DIGITAL KEYBOARD

PSR-F50

SERVICE MANUAL



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CL 001894

YAMAHA

HAMAMATSU, JAPAN

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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: This product contains chemicals known to the State of California to cause cancer, 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.

■ WARNING

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

■ SAVING DATA



Be sure to perform it

Saving and backing up your data

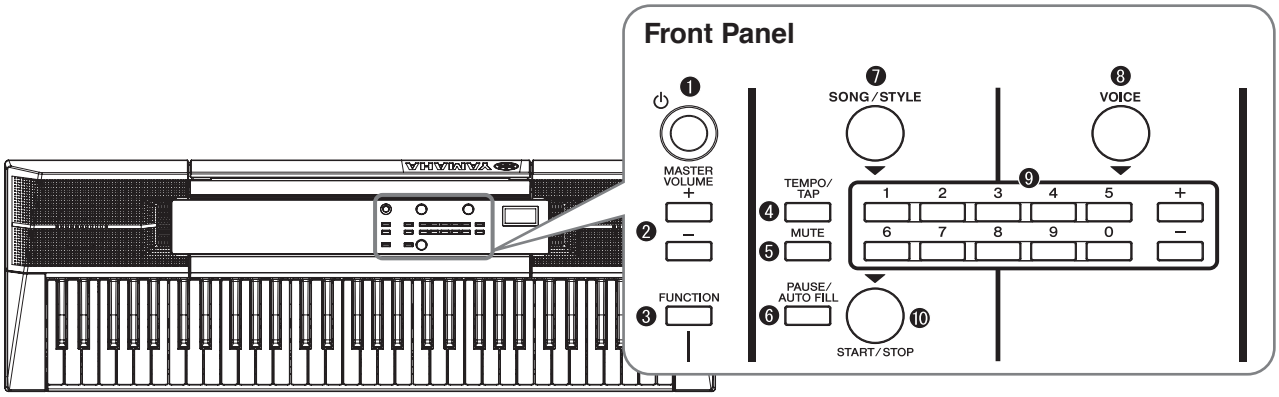
Some data items are automatically saved as backup data in the internal memory even if you turn the power off. Saved data may be lost due to malfunction or incorrect operation. Save important data to external device such as a computer.

■ SPECIFICATIONS

Dimensions (W x D x H)	940 x 306 x 109 mm (37" x 12-1/16" x 4-5/16")
Weight	3.4 kg (7 lbs., 8 oz.) (not including batteries)
Keyboard	61 standard-size keys
Display	LED display
Voices	• Polyphony: 32 notes • Preset: 120
Accompaniment Styles	• Preset: 114 • Style Controls: Main, Fill-in
Songs	Preset: 30
Connectivity	MINI PHONES/OUTPUT, DC IN
Amplifiers	2.5W + 2.5W
Speakers	8cm x 2
Power Supply	• AC Power Adaptor: PA-3C, PA-130A • Batteries: Six 1.5V "AA" size Alkaline (LR6), Manganese (R6) or Ni-MH rechargeable batteries or equivalent
Power Consumption	6W (When using PA-130A AC Power Adaptor)
Auto Power Off Function	Yes

Included Accessories	• Owner's Manual • AC Power Adaptor: PA-130A or equivalent * May not be included depending on your particular area. Please check with your Yamaha dealer. • Music Rest • Online Member Product Registration
Optional Accessories	• AC Power Adaptor: PA-3C, PA-130A or equivalent • Stereo Headphones (HPE-30)

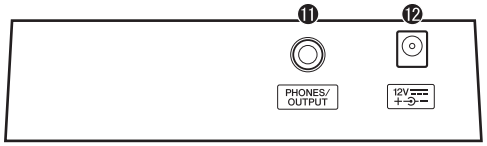
■ PANEL LAYOUT



Front Panel

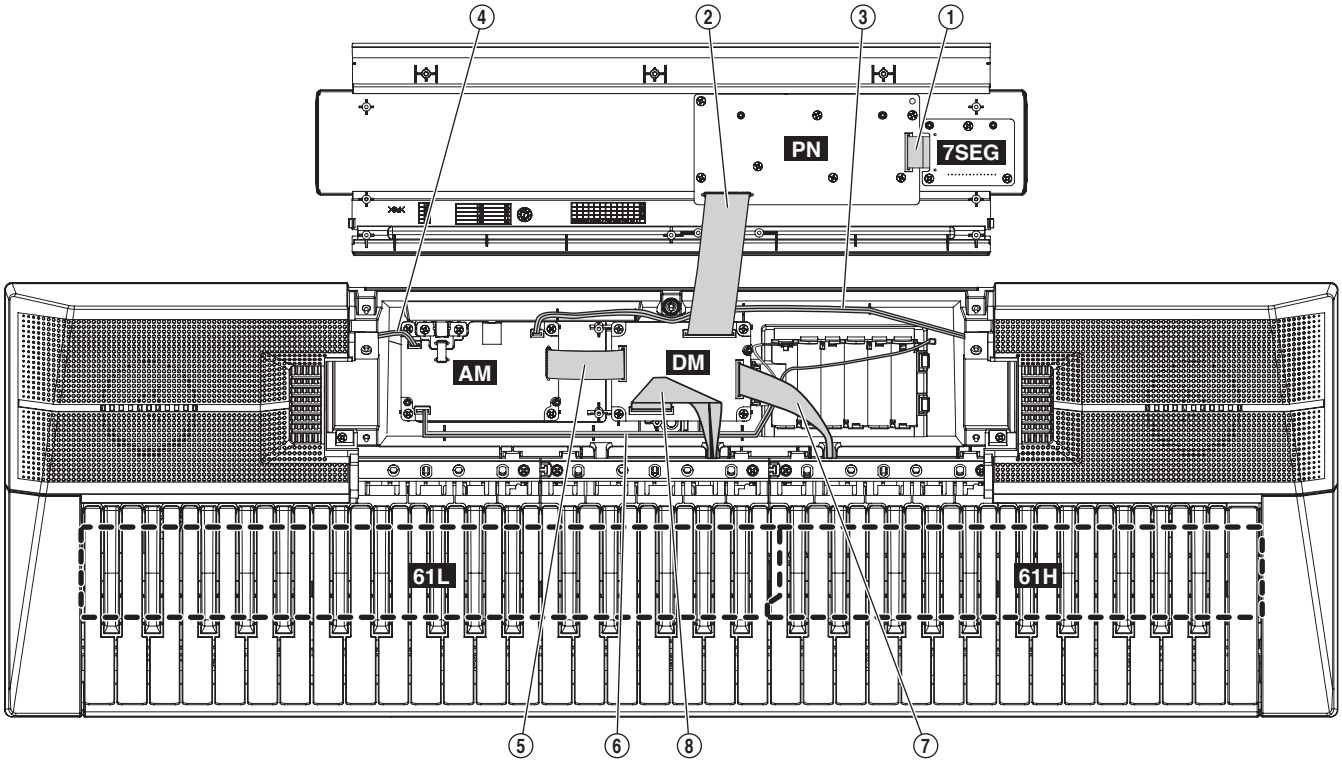
❶ [⏻] (Standby/On) switch
❷ MASTER VOLUME [+]/[−] buttons
❸ [FUNCTION] button
❹ [TEMPO/TAP] button
❺ [MUTE] button
❻ [PAUSE/AUTO FILL] button
❼ [SONG/STYLE] button
❽ [VOICE] button
❾ Number buttons
[0]-[9], [+], [−]
❿ [START/STOP] button

Rear Panel



⓫ [PHONES/OUTPUT] jack
⓬ [DC IN] jack

■ CIRCUIT BOARD LAYOUT & WIRING



No.	Location	Part No.	Part Name	Destination						Remarks
①	WH301	(ZA27130)	WIRING ASSEMBLY	7SEG - CN301	*3	*5	PN - CN202	*1	*5	11P L=75
②	WH201	(ZF93670)	WIRING ASSEMBLY	PN- CN201	*3	*5	DM - CN301	*1	*5	16P L=150
③	SR30	(ZF94030)	WIRING ASSEMBLY SP	SPEAKER R	*2	*6	AM - CN152	*1	*4	2P L=525
④	SL30	(ZF94040)	WIRING ASSEMBLY SP	SPEAKER L	*2	*6	AM - CN151	*1	*4	2P L=255
⑤	WH103	(ZA18350)	WIRING ASSEMBLY	AM - CN103	*3	*5	DM - CN1	*1	*5	10P L=100
⑥	L250	(ZF93820)	CONNECTOR ASSEMBLY BATT	SPRING TERMINAL A	*2	*7	AM - CN102	*1	*4	L=440
				SPRING TERMINAL B	*2	*8				L=370
⑦	L30	(ZA18560)	WIRING ASSEMBLY	61H - CN1	*1	*5	DM - CN201	*1	*5	11P L=225
⑧	L40	(ZA18870)	WIRING ASSEMBLY	61L - CN1	*1	*5	DM - CN202	*1	*5	13P L=200

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

*1: Installation

*2: Manual soldering

*3: Dip soldering

*4: Red wire is adjusted to Pin 1 mark (△ mark).

*5: Edge mark is adjusted to Pin 1 mark (△ mark).

*6: Red wire is connected to (+) terminal. Black wire is connected to (–) terminal.

*7: Black wire is connected to Battery Terminal A.

*8: Red wire is connected to Battery Terminal B.

Caution: Be sure to attach the removed filament tape just as it was before removal.

■ DISASSEMBLY PROCEDURE

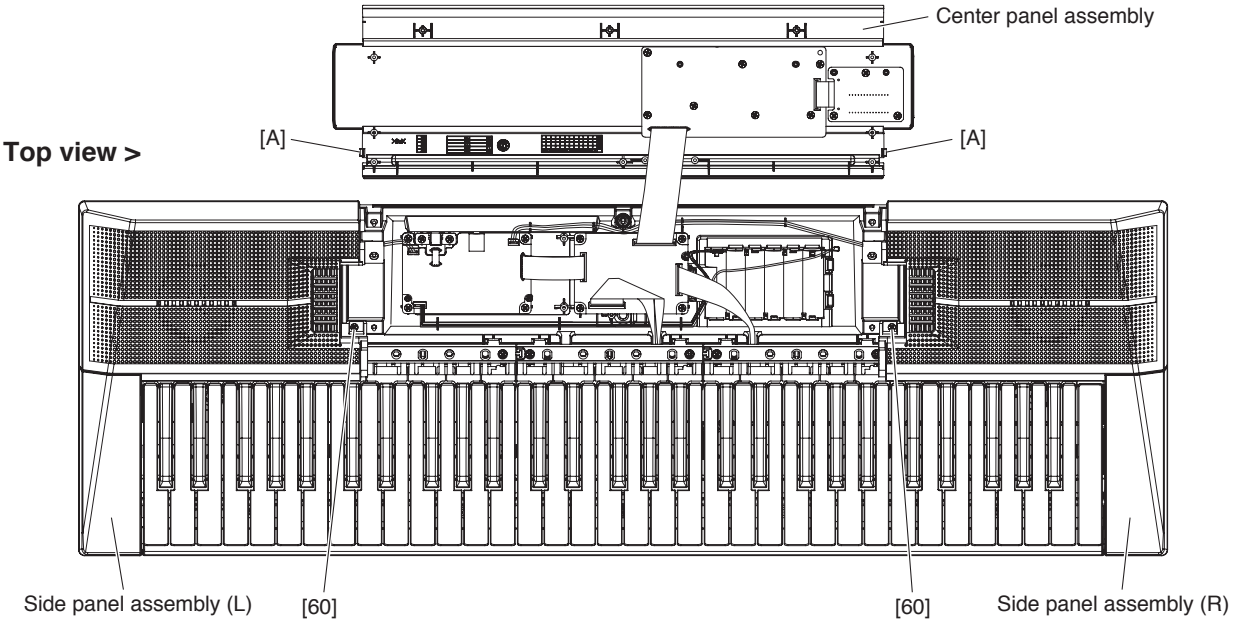
Caution: Be sure to attach the removed filament tape just as it was before removal.

1. Center Panel Assembly (Time required: About 2 minutes)

1-1 Remove the seven (7) screws marked [70A] and three (3) screws marked [80A]. (Fig.1)

1-2 Release the two (2) hooks marked [A].
The center panel assembly can then be removed. (Fig.1)

< Top view >



< Bottom view >

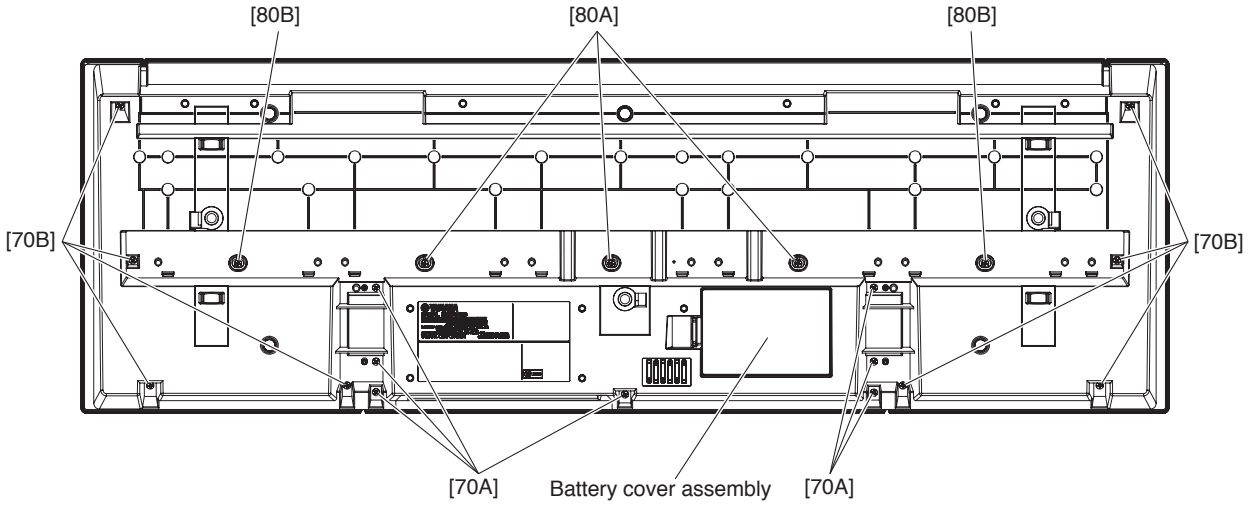


Fig.1

2. Circuit Boards
(Time required: About 4 minutes)

2-1 Remove the center panel assembly. (See procedure 1.)

2-2 Remove the following screws.
Each circuit board can then be removed. (Fig.2, Table.1)

< Top view >

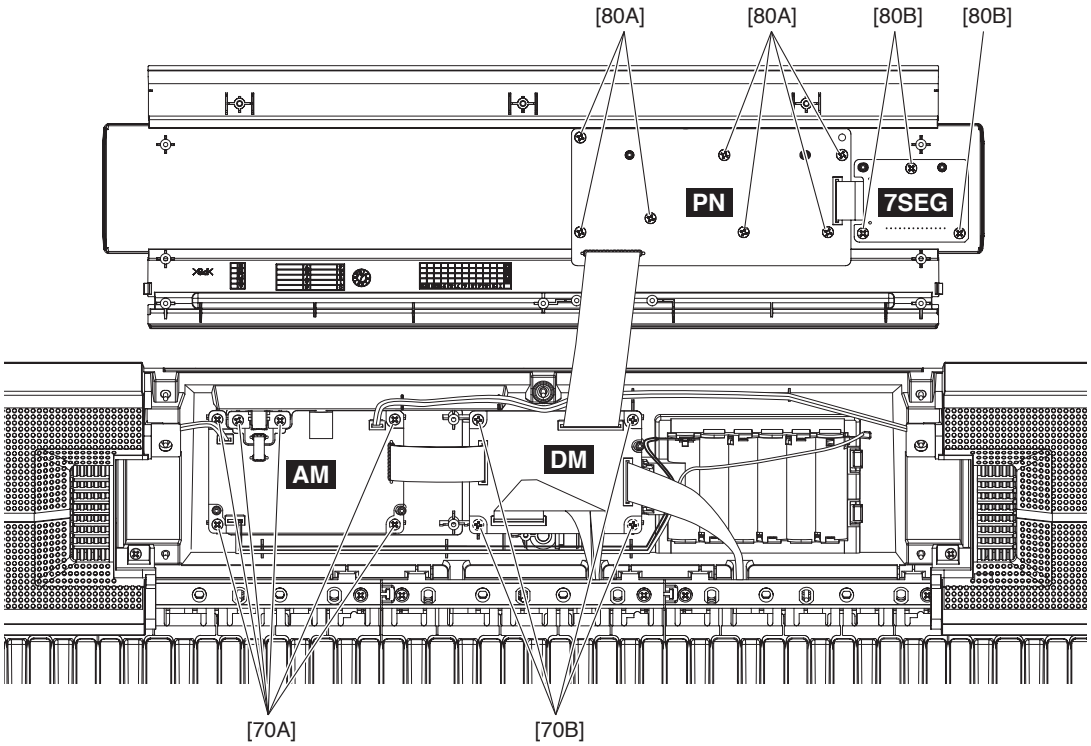


Fig.2

Circuit Board	Screw Ref.No.	QTY	Fig.
AM Circuit Board	70A	6	2
DM Circuit Board	70B	4	2
PN Circuit Board	80A	7	2
7SEG Circuit Board	80B	3	2

Table.1

3. Side Panel Assembly L,R (Time required: About 4 minutes)

3-1 Remove the center panel assembly. (See procedure 1.)

3-2 Remove the four (4) screws marked [70B], the screw marked [80B] and the screw marked [60].
The side panel assembly can then be removed.(Fig.1)

* ***The side panel assembly L and R can be removed in the same manner.***

4. Speaker L, R (Time required: About 5 minutes)

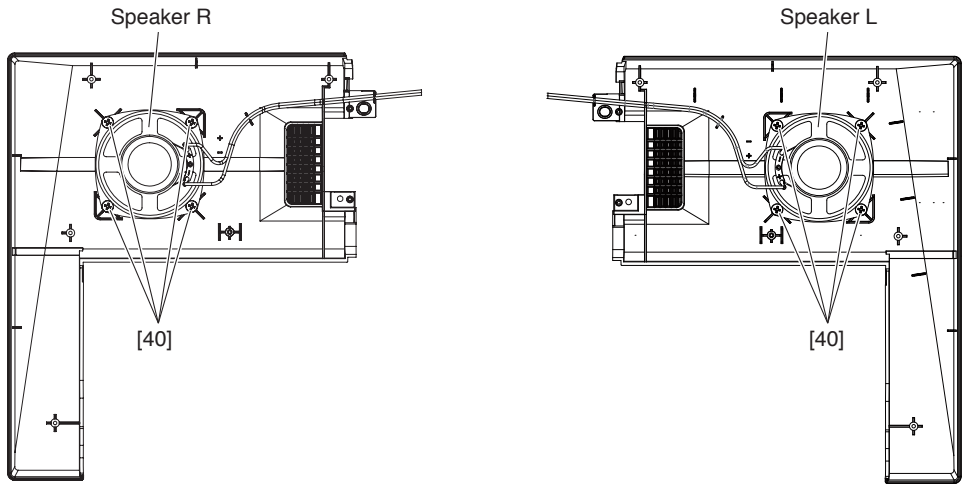
4-1 Remove the center panel assembly. (See procedure 1.)

4-2 Remove the side panel assembly. (See procedure 3.)

4-3 Remove the four (4) screws marked [40].
The speaker can then be removed.(Fig.3)

* ***The speaker L and R can be removed in the same manner.***

< Bottom view >



<Side Panel R Assembly>

Fig.3

<Side Panel L Assembly>

5. Disassembling Keyboard Assembly (Time required: About 13 minutes)

5-1 Remove the center panel assembly. (See procedure 1.)

5-2 Remove the side panel assembly L, R. (See procedure 3.)

5-3 White Keys and Black Keys

5-3-1 White and black keys for one octave unit are integrated as a set. There are five sets in total. Only the C6 white key, unlike the other keys, is not integrated in a set. (Fig.4)

5-3-2 To remove a set, remove the two (2) each screws marked [110A]. The white and black keys in the set can then be removed. (Fig.4)

When removing, unfasten the two (2) hooks at the back of the black keys upward, and lift the white and black keys while pulling them toward you a little. (Photo.1)

5-3-3 To remove the white key C6, remove the screw marked [110B], unhook as described in Procedure 5-3-2, and pull out toward you. (Fig.4)

* ***When all white and black keys were removed, first attach the white and black keys from C3 to B3 aligning them with the boss, and then attach the remaining white and black keys. (Fig.4)***

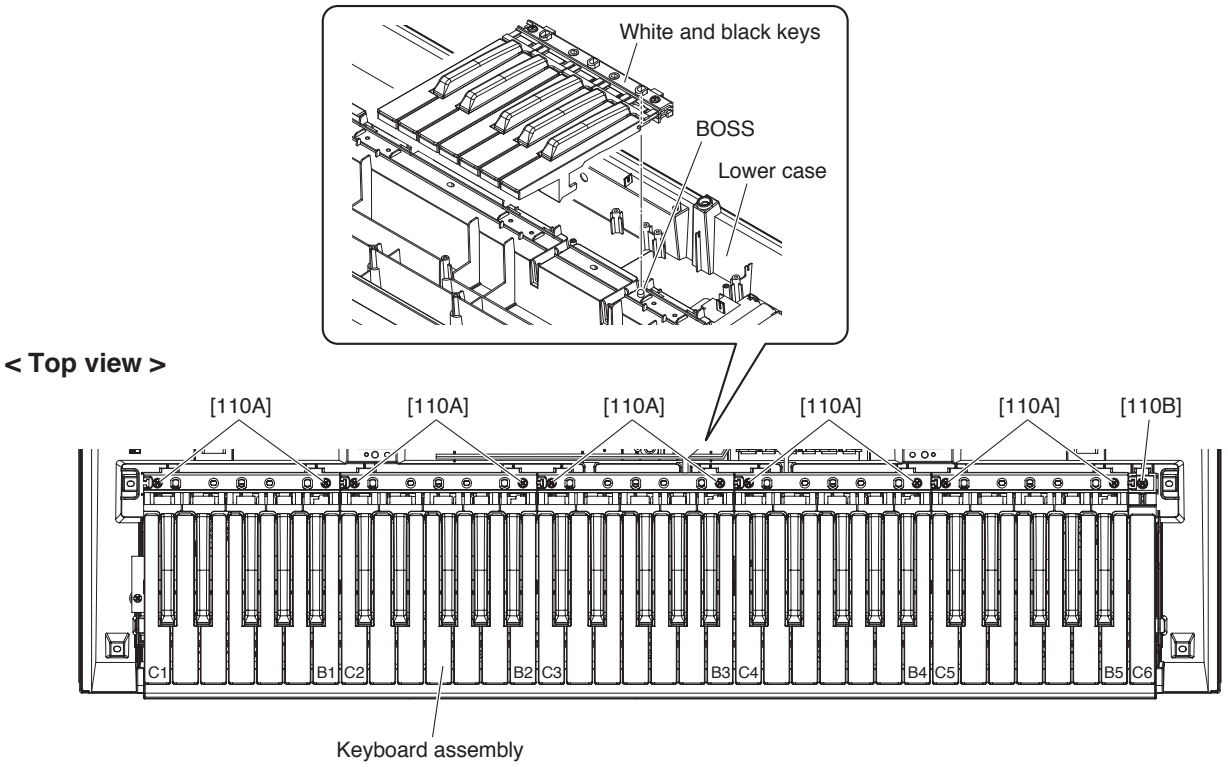


Fig.4

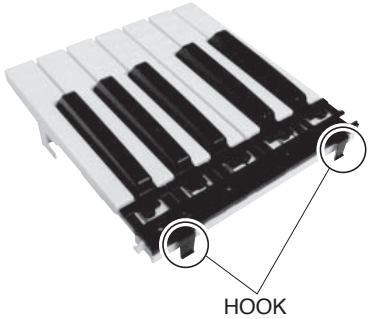


Photo.1

5-4 **Rubber Contact**

5-4-1 Remove the white and black keys corresponding to the rubber contacts to be removed.
(See Fig.4 and Procedure 5-3.)

5-4-2 Remove the rubber contacts. (Photo.2, Fig.5)

5-5 **61L Circuit Board**

5-5-1 Remove the white and black keys from C1 to B3.
(See Fig.4 and Procedure 5-3.)

5-5-2 Remove the twelve (12) screws marked [90A]. The 61L circuit board can then be removed. (Fig.5)

5-6 **61H Circuit Board**

5-6-1 Remove the white and black keys from C4 to C6.
(See Fig.4 and Procedure 5-3.)

5-6-2 Remove the eight (8) screws marked [90B]. The 61H circuit board can then be removed. (Fig.5)

< Top view >

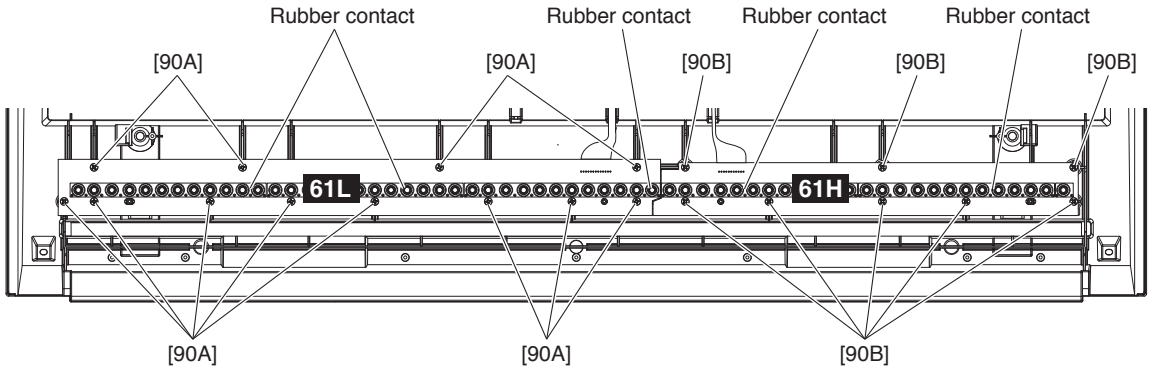


Fig.5

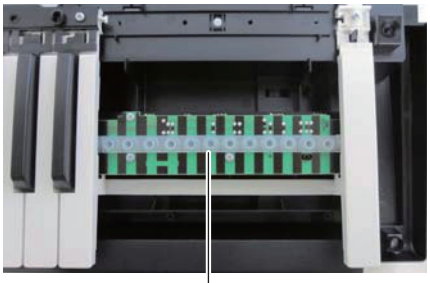


Photo.2

6. How to Remove Spring Terminals

6-1 Spring Terminal A and Spring Terminal B (Time required: About 4 minutes each)

6-1-1 Remove the center panel assembly. (See procedure 1.)

6-1-2 Remove the BATT connector assembly soldered to the spring terminal A and spring terminal B. (Photo.3)

6-1-3 Reverse the instrument and remove the battery cover assembly. (Fig.1)

6-1-4 Lift the spring terminal A a little and slide it in the upper right direction to remove it. (Fig.6)

6-1-5 Remove the hook for the spring terminal B to pull it out from inside. (Fig.6)

6-2 Spring Terminal C and Spring Terminal D (Time required: About 1 minute each)

6-2-1 Remove the battery cover assembly. (See procedure 6-1-5.)

6-2-2 Remove the hooks to pull out the spring terminal C and spring terminal D. (Fig.6, Fig.7)

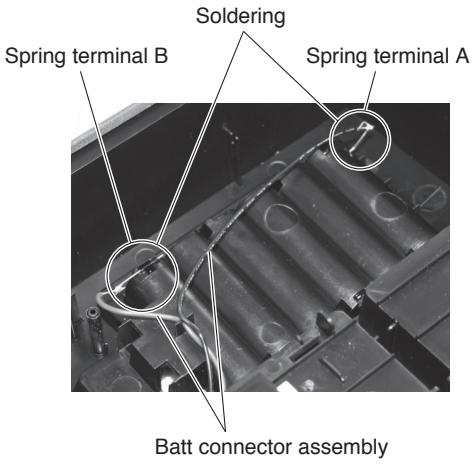


Photo.3

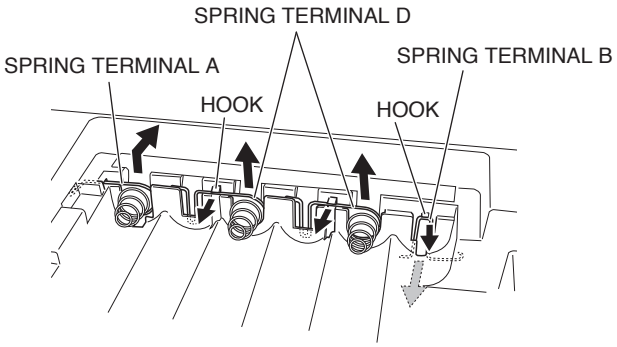


Fig.6

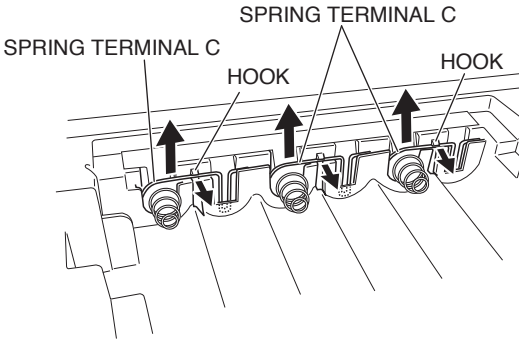


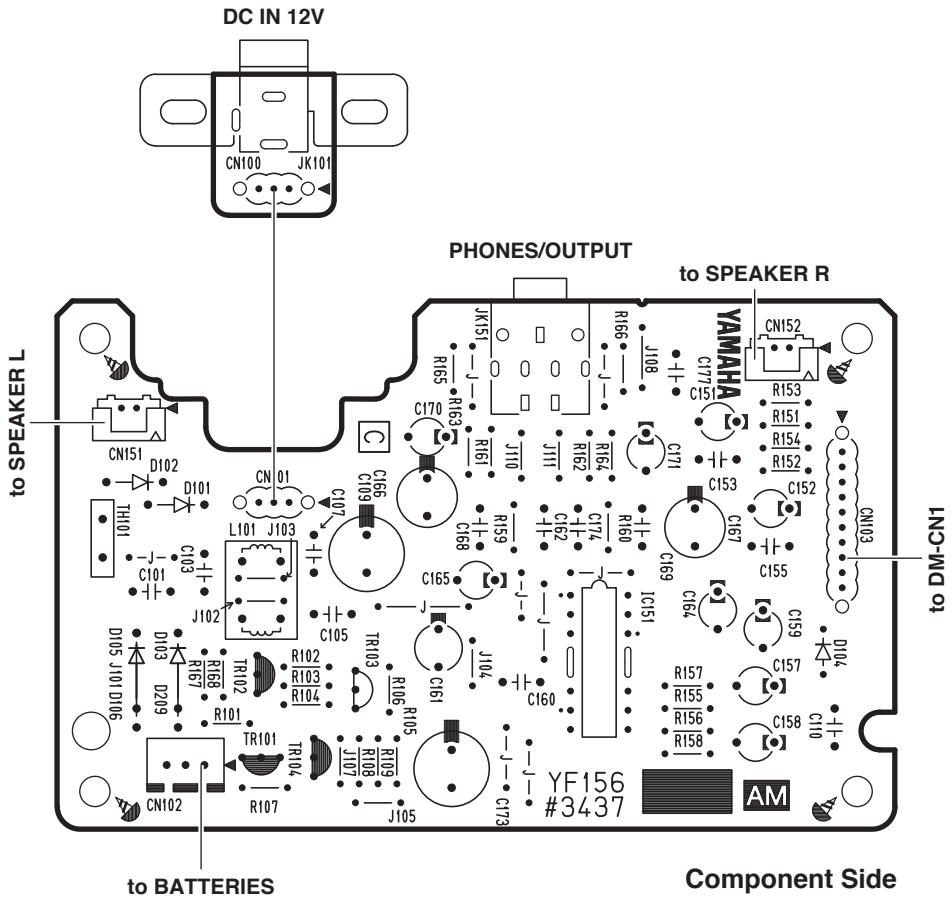
Fig.7

■ CIRCUIT BOARDS

- **DM Circuit Board** (YF155D0) 13
- **AM Circuit Board** (YF156C0) 11
- **PN Circuit Board** (YF156C0) 12
- **7SEG Circuit Board** (YF156C0) 12
- **61H Circuit Board** (XT701C0) 14
- **61L Circuit Board** (YE761A0) 15

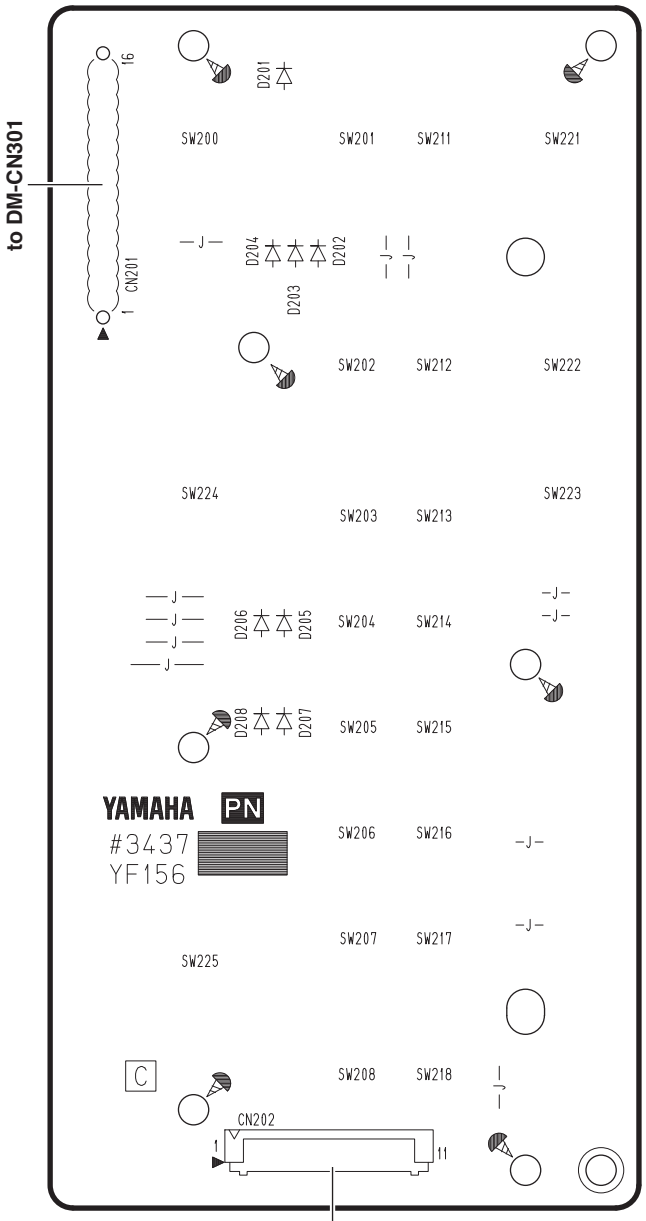
Note: See parts list for details of circuit board component parts.

● AM Circuit Board

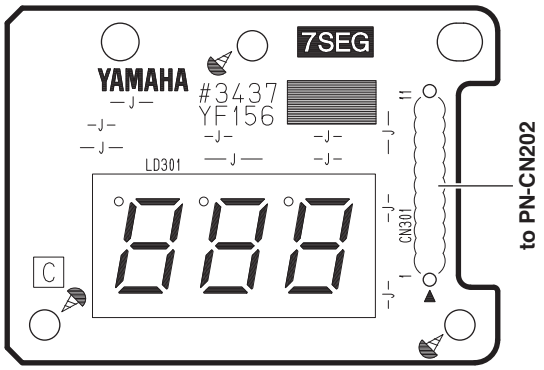


2NA-ZF28700 2

• PN Circuit Board

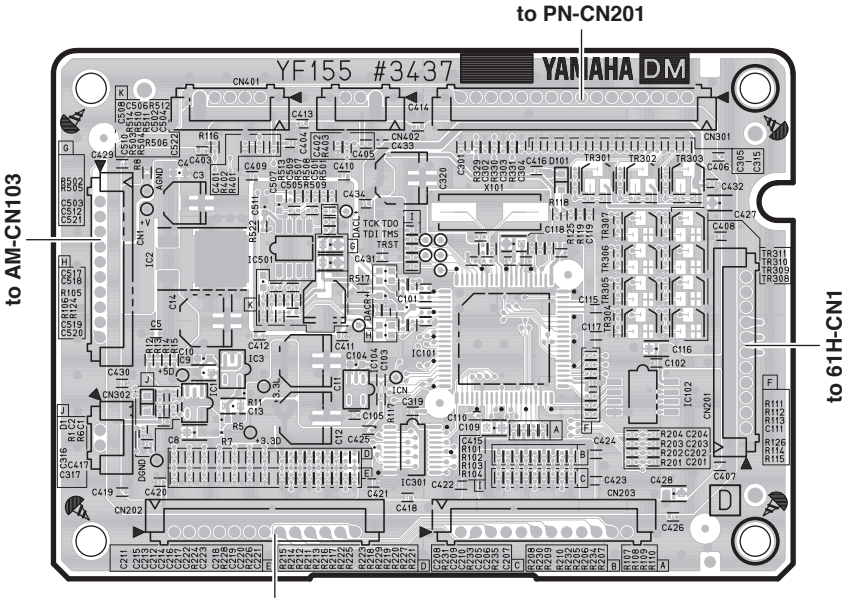


• 7SEG Circuit Board

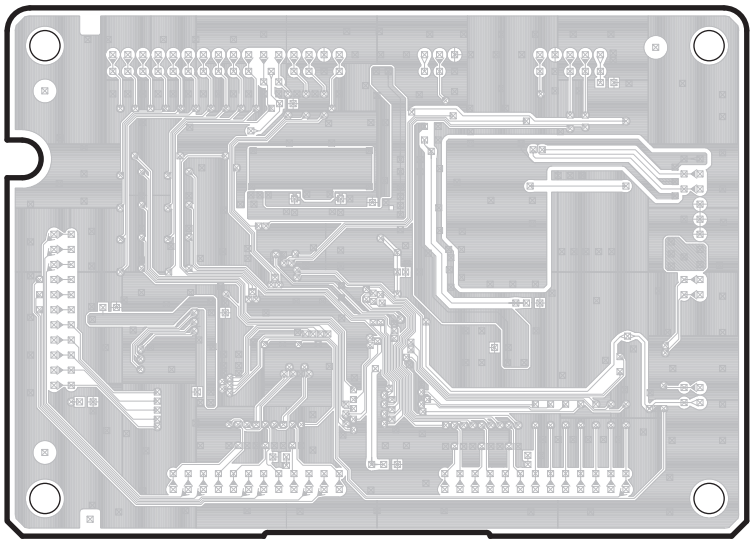


2NA-ZF28700 2

• DM Circuit Board



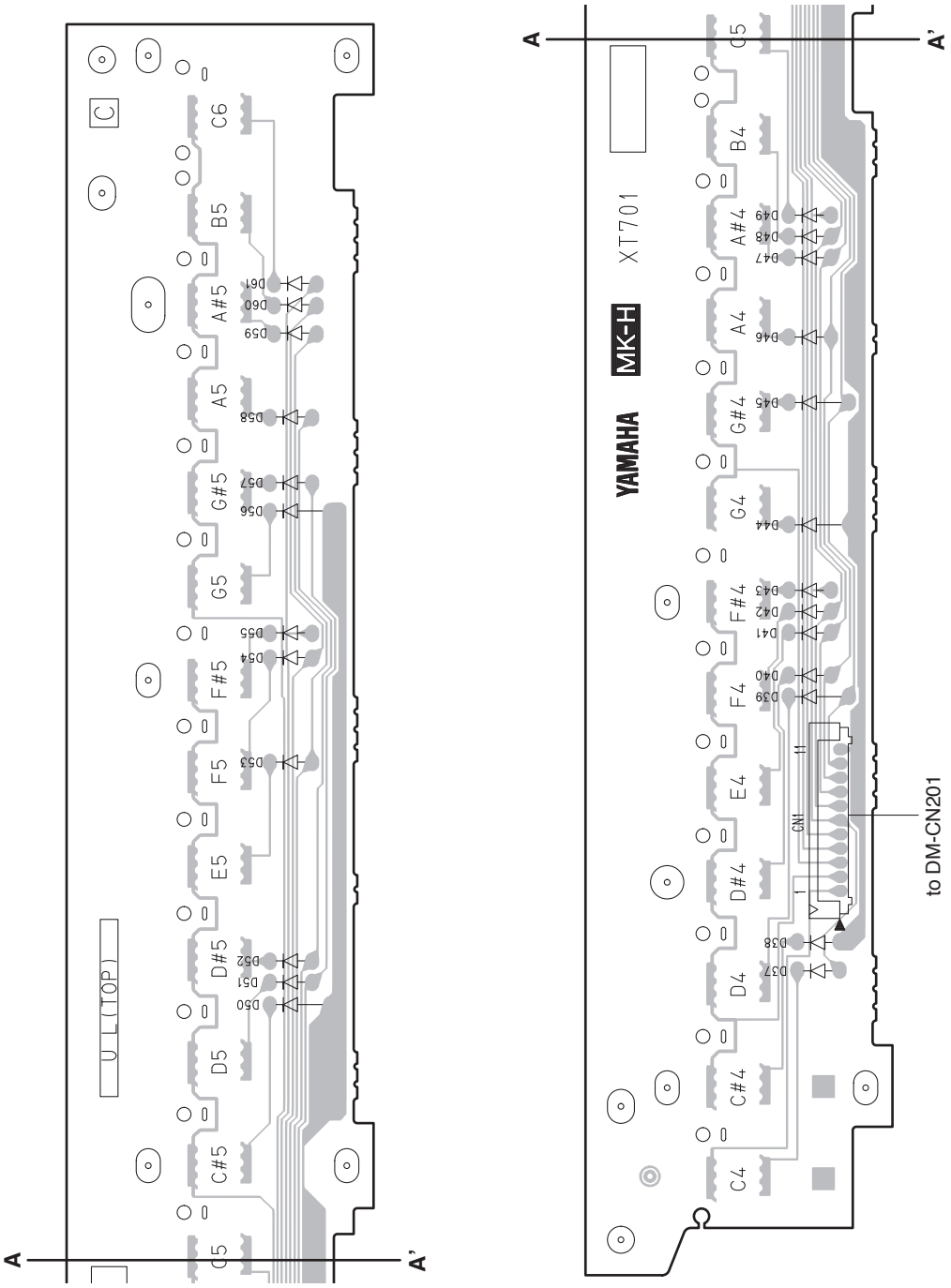
Component Side



Pattern Side

2NA-ZF28690 1

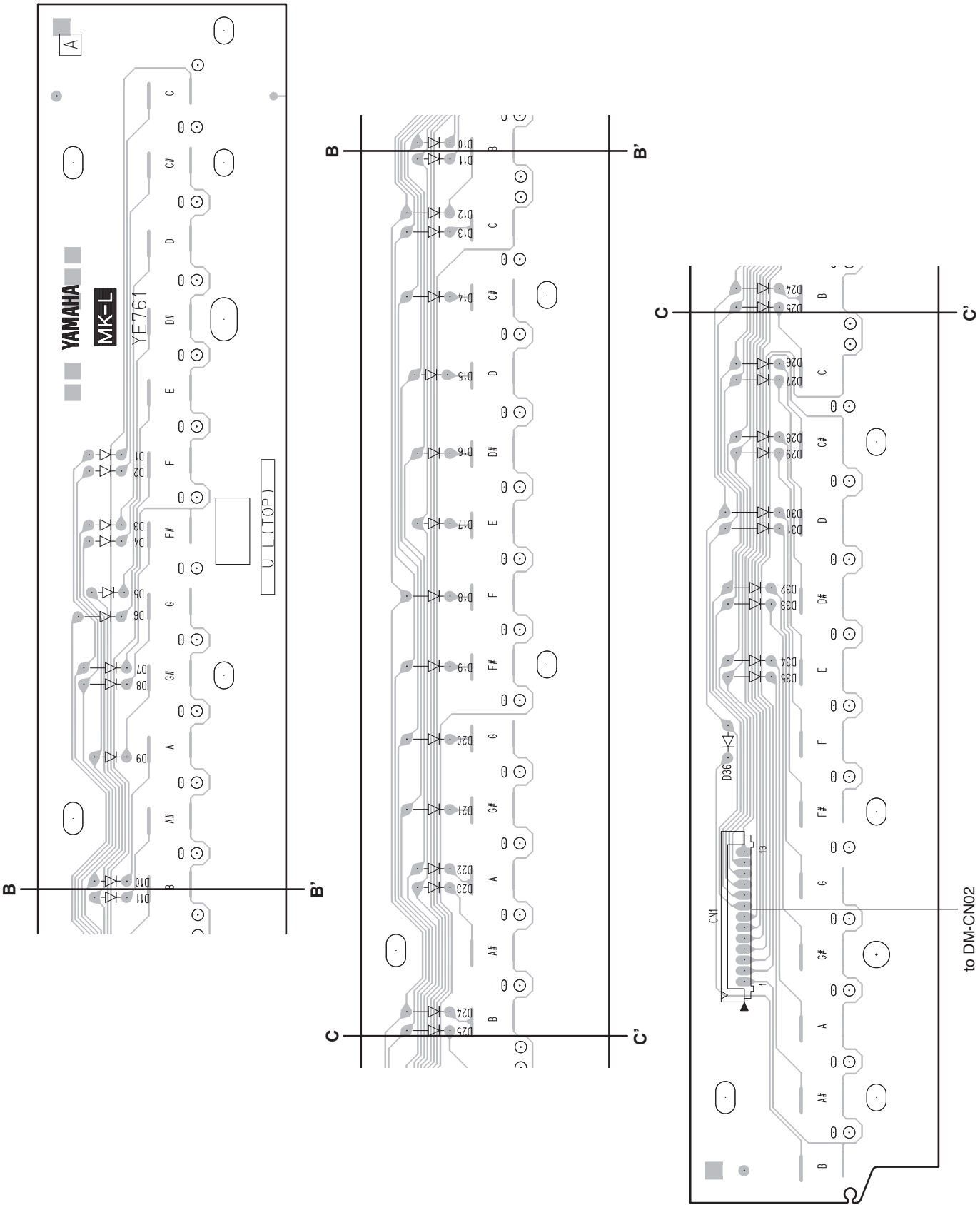
•61H Circuit Board



Component Side

2NAK8-ZF61670 /1

•61L Circuit Board



2NAK8-ZD49640

■ DM Circuit Board Test Method

The DM Circuit Board is provided with test points for service check purposes.

Check the test points on the DM Circuit Board if the following symptoms appear.

Symptoms and check items

No LED display with Power SW ON --> Check items 1 to 5 sequentially

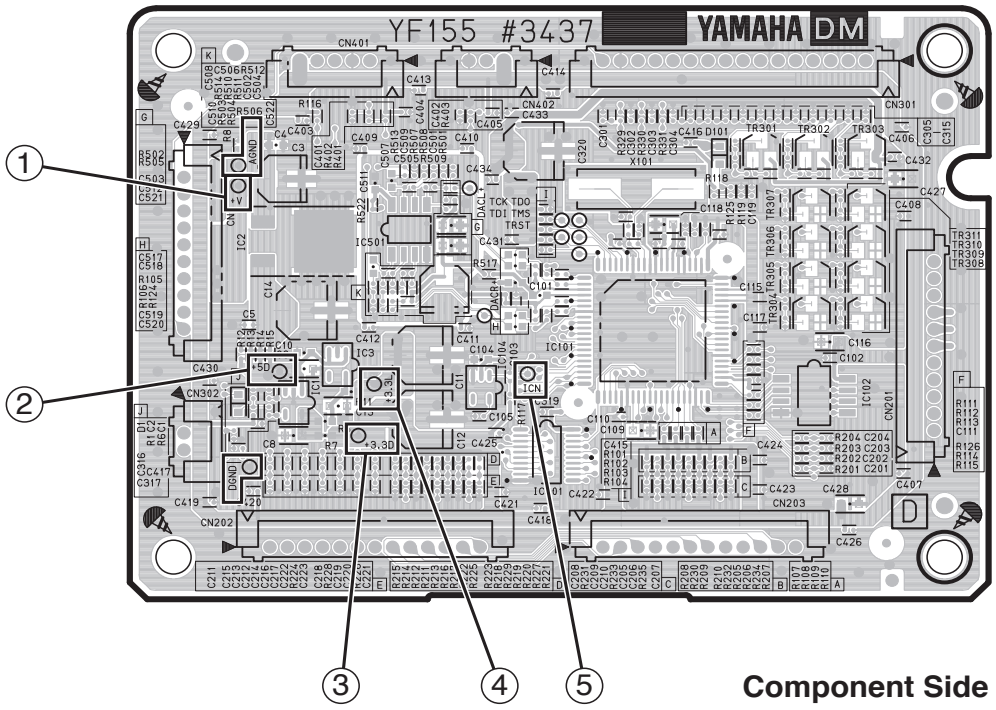
Test Point

NO.	Test Point	Circuit	Judgment criteria	Measured GND	Measured by	Parts with possible defects
①	+V	Power supply for DM Circuit Board	More than 10V	DGND	Multimeter	TH101 or TR101 *1 (On AM Circuit Board)
②	+5D	5V power for digital circuit	5V±0.5V	DGND	Multimeter	IC2
③	+3.3D	3.3V power for digital circuit	3.3V±0.3V	DGND	Multimeter	IC1
④	+3.3L	3.3V power for LED circuit	3.3V±0.3V	DGND	Multimeter	IC3
⑤	ICN	CPU reset signal	3.3V±0.3V	DGND	Multimeter	IC104 *2

Use the standard AC adapter PA-3C or PA-130A for check operation.

*1 There are not available as spare parts. The exchange of the AM circuit board (ZF836000) is recommended.
*2 There are not available as spare parts. The exchange of the DM circuit board (ZF836100) is recommended.

DM Circuit Board (ZF836000)



Component Side

■ TEST PROGRAM

*** If the test number 60 "Factory Set" is executed, the data already set will be lost.**

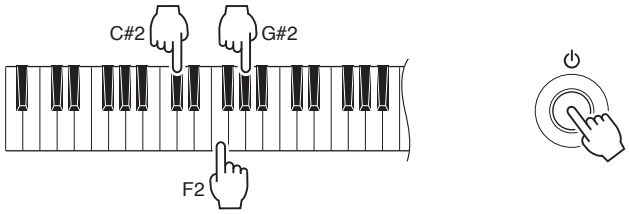
1 Preparations

1) Use an AC adaptor PA-3C or PA-130A.
2) Measuring device: Frequency counter, which can detect thousandth value or more, Level meter (with JIS-C filter), Oscilloscope
   * Input impedance of the measuring device should be 1 MΩ or more.
3) Terminal condition:
   Use a stereo plug and connect a load resistor of 33 Ω to the [PHONES/OUTPUT] jack for measurement unless otherwise specified.
4) Controller settings
   Initial setting when the power is turned on

2 Starting up the test program

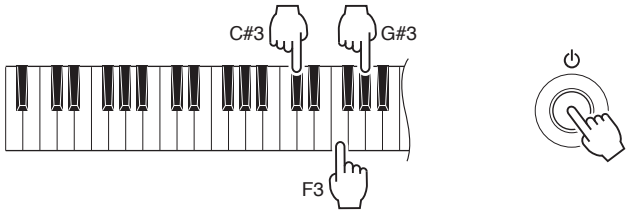
Manual mode

While holding down the keys [C#2], [F2] and [G#2] simultaneously, press the [STANDBY/ON] switch



Auto mode

While holding down the keys [C#3], [F3] and [G#3] simultaneously, press the [STANDBY/ON] switch.
Executed sequentially from [1] to [7] of auto mode test item.



3 Test procedure

Manual mode

1) When the test program is started, "TST" will be displayed on the 7-segment LED.
2) Press the [Tenkey –] or [Tenkey +] button to select a test program item.
3) Press the [START/STOP] button to execute the test.

If the result is OK or test item is completed, press the [START/STOP] button again to return to the item selection display.
Press the [Tenkey –] or [Tenkey +] button to select the next test item.
In the acceptable selection screen, each character of the item number will be followed by dot "." on the 7-segment LED, so that you can see later if it has already been checked.

If the result is NG, press the [SONG/STYLE] button or the lowest key (white key C1) to return to the item selection display.

Auto mode

The operation method follows a manual mode.

4 Test program list (dBu=dBm)

TEST No.	LCD display	Test descriptions, Judging Criteria	Auto mode
1	T01	Displays version of the ROM. "*.**" *.** : Version	1
3	T03	Checks the ROM connected to the CPU bus. Confirm that "PAS" is displayed on the 7-segment LED.	2
9	T09	Checks pitch accuracy. Connect the frequency counter to the [PHONES/OUTPUT] jack. (Either L or R) Confirm that the correct signal is output. (441.0 Hz +/- 0.2 Hz)	3
11	T11	Connect the level meter (with JIS-C filter) to the [PHONES/OUTPUT] jack. (33Ω load) Check the output level. OUTPUT R: -12.5 +/- 2 dBu OUTPUT L: -52.0 dBu or less	4
12	T12	Connect the level meter (with JIS-C filter) to the [PHONES/OUTPUT] jack. (33Ω load) Check the output level. OUTPUT R: -52.0 dBu or less OUTPUT L: -12.5 +/- 2 dBu	6
23	T23	Checks the switches on the panel. Press the switches as shown in the 7-segment LED. When a switch is pressed, a sound is played at the prescribed pitch. (Refer to the switch test item list on the p.19) Also, check that no key stick is existed. Confirm that "PAS" is displayed on the 7-segment LED when all the switches are pressed as indicated. If more than two switches are pressed at a time, "Out" is displayed. To cancel the running test, press the [SONG/STYLE] button or the lowest key (white key C1) to return to the item selection display.	
24	T24	Confirm that all LEDs turned on.	5
45	T45	Insert the plug of the AC adapter into a DC-IN 12V jack. Confirm that "PAS" is displayed on the 7-segment LED.	7
55	T55	Checks the ROM connected to the CPU bus. (Full address) Confirm that "PAS" is displayed on the 7-segment LED. It will take about 10 seconds for the check.	
60	T60	Initializes the entire backup area to reset to the factory default, and turns the power off.	8
61	T61	This will leave the test program, reset the system and change to the play mode. Do not turn off the power until the main screen is displayed.	

• Other Tests

Popping Noise Check

Connect the oscilloscope to the L/R of the [PHONES/OUTPUT] jack and turn on and then off the [STANDBY/ON] switch.

Make sure that popping noise level is 1.0 Vp-p or less, and that no abnormal sound or popping noise is output from the speakers.

Noise Level Check

Connect the level meter (with JIS-C filter) to the L/R of the [PHONES/OUTPUT] jack. (33 Ω load)

Set the [MASTER VOLUME] to the maximum level and check the noise level.

· PHONES L, R: –80.0 dBu or less

Battery Charging Check

Connect the AC adapter to the [DC IN] jack.

Confirm that the unit shall be performed normally, and no voltage is generated between spring terminal A - B.

Switch test item list

ORDER	SWITCH NAME	DISPLAY	NOTE
1	SONG/STYLE	S01	C2
2	VOICE	S02	C#2
3	MASTER VOLUME +	S03	D2
4	TEMPO/TAP	S04	D#2
5	Tenkey 1	S05	E2
6	Tenkey 2	S06	F2
7	Tenkey 3	S07	F#2
8	Tenkey 4	S08	G2
9	Tenkey 5	S09	G#2
10	Tenkey +	S 10	A2
11	MASTER VOLUME –	S 11	A#2
12	MUTE	S 12	B2
13	Tenkey 6	S 13	C3
14	Tenkey 7	S 14	C#3
15	Tenkey 8	S 15	D3
16	Tenkey 9	S 16	D#3
17	Tenkey 0	S 17	E3
18	Tenkey –	S 18	F3
19	FUNCTION	S 19	F#3
20	PAUSE/AUTO FILL	S20	G3
21	START/STOP	S21	G#3

PSR-F50

PARTS LIST

CONTENTS

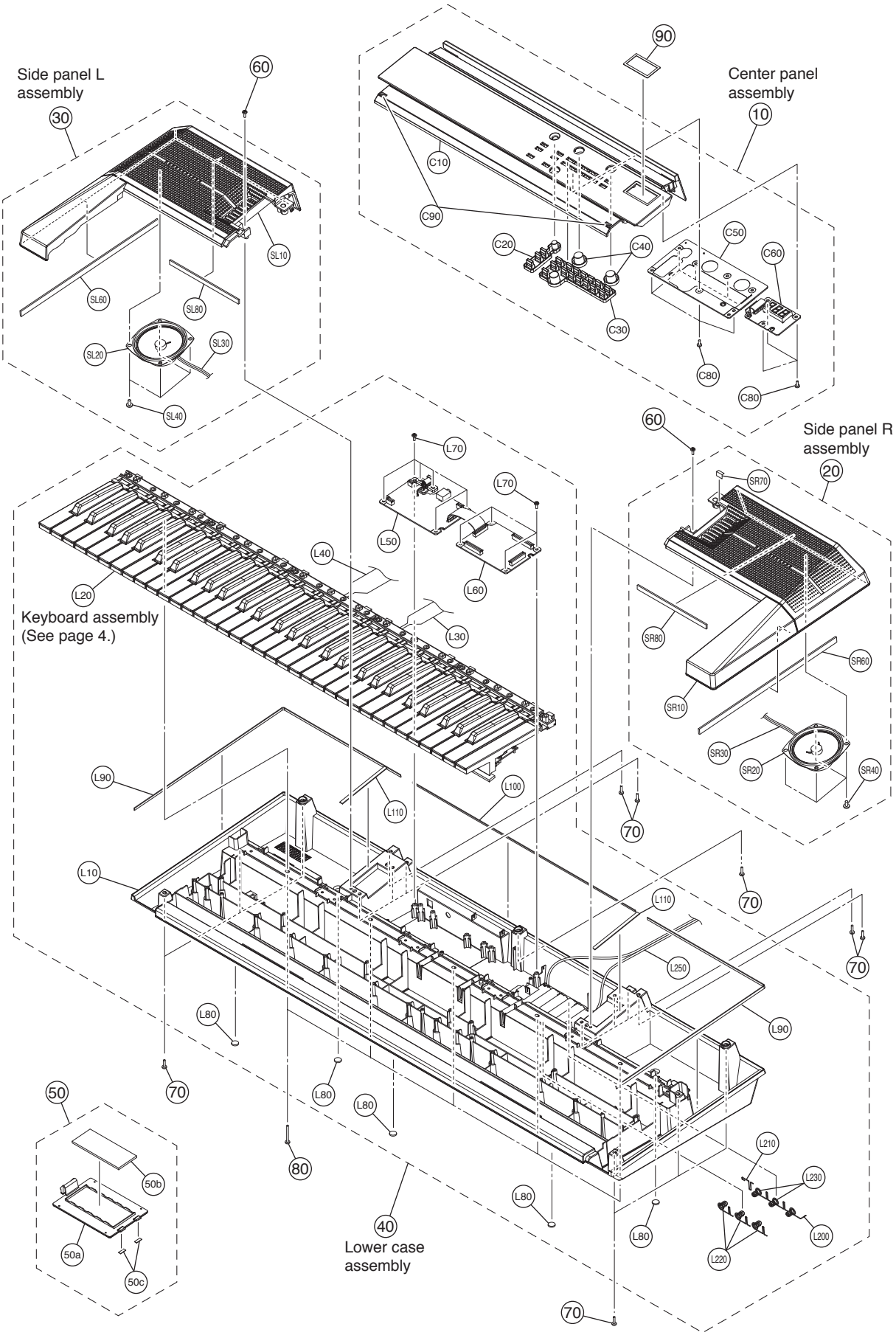
OVERALL ASSEMBLY 2
KEYBOARD ASSEMBLY（16NS）.....4
ELECTRICAL PARTS.....5

WARNING

Components having special characteristics are marked ⚠ 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

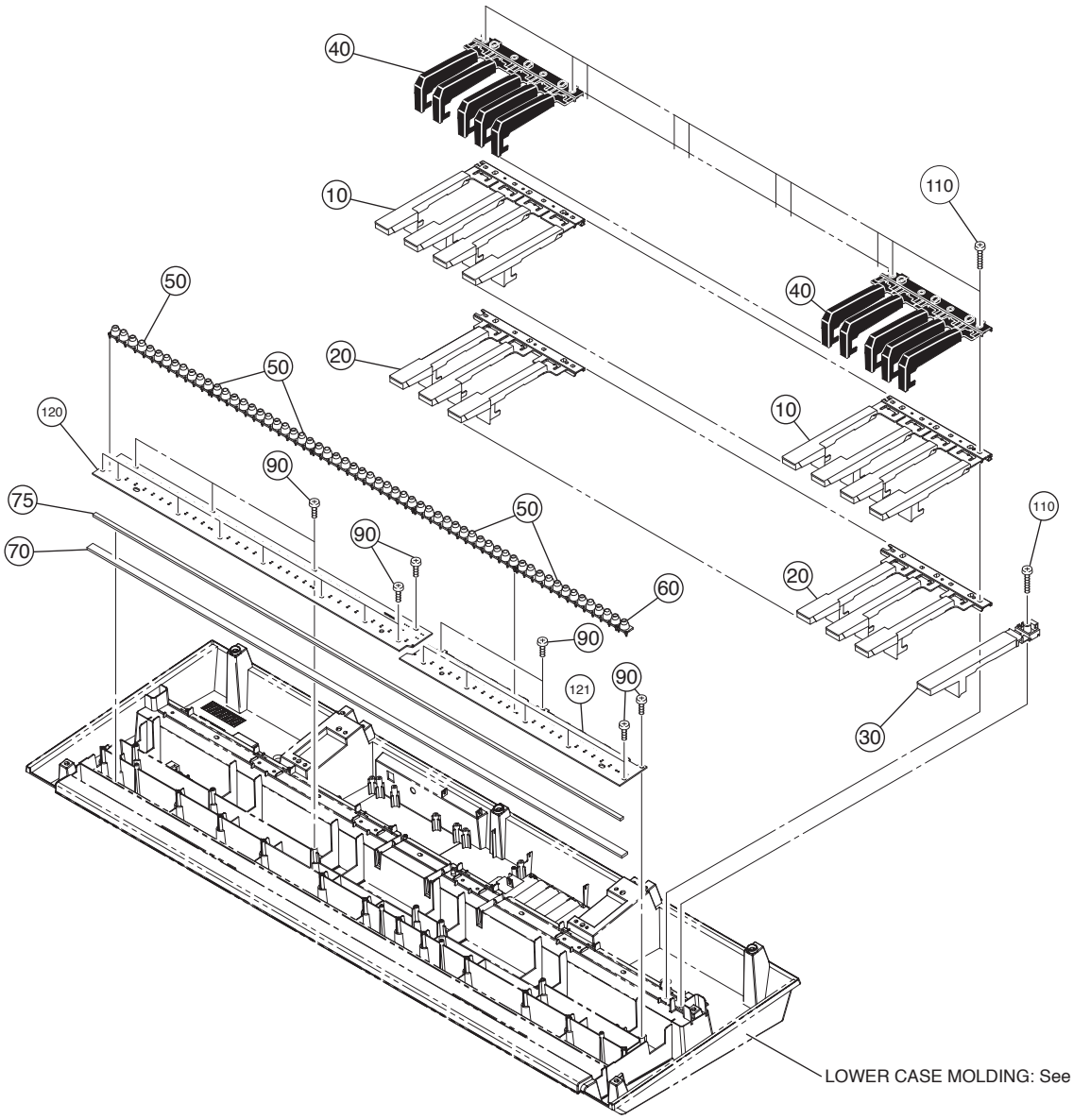


	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY	RANK
			OVERALL ASSEMBLY		総組立	PSR-F50		
		--	FINAL ASSEMBLY	PK PSR-F50	総組立	(ZF74220)		
	10	--	CENTER PANEL ASSEMBLY	PK PSR-F50	Cパネル	(ZF61320)		
	20	--	SIDE PANEL R ASSEMBLY	PK PSR-F50	右パネルAss'y	(ZF61330)		
	30	--	SIDE PANEL L ASSEMBLY	PK PSR-F50	左パネルAss'y	(ZF61340)		
	40	--	LOWER CASE ASSEMBLY	PK PSR-F50	下ケースAss'y	(ZF61350)		
	50	**WR080100**	BATTERY COVER ASSEMBLY		電池蓋Ass'y			02
	50a	--	BATTERY COVER		バッテリーカバー	(WD87980)		
	50b	--	BATTERY CUSHION	WHITE	バッテリークッション	(WR08000)		
	50c	--	NONWOVENFABRICCLOTH		不織布	(WD88000)	2	
	60	**WE774300**	BIND HEAD B-TIGHT SCREW	3.0X8 MFZN2W3	Bタイト+BIND		2	
	70	**WE98740R**	BIND HEAD TAPPING SCREW	3.0X12 MFZN2W3	Bタイト+BIND		15	01
	80	**WF491001**	SCREW TP #B +BIND	3.0X30 MFZN2W3	Bタイト+BIND		5	01
*	90	**ZF637200**	LED COVER	PSR-F50	LEDカバー			
		--	CENTER PANEL ASSEMBLY	PK PSR-F50	Cパネルass'y	(ZF61320)		
*	C10	**ZF836600**	C PANEL FINISHED		センターパネル加工品			
*	C20	**ZF635400**	PN SWITCH		PNスイッチ	STANDBY/ON, MASTER VOLUME+/-,FUNCTION		
*	C30	**ZF635500**	PN SWITCH		PNスイッチ	TEMPO/TAP,MUTE, PAUSE/AUTO FILL, START/STOP,0-9,+,-		
*	C40	**ZF635600**	PN SWITCH		PNスイッチ	SONG/STYLE,VOICE	2	
*	C50	**ZF836200**	CIRCUIT BOARD	PN	PNシート			
*	C60	**ZF836300**	CIRCUIT BOARD	7SEG	7SEGシート			
	C80	**WE774300**	BIND HEAD B-TIGHT SCREW	3.0X8 MFZN2W3	Bタイト+BIND		10	
	C90	--	NONWOVEN CLOTH	10X8X0.5	不織布	(WK60830)	2	
		--	SIDE PANEL R ASSEMBLY	PK PSR-F50	右パネルAss'y	(ZF61330)		
*	SR10	**ZF610300**	SIDE PANEL R MOLDING		サイドパネルR成形品			
*	SR20	**YF173A00**	LOUD SPEAKER	8.0CM 4OHM 3W	スピーカ			
	SR30	--	WIRING ASSEMBLY SP	2P L=525	SP線材	(ZF94030)		
	SR40	**WE97460R**	BIND HEAD TAPPING SCREW-B	4.0X8 MFZN2W3	Bタイト+BIND		4	01
	SR60	--	CUSHION (PE)	275X8X1	クッション(PE)	(WT44070)		
	SR70	--	NONWOVEN CLOTH	10X8X0.5	不織布	(WK60830)		
	SR80	--	CUSHION (PE)	145X6X1	クッション(PE)	(ZH99880)		
		--	SIDE PANEL L ASSEMBLY	PK PSR-F50	左パネルAss'y	(ZF61340)		
*	SL10	**ZF610400**	SIDE PANEL L MOLDING		サイドパネルL成形品			
*	SL20	**YF173A00**	LOUD SPEAKER	8.0CM 4OHM 3W	スピーカ			
	SL30	--	WIRING ASSEMBLY SP	2P L=255	SP線材	(ZF94040)		
	SL40	**WE97460R**	BIND HEAD TAPPING SCREW-B	4.0X8 MFZN2W3	Bタイト+BIND		4	01
	SL60	--	CUSHION (PE)	275X8X1	クッション(PE)	(WT44070)		
	SL80	--	CUSHION (PE)	145X6X1	クッション(PE)	(ZH99880)		
		--	LOWER CASE ASSEMBLY	PK PSR-F50	下ケースAss'y	(ZF61350)		
*	L10	**ZF610500**	LOWER CASE MOLDING		下ケース成形品			
	L20	--	16NS	16N C61 D1M	16NS	(ZD49620)		
	L30	--	WIRING ASSEMBLY	11P L=225	線材	(ZA18560)		
	L40	--	WIRING ASSEMBLY	13P L=200	線材	(ZA18870)		
*	L50	**ZF836100**	CIRCUIT BOARD	AM	AMシート			
*	L60	**ZF836000**	CIRCUIT BOARD	DM	DMシート			
	L70	**WE774300**	BIND HEAD B-TIGHT SCREW	3.0X8 MFZN2W3	Bタイト+BIND		10	
	L80	**WW693500**	RUBBER FOOT		ゴム脚		5	01
	L90	--	CUSHION PE	515X10X1	クッションPE	(ZG23840)	2	
	L100	--	CUSHION PE	430X10X1	クッションPE	(ZG23860)		
	L110	--	CUSHION PE	88X5X1	クッションPE	(ZG23870)	2	
	L200	**WD87920R**	SPRING TERMINAL YPT-200		接点バネA			01
	L210	**WD87930R**	SPRING TERMINAL YPT-200		接点バネB			01
	L220	**WD87940R**	SPRING TERMINAL C YPT-200		接点バネC		3	01
	L230	**WD87970R**	SPRING TERMINAL D YPT-200		接点バネD		2	01
	L250	--	CONNECTOR ASSEMBLY BATT		BATT束線	(ZF93820)		
			ACCESSORIES		付属品	PSR-F50		
*		**ZF952800**	MUSIC REST WITH BAG	PK COMMON BLACK	譜面板袋入り			
		--	MUSIC REST	PK COMMON BLACK	譜面板	(ZF68860)		
		WU356500	AC ADAPTOR	PA-130A K	ACアダプター	K		10
		WR526500	AC ADAPTOR	PA-130A E	ACアダプター	R		08

* : New Parts

RANK : Japan only

■ KEYBOARD ASSEMBLY（16NS）



LOWER CASE MOLDING: See page 2.

REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY	RANK
		KEYBOARD ASSEMBLY		鍵盤Ass'y	PSR-F50		
	--	16NS	16N C61 D1M	16NS	(ZD49620)		
10	**ZE369800**	WHITE KEY	16NS CEGB	白鍵CEGB		5	
20	**ZE369900**	WHITE KEY	16NS DFA	白鍵DFA		5	
30	**V476030R**	WHITE KEY 16N C' PSR-170,		白鍵C'			02
40	**WZ168300**	BLACK KEY T=1.5	16NS #	黒鍵		5	
50	**VZ271801**	RUBBER CONTACT 16N-1M	16N OCT 1M	接点ゴム		5	
50	**WE152500**	RUBBER CONTACT	16N-1M OCT LIM	接点ゴム		5	03
60	**VZ271900**	RUBBER CONTACT 16N-1M C'	16N C_ 1M	接点ゴム			04
70	**VZ303020**	FELT L 11x827 WHITE	827 11 SHIRO	フェルトL			
75	**VZ302901**	FELT U836	836 5 SHIRO	フェルトU			02
90	**WE774300**	BIND HEAD B-TIGHT SCREW	3.0X8 MFZN2W3	Bタイト＋BIND		20	
110	**WF49200R**	BIND HEAD TAPPING SCREW-P	3.0X20 MFZN2W3	Pタイト＋BIND		11	01
120	**ZD496300**	CIRCUIT BOARD 61L	16N C61 D1M L	シート61L			
121	**ZF616800**	CIRCUIT BOARD 61H	16N C61 D1M H	シート61H			

＊ : New Parts

RANK : Japan only

■ ELECTRICAL PARTS

DM,AM,PN,7SEG

	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY	RANK
			ELECTRICAL PARTS		電気部品	PSR-F50		
*		**ZF836000**	CIRCUIT BOARD	DM	DMシート	(ZF28690)(YF155D0)		
*		**ZF836100**	CIRCUIT BOARD	AM	AMシート	(ZF28700)(YF156C0)		
*		**ZF836200**	CIRCUIT BOARD	PN	PNシート	(ZF28700)(YF156C0)		
*		**ZF836300**	CIRCUIT BOARD	7SEG	7SEGシート	(ZF28700)(YF156C0)		
		ZD496300	CIRCUIT BOARD	16N C61 D1M L	シート61L	(ZD49640)(YE761A0)		
		ZF616800	CIRCUIT BOARD	16N C61 D1M H	シート61H	(ZF61670)(XT701C0)		
*		**ZF836000**	CIRCUIT BOARD	DM	DMシート	(ZF28690)(YF155D0)		
	IC1	**YE787A00**	IC	BU33TD3WG-TR 3.3V	IC	REGULATOR +3.3V		
	IC2	**X8260A00**	IC	BA50BCOFP-E2 +5V	IC	REGULATOR +5V		02
	IC3	**YE787A00**	IC	BU33TD3WG-TR 3.3V	IC	REGULATOR +3.3V		
*		**ZF836100**	CIRCUIT BOARD	AM	AMシート	(ZF28700)(YF156C0)		
*		**ZF836200**	CIRCUIT BOARD	PN	PNシート	(ZF28700)(YF156C0)		
*		**ZF836300**	CIRCUIT BOARD	7SEG	7SEGシート	(ZF28700)(YF156C0)		
	IC151	**YF011A00**	IC ANALOG AMP	TA8227AP 2.5W 2CH	アンプIC	POWER AMP 2.5W 2CH		
⚠	JK101	**WZ704401**	POWER JACK	DC-502-AG-PBT-2.0-	電源コネクタ	DC IN		
	JK151	**ZA590000**	PHONE	JACK MINI STEREO	ホーンコネクタ	PHONES/OUTPUT		
		ZD496300	CIRCUIT BOARD	16N C61 D1M L	シート61L	(ZD49640)(YE761A0)		
	D1	**VB941200**	DIODE	1SS133,1SS176 TE-5	ダイオード			
	-36	**VB941200**	DIODE	1SS133,1SS176 TE-5	ダイオード			
		ZF616800	CIRCUIT BOARD	16N C61 D1M H	シート61H	(ZF61670)(XT701C0)		
	D37	**VB941200**	DIODE	1SS133,1SS176 TE-5	ダイオード			
	-61	**VB941200**	DIODE	1SS133,1SS176 TE-5	ダイオード			
		WU356500	AC ADAPTOR	PA-130A K	ACアダプター	K		10
		WR526500	AC ADAPTOR	PA-130A E	ACアダプター	R		08
*		**YF173A00**	LOUD SPEAKER	8.0CM 4OHM 3W	スピーカ		2	

* : New Parts

RANK : Japan only

DIGITAL KEYBOARD

PSR-F50

OVERALL CIRCUIT DIAGRAM

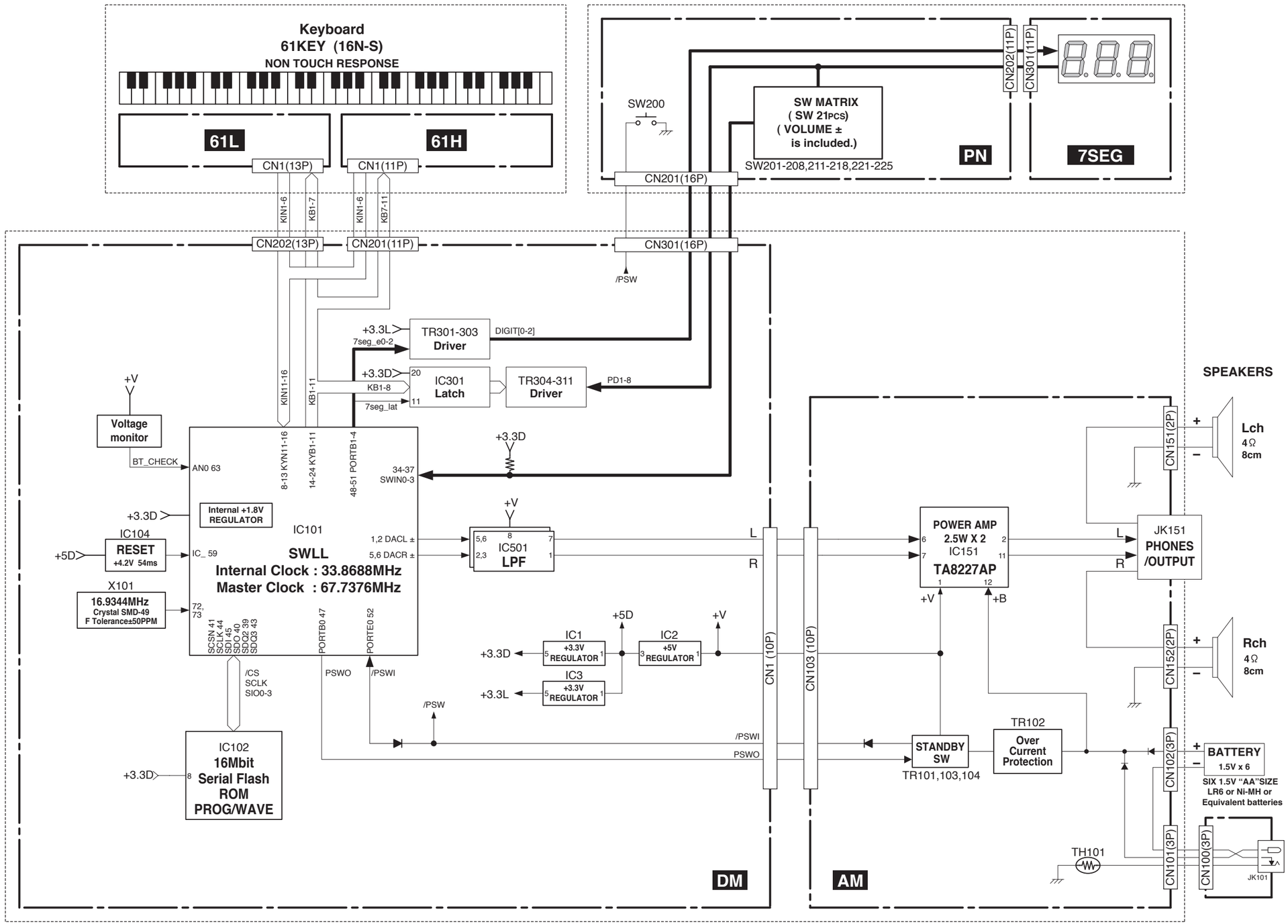


- BLOCK DIAGRAM 1
  OVERALL CIRCUIT DIAGRAM 1/3 (DM) 2
- OVERALL CIRCUIT DIAGRAM 2/3 (AM, PN, 7SEG) 3
  OVERALL CIRCUIT DIAGRAM 3/3 (61H, 61L) 4

CL 001894

YAMAHA
HAMAMATSU, JAPAN
AdM ⓘ Printed in Japan '13.07

■ PSR-F50 BLOCK DIAGRAM



■ PSR-F50 OVERALL CIRCUIT DIAGRAM 1/3 (DM)

DM

REGULATOR +5V

REGULATOR +3.3V

REGULATOR +3.3V

OP AMP

Fc=33.6KHz
G=5.2dB

CPU SWLL

16.9344MHz±50ppm
Internal Clock : 33.8688MHz
Master Clock : 67.7376MHz

FLASH ROM 16M

VOLTAGE DETECTOR
Detect voltage 4.2V
reset time
min. 15.89ms
typ. 53.81ms
max. 138.59ms

D-FF

Panel scan input

No Mount

No Mount, No Silk Location (Solder side)

No Mount
For extension

For panel extension

For extension

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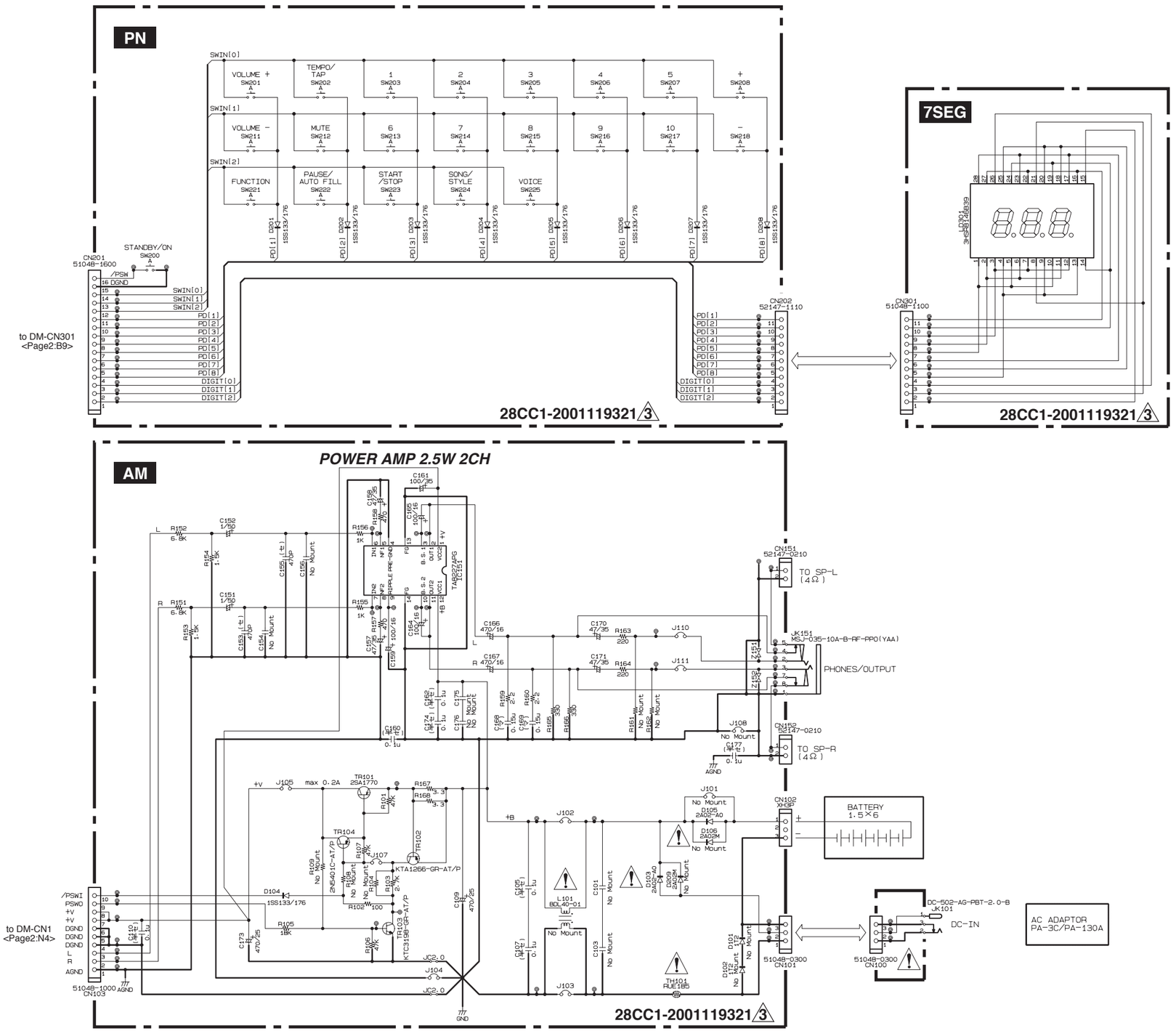
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to 61H-CN1
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to PN-CN201
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28CC1-2001119320/3

■ PSR-F50 OVERALL CIRCUIT DIAGRAM 2/3 (AM, PN, 7SEG)



■ PSR-F50 OVERALL CIRCUIT DIAGRAM 3/3 (61H, 61L)

