5	I/O	
256	AE16	DQMH3	O		361	T2	HRD4	I/O	
257	AF16	DQMH1	O	Address bus (DIMM, SDRAM)	362	T1	HRD3	I/O	
258	AD15	DMAH14	O		363	R3	HRD2	I/O	
259	AE15	DMAH13	O	Ground	364	R2	HRD1	I/O	
260	AB14	VSS	-		365	P5	VDD5	-	Power supply +3 V
261	AC14	VSS2	-	366	P4	HRD0	I/O	DRAM data bus	
262	AD14	DMAH11	O	DRAM write enable	367	P3	RWEN		O
263	AF15	DMAH12	O		368	R1	RQML	O	
264	AE14	DMAH10	O	Address bus (DIMM, SDRAM)	369	P2	RCAS	O	DRAM column address strobe (RAS signal)
265	AF14	DMAH9	O		370	P1	RRAS	O	
266	AF13	DMAH8	O	Power supply +3 V	371	N1	RA13	O	DRAM address bus
267	AB13	VDD5	-		372	N5	VDD5	-	
268	AC13	VDD5	-	Power supply +3 V	373	N4	VDD5	-	Power supply +3 V
269	AD13	DMAH6	O		374	N3	RA10	O	
270	AE13	DMAH7	O	Address bus (DIMM, SDRAM)	375	N2	RA12	O	DRAM address bus
271	AE12	DMAH4	O		376	M2	RA1	O	
272	AD12	DMAH3	O	Power supply +1.5 V	377	M3	RA2	O	Power supply +3 V
273	AC12	VDD5	-		378	M4	VDD5	-	
274	AB12	VSS	-	Ground	379	M5	VSS	-	
275	AF12	DMAH5	O		Address bus (DIMM, SDRAM)	380	M1	RA0	O
276	AF11	DMAH2	O	381		L1	RA3	O	
277	AE11	DMAH1	O	Ground	382	L2	RA4	O	
278	AD11	DMAH0	O		383	L3	RA5	O	
279	AC11	VSS	-	Ground	384	L4	VSS2	-	
280	AB11	VSS	-		385	L5	VSS	-	Ground
281	AF10	DRAS1	O	MASK signal	386	K1	RA6	O	
282	AE10	DSSH2	O		387	K2	RA7	O	
283	AF9	DQMH2	O	Power supply +1.5 V	388	J1	RA9	O	
284	AD10	DSSH3	O		389	K3	RA8	O	
285	AC10	VDDC	-	Ground	390	K4	VDDC	-	Power supply +1.5 V
286	AB10	VSS2	-		391	K5	VSS2	-	
287	AE9	DQMH0	O	MASK signal	392	J2	RA11	O	DRAM address bus
288	AF8	DWEN1	O		393	H1	RCLK	O	
289	AD9	DCAS1	O	Power supply +3 V	394	J3	RCLK	O	
290	AE8	DCLK2	O		395	H2	RCLKIN	I	
291	AC9	VDD5	-	Power supply +1.5 V	396	J4	VDD5	-	Power supply +3 V
292	AB9	VDDC	-		397	J5	VDDC	-	
293	AD8	DCLK3	O	MEL wave data output	398	H3	RQMH	O	
294	AF7	MEL00	O		399	G1	LRD15	I/O	
295	AE7	MEL01	O	Power supply +3 V	400	G2	LRD14	I/O	
296	AD7	MEL02	O		401	G3	LRD13	I/O	
297	AC8	VDD5	-	Ground	402	H4	VDD5	-	Power supply +3 V
298	AB8	VSS	-		403	H5	VSS	-	
299	AF6	MEL03	O	MEL wave data output	404	F1	LRD12	I/O	
300	AE6	MEL04	O		405	F2	LRD11	I/O	
301	AF5	MEL05	O	Ground	406	E1	LRD8	I/O	
302	AC7	MEL06	O		407	G4	VDD5	-	Ground
303	AD6	MEL07	O	For DAC LR clock	408	F3	LRD10	I/O	
304	AB7	WCLK0	O		409	G5	VDD5	-	Ground
305	AC6	WCLK1	O	410	F4	LRD9	I/O		
306	AE5	EIRQ	O	DRAM data bus (Lower data)	411	E2	LRD7	I/O	
307	AF4	EICN	O		412	D1	LRD5	I/O	
308	AD5	ESDA	I/O	DRAM data bus (Lower data)	413	E3	LRD6	I/O	
309	AE4	ESCL	I/O		414	D2	LRD4	I/O	
310	AB6	MELI0	I	Ground	415	F5	VSS2	-	
311	AC5	MELI1	I		416	E4	VSS	-	Ground
312	AD4	MELI2	I	MEL wave data input	417	D3	LRD3	I/O	
303	AF3	MELI3	I		418	C1	LRD2	I/O	
314	AE3	MELI4	I	DRAM data bus (Lower data)	419	C2	LRD1	I/O	
315	AF2	MELI5	I		420	B1	LRD0	I/O	

### ● M66291GP (X2156A00) USB Controller

DM: IC002

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Core Vcc		Core power supply	25	D2	I/O	Data bus
2	GND		Ground	26	D3	I/O	
3	D-	I/O	USB data (-)	27	D4	I/O	
4	D+	I/O	USB data (+)	28	D5	I/O	
5	Vbus	I	V bus input	29	D6	I/O	
6	Tr ON	O	Tr ON output	30	D7	I/O	
7	TEST	I	TEST input	31	D8/P0	I/O	
8	/Dack1	I	DMA reception signal 1	32	D9/P1	I/O	
9	/Dreq1	O	DMA request 1	33	D10/P2	I/O	
10	/TC1	I	TC input	34	D11/P3	I/O	
11	/INT1/SOF	O	Interrupt 1/SOF output	35	IOVcc		I/O power supply Ground
12	IOVcc		I/O power supply	36	GND		
13	Xout	O	Output for oscillation	37	D12/P4	I/O	Data bus
14	Xin	I	Input for oscillation	38	D13/P5	I/O	
15	GND		Ground	39	D14/P6	I/O	
16	Core Vcc		Core power supply	40	D15/A0	I/O	Highlight strobe/bus width select Interrupt 0 Read strobe Low write strobe Chip select Reset signal DMA request 0 DMA reception signal 0
17	A1	I	Address bus	41	/HWR//BYTE	I	
18	A2	I					
19	A3	I					
20	A4	I					
21	A5	I					
22	A6	I	Data bus	42	/INT0	O	
23	D0	I/O					
24	D1	I/O					
				43	/RD	I	
				44	/LWR	I	
				45	/CS	I	
				46	/RST	I	
				47	/Dreq0	O	
				48	/Dack0	I	

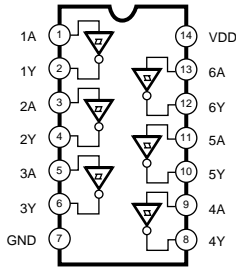
### ● PCM1730E-1/2K (X2077A00) DAC (Digital to Analog Converter)

DM: IC029

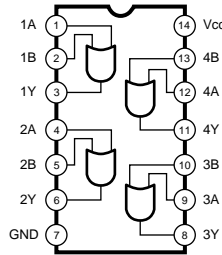
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	/RST	I	Reset	15	MUTE	I	Analog output mute control
2	ZEROL	O	Zero flag for L-channel	16	IOUTr-	O	R-channel analog current output -
3	ZEROR	O	Zero flag for R-channel	17	IOUTr+	O	R-channel analog current output +
4	LRCK	I	Left and right clock	18	AGND1	-	Analog ground
5	DATA	I	Serial audio data input	19	VCOM1	-	Internal bias de-coupling pin
6	BCK	I	Bit clock input	20	VCOM2	-	Common voltage for I/V
7	SCKI	I	System clock input	21	IREF	-	Output current reference bias pin
8	DGND	-	Digital ground	22	VCOM3	-	Internal bias de-coupling pin
9	VDD	-	Digital supply, +3.3V	23	VCC1	-	Analog supply, +5 V
10	DEPMP0	I	De-emphasis control	24	VCC2	-	Analog supply, +5 V
11	DEMP1	I					
12	FMT0	I	Audio data format select	25	IOUtl+	O	L-channel analog current output +
13	FMT1	I					
14	FMT2	I					
				26	IOUtl-	O	L-channel analog current output -
				27	AGND2	I	Analog ground
				28	VCC3	I	Analog power supply, +5 V

## IC BLOCK DIAGRAM

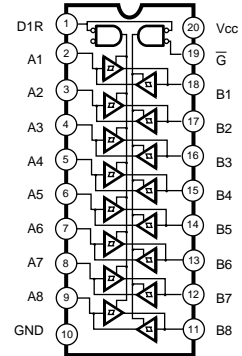
- **TC74VHC14FT** (XV890A00)  
Hex Inverter  
DM: IC006



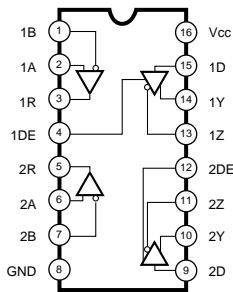
- **TC74VHC32FT** (XY945A00)  
**74VHC32MTCX** (X0299A00)  
Quad 2 Input OR  
DM: IC007



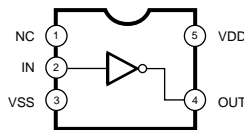
- **TC74VHCT245AFT** (XT744A00)  
**74VHCT245AMTCX** (X0295A00)  
Octal 3-State Bus Transceiver  
DM: IC009, 010



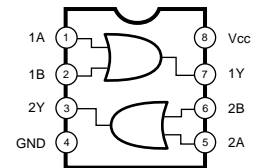
- **SN75C1168NSR** (XU073A00)  
Line Driver / Receiver  
DJK: IC002



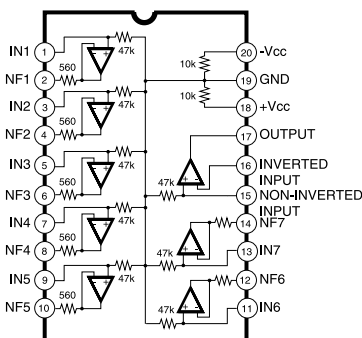
- **SC7SU04FEL** (XI348A00)  
**TC7SU04F** (XY447A00)  
Inverter Gate  
DJK: IC001



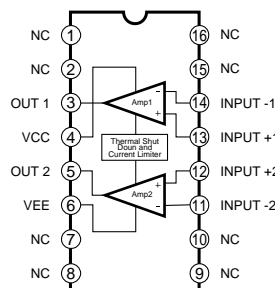
- **TC7WH32FU(TE12L)** (XY364A00)  
Dual 2 Input OR Gate  
DM: IC013



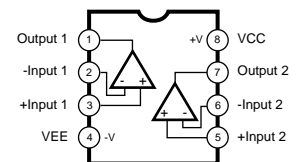
- **M5229FP** (XY487A00)  
7 Band Graphic Equalizer  
AJK: IC300, 400



- **LA6517M-TE-R** (XT131A00)  
Dual Low Voltage Power Amplifier  
AJK: IC200



- **μPC4570G2** (XF291A00)  
Dual Operational Amplifier  
DM: IC033-35  
AJK: IC100  
PNL: IC073

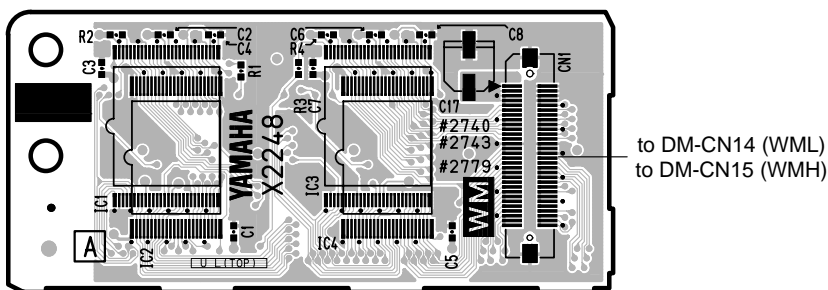


## ■ CIRCUIT BOARDS

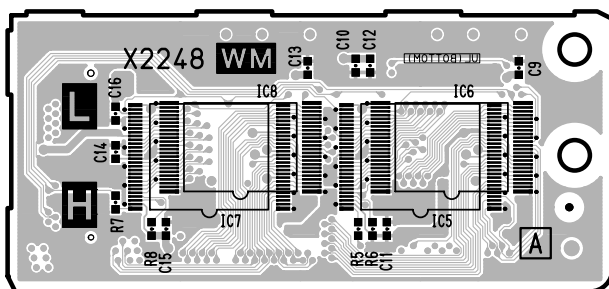
<b>AJK</b> (X2246B0) .....	25	<b>MV2</b> (X2244B0) .....	32
<b>DJK</b> (X2245C0) .....	28	<b>NET1</b> (XT123B0) .....	29
<b>DM</b> (XZ592H0) .....	26/27	<b>PEDAL (DJK)</b> (X2245C0) .....	28
<b>FU120L</b> (XS882A0) .....	33	<b>PEDAL (SW)</b> (X0193A0) .....	34
<b>GHD EBUS L</b> (XZ138D0) .....	35	<b>PL</b> (XR898A0) .....	32
<b>GHD H</b> (X2218A0) .....	37	<b>PNL</b> (X2243D0) .....	30/31
<b>GHD M</b> (X2217A0) .....	36	<b>PNR</b> (X2244B0) .....	32/33
<b>HP</b> (XQ390A0) .....	32	<b>WML</b> (X2248A0) .....	24
<b>MA120</b> (XQ393E0) .....	29	<b>WMH</b> (X2248A0) .....	24
<b>MK SUB</b> (XZ142B0) .....	34		

**Note** : See parts list for details of circuit board component parts.

- WML Circuit Board
- WMH Circuit Board



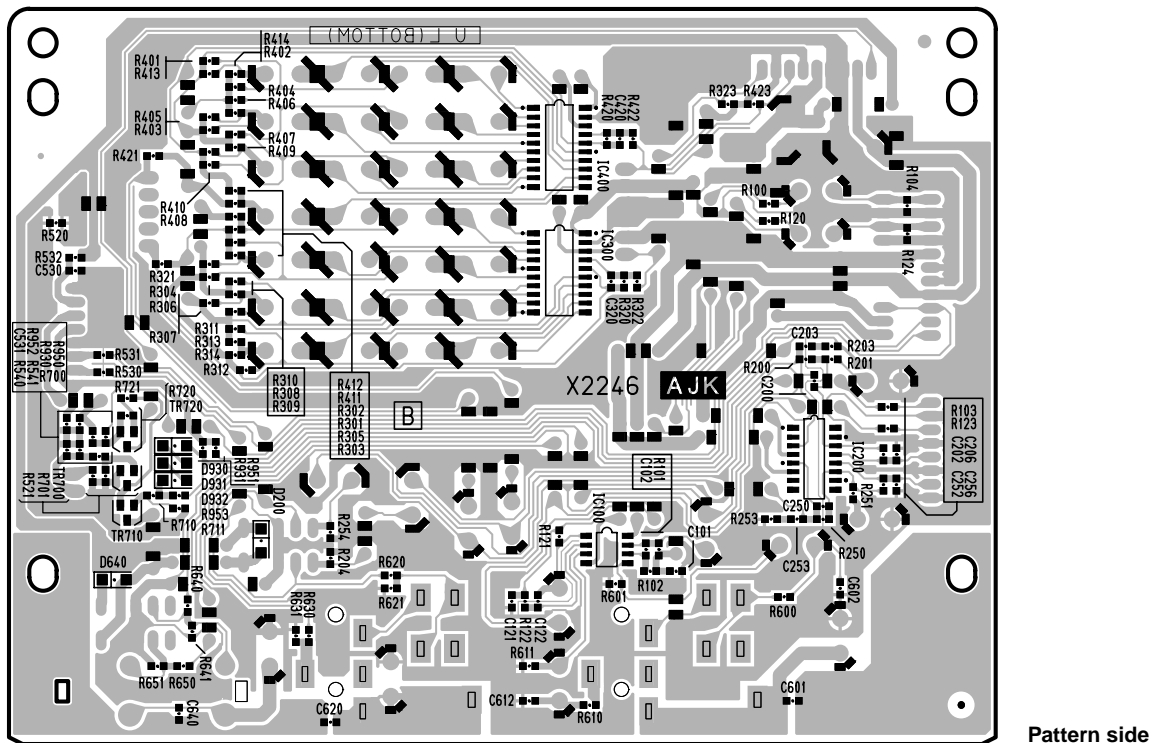
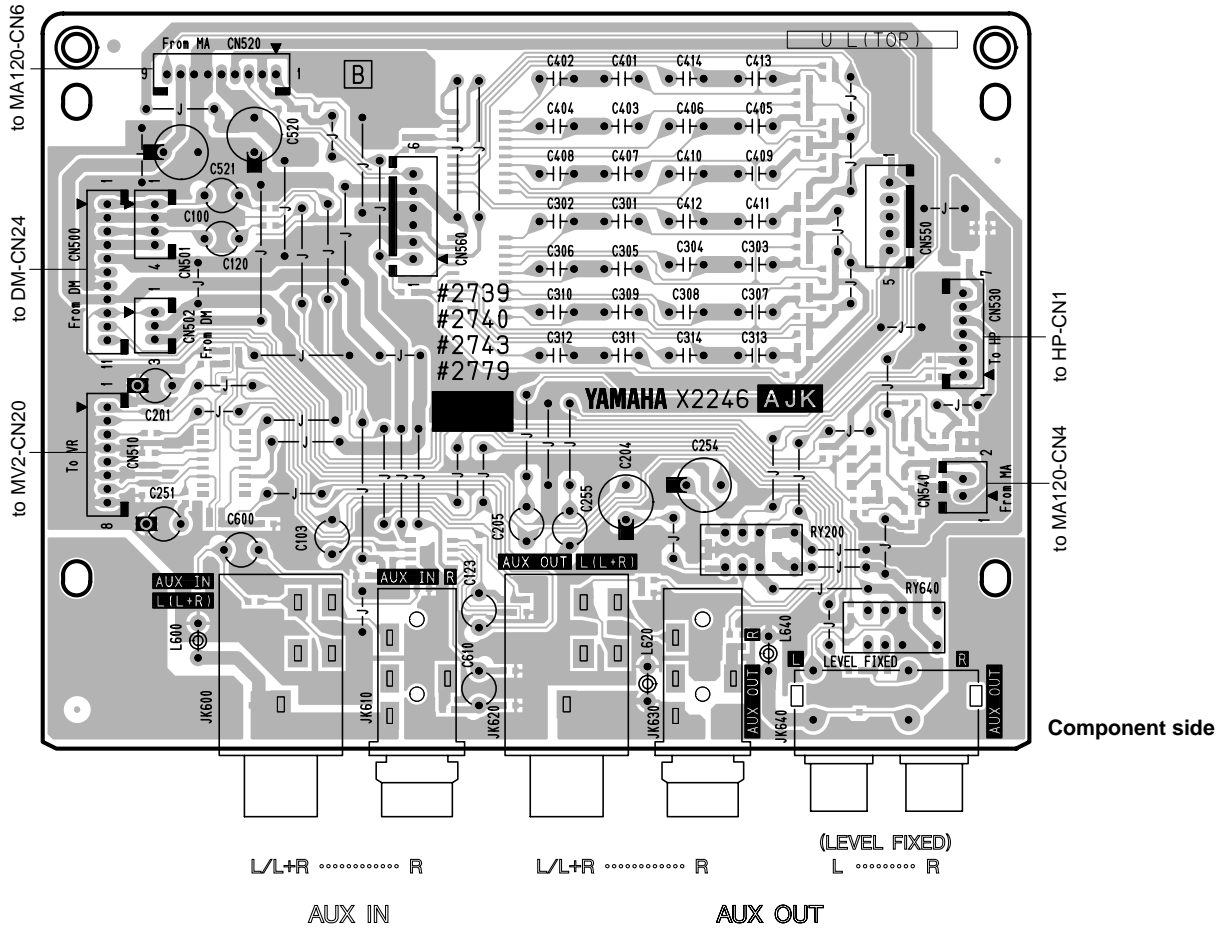
Component side



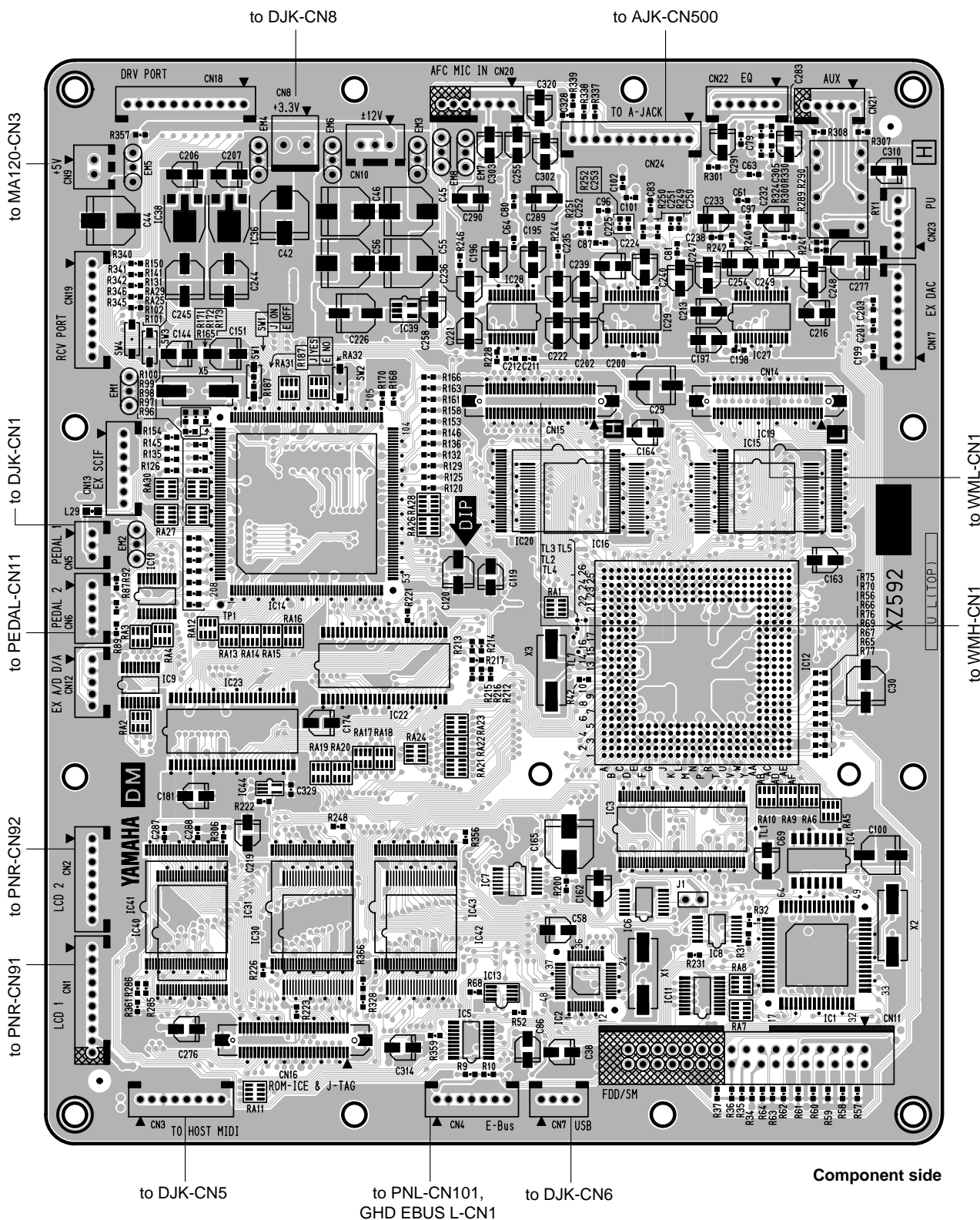
Pattern side



● AJK Circuit Board

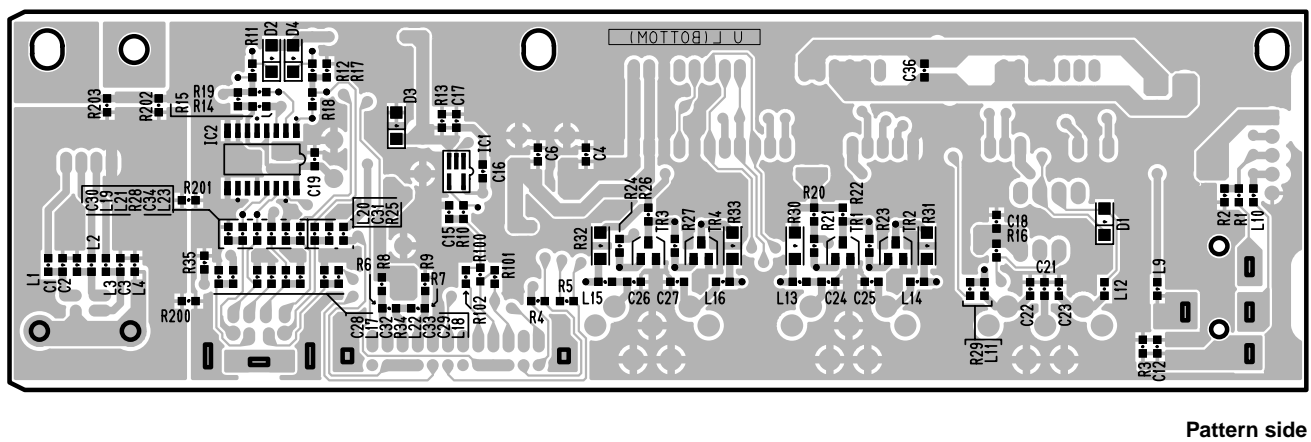
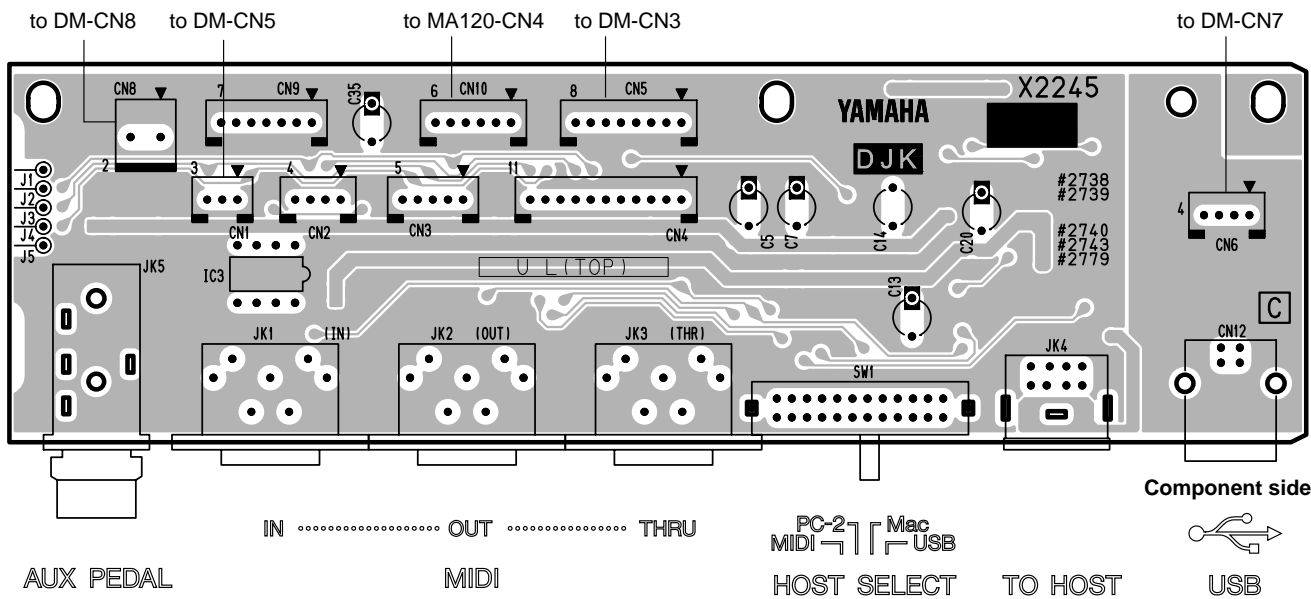


● DM Circuit Board (XZ592H0)

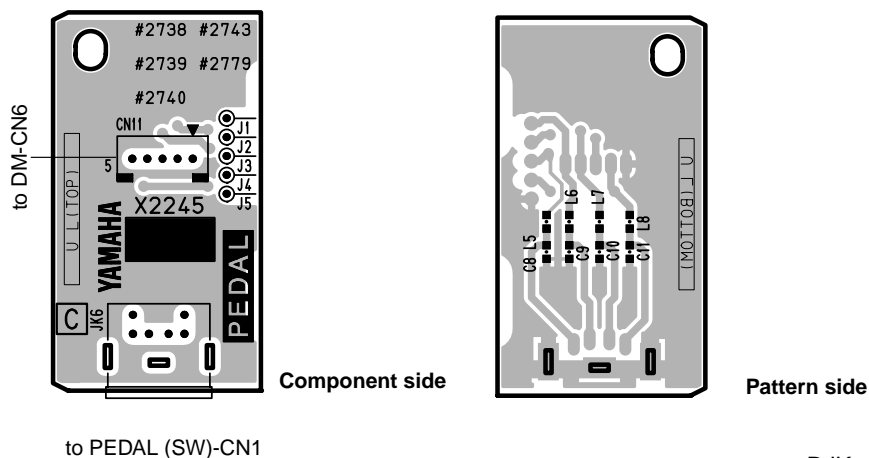




● DJK Circuit Board



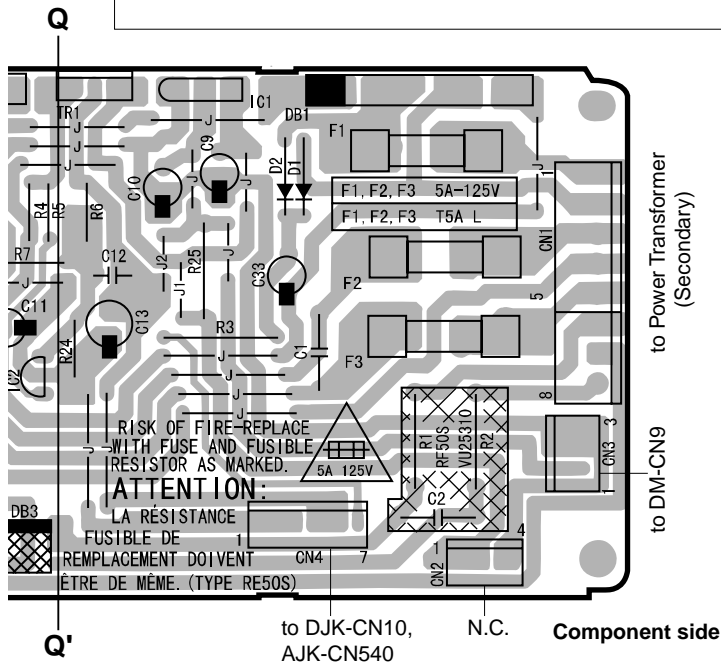
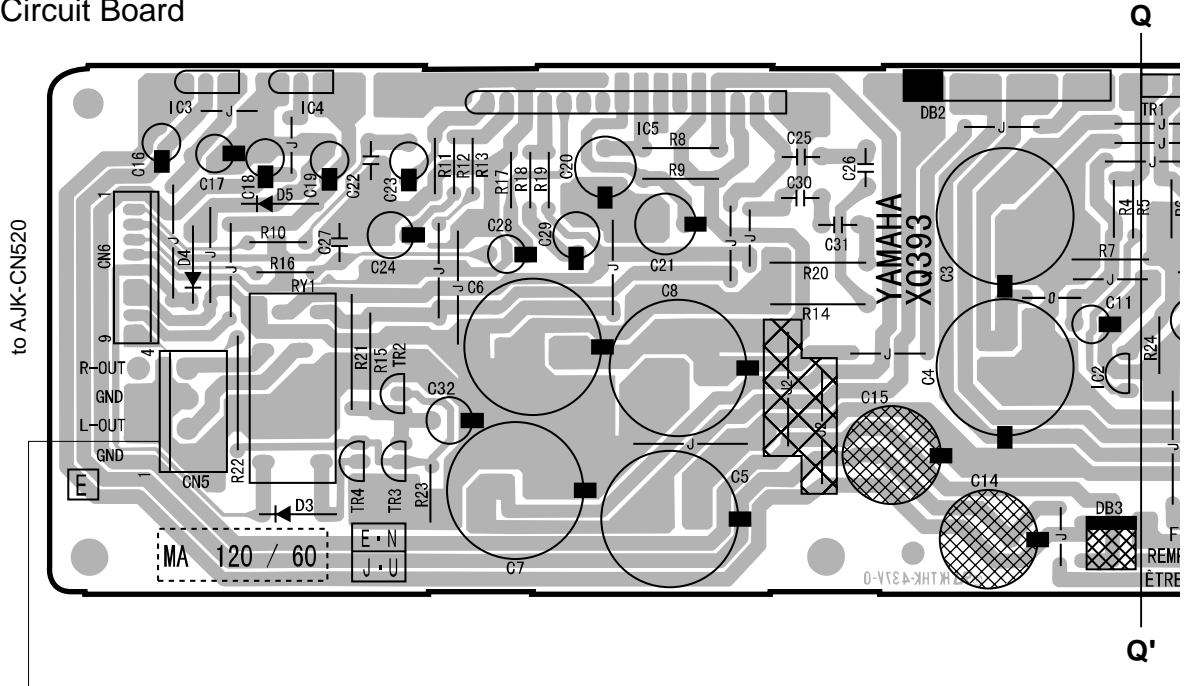
● PEDAL (DJK) Circuit Board

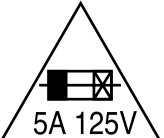


DJK: 2NA-V849640

PEDAL (DJK): 2NA-V849640


● MA120 Circuit Board



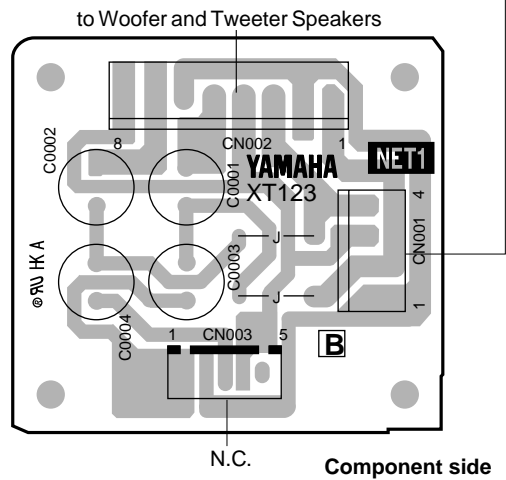



**CAUTION: REPLACE WITH SAME TYPE 5A 125V FUSE.**


**ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 5A 125V.**

NOTE : The symbol (  ) shows Slow operating fuse.

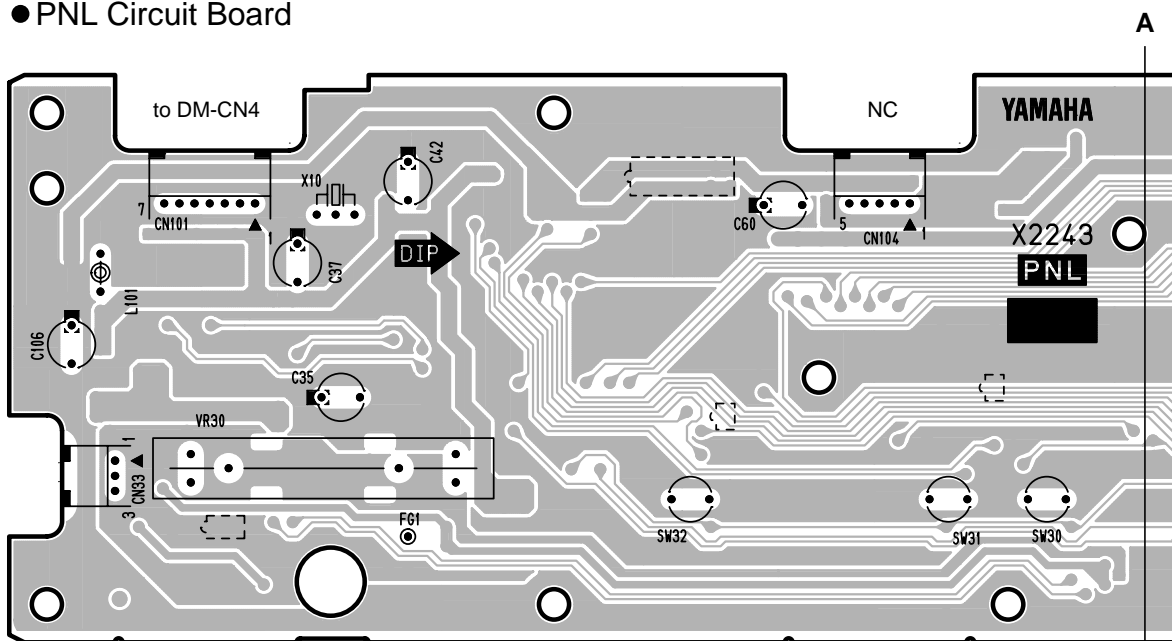
● NET1 Circuit Board



MA120: 2NA-VT14340 

NET1: 2NA-VY64290 

● PNL Circuit Board



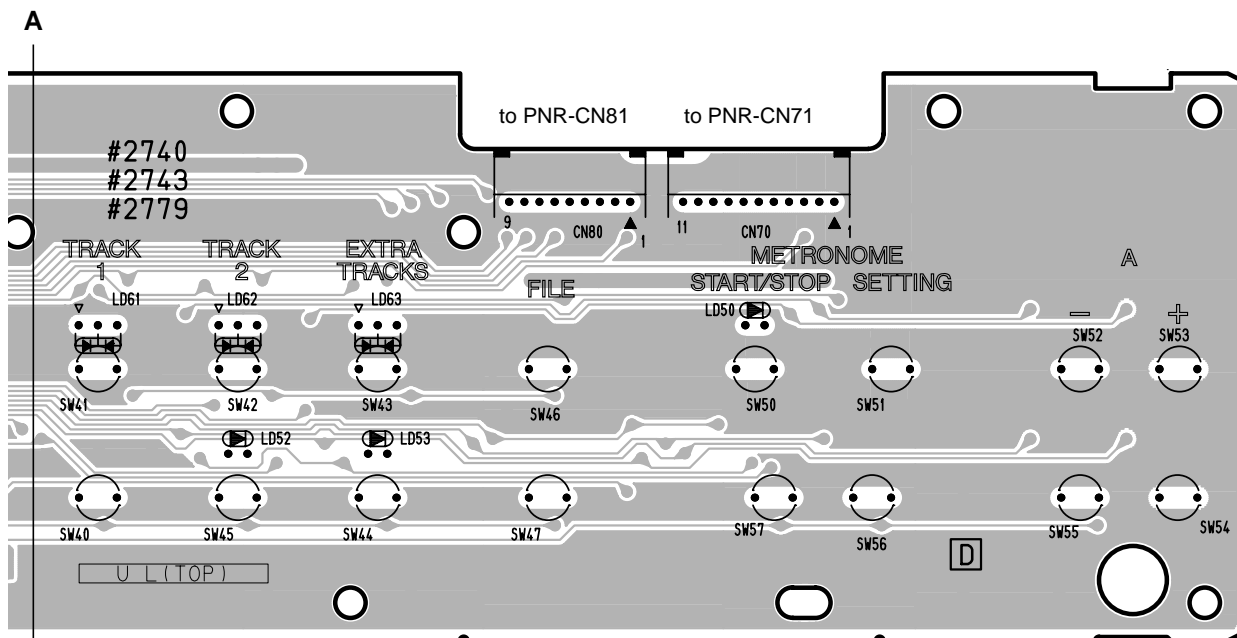
SONG . . . . . KEYBOARD

SONG BALANCE

DEMO

SONG SELECT

NEW SONG



TOP

START/STOP

REC

SONG SETTING

DOWN

UP

TEMPO

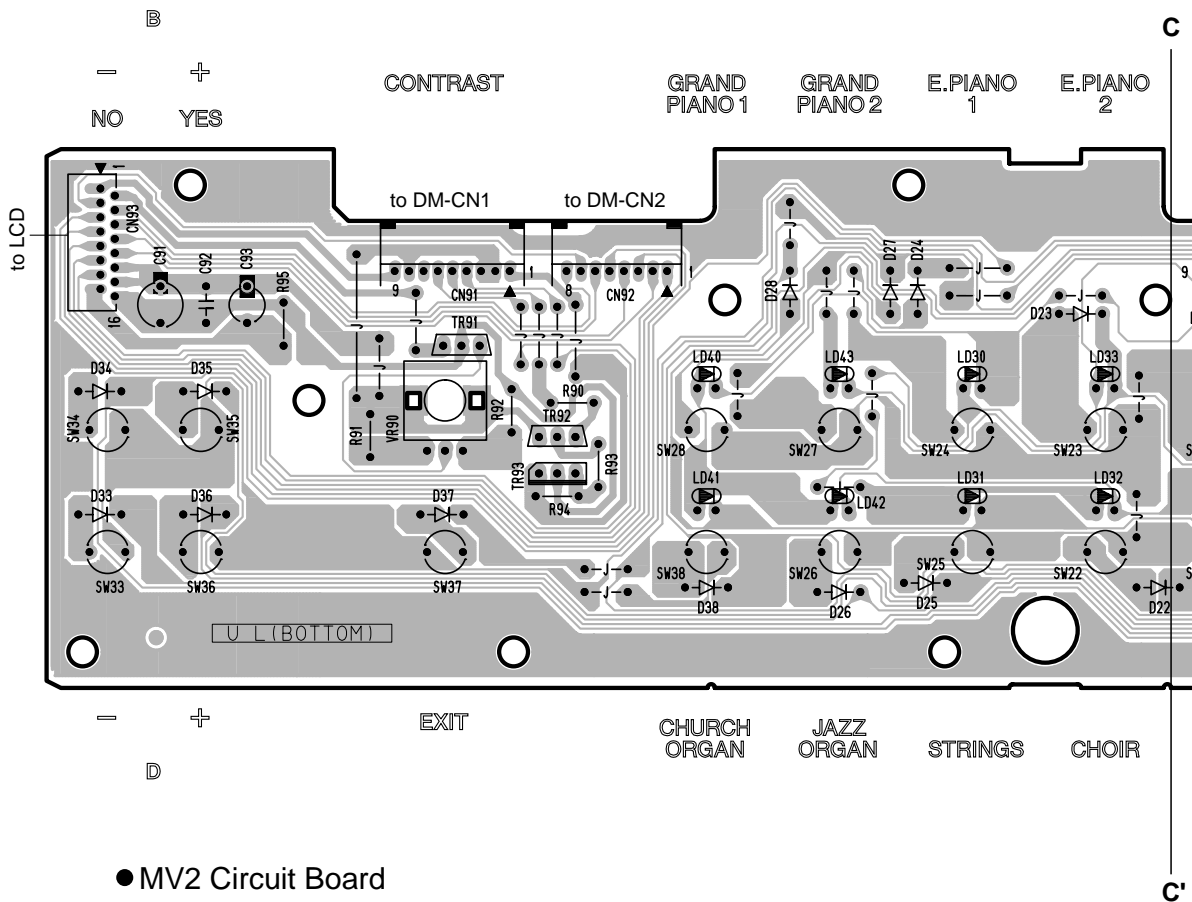
SYNCHRO START

SONG

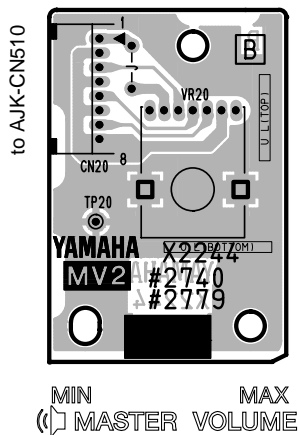
Component side



● PNR Circuit Board

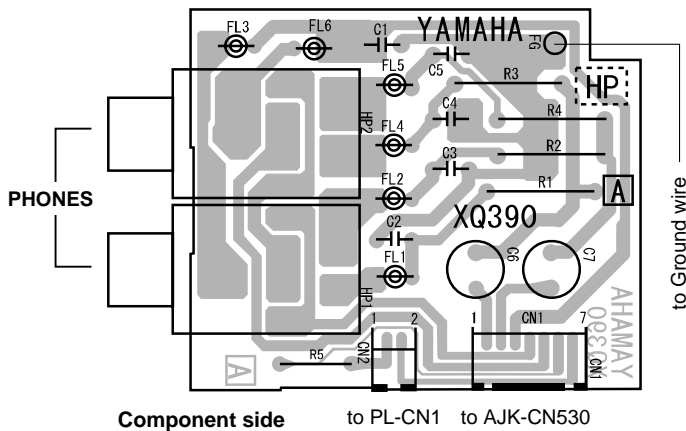


● MV2 Circuit Board



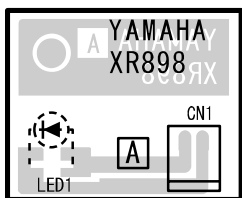
Component side

● HP Circuit Board



Component side

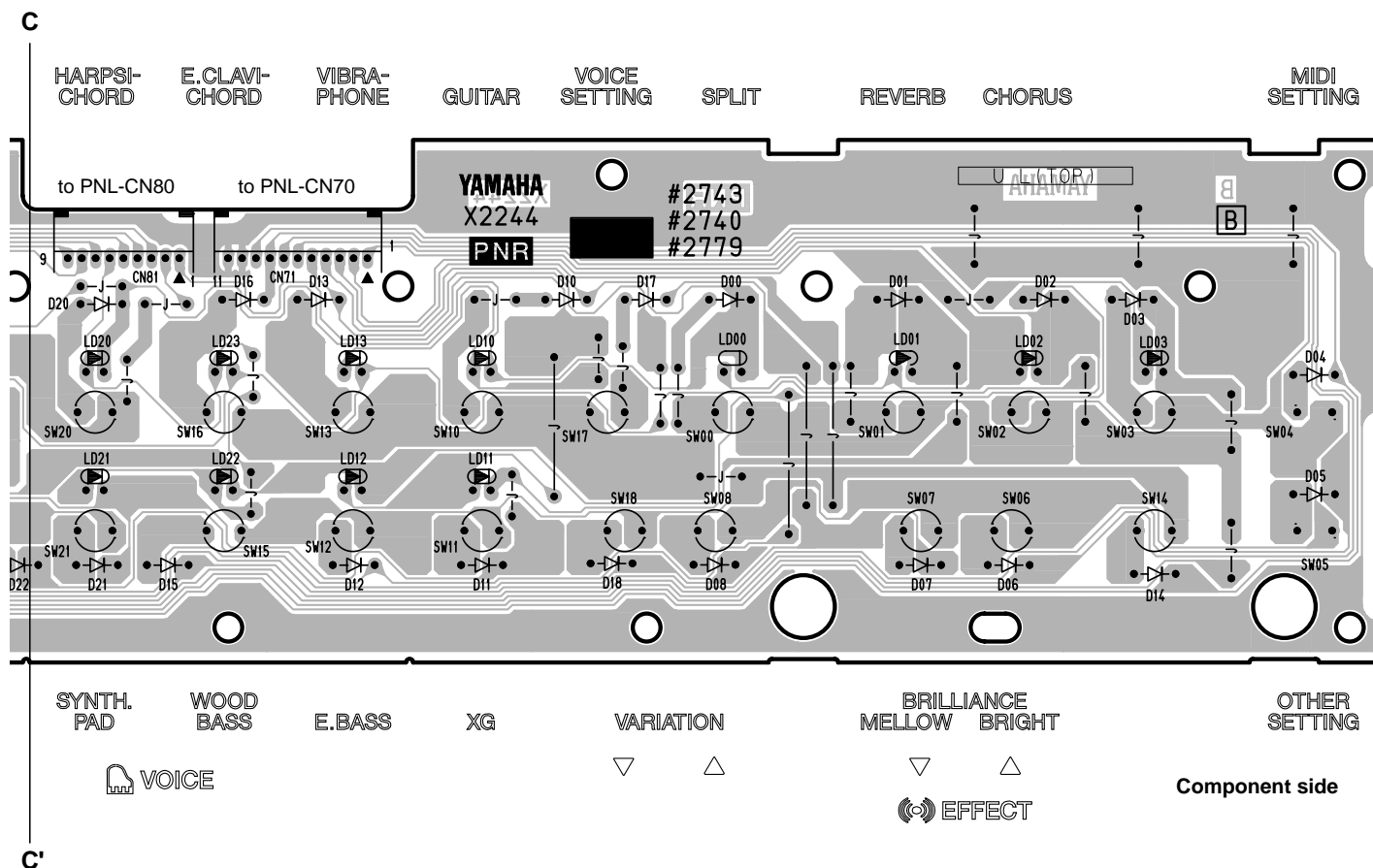
● PL Circuit Board



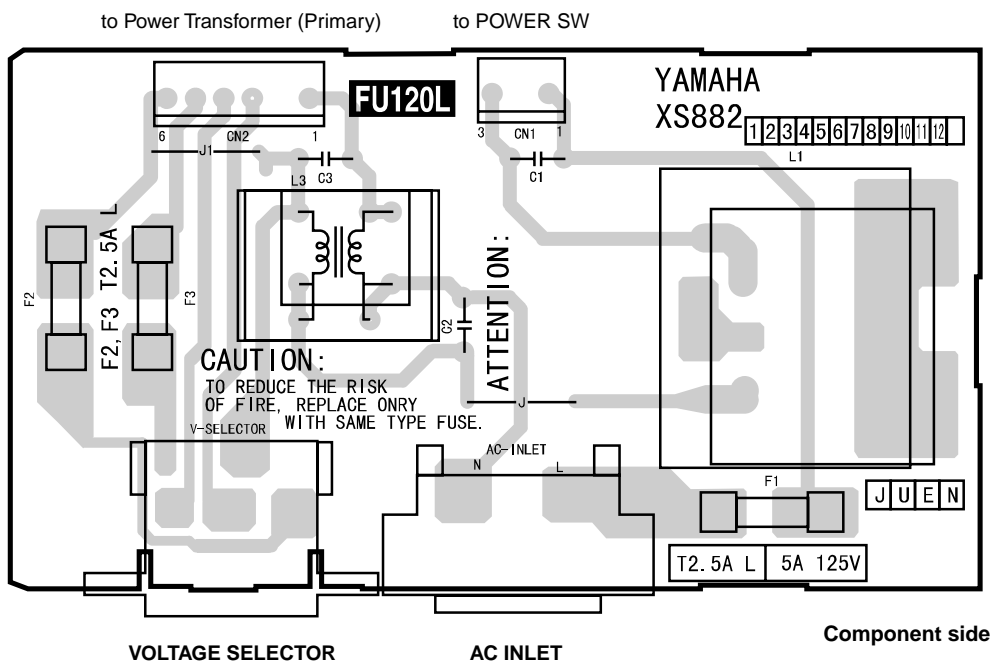
Component side

- PNR: 2NA-V845520
- MV2: 2NA-V845520
- HP: 2NA-V004770
- PL: 2NA-VN63740



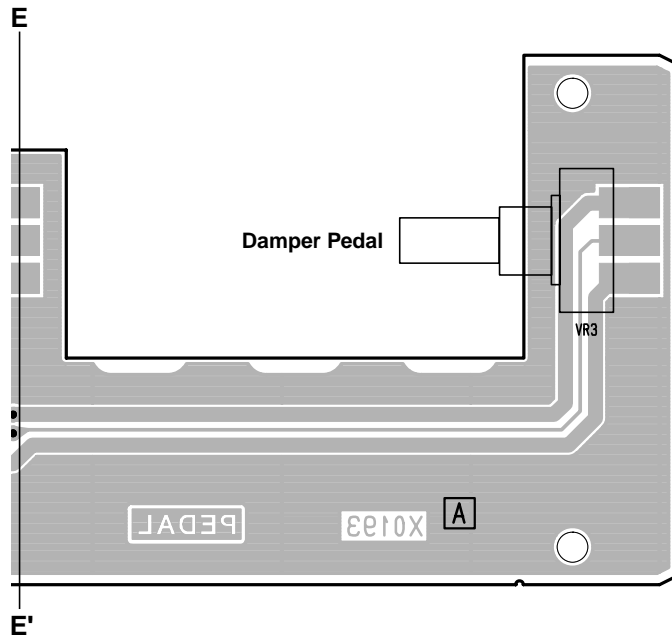
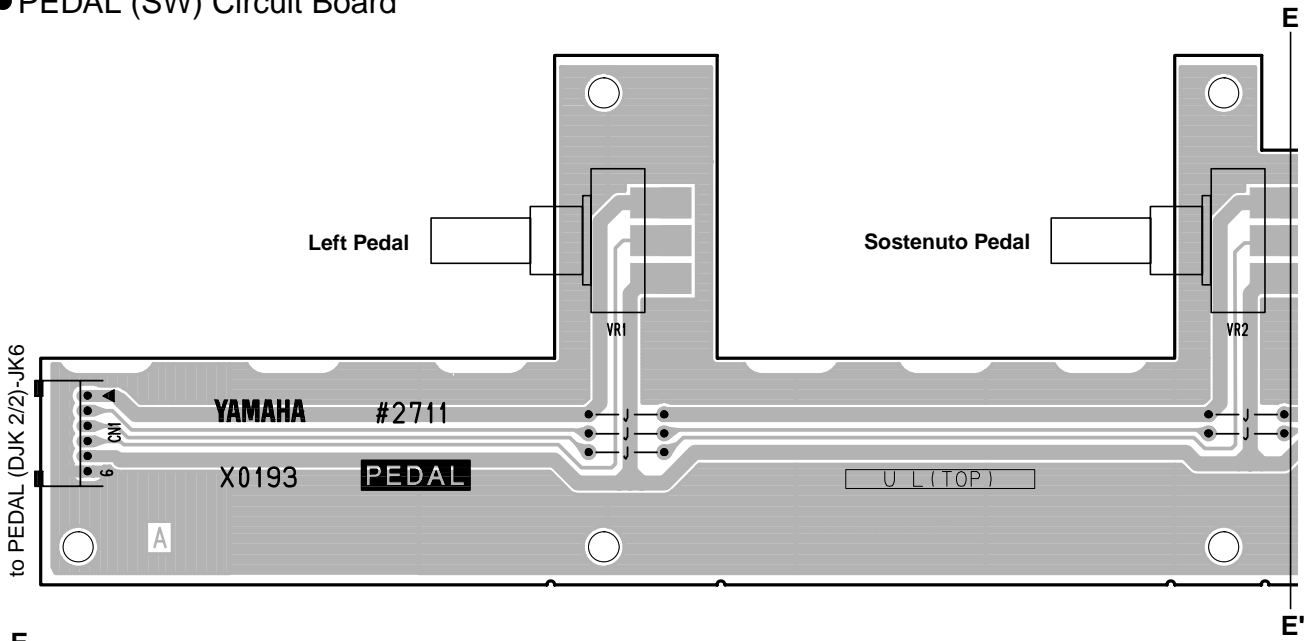


● FU120L Circuit Board



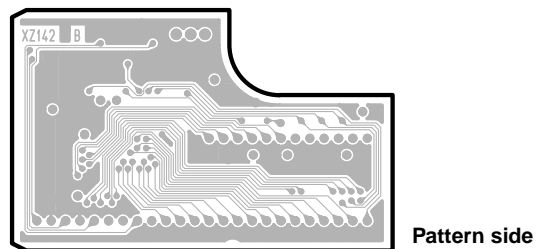
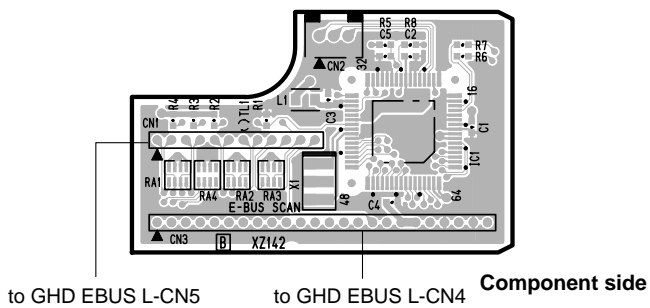
- PNR: 2NA-V845520
- FU120L: 2NA-VV65070

● PEDAL (SW) Circuit Board



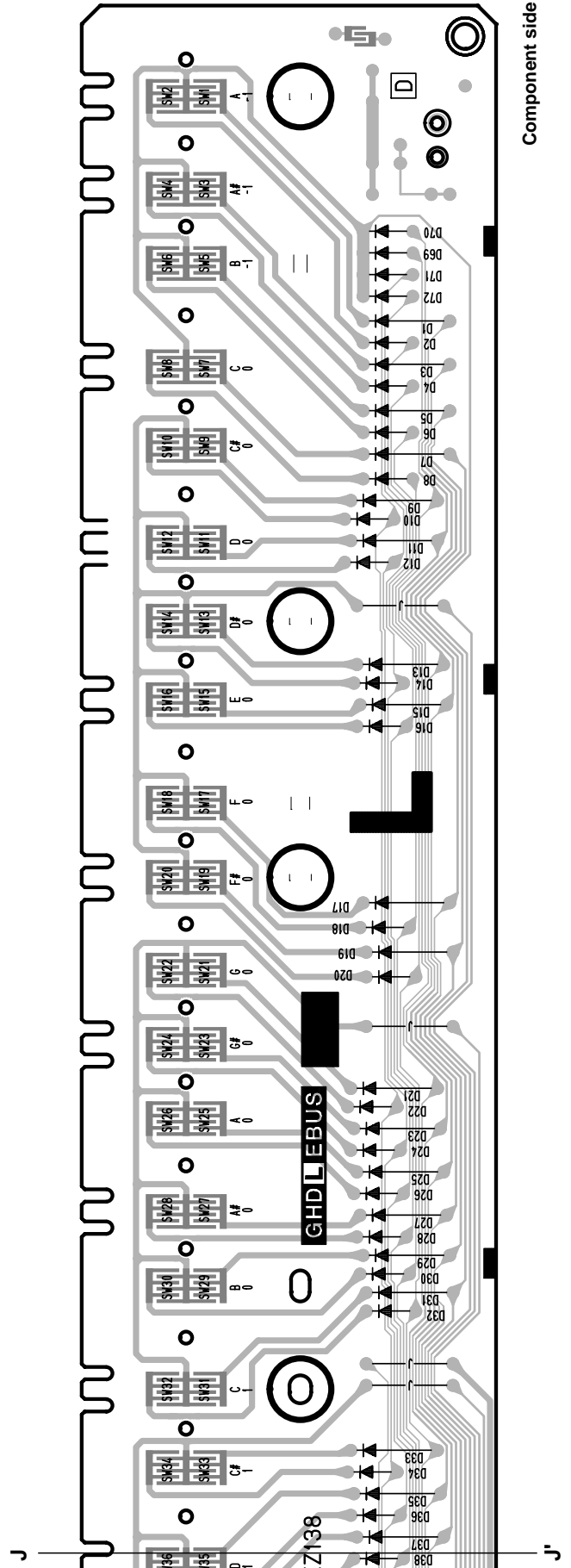
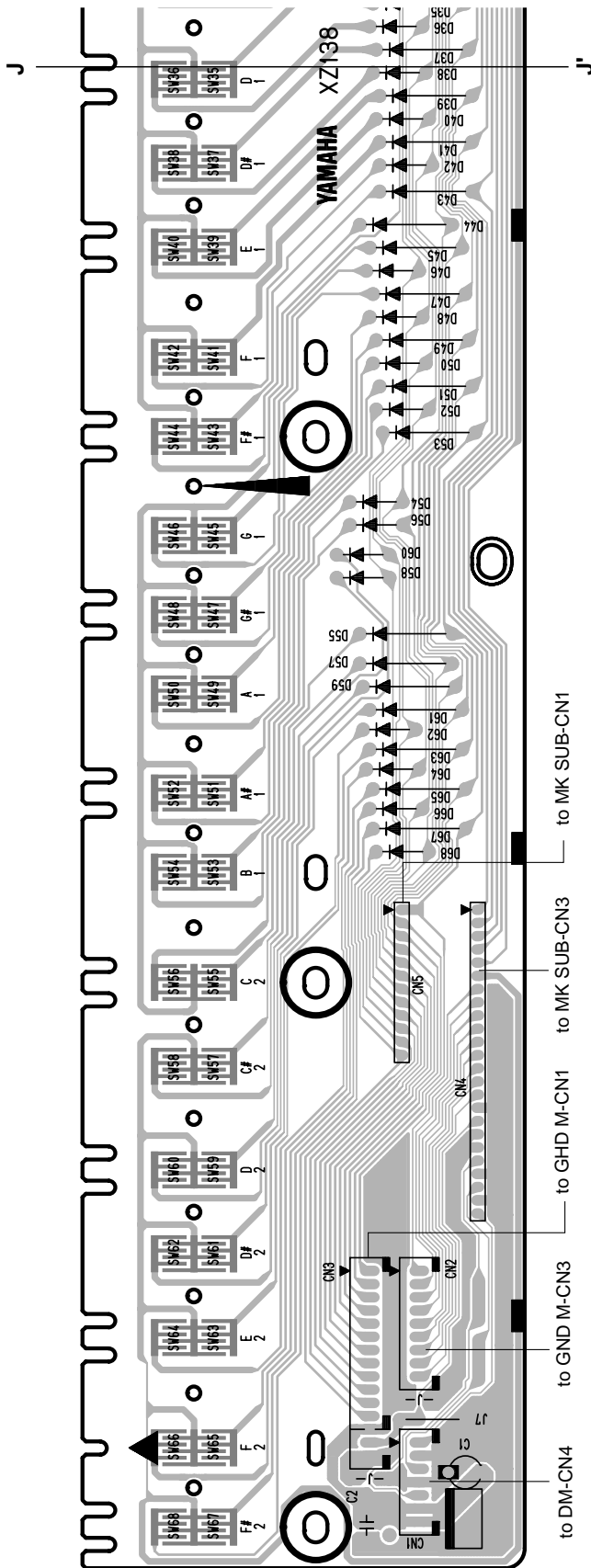
Component side

● MK SUB Circuit Board



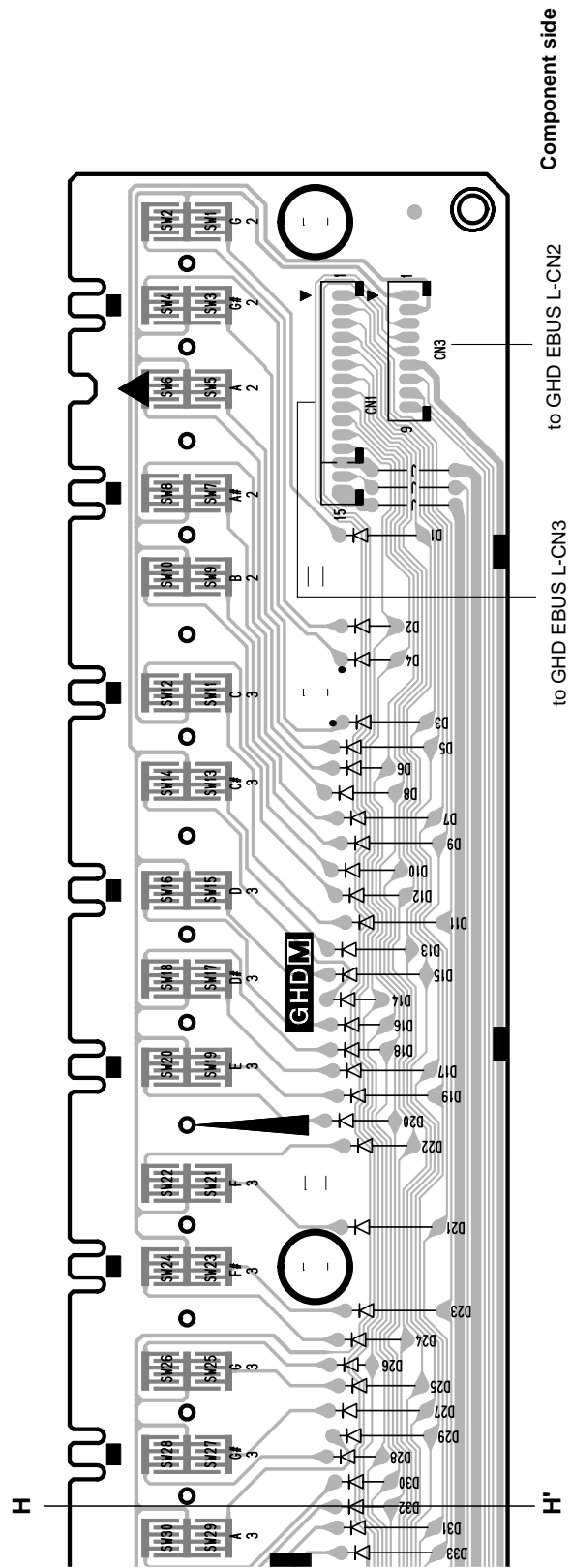
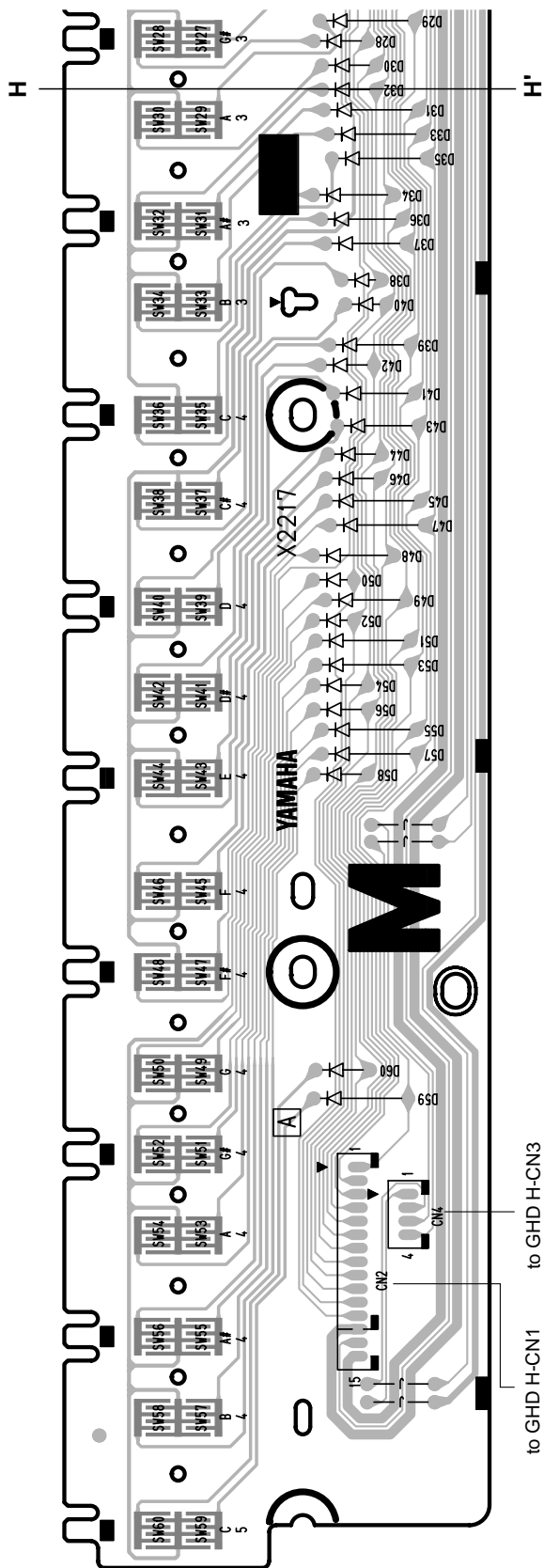
PEDAL (SW): 2NA-V767550  
MK SUB:

● GHD EBUS L Circuit Board



Component side

● GHD M Circuit Board

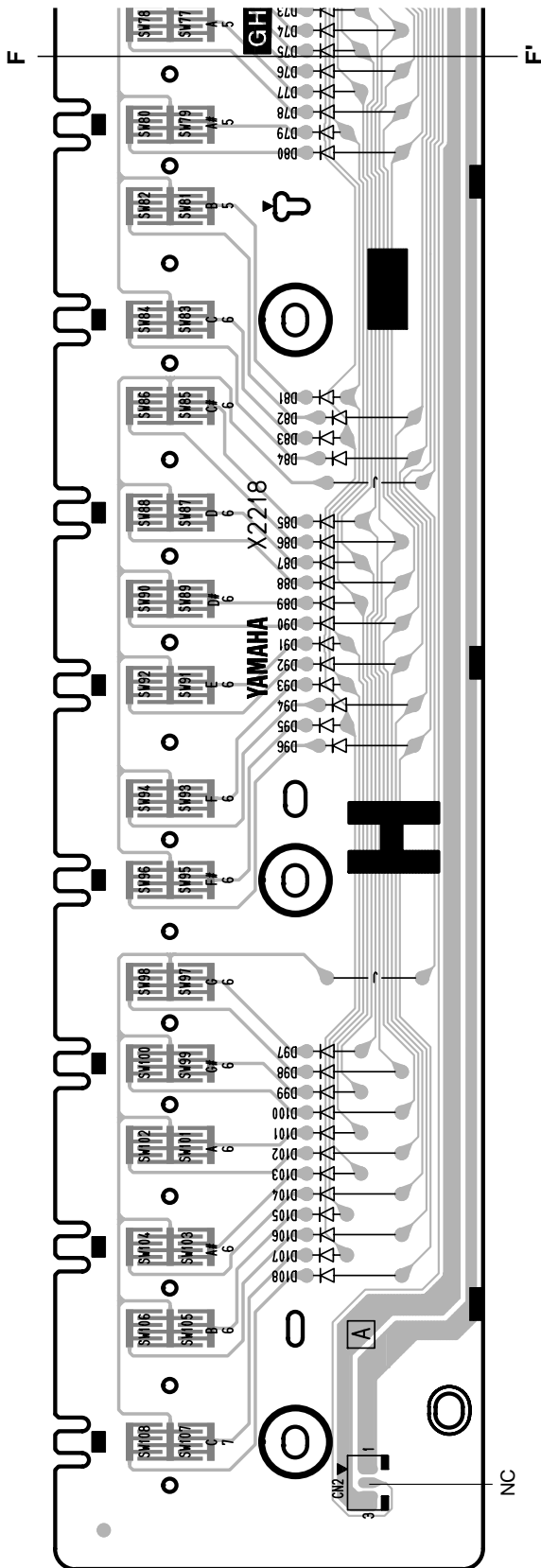


Component side

to GHD EBUS L-CN2

to GHD EBUS L-CN3

● GHD H Circuit Board



## ■ TEST PROGRAM

### 1. Preparation

- 1) Measuring instruments: Frequency counter, level meter (with JIS-C filter)  
 Note) [PHONES] jack: 33Ω load, [AUX OUT] jack: 10kΩ load  
 2) Jigs: Foot volume (FC-7), MIDI cable

### 2. How to enter the Test Program

While pressing the [C#2], [F2] and [G#2] keys, turn on the [POWER] switch.

### 3. Proceeding through the Test Program

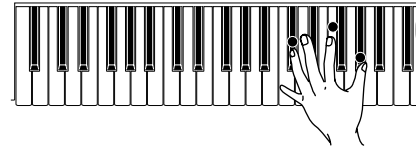
When the test program is activated, the sign “TEST CLP 150” appears on the LCD display.

Select the test program item by pressing the [UP] or [DOWN] button of [TEMPO].

Press the [START/STOP] button of [METRONOME] to execute testing.

When the test result is OK, press the [START/STOP] button of [METRONOME] to return to the screen of test items for selection. Select the next test item by pressing the [UP] or [DOWN] button of [TEMPO]. When the test result is OK, an asterisk (\*) is added in front of its item name on display.

When the test result is NG, press the [DEMO] button to return to the screen of test items for selection and then turn off the [POWER] switch to end the test program.



### 4. Test program list

No.	LCD	Function and judgment criteria
1	001: Main Version	Displays the Main ROM version. The ROM (Program) version is displayed.
2	002: Wave Version	Displays the Wave ROM version. The Wave ROM version is displayed.
3	003: Main Rom Chk1	Checks ROMs that are connected to the CPU bus. Outputs the C4 sine wave when the check result is OK and “Main Rom Chk1 OK” is displayed on the LCD display.
4	004: Main Ram Chk1	Checks RAMs that are connected to the CPU bus. Outputs the C4 sine wave when the check result is OK and “Main Ram Chk1 OK” is displayed on the LCD display.
5	005: FlashRom Chk1	Checks Flash Memories that are connected to the CPU bus. Outputs the C4 sine wave when the check result is OK and “Flash Chk1 OK” is displayed on the LCD display.
6	006: WaveRom Chk1	Checks Wave ROMs. Outputs the C4 sine wave when the check result is OK and “WaveRom Chk1 OK” is displayed on the LCD display.
8	008: EffectRam Chk	Checks the effect RAM. Outputs the sine wave (C4) when the check result is OK and displays “effectRam Chk OK” is displayed on the LCD display.
9	009: TG Chk	Checks the Sound Source (Autoscale). Sequentially outputs the sine wave by changing the tone of the sound source from the low keys (from C2 to G4). Check by hearing that the produced sound is free from noise and abnormal sound.
10	010: Pitch Chk	Checks the pitch. Connect the frequency counter to the [PHONES] jack. Outputs the sine wave at $440.5 \pm 0.2\text{Hz}$ (PAN = Center) when the test is executed. Connect the level meter (with a JIS-C filter) to the [PHONES] jack. Set the [MASTER VOLUME] at the MIN. position and check the output level. PHONES L, R: -90.0dBm or less

No.	LCD	Function and judgment criteria
11	011: Output R	<p>Checks the R channel output.</p> <p>Connect the level meter (with a JIS-C filter) to each output terminal.</p> <p>Set the [MASTER VOLUME] at the MAX. position and check the output level of the R channel. (1kHz sine wave, PAN = R)</p> <p>PHONES L: -40.0dBm or less                      PHONES R: +2.0dBm ± 2dB</p> <p>AUX OUT L/L+R: -50dBm or less                      AUX OUT R: -1.5dBm ± 2dB</p> <p>AUX OUT (LEVEL FIXED)L: -50dBm or less                      AUX OUT (LEVEL FIXED)R: -2.0dBm ± 2dB</p>
12	012: Output L	<p>Checks the L channel output.</p> <p>Connect the level meter (with a JIS-C filter) to each terminal.</p> <p>Set the [MASTER VOLUME] at the MAX. position and check the output level of the L channel. (1kHz sine wave, PAN = R)</p> <p>PHONES L: +2.0dBm ± 2dB                      PHONES R: -40dBm or less</p> <p>AUX OUT L/L+R: -1.5dBm ± 2dB                      AUX OUT R: -50dBm or less</p> <p>AUX OUT (LEVEL FIXED)L: -2.0dBm ± 2dB                      AUX OUT (LEVEL FIXED)R: -50dBm or less</p>
13	013: EQ Low	<p>Checks the EQ-LOW frequency.</p> <p>Check that 65.4Hz (C1) sine wave is output. (PAN = Center)</p>
14	014: EQ Mid	<p>Checks the EQ-MID frequency.</p> <p>Check that 523Hz (C4) sine wave is output. (PAN = Center)</p>
15	015: EQ High	<p>Checks the EQ-HIGH frequency.</p> <p>Check that 4186Hz (C7) sine wave is output. (PAN = Center)</p>
16	016: D/A Noise	<p>This test item is included in the factory inspection.</p>
17	017: SW, LED Chk	<p>Checks the switches on the panel and LED.</p> <p>Press the switches as their names are indicated on the LCD. When each switch is pressed, its pre-assigned note is output. (See Table 1 on p. 41.) When the switch with LED is pressed, that LED will light up at the same time. Upon completion of checking all switches, "SW. LED Chk OK" is displayed on the LED display.</p>
18	018: All LED On	<p>Check that all LEDs light up.</p>
19	019: Red LED On	<p>Check that all red LEDs light up.</p>
20	020: Green LED On	<p>Check that all green LEDs light up.</p>
21	021: All LCD On	<p>Check that all LCD dots light up.</p>
22	022: All LCD Off	<p>Check that all LCD dots go off.</p>
23	023: SoftPedal Chk	<p>Checks the soft pedal.</p> <p>Check that the C3 note is output when the test is executed and the soft pedal is depressed and the C4 note is output when it is released. For the check result, check that "Soft Test OK" is displayed on the LCD display.</p>
24	024: SostenutoPedalChk	<p>Checks the sostenute pedal.</p> <p>Check that the C3 note is output when the test is executed and the sostenute pedal is depressed and the C4 note is output when it is released. For the check result, check that "Sostenute Test OK" is displayed on the LCD display.</p>
25	025: DamperPedalChk	<p>Checks the damper pedal.</p> <p>Check that the C3 note is output when the damper pedal is depressed and the C4 note is output when it is released. For the check result, check that "Damper Test OK" is displayed on the LCD display.</p>
26	026: ExpPedalChk	<p>Connect the foot volume (FC-7) to the [AUX PEDAL] jack.</p> <p>Check that the C3 note is output when the pedal is depressed fully to the back (DOWN) and the C4 note is output when it is depressed fully to the front (UP). For the check result, check that "Aux Pedal OK" is displayed on the LCD display.</p>

No.	LCD	Function and judgment criteria
27	027: Song Balance Chk	Checks the song balance. When the [SONG BALANCE] control is set to the "SONG" position, the C3 note is output and "SONG BAL MIN" is displayed on the LCD display, when it is set to the "KEYBOARD" position, the G3 note is output and "SONG BAL MAX" is displayed and when it is set back to the "CENTER" position, the C4 note is output and the check result is displayed on the LCD display. Check that "SONG BAL OK" is displayed.
29	029: Midi Chk	After connecting the [MIDI in] jack and the [MIDI OUT] jack with a MIDI cable, execute the test. (Keep the [HOST SELECT] switch at the MIDI position. ) Then the C4 tone is output and the check result is displayed on the LCD display. Check that "Midi Chk OK" is displayed.
30	030: To Host Chk	Short-circuit between pins 3 and 5, pins 6 and 8 of the [TO HOST] terminal and execute the test. Change the [HOST SELECT] switch position according to the LCD indication and check that the following tone is output at each position. (C3 at USB, C4 at PC and C5 at MAC). For the check result, check that "To Host Chk OK" is displayed on the LCD display.
31	031: USB Chk	Checks the USB jack. Connect the [USB] jack and the personal computer with a USB cable and set the [HOST SELECT] switch to the USB position. When the test is executed, "USB Chk In" is displayed on the LCD display. When the cable is disconnected, "USB Chk Out" is displayed on the LCD display. For the check result, check that the C4 tone is output and "USB Chk OK" is displayed. (Set to the Thru On position on the computer side.)
32	032: Keyboard Type Chk	Checks the keyboard type. When the test is executed, the C4 tone is output and check result is displayed on the LCD display. Check that "Keyboard Type Chk OK" is displayed.
37	037: Main Rom Chk2	Checks all the ROMs that are connected to the CPU bus. For the check result, check that "Main Rom Chk2 OK" is displayed on the LCD display.
38	038: Main Ram Chk2	Checks all the RAMs that are connected to the CPU bus. For the check result, check that "Main Ram Chk2 OK" is displayed on the LCD display.
39	039: Flash Rom Chk2	Checks all the flash memories that are connected to the CPU bus. For the check result, check that "Flash Chk2 OK" is displayed on the LCD display. It takes about 50 seconds.
40	040: WaveRom Chk2	Checks the WAVE ROMs. For the check result, check that "Wave Rom Chk2 OK" is displayed on the LCD display. It takes about 30 seconds.
41	041: EffectRam Chk2	Checks the Effect ROMs. For the check result, check that "Effect Ram Chk2 OK" is displayed on the LCD display. It takes about 10 seconds.
42	042: Factory Set	When this test is executed, the factory preset data will be set in the Flash ROMs when the power is turned on the next time. Check that "Factory Set OK" is displayed on the LCD display. It takes about 20 seconds.
43	043: Test Exit	When the test is executed, the test program will exit and the play mode will be set.

\* 0 dBm = 0.775 V



Table 1

Order	Switch Name	Note	Order	Switch Name	Note
1	DEMO	G1	31	VIBRAPHONE	C#4
2	SONG SELECT ◀◀	G#1	32	GIUITAR	D4
3	SONG SELECT ▶▶	A1	33	CHURCH ORGAN	D#4
4	SONG TRACK 1	A#1	34	JAZZ ORGAN	E4
5	SONG TRACK 2	B1	35	STRINGS	F4
6	SONG EXTRA TRACKS	C2	36	CHOIR	F#4
7	SONG TOP	C#2	37	SYNTH. PAD	G4
8	SONG START/STOP	D2	38	WOOD BASS	G#4
9	SONG REC	D#2	39	E. BASS	A4
10	FILE	E2	40	XG	A#4
11	SONG SETTING	F2	41	VOICE SETTING	B4
12	METRONOME START/STOP	F#2	42	SPLIT	C5
13	METRONOME SETTING	G2	43	REVERB	C#5
14	TEMPO DOWN	G#2	44	CHORUS	D5
15	TEMPO UP	A2	45	VARIATION DOWN	D#5
16	LCD A -	A#2	46	VARIATION UP	E5
17	LCD A +	B2	47	BRILLIANCE MELLOW	F5
18	LCD C -	C3	48	BRILLIANCE BRIGHT	F#5
19	LCD C +	C#3	49	MIDI SETTING	G5
20	LCD B -	D3	50	OTHER SETTING	G#5
21	LCD B +	D#3			
22	LCD D -	E3			
23	LCD D +	F3			
24	EXIT	F#3			
25	GRAND PIANO1	G3			
26	GRAND PIANO2	G#3			
27	E.PIANO1	A3			
28	E.PIANO2	A#3			
29	HARPSICHORD	B3			
30	E.CLAVICHORD	C4			

### ● Initialization

The system will be initialized and the factory preset state will be restored when the [POWER] switch is pressed while pressing the highest (rightmost) white key on the keyboard.

## ■ MIDI IMPLEMENTATION CHART

YAMAHA [ Clavinova ]  
Model: CLP-170/150

MIDI Implementation Chart

Date : 25 Dec 2001  
Version : 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16	1-16	
	Changed	1-16	1-16	
Mode	Default	3	3	
	Messages	x	x	
	Altered	*****	x	
Note Number:	True voice	0-127 *****	0-127 0-127	
Velocity	Note ON	o 9nH , v = 1-127	o 9nH , v = 1-127	
	Note OFF	x 9nH , v = 0	x	
After Touch	Key's	x	x	
	Ch's	x	o	
Pitch Bend		o	o0-24 semi	
Control Change	0, 32	o	o	Bank Select
	1	x	o	Modulation
	5	x	o	Portament Time
	7, 10, 11	o	o	
	6, 38	o	o	Data Entry
	64, 66, 67	o	o	
	65	x	o	Portament
	71 , 74	o	o	Sound Controller
	72 , 73	x	o	Sound Controller
	84	x	o	Portament Control
	91, 93	o	o	Effect Depth
	94	x	o	Effect Depth
	96-97	x	o	RPN Inc,Dec
	98-99	x	o	NRPN LSB,MSB
	100-101	o	o	RPN LSB,MSB
120	x	o	All Sound Off	
Prog Change:	True #	o 0-127 *****	o 0-127	
System Exclusive		o	o	
Common	: Song Pos.	x	x	
	: Song Sel.	x	x	
	: Tune	x	x	
System Real Time	: Clock	o	x	
	: Commands	o	o	
Aux Messages	: Local ON/OFF	x	x	
	: All Notes OFF	x	o	
Messages	: Active Sense	o	o	
	: Reset	x	x	
Notes:				

Mode 1 : OMNI ON , POLY  
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON ,MONO  
Mode 4 : OMNI OFF,MONO

o : Yes  
x : No

# MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

Many MIDI messages listed in the MIDI Data Format are expressed in decimal numbers, binary numbers and hexadecimal numbers. Hexadecimal numbers may include the letter "H" as a suffix.

Also, "n" can freely be defined as any whole number. To enter data/values, refer to the table below.

decimal	hexadecimal	binary
0	00	0000 0000
1	01	0000 0001
2	02	0000 0010
3	03	0000 0011
4	04	0000 0100
5	05	0000 0101
6	06	0000 0110
7	07	0000 0111
8	08	0000 1000
9	09	0000 1001
10	0A	0000 1010
11	0B	0000 1011
12	0C	0000 1100
13	0D	0000 1101
14	0E	0000 1110
15	0F	0000 1111
16	10	0001 0000
17	11	0001 0001
18	12	0001 0010
19	13	0001 0011
20	14	0001 0100
21	15	0001 0101
22	16	0001 0110
23	17	0001 0111
24	18	0001 1000
25	19	0001 1001
26	1A	0001 1010
27	1B	0001 1011
28	1C	0001 1100
29	1D	0001 1101
30	1E	0001 1110
31	1F	0001 1111

decimal	hexadecimal	binary
32	20	0010 0000
33	21	0010 0001
34	22	0010 0010
35	23	0010 0011
36	24	0010 0100
37	25	0010 0101
38	26	0010 0110
39	27	0010 0111
40	28	0010 1000
41	29	0010 1001
42	2A	0010 1010
43	2B	0010 1011
44	2C	0010 1100
45	2D	0010 1101
46	2E	0010 1110
47	2F	0010 1111
48	30	0011 0000
49	31	0011 0001
50	32	0011 0010
51	33	0011 0011
52	34	0011 0100
53	35	0011 0101
54	36	0011 0110
55	37	0011 0111
56	38	0011 1000
57	39	0011 1001
58	3A	0011 1010
59	3B	0011 1011
60	3C	0011 1100
61	3D	0011 1101
62	3E	0011 1110
63	3F	0011 1111

decimal	hexadecimal	binary
64	40	0100 0000
65	41	0100 0001
66	42	0100 0010
67	43	0100 0011
68	44	0100 0100
69	45	0100 0101
70	46	0100 0110
71	47	0100 0111
72	48	0100 1000
73	49	0100 1001
74	4A	0100 1010
75	4B	0100 1011
76	4C	0100 1100
77	4D	0100 1101
78	4E	0100 1110
79	4F	0100 1111
80	50	0101 0000
81	51	0101 0001
82	52	0101 0010
83	53	0101 0011
84	54	0101 0100
85	55	0101 0101
86	56	0101 0110
87	57	0101 0111
88	58	0101 1000
89	59	0101 1001
90	5A	0101 1010
91	5B	0101 1011
92	5C	0101 1100
93	5D	0101 1101
94	5E	0101 1110
95	5F	0101 1111

decimal	hexadecimal	binary
96	60	0110 0000
97	61	0110 0001
98	62	0110 0010
99	63	0110 0011
100	64	0110 0100
101	65	0110 0101
102	66	0110 0110
103	67	0110 0111
104	68	0110 1000
105	69	0110 1001
106	6A	0110 1010
107	6B	0110 1011
108	6C	0110 1100
109	6D	0110 1101
110	6E	0110 1110
111	6F	0110 1111
112	70	0111 0000
113	71	0111 0001
114	72	0111 0010
115	73	0111 0011
116	74	0111 0100
117	75	0111 0101
118	76	0111 0110
119	77	0111 0111
120	78	0111 1000
121	79	0111 1001
122	7A	0111 1010
123	7B	0111 1011
124	7C	0111 1100
125	7D	0111 1101
126	7E	0111 1110
127	7F	0111 1111

- Except the table above, for example 144-159(decimal)/9nH/1001 0000-1001 1111(binary) denotes the Note On Message for each channel (1-16). 176-191/BnH/1011 0000-1011 1111 denotes the Control Change Message for each channel (1-16). 192-207/CnH/1100 0000-1100 1111 denotes the Program Change Message for each channel (1-16). 240/FOH/1111 0000 denotes the start of a System Exclusive Message. 247/F7H/1111 0111 denotes the end of a System Exclusive Message.
- aaH (hexidecimal)/0aaaaaaa (binary) denotes the data address. The address contains High, Mid, and Low.
- bbH/0bbbbbbb denotes the byte count.
- ccH/0ccccccc denotes the check sum.
- ddH/0ddddddd denotes the data/value.

MIDI CHANNEL MESSAGE (1)

○: available

MIDI Events	Status byte		1st Data byte		2nd Data byte		MIDI Reception (respond/ignore)			MIDI Transmission (generated data)			PLAY		REC
	Status	(n:Channel Number)	Data (HEX)	Parameter	Data (HEX)	Parameter	Song	Main Layer Left Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
Key Off	8nH	(n:Channel Number)	kk	Key no. (0-127)	vv	Velocity(0-127)	○	○	○	×	○	×	○	×	×
Key On	9nH	(n:Channel Number)	kk	Key no. (0-127)	vv	Key On :vv=1-127 Key Off :vv=0	○	○	○	○ (Keyboard)	○	×	○	×	○
Control Change	BnH		0 (00H)	Bank Select MSB	0 (00H) 64 (40H) 126 (7EH) 127 (7FH)	Normal SFX voice SFX kit Drum kit	○	○	×	○ (Voice)	○	×	○	○	○
			1 (01H)	Modulation	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	×	○	×	○	○	×
			5 (05H)	Portamento Time	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	×	○	×	○	○	×
			6 (06H)	Data Entry MSB	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			7 (07H)	Main Volume	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			10 (0AH)	Panpot	0-127 (00H...7FH)	L64	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			11 (0BH)	Expression	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Pedal)	○	×	○	○	○
			32 (20H)	Bank Select LSB	0-127 (00H...7FH)	Data	○	○	×	○ (Voice)	○	×	○	○	○
			38 (26H)	Data Entry LSB	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	×	○
			64 (40H)	Sustain(Damper)	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Pedal)	○	×	○	○	○
			65 (41H)	Portamento	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	○	○ (All manually played parts)	×	○	×	○	○	×
			66 (42H)	Sostenuto	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	○	○ (All manually played parts)	○ (Pedal)	○	×	○	○	○
			67 (43H)	Soft Pedal	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	○	○ (All manually played parts)	○ (Pedal)	○	×	○	○	○
			71 (47H)	Harmonic Content	0-127 (00H...7FH)	-64...0...+63	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			72 (48H)	Release Time	0-127 (00H...7FH)	-64...0...+63	○	○	○ (All manually played parts)	×	○	×	○	○	×
			73 (49H)	Attack Time	0-127 (00H...7FH)	-64...0...+63	○	○	○ (All manually played parts)	×	○	×	○	○	×
			74 (4AH)	Brightness	0-127 (00H...7FH)	-64...0...+63	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			84 (54H)	Portamento Control	0-127 (00H...7FH)	Key no. (0-127)	○	○	×	×	○	×	○	×	×
			91 (5BH)	Effect1 Depth (Reverb Send Level)	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			93 (5DH)	Effect3 Depth (Chorus Send Level)	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
			94 (5EH)	Effect4 Depth (Variation Send Level)	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	×	○	×	○	○	×
96 (60H)	RPN Increment	- - *	- - *	○	○	×	×	○	×	○	×	×			
97 (61H)	RPN Decrement	- - *	- - *	○	○	×	×	○	×	○	×	×			
98 (62H)	NRPN LSB	0-127 (00H...7FH)	Data	○	○	×	×	○	×	○	○	×			
99 (63H)	NRPN MSB	0-127 (00H...7FH)	Data	○	○	×	×	○	×	○	○	×			
100 (64H)	RPN LSB	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○			
101 (65H)	RPN MSB	0-127 (00H...7FH)	Data	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○			
Mode Message	BnH	(n:Channel Number)	120 (78H)	All Sound Off	0 (00H)	Data	○	○	○ (All manually played parts)	×	○	×	○	×	×
			121 (79H)	Reset All Controllers	0 (00H)	Data	○	×	×	×	○	×	○	×	×
			123 (7BH)	All Note Off	0 (00H)	Data	○	○	○ (All manually played parts)	×	○	×	○	×	×
			124 (7CH)	Omn Off	0 (00H)	Data	○	×	×	×	×	×	×	×	×
			125 (7DH)	Omn On	0 (00H)	Data	○	×	×	×	×	×	×	×	×
			126 (7EH)	Mono	0-16 (00H...10H)	Data	○	×	×	×	○	×	○	×	×
			127 (7FH)	Poly	0 (00H)	Data	○	×	×	×	○	×	○	×	×
Program Change	CnH	(n:Channel Number)	pp (00H...7FH)	Voice number (0-127)	- - -	-	○	○	×	○ (Voice)	○	×	○	○	○
Channel After Touch	DnH	(n:Channel Number)	vv (00H...7FH)	Data	- - -	-	○	○	○ (All manually played parts)	×	○	×	○	×	×
Polyphonic After Touch	AnH	(n:Channel Number)	kk (00H...7FH)	Key no. (0-127)	vv (00H...7FH)	Data	○	×	×	×	○	×	○	×	×
Pitch Bend Change	EnH	(n:Channel Number)	cc (00H...7FH)	LSB	dd (00H...7FH)	MSB	○	○	○ (All manually played parts)	○ (Pedal)	○	×	○	○	○
Realtime Message	F8H	MIDI Clock	-	-	-	-	-	-	×	○	-	-	-	×	
	FAH	Start	-	-	-	-	-	-	○	○	-	-	-	×	
	FBH	Continue	-	-	-	-	-	-	×	×	-	-	-	×	
	FCH	Stop	-	-	-	-	-	-	○	○	-	-	-	×	
	FEH	Active Sens	-	-	-	-	-	-	○	○	-	-	-	×	
	FFH	System Reset	-	-	-	-	-	-	×	×	-	-	-	×	

\* The data byte is ignored.

**MIDI CHANNEL MESSAGE (2)**

Parameters controlled by NRPN (Non-Registered Parameter Numbers)

NRPN		Data Entry		Parameter	Data Range	MIDI Reception (respond/ignore)			MIDI Transmission (generated data)			PLAY		REC
MSB	LSB	MSB	LSB			Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
01H	08H	mmH	--	Vibrato Rate	mm : 00H-40H-7FH (-64...0...+63)	○	○	×	×	○	×	○	○	×
01H	09H	mmH	--	Vibrato Depth	mm : 00H-40H-7FH (-64...0...+63)	○	○	×	×	○	×	○	○	×
01H	0AH	mmH	--	Vibrato Delay	mm : 00H-40H-7FH (-64...0...+63)	○	○	×	×	○	×	○	○	×
01H	20H	mmH	--	Low Pass Filter Cutoff Frequency	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
01H	21H	mmH	--	Low Pass Filter Resonance	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
01H	30H	mmH	--	EQ BASS	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
01H	31H	mmH	--	EQ TREBLE	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
01H	34H	mmH	--	EQ BASS Frequency	mm : 04H-28H (32...2.0k [Hz])	○	×	×	×	○	×	○	○	×
01H	35H	mmH	--	EQ TREBLE Frequency	mm : 1CH-3AH (500...16.0k [Hz])	○	×	×	×	○	×	○	○	×
01H	63H	mmH	--	EG Attack Time	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
01H	64H	mmH	--	EG Decay Time	mm : 00H-40H-7FH (-64...0...+63)	○	○	×	×	○	×	○	○	×
01H	66H	mmH	--	EG Release	mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	○	×
14H	rrH	mmH	--	Drum Low Pass Filter Cutoff Frequency	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
15H	rrH	mmH	--	Drum Low Pass Filter Resonance	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
16H	rrH	mmH	--	Drum EG Attack Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
17H	rrH	mmH	--	Drum EG Decay Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
18H	rrH	mmH	--	Drum Pitch Coarse	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
19H	rrH	mmH	--	Drum Pitch Fine	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	○	×	×	×	○	×	○	×	×
1AH	rrH	mmH	--	Drum Level	rr : drum instrument note number mm : 00H-7FH (0...127)	○	×	×	×	○	×	○	×	×
1CH	rrH	mmH	--	Drum Pan	rr : drum instrument note number mm : 00H, 01H-40H-7FH (RND, L63...C...R63)	○	×	×	×	○	×	○	×	×
1DH	rrH	mmH	--	Drum Reverb Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	○	×	×	×	○	×	○	×	×
1EH	rrH	mmH	--	Drum Chorus Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	○	×	×	×	○	×	○	×	×
1FH	rrH	mmH	--	Drum Variation Send Level	rr : drum instrument note number mm : 00H-7FH (0...127) (Variation Connection = SYSTEM) mm : 00H, 01H-7FH (OFF, ON) (Variation Connection = INSERTION)	○	×	×	×	○	×	○	×	×

NRPN MSB: 14H-1FH (for drums) message is accepted as long as the channel is set with a drum voice.

Data Entry LSB: Ignored.

Parameters controlled by RPN (Registered Parameter Numbers)

NRPN		Data Entry		Parameter	Data Range	MIDI Reception (respond/ignore)			MIDI Transmission (generated data)			PLAY		REC
MSB	LSB	MSB	LSB			Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
00H	00H	mmH	--	Pitch Bend Sensitivity	mm : 00H-18H (0...+24 [semitones])	○	○	○ (All manually played parts)	○ (Other Setting)	○	×	○	○	○
00H	01H	mmH	llH	Fine Tune	mm ll : 00H 00H -100 [cent] ... mm ll : 40H 00H 0 [cent] ... mm ll : 7FH 7FH 100 [cent]	○	○	○ (All manually played parts)	○ (Voice Setting)	○	×	○	○	○
00H	02H	mmH	--	Coarse Tune	mm : 28H-40H-58H (-24...0...+24 [semitones])	○	○	○ (All manually played parts)	×	○	×	○	○	×
7FH	7FH	--	--	Null	-	○	○	○ (All manually played parts)	×	○	×	○	×	×

**MIDI PARAMETER CHANGE TABLE**

\* Not Received when Receive Parameter SysEx is set to off.

\* Not transmitted when Transmit Parameter SysEx is set to on.

MIDI Parameter Change table (XG SYSTEM)

○: available

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC		
						Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel		
00	00	00 01 02 03	4	00-0F 00-0F 00-0F 00-0F	MASTER TUNE	-102.4...0...+102.3 [cent] 1st bit3-0 → bit15-12 2nd bit3-0 → bit11-8 3rd bit3-0 → bit7-4 4th bit3-0 → bit3-0	* Panel setting value	○	×	×	×	○	×	○	×	×
		04	1	00-7F	MASTER VOLUME	0...127	7F	○	×	×	×	○	×	○	×	×
		05	1	00-7F	MASTER ATTENUATOR	0...127	00	×	×	×	×	×	×	×	×	×
		06	1	28-58	TRANSCOPE	-24...0...+24 [semitones]	40	○	×	×	×	○	×	○	○	×
		7D	1	N	DRUM SETUP RESET	N:Drum setup number	-	○	×	×	×	○	×	○	×	×
		7E	1	00	XG SYSTEM ON	00=XG system ON	-	○	×	×	×	○	×	○	×	○
		7F	1	00	ALL PARAMETER RESET	00=ON	-	○	×	×	×	○	×	○	×	×

TOTAL SIZE 07

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MIDI Parameter Change table (SYSTEM INFORMATION)

Address (H)	Size (H)	Data (H)	Parameter	Description	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC
					Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
01	00	00...0D	Model Name 1 ... Model Name 14	32...127(ASCII CHARACTER) ... 32...127(ASCII CHARACTER)	-	-	-	×	×	○	×	×	×
		0E	NOT USED										
		0F	NOT USED										

TOTAL SIZE 10

Transmitted in response to Dump Request. Not received.

MIDI Parameter Change table (EFFECT1)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC		
						Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel		
02	01	00	REVERB TYPE MSB REVERB TYPE LSB	Refer to Effect Parameter List *	01(=HALL1) 00	○			○(Voice Setting)			○	×	○	○	○
		02	REVERB PARAMETER 1	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		03	REVERB PARAMETER 2	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		04	REVERB PARAMETER 3	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		05	REVERB PARAMETER 4	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		06	REVERB PARAMETER 5	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		07	REVERB PARAMETER 6	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		08	REVERB PARAMETER 7	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		09	REVERB PARAMETER 8	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		0A	REVERB PARAMETER 9	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		0B	REVERB PARAMETER 10	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		0C	REVERB RETURN	-->dB...0dB...+6dB(0...96...127)	40	○			×			○	×	○	○	×
		0D	REVERB PAN	L63...C...R63	40	○			×			○	×	○	○	×

TOTAL SIZE 0E

02	01	10	1	00-7F	REVERB PARAMETER 11	Refer to Effect Parameter List	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		11	1	00-7F	REVERB PARAMETER 12	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		12	1	00-7F	REVERB PARAMETER 13	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		13	1	00-7F	REVERB PARAMETER 14	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		14	1	00-7F	REVERB PARAMETER 15	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×
		15	1	00-7F	REVERB PARAMETER 16	"	Depends on Reverb Type	○ (* Depends on Reverb Type)			×			○	×	○	○	×

TOTAL SIZE 06

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC				
						Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel				
02	01	20	2	00-7F 00-7F	CHORUS TYPE MSB CHORUS TYPE LSB	Refer to Effect Parameter List *	41(=CHORUS1) 00	○			○(Voice Setting)			○	×	○	○	○
		22	1	00-7F	CHORUS PARAMETER 1	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		23	1	00-7F	CHORUS PARAMETER 2	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		24	1	00-7F	CHORUS PARAMETER 3	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		25	1	00-7F	CHORUS PARAMETER 4	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		26	1	00-7F	CHORUS PARAMETER 5	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		27	1	00-7F	CHORUS PARAMETER 6	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		28	1	00-7F	CHORUS PARAMETER 7	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		29	1	00-7F	CHORUS PARAMETER 8	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		2A	1	00-7F	CHORUS PARAMETER 9	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		2B	1	00-7F	CHORUS PARAMETER 10	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		2C	1	00-7F	CHORUS RETURN	-->dB...0dB...+6dB(0...96...127)	40	○			×			○	×	○	○	×
		2D	1	01-7F	CHORUS PAN	L63...C...R63	40	○			×			○	×	○	○	×
		2E	1	00-7F	SEND CHORUS TO REVERB	-->dB...0dB...+6dB(0...96...127)	00	○			×			○	×	○	○	×

TOTAL SIZE 0F

02	01	30	1	00-7F	CHORUS PARAMETER 11	Refer to Effect Parameter List	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		31	1	00-7F	CHORUS PARAMETER 12	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		32	1	00-7F	CHORUS PARAMETER 13	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		33	1	00-7F	CHORUS PARAMETER 14	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		34	1	00-7F	CHORUS PARAMETER 15	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×
		35	1	00-7F	CHORUS PARAMETER 16	"	Depends on Chorus Type	○ (* Depends on Chorus Type)			×			○	×	○	○	×

TOTAL SIZE 06

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC	
								Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel	
02	01	40	2	00-7F	VARIATION TYPE MSB	Refer to Effect Parameter List	05(=DELAY L,C,R)										
				00-7F	VARIATION TYPE LSB	*	00										
		42	2	00-7F	VARIATION PARAMETER 1 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 1 LSB	*											
		44	2	00-7F	VARIATION PARAMETER 2 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 2 LSB	*											
		46	2	00-7F	VARIATION PARAMETER 3 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 3 LSB	*											
		48	2	00-7F	VARIATION PARAMETER 4 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 4 LSB	*											
		4A	2	00-7F	VARIATION PARAMETER 5 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 5 LSB	*											
		4C	2	00-7F	VARIATION PARAMETER 6 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 6 LSB	*											
		4E	2	00-7F	VARIATION PARAMETER 7 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 7 LSB	*											
		50	2	00-7F	VARIATION PARAMETER 8 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 8 LSB	*											
		52	2	00-7F	VARIATION PARAMETER 9 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 9 LSB	*											
		54	2	00-7F	VARIATION PARAMETER 10 MSB	*	Depends on Variation Type										
				00-7F	VARIATION PARAMETER 10 LSB	*											
		56	1	00-7F	VARIATION RETURN	--dB...0dB...+6dB(0...96...127)	40										
		57	1	01-7F	VARIATION PAN	L63...C...R63	40										
		58	1	00-7F	SEND VARIATION TO REVERB	--dB...0dB...+6dB(0...96...127)	00										
		59	1	00-7F	SEND VARIATION TO CHORUS	--dB...0dB...+6dB(0...96...127)	00										
		5A	1	00-01	VARIATION CONNECTION	INSERTION, SYSTEM	00										
		5B	1	00-7F	VARIATION PART NUMBER	Reception: Part1...16(0...15) Transmission: Part1...16(0...15) AD(64) OFF(127)	7F										
		5C	1	00-7F	MW VARIATION CONTROL DEPTH	-64...0...+63	40										
		5D	1	00-7F	BEND VARIATION CONTROL DEPTH	-64...0...+63	40										
		5E	1	00-7F	CAT VARIATION CONTROL DEPTH	-64...0...+63	40										
		5F	1	00-7F	AC1 VARIATION CONTROL DEPTH	-64...0...+63	40										
		60	1	00-7F	AC2 VARIATION CONTROL DEPTH	-64...0...+63	40										

TOTAL SIZE 21

02	01	70	1	00-7F	VARIATION PARAMETER 11	Refer to Effect Parameter List	Depends on Variation Type										
		71	1	00-7F	VARIATION PARAMETER 12	*	Depends on Variation Type										
		72	1	00-7F	VARIATION PARAMETER 13	*	Depends on Variation Type										
		73	1	00-7F	VARIATION PARAMETER 14	*	Depends on Variation Type										
		74	1	00-7F	VARIATION PARAMETER 15	*	Depends on Variation Type										
		75	1	00-7F	VARIATION PARAMETER 16	*	Depends on Variation Type										

TOTAL SIZE 06

MIDI Parameter Change table (EFFECT2)

Address (H)	Size (H)	Data (H)	Parameter	Description	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC
					Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
03	n	00	2	00-7F 00-7F	INSERTION EFFECT TYPE MSB INSERTION EFFECT TYPE LSB	Refer to Effect Parameter List "			○ (Voice Setting)			○	○
		02	1	00-7F	INSERTION EFFECT PARAMETER 1	○ (* Depends on Insertion Type)			○ (Voice Setting)			○	○
		03	1	00-7F	INSERTION EFFECT PARAMETER 2	○ (* Depends on Insertion Type)			×			○	○
		04	1	00-7F	INSERTION EFFECT PARAMETER 3	○ (* Depends on Insertion Type)			○ (Voice Setting)			○	○
		05	1	00-7F	INSERTION EFFECT PARAMETER 4	○ (* Depends on Insertion Type)			×			○	○
		06	1	00-7F	INSERTION EFFECT PARAMETER 5	○ (* Depends on Insertion Type)			×			○	○
		07	1	00-7F	INSERTION EFFECT PARAMETER 6	○ (* Depends on Insertion Type)			×			○	○
		08	1	00-7F	INSERTION EFFECT PARAMETER 7	○ (* Depends on Insertion Type)			×			○	○
		09	1	00-7F	INSERTION EFFECT PARAMETER 8	○ (* Depends on Insertion Type)			×			○	○
		0A	1	00-7F	INSERTION EFFECT PARAMETER 9	○ (* Depends on Insertion Type)			×			○	○
		0B	1	00-7F	INSERTION EFFECT PARAMETER 10	○ (* Depends on Insertion Type)			○ (Voice Setting)			○	○
		0C	1	00-7F	INSERTION EFFECT PART NUMBER	Reception: Part1...16(0...15) Transmission: Part1...16(0...15) AD(64) OFF(127)			○ (Voice)			○	○
		0D	1	00-7F	MW INSERTION CONTROL DEPTH	-64...0...+63			○			×	○
		0E	1	00-7F	BEND INSERTION CONTROL DEPTH	-64...0...+63			○			×	○
		0F	1	00-7F	CAT INSERTION CONTROL DEPTH	-64...0...+63			○			×	○
		10	1	00-7F	AC1 INSERTION CONTROL DEPTH	-64...0...+63			○			×	○
		11	1	00-7F	AC2 INSERTION CONTROL DEPTH	-64...0...+63			○			×	○
TOTAL SIZE		12											

		20	1	00-7F	INSERTION EFFECT PARAMETER 11	Refer to Effect Parameter List			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		21	1	00-7F	INSERTION EFFECT PARAMETER 12	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		22	1	00-7F	INSERTION EFFECT PARAMETER 13	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		23	1	00-7F	INSERTION EFFECT PARAMETER 14	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		24	1	00-7F	INSERTION EFFECT PARAMETER 15	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		25	1	00-7F	INSERTION EFFECT PARAMETER 16	"			○ (* Depends on Insertion Type)			○ (Voice Setting)			○	○	○
TOTAL SIZE		6															

		30	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 1 MSB INSERTION EFFECT PARAMETER 1 LSB	Refer to Effect Parameter List			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		32	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 2 MSB INSERTION EFFECT PARAMETER 2 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		34	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 3 MSB INSERTION EFFECT PARAMETER 3 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		36	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 4 MSB INSERTION EFFECT PARAMETER 4 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		38	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 5 MSB INSERTION EFFECT PARAMETER 5 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		3A	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 6 MSB INSERTION EFFECT PARAMETER 6 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		3C	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 7 MSB INSERTION EFFECT PARAMETER 7 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		3E	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 8 MSB INSERTION EFFECT PARAMETER 8 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		40	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 9 MSB INSERTION EFFECT PARAMETER 9 LSB	"			○ (* Depends on Insertion Type)			×	○	○	○	○	×
		42	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 10 MSB INSERTION EFFECT PARAMETER 10 LSB	"			○ (* Depends on Insertion Type)			○ (Voice Setting)			○	○	○
TOTAL SIZE		14															

The EFFECT2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.

The second byte of the address is considered as an Insertion effect number.

n : insertion effect number

For effect types that do not require MSB, the Parameters for Address 02-0B will be received and the Parameters for Address 30-42 will not be received.

For effect types that require MSB, the Parameters for Address 30-42 will be received and the Parameters for Address 02-0B will not be received.

When Bulk Dumps that include Effect Type data are transmitted, the Parameters for Address 02-0B will always be transmitted. But, effects that require MSB, when the bulk dump is received the Parameters for Address 02-0B will not be received.



MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

MIDI Parameter Change table (MULTI PART)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC			
						Song	Main Layer Left Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel			
08	nn	00	1	00-20	NOT USED		×	×	×	×	×	×	×	×	×		
		01	1	00-7F	BANK SELECT MSB	0...127	part10=7F, other parts=00	○	○	×	×	○	×	○	○	×	
		02	1	00-7F	BANK SELECT LSB	0...127	00	○	○	×	×	○	×	○	○	×	
		03	1	00-7F	PROGRAM NUMBER	1...128	00	○	○	×	×	○	×	○	○	×	
		04	1	00-0F, 7F	Rcv CHANNEL	1...16, OFF	Part No.	○	×	×	×	○	×	○	×	×	
		05	1	00-01	MONO/POLY MODE	MONO, POLY	01	○	×	×	×	○	×	○	×	×	
		06	1	00-02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST(for Drum)	01	○	×	×	×	○	×	○	×	×	
		07	1	00-03	PART MODE	NORMAL, DRUM, DRUMS1...2	part10=02, other parts=00	○	×	×	○ (Drum Voice)	○	×	○	×	○	
		08	1	28-58	NOTE SHIFT	-24...0...+24 [semitones]	40	○	○	×	×	○	×	○	○	×	
		09	0A	2	00-0F	DETUNE	-12.8...0...+12.7 [Hz]	08 00	○	○	×	×	○	×	○	×	×
		0A	00-0F			1st bit3-0 → bit7-4											
		0B	1	00-7F	VOLUME	0...127	64	○	○	×	×	○	×	○	○	×	
		0C	1	00-7F	VELOCITY SENSE DEPTH	0...127	40	○	○	×	○ (Voice Setting)	○	×	○	○	○	
		0D	1	00-7F	VELOCITY SENSE OFFSET	0...127	40	○	○	×	○ (Voice Setting)	○	×	○	○	○	
		0E	1	00-7F	PAN	RND.L63...C...R63	40	○	○	×	×	○	×	○	○	×	
		0F	1	00-7F	NOTE LIMIT LOW	C-2...G8	00	○	○	×	×	○	×	○	×	×	
		10	1	00-7F	NOTE LIMIT HIGH	C-2...G8	7F	○	○	×	×	○	×	○	×	×	
		11	1	00-7F	DRY LEVEL	0...127	7F	○	○	×	×	○	×	○	○	×	
		12	1	00-7F	CHORUS SEND	0...127	00	○	○	×	×	○	×	○	○	×	
		13	1	00-7F	REVERB SEND	0...127	28	○	○	×	×	○	×	○	○	×	
		14	1	00-7F	VARIATION SEND	0...127	00	○	○	×	×	○	×	○	○	×	
		15	1	00-7F	VIBRATO RATE	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		16	1	00-7F	VIBRATO DEPTH	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		17	1	00-7F	VIBRATO DELAY	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		18	1	00-7F	FILTER CUTOFF FREQUENCY	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		19	1	00-7F	FILTER RESONANCE	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		1A	1	00-7F	EG ATTACK TIME	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		1B	1	00-7F	EG DECAY TIME	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		1C	1	00-7F	EG RELEASE TIME	-64...0...+63	40	○	○	×	×	○	×	○	○	×	
		1D	1	28-58	MW PITCH CONTROL	-24...0...+24 [semitones]	40	○	○	×	×	○	×	○	×	×	
		1E	1	00-7F	MW LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	○	×	×	○	×	○	×	×	
		1F	1	00-7F	MW AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	○	×	×	○	×	○	×	×	
		20	1	00-7F	MW LFO PMOD DEPTH	0...127	0A	○	○	×	×	○	×	○	×	×	
		21	1	00-7F	MW LFO FMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		22	1	00-7F	MW LFO AMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		23	1	28-58	BEND PITCH CONTROL	-24...0...+24 [semitones]	42	○	○	×	×	○	×	○	×	×	
		24	1	00-7F	BEND LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	○	×	×	○	×	○	×	×	
		25	1	00-7F	BEND AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	○	×	×	○	×	○	×	×	
		26	1	00-7F	BEND LFO PMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		27	1	00-7F	BEND LFO FMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		28	1	00-7F	BEND LFO AMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
TOTAL SIZE		29															
		30	1	00-01	Rcv PITCH BEND	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		31	1	00-01	Rcv CH AFTER TOUCH(CAT)	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		32	1	00-01	Rcv PROGRAM CHANGE	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		33	1	00-01	Rcv CONTROL CHANGE	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		34	1	00-01	Rcv POLY AFTER TOUCH(PAT)	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		35	1	00-01	Rcv NOTE MESSAGE	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		36	1	00-01	Rcv RPN	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		37	1	00-01	Rcv NRPN	OFF, ON	XGmode=01, GMmode=00	○	×	×	×	○	×	○	×	×	
		38	1	00-01	Rcv MODULATION	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		39	1	00-01	Rcv VOLUME	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3A	1	00-01	Rcv PAN	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3B	1	00-01	Rcv EXPRESSION	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3C	1	00-01	Rcv HOLD1	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3D	1	00-01	Rcv PORTAMENTO	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3E	1	00-01	Rcv SOSTENUTO	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		3F	1	00-01	Rcv SOFT PEDAL	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		40	1	00-01	Rcv BANK SELECT	OFF, ON	01	○	×	×	×	○	×	○	×	×	
		41	1	00-7F	SCALE TUNING C	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		42	1	00-7F	SCALE TUNING C#	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		43	1	00-7F	SCALE TUNING D	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		44	1	00-7F	SCALE TUNING D#	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		45	1	00-7F	SCALE TUNING E	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		46	1	00-7F	SCALE TUNING F	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		47	1	00-7F	SCALE TUNING F#	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		48	1	00-7F	SCALE TUNING G	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		49	1	00-7F	SCALE TUNING G#	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		4A	1	00-7F	SCALE TUNING A	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		4B	1	00-7F	SCALE TUNING A#	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		4C	1	00-7F	SCALE TUNING B	-63...0...+63 [cent]	40	○	○	×	○ (Other Setting)	○	×	○	×	○	
		4D	1	28-58	CAT PITCH CONTROL	-24...0...+24 [semitones]	40	○	○	×	×	○	×	○	×	×	
		4E	1	00-7F	CAT LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	○	×	×	○	×	○	×	×	
		4F	1	00-7F	CAT AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	○	×	×	○	×	○	×	×	
		50	1	00-7F	CAT LFO PMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		51	1	00-7F	CAT LFO FMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		52	1	00-7F	CAT LFO AMOD DEPTH	0...127	00	○	○	×	×	○	×	○	×	×	
		53	1	28-58	PAT PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○	×	○	×	×	
		54	1	00-7F	PAT LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○	×	○	×	×	

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC	
						Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel	
	55	1	00-7F	PAT AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○	×	○	×	×
	56	1	00-7F	PAT LFO PMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	57	1	00-7F	PAT LFO FMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	58	1	00-7F	PAT LFO AMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	59	1	00-5F	AC1 CONTROLLER NUMBER	0...95	10	○	×	×	×	○	×	○	×	×
	5A	1	28-58	AC1 PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○	×	○	×	×
	5B	1	00-7F	AC1 LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○	×	○	×	×
	5C	1	00-7F	AC1 AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○	×	○	×	×
	5D	1	00-7F	AC1 LFO PMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	5E	1	00-7F	AC1 LFO FMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	5F	1	00-7F	AC1 LFO AMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	60	1	00-5F	AC2 CONTROLLER NUMBER	0...95	11	○	×	×	×	○	×	○	×	×
	61	1	28-58	AC2 PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○	×	○	×	×
	62	1	00-7F	AC2 LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○	×	○	×	×
	63	1	00-7F	AC2 AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○	×	○	×	×
	64	1	00-7F	AC2 LFO PMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	65	1	00-7F	AC2 LFO FMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	66	1	00-7F	AC2 LFO AMOD DEPTH	0...127	00	○	×	×	×	○	×	○	×	×
	67	1	00-01	PORTAMENTO SWITCH	OFF, ON	00	○	○	×	×	○	×	○	○	×
	68	1	00-7F	PORTAMENTO TIME	0...127	00	○	○	×	×	○	×	○	○	×
	69	1	00-7F	PITCH EG INITIAL LEVEL	-64...0...+63	40	○	×	×	×	○	×	○	×	×
	6A	1	00-7F	PITCH EG ATTACK TIME	-64...0...+63	40	○	×	×	×	○	×	○	×	×
	6B	1	00-7F	PITCH EG RELEASE LEVEL	-64...0...+63	40	○	×	×	×	○	×	○	×	×
	6C	1	00-7F	PITCH EG RELEASE TIME	-64...0...+63	40	○	×	×	×	○	×	○	×	×
	6D	1	01-7F	VELOCITY LIMIT LOW	1...127	01	○	×	×	×	○	×	○	×	×
	6E	1	01-7F	VELOCITY LIMIT HIGH	1...127	7F	○	×	×	×	○	×	○	×	×

TOTAL SIZE 3F

	70	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	71	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	72	1	00-7F	EQ BASS GAIN	-12dB...+12dB	40	○	○	×	○ (Voice Setting)	○	×	○	○	○
	73	1	00-7F	EQ TREBLE GAIN	-12dB...+12dB	40	○	○	×	○ (Voice Setting)	○	×	○	○	○

TOTAL SIZE 04

	74	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	75	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	76	1	04-28	EQ BASS FREQUENCY	32...2.0k [Hz]	0C	○	○	×	○ (Voice Setting)	○	×	○	○	○
	77	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k [Hz]	36	○	○	×	○ (Voice Setting)	○	×	○	○	○
	78	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	79	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7A	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7B	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7C	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7D	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7E	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--
	7F	1		NOT USED	--	--	--	--	--	--	--	--	--	--	--

TOTAL SIZE 0C

nn = PART NUMBER

If there is a Drum Voice assigned to the part, the following parameters are ineffective.

- BANK SELECT LSB
- MONO/POLY MODE
- SCALE TUNING
- PORTAMENTO
- PITCH EG
- FILTER MODULATION DEPTH (FMOD DEPTH)
- AMPLITUDE MODULATION DEPTH (AMOD DEPTH)

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

MIDI Parameter Change table (DRUM SETUP)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)			PLAY		REC		
						Song	Main Layer Left Left-Layer	Keyboard	Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel		
3n	rr	00	1	00-7F	PITCH COARSE	-64...0...+63	40	○	×	×	×	○	×	○	×	×
		01	1	00-7F	PITCH FINE	-64...0...+63 [cent]	40	○	×	×	×	○	×	○	×	×
		02	1	00-7F	LEVEL	0...127	Depends on the note	○	×	×	×	○	×	○	×	×
		03	1	00-7F	ALTERNATE GROUP	OFF, 1...127	Depends on the note	○	×	×	×	○	×	○	×	×
		04	1	00-7F	PAN	RND, L63...C...R63	Depends on the note	○	×	×	×	○	×	○	×	×
		05	1	00-7F	REVERB SEND	0...127	Depends on the note	○	×	×	×	○	×	○	×	×
		06	1	00-7F	CHORUS SEND	0...127	Depends on the note	○	×	×	×	○	×	○	×	×
		07	1	00-7F	VARIATION SEND	0...127	7F	○	×	×	×	○	×	○	×	×
		08	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	○	×	×	×	○	×	○	×	×
		09	1	00-01	Rcv NOTE OFF	OFF, ON	Depends on the note	○	×	×	×	○	×	○	×	×
		0A	1	00-01	Rcv NOTE ON	OFF, ON	01	○	×	×	×	○	×	○	×	×
		0B	1	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40	○	×	×	×	○	×	○	×	×
		0C	1	00-7F	LOW PASS FILTER RESONANCE	-64...0...+63	40	○	×	×	×	○	×	○	×	×
		0D	1	00-7F	EG ATTACK RATE	-64...0...+63	40	○	×	×	×	○	×	○	×	×
		0E	1	00-7F	EG DECAY1 RATE	-64...0...+63	40	○	×	×	×	○	×	○	×	×
		0F	1	00-7F	EG DECAY2 RATE	-64...0...+63	40	○	×	×	×	○	×	○	×	×
TOTAL SIZE		10														

		20	1	00-7F	EQ BASS GAIN	-12...+12 [dB]	40	○	×	×	×	○	×	○	×	×
		21	1	00-7F	EQ TREBLE GAIN	-12...+12 [dB]	40	○	×	×	×	○	×	○	×	×
		22	1		NOT USED			-	-	-	-	-	-	-	-	-
		23	1		NOT USED			-	-	-	-	-	-	-	-	-
		24	1	04-28	EQ BASS FREQUENCY	32...2.0k [Hz]	0C	○	×	×	×	○	×	○	×	×
		25	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k [Hz]	36	○	×	×	×	○	×	○	×	×
		26	1		NOT USED			-	-	-	-	-	-	-	-	-
		27	1		NOT USED			-	-	-	-	-	-	-	-	-
		28	1		NOT USED			-	-	-	-	-	-	-	-	-
		29	1		NOT USED			-	-	-	-	-	-	-	-	-
		2A	1		NOT USED			-	-	-	-	-	-	-	-	-
		2B	1		NOT USED			-	-	-	-	-	-	-	-	-
		2C	1		NOT USED			-	-	-	-	-	-	-	-	-
		2D	1		NOT USED			-	-	-	-	-	-	-	-	-
TOTAL SIZE		0E														

n: Drum Setup Number (0-1)  
 rr: note number (0D-5B)

In the following cases, the Clavinova will initialize all Drum Setups.

- XG SYSTEM ON received
- GM SYSTEM ON received
- DRUM SETUP RESET received (only when in XG mode)

- When a part to which a Drum Setup is assigned receives a program change, the assigned Drum Setup will be initialized. If the same Drum Setup is assigned to two or more parts, changes in Drum Setup parameters (including program changes) will apply to all parts to which it is assigned.

System Exclusive Messages (1)

- \* Not Received when Receive Parameter SysEx is set to off.
- \* Not transmitted when Transmit Parameter SysEx is set to on.

System Exclusive Messages (Universal Realtime messages)

○: available

MIDI Event	Data Format	MIDI Reception (effective or not for each part)			MIDI Reception (affecting the panel)	MIDI Transmission (generated data)			PLAY		REC
		Song	Main Layer Left Left-Layer	Keyboard		Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
Master Volume	F0 7F XN 04 01 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000001 01 = Sub-ID #2=Master Volume 0sssssss SS = Volume LSB 0ttttttt TT = Volume MSB 11110111 F7 = End of Exclusive	○	×	×	×	×	×	○	○	×	

System Exclusive Messages (Universal Non Realtime messages)

MIDI Event	Data Format	MIDI Reception (effective or not for each part)			MIDI Reception (affecting the panel)	MIDI Transmission (generated data)			PLAY		REC
		Song	Main Layer Left Left-Layer	Keyboard		Panel (main generation method)	Song	Midi	PLAY	REW	Recorded from panel
GM1 System On	F0 7E XN 09 01 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=General MIDI Message 00000001 01 = Sub-ID #2=General MIDI On 11110111 F7 = End of Exclusive	○	×	×	○ (Voice Setting Reverb Type Chorus Type)	×	○	×	○	×	○

**System Exclusive Messages (2)**

- \* Not received when the Receive Parameter SysEx is set to off.
- \* Not transmitted when the Transmit Parameter SysEx is set to on.

**System Exclusive Messages (Preset voice)**

MIDI Event	Data Format							MIDI Reception (effective or not for each part)			MIDI Reception (affecting the panel)	MIDI Transmission (generated data)					
								Song	Main Layer Left Left-Layer	Keyboard		Panel (main generation method)	Song	Midi			
String Resonance Depth	F0	43	73	01	50	11	0n	02	dd	F7							
		11110000	F0	= Exclusive status													
		01000011	43	= YAMAHA ID													
		01110011	73	= Clavinova ID													
		00000001	01	= Model ID (Clavinova common ID)													
		01010000	50	= SubID													
		00010001	11	= SubID													
		0000nnnn	0n	= Channel (00-0F)													
		00000010	02	= SubID(String Resonance Depth)													
	0ddddd	dd	= Depth(00-48)														
	11110111	F7	= End of Exclusive														
Sustain Sample Depth	F0	43	73	01	50	11	0n	03	dd	F7							
		11110000	F0	= Exclusive status													
		01000011	43	= YAMAHA ID													
		01110011	73	= Clavinova ID													
		00000001	01	= Model ID (Clavinova common ID)													
		01010000	50	= SubID													
		00010001	11	= SubID													
		0000nnnn	0n	= Channel (00-0F)													
		00000011	03	= SubID(Sustain Sample Depth)													
	0ddddd	dd	= Depth(00-48)														
	11110111	F7	= End of Exclusive														
Key Off Sampling Depth	F0	43	73	01	50	11	0n	04	dd	F7							
		11110000	F0	= Exclusive status													
		01000011	43	= YAMAHA ID													
		01110011	73	= Clavinova ID													
		00000001	01	= Model ID (Clavinova common ID)													
		01010000	50	= SubID													
		00010001	11	= SubID													
		0000nnnn	0n	= Channel (00-0F)													
		00000100	04	= SubID(Key Off Sampling Depth)													
	0ddddd	dd	= Depth(00-50)														
	11110111	F7	= End of Exclusive														
Soft Pedal Depth	F0	43	73	01	50	11	0n	05	dd	F7							
		11110000	F0	= Exclusive status													
		01000011	43	= YAMAHA ID													
		01110011	73	= Clavinova ID													
		00000001	01	= Model ID (Clavinova common ID)													
		01010000	50	= SubID													
		00010001	11	= SubID													
		0000nnnn	0n	= Channel (00-0F)													
		00000101	05	= SubID(Soft Pedal Depth)													
	0ddddd	dd	= Depth(00-7F)														
	11110111	F7	= End of Exclusive														

\* For each Depth value, the reset value is 40H = voice parameter.

**System Exclusive Messages (Others)**

MIDI Event	Data Format										MIDI Reception (effective or not for each part)			MIDI Reception (affecting the panel)	MIDI Transmission (generated data)			
											Song	Main Layer Left Left-Layer	Keyboard		Panel (main generation method)	Song	Midi	
MIDI Master Tuning	F0	43	1n	27	30	00	00	mm	ll	cc	F7							
		11110000	F0	= Exclusive status														
		01000011	43	= YAMAHA ID														
		0001nnnn	1n	= always 0(when transmit), n=0-F(when receive)														
		00100111	27	= Model ID of TG100														
		00110000	30	= Address High														
		00000000	00	= Address Mid														
		00000000	00	= Address Low														
		0000mmmm	0m	= Master Tune MSB														
		0000llll	0l	= Master Tune LSB														
		0ccccccc	cc	= don't care														
	11110111	F7	= End of Exclusive															

# Clavinova®

## CLP-150/CLP-150M/ CLP-150C PARTS LIST

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### Notes : DESTINATION ABBREVIATIONS

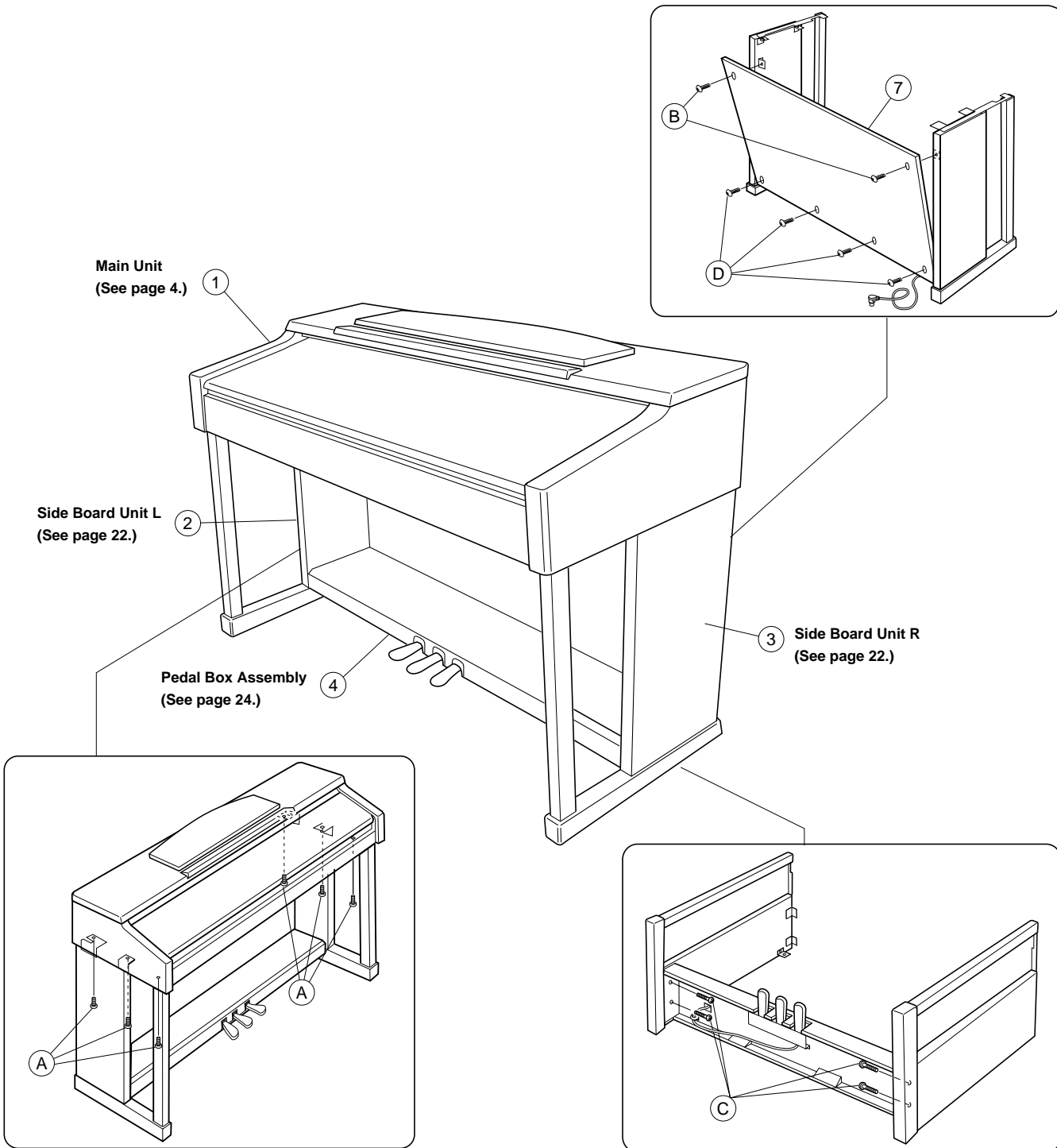
A : Australian model	M : South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W : General export model (220)
I : Indonesian model	N,X : General export model
J : Japanese model	Y : Export model
K : Korean model	

### ■ WARNING

Components having special characteristics are marked  $\triangle$  and must be replaced with parts having specification equal to those originally installed.

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

## OVERALL ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		OVERALL ASSEMBLY		CLP-150/150M/150C		
1	--	Main Unit		CLP-150 U (V828100)		
1	--	Main Unit		CLP-150M U (V854370)		
1	--	Main Unit		CLP-150C U (V854410)		
1	--	Main Unit		CLP-150 B,E (V828110)		
1	--	Main Unit		CLP-150M B,E (V854380)		
1	--	Main Unit		CLP-150C B,E (V854420)		
1	--	Main Unit		CLP-150 N (V828120)		
1	--	Main Unit		CLP-150M N (V854390)		
1	--	Main Unit		CLP-150C N (V854430)		
1	--	Main Unit		CLP-150 K (V984460)		
1	--	Main Unit		CLP-150M K (V984470)		
1	--	Main Unit		CLP-150C K (V984480)		
* 2	<b>V8433400</b>	Side Board Unit L	LEFT	CLP-150		22
* 2	<b>V8552000</b>	Side Board Unit L	LEFT	CLP-150M		
* 2	<b>V8552400</b>	Side Board Unit L	LEFT	CLP-150C		
* 3	<b>V8433500</b>	Side Board Unit R	RIGHT	CLP-150		22
* 3	<b>V8552100</b>	Side Board Unit R	RIGHT	CLP-150M		
* 3	<b>V8552500</b>	Side Board Unit R	RIGHT	CLP-150C		
4	--	Pedal Box Assembly		CLP-150 (V843380)		
4	--	Pedal Box Assembly		CLP-150M (V854910)		
4	--	Pedal Box Assembly		CLP-150C (V854960)		
* 7	<b>V8432300</b>	Back Board Assembly		CLP-150		
* 7	<b>V8558900</b>	Back Board Assembly		CLP-150M		
* 7	<b>V8559200</b>	Back Board Assembly		CLP-150C		
		ACCESSORIES				
△	<b>VT015800</b>	AC Cord Set	U 2P 2.44m 7A	U		06
△	<b>VT016000</b>	AC Cord Set	B 2P 2.5m	B		08
△	<b>VT015900</b>	AC Cord Set	E 2P 2.5m	E,N		05
△	<b>V8911300</b>	AC Cord Set	K 2P 2.5m	K		
△	<b>VK726100</b>	Connector	CCT5902	N		05
	--	Bench	BC-102DR	CLP-150 U (V756390)		
	--	Bench	BC-102MH	CLP-150M U (V756400)		
	--	Bench	BC-102CH	CLP-150C U (V887870)		
	--	Bench	BC-100DR	CLP-150 N,K (V553140)		
	--	Bench	BC-100MH	CLP-150M N,K (V553150)		
	--	Bench	BC-100CH	CLP-150C N,K (V553160)		
* 7	<b>V8740600</b>	Headphone Hanger Set				07
* 7	<b>V8813600</b>	Screw Set		CLP-150/150M		04
* 7	<b>V9205200</b>	Screw Set		CLP-150C		
* 7	<b>X2568A00</b>	CD-ROM	12cm	U,B,E,N,K		03
* 7	<b>V8813600</b>	Screw Set		CLP-150/150M		04
* 7	<b>V9205200</b>	Screw Set		CLP-150C		
A	<b>EG360020</b>	Bind Head Screw	6.0X16 MFZN2BL		6	01
B	<b>VP367300</b>	Truss Head Screw	4.0X12 MFZN2BL	CLP-150/150M	2	01
B	<b>V6135000</b>	Truss Head Screw	4.0X12 MFC2	CLP-150C	2	01
C	<b>VQ448400</b>	Truss Head Screw	6.0X25 MFZN2BL		4	01
D	<b>03747290</b>	Truss Head Tapping Screw-1	4.0X20 MFZN2BL	CLP-150/150M	4	01
D	<b>VB164600</b>	Truss Head Tapping Screw-1	4.0X20 MFC2	CLP-150C	4	01
E	<b>VR410300</b>	Cord Clamp Set				03
		JIGS				
	<b>TX000670</b>	Rod				

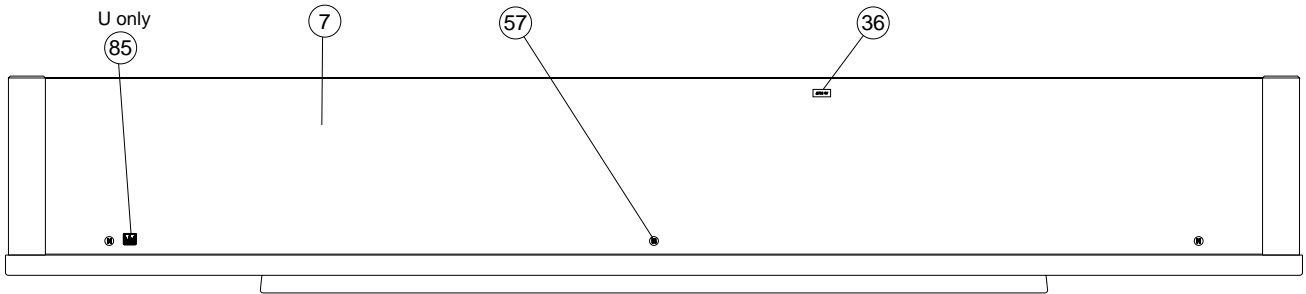
\*: New Parts

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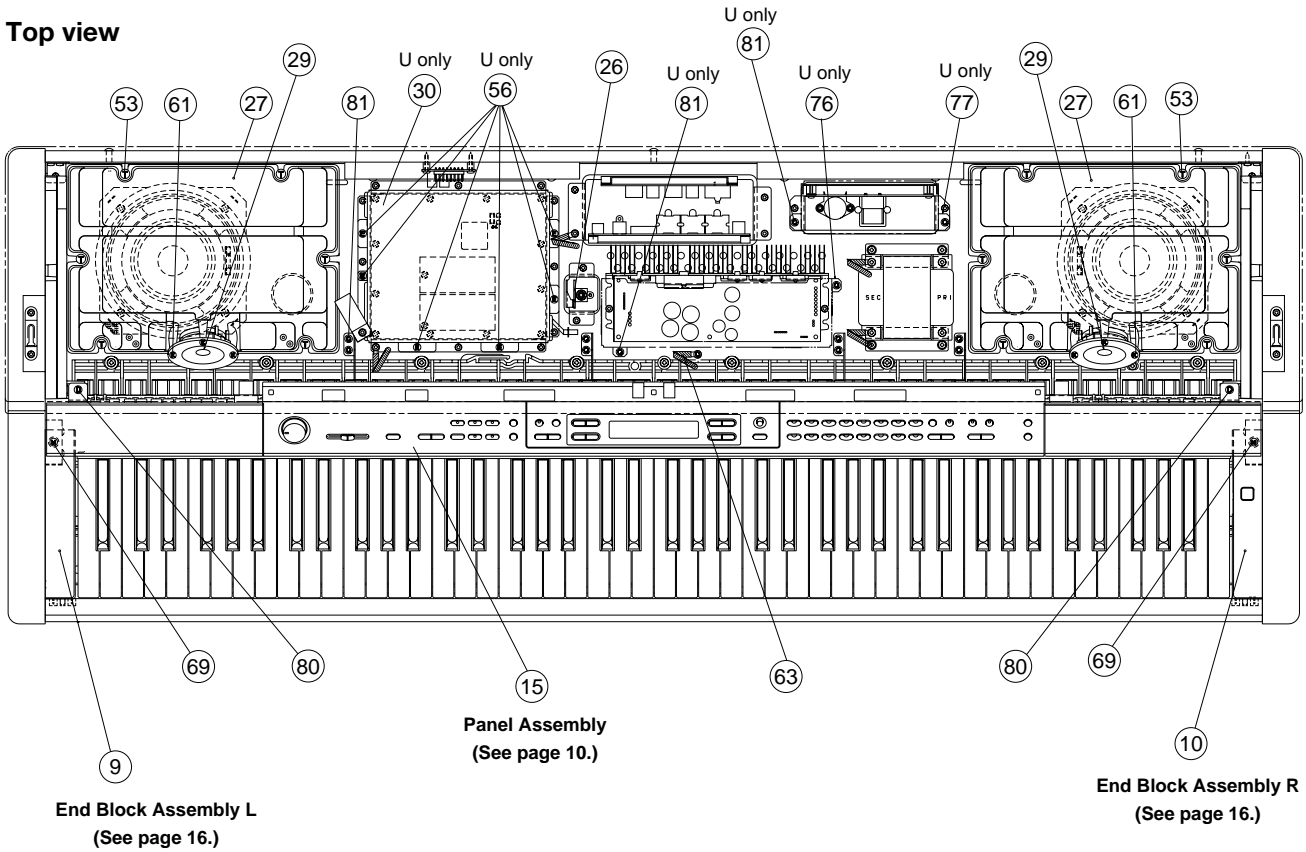




• Rear view



• Top view



End Block Assembly L  
(See page 16.)

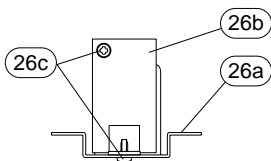
Panel Assembly  
(See page 10.)

End Block Assembly R  
(See page 16.)

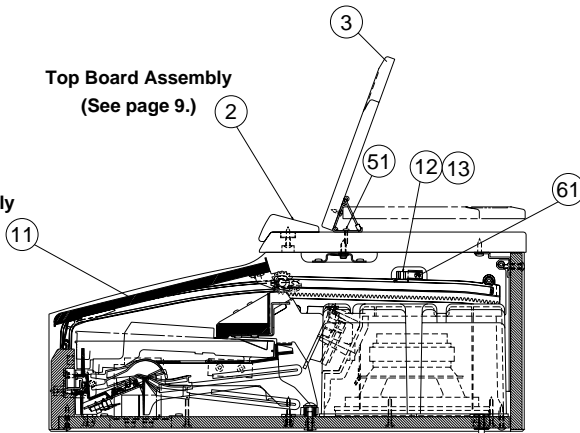
Music Rest Assembly  
(See page 13.)

Top Board Assembly  
(See page 9.)

• 26 PK Connector



Key Cover Assembly  
(See page 17.)



• Side view

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	MAIN UNIT		CLP-150/150M/150C		
	--	Main Unit		CLP-150 U (V828100)		
	--	Main Unit		CLP-150M U (V854370)		
	--	Main Unit		CLP-150C U (V854410)		
	--	Main Unit		CLP-150 B,E (V828110)		
	--	Main Unit		CLP-150M B,E (V854380)		
	--	Main Unit		CLP-150C B,E (V854420)		
	--	Main Unit		CLP-150 N (V828120)		
	--	Main Unit		CLP-150M N (V854390)		
	--	Main Unit		CLP-150C N (V854430)		
	--	Main Unit		CLP-150 K (V984460)		
	--	Main Unit		CLP-150M K (V984470)		
	--	Main Unit		CLP-150C K (V984480)		
17	--	Jack Assembly		U (V964290)		
17	--	Jack Assembly		B,E,N,K (V862710)		
30	--	DM Shield Cover Assembly		U (V787810)		
56	EP600130	Bind Head Tapping Screw-B	3.0X6 MFZN2Y	U	6	01
70	--	Main Unit Sub Assembly		CLP-150 (V828150)		
70	--	Main Unit Sub Assembly		CLP-150M (V854490)		
70	--	Main Unit Sub Assembly		CLP-150C (V854500)		
71	XQ426A00	Power Transformer	29WP244 U	U		13
71	XQ427B00	Power Transformer	GA-120 E IEC65	B,E,K		14
71	XQ428B00	Power Transformer	GA-120 N	N		16
72	V8583600	MA120 Assembly		U		
72	V8583700	MA120 Assembly		B,E,N,K		
73	V8780300	FU120BL Assembly		U		
73	V7631600	FU120LB Assembly		B,E,K		
73	V7631700	FU120LB Assembly		N		
75	--	Name Plate	YMMA	CLP-150 U (V867370)		
75	--	Name Plate	YMMA	CLP-150M U (V867420)		
75	--	Name Plate	YMMA	CLP-150C U (V867470)		
75	--	Name Plate	YMMA	CLP-150 B,E (V867390)		
75	--	Name Plate	YMMA	CLP-150M B,E (V867440)		
75	--	Name Plate	YMMA	CLP-150C B,E (V867490)		
75	--	Name Plate	YMMA	CLP-150 N (V867400)		
75	--	Name Plate	YMMA	CLP-150M N (V867450)		
75	--	Name Plate	YMMA	CLP-150C N (V867500)		
75	--	Name Plate	YMMA	CLP-150 K (V958460)		
75	--	Name Plate	YMMA	CLP-150M K (V958470)		
75	--	Name Plate	YMMA	CLP-150C K (V958480)		
76	V2191000	MA Cover Assembly		U		07
77	VV607200	FU Cover Assembly		U		06
80	EP600240	Bind Head Tapping Screw-B	4.0X10 MFZN2BL		6	01
81	EP030240	Bind Head Tapping Screw-1	3.5X12 MFZN2Y	U	28	01
81	EP030240	Bind Head Tapping Screw-1	3.5X12 MFZN2Y	B,E,N,K	24	01
82	CB817510	Cord Binder	S-14B		3	03
85	--	Graphic Mark		U (V846210)		
	--	Main Unit Sub Assembly		CLP-150 (V828150)		
	--	Main Unit Sub Assembly		CLP-150M (V854490)		
	--	Main Unit Sub Assembly		CLP-150C (V854500)		
* 1	V8278500	Keyboard Assembly	GHD_EBUS A88 K6			
* 2	V8339400	Top Board Assembly		CLP-150		
* 2	V8553200	Top Board Assembly		CLP-150M		
* 2	V8553700	Top Board Assembly		CLP-150C		
* 3	V8388000	Music Rest Assembly		CLP-150		
* 3	V8558200	Music Rest Assembly		CLP-150M		
* 3	V8558500	Music Rest Assembly		CLP-150C		
* 4	V8281900	Arm Assembly L	LEFT	CLP-150		
* 4	V8545100	Arm Assembly L	LEFT	CLP-150M		
* 4	V8546000	Arm Assembly L	LEFT	CLP-150C		
* 5	V8282000	Arm Assembly R	RIGHT	CLP-150		
* 5	V8545200	Arm Assembly R	RIGHT	CLP-150M		
* 5	V8546100	Arm Assembly R	RIGHT	CLP-150C		
6	--	Front Rail Assembly		CLP-150 (V821910)		
6	--	Front Rail Assembly		CLP-150M (V854950)		
6	--	Front Rail Assembly		CLP-150C (V854990)		
6	--	Front Rail Assembly	DR Wrapping	CLP-150 (V900090)		
6	--	Front Rail Assembly	DR Wrapping	CLP-150M (V900100)		
6	--	Front Rail Assembly	DR Wrapping	CLP-150C (V900120)		

\*: New Parts

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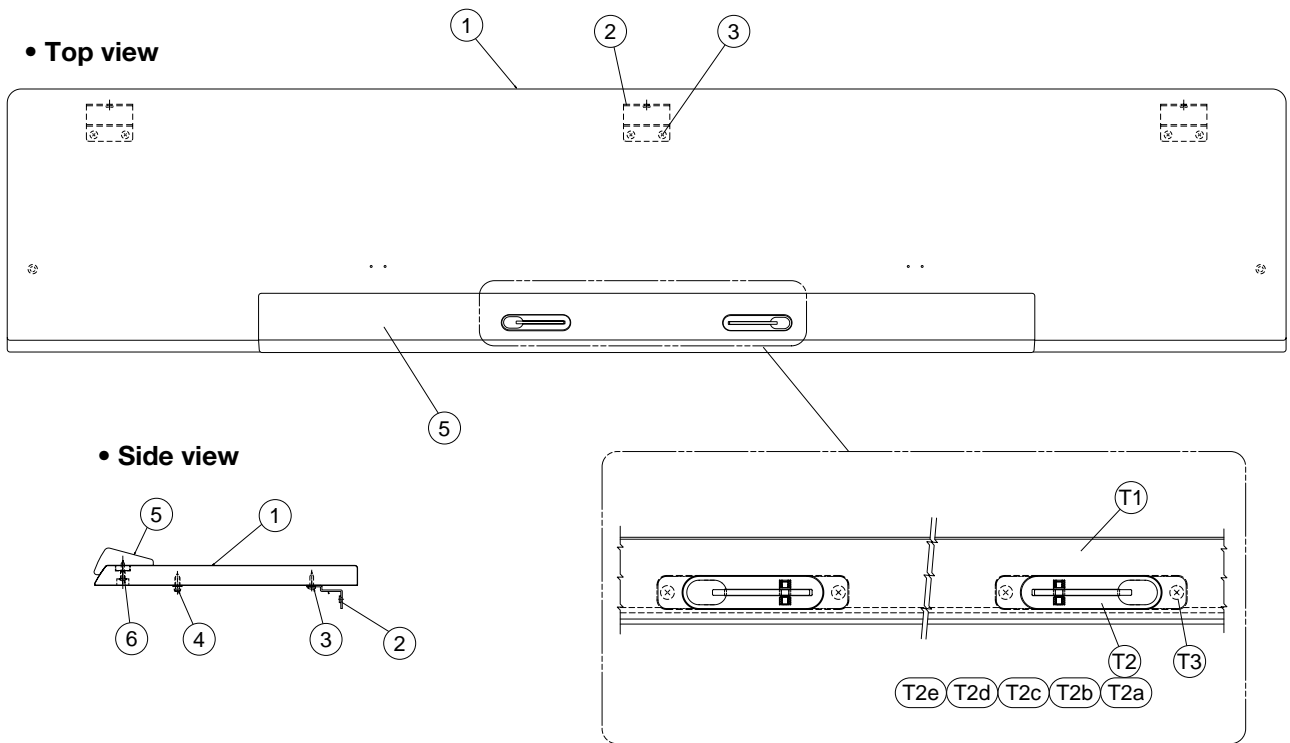
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* 7	V8432800	Back Top Panel Assembly		CLP-150		
* 7	V8547500	Back Top Panel Assembly		CLP-150M		
* 7	V8547700	Back Top Panel Assembly		CLP-150C		
* 8	V8431900	Keybed Assembly		CLP-150/150M		
* 8	V8894500	Keybed Assembly		CLP-150C		
8a	--	Keybed Assembly		CLP-150/150M (V843200)		
8a	--	Keybed Assembly		CLP-150C (V889470)		
8aa	V6008700	Nut	B 6.0X12.5 MFZN2BL		8	01
8ab	VA127400	Nut	B 5.0X12 MFZN2BL		9	01
8ac	VA789400	Nut	B 4.0X11.5 MFZN2BL		4	01
* 8ad	V9001100	Nut	TYPE I M4XL12.5		2	
8b	--	Holder, DM		(V787780)	2	
8c	--	Holder, DM L	LEFT	(V787790)		
8d	--	Holder, DM R	RIGHT	(V787800)		
8e	V2431100	Holder Assembly P.T.			2	07
8ea	--	Holder, Power Transformer		(V243100)	2	
8eb	VA121600	Bushing			4	01
8ec	VK431100	FDD Spacer			4	01
8ed	VA121400	Spacer			4	02
8f	VF823100	Metal Net			2	03
8g	--	Cushion Black	GH	(VZ75050)	2	
8h	CB817510	Cord Binder	S-14B			03
8i	VU891300	Cord Holder	L=80		2	03
8j	EP030240	Bind Head Tapping Screw-1	3.5X12 MFZN2Y		11	01
8k	EG340410	Bind Head Screw	4.0X20 MFZN2Y		4	01
8l	--	Cushion	450X6XT2	(V005320)	2	
9	--	End Block Assembly L	LEFT	CLP-150 (V925890)		
9	--	End Block Assembly L	LEFT	CLP-150M (V925920)		
9	--	End Block Assembly L	LEFT	CLP-150C (V925940)		
10	--	End Block Assembly R	RIGHT	CLP-150 (V863320)		
10	--	End Block Assembly R	RIGHT	CLP-150M (V863380)		
10	--	End Block Assembly R	RIGHT	CLP-150C (V863390)		
* 11	V8607500	Key Cover Assembly		CLP-150		
* 11	V8607600	Key Cover Assembly		CLP-150M		
* 11	V8607700	Key Cover Assembly		CLP-150C		
12	VS312100	Rack Cover L	LEFT			03
13	VS312200	Rack Cover R	RIGHT			03
15	--	Panel Assembly		CLP-150 (V829800)		
15	--	Panel Assembly		CLP-150M (V829810)		
15	--	Panel Assembly		CLP-150C (V829820)		
19	--	Headphones Jack Assembly		(V878160)		
21	CB040950	Spacer			4	03
23	--	DM Assembly		(V878670)		
24	V2403300	Circuit Board	NET1			05
26	--	PK Connector		(V879350)		
26a	V7585400	Angle, PK Connector				05
* 26b	V8496600	Circuit Board	PEDAL (DJK)			
26c	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		2	01
27	V2630800	Speaker Box Assembly			2	10
* 28	X2566A00	Speaker	16.0cm 8 ohm 60W	WOOFER	2	
29	XL455A00	Speaker	5.0cm 16 ohm 60W	TWEETER	2	07
35	VP834600	Adhesive Tape	12X50		2	02
36	--	Label		(VT50100)		
37	--	Label		(VS47810)		
51	EP030310	Bind Head Tapping Screw-1	3.0X16 MFZN2BL		4	01
52	VV040700	Pan Head Screw	PW5.0X25 MFZN2Y		9	01
53	EN630230	Truss Head Tapping Screw-1	3.5X14 MFZN2Y		12	01
54	EP040230	Bind Head Tapping Screw-1	4.0X14 MFZN2Y		2	01
55	VU952600	Truss Head Tapping Screw-1	3.5X30 MFZN2BL		21	01
56	EP600130	Bind Head Tapping Screw-B	3.0X6 MFZN2Y		12	01
57	VB934000	Truss Head Screw	4.0X20 MFZN2BL	CLP-150/150M	3	01
57	V6141100	Truss Head Screw	4.0X20 MFC2	CLP-150C	3	
58	EP030470	Bind Head Tapping Screw-1	3.5X20 MFZN2Y		4	01
59	VN887900	Guide Screw	6.0X14		2	03
60	EP030190	Bind Head Tapping Screw-1	3.5X16 MFZN2Y		10	01
61	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y		8	01
63	CB817510	Cord Binder	S-14B			03
64	CB069250	Cord Holder	BK-1		3	01
65	VP834600	Adhesive Tape	12X50		10	02
66	--	Port Black	M40.0 L=100	(V602200)	2	

\*: New Parts

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# TOP BOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		TOP BOARD ASSEMBLY		CLP-150/150M/150C		
*	<b>V8339400</b>	Top Board Assembly		CLP-150		
*	<b>V8553200</b>	Top Board Assembly		CLP-150M		
*	<b>V8553700</b>	Top Board Assembly		CLP-150C		
1	--	Top Board		CLP-150 (V828780)		
1	--	Top Board		CLP-150M (V855330)		
1	--	Top Board		CLP-150C (V855380)		
2	<b>VQ485800</b>	Holder, Top Board			3	05
3	<b>EP040170</b>	Bind Head Tapping Screw-1	4.0X16 MFZN2Y		6	01
4	<b>VV444100</b>	Strap Screw			2	03
5	--	Score Support Assembly		CLP-150 (V829300)		
5	--	Score Support Assembly		CLP-150M (V855430)		
5	--	Score Support Assembly		CLP-150C (V855460)		
6	<b>EN630260</b>	Truss Head Tapping Screw-1	3.5X20 MFZN2Y		5	01
	--	Score Support Assembly		CLP-150 (V829300)		
	--	Score Support Assembly		CLP-150M (V855430)		
	--	Score Support Assembly		CLP-150C (V855460)		
T1	--	Score Support		CLP-150 (V829300)		
T1	--	Score Support		CLP-150M (V855440)		
T1	--	Score Support		CLP-150C (V855470)		
T2	<b>V7114400</b>	Music Stopper Assembly		CLP-150	2	
T2	<b>V7567500</b>	Music Stopper Assembly		CLP-150M	2	
T2	<b>V8902200</b>	Music Stopper Assembly		CLP-150C	2	
T2a	--	Case, Music Stopper	A	(V711320)	2	
T2b	--	Case, Music Stopper	B	CLP-150/150M (V711330)	2	
T2b	--	Case, Music Stopper	B	CLP-150C (V890200)		
T2c	<b>V7113700</b>	Music Stopper Assembly	BRASS		2	05
T2d	<b>V7113400</b>	Bushing			4	
T2e	<b>EP600250</b>	Bind Head Tapping Screw-B	3.0X8 MFZN2Y		2	01
T3	<b>EP030320</b>	Bind Head Tapping Screw-1	3.5X10 MFZN2BL		4	01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		PANEL ASSEMBLY		CLP-150/150M/150C		
	--	Panel Assembly		CLP-150 (V829800)		
	--	Panel Assembly		CLP-150M (V829810)		
	--	Panel Assembly		CLP-150C (V829820)		
* 1	V8299000	Control Panel		CLP-150/150M		
* 1	V8299100	Control Panel		CLP-150C		
* 2	V8298300	Panel L	LEFT	CLP-150		
* 2	V8298400	Panel L	LEFT	CLP-150M		
* 2	V8298500	Panel L	LEFT	CLP-150C		
* 3	V8829300	Panel R	RIGHT	CLP-150		
* 3	V8829400	Panel R	RIGHT	CLP-150M		
* 3	V8829500	Panel R	RIGHT	CLP-150C		
* 4	V8832200	Grille Assembly	A	CLP-150/150M	2	
* 4	V8832400	Grille Assembly	A	CLP-150C	2	
6	--	Control Panel Holder		(V829560)	4	
7	--	Control Panel Holder A		(V907460)	2	
8	V8085100	Slide Knob		SONG BALANCE		01
9	--	Dust Proof Cloth	54X10X0.25	(V591130)		
10	VU432400	Knob Black		MASTER VOLUME		01
11	VU638700	Felt	MK			05
* 12	V8811300	LCD	SCLCMDYAMS0049			
* 13	V8670000	Button Brown	B	DEMO		
* 14	V8064400	Button Gray	A1 x2	SONG SELECT		
15	V8065500	Button Dark Gray	B1 LENS	TRACK 1/2, EXTRA TRACKS	3	05
16	V8065100	Button Dark Gray	B1	TOP		04
* 17	V8670300	Button Green	B LENS(GREEN)	SONG START/STOP		
* 18	V8670200	Button Dark Gray	B LENS(RED)	REC		
19	V8066000	Button Dark Gray	D1	FILE, SETTING(SONG, METRONOME, MIDI, OTHER, VOICE)	6	04
* 20	V8671400	Button Green	D LENS(GREEN)	METRONOME START/STOP		
21	V8064900	Button Gray	A1 x2	TEMPO, VARIATION, BRILLIANCE	3	05
* 22	V8671200	Button Gray	A1b x2	LCD A/B/C/D	4	
* 23	V8670700	Button Gray	B1a x1	EDIT		
24	V8065800	Button Dark Gray	C1 x7	GRAND PIANO 1/2, E.PIANO 1/2, HARPSICHORD, E.CLAVICHORD, VIBRAPHONE, CHURCH ORGAN, JAZZ ORGAN, STRINGS, CHOIR, E.BASS, WOOD BASS, SYNTH.PAD	2	06
* 25	V8465000	Button Dark Gray	E x1	GUITAR, XG	2	
26	V8066100	Button Dark Gray	D1	SPRIT, REVERB, CHORUS	3	05
28	--	Connector Assembly	KRD-KRD 9P-700	(VK11840)		
29	--	Connector Assembly	KRD-KRD 8P-700	(VK11830)		
30	VK110000	Connector Assembly	KRD-KRD 11P-400			06
31	--	Connector Assembly	KRD-KRD 9P-400	(VK10990)		
* 32	V9384800	FFC Cable	16P 110mm			
33	--	Connector Assembly	VOL PH 8P	(V876870)		
34	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y		42	01
35	VD791000	Bind Head Tapping Screw-B	2.6X10 MFZN2Y		3	01
36	EP030230	Bind Head Tapping Screw-1	3.5X10 MFZN2Y		10	01
37	EP030340	Bind Head Tapping Screw-1	3.5X12 MFZN2BL		8	01
* 38	V8455100	Circuit Board	PNL			
* 39	V8502800	Circuit Board	PNR			
* 40	V8345900	LCD Cover				
41	CB069250	Cord Holder	BK-1		7	01
42	VP834600	Adhesive Tape	12X50			02
* 43	V8562800	Circuit Board	MV2			
45	--	Control Panel Holder		(V884220)	2	
46	--	Nonwoven Fabric Cloth	11 57.4X7.5X0.5	(V889010)		
47	--	Nonwoven Fabric Cloth	12 99X7.5X0.5	(V889020)	2	
48	--	Nonwoven Fabric Cloth	13 30X7.5X0.5	(V889030)	3	
49	--	Nonwoven Fabric Cloth	14 182X7.5X0.5	(V889040)	2	
50	--	Nonwoven Fabric Cloth	15 80X7.5X0.5	(V889050)	2	
51	--	Nonwoven Fabric Cloth	21 129.3X13.5X0.5	(V889060)		
52	--	Nonwoven Fabric Cloth	22 60.3X13.5X0.5	(V889070)		
53	--	Nonwoven Fabric Cloth	23 103.5X13.5X0.5	(V889080)		
54	--	Nonwoven Fabric Cloth	24 103.5X13.5X0.5	(V889090)		
55	--	Nonwoven Fabric Cloth	H	(V860690)	2	

\*: New Parts

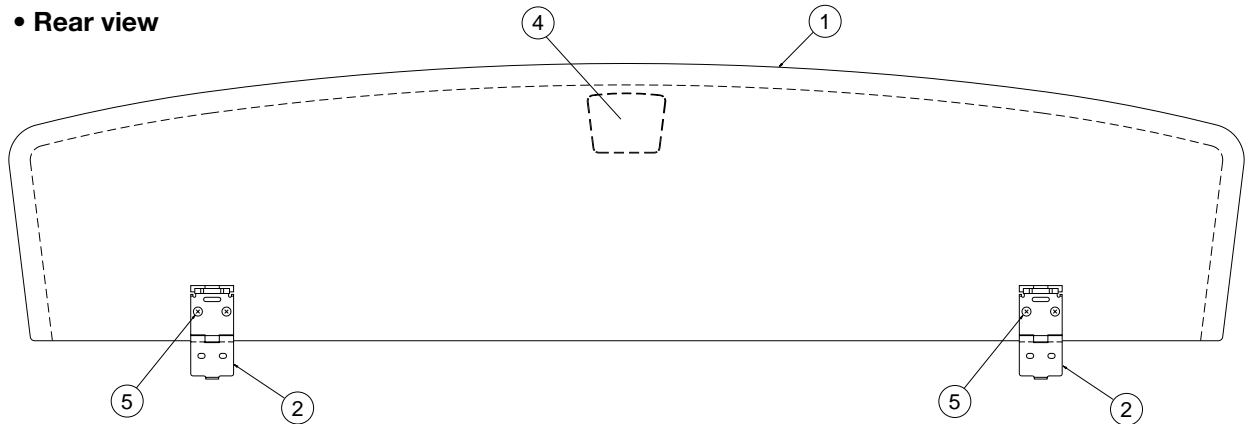
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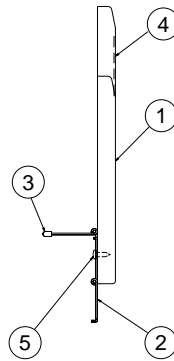


# ■ MUSIC REST ASSEMBLY

• Rear view



• Side view

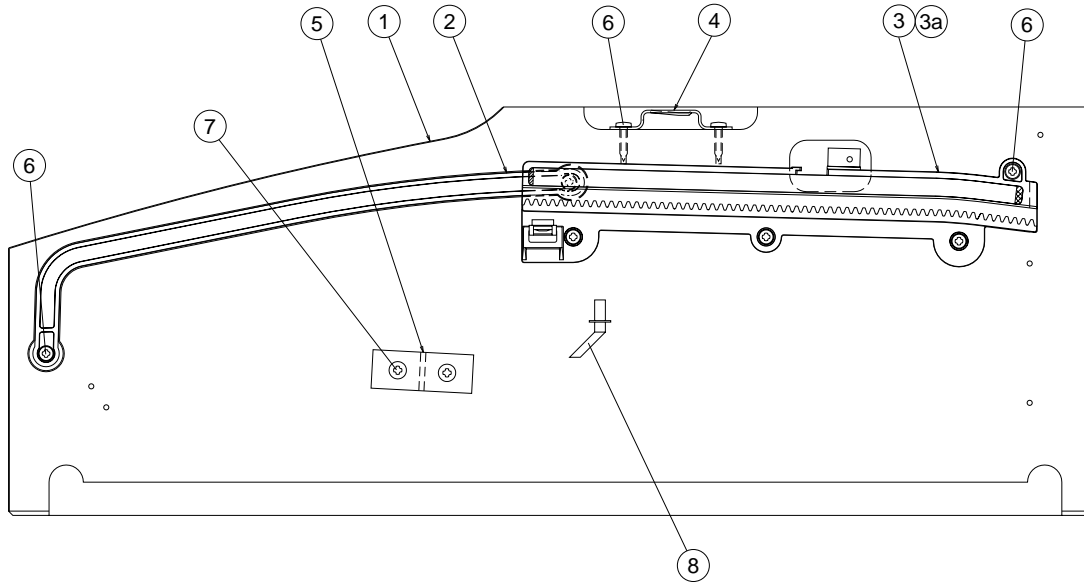


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	<b>V8388000</b>	MUSIC REST ASSEMBLY		CLP-150/150M/150C		
*	<b>V8558200</b>	Music Rest Assembly		CLP-150		
*	<b>V8558500</b>	Music Rest Assembly		CLP-150M		
1	--	Music Rest		CLP-150C		
1	--	Music Rest		CLP-150 (V842650)		
1	--	Music Rest		CLP-150M (V855680)		
2	<b>V8437600</b>	Hinge	1STEP 1.6mm YMMA		2	
3	<b>VV965900</b>	Cap	T=1.6mm		2	03
4	<b>V5782300</b>	Badge	CLAVINOVA BRASS			05
5	<b>20404200</b>	Bind Head Tapping Screw-1	3.0X10 MFZN2BL		4	

\*: New Parts

RANK: Japan only

## ARM ASSEMBLY



### ● Arm Assembly L

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ARM ASSEMBLY L	LEFT	CLP-150/150M/150C		
*	<b>V8281900</b>	Arm Assembly L	LEFT	CLP-150		
*	<b>V8545100</b>	Arm Assembly L	LEFT	CLP-150M		
*	<b>V8546000</b>	Arm Assembly L	LEFT	CLP-150C		
1	--	Side Cover L	LEFT	CLP-150 (V828950)		
1	--	Side Cover L	LEFT	CLP-150M (V854530)		
1	--	Side Cover L	LEFT	CLP-150C (V854620)		
2	<b>V4949100</b>	Guide Rail L	LEFT	CLP-150/150M		03
*	2	<b>V6023800</b>	Guide Rail L	LEFT	CLP-150C	
*	3	<b>V8553000</b>	Rack Assembly L	LEFT		
3a	<b>VV435100</b>	Nut	M4 WUSN-4039			01
4	<b>VV444200</b>	Holder, Top Board	1.20			03
5	--	Crosspiece		(V861370)		
6	<b>EP030260</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2BL		9	01
7	<b>VU952600</b>	Truss Head Tapping Screw-1	3.5X30 MFZN2BL		2	01
8	<b>VU891300</b>	Cord Holder Black	L80			03

\*: New Parts

RANK: Japan only

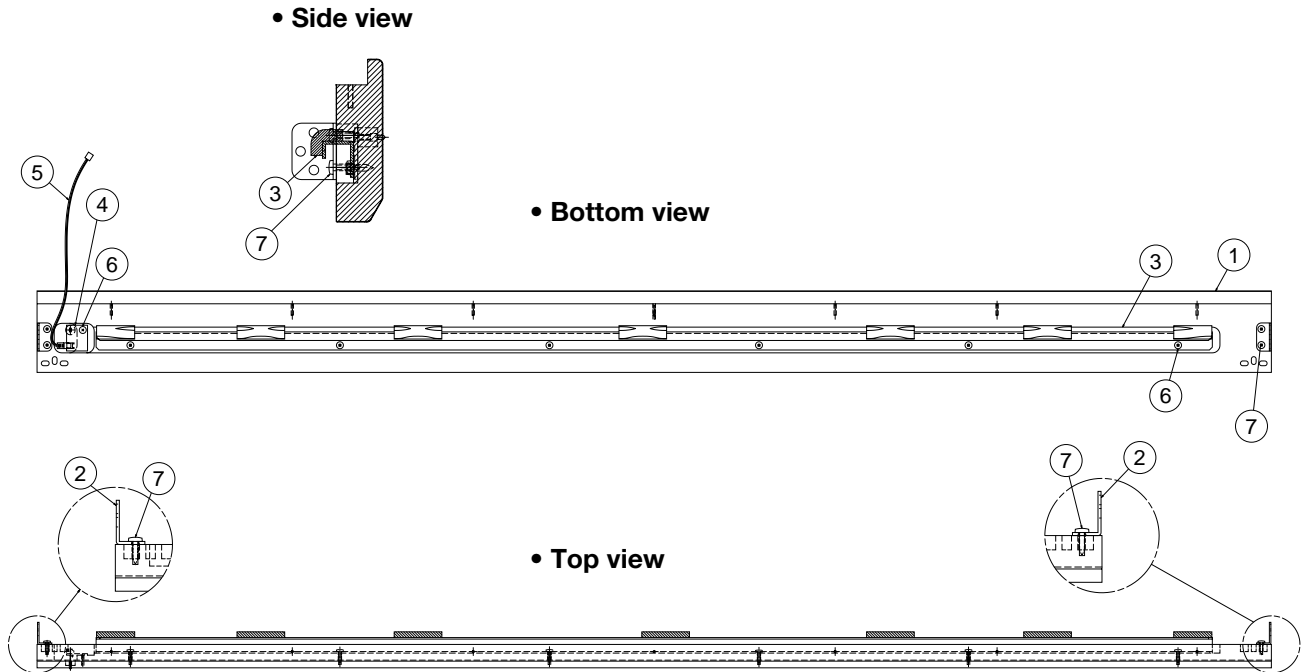
### ● Arm Assembly R

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ARM ASSEMBLY R	RIGHT	CLP-150/150M/150C		
*	<b>V8282000</b>	Arm Assembly R	RIGHT	CLP-150		
*	<b>V8545200</b>	Arm Assembly R	RIGHT	CLP-150M		
*	<b>V8546100</b>	Arm Assembly R	RIGHT	CLP-150C		
1	--	Side Cover R	RIGHT	CLP-150 (V828990)		
1	--	Side Cover R	RIGHT	CLP-150M (V854540)		
1	--	Side Cover R	RIGHT	CLP-150C (V854630)		
2	<b>V4949300</b>	Guide Rail R	RIGHT	CLP-150C/150M		03
*	2	<b>V6024000</b>	Guide Rail R	RIGHT	CLP-150C	
*	3	<b>V8553100</b>	Rack Assembly R	RIGHT		
3a	<b>VV435100</b>	Nut	M4 WUSN-4039			01
4	<b>VV444200</b>	Holder, Top Board	1.20			03
5	--	Crosspiece		(V861370)		
6	<b>EP030260</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2BL		8	01
7	<b>VU952600</b>	Truss Head Tapping Screw-1	3.5X30 MFZN2BL		2	01
8	<b>VU891300</b>	Cord Holder Black	L80			03

\*: New Parts

RANK: Japan only

# FRONT RAIL ASSEMBLY



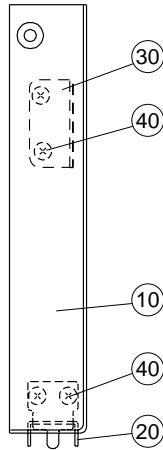
REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		FRONT RAIL ASSEMBLY	CLP-150/150M/150C		
	--	Front Rail Assembly	CLP-150 (V821910)		
	--	Front Rail Assembly	CLP-150M (V854950)		
	--	Front Rail Assembly	CLP-150C (V854990)		
	--	Front Rail Assembly	CLP-150 (V900090)		
	--	Front Rail Assembly	CLP-150M (V900100)		
	--	Front Rail Assembly	CLP-150C (V900120)		
* 1	<b>V8243700</b>	Front Rail	CLP-150		
* 1	<b>V8559900</b>	Front Rail	CLP-150M		
* 1	<b>V8560500</b>	Front Rail	CLP-150C		
2	--	Holder, Rail	1.6 L (V526350)	2	
3	--	Holder Assembly, Keyboard	(V760310)		
4	<b>VN637600</b>	Circuit Board	PL (YCJ)		03
4	<b>VU659100</b>	Circuit Board	PL (YMMA)		03
5	--	Connector Assembly	KRD-KRD 2P-150 (VK09960)		
6	<b>EP030340</b>	Bind Head Tapping Screw-1	3.5X12 MFZN2BL	7	01
7	<b>EP030260</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2BL	4	01

\*: New Parts

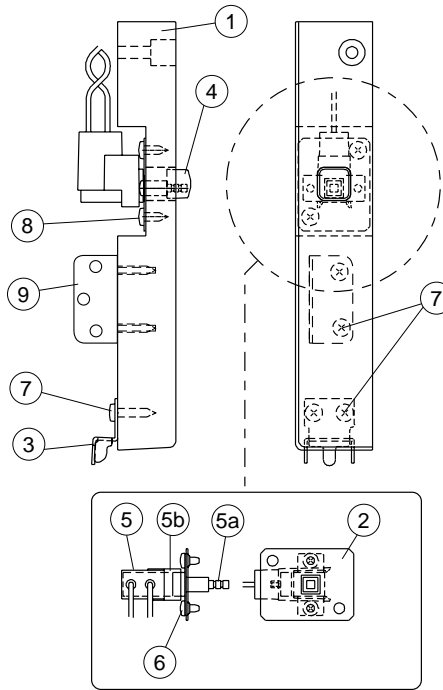
RANK: Japan only

## ■ END BLOCK ASSEMBLY

### ● End Block Assembly L



### ● End Block Assembly R



### ● End Block Assembly L

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	END BLOCK ASSEMBLY L	LEFT	CLP-150/150M/150C		
	--	End Block Assembly L	LEFT	CLP-150 (V925890)		
	--	End Block Assembly L	LEFT	CLP-150M (V925920)		
	--	End Block Assembly L	LEFT	CLP-150C (V925940)		
* 10	<b>V9351000</b>	End Block L	LEFT	CLP-150		
* 10	<b>V9351100</b>	End Block L	LEFT	CLP-150M		
* 10	<b>V8605500</b>	End Block L	LEFT	CLP-150C		
20	--	Angle H	1.2 L	(V533550)		
30	--	Angle K	1.6 L	(V526350)		
40	<b>EP030190</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2Y		2	01

\*: New Parts

RANK: Japan only

### ● End Block Assembly R

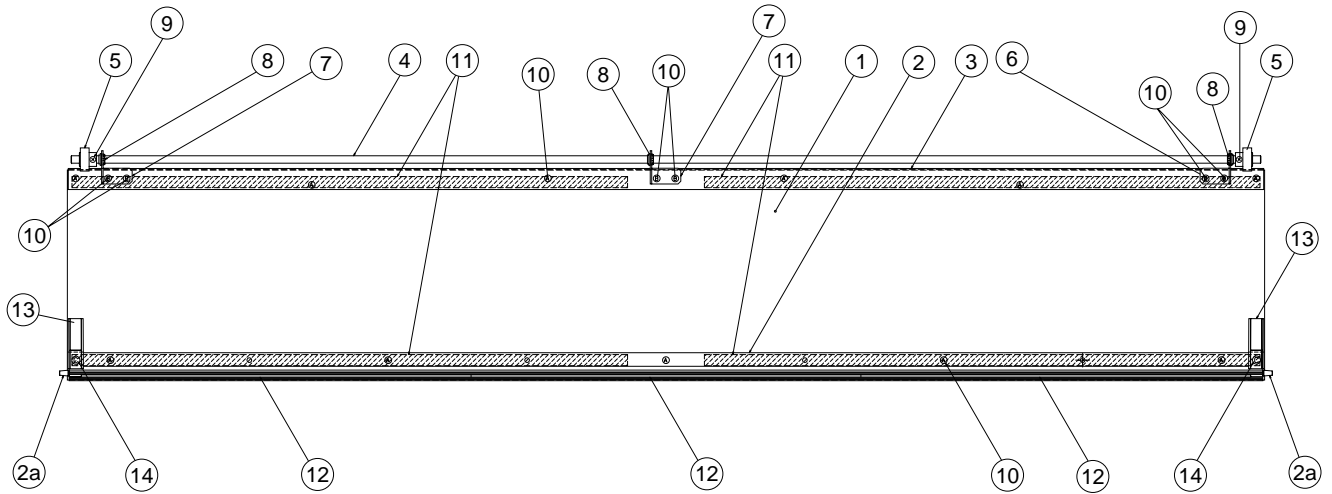
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	END BLOCK ASSEMBLY R	RIGHT	CLP-150/150M/150C		
	--	End Block Assembly R	RIGHT	CLP-150 (V863320)		
	--	End Block Assembly R	RIGHT	CLP-150M (V863380)		
	--	End Block Assembly R	RIGHT	CLP-150C (V863390)		
* 1	<b>V9351500</b>	End Block R	RIGHT	CLP-150		
* 1	<b>V9351600</b>	End Block R	RIGHT	CLP-150M		
* 1	<b>V8607300</b>	End Block R	RIGHT	CLP-150C		
2	--	Holder, Power Switch	0.8	(V522000)		
3	--	Angle H	1.2 L	(V533550)		
4	<b>VF663400</b>	Knob Black		CLP-150/150M POWER		02
4	<b>V6250700</b>	Knob Brown		CLP-150C POWER		01
* 5	<b>V8768900</b>	Power Switch Assembly	PSW			
5a	<b>VC843500</b>	Push Switch	SDDL B1216A J.U.C.S	POWER		03
5b	<b>V5800800</b>	Switch Cover Ivory/Black				01
6	<b>EP600230</b>	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		2	01
7	<b>EP030190</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2Y		4	01
8	<b>EP030320</b>	Bind Head Tapping Screw-1	3.5X10 MFZN2BL		2	01
9	--	Angle K	1.6 L	(V526350)		

\*: New Parts

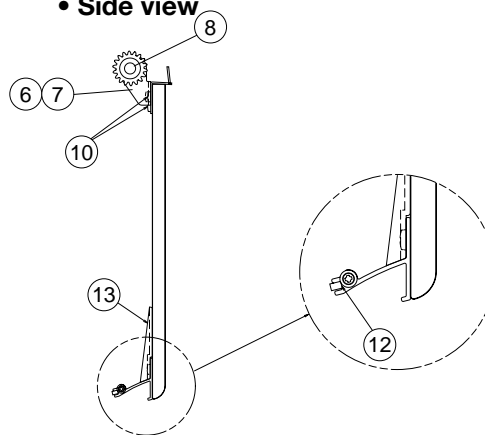
RANK: Japan only

# KEY COVER ASSEMBLY

• Bottom view



• Side view



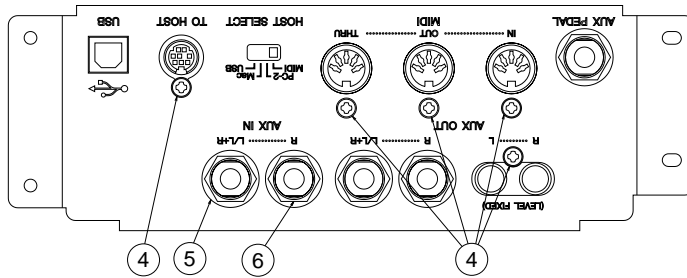
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		KEY COVER ASSEMBLY		CLP-150/150M/150C		
*	<b>V8607500</b>	Key Cover Assembly		CLP-150		
*	<b>V8607600</b>	Key Cover Assembly		CLP-150M		
*	<b>V8607700</b>	Key Cover Assembly		CLP-150C		
1	--	Key Cover		CLP-150 (V844670)		
1	--	Key Cover		CLP-150M (V856100)		
1	--	Key Cover		CLP-150C (V856130)		
2	<b>V4961900</b>	Sash Assembly	FRONT			10
2a	<b>V4964400</b>	Guide Pin			2	
3	--	Sash	REAR	(V664750)		
4	--	Rod		(V496240)		
5	<b>VT190400</b>	Gear			2	03
6	<b>VV285600</b>	Holder, Rod L	LEFT			03
7	<b>VV285700</b>	Holder, Rod R	RIGHT		2	03
8	<b>VS368500</b>	Bushing			3	03
9	<b>EG330060</b>	Bind Head Screw	3.0X10 MFZN2Y		2	01
10	<b>VN920900</b>	Bind Head Tapping Screw-1	3.5X8 MFZN2BL		17	01
11	--	Adhesive Tape	#500 600X12	(VO02370)	4	
*	12	<b>V9465400</b>	Cushion	H-32 426X2.5XT4	3	
13	<b>V5902900</b>	Block			2	02
14	<b>EP030230</b>	Bind Head Tapping Screw-1	3.5X10 MFZN2Y		2	01

\*: New Parts

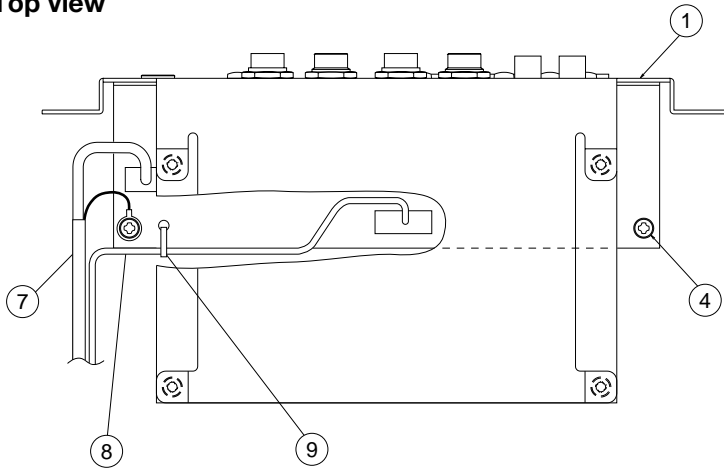
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# JACK ASSEMBLY

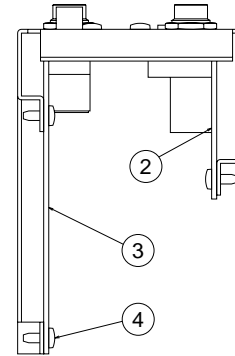
• Front view



• Top view



• Side view

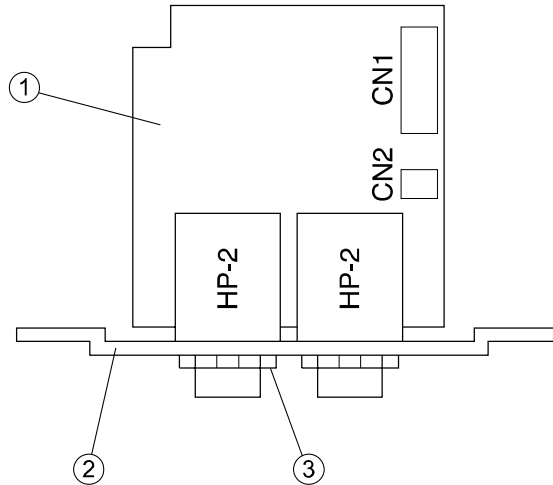


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		JACK ASSEMBLY		CLP-150/150M/150C		
	--	Jack Assembly		U (V964290)		
	--	Jack Assembly		B,E,N,K (V862710)		
	--	Angle, Jack		(V862720)		
1						
*	<b>V8496500</b>	Circuit Board	DJK			
*	<b>V8499900</b>	Circuit Board	AJK			
	<b>EP600190</b>	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		11	01
	<b>VJ869400</b>	Washer Black			5	02
	<b>VB508600</b>	Hexagonal Nut	12.0 14X2 MFZN2BL		5	01
	--	USB Cable		(V933990)		
	--	Connector Assembly	DJK-LF PH-8P	U (V961400)		
	--	Connector Assembly	DJK PH-8P	B,E,N,K (V937590)		
	<b>CB069250</b>	Cord Holder	BK-1			01

\*: New Parts

RANK: Japan only

## ■ HEADPHONES JACK ASSEMBLY

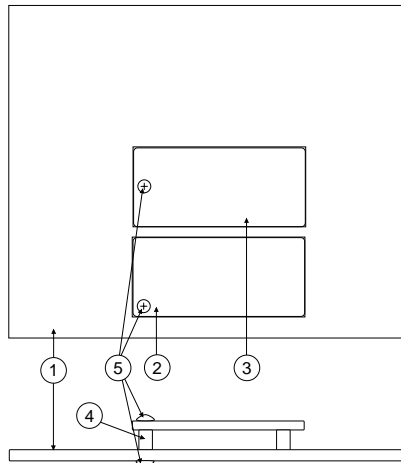


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	HEADPHONES JACK ASSEMBLY		CLP-150/150M/150C		
*		Headphones Jack Assembly		(V878160)		
1	V8781900	Circuit Board	HP			
2	VN631800	Angle, Headphone				04
3	VB508600	Hexagonal Nut	12.0 14X2 MFZN2BL		2	01

\*: New Parts

RANK: Japan only

## ■ DM ASSEMBLY

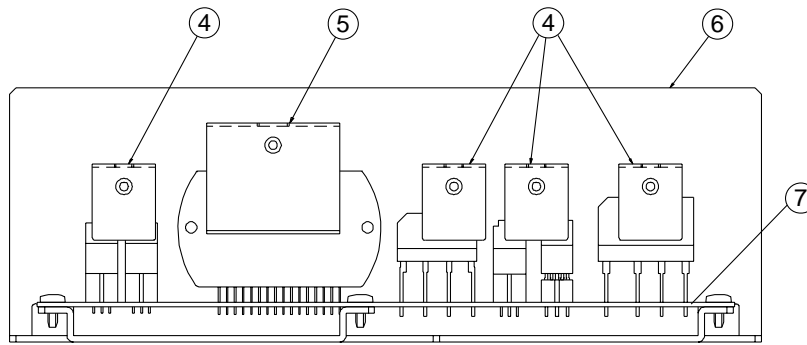
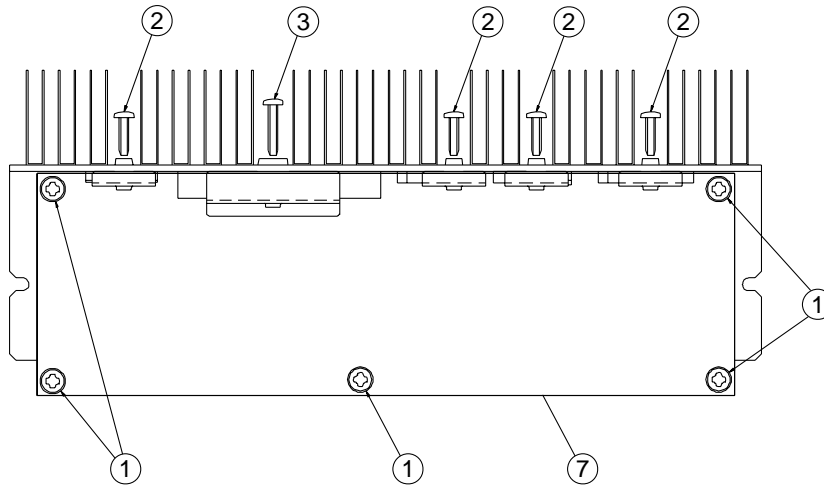


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	DM ASSEMBLY		CLP-150/150M/150C		
*		DM Assembly		(V878670)		
1	V8540500	Circuit Board	DM			
2	V8544400	Circuit Board	WML			
3	V8544500	Circuit Board	WMH			
4	V8868000	Spacer			2	
5	EG330040	Bind Head Screw	3.0X6 MFZN2Y		4	01

\*: New Parts

RANK: Japan only

## ■ MA120 ASSEMBLY



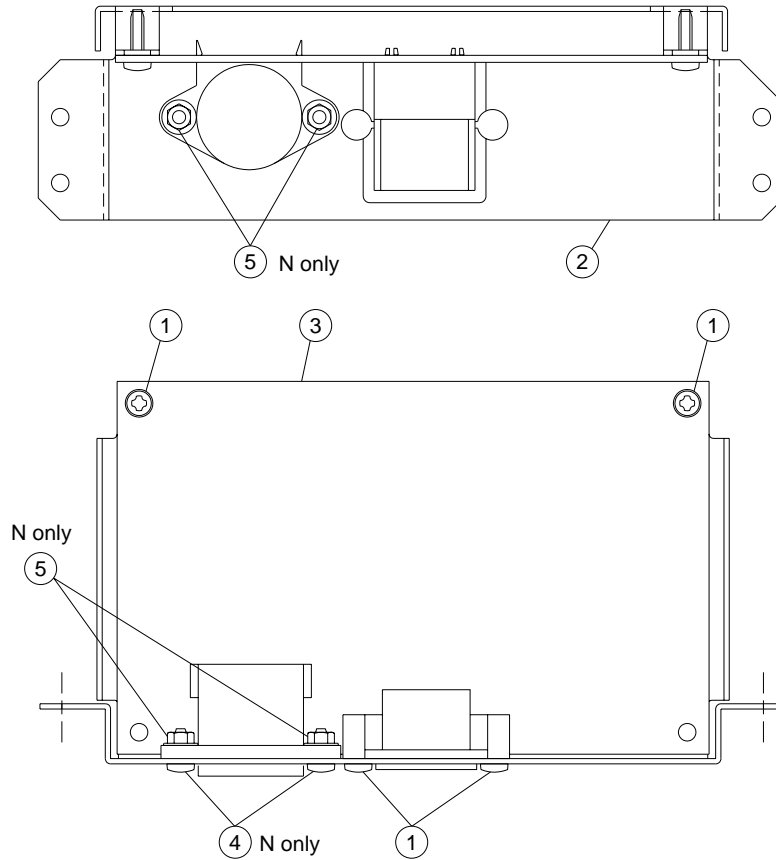
REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		MA120 ASSEMBLY	CLP-150/150M/150C		
*	<b>V8583600</b>	MA120 Assembly	U		
*	<b>V8583700</b>	MA120 Assembly	B,E,N,K		
1	<b>EP640410</b>	Bind Head Tapping Screw-B 4.0X8 MFZN2Y		5	01
2	<b>EP600220</b>	Bind Head Tapping Screw-B 3.0X10 MFZN2Y		4	01
3	<b>EP600390</b>	Bind Head Tapping Screw-B 3.0X16 MFZN2Y			01
4	<b>VT461100</b>	Transistor Holder A		4	03
5	<b>VT461200</b>	Transistor Holder B			03
6	<b>VT444300</b>	Heat Sink			11
7	--	Circuit Board MA120	U (V858380)(V859370)		
7	--	Circuit Board MA120	B,E,N,K (V859380)(V858390)		

\*: New Parts

RANK: Japan only



## ■ FU120LB ASSEMBLY



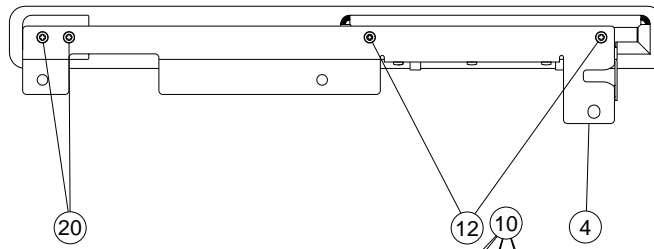
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	<b>V8780300</b>	FU120LB ASSEMBLY		CLP-150/150M/150C		
	<b>V7631600</b>	FU120BL Assembly		U		
	<b>V7631700</b>	FU120LB Assembly		B,E,K		
	<b>V7631700</b>	FU120LB Assembly		N		
1	<b>EP600190</b>	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		4	01
2	<b>V7585500</b>	Panel, AC Inlet		U,B,E,K		06
2	<b>V7585600</b>	Panel, AC Inlet		N		06
3	<b>VV650200</b>	Circuit Board	FU120L	U		07
3	<b>V7601300</b>	Circuit Board	FU120BL	B,E,K		
3	<b>VV650500</b>	Circuit Board	FU120L	N		08
4	<b>EG330380</b>	Bind Head Screw	3.0X10 MFZN2BL	N	2	01
5	<b>VA211900</b>	Hexagonal Nut	3.0 MFZN2Y	N	2	01

\*: New Parts

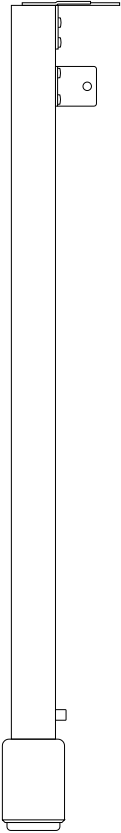
RANK: Japan only

## ■ SIDE BOARD UNIT

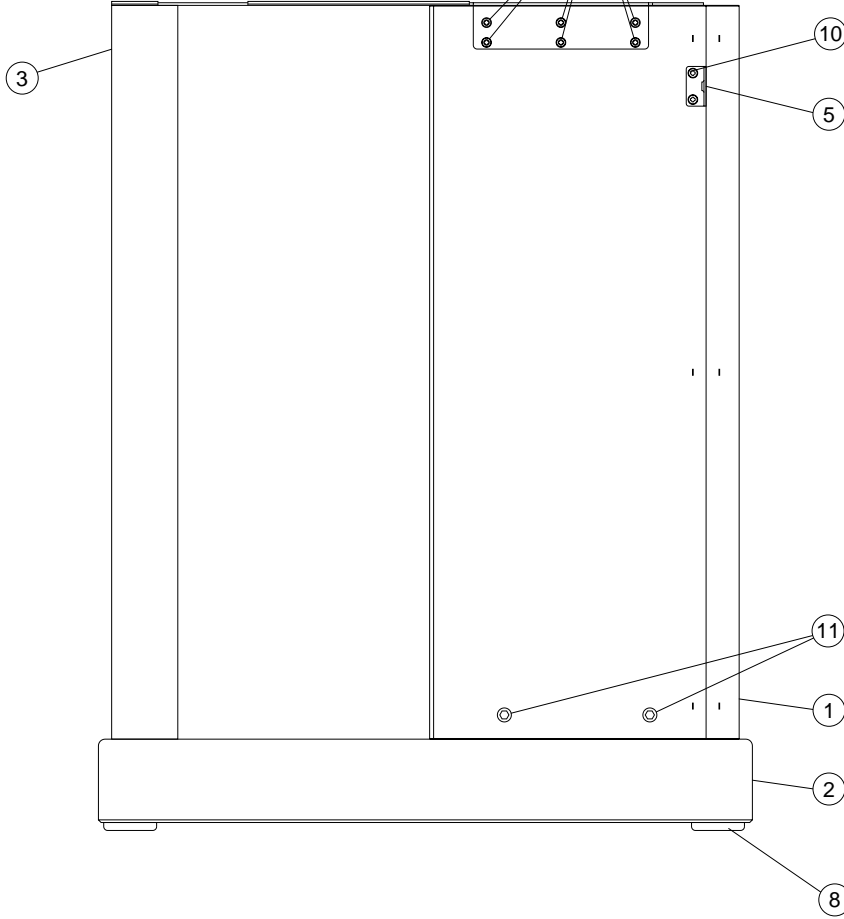
• Top view



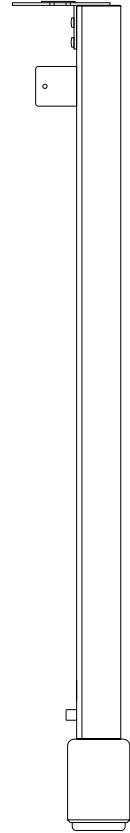
• Front view



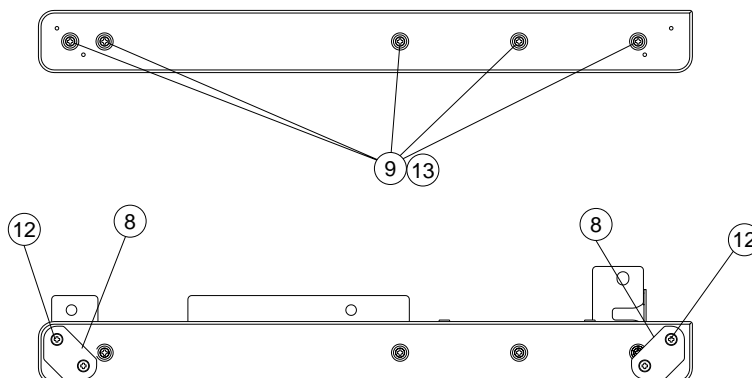
• Side view



• Rear view



• Bottom view



## ● Side Board Unit L

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		SIDE BOARD UNIT L	LEFT	CLP-150/150M/150C		
*	<b>V8433400</b>	Side Board Unit L	LEFT	CLP-150		
*	<b>V8552000</b>	Side Board Unit L	LEFT	CLP-150M		
*	<b>V8552400</b>	Side Board Unit L	LEFT	CLP-150C		
1	--	Side Board L	LEFT	CLP-150 (V843360)		
1	--	Side Board L	LEFT	CLP-150M (V855220)		
1	--	Side Board L	LEFT	CLP-150C (V855260)		
2	--	Stand Base L	LEFT ROSE	CLP-150 (V828400)		
2	--	Stand Base L	LEFT MAHOGANY	CLP-150M (V855000)		
2	--	Stand Base L	LEFT CHERRY	CLP-150C (V855040)		
3	--	Leg		CLP-150 (V834960)		
3	--	Leg		CLP-150M (V855550)		
3	--	Leg		CLP-150C (V855570)		
4	--	Holder, Stand	LEFT	(V834670)		
5	<b>VQ958300</b>	Holder, Back Board				05
8	<b>CB006650</b>	Foot C Black			2	03
9	<b>VV444000</b>	Pan Head Tapping Screw-1	4.0X65 MFZN2Y		5	01
10	<b>EP030580</b>	Bind Head Tapping Screw-1	3.5X20 MFZN2BL		8	01
11	<b>V5251600</b>	Nut	TYPE M M6XL33		2	01
12	<b>EM040020</b>	Flat Head Tapping Screw-1	4.0X20 MFZN2BL		6	01
13	<b>ET500040</b>	Flat Washer	4.0X10X0.8 MFZN2BL		5	01
20	<b>EM040040</b>	Flat Head Tapping Screw-1	4.0X30 MFZN2BL		2	01

\*: New Parts

RANK: Japan only

## ● Side Board Unit R

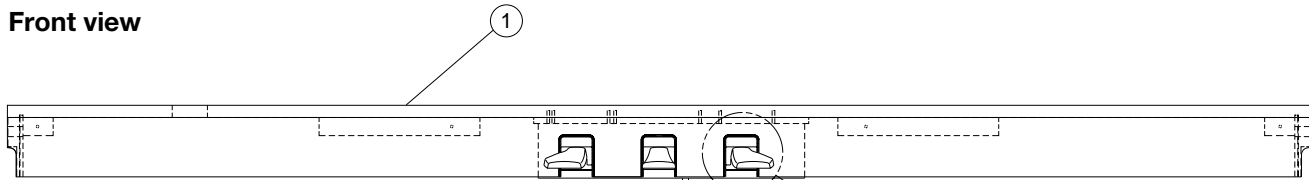
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		SIDE BOARD UNIT R	RIGHT	CLP-150/150M/150C		
*	<b>V8433500</b>	Side Board Unit R	RIGHT	CLP-150		
*	<b>V8552100</b>	Side Board Unit R	RIGHT	CLP-150M		
*	<b>V8552500</b>	Side Board Unit R	RIGHT	CLP-150C		
1	--	Side Board R	RIGHT	CLP-150 (V843370)		
1	--	Side Board R	RIGHT	CLP-150M (V855230)		
1	--	Side Board R	RIGHT	CLP-150C (V855270)		
2	--	Stand Base R	RIGHT ROSE	CLP-150 (V828410)		
2	--	Stand Base R	RIGHT MAHOGANY	CLP-150M (V855010)		
2	--	Stand Base R	RIGHT CHERRY	CLP-150C (V855050)		
3	--	Leg		CLP-150 (V834960)		
3	--	Leg		CLP-150M (V855550)		
3	--	Leg		CLP-150C (V855570)		
4	--	Holder, Stand	RIGHT	(V834680)		
5	<b>VQ958300</b>	Holder, Back Board				05
8	<b>CB006650</b>	Foot C Black			2	03
9	<b>VV444000</b>	Pan Head Tapping Screw-1	4.0X65 MFZN2Y		5	01
10	<b>EP030580</b>	Bind Head Tapping Screw-1	3.5X20 MFZN2BL		8	01
11	<b>V5251600</b>	Nut	TYPE M M6XL33		2	01
12	<b>EM040020</b>	Flat Head Tapping Screw-1	4.0X20 MFZN2BL		6	01
13	<b>ET500040</b>	Flat Washer	4.0X10X0.8 MFZN2BL		5	01
20	<b>EM040040</b>	Flat Head Tapping Screw-1	4.0X30 MFZN2BL		2	01

\*: New Parts

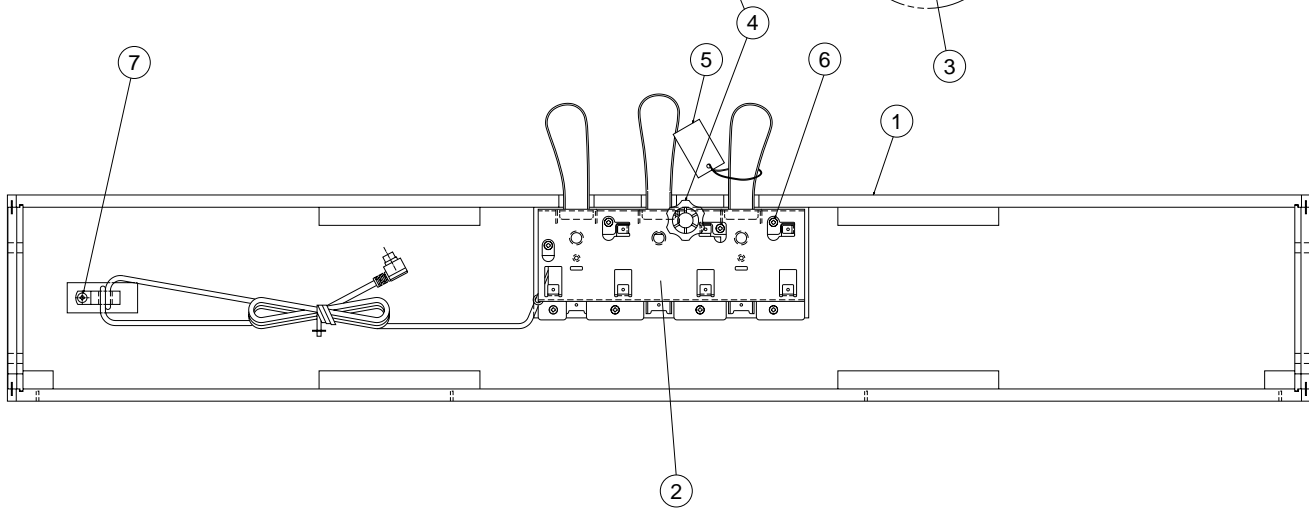
RANK: Japan only

## ■ PEDAL BOX ASSEMBLY

• Front view



• Bottom view



Pedal Assembly  
(See page 25.)

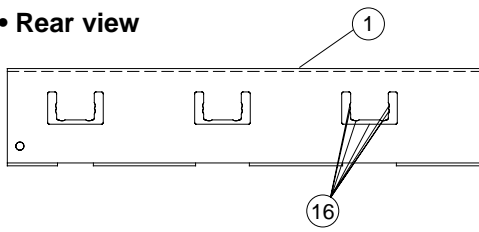
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		PEDAL BOX ASSEMBLY		CLP-150/150M/150C		
	--	Pedal Box Assembly		CLP-150 (V843380)		
	--	Pedal Box Assembly		CLP-150M (V854910)		
	--	Pedal Box Assembly		CLP-150C (V854960)		
* 1	V8433900	Pedal box		CLP-150		
* 1	V8549200	Pedal Box		CLP-150M		
* 1	V8549700	Pedal Box		CLP-150C		
* 2	V8613100	Pedal Assembly	O			
3	VU464300	Felt Red	115X12X2		3	03
4	VU379700	Adjuster				02
5	VD966100	Caution Label	Clavinova			03
6	EP040230	Bind Head Tapping Screw-1	4.0X14 MFZN2Y		8	01
7	EN630260	Truss Head Tapping Screw-1	3.5X20 MFZN2Y			01

\*: New Parts

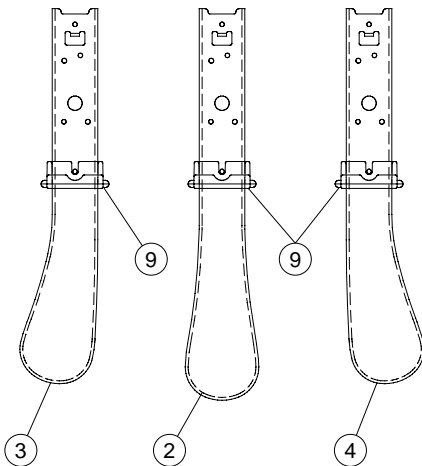
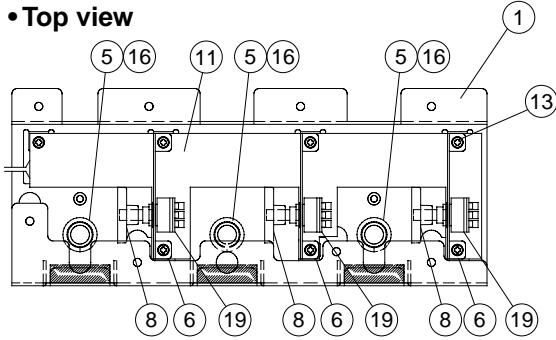
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# ■ PEDAL ASSEMBLY

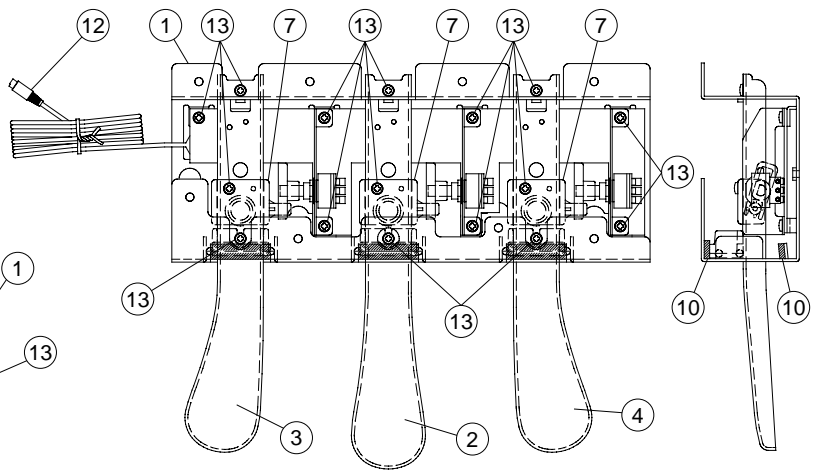
• Rear view



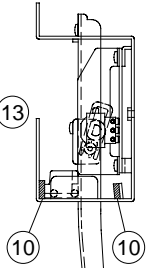
• Top view



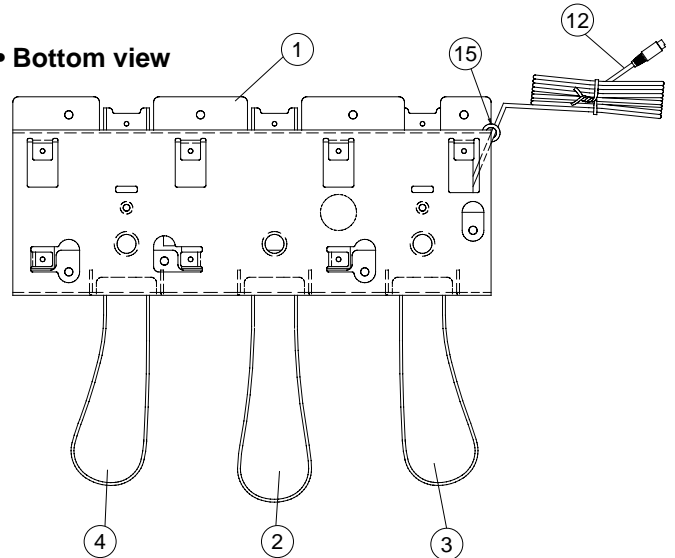
• Top view



• Side view



• Bottom view

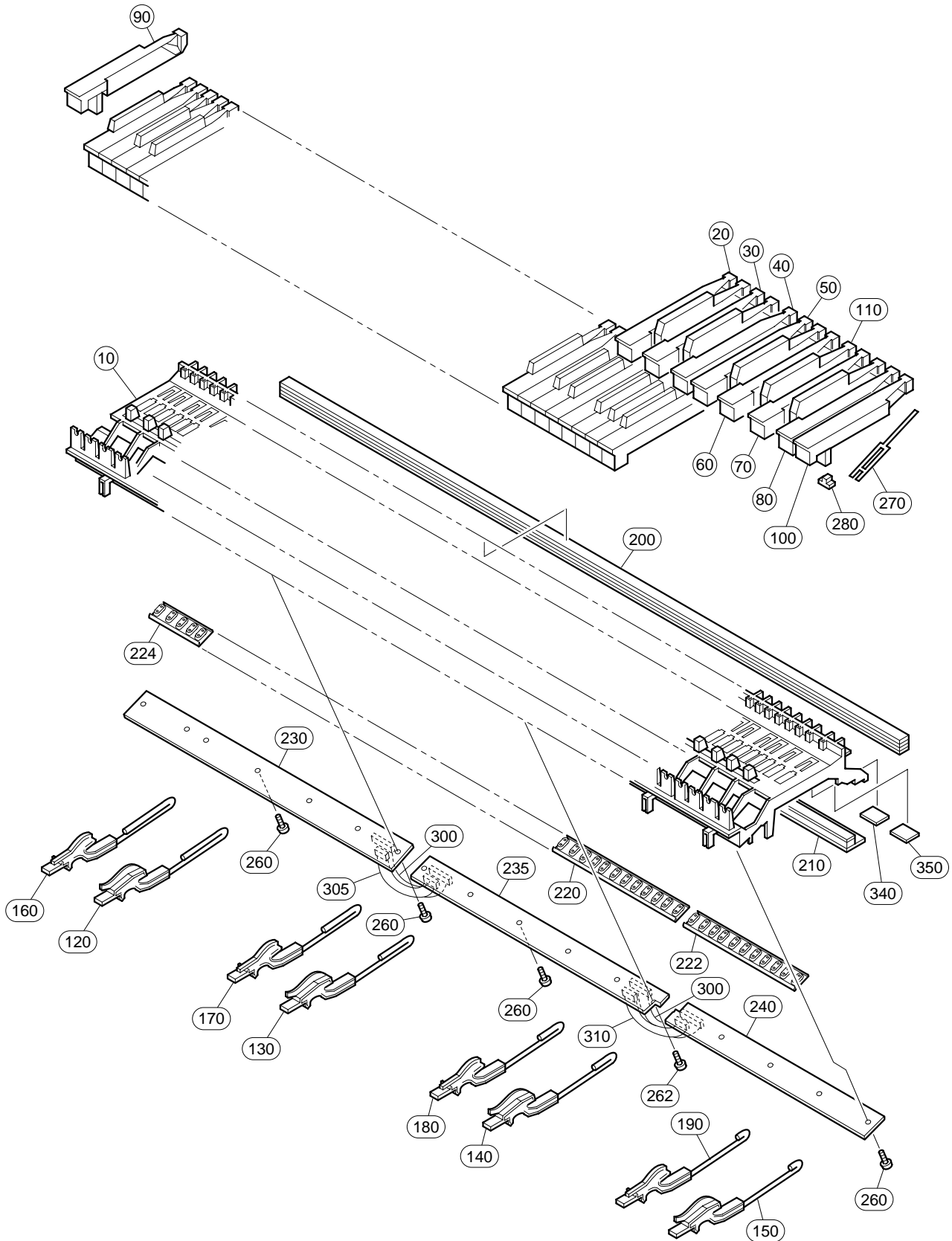


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	V8613100	PEDAL ASSEMBLY	O	CLP-150/150M/150C		
1	V7511700	Pedal Frame				06
2	VU362000	Pedal Piece C	CENTER	Sostenuto pedal		08
3	VU362100	Pedal Piece L	LEFT	Left pedal		08
4	VU362200	Pedal Piece R	RIGHT	Damper pedal		08
5	VP348100	Pedal Spring			3	03
6	V7598000	Angle Bracket	3VR		3	
7	VV475800	Holder, VR	PEDAL		3	03
8	VV476000	Actuator, VR	PEDAL		3	03
9	VU339800	Shutter	PEDAL		3	03
10	VU346500	Felt Black	PA		6	03
11	V7675600	Circuit Board	PEDAL (SW)			07
12	V0044700	Connector Assembly	PK-LF			08
13	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		16	01
15	CB069250	Cord Holder	BK-1			01
16	--	Grease	G-31KA	(VE96850)		
19	HS412520	Rotary Variable Resistor	K161SOZO1	PEDAL VOLUME	3	05

\*: New Parts

RANK: Japan only

# KEYBOARD ASSEMBLY

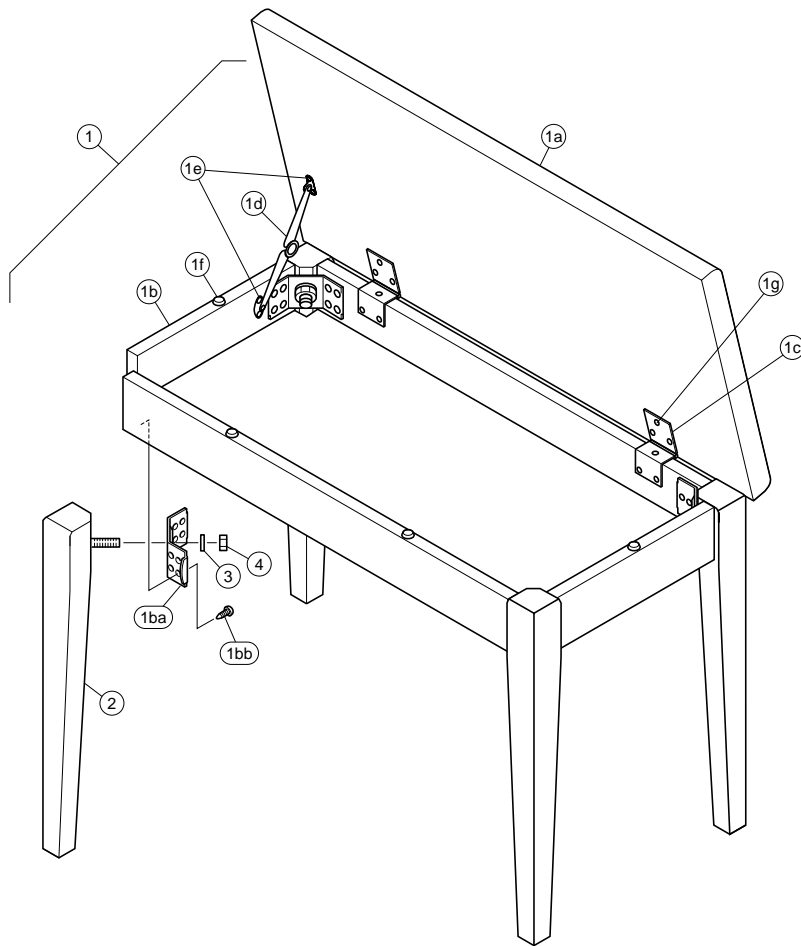


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* 1	<b>V8278500</b>	KEYBOARD ASSEMBLY	GHD_EBUS A88 K6	CLP-150/150M/150C		
10	--	MK Frame		(VU42210)		
20	<b>VU101000</b>	White Key	C		7	05
30	<b>VU101100</b>	White Key	D		7	05
40	<b>VU101200</b>	White Key	E		7	05
50	<b>VU101300</b>	White Key	F		7	05
60	<b>VU101400</b>	White Key	G		7	05
70	<b>VU101500</b>	White Key	A		7	05
80	<b>VU101600</b>	White Key	B		8	05
90	<b>VU101700</b>	White Key	A'			05
100	<b>VU101800</b>	White Key	C'			05
110	<b>VU102100</b>	Black Key			36	05
120	<b>VY828500</b>	Hammer Assembly, White Key	W1 A1-F1		13	05
130	<b>VY828600</b>	Hammer Assembly, White Key	W2 G3-E3		13	05
140	<b>VY828700</b>	Hammer Assembly, White Key	W3 F3-D5		13	05
150	<b>VY828800</b>	Hammer Assembly, White Key	W4 E5-C7		13	05
160	<b>VY828900</b>	Hammer Assembly, Black Key	B1 A#1-F#1		9	05
170	<b>VY829000</b>	Hammer Assembly, Black Key	B2 G#1-D#3		9	05
180	<b>VY829100</b>	Hammer Assembly, Black Key	B3 F#3-C#5		9	05
190	<b>VY829200</b>	Hammer Assembly, Black Key	B4 D#5-A#6		9	05
200	<b>VU342100</b>	Stopper Felt	1229X12X14.8T U88			09
210	<b>V7640100</b>	Stopper Felt	1239.5X28X10.1T			07
220	<b>VY846700</b>	Rubber Contact	OCTAVE 12KEYS D-C#		6	08
222	<b>VY846800</b>	Rubber Contact	OCTAVE 11KEYS A-C#			08
224	<b>VY846900</b>	Rubber Contact	OCTAVE 5KEYS D-C			08
* 230	<b>V8514800</b>	Circuit Board	GHD_EBUS L			
* 235	<b>V8521400</b>	Circuit Board	GHD M			
* 240	<b>V8521500</b>	Circuit Board	GHD H			
260	<b>VT413400</b>	Bind Head Tapping Screw-P	3.0X10 MFC2N2		16	01
* 262	<b>V8833200</b>	PW Head Tapping Screw-P	3X10-10 MFC2BL			
270	<b>VZ417900</b>	Spring	R WHITE/BLACK	}	88	03
270	<b>V2798500</b>	Spring	R WHITE/BLACK		88	
280	<b>VU237500</b>	Rubber			88	03
280	<b>V2211300</b>	Rubber	2		88	03
290	--	Grease	G-1006Y		(V627430)	
300	--	Cable	12P L=106 P=2	(V852050)	2	
305	--	Cable	9P L=106 P=2	(V776680)		
310	--	Cable	4P L=106 P=2	(V852100)		
340	<b>VV467900</b>	Stopper Support	A 35.5X20		7	03
350	<b>VV468100</b>	Stopper Support	B 24X20		12	03
	<b>TX000670</b>	JIGS Rod				

\*: New Parts

RANK: Japan only

■ BENCH (BC-102DR/BC-102MH/BC-102CH)



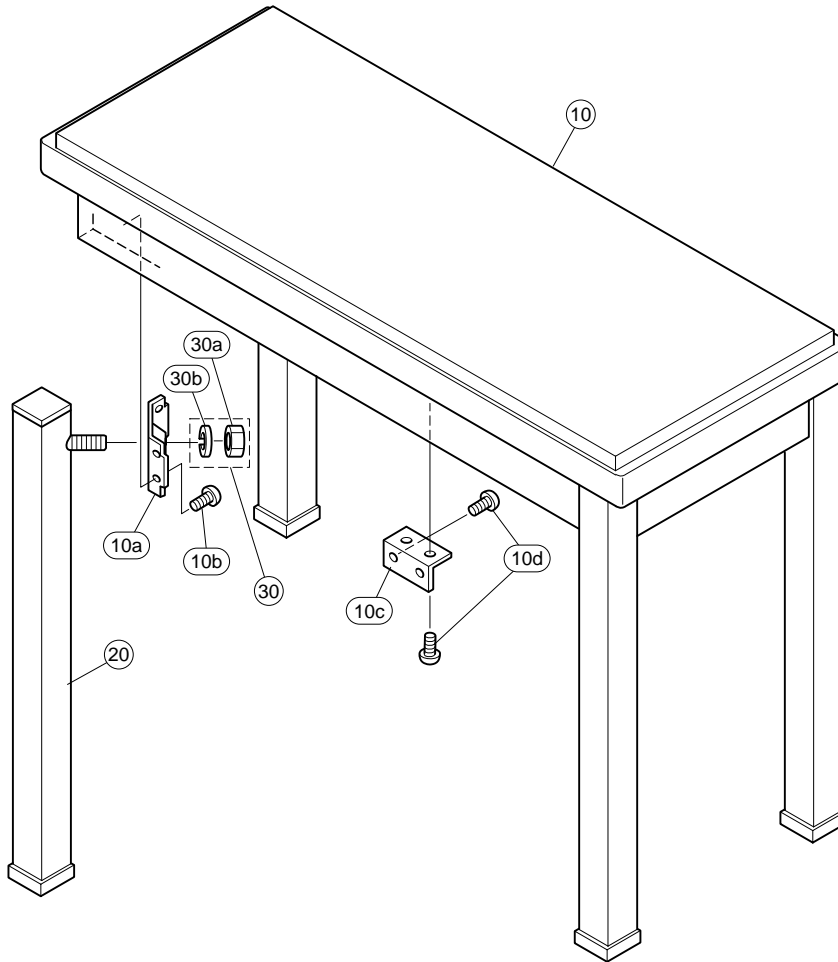
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	BENCH	BC-102	CLP-150/150M/150C		
	--	Bench	BC-102DR	CLP-150 U (V756390)		
	--	Bench	BC-102MH	CLP-150M U (V756400)		
	--	Bench	BC-102CH	CLP-150C U (V887870)		
1	<b>V7695800</b>	Bench Board Assembly	ROSE	CLP-150		
1	<b>V7695900</b>	Bench Board Assembly	MAHOGANY	CLP-150M		
* 1	<b>V8899900</b>	Bench Board Assembly	CHERRY	CLP-150C		
1a	--	Bench Board Assembly		CLP-150 (V769170)		
1a	--	Bench Board Assembly		CLP-150M (V769180)		
1a	--	Bench Board Assembly		CLP-150C (V890010)		
1b	--	Seat Support Assembly		CLP-150 (V769620)		
1b	--	Seat Support Assembly		CLP-150M (V769630)		
1b	--	Seat Support Assembly		CLP-150C (V890020)		
1ba	<b>V7396200</b>	Holder, Leg			4	03
1bb	<b>EP030260</b>	Bind Head Tapping Screw-1	3.5X16 MFZN2BL		32	01
1c	<b>V7696900</b>	Hinge	2.0 1 MFZN2BL		2	05
1d	<b>VB896300</b>	Stay	MFZN2BL			04
1e	<b>EP030250</b>	Bind Head Tapping Screw-1	3.5X14 MFZN2BL		4	01
1f	--	Spacer Felt	15X15X3T BLACK	(V792090)	4	
1g	<b>EM030340</b>	Flat Head Tapping Screw-1	3.5X14 MFZN2BL		12	01
2	<b>V7692000</b>	Leg Assembly	ROSE	CLP-150	4	
2	<b>V7692100</b>	Leg Assembly	MAHOGANY	CLP-150M	4	
* 2	<b>V8900000</b>	Leg Assembly	CHERRY	CLP-150C	4	
3	<b>V7678600</b>	Spring Washer	10.0 MFZN2BL		4	
4	<b>V7678700</b>	Hexagonal Nut	10.0X1.25 MFZN2		4	
	--	ACCESSORIES				
	--	Wrench		(V688680)		

\*: New Parts

RANK: Japan only



■ BENCH (BC-100DR/BC100MH/BC-100CH)



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		BENCH	BC-100	CLP-150/150M/150C		
	--	Bench	BC-100DR	CLP-150 N,K (V553140)		
	--	Bench	BC-100MH	CLP-150M N,K (V553150)		
	--	Bench	BC-100CH	CLP-150C N,K (V553160)		
10	V5532900	Bench Board Assembly	ROSE	CLP-150		16
10	V5533000	Bench Board Assembly	MAHOGANY	CLP-150M		15
10	V5533100	Bench Board Assembly	CHERRY	CLP-150C		16
10a	AA016480	Holder, Leg			4	02
10b	EP030190	Bind Head Tapping Screw-1	3.5X16 MFZN2Y		16	01
10c	VC969300	Holder, Bench Board			4	03
10d	EP030170	Bind Head Tapping Screw-1	3.5X14 MFZN2Y		16	01
20	V8176300	Leg Assembly	ROSE	CLP-150	4	
20	V8176400	Leg Assembly	MAHOGANY	CLP-150M	4	
20	V8176500	Leg Assembly	CHERRY	CLP-150C	4	
30	VS530500	Screw Set	BC-XX			03
30a	03761250	Hexagonal Nut	10.0X1.25 MFZN2		4	01
30b	03765820	Spring Washer	10.0 MFZN2Y		4	01
		ACCESSORIES				
	--	Wrench		(V688680)		

\*: New Parts

RANK: Japan only

# ■ ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		ELECTRICAL PARTS	CLP-150/150M/150C		
*	V8499900	Circuit Board	AJK (X2246B0)		
*	V8496500	Circuit Board	DJK (V849640)(X2245C0)		
*	V8496600	Circuit Board	PEDAL (DJK) (V849640)(X2245C0)		
*	V8540500	Circuit Board	DM (XZ592H0)		
*	VV650200	Circuit Board	FU120L U (XS882A0)		07
*	V7601300	Circuit Board	FU120BL B,E,K (XS882A0)		
*	VV650500	Circuit Board	FU120L N (XS882A0)		08
*	V8514800	Circuit Board	GHD_EBUS L (XZ138D0)		
*	V6588200	Circuit Board	MK SUB (XZ142B0)		10
*	V8521500	Circuit Board	GHD H (X2218A0)		
*	V8521400	Circuit Board	GHD M (X2217A0)		
*	V8781900	Circuit Board	HP (XQ389A0,XQ390A0)		
	--	Circuit Board	MA120 U (V858380)(XQ393E0)		
	--	Circuit Board	MA120 B,E,N,K (V858390)(XQ393E0)		
	V7675600	Circuit Board	PEDAL (SW) (X0193A0)		07
	VN637600	Circuit Board	PL (YCJ) (XL151B0,XR898A0)		03
	VU659100	Circuit Board	PL (YMMA) (XL151B0,XR898A0)		03
*	V8455100	Circuit Board	PNL (X2243D0)		
*	V8502800	Circuit Board	PNR (V850270)(X2244B0)		
*	V8562800	Circuit Board	MV2 (V850270)(X2244B0)		
*	V2403300	Circuit Board	NET1 (XT123B0)		05
*	V8544500	Circuit Board	WMH (X2248A0)		
*	V8544400	Circuit Board	WML (X2248A0)		
*	V8499900	Circuit Board	AJK (X2246B0)		
	--	Jumper Wire	0.55 (VA07890)		
C0100	UN866220	Electrolytic Cap.-BP	2.20 50.0V		01
C0101	US063330	Ceramic Capacitor-B (chip)	3300P 50V K		01
C0102	US062470	Ceramic Capacitor-SL(chip)	470P 50V J		01
C0103	UN866470	Electrolytic Cap.-BP	4.70 50.0V		01
C0120	UN866220	Electrolytic Cap.-BP	2.20 50.0V		01
C0121	US063330	Ceramic Capacitor-B (chip)	3300P 50V K		01
C0122	US062470	Ceramic Capacitor-SL(chip)	470P 50V J		01
C0123	UN866470	Electrolytic Cap.-BP	4.70 50.0V		01
C0200	US062150	Ceramic Capacitor-SL(chip)	150P 50V J		01
C0201	UR866470	Electrolytic Cap.	4.70 50.0V		01
C0202	US062100	Ceramic Capacitor-SL(chip)	100P 50V J		01
C0203	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z		01
C0204	UN838100	Electrolytic Cap.-BP	100.00 16.0V		01
C0205	UN866470	Electrolytic Cap.-BP	4.70 50.0V		01
C0206	US063100	Ceramic Capacitor-B (chip)	1000P 50V K		01
C0250	US062150	Ceramic Capacitor-SL(chip)	150P 50V J		01
C0251	UR866470	Electrolytic Cap.	4.70 50.0V		01
C0252	US062100	Ceramic Capacitor-SL(chip)	100P 50V J		01
C0253	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z		01
C0254	UN838100	Electrolytic Cap.-BP	100.00 16.0V		01
C0255	UN866470	Electrolytic Cap.-BP	4.70 50.0V		01
C0256	US063100	Ceramic Capacitor-B (chip)	1000P 50V K		01
C0301	UA354680	Polyester Film Capacitor	0.0680 50V J		01
C0302	VR169300	Polyester Multilay Cap.	0.56 50V J		01
C0303	UA354560	Polyester Film Capacitor	0.0560 50V J		01
C0304	VR168500	Polyester Multilay Cap.	0.15 50V J		01
C0305	UA354330	Polyester Film Capacitor	0.0330 50V J		01
C0306	UA354390	Polyester Film Capacitor	0.0390 50V J		01
C0307	UA354120	Polyester Film Capacitor	0.0120 50V J		01
C0308	UA354820	Polyester Film Capacitor	0.0820 50V J		01
C0309	UA353270	Polyester Film Capacitor	2700P 50V J		01
C0310	UA354390	Polyester Film Capacitor	0.0390 50V J		01
C0311	UA353390	Polyester Film Capacitor	3900P 50V J		01
C0312	UA353220	Polyester Film Capacitor	2200P 50V J		01
C0313	UA354120	Polyester Film Capacitor	0.0120 50V J		01
C0314	UA353330	Polyester Film Capacitor	3300P 50V J		01
C0320	US062470	Ceramic Capacitor-SL(chip)	470P 50V J		01
C0401	UA354680	Polyester Film Capacitor	0.0680 50V J		01
C0402	VR169300	Polyester Multilay Cap.	0.56 50V J		01
C0403	UA354560	Polyester Film Capacitor	0.0560 50V J		01
C0404	VR168500	Polyester Multilay Cap.	0.15 50V J		01
C0405	UA354330	Polyester Film Capacitor	0.0330 50V J		01
C0406	UA354390	Polyester Film Capacitor	0.0390 50V J		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0407	UA354120	Polyester Film Capacitor	0.0120 50V J			01
C0408	UA354820	Polyester Film Capacitor	0.0820 50V J			01
C0409	UA353270	Polyester Film Capacitor	2700P 50V J			01
C0410	UA354390	Polyester Film Capacitor	0.0390 50V J			01
C0411	UA353390	Polyester Film Capacitor	3900P 50V J			01
C0412	UA353220	Polyester Film Capacitor	2200P 50V J			01
C0413	UA354120	Polyester Film Capacitor	0.0120 50V J			01
C0414	UA353330	Polyester Film Capacitor	3300P 50V J			01
C0420	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0520	UR848220	Electrolytic Cap.	220.00 25.0V			01
C0521	UR848220	Electrolytic Cap.	220.00 25.0V			01
C0530	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0531	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0600	UN866470	Electrolytic Cap.-BP	4.70 50.0V			01
C0601	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C0602	US063680	Ceramic Capacitor-B (chip)	6800P 50V K			01
C0610	UN866470	Electrolytic Cap.-BP	4.70 50.0V			01
C0612	US063680	Ceramic Capacitor-B (chip)	6800P 50V K			01
C0620	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C0640	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
CN500	VB390700	Connector Base Post	PH 11P TE			01
CN510	VB390400	Connector Base Post	PH 8P TE			01
CN520	VB390500	Connector Base Post	PH 9P TE			03
CN530	VB390300	Connector Base Post	PH 7P TE			01
CN540	LB918020	Base Post Connector	XH 2P TE			01
D0200	VB493900	Diode	MA221			01
D0200	VV925900	Diode	RLS-73 TE-11			01
D0640	VB493900	Diode	MA221			01
D0640	VV925900	Diode	RLS-73 TE-11			01
IC100	XF291A00	IC	UPC4570G2	OP AMP		03
IC200	XT131A00	IC	LA6517M-TE-R	OP AMP		04
IC300	XY487A00	IC	M5229FP	EQUALIZER		03
IC400	XY487A00	IC	M5229FP	EQUALIZER		03
JK600	VL080500	Phone Jack	YKB21-5076	AUX IN (L/L+R)		02
JK610	VS115400	Phone Jack Black	LGR4609-7000	AUX IN (R)		01
JK620	VL080500	Phone Jack	YKB21-5076	AUX OUT (L/L+R)		02
JK630	VS115400	Phone Jack Black	LGR4609-7000	AUX OUT (R)		01
JK640	VP599300	Pin Jack	2P YKC21-3120	AUX OUT (LEVEL FIXED)		02
L0600	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L0620	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L0640	GE300670	Ferrite Bead	BL02RN2-R62T4			02
R0100	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0101	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0102	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R0103	RD355100	Carbon Resistor (chip)	100 63M J			01
R0104	RD357330	Carbon Resistor (chip)	33K 63M J			01
R0120	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0121	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0122	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R0123	RD355100	Carbon Resistor (chip)	100 63M J			01
R0124	RD357330	Carbon Resistor (chip)	33K 63M J			01
R0200	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0201	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0203	RD354330	Carbon Resistor (chip)	33 63M J			01
R0204	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0250	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0251	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0253	RD354330	Carbon Resistor (chip)	33 63M J			01
R0254	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0254	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0301	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0302	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0303	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0304	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0305	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
R0306	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0307	RD355820	Carbon Resistor (chip)	820 63M J			01
R0308	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0309	RD355180	Carbon Resistor (chip)	180 63M J			01
R0310	RD357180	Carbon Resistor (chip)	18K 63M J			01

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0311	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0312	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0313	RD357150	Carbon Resistor (chip)	15K 63M J			01
R0314	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0320	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R0321	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0322	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0323	RD356270	Carbon Resistor (chip)	2.7K 63M J			01
R0401	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0402	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0403	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0404	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0405	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
R0406	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0407	RD355820	Carbon Resistor (chip)	820 63M J			01
R0408	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0409	RD355180	Carbon Resistor (chip)	180 63M J			01
R0410	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0411	RD357180	Carbon Resistor (chip)	18K 63M J			01
R0412	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0413	RD357150	Carbon Resistor (chip)	15K 63M J			01
R0414	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0420	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R0421	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0422	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0423	RD356270	Carbon Resistor (chip)	2.7K 63M J			01
R0521	RD350000	Carbon Resistor (chip)	0 63M J			01
R0530	RD350000	Carbon Resistor (chip)	0 63M J			01
R0531	RD350000	Carbon Resistor (chip)	0 63M J			01
R0532	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0540	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0600	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0601	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0610	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0611	RD356560	Carbon Resistor (chip)	5.6K 63M J			01
R0620	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
R0621	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0630	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
R0631	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0640	RD355680	Carbon Resistor (chip)	680 63M J			01
R0650	RD355680	Carbon Resistor (chip)	680 63M J			01
R0700	RD356680	Carbon Resistor (chip)	6.8K 63M J			01
R0701	RD357470	Carbon Resistor (chip)	47K 63M J			01
R0710	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0711	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0720	RD357330	Carbon Resistor (chip)	33K 63M J			01
R0721	RD357330	Carbon Resistor (chip)	33K 63M J			01
R0950	RD350000	Carbon Resistor (chip)	0 63M J			01
-0953	RD350000	Carbon Resistor (chip)	0 63M J			01
* RY200	V8245600	Relay	DC ATX203 12V			
* RY640	V8245600	Relay	DC ATX203 12V			
TR700	VV556400	Transistor	2SC2412K Q,R,S			01
TR710	VV556400	Transistor	2SC2412K Q,R,S			01
TR720	VJ927200	Transistor	2SA1162 O,Y			01
TR720	VQ395600	Transistor	2SA1052 B,C			01
*	V8496500	Circuit Board	DJK	(V849640)(X2245C0)		
*	V8496600	Circuit Board	PEDAL (DJK)	(V849640)(X2245C0)		
C0004	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0005	UR838100	Electrolytic Cap.	100.00 16.0V			01
C0006	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0007	UR838100	Electrolytic Cap.	100.00 16.0V			01
C0009	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0012	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0013	UR837100	Electrolytic Cap.	10.00 16.0V			01
C0014	UN817470	Electrolytic Cap.-BP	47.00 6.3V			01
C0016	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0017	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0018	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0019	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0020	UR837100	Electrolytic Cap.	10.00 16.0V			01
C0021	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0035	UR838100	Electrolytic Cap.	100.00 16.0V			01
C0036	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
CN001	VB389900	Connector Base Post	PH 3P TE			01
CN005	VB390400	Connector Base Post	PH 8P TE			01
CN006	VB390000	Connector Base Post	PH 4P TE			01
CN008	LB932020	Base Post Connector	VH 2P TE			01
CN010	VB390200	Connector Base Post	PH 6P TE			01
CN011	VB390100	Connector Base Post	PH 5P TE			01
CN012	V3671200	USB Jack	USB 4P TE	} USB		03
CN012	V6802600	USB Jack	USB 4P SE			02
D0001	VB493900	Diode	MA221	} INVERTER		01
-0004	VB493900	Diode	MA221			01
D0001	VV925900	Diode	RLS-73 TE-11			01
-0004	VV925900	Diode	RLS-73 TE-11			01
IC001	XI348A00	IC	SC7SU04FEL	} INVERTER		01
IC001	XY447A00	IC	TC7SU04F			01
IC002	XU073A00	IC	SN75C1168NSR	} LINE DRIVER/RECEIVER		05
IC003	VD473200	Photo Coupler	6N137			05
JK001	VT202500	DIN Connector	5P YKF51-50	} MIDI IN		01
JK002	VT202500	DIN Connector	5P YKF51-50			01
JK003	VT202500	DIN Connector	5P YKF51-50	} MIDI THRU		01
JK004	VV269500	DIN Connector	DIN 8P MD-S813			03
JK005	VS115400	Phone Jack Black	LGR4609-7000	} AUX PEDAL to Pedal assembly		01
JK006	V4874800	DIN Connector	DIN 6P MD-S613			02
L0001	RD350000	Carbon Resistor (chip)	0 63M J			01
-0004	RD350000	Carbon Resistor (chip)	0 63M J			01
L0005	VY657200	Chip Inductance	600 BK1608HM601			01
L0006	RD350000	Carbon Resistor (chip)	0 63M J			01
L0007	VY657200	Chip Inductance	600 BK1608HM601			01
-0023	VY657200	Chip Inductance	600 BK1608HM601			01
R0001	RD355220	Carbon Resistor (chip)	220 63M J			01
R0002	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0003	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0006	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0009	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0010	RD350000	Carbon Resistor (chip)	0 63M J			01
R0011	RD355100	Carbon Resistor (chip)	100 63M J			01
R0012	RD355100	Carbon Resistor (chip)	100 63M J			01
R0013	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0014	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0015	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0016	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0017	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0018	RD355220	Carbon Resistor (chip)	220 63M J			01
R0019	RD355220	Carbon Resistor (chip)	220 63M J			01
R0020	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0021	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0022	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0023	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0024	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0025	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0026	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0027	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
R0028	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0029	RD355220	Carbon Resistor (chip)	220 63M J			01
R0030	RD154470	Carbon Resistor (chip)	47.0 1/4 J			01
-0033	RD154470	Carbon Resistor (chip)	47.0 1/4 J			01
R0034	RD350000	Carbon Resistor (chip)	0 63M J			01
R0035	RD350000	Carbon Resistor (chip)	0 63M J			01
R0100	RD350000	Carbon Resistor (chip)	0 63M J			01
R0200	RD350000	Carbon Resistor (chip)	0 63M J			01
-0203	RD350000	Carbon Resistor (chip)	0 63M J			01
SW001	VQ665200	Slide Switch	SSSF144-S06N-0	} HOST SELECT		03
TR001	VV556400	Transistor	2SC2412K Q,R,S			01
-004	VV556400	Transistor	2SC2412K Q,R,S			01
* C0001	V8540500	Circuit Board	DM	(XZ592H0)		
	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0002	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0003	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0004	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0005	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0006	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0007	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0008	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0009	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0010	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0011	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0012	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0013	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0014	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0015	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0016	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0017	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0018	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0019	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0020	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0021	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0022	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0023	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0024	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0025	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0026	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0027	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0028	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0029	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C0030	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C0032	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
-0036	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C0037	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0038	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0039	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0040	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0042	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C0043	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0044	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C0045	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C0046	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C0047	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
-0051	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0053	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0055	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C0056	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C0058	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0059	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0060	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0062	US061270	Ceramic Capacitor-CH(chip)	27P 50V J			01
C0066	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0067	US061270	Ceramic Capacitor-CH(chip)	27P 50V J			01
C0069	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0070	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0071	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0072	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0073	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0074	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0075	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0076	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0077	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0081	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0083	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0085	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0086	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0087	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0089	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0090	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0091	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0092	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0093	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0094	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0096	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0101	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0102	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0104	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0105	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0106	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C0107	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C0108	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0111	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0112	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0113	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0114	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0115	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0116	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0117	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0118	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0119	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0120	UF008100	Electrolytic Cap. (chip)	100 4V			01
C0121	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0122	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0123	RD350000	Carbon Resistor (chip)	0 63M J			01
C0124	RD350000	Carbon Resistor (chip)	0 63M J			01
C0125	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0126	RD350000	Carbon Resistor (chip)	0 63M J			01
C0127	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0128	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
-0131	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0132	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0133	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0134	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0135	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0136	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0137	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0138	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0139	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0140	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0141	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0142	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0143	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0144	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0145	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0146	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0147	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0148	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0149	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0150	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0151	UF008100	Electrolytic Cap. (chip)	100 4V			01
C0152	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0153	US060300	Ceramic Capacitor-CH(chip)	3P 50V C			01
C0154	US061100	Ceramic Capacitor-CH(chip)	10P 50V D			01
C0155	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C0162	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C0165	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C0168	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0169	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0170	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0171	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0172	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0173	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0174	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0175	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0176	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0177	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0178	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0179	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0180	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0181	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0187	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0188	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0189	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0190	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0191	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0192	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0193	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0194	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0200	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0202	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0205	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0206	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0207	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0208	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
-0210	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0219	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0224	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0225	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0226	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C0230	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0231	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0234	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0239	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0240	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0241	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
-0243	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0244	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C0245	UF008220	Electrolytic Cap. (chip)	220 4V			01
C0246	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0250	US063220	Ceramic Capacitor-B (chip)	2200P 50V K			01
-0253	US063220	Ceramic Capacitor-B (chip)	2200P 50V K			01
C0258	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C0259	US063820	Ceramic Capacitor-B (chip)	8200P 50V K			01
C0260	US063820	Ceramic Capacitor-B (chip)	8200P 50V K			01
C0265	US063180	Ceramic Capacitor-B (chip)	1800P 50V K			01
-0268	US063180	Ceramic Capacitor-B (chip)	1800P 50V K			01
C0276	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0285	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0286	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0321	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0327	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0328	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
CN001	VB390500	Connector Base Post	PH 9P TE			03
CN002	VB390400	Connector Base Post	PH 8P TE			01
CN003	VB390400	Connector Base Post	PH 8P TE			01
CN004	VB390300	Connector Base Post	PH 7P TE			01
CN005	VB389900	Connector Base Post	PH 3P TE			01
CN006	VB390100	Connector Base Post	PH 5P TE			01
CN007	VB390000	Connector Base Post	PH 4P TE			01
CN008	LB932020	Base Post Connector	VH 2P TE			01
CN009	LB918020	Base Post Connector	XH 2P TE			01
* CN014	V8389000	Connector	55091 60P TE			
* CN015	V8389000	Connector	55091 60P TE			
CN024	VB390700	Connector Base Post	PH 11P TE			01
D0001	VV925900	Diode	RLS-73 TE-11			01
D0002	VS201100	Diode	D1F60			01
-0005	VS201100	Diode	D1F60			01
EM001	VD542700	LC Filter	DSS306-93F223Z1			01
EM002	VD542700	LC Filter	DSS306-93F223Z1			01
EM004	VD542700	LC Filter	DSS306-93F223Z1			01
EM005	VD542700	LC Filter	DSS306-93F223Z1			01
EM007	VD542700	LC Filter	DSS306-93F223Z1			01
EM008	VD542700	LC Filter	DSS306-93F223Z1			01
* IC002	X2156A00	IC	M66291GP	USB CONTROLLER		
IC003	X0176A00	IC	W986432DH-7	} SDRAM 64M		15
IC003	X0493A00	IC	K4S643232E-TC60000			
IC006	XV890A00	IC	TC74VHC14FT	INVERTER		02
IC007	XY945A00	IC	TC74VHC32FT	} OR		01
IC007	X0299A00	IC	74VHC32MTCX			01
IC009	XT744A00	IC	TC74VHCT245AFT	} TRANSCEIVER		07
IC009	X0295A00	IC	74VHCT245AMTCX			03
IC010	XT744A00	IC	TC74VHCT245AFT	TRANSCEIVER		07

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
IC010	X0295A00	IC	74VHCT245AMTCX			03
* IC012	X0060A00	IC	T8F02TB-0102	SWP50		
IC013	XY364A00	IC	TC7WH32FU(TE12L)	OR		01
* IC014	X2687A00	IC	HD6417709SHF200	CPU		
IC022	XZ414B00	IC	W986416DH-7	DRAM 64M		
IC022	X2760A00	IC	K4S641632F-TC75			
IC023	XZ414B00	IC	W986416DH-7	DRAM 64M		
IC023	X2760A00	IC	K4S641632F-TC75			
* IC029	X2077A00	IC	PCM1730E-1/2K	DAC		
IC030	X2539200	IC		MASK ROM 64M MAIN		08
IC032	XV492A00	IC	UPC2905T-E1	REGULATOR +5V		03
IC032	XW674A00	IC	NJM7805DL1A(TE1)			02
IC033	XF291A00	IC	UPC4570G2	OP AMP		03
-035	XF291A00	IC	UPC4570G2	OP AMP		03
* IC036	X0609A00	IC	LMS8117AMP-ADJ	REGULATOR		
* IC038	X0609A00	IC	LMS8117AMP-ADJ	REGULATOR		
IC039	XZ642A00	IC	TAR5S33	REGULATOR +3.3V		
* IC040	XZ216A00	IC	MBM29LV160BE90TN-K	FLASH ROM 16M		
* L0001	V8901200	Chip Solid Inductance	BLM21PG221SN1D			
L0002	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
L0003	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
* L0004	V8901200	Chip Solid Inductance	BLM21PG221SN1D			
L0005	VR579900	Chip Inductance	BK2125HS601-T			01
-0009	VR579900	Chip Inductance	BK2125HS601-T			01
L0012	VR579900	Chip Inductance	BK2125HS601-T			01
-0032	VR579900	Chip Inductance	BK2125HS601-T			01
R0003	RD350000	Carbon Resistor (chip)	0 63M J			01
R0004	RD350000	Carbon Resistor (chip)	0 63M J			01
R0005	RD354330	Carbon Resistor (chip)	33 63M J			01
-0007	RD354330	Carbon Resistor (chip)	33 63M J			01
R0008	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0009	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0010	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0011	RD356150	Carbon Resistor (chip)	1.5K 63M J			01
* R0012	RD354270	Carbon Resistor (chip)	27 63M J			
* -0017	RD354270	Carbon Resistor (chip)	27 63M J			
R0019	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0021	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0022	RD356120	Carbon Resistor (chip)	1.2K 63M J			01
R0023	RD359100	Carbon Resistor (chip)	1.0M 63M J			01
R0030	RD357100	Carbon Resistor (chip)	10K 63M J			01
* R0042	V2747000	Chip Inductance	BLM18PG600SN1			
R0043	RD354680	Carbon Resistor (chip)	68 63M J			01
R0044	RD354680	Carbon Resistor (chip)	68 63M J			01
R0050	RD359100	Carbon Resistor (chip)	1.0M 63M J			01
R0052	RD354680	Carbon Resistor (chip)	68 63M J			01
R0055	RD355560	Carbon Resistor (chip)	560 63M J			01
R0065	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0066	RD354680	Carbon Resistor (chip)	68 63M J			01
R0067	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0069	RD354680	Carbon Resistor (chip)	68 63M J			01
R0070	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0071	RD354680	Carbon Resistor (chip)	68 63M J			01
R0072	RD354680	Carbon Resistor (chip)	68 63M J			01
R0073	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0074	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0076	RD354680	Carbon Resistor (chip)	68 63M J			01
R0083	RD354680	Carbon Resistor (chip)	68 63M J			01
R0087	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0089	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0092	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0093	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0095	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0099	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
-0102	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0103	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0105	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0106	RD350000	Carbon Resistor (chip)	0 63M J			01
-0119	RD350000	Carbon Resistor (chip)	0 63M J			01
R0121	RD354680	Carbon Resistor (chip)	68 63M J			01

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0122	RD354680	Carbon Resistor (chip)	68 63M J			01
R0123	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0128	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0129	RD354680	Carbon Resistor (chip)	68 63M J			01
R0130	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0131	RD354680	Carbon Resistor (chip)	68 63M J			01
R0132	RD354680	Carbon Resistor (chip)	68 63M J			01
R0133	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0134	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0136	RD354680	Carbon Resistor (chip)	68 63M J			01
R0138	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0139	RD354680	Carbon Resistor (chip)	68 63M J			01
R0140	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0141	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0142	RD354680	Carbon Resistor (chip)	68 63M J			01
R0143	RD357470	Carbon Resistor (chip)	47K 63M J			01
R0144	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0146	RD354680	Carbon Resistor (chip)	68 63M J			01
R0148	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0149	RD354680	Carbon Resistor (chip)	68 63M J			01
R0150	RD354680	Carbon Resistor (chip)	68 63M J			01
R0151	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0152	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0153	RD354680	Carbon Resistor (chip)	68 63M J			01
R0156	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0157	RD354560	Carbon Resistor (chip)	56 63M J			01
R0158	RD354680	Carbon Resistor (chip)	68 63M J			01
R0159	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0160	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0161	RD354680	Carbon Resistor (chip)	68 63M J			01
R0162	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0163	RD354680	Carbon Resistor (chip)	68 63M J			01
R0164	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0165	RD354680	Carbon Resistor (chip)	68 63M J			01
R0166	RD354680	Carbon Resistor (chip)	68 63M J			01
R0167	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0168	RD354680	Carbon Resistor (chip)	68 63M J			01
R0169	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0170	RD354680	Carbon Resistor (chip)	68 63M J			01
R0171	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0173	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0174	RD355100	Carbon Resistor (chip)	100 63M J			01
-0176	RD355100	Carbon Resistor (chip)	100 63M J			01
R0177	RD355220	Carbon Resistor (chip)	220 63M J			01
R0178	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0179	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0180	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0181	RD355330	Carbon Resistor (chip)	330 63M J			01
R0182	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0183	RD358470	Carbon Resistor (chip)	470K 63M J			01
R0184	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0185	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0186	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0189	RD354680	Carbon Resistor (chip)	68 63M J			01
-0192	RD354680	Carbon Resistor (chip)	68 63M J			01
R0193	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0194	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0195	RD357220	Carbon Resistor (chip)	22K 63M J			01
R0196	RD358120	Carbon Resistor (chip)	120K 63M J			01
R0197	RD355100	Carbon Resistor (chip)	100 63M J			01
R0198	RD355100	Carbon Resistor (chip)	100 63M J			01
R0199	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0200	RD359100	Carbon Resistor (chip)	1.0M 63M J			01
R0201	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0204	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0206	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0211	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0216	RD350000	Carbon Resistor (chip)	0 63M J			01
R0217	RD350000	Carbon Resistor (chip)	0 63M J			01
R0223	RD357100	Carbon Resistor (chip)	10K 63M J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0224	RD350000	Carbon Resistor (chip)	0 63M J			01
R0226	RD350000	Carbon Resistor (chip)	0 63M J			01
R0230	RD354680	Carbon Resistor (chip)	68 63M J			01
R0232	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0233	RD357150	Carbon Resistor (chip)	15K 63M J			01
R0234	RD356820	Carbon Resistor (chip)	8.2K 63M J			01
R0235	RD355220	Carbon Resistor (chip)	220 63M J			01
R0236	RD356120	Carbon Resistor (chip)	1.2K 63M J			01
R0237	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R0238	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0239	RD356270	Carbon Resistor (chip)	2.7K 63M J			01
R0249	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
-0252	RD356180	Carbon Resistor (chip)	1.8K 63M J			01
R0259	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
-0262	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0273	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0274	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0276	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0277	RD355390	Carbon Resistor (chip)	390 63M J			01
R0278	RD355390	Carbon Resistor (chip)	390 63M J			01
R0279	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R0280	RD355390	Carbon Resistor (chip)	390 63M J			01
R0281	RD355390	Carbon Resistor (chip)	390 63M J			01
R0285	RD350000	Carbon Resistor (chip)	0 63M J			01
R0296	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0297	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0337	RD355100	Carbon Resistor (chip)	100 63M J			01
-0339	RD355100	Carbon Resistor (chip)	100 63M J			01
RA001	RE047100	Resistor Array	10KX4			01
RA002	RE044680	Resistor Array	68X4			01
-004	RE044680	Resistor Array	68X4			01
RA005	RE047100	Resistor Array	10KX4			01
RA006	RE047100	Resistor Array	10KX4			01
RA009	RE047100	Resistor Array	10KX4			01
RA010	RE047100	Resistor Array	10KX4			01
RA012	RE047100	Resistor Array	10KX4			01
RA013	RE044680	Resistor Array	68X4			01
-026	RE044680	Resistor Array	68X4			01
RA027	RE047100	Resistor Array	10KX4			01
RA028	RE044680	Resistor Array	68X4			01
RA029	RE044680	Resistor Array	68X4			01
RA030	RE047100	Resistor Array	10KX4			01
-032	RE047100	Resistor Array	10KX4			01
SW001	V3026900	Jumper Wire	CHS-01 TA1			02
TR001	VV925400	Transistor	2SC2SC2712 GR			01
-003	VV925400	Transistor	2SC2SC2712 GR			01
TR004	VJ927200	Transistor	2SA1162 O,Y			01
X0001	V4093500	Quartz Crystal Unit	6MHz SMD-49			03
X0003	VP864800	Quartz Crystal Unit	11.2896MHz SMD-49			04
X0005	VP864900	Quartz Crystal Unit	16MHz SMD-49			04
	VV650200	Circuit Board	FU120L	U (XS882A0)		07
	V7601300	Circuit Board	FU120BL	B,E,K (XS882A0)		
	VV650500	Circuit Board	FU120L	N (XS882A0)		08
	VT139600	Voltage Selector	M1684-E	N		04
△	VT308100	AC Inlet	2P CCT9302-0101M	B,E,N,K		02
△	VT308200	AC Inlet	CCT9302-0201	U		02
	LB201530	Fuse Holder	PC-FH1	U,B,E,K	2	01
	LB201530	Fuse Holder	PC-FH1	N	6	01
	--	Jumper Wire	0.55	(VD04170)		
△	C0001	Capacitor	0.010 250V J.U.C.S			01
△	C0002	Capacitor	4700P 250V J.U.C.S			01
△	C0003	Capacitor	4700P 250V J.U.C.S			01
	CN001	Base Post Connector	VH 3P TE			01
	CN002	Base Post Connector	VH 6P TE			01
△	F0001	Fuse	5.00A JU	U,N		01
△	F0001	Fuse	2.50A S	B,E,K		01
△	F0002	Fuse	2.50A S	N		01
△	F0003	Fuse	2.50A S	N		01
	J0001	Jumper Wire	0.55	U,B,E,K (VD04170)		

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
L0001	--	Jumper Wire	0.55	U,B,E,N,K (VD04170)		
L0003	<b>VF790900</b>	Coil	SU10V-D20010 10uH			03
*	<b>V8514800</b>	Circuit Board	GHD_EBUS L	(XZ138D0)		
	<b>V6588200</b>	Circuit Board	MK SUB			10
	--	Nonwoven Fabric Cloth		(VU45960)		
	<b>VB390300</b>	Connector Base Post	PH 7P TE			01
	<b>VK025300</b>	Wire Trap	52147 9P TE			01
	<b>VK025600</b>	Wire Trap	52147 12P TE			01
	<b>VB941200</b>	Diode	1SS133,1SS176			01
C	<b>UI527470</b>	Electrolytic Cap.	47.00 10.0V			01
C2	<b>VF611200</b>	Monolithic Ceramic Cap.	0.100 50V Z			02
J	--	Jumper Wire	0.55	(VA07890)		
J7	--	Jumper Wire	0.55	(VA07890)		
	<b>V6588200</b>	Circuit Board	MK SUB	(XZ142B0)		10
C0001	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
-0004	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0005	<b>US063100</b>	Ceramic Capacitor-CH(chip)	1000P 50V K			01
CN001	<b>V6954300</b>	Connector	11 PFA105-122A01			03
CN003	<b>V6954400</b>	Connector	11 PFA105-242A01			03
IC001	<b>X0031100</b>	IC	UPD780031AYGK-N02	LKS		05
L0001	<b>VR243700</b>	Chip Inductance	56U LEM2520 T 560J			01
R0001	<b>RD357100</b>	Carbon Resistor (chip)	10K 63M J			01
R0005	<b>RD356100</b>	Carbon Resistor (chip)	1.0K 63M J			01
R0006	<b>RD354470</b>	Carbon Resistor (chip)	47 63M J			01
-0008	<b>RD354470</b>	Carbon Resistor (chip)	47 63M J			01
RA001	<b>RE047100</b>	Resistor Array	10KX4			01
-004	<b>RE047100</b>	Resistor Array	10KX4			01
X0001	<b>V6150500</b>	Ceramic Resonator	8.38MHZ EFOS8384E5			01
*	<b>V8521500</b>	Circuit Board	GHD H	(X2218A0)		
	--	Nonwoven Fabric Cloth		(V852160)		
	<b>VK024800</b>	Wire Trap	52147 4P TE			01
	<b>VK025600</b>	Wire Trap	52147 12P TE			01
	<b>VB941200</b>	Diode	1SS133,1SS176			01
J	--	Jumper Wire	0.55	(VA07890)		
*	<b>V8521400</b>	Circuit Board	GHD M	(X2217A0)		
	--	Nonwoven Fabric Cloth		(V846990)		
	<b>VK024800</b>	Wire Trap	52147 4P TE			01
	<b>VK025300</b>	Wire Trap	52147 9P TE			01
	<b>VK025600</b>	Wire Trap	52147 12P TE			01
	<b>VB941200</b>	Diode	1SS133,1SS176			01
J	--	Jumper Wire	0.55	(VA07890)		
*	<b>V8781900</b>	Circuit Board	HP	(XQ389A0,XQ390A0)		
C0001	<b>FG644100</b>	Ceramic Capacitor-B	0.01 50V Z			01
-0005	<b>FG644100</b>	Ceramic Capacitor-B	0.01 50V Z			01
C0006	--	Jumper Wire	0.55	(VD04170)		
C0007	--	Jumper Wire	0.55	(VD04170)		
CN001	<b>VB858600</b>	Connector Base Post	PH 7P SE			01
CN002	<b>VB858100</b>	Connector Base Post	PH 2P SE			01
FL001	<b>VB971100</b>	Coil	FL5R200QN 20uH			01
-006	<b>VB971100</b>	Coil	FL5R200QN 20uH			01
FL001	<b>VB835000</b>	Coil	FL5R200QNT 20uH			01
-006	<b>VB835000</b>	Coil	FL5R200QNT 20uH			01
HP001	<b>LB101870</b>	Phone Jack	YKB21-5006	PHONES		03
HP002	<b>LB101870</b>	Phone Jack	YKB21-5006	PHONES		03
R0001	<b>V9295000</b>	Carbon Resistor	33.0 1/2 J			
-0004	<b>V9295000</b>	Carbon Resistor	33.0 1/2 J			
R0005	--	Jumper Wire	0.55	(VD04170)		
WH001	<b>VT890700</b>	Earth Wire	L=150mm			01
	--	Circuit Board	MA120	U (V858380)(XQ393E0)		
	--	Circuit Board	MA120	B,E,N,K (V858390)(XQ393E0)		
	<b>VT443500</b>	Support, PCB	T=8			03
	<b>VT740000</b>	Support, PCB	3T-9 T=9		3	03
	<b>VP206500</b>	Fuse Holder	EYF-52BC		6	01
	<b>VJ834500</b>	Insulation Sheet	#1000			03

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	Jumper Wire	0.55	(VD04170)		
C0001	VA302600	Ceramic Capacitor-E	0.0100 500V P			01
C0002	VA302600	Ceramic Capacitor-E	0.0100 500V P			01
△	C0003	VU642700	Electrolytic Cap.	4700 16.0V		03
△	C0003	V0069900	Electrolytic Cap.	4700 16.0V		
△	C0004	VU642700	Electrolytic Cap.	4700 16.0V		03
△	C0004	V0069900	Electrolytic Cap.	4700 16.0V		
△	C0005	VL232200	Electrolytic Cap.	3300 50.0V		04
△	-0008	VL232200	Electrolytic Cap.	3300 50.0V		04
△	C0005	VY715200	Electrolytic Cap.	3300 50.0V		04
△	-0008	VY715200	Electrolytic Cap.	3300 50.0V		04
	C0009	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	-0011	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0012	FG613100	Ceramic Capacitor-B	1000P 50V K		01
	C0013	VJ762900	Electrolytic Cap.	100.00 16.0V PR		01
	C0014	VL232300	Electrolytic Cap.	2200 25.0V		03
	C0014	VY861100	Electrolytic Cap.	2200 25.0V		03
	C0015	VL232300	Electrolytic Cap.	2200 25.0V		03
	C0015	VY861100	Electrolytic Cap.	2200 25.0V		03
	C0016	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0017	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z		01
	C0018	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0019	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0020	VY715600	Electrolytic Cap.	100.00 50.0V		
	C0020	VT888400	Electrolytic Cap.	100 50.0V		01
	C0021	VY715600	Electrolytic Cap.	100.00 50.0V		
	C0021	VT888400	Electrolytic Cap.	100 50.0V		01
	C0022	FG613100	Ceramic Capacitor-B	1000P 50V K		01
	C0023	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0024	VJ762900	Electrolytic Cap.	100.00 16.0V PR		01
	C0025	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z		01
	C0026	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z		01
	C0027	FG613100	Ceramic Capacitor-B	1000P 50V K		01
	C0028	VN701200	Electrolytic Cap.	1.00 50.0V PR		01
	C0029	VJ762900	Electrolytic Cap.	100.00 16.0V PR		01
	C0030	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z		01
	C0031	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z		01
	C0032	VJ762900	Electrolytic Cap.	100.00 16.0V PR		01
	C0033	VN701400	Electrolytic Cap.	3.30 50.0V PR		01
	CN001	LB932080	Base Post Connector	VH 8P TE		01
	CN003	LB918030	Base Post Connector	XH 3P TE		01
	CN004	VB390300	Connector Base Post	PH 7P TE		01
	CN005	LB932040	Base Post Connector	VH 4P TE		01
	CN006	VB390500	Connector Base Post	PH 9P TE		03
	D0001	VB481900	Diode	11ES4		01
	-0005	VB481900	Diode	11ES4		01
	D0001	V7803100	Diode	1T4-T/A52		
	-0005	V7803100	Diode	1T4-T/A52		
	D0001	V9362200	Diode	1T4-T/A26		
	-0005	V9362200	Diode	1T4-T/A26		
△	DB001	VK421800	Diode Stack	D5SBA20 6.0A 200V		03
△	DB002	VQ111500	Diode Stack	D3SBA20-4103 4.0A		03
△	DB003	VR253700	Diode Stack	S1NB20 1.0A 200V		02
△	F0001	KB003630	Fuse	5.00A JU	U	01
△	-0003	KB003630	Fuse	5.00A JU	U	01
△	F0001	KB003240	Fuse	5.00A S	B,E,N,K	01
△	-0003	KB003240	Fuse	5.00A S	B,E,N,K	01
△	IC001	XQ437A00	IC	SI-3051N	REGULATOR +5V	03
	IC002	XQ667A00	IC	M5237L	REGULATOR +5V	02
	IC003	XJ602A00	IC	NJM78M12FA	REGULATOR +12V 0.5A	02
	IC004	XD343A00	IC	NJM79M12FA	REGULATOR -12V	03
	IC005	XQ374A00	IC	STK401-090	POWER AMP.	09
	R0001	VU253100	Fuse Resistor	0.47 1/2 J		01
	R0002	VU253100	Fuse Resistor	0.47 1/2 J		01
	R0003	HF756100	Carbon Resistor	1.0K 1/4 J		01
	R0004	HF755220	Carbon Resistor	220.0 1/4 J		01
	R0005	HF754560	Carbon Resistor	56.0 1/4 J		01
	R0006	HF756560	Carbon Resistor	5.6K 1/4 J		01
	R0007	HF756330	Carbon Resistor	3.3K 1/4 J		01
	R0008	HW095100	Fuse Resistor	100.0 1/4 J		01

\*: New Parts

RANK: Japan only

CLP-150/CLP-150M/CLP-150C

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0009	HW095100	Fuse Resistor	100.0 1/4 J			01
R0010	HF755560	Carbon Resistor	560.0 1/4 J			01
R0011	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0012	HF755390	Carbon Resistor	390.0 1/4 J			01
R0013	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0014	VC742500	Metal Oxide Film Resistor	10.0 1W J			01
R0015	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0016	HF755560	Carbon Resistor	560.0 1/4 J			01
R0017	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0018	HF755390	Carbon Resistor	390.0 1/4 J			01
R0019	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0020	VC742500	Metal Oxide Film Resistor	10.0 1W J			01
R0021	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0022	HF756330	Carbon Resistor	3.3K 1/4 J			01
R0023	HF756330	Carbon Resistor	3.3K 1/4 J			01
RY001	VK881200	Relay	DC G5Z-2A-YA 12V			04
TR001	VJ828100	Transistor	2SA1451A-O/Y O.Y			04
TR002	IC1815M0	Transistor	2SC1815 Y,GR			01
-004	IC1815M0	Transistor	2SC1815 Y,GR			01
CN001	V7675600	Circuit Board	PEDAL (SW)	(X0193A0)		07
J	VB858500	Connector Base Post	PH 6P SE			01
	--	Jumper Wire	0.55	(VD04170)		
	VN637600	Circuit Board	PL (YCJ)	(XL151B0,XR898A0)		03
	VU659100	Circuit Board	PL (YMMA)	(XL151B0,XR898A0)		03
	VB858100	Connector Base Post	PH 2P SE			01
	VD180000	LED Red	SLZ-190B-03	POWER indicator		01
*	V8455100	Circuit Board	PNL	(X2243D0)		
C0031	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0032	RD350000	Carbon Resistor (chip)	0 63M J			01
C0034	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0035	UM378100	Electrolytic Cap.	100.00 10.0V			01
C0036	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0037	UM378100	Electrolytic Cap.	100.00 10.0V			01
C0041	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0042	UM378100	Electrolytic Cap.	100.00 10.0V			01
C0051	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
-0056	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0060	VV020100	Electrolytic Cap.	220.00 10.0V			01
C0061	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
-0068	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C0069	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0071	RD358470	Carbon Resistor (chip)	470K 63M J			01
-0074	RD358470	Carbon Resistor (chip)	470K 63M J			01
C0102	US061680	Ceramic Capacitor-SL(chip)	68P 50V J			01
C0103	US061680	Ceramic Capacitor-SL(chip)	68P 50V J			01
C0105	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0106	VV020100	Electrolytic Cap.	220.00 10.0V			01
C0107	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0108	RD350000	Carbon Resistor (chip)	0 63M J			01
C0109	RD350000	Carbon Resistor (chip)	0 63M J			01
C0119	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C0200	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0201	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
CN070	VB389600	Connector Base Post	PH 11P SE			01
CN080	VB858800	Connector Base Post	PH 9P SE			01
CN101	VB858600	Connector Base Post	PH 7P SE			01
D0030	VB493900	Diode	MA221			01
-0032	VB493900	Diode	MA221			01
D0040	VB493900	Diode	MA221			01
-0047	VB493900	Diode	MA221			01
D0050	VB493900	Diode	MA221			01
-0057	VB493900	Diode	MA221			01
D0101	VB493900	Diode	MA221			01
-0107	VB493900	Diode	MA221			01
D0114	VB493900	Diode	MA221			01
D0115	VB493900	Diode	MA221			01
IC010	XZ916100	IC	UPD780031AYGK-N01-9ET	LED DRIVER/SWITCH SCAN.		05

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* IC071	V8074800	FET	MCH6616-TL			
* IC072	V8074800	FET	MCH6616-TL			
IC073	XF291A00	IC	UPC4570G2	OP AMP		03
LD050	VU067800	LED	SEL6210S-TP5	METRONOME START/STOP		01
LD052	VU067800	LED	SEL6210S-TP5	SONG START/STOP		01
LD053	VU067800	LED	SEL6210S-TP5	REC		01
LD061	V8066800	LED	SML72423CTP15	TRACK 1		01
LD062	V8066800	LED	SML72423CTP15	TRACK 2		01
LD063	V8066800	LED	SML72423CTP15	EXTRA TRACKS		01
L0101	GE901870	Coil	SN3-205B 10uH			03
L0108	VY657200	Chip Inductance	600 BK1608HM601			01
-0110	VY657200	Chip Inductance	600 BK1608HM601			01
R0031	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0051	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0056	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0061	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
-0066	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R0067	RD154470	Carbon Resistor (chip)	47.0 1/4 J			01
R0068	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R0070	RD357100	Carbon Resistor (chip)	10K 63M J			01
-0080	RD357100	Carbon Resistor (chip)	10K 63M J			01
R0081	RD354470	Carbon Resistor (chip)	47 63M J			01
-0084	RD354470	Carbon Resistor (chip)	47 63M J			01
R0101	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R0102	RD354470	Carbon Resistor (chip)	47 63M J			01
R0103	RD354470	Carbon Resistor (chip)	47 63M J			01
R0104	RD355100	Carbon Resistor (chip)	100 63M J			01
R0105	VI197400	Metal Film Resistor (chip)	10.0K 1/10 D			01
R0106	VI197400	Metal Film Resistor (chip)	10.0K 1/10 D			01
SW030	VV439800	Tact Switch	SKQNAJ	SONG SELECT >>		01
SW031	VV439800	Tact Switch	SKQNAJ	SONG SELECT <<		01
SW032	VV439800	Tact Switch	SKQNAJ	DEMO		01
SW040	VV439800	Tact Switch	SKQNAJ	TOP		01
SW041	VV439800	Tact Switch	SKQNAJ	TRACK 1		01
SW042	VV439800	Tact Switch	SKQNAJ	TRACK 2		01
SW043	VV439800	Tact Switch	SKQNAJ	EXTRA TRACKS		01
SW044	VV439800	Tact Switch	SKQNAJ	REC		01
SW045	VV439800	Tact Switch	SKQNAJ	SONG START/STOP		01
SW046	VV439800	Tact Switch	SKQNAJ	FILE		01
SW047	VV439800	Tact Switch	SKQNAJ	SONG SETTING		01
SW050	VV439800	Tact Switch	SKQNAJ	METRONOME START/STOP		01
SW051	VV439800	Tact Switch	SKQNAJ	METRONOME SETTING		01
SW052	VV439800	Tact Switch	SKQNAJ	LCD A -		01
SW053	VV439800	Tact Switch	SKQNAJ	LCD A +		01
SW054	VV439800	Tact Switch	SKQNAJ	LCD C +		01
SW055	VV439800	Tact Switch	SKQNAJ	LCD C -		01
SW056	VV439800	Tact Switch	SKQNAJ	TEMPO UP		01
SW057	VV439800	Tact Switch	SKQNAJ	TEMPO DOWN		01
TA060	VT943400	Transistor Array	TD62785F(TP1)			04
* VR030	V8576200	Slide Variable Resistor	B10.0K RS30111D9	SONG BALANCE		
X0010	V6091100	Ceramic Resonator	8.38M EFOMC8384T4			01
*	V8502800	Circuit Board	PNR	(V850270)(X2244B0)		
	--	Jumper Wire	0.55	(VD04170)		
C0091	UM378100	Electrolytic Cap.	100.00 10.0V			01
C0092	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z			01
CN071	VB389600	Connector Base Post	PH 11P SE			01
CN081	VB858800	Connector Base Post	PH 9P SE			01
CN091	VB858800	Connector Base Post	PH 9P SE			01
CN092	VB858700	Connector Base Post	PH 8P SE			01
CN093	V5492000	FFC Connector	52807 16P SE			01
D0000	VB941200	Diode	1SS133,1SS176			01
-0002	VB941200	Diode	1SS133,1SS176			01
D0000	VD631600	Diode	1SS133,176,HSS104			01
-0002	VD631600	Diode	1SS133,176,HSS104			01
D0004	VB941200	Diode	1SS133,1SS176			01
-0008	VB941200	Diode	1SS133,1SS176			01
D0004	VD631600	Diode	1SS133,176,HSS104			01
-0008	VD631600	Diode	1SS133,176,HSS104			01
D0010	VB941200	Diode	1SS133,1SS176			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
-0013	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0010	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
-0013	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0015	<b>VB941200</b>	Diode	1SS133,1SS176			01
-0018	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0015	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
-0018	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0020	<b>VB941200</b>	Diode	1SS133,1SS176			01
-0028	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0020	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
-0028	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0033	<b>VB941200</b>	Diode	1SS133,1SS176			01
-0038	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0033	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
-0038	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
LD000	<b>VU067800</b>	LED	SEL6210S-TP5			SPLIT
LD001	<b>VU067800</b>	LED	SEL6210S-TP5	REVERB	01	
LD002	<b>VU067800</b>	LED	SEL6210S-TP5	CHORUS	01	
LD010	<b>VU067800</b>	LED	SEL6210S-TP5	GUITAR	01	
LD011	<b>VU067800</b>	LED	SEL6210S-TP5	XG	01	
LD012	<b>VU067800</b>	LED	SEL6210S-TP5	E.BASS	01	
LD013	<b>VU067800</b>	LED	SEL6210S-TP5	VIBRAPHONE	01	
LD020	<b>VU067800</b>	LED	SEL6210S-TP5	HARPSICHORD	01	
LD021	<b>VU067800</b>	LED	SEL6210S-TP5	SYNTH.PAD	01	
LD022	<b>VU067800</b>	LED	SEL6210S-TP5	WOOD BASS	01	
LD023	<b>VU067800</b>	LED	SEL6210S-TP5	E.CLAVICHORD	01	
LD030	<b>VU067800</b>	LED	SEL6210S-TP5	E.PIANO 1	01	
LD031	<b>VU067800</b>	LED	SEL6210S-TP5	STRINGS	01	
LD032	<b>VU067800</b>	LED	SEL6210S-TP5	CHOIR	01	
LD033	<b>VU067800</b>	LED	SEL6210S-TP5	E.PIANO 2	01	
LD040	<b>VU067800</b>	LED	SEL6210S-TP5	GRAND PIANO 1	01	
LD041	<b>VU067800</b>	LED	SEL6210S-TP5	CHURCH ORGAN	01	
LD042	<b>VU067800</b>	LED	SEL6210S-TP5	JAZZ ORGAN	01	
LD043	<b>VU067800</b>	LED	SEL6210S-TP5	GRAND PIANO 2	01	
R0090	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01	
R0091	<b>HF756820</b>	Carbon Resistor	8.2K 1/4 J		01	
R0092	<b>HF757270</b>	Carbon Resistor	27.0K 1/4 J		01	
R0093	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01	
R0094	<b>HF757270</b>	Carbon Resistor	27.0K 1/4 J		01	
R0095	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01	
SW000	<b>VV439800</b>	Tact Switch	SKQNAJ	SPLIT	01	
SW001	<b>VV439800</b>	Tact Switch	SKQNAJ	REVERB	01	
SW002	<b>VV439800</b>	Tact Switch	SKQNAJ	CHORUS	01	
SW004	<b>VV439800</b>	Tact Switch	SKQNAJ	MIDI SETTING	01	
SW005	<b>VV439800</b>	Tact Switch	SKQNAJ	OTHER SETTING	01	
SW006	<b>VV439800</b>	Tact Switch	SKQNAJ	BRILLIANCE BRIGHT	01	
SW007	<b>VV439800</b>	Tact Switch	SKQNAJ	BRILLIANCE MELLOW	01	
SW008	<b>VV439800</b>	Tact Switch	SKQNAJ	VARIATION UP	01	
SW010	<b>VV439800</b>	Tact Switch	SKQNAJ	GUITAR	01	
SW011	<b>VV439800</b>	Tact Switch	SKQNAJ	XG	01	
SW012	<b>VV439800</b>	Tact Switch	SKQNAJ	E.BASS	01	
SW013	<b>VV439800</b>	Tact Switch	SKQNAJ	VIBRAPHONE	01	
SW015	<b>VV439800</b>	Tact Switch	SKQNAJ	WOOD BASS	01	
SW016	<b>VV439800</b>	Tact Switch	SKQNAJ	E.CLAVICHORD	01	
SW017	<b>VV439800</b>	Tact Switch	SKQNAJ	VOICE SETTING	01	
SW018	<b>VV439800</b>	Tact Switch	SKQNAJ	VARIATION DOWN	01	
SW020	<b>VV439800</b>	Tact Switch	SKQNAJ	HARPSICHORD	01	
SW021	<b>VV439800</b>	Tact Switch	SKQNAJ	SYNTH.PAD	01	
SW022	<b>VV439800</b>	Tact Switch	SKQNAJ	CHOIR	01	
SW023	<b>VV439800</b>	Tact Switch	SKQNAJ	E.PIANO 2	01	
SW024	<b>VV439800</b>	Tact Switch	SKQNAJ	E.PIANO 1	01	
SW025	<b>VV439800</b>	Tact Switch	SKQNAJ	STRINGS	01	
SW026	<b>VV439800</b>	Tact Switch	SKQNAJ	JAZZ ORGAN	01	
SW027	<b>VV439800</b>	Tact Switch	SKQNAJ	GRAND PIANO 2	01	
SW028	<b>VV439800</b>	Tact Switch	SKQNAJ	GRAND PIANO 1	01	
SW033	<b>VV439800</b>	Tact Switch	SKQNAJ	LCD D -	01	
SW034	<b>VV439800</b>	Tact Switch	SKQNAJ	LCD B -	01	
SW035	<b>VV439800</b>	Tact Switch	SKQNAJ	LCD B +	01	
SW036	<b>VV439800</b>	Tact Switch	SKQNAJ	LCD D +	01	
SW037	<b>VV439800</b>	Tact Switch	SKQNAJ	EDIT	01	

\*: New Parts

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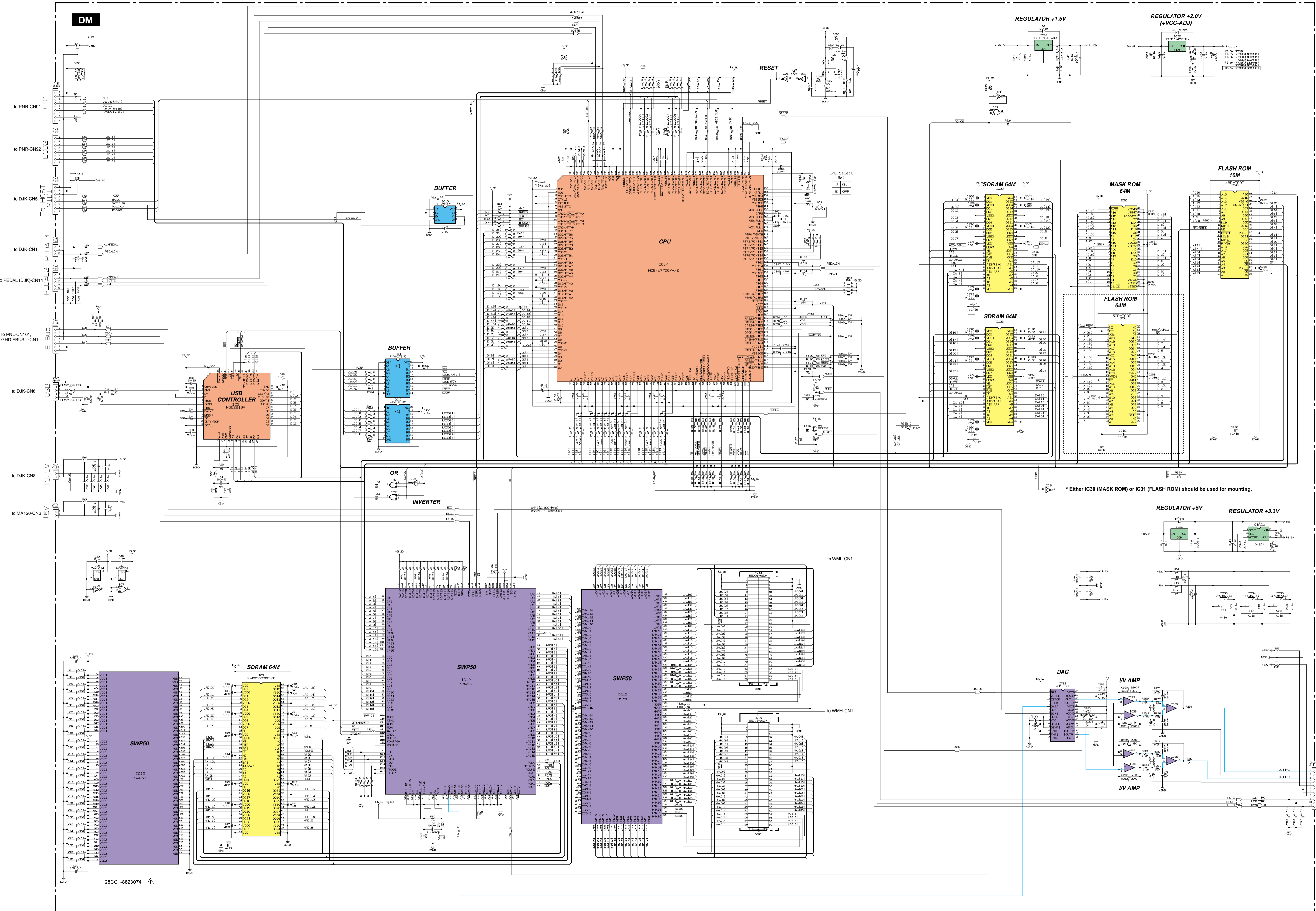


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW038	<b>VV439800</b>	Tact Switch	SKQNAJ	CHURCH ORGAN		01
TR091	<b>IC174020</b>	Transistor	2SC1740S R,S			01
TR092	<b>IC174020</b>	Transistor	2SC1740S R,S			01
TR093	<b>VP872600</b>	Transistor	2SA1708 S,T			01
VR090	<b>VS368200</b>	Rotary Variable Resistor	B10K RK09K1130BN7A	CONTRAST		01
*	<b>V8562800</b>	Circuit Board	MV2	(V850270)(X2244B0)		
	--	Jumper Wire	0.55	(VD04170)		
CN020	<b>VB858700</b>	Connector Base Post	PH 8P SE			01
* VR020	<b>V8590000</b>	Rotary Variable Resistor	B 10.0K XV0141GN	MASTER VOLUME		
	<b>V2403300</b>	Circuit Board	NET1	(XT123B0)		05
	--	Jumper Wire	0.55	(VD04170)		
C0001	<b>VS677200</b>	Electrolytic Cap.-BP	1.50UF 63.0V			01
C0002	<b>VS677200</b>	Electrolytic Cap.-BP	1.50UF 63.0V			01
CN001	<b>LB932040</b>	Base Post Connector	VH 4P TE			01
CN002	<b>LB932080</b>	Base Post Connector	VH 8P TE			01
*	<b>V8544500</b>	Circuit Board	WMH	(X2248A0)		
* CN001	<b>V8389100</b>	Connector	52901 60P TE			
C0001	<b>US064100</b>	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0003	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0005	<b>US064100</b>	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0007	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0017	<b>UF018100</b>	Electrolytic Cap. (chip)	100 6.3V			01
* IC002	<b>X2563100</b>	IC		ROM 128M WAVE-H1		
* IC004	<b>X2543100</b>	IC		ROM 64M WAVE-H2		
*	<b>V8544400</b>	Circuit Board	WML	(X2248A0)		
* CN001	<b>V8389100</b>	Connector	52901 60P TE			
C0001	<b>US064100</b>	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0003	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0005	<b>US064100</b>	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C0007	<b>US135100</b>	Ceramic Capacitor-F (chip)	0.1000 16V Z			01
C0017	<b>UF018100</b>	Electrolytic Cap. (chip)	100 6.3V			01
* IC002	<b>X2561100</b>	IC		ROM 128M WAVE-L1		
* IC004	<b>X2541100</b>	IC		ROM 64M WAVE-L2		
△	<b>VT015800</b>	AC Cord Set	U 2P 2.44m 7A	U		06
△	<b>VT016000</b>	AC Cord Set	B 2P 2.5m	B		08
△	<b>VT015900</b>	AC Cord Set	E 2P 2.5m	E,N		05
△	<b>V8911300</b>	AC Cord Set	K 2P 2.5m	K		
△	<b>VK726100</b>	Connector	CCT5902	N		05
△	<b>XQ426A00</b>	Power Transformer	29WP244 U	U		13
△	<b>XQ427B00</b>	Power Transformer	GA-120 E IEC65	B,E,K		14
△	<b>XQ428B00</b>	Power Transformer	GA-120 N	N		16
*	<b>V8811300</b>	LCD	SCLCMDYAMS0049			
*	<b>X2566A00</b>	Speaker	16.0cm 8 ohm 60W	WOOFER	2	
	<b>XL455A00</b>	Speaker	5.0cm 16 ohm 60W	TWEETER	2	07
△	<b>VC843500</b>	Push Switch	SDDL1216A J.U.C.S	POWER		03
	<b>HS412520</b>	Rotary Variable Resistor	K161SOZO1	PEDAL VOLUME	3	05

\*: New Parts

RANK: Japan only

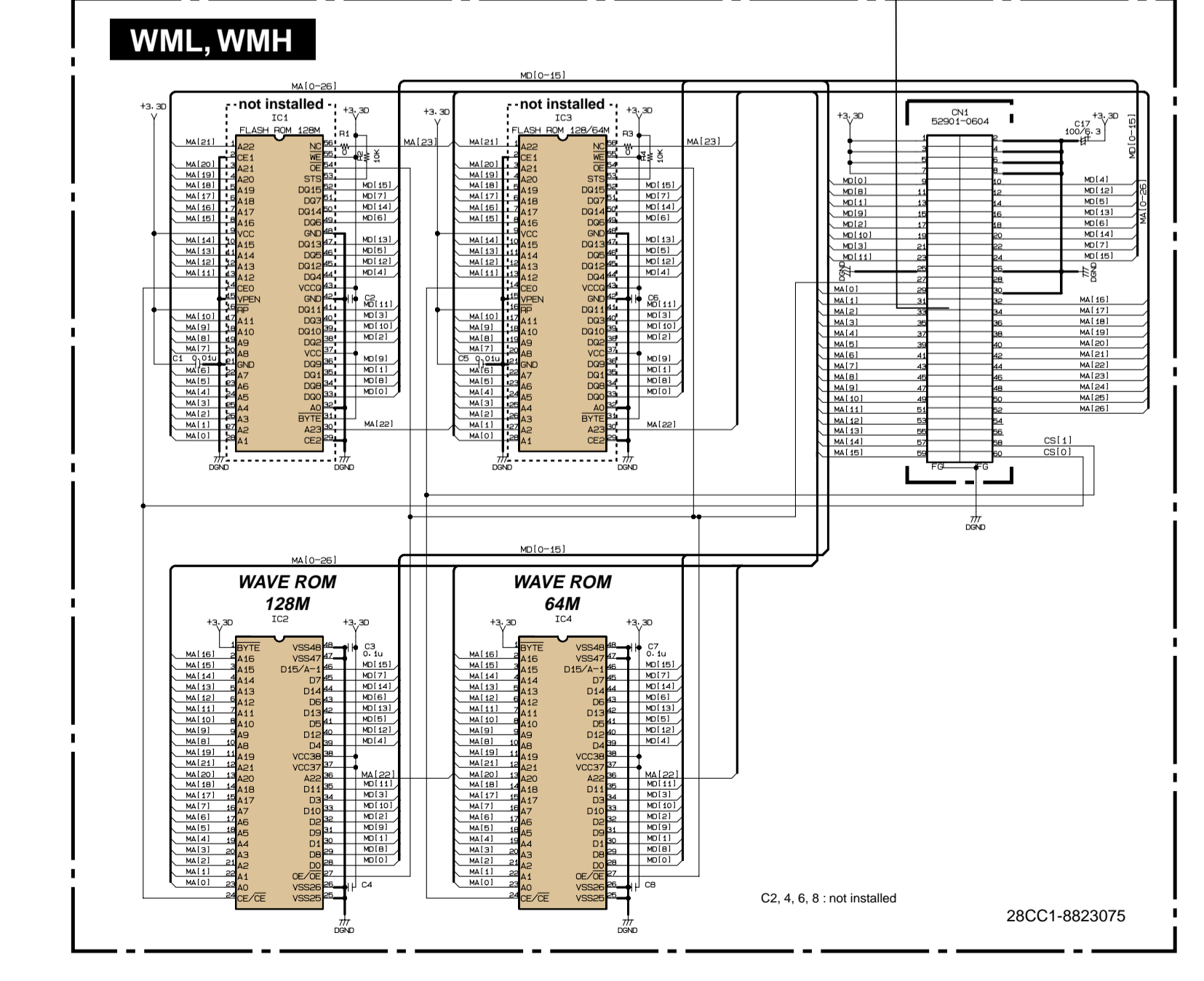
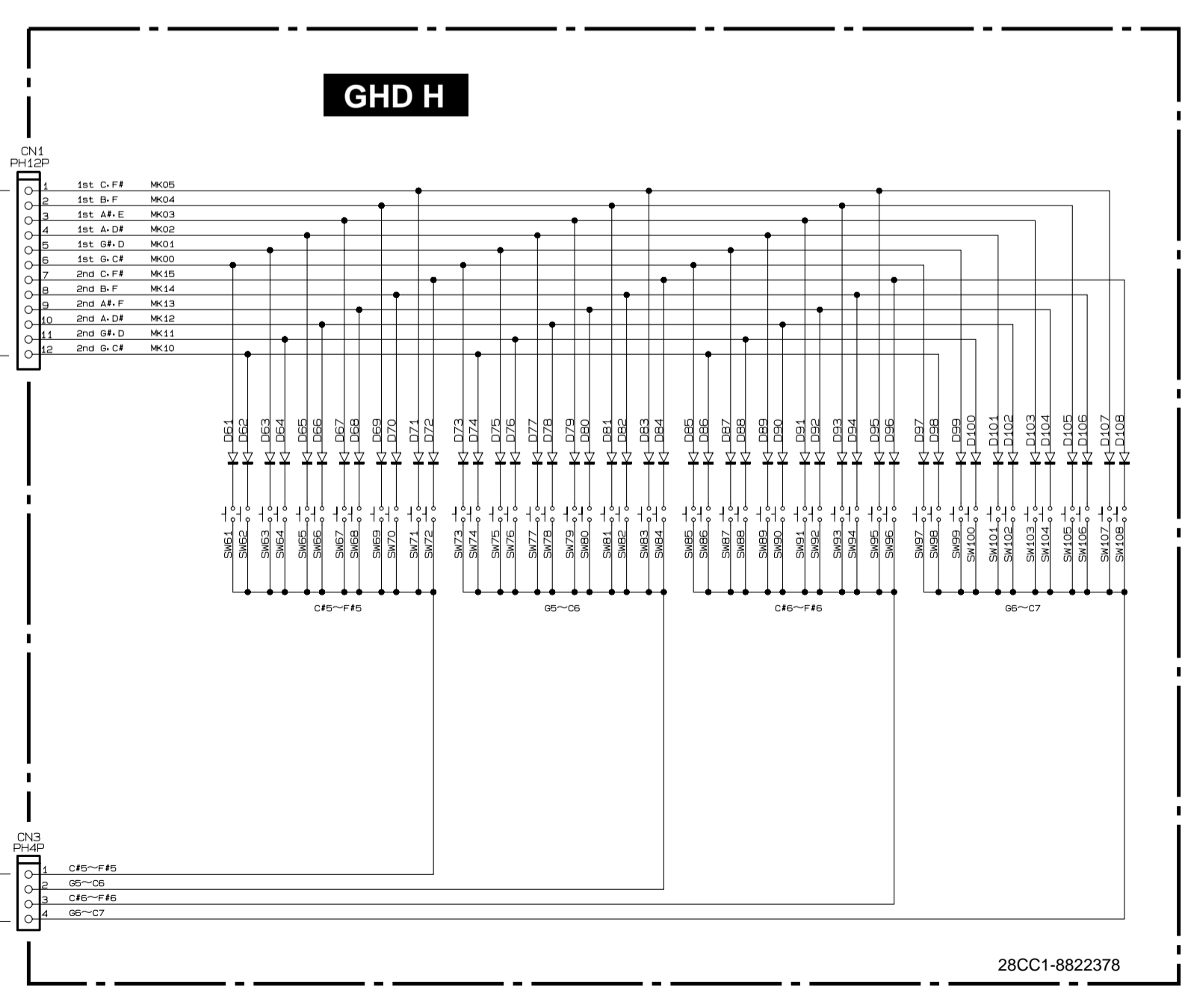
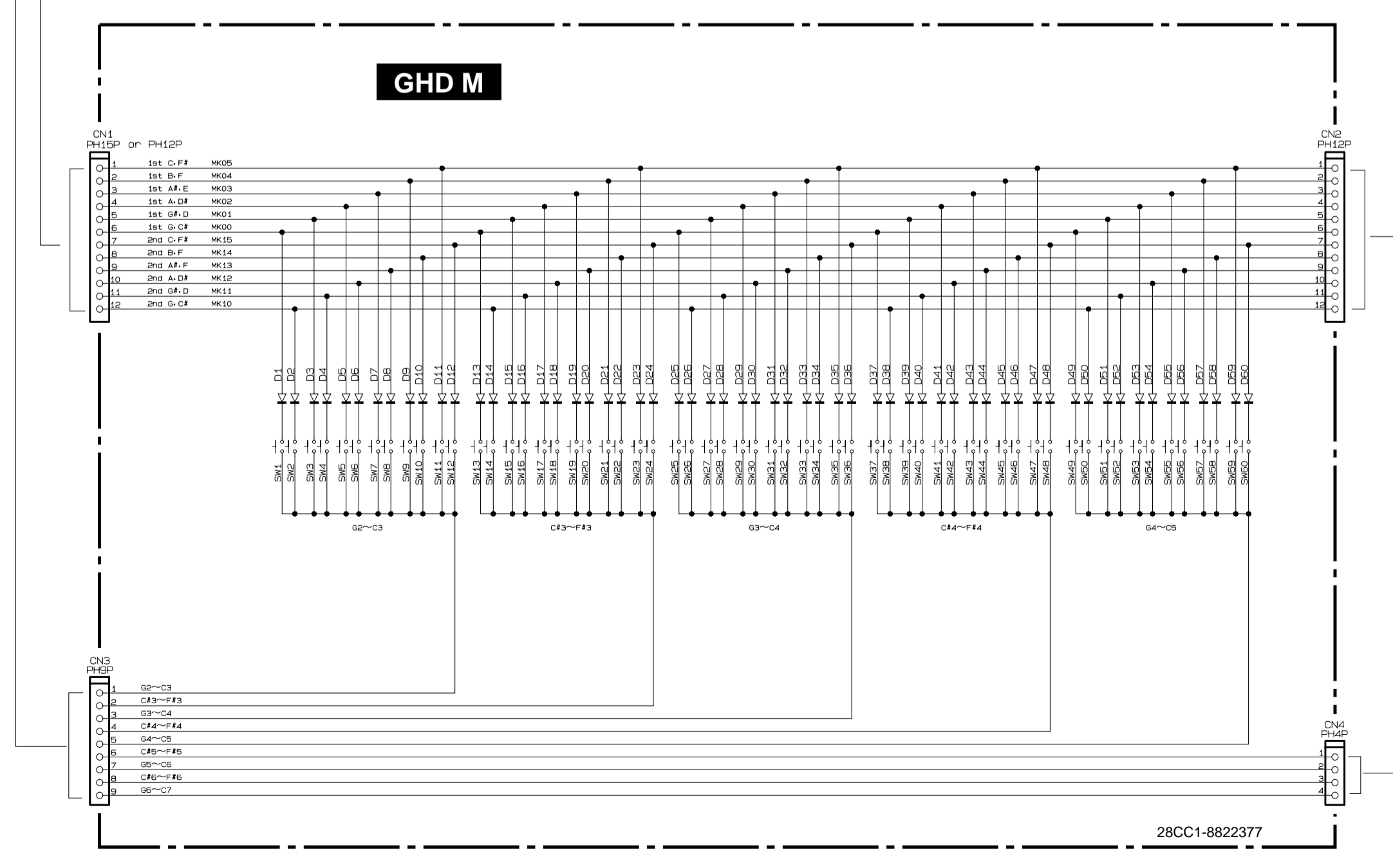
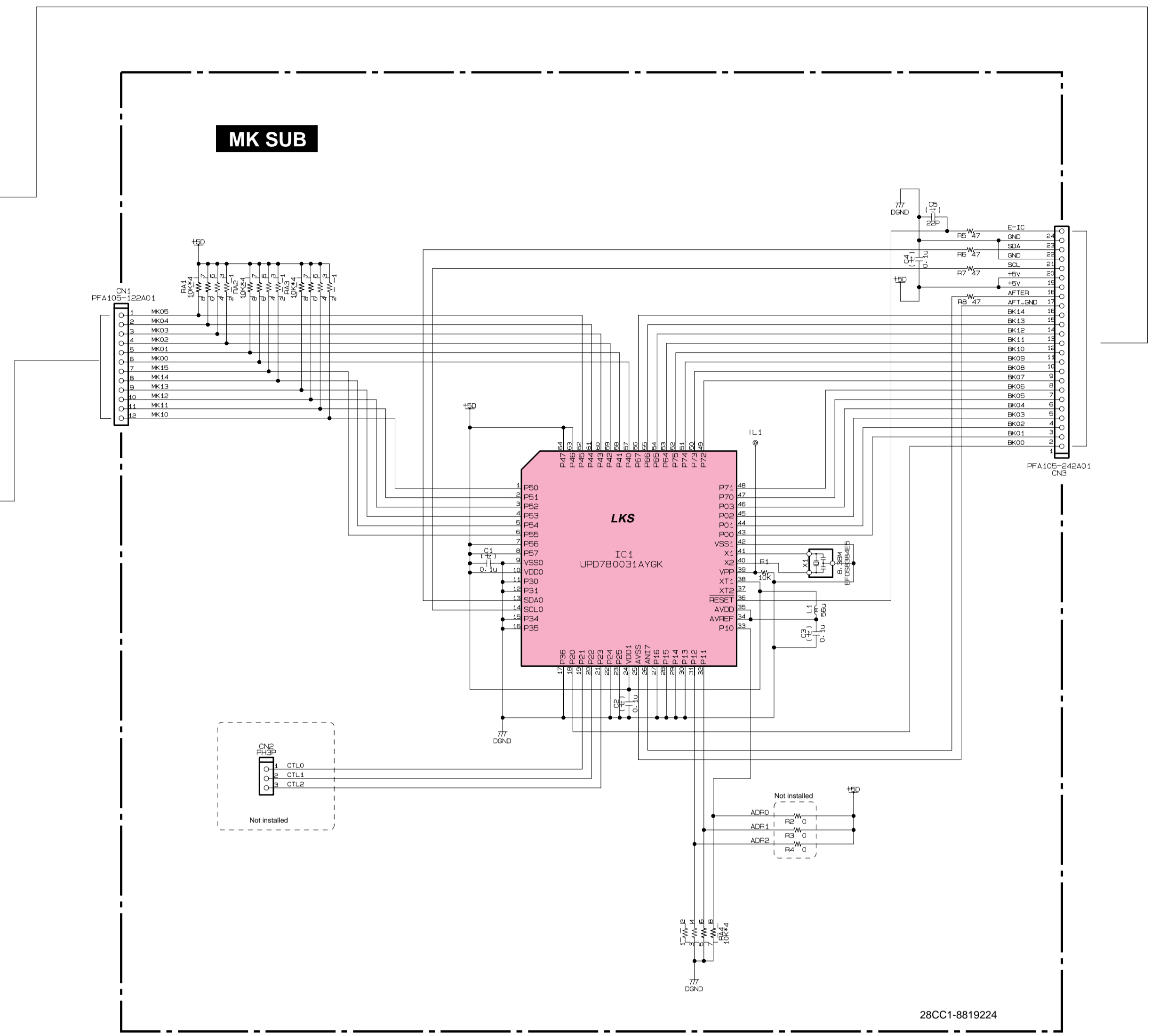
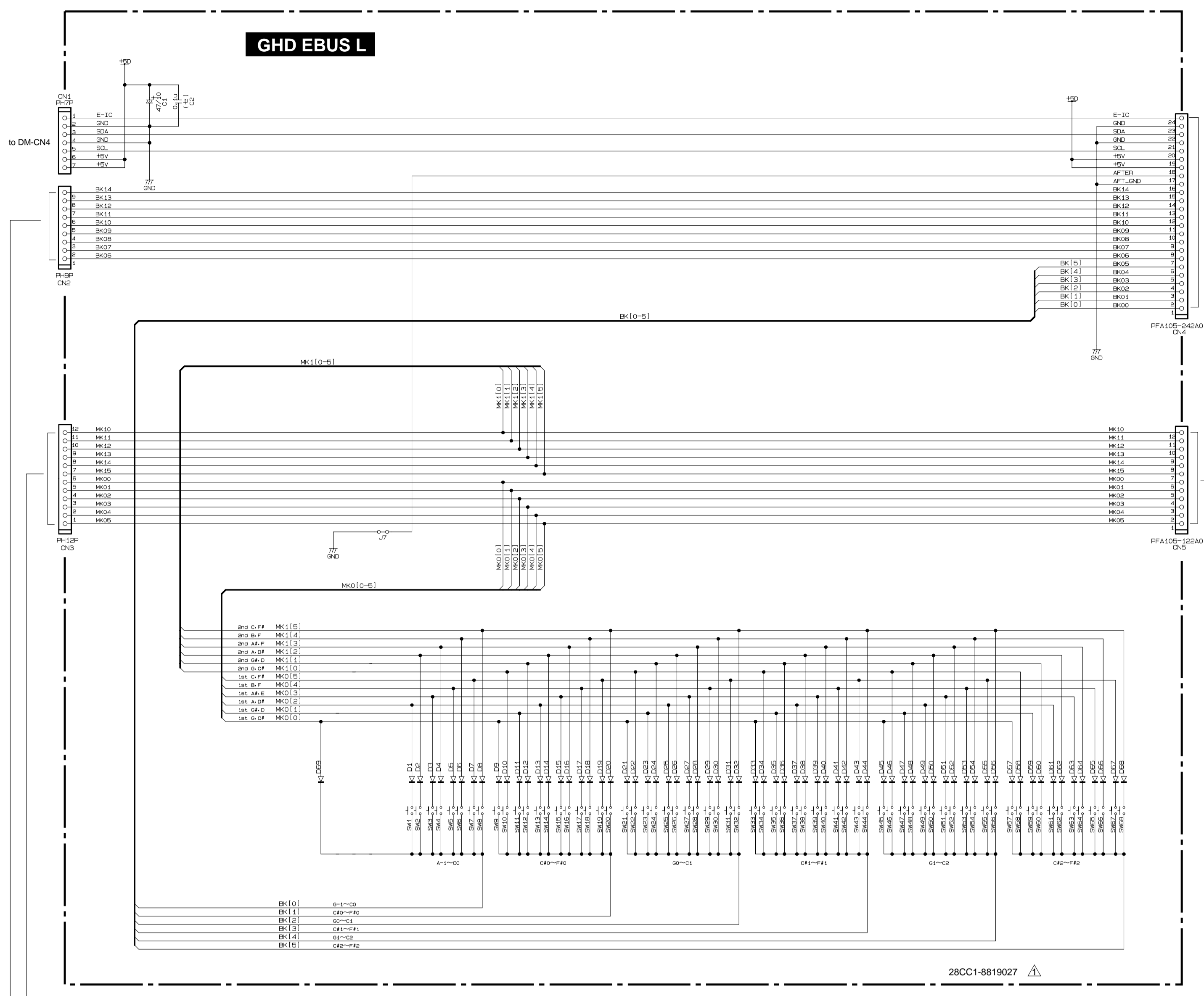
CLP-150/CLP-150M/CLP-150C OVERALL CIRCUIT BOARD 1/4 (DM)



\* Either IC30 (MASK ROM) or IC31 (FLASH ROM) should be used for mounting.

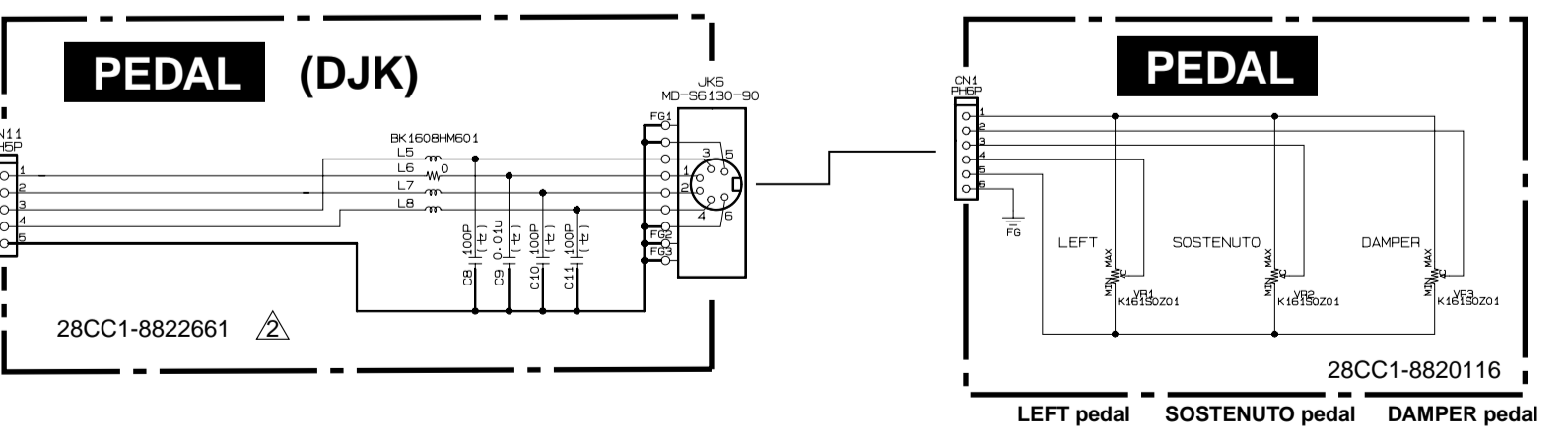
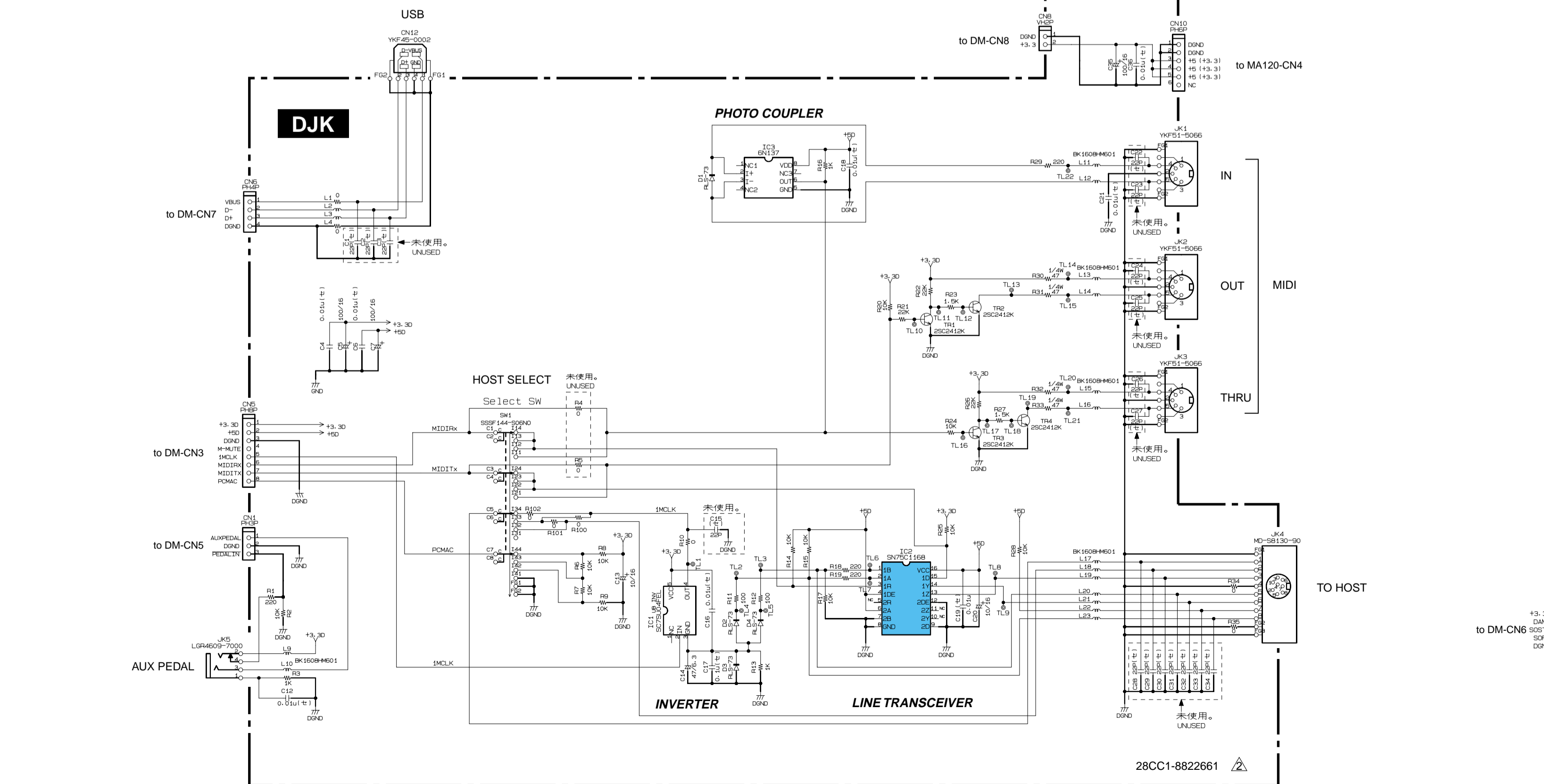
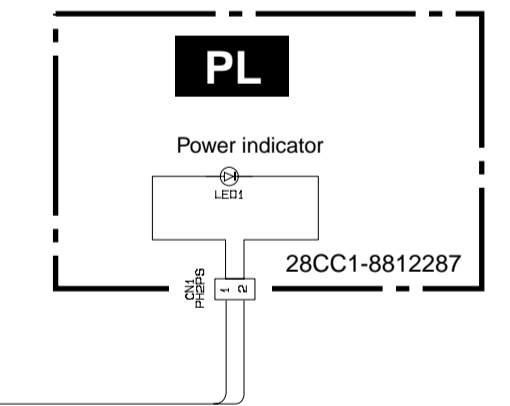
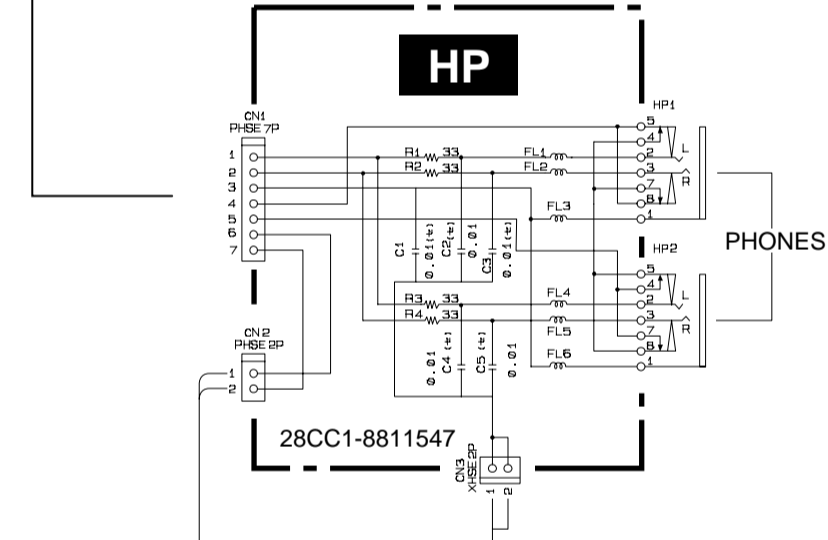
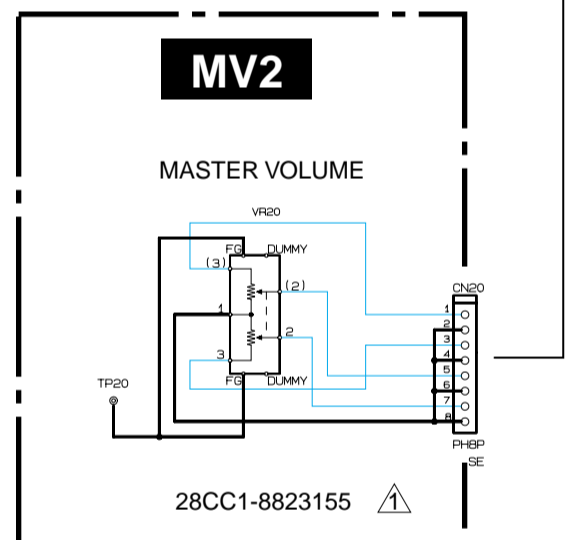
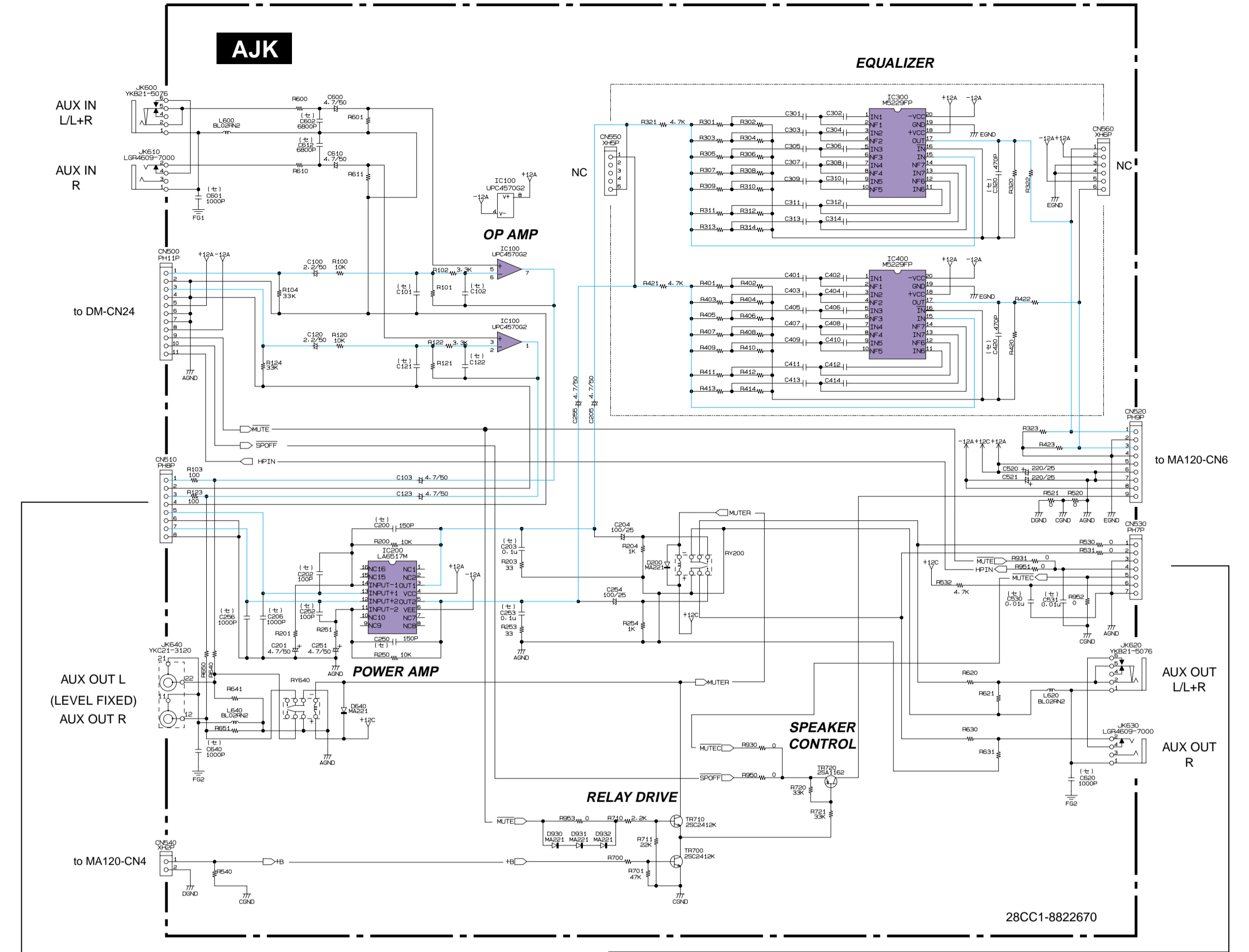
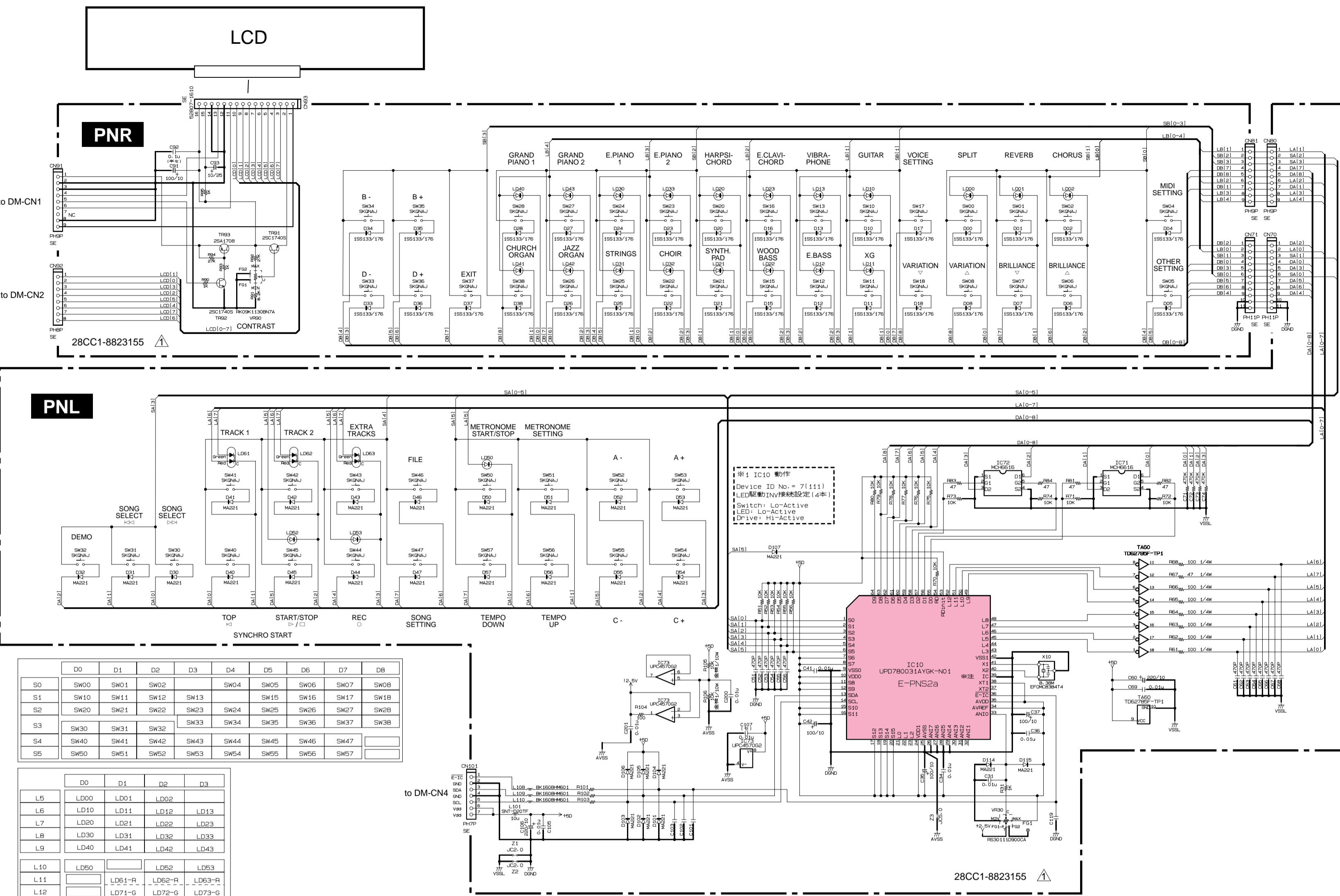
Note : See parts list for details of circuit board component parts.

28CC1-8823074



Note : See parts list for details of circuit board component parts.

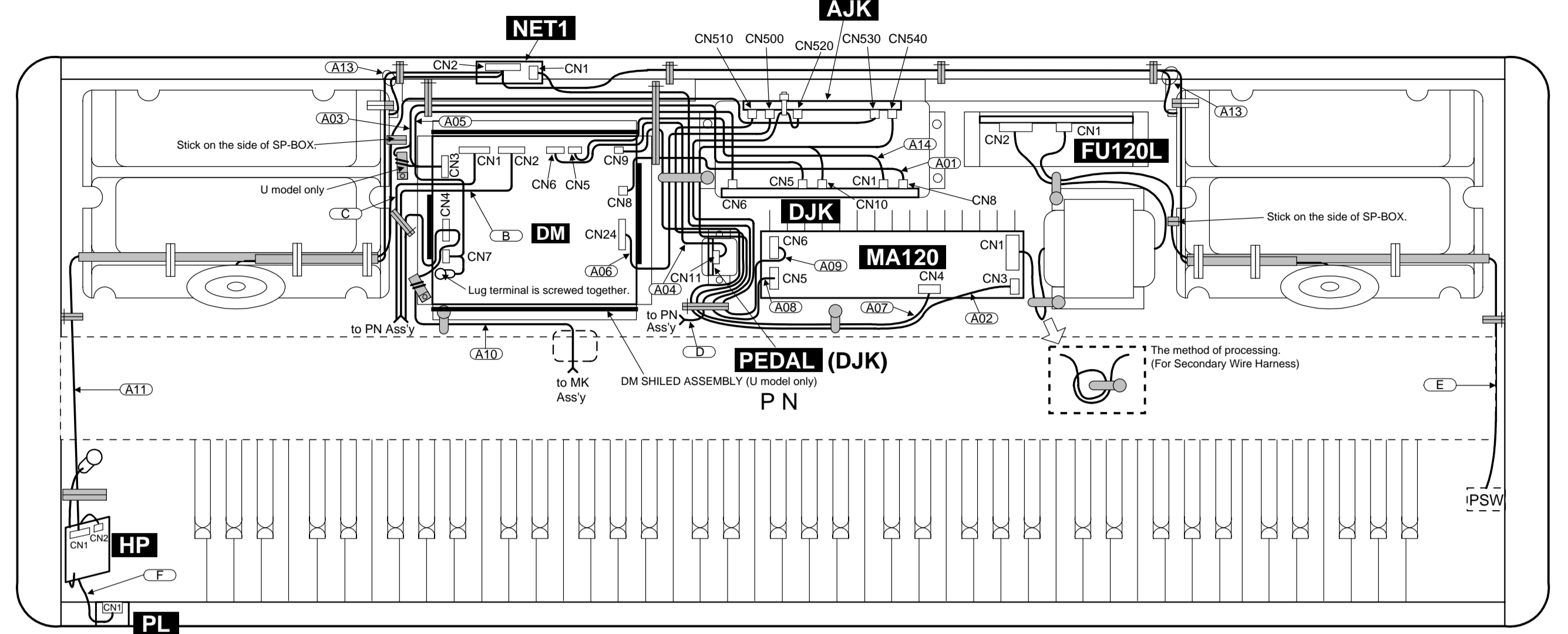
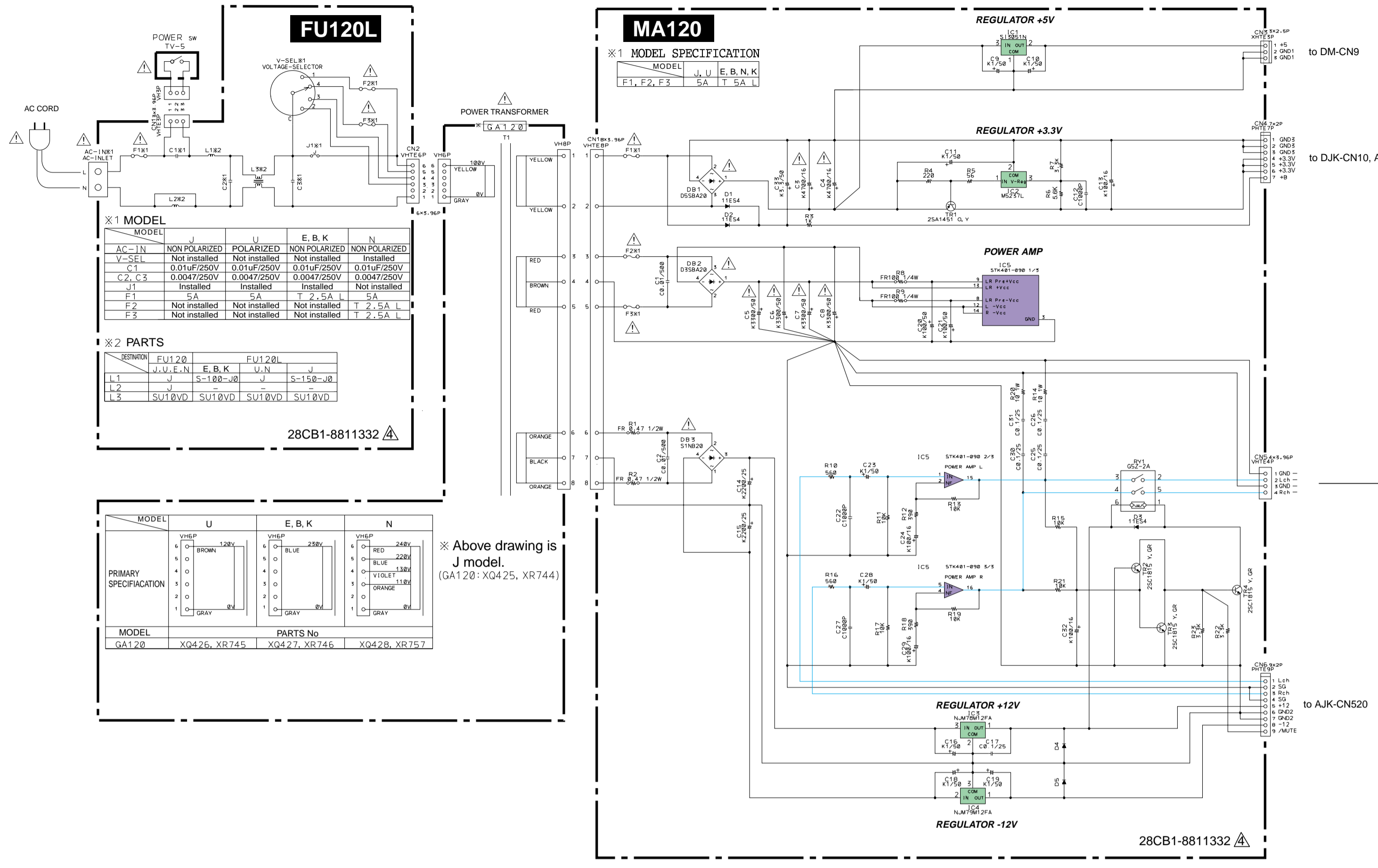
CLP-150/CLP-150M/CLP-150C OVERALL CIRCUIT BOARD 3/4 (PNL, PNR, MV2, DJK, PEDAL(DJK), PEDAL(SW), AJK, HP, PL)



1: Ceramic Capacitor  
Note: See parts list for details of circuit board component parts.

CLP-150/CLP-150M/CLP-150C OVERALL CIRCUIT BOARD 4/4 (FU120L, MA120, NET1)

CLP-150/CLP-150M/CLP-150C CIRCUIT BOARD LAYOUT



- NOTE1** The meaning of symbols.
- : Ferrite core
  - : Cord binder(vinyl tie)
  - : Lug terminal
  - : Filament tape
  - : Filament tape
  - : Cable holder
  - : Connector direction
  - : Connector direction
- NOTE2** The Wire Harness passing through Speaker Box top and (A13) does not touch a Key Cover
- NOTE3** The following Wire Harness does not touch a Hammer.
- (A02) (A07) (A10) (B) (C) (D)
- NOTE4** Fix the following Wire Harness to PANEL STAY ASSEMBLY by Wire Harness tie.
- (A02) (B) (C)
- Wire Harness tie
- <SIDE VIEW>
- NOTE5** Fix (A10) (D) to CONTROL PANEL (PRINTED) by Wire Harness tie after inserting (A10) in PNL-CN101.
- (A10) (D)
- <TOP VIEW>
- NOTE6** (A09) wire harness is fixed to the hole of circuit board AJK by wire harness tie.
- (A09) (CN520)
- Circuit Board AJK

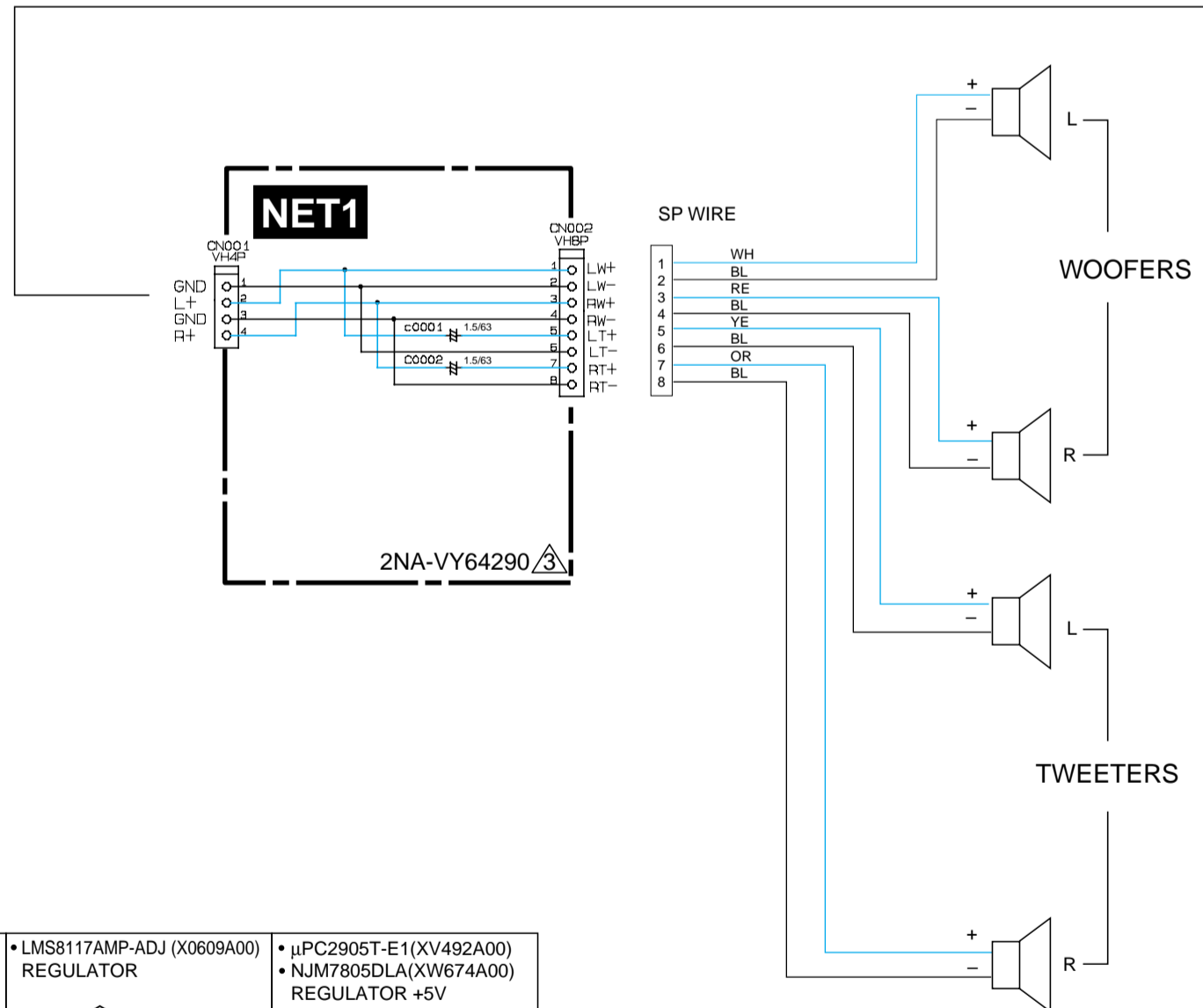
LOCATION	PART No.	PART NAME	PIN No.	DESTINATION
A01	(V876820)	3D NETWORK WIRE HARNESS	2	DM-CN8 - DJK-CN8
A02	(V876830)	5D POWER SUPPLY WIRE HARNESS	2	DM-CN9 - MA120-CN3
A03	(V937590)	DJK WIRE HARNESS	8	DM-CN3 - DJK-CN5
A04	(VK10380)	KRD-KRD WIRE HARNESS	5	DM-CN6 - PEDAL-CN11
A05	(V933990)	USB CABLE	4	DM-CN7 - DJK-CN6
A06	(VK10460)	KRD-KRD WIRE HARNESS	11	DM-CN24 - AJK-CN500
A07	(V876850)	3DB POWER SUPPLY WIRE HARNESS	7-2-6	MA120-CN4 - AJK-CN540 - DJK-CN10
A08	(V876860)	NW WIRE HARNESS	4	MA120-CN5 - NET1-CN1
A09	VK10600	KRD-KRD WIRE HARNESS	9	MA120-CN6 - AJK-CN520
A10	V9289300	EBUS-LF WIRE HARNESS	7	DM-CN4 - PNL-CN101 - GHD EBUS L-CN1
A11	(V899560)	HP WIRE HARNESS	7	AJK-CN530 - HP-CN1
A13	(V876880)	SP WIRE HARNESS	8	NET1-CN2 - WF-L, R TW-L, R
A14	(VK10530)	KRD-KRD WIRE HARNESS	3	DM-CN5 - DJK-CN1
B	(VK11830)	KRD-KRD WIRE HARNESS	8	DM-CN2 - PNR-CN92
C	(VK11840)	KRD-KRD WIRE HARNESS	9	DM-CN1 - PNR-CN91
D	(V876870)	VOL WIRE HARNESS	8	AJK-CN510 - MV2-CN20
E	V876890	PSW WIRE HARNESS	2	PSW - FU120L-CN1
F	VK09960	KRD-KRD WIRE HARNESS	2	HP-CN2 - PL-CN1

\* The parts with "( )" in "Part No." are not available as service parts.

**WARNING**

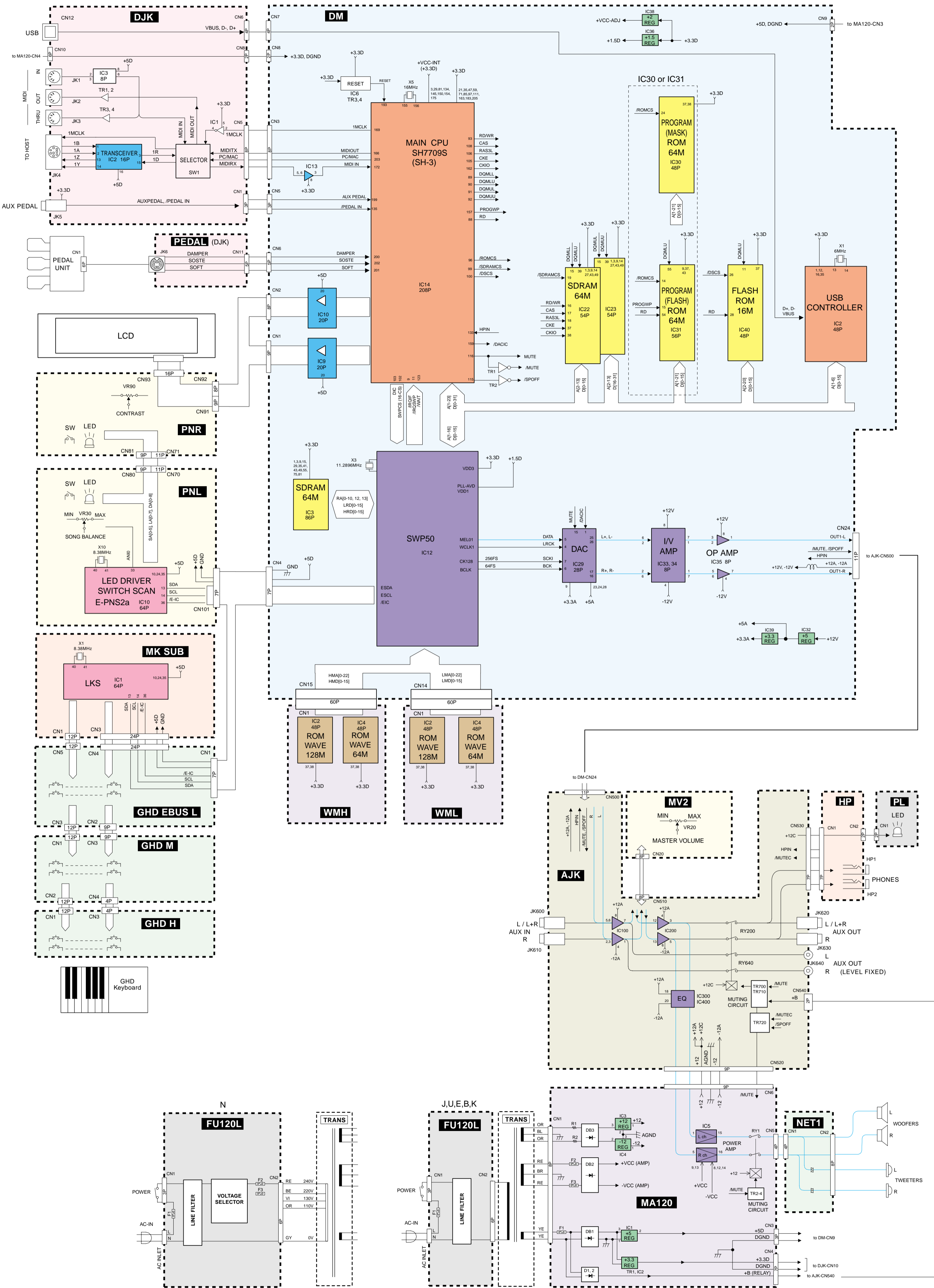
Components having special characteristics are marked  $\Delta$ , and must be replaced with parts having specification equal to those originally installed.

(セラ) : Ceramic Capacitor  
 (半セ) : Semiconductive Ceramic Capacitor  
 (金膜) : Metal Oxide Film Resistor  
 Note : See parts list for details of circuit board component parts.



<p>•D5SBA20 (VK421800) DIODE STACK 6.0A 200V</p>	<p>•D3SBA20-4103 (VO111500) DIODE STACK 4.0A</p>	<p>•S1NB20 1.0A 200V (VR253700) DIODE STACK</p>	<p>•NJU7202U50(X0150A00) REGULATOR +5V</p>	<p>•LMS8117AMP-ADJ (X0609A00) REGULATOR</p>	<p>•μPC2905T-E1 (XV492A00) •NJM7805DLA(XV674A00) REGULATOR +5V</p>
<p>•NJM79M12FA(XD343A00) REGULATOR -12V</p>	<p>•NJM78M12FA(XJ602A00) REGULATOR +12V</p>	<p>•SI-3051N(XQ437A00) REGULATOR +5V</p>	<p>•MS237L(XQ667A00) REGULATOR +5V</p>	<p>•TARSS33 (XZ642A00) REGULATOR +3.3V</p>	

CLP-150/CLP-150M/CLP-150C BLOCK DIAGRAM



28CA1-8823076