

# Digital Percussion **DD-55**

## SERVICE MANUAL



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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: 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.

### ■ WARNING

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

## ■ SPECIFICATIONS

### Drum Pads

7 pads (125mm x 4, 88mm x 3), Touch Sensitive

### Maximum Polyphony

32

### Drum Kits

45 Preset +1 Custom

### Songs

100

### Tracks

4 (DRUM 1/DRUM 2/DRUM 3/BACKING)

### Custom Song

1 Song (approximately 20,000 notes)

### Voices

Drum Voices 192 + GM Voices 128 + Drum Kits 8

### Functions

Track ON/OFF, TAP START, BREAK, A-B REPEAT, DEMO

### Panel Controls

[STANDBY ON / OFF] switch, [PAD] button, [KIT] button, [SONG] button, [TEMPO] button, VOLUME [▲], [▼] buttons, [HAND PERC] button, TRACK (DRUM 1 / DRUM 2 / DRUM 3 / BACKING) button, [DEMO] button, [CLICK] button, [START/STOP] button, [A-B REPEAT] button, [BREAK/TAP] button, [REC] button, DIAL

### LED Display

Song / Drum Kit / Tempo etc.

### Auxiliary jacks

DC IN 12 V, PHONES / OUTPUT, MIDI IN / OUT, PEDAL 1/2

### Output Impedance

33Ω (PHONES / OUTPUT jack)

### Main Amplifier

5W + 5W (EIAJ)

### Speaker

8 cm x 2

### Power Consumption

16 W (when using PA-5C power adaptor)

### Power Supply

Adaptor: DC12V (Yamaha PA-5C sold separately)

Batteries: Six "C" size, R-14(LR14), or equivalent batteries (sold separately)

### Dimensions (WxDxH)

558 x 355 x 174 mm (22" x 14" x 6" 7/8)

### Weight

3.8 kg (8 lbs. 6 oz)

### Supplied Accessories

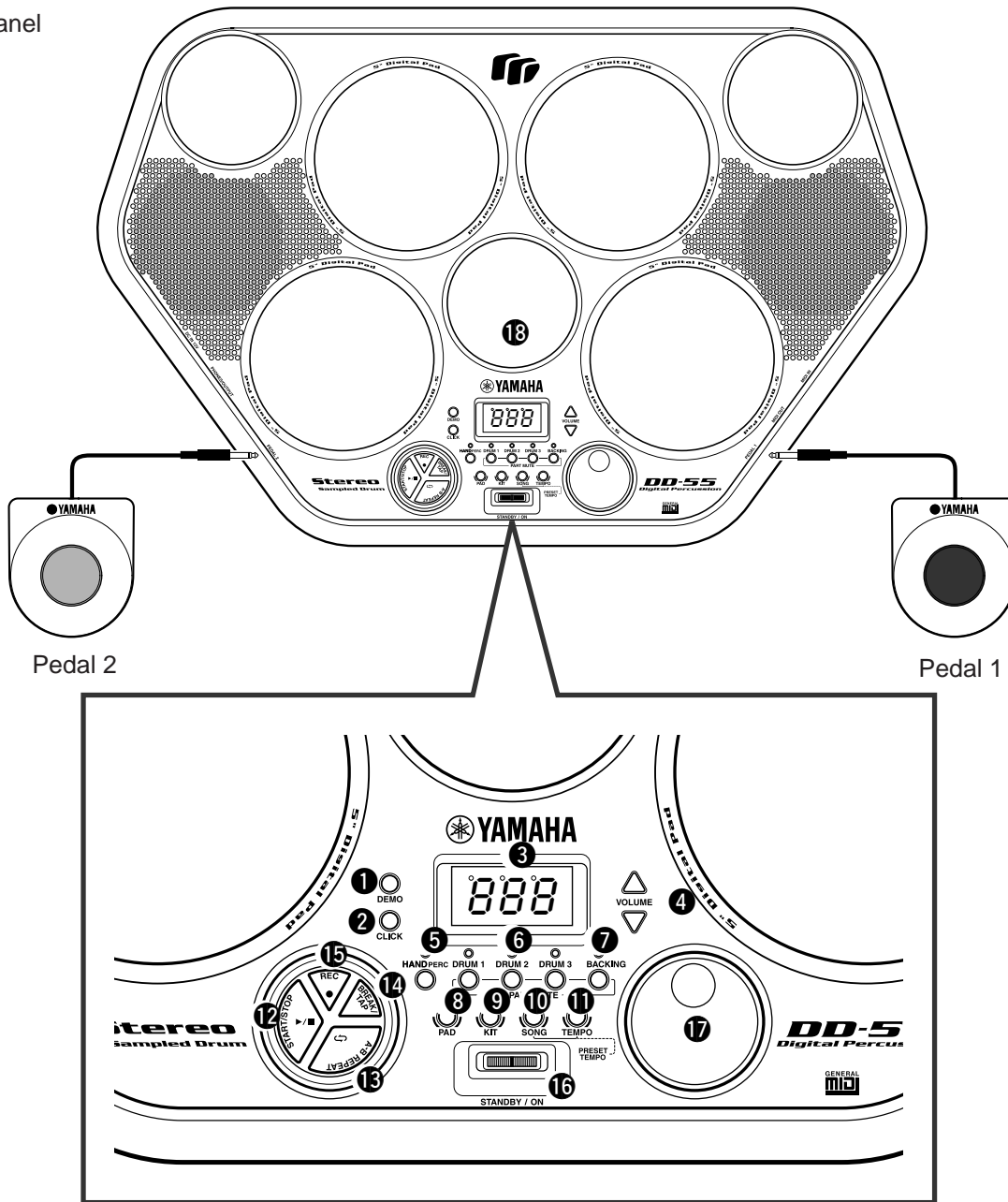
Drum Stick x 2, Foot Pedal 1 & 2, Owner's Manual

### Optional Accessories

Headphones HPE-150

## ■ PANEL LAYOUT

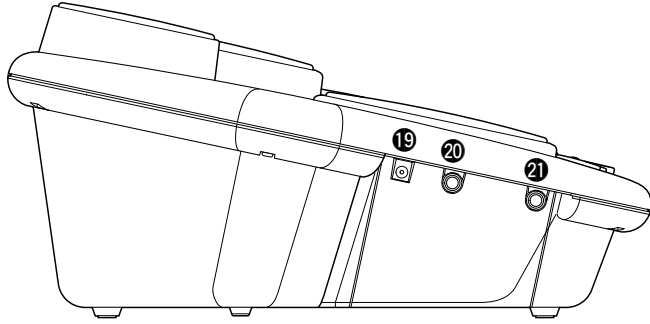
### • Front Panel



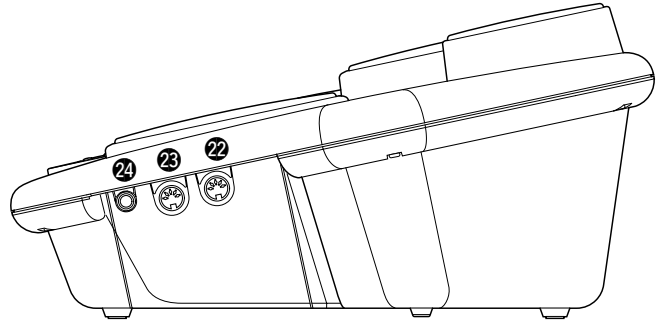
### Front Panel

- |                           |                     |
|---------------------------|---------------------|
| ① DEMO Button             | ⑩ SONG Button       |
| ② CLICK Button            | ⑪ TEMPO Button      |
| ③ DISPLAY.                | ⑫ START/STOP Button |
| ④ VOLUME [▲], [▼] Buttons | ⑬ A-B REPEAT Button |
| ⑤ HAND PERC Button        | ⑭ BREAK/TAP Button  |
| ⑥ DRUM 1 - 3 Buttons      | ⑮ REC Button        |
| ⑦ BACKING Button          | ⑯ STANDBY/ON Switch |
| ⑧ PAD Button              | ⑰ DIAL              |
| ⑨ KIT Button              | ⑱ Drum Pads (x7)    |

• Side Panel L



• Side Panel R



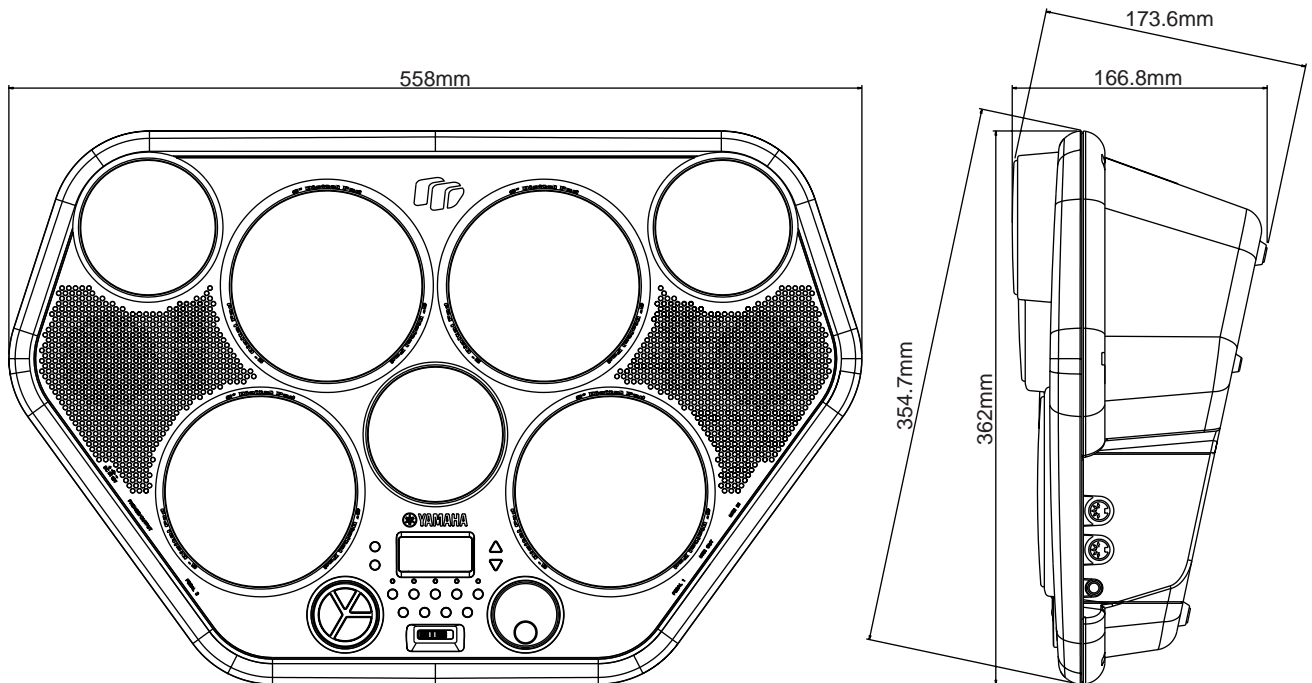
Side Panel (Left)

- ①⑨ DC IN 12V (AC Adaptor) Jack
- ②⑩ PHONES/OUTPUT Jack
- ②① PEDAL 2 Jack

Side Panel (Right)

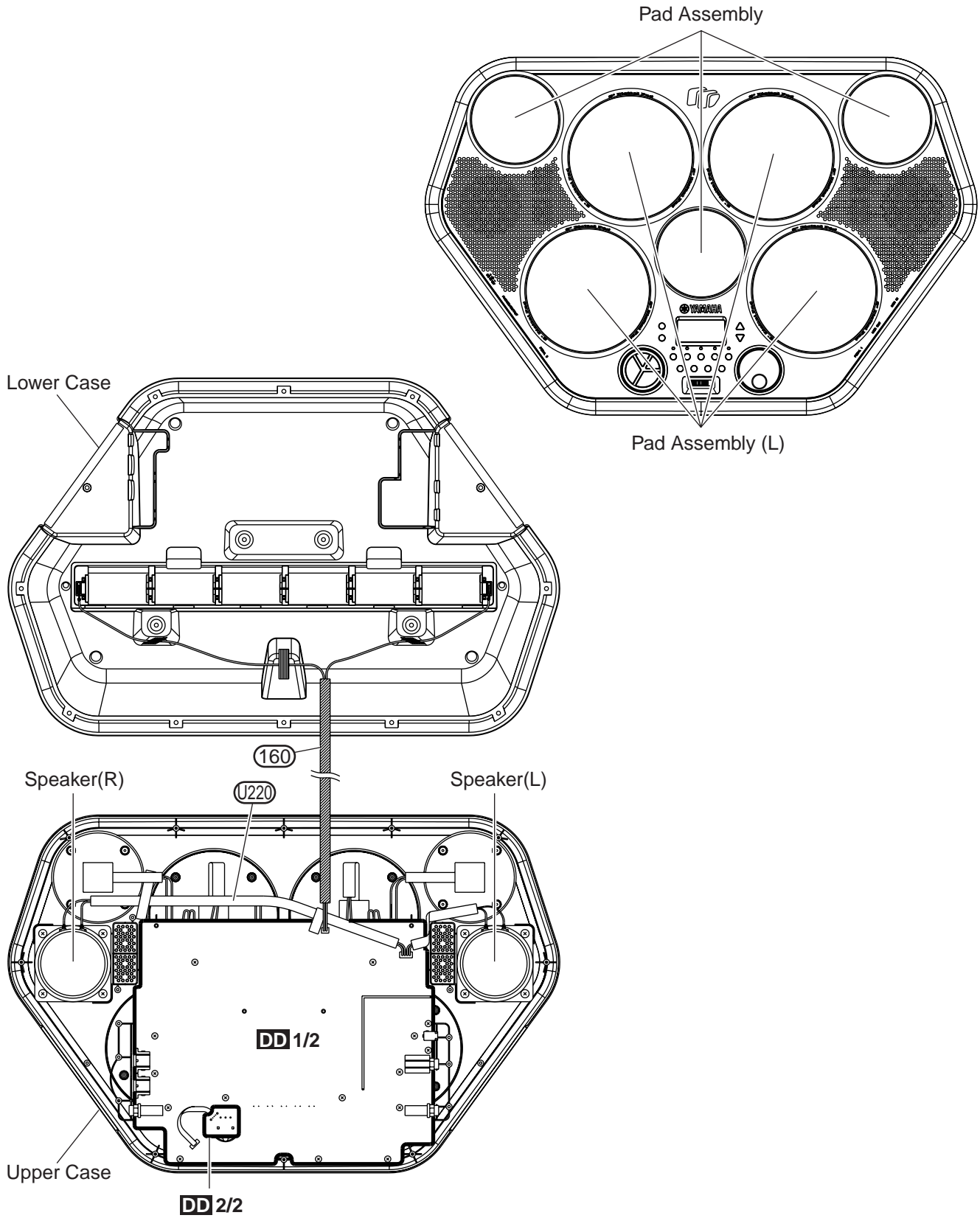
- ②② MIDI IN Terminal
- ②③ MIDI OUT Terminal
- ②④ PEDAL 1 Jack

■ DIMENSION



# CIRCUIT BOARD LAYOUT

## Top view



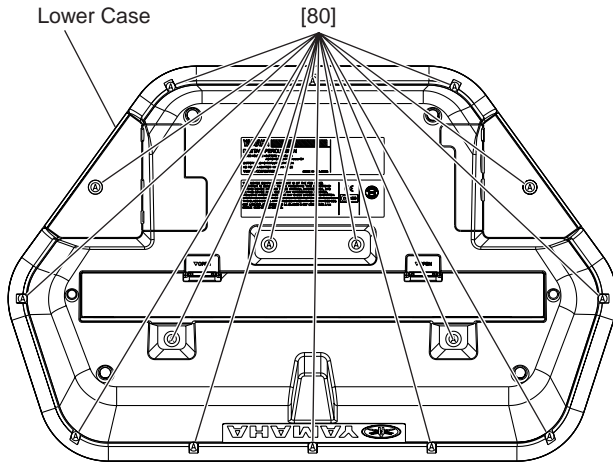




## DISASSEMBLY PROCEDURE

### 1. Lower Case Assembly (Time required: about 2 min)

1-1 Remove the sixteen (16) screws marked [80]. The lower case assembly can then be removed. (Fig. 1)



[80]: Binding Head Tapping Screw-B 3.0X12 MFZN2BL (VQ074600)

(Fig. 1)

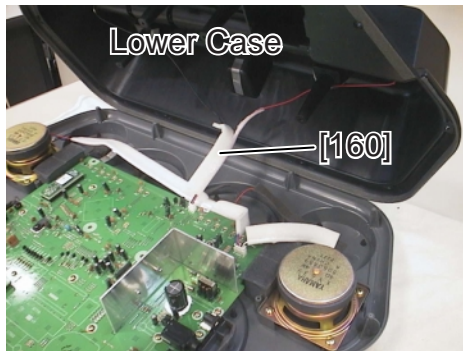


\* In this operation, screw an easily touch and scratch the bottom case, so be careful that screws do not contact it.

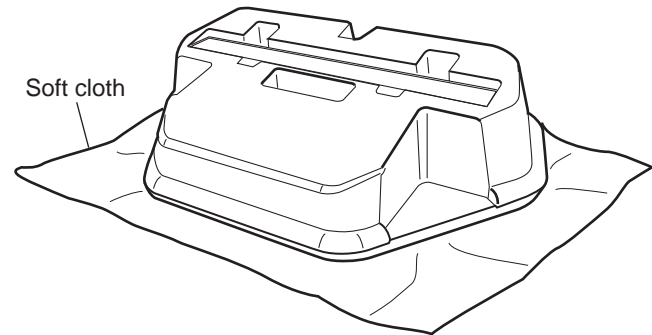
(Fig. 1-1)

\* When removing the lower case, pay attention not to break [160] BAT bundled cables (see Fig. 2).

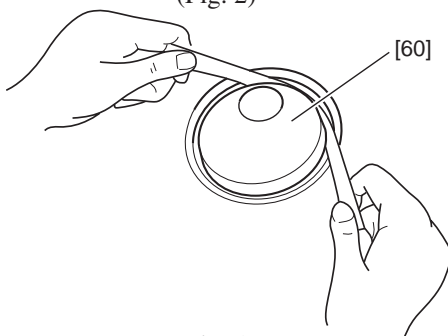
\* When working with the unit turned over, place it on a soft cloth to protect the surface from scratches.



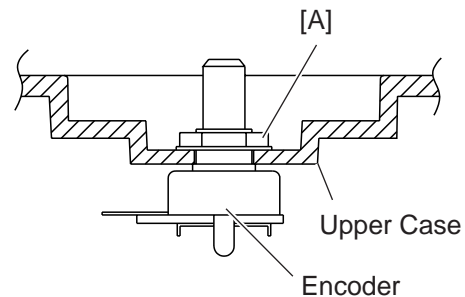
(Fig. 2)



(Fig. 3)



(Fig. 4)



(Fig. 5)

### 2. DD 2/2 Circuit Board (Time required: about 2 min)

2-1 Remove the lower case assembly. (See procedure 1.)

2-2 Remove the encoder knob marked [60]. (Fig. 4)

2-3 Remove the hexagonal nut marked [A]. The DD 2/2 circuit board can then be removed. (Fig. 5)

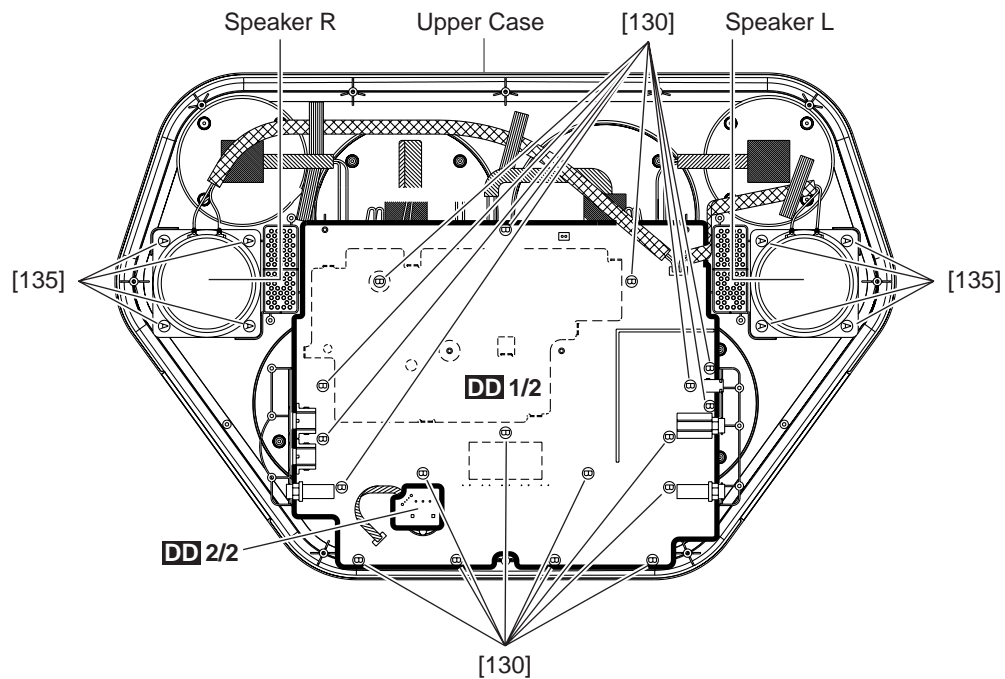
### 3. DD 1/2 Circuit Board (Time required: about 4 min)

3-1 Remove the lower case assembly. (See procedure 1.)

3-2 Remove the DD 2/2 circuit board can then be removed. (See procedure 2.)

3-3 Remove the seventeen (17) screws marked [130]. The DD 1/2 circuit board can then be removed. (Fig. 6)





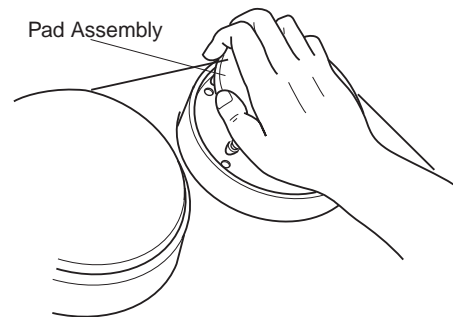
[130]: Binding Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)  
 [135]: Binding Head Tapping Screw-B 4.0X8 MFZN2Y (EP640410)

(Fig. 6)

#### 4. Pad Assembly (Time required: about 5 min)

- 4-1 Remove the lower case assembly. (See procedure 1.)
- 4-2 Remove the DD 2/2 circuit board. (See procedure 2.)
- 4-3 Remove the DD 1/2 circuit board. (See procedure 3.)
- 4-4 Pull a pad assembly off the panel as shown in the illustration. (Fig. 7)

\* The pad assembly (S) and pad assembly (L) can then be removed in the same manner.



(Fig. 7)

#### 5. Speakers (Time required: about 3 min)

- 5-1 Remove the lower case assembly. (See procedure 1.)
- 5-2 Remove the four (4) screws marked [135]. The speakers can then be removed. (Fig. 6)

\* The left speaker and right speaker can then be removed in the same manner.

#### 6. Attaching the Pad Assembly

- 6-1 Turn over the upper case and support the pad assembly from the lower side of the case.
- 6-2 Insert the legs of pad assembly in the holes of the upper case and then pull them up with a needle-nose pleyer. (Fig.8)

\* All pad assemblies can be attached in the same way.



(Fig. 8)

# LSI PIN DISCRIPTION

## ● HG73C205AFD (XU947C00) SWX00B TONEGENERATOR

DD 1/2: IC100

PIN No.	NAME	I/O	FUNCTION	PIN No.	NAME	I/O	FUNCTION	
1	ICN	I	Initial clear	85	CMA3	O	Program address bus	
2	RFCLKI	I	PLL Clock	86	CMA8	O		
3	TM2	I	PLL Control	87	CMA2	O		
4	AVDD_PLL	I	Power supply	88	CRD	O	read signal	
5	AVSS_PLL	I	Ground	89	CMA1	O	Program address bus	
6	MODE0	I	SWX dual mode	90	CUB	O	high byte effective signal	
7	VCC7	I	Power supply	91	VCC91	O	Power supply	
8	GND8	I	Ground	92	GHND92	O	Ground	
9	XIN	I	crystal oscillator	93	CS1	O	CS signal	
10	XOUT	O	crystal oscillator	94	CMA0	O	Program address bus	
11	MODE1	I	SWX separate mode	95	CLB	O	low byte effective signal	
12	TEST0	I	TEST pin	96	CMA12	O	Program address bus	
13	TESTON	I	TEST pin	97	CMA11	O		
14	ANO-P40	I		98	CMA10	O		
15	AN1-P41	I	A/D converter	99	CMA9	O	Ground	
16	AN2-P42	I						
17	AN3-P43	I						
18	AVDD_AN	I	Power supply	100	GND100	O	write signal	
19	AVSS_AN	I	Ground	101	CWE	O	Program address bus	
20	TXD0	O	for MIDI or TO-HOST	102	CMA16	O		
21	TXD1	O	for MIDI	103	CMA15	O		
22	EXCLK	I	Crystal oscillator	104	CMA14	O	Program memory Data bus	
23	SMD11	I/O	Wave memory data bus	105	CMA13	O		
24	SMD4	I/O						
25	SMD3	I/O						
26	SMD12	I/O						
27	SMD10	I/O						
28	SMD5	I/O						
29	SMD2	I/O						
30	SMD13	I/O						
31	SMD9	I/O						
32	SMD6	I/O						
33	SMD1	I/O						
34	SMD14	I/O						
35	VCC35	I		Power supply	106	CMD8	I/O	
36	GND36	I		Ground	107	CMD7	I/O	
37	SMD8	I/O		Wave memory data bus	108	CMD9	I/O	
38	SMD7	I/O						
39	SMD0	I/O						
40	SMD15	I/O						
41	SOE	O	read signal		109	CMD6	I/O	
42	SWE	O	write signal		110	CMD10	I/O	
43	SRAS	O	RAS signal		111	CMD5	I/O	
44	SCAS	O	CAS signal		112	CMD11	I/O	
45	REFRESH	O	REFRESH signal		113	CMD4	I/O	
46	CS0	O	CS signal		114	CMD12	I/O	
47	SMA0	O	Memory address bus		115	CMD3	I/O	
48	SMA16	O	Memory address bus		116	CMD13	I/O	
49	VCC49	I			Power supply	117	CMD2	I/O
50	GND50	I			Ground	118	CMD14	I/O
51	SMA1	O						
52	SMA15	O						
53	SMA2	O						
54	SMA14	O						
55	SMA3	O						
56	SMA13	O						
57	SMA4	O						
58	SMA12	O						
59	SMA5	O						
60	GND60	I		Ground	119	VCC119	O	
61	VCC61	I		Power supply	120	GND115	O	
62	SMA11	O		Memory address bus	121	CMD1	I/O	
63	SMA6	O						
64	SMA10	O						
65	SMA7	O						
66	SMA9	O						
67	SMA17	O						
68	SMA8	O						
69	SMA18	O						
70	SMA19	O						
71	SMA20	O						
72	SMA21	O						
73	SMA22	O						
74	SMA23	O						
75	CMA20	O	Program address bus		122	CMD15	I/O	
76	CMA19	O						
77	VCC77	I		Power supply	123	CMD0	I/O	
78	GND78	I	Ground	124	CMA21	O		
79	CMA18	O	Program address bus	125	PDT15	I/O		
80	CMA17	O						
81	CMA5	O						
82	CMA6	O						
83	CMA4	O						
84	CMA7	O						
					126	PDT14	I/O	
					127	PDT13	I/O	
					128	PDT12	I/O	
					129	PDT11	I/O	
					130	PDT10	I/O	
					131	PDT9	I/O	
					132	PDT8	I/O	
					133	VCC133	O	
					134	GND134	O	
				135	PDT7	I/O		
				136	PDT6	I/O		
				137	PDT5	I/O		
				138	PDT4	I/O		
				139	PDT3	I/O		
				140	PDT2	I/O		
				141	PDT1	I/O		
				142	PDT0	I/O		
				143	VCA143	O		
				144	GND144	O		
				145	PAD2	I		
				146	PAD1	I		
				147	PAD0	I		
				148	VCC148	O		
				149	GND149	O		
				150	PCS	I		
				151	PWR	I		
				152	PRD	I		
				153	RXD0	I		
				154	RXD1	I		
				155	SCLKI	I		
				156	ADIN	I		
				157	ADLR	O		
				158	DO0	O		
				159	DO1	O		
				160	SYSCLK	O		
				161	VCC161	O		
				162	GND162	O		
				163	WCLK	O		
				164	QCLK	O		
				165	BCLK	O		
				166	SYI	I		
				167	IRQ0	I		
				168	NMI	I		

● uPD63200GS (XM145A00) DAC (Digital to Analog Converter)

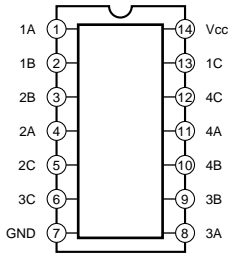
DD 1/2: IC500

PIN No.	NAME	I/O	FUNCTION	PIN No.	NAME	I/O	FUNCTION
1	4/8F	I	4/8 Fs selection	9	R. REF		Channel R voltage reference
2	D. GND		Digital ground	10	L. REF		Channel L voltage reference
3	16 BIT	I	16 bit/18 bit selection	11	L. OUT	O	Channel L output
4	D. VDD		Digital power supply	12	A. GND		Analog ground
5	A. GND		Analog ground	13	WDCK	I	Word clock
6	R. OUT	O	Channel R output	14	RSI	I	Channel R series input
7	A. VDD		Analog power supply	15	SI/LSI	I	Series input/Channel L series input
8	A. VDD			16	CLK	I	Clock

■ IC BLOCK DIAGRAM

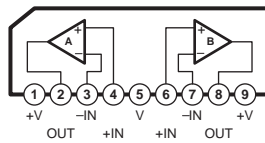
● SN74HC4066NSR (XZ824A00)  
HD74HC4066NSR (X0563A00)  
ANALOG SWITCH

DD 1/2: IC710  
IC750  
IC790



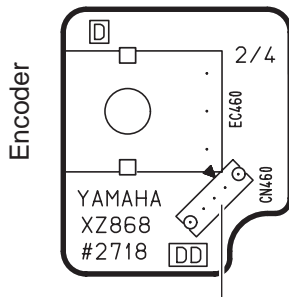
● uPC4572HA (XF633A00)  
OP AMP

DD 1/2: IC550



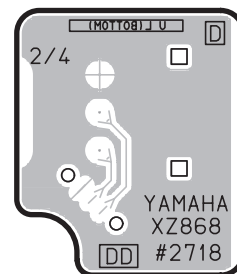
■ CIRCUIT BOARDS

● DD 2/2 Circuit Board



to DD 1/2 CN461

Component Side

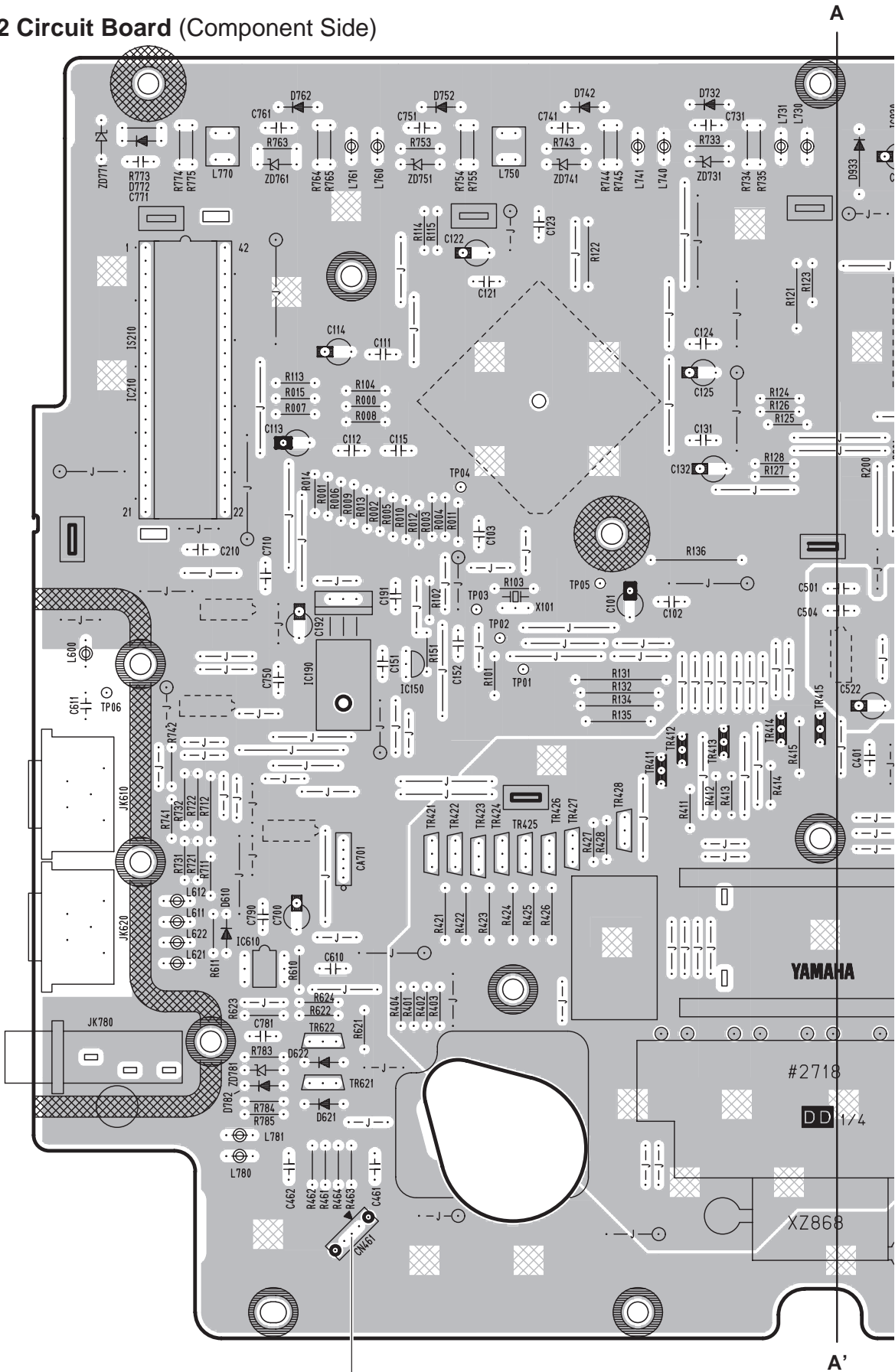


Pattern Side

DD 2/2: 2NA-V707790

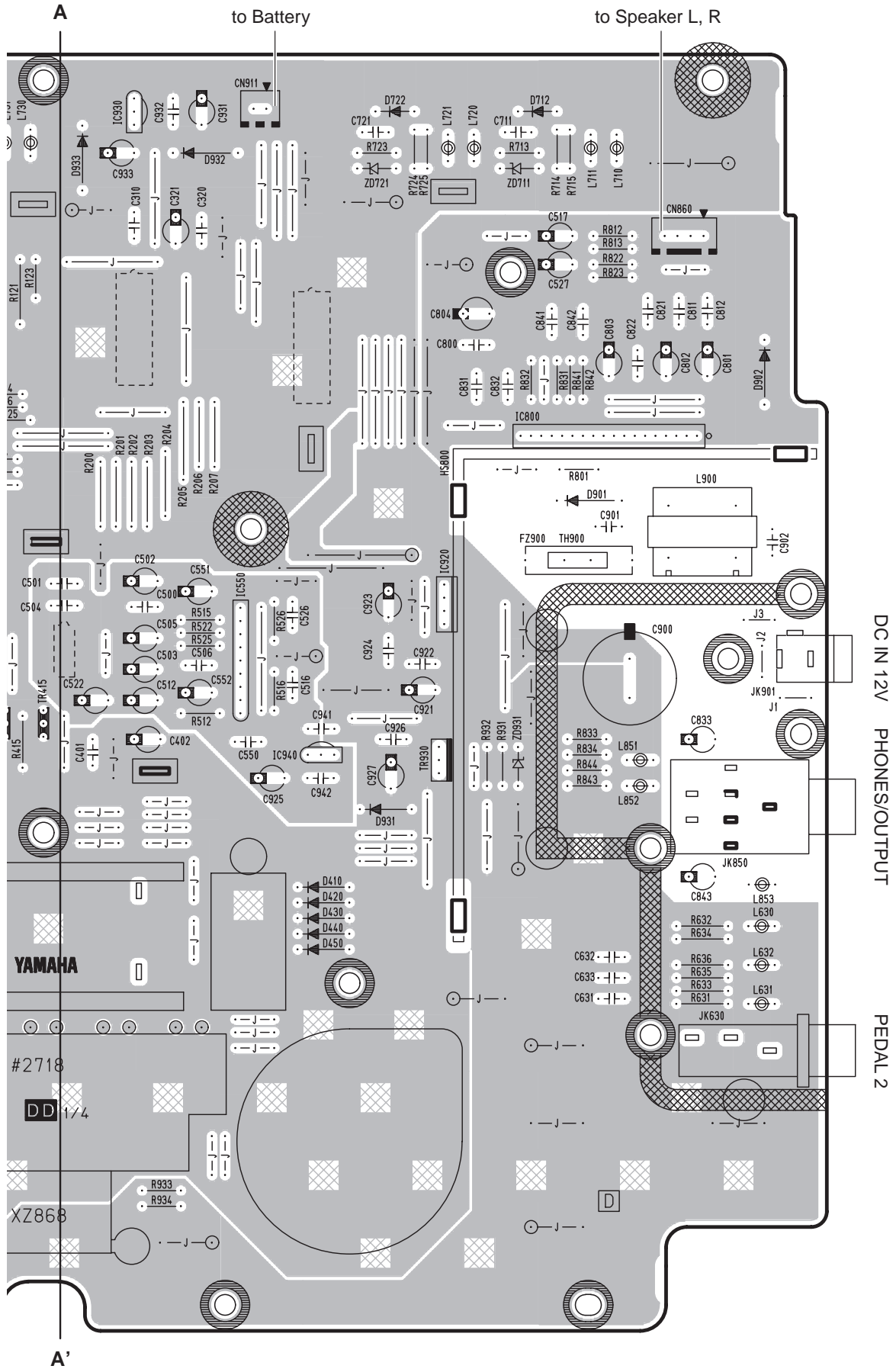
●DD 1/2 Circuit Board (Component Side)

PEDAL 1    MIDI OUT    MIDI IN



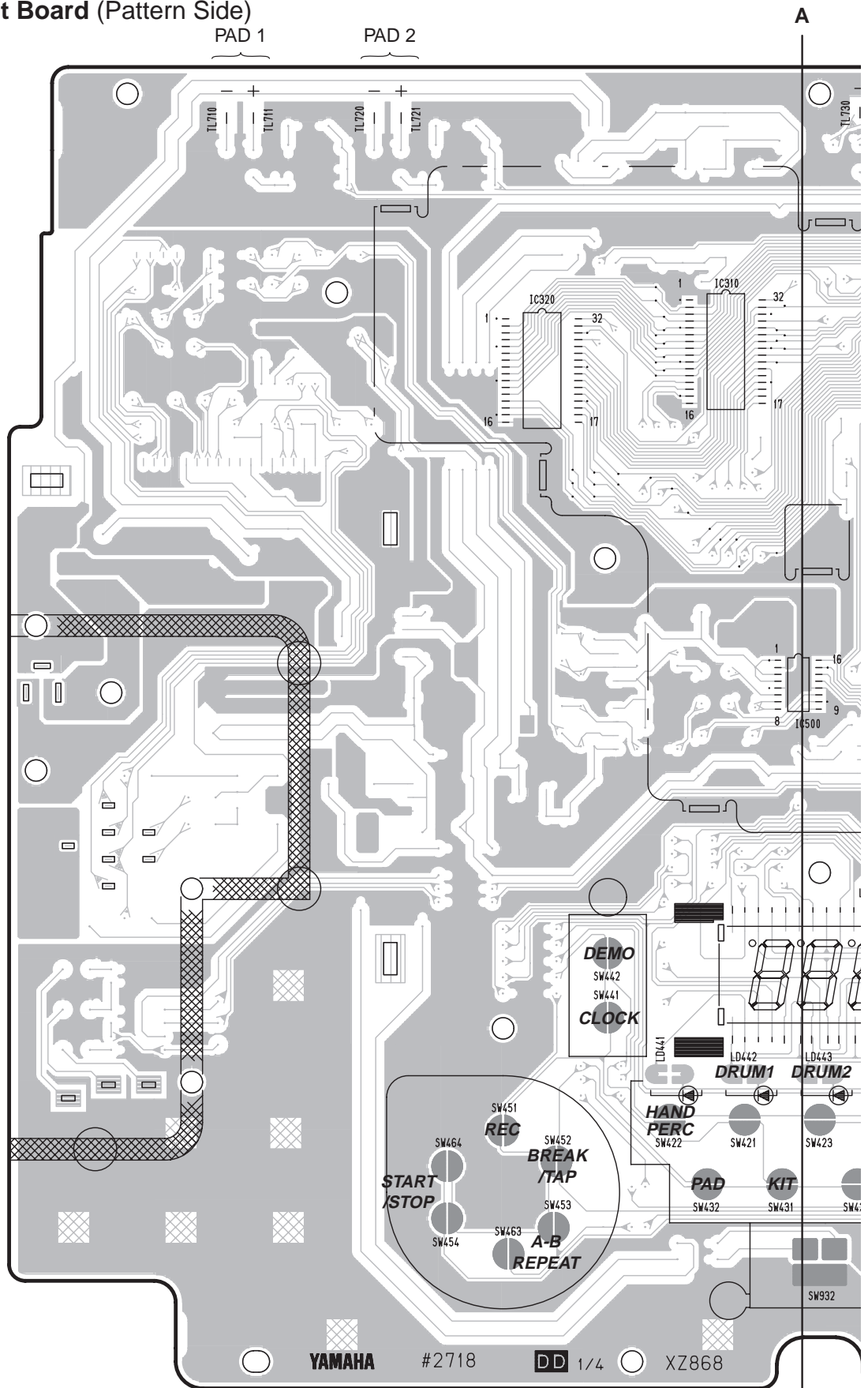
Component Side

to DD 2/2 CN460



Component Side

•DD 1/2 Circuit Board (Pattern Side)



Pattern Side

A'

DD 1/2: 2NA-V707790  $\Delta$







## ■ TEST PROGRAM

### Setting Conditions

Requirements for Measurement

Before starting to measure the unit, make sure you have the following instrumentations and test jigs:

Measuring instruments:

Oscilloscope (Input impedance, 1M  $\Omega$  or more; Loading, 33  $\Omega$ )

Level indicator (JIS-C curve; Input impedance, 1M  $\Omega$  or more; Loading, 33  $\Omega$ ; 0dBm: 1mW 600  $\Omega$ )

Test jigs:

Power adaptor, PA-5C

Stick

### A. Setting Conditions

Set the [STANDBY/ON] switch to ON with the [TEMPO] and [HANDPERC] button pressed and held (Fig. 1).



(Fig. 1)

### B. Test Entry

To scroll the test items, press the [VOLUME ▲] button for forwards, and the [VOLUME ▼] for backwards.

To start a test, press the [START/STOP] button.

Pressing the [START/STOP] button again returns to the selected item.

If you pass the test and return to the selected item, a dot appears on the upper left of the LED segment (See Fig.2).

If you fail the test, the LED shows “Err” (See Fig.3). To return to the selected item, press the [DEMO] button. (Note that the [START/STOP] button is inactive at this time.)

- \* Even if the test has successfully completed, pressing the [DEMO] button forces the system back to the Item Selection.
- \* The LED displays, and/or the interactions for OK/NG may be different depending on the test types. For details, see each test item you want to perform.



(Fig. 2)



(Fig. 3)

### C. Step for NG

If the unit could not pass a test press the [DEMO] button to display the “Test Item Selection” screen.

(Note that the [START/STOP] button is inactive at this time.)

## 5. Test Items

Test No.	LED display	Test function and judgment criteria
1	001: Version	Displays version for ROM. ROM versions are displayed alternately in the LED. [Displaying the test result] OK: ["XX"] NG: ["Error"]
2	002: Rom Check 1	Checks the ROM. The test result appears on the LED. [Displaying the test result] OK: ["PASS"] NG: ["Error"]
3	003: Ram Check 1	Checks all RAMs which are connected to the CPU. The test result appears on the LED. [Displaying the test result] OK: ["PASS"] NG: ["Error"]
11	011: TG1 Check	Output the sine wave by changing the channels in sequence from C2 to G4. After autoscaling is finished, individual keys can be played. Check to see if there is no abnormal noise or tone.
13	013: Pitch Check	Checks the Pitch. Connect the frequency counter to the [PHONES/OUTPUT] jack. Check that the 440.0 +/-1.76 Hz signal is output.
14	014: Output R Check	Connect the level meter (with a JIS-C filter) to the [PHONES/OUTPUT] jack. (Load: 33 ohm) PHONES L: Less than -60.0 dBm PHONES R: -11.5 dBm +/-2
15	015: Output L Check	Connect the level meter (with a JIS-C filter) to the [PHONES/OUTPUT] jack. (Load: 33 ohm) PHONES R: Less than -60.0 dBm PHONES L: -11.5 dBm +/-2 dB
19	019: Noise Level Check	Connect the level meter (with a JIS-C Filter) to the [PHONES/OUTPUT] jack. (Load: 33 ohm) Phones L/R: Less than -80.0 dBm
20	020: Switch and LED Check	Check switches on the panel and LED. Press the switches which are displayed on the LED. A pre-assigned note is output when depressing the switch. The test result appears on the LED. (Table 1) [Displaying the test result] OK: ["PASS"] NG: ["Error"]
21	021: Panel LED Check	Checks the panel LED. As the test is started, all the LED's go on.

30	030: Pad Check	<p>Checks the PAD.</p> <p>When a pad is tapped, the LED's indicate its identification number and tapping power.</p> <p>[Displaying the test result]</p> <p>Maximum data: 7F Minimum data: 18</p>
31	031: Pedal 1 Check	<p>Checks the [PEDAL 1].</p> <p>Connect the pedal to the [PEDAL 1] jack. When the pedal is stepped on, it sounds in bass drum tones. The LED's indicate the tapping power.</p> <p>[Displaying the test result]</p> <p>Maximum data: 7F Minimum data: 38</p>
32	032: Pedal 2 Check	<p>Checks the [PEDAL 2].</p> <p>Connect the pedal to the [PEDAL 2] jack.</p> <p>Check that the C3 note is output when starting the test program.</p> <p>Check that the C4 note is output when pushing the pedal and that tone is turned off when releasing the pedal.</p> <p>"20F" is displayed and the sound stops.</p>
37	037: MIDI Check	<p>Checks the MIDI.</p> <p>After connecting the [MIDI IN] and [MIDI OUT] with a MIDI cable, execute the test.</p> <p>Check that the C4 note is output and the test result appears on the LED.</p> <p>[Displaying the test result]</p> <p>OK: ["PAS"] NG: ["Err"]</p>
41	041: Rom 2 Check	<p>Checks the ROM.</p> <p>The test result appears on the LED.</p> <p>[Displaying the test result]</p> <p>OK: ["PAS"] NG: ["Err"]</p>
42	042: Ram 2 Check	<p>Checks the RAM.</p> <p>The test result appears on the LED.</p> <p>[Displaying the test result]</p> <p>OK: ["PAS"] NG: ["Err"]</p>
46	046: Rom Backup Check 2	<p>Performs the RAM back-up check.</p> <p>After checking that the beginning becomes NG, turn the power switch off.</p> <p>Enter the test program and perform the RAM back-up and check again.</p> <p>[Displaying the test result]</p> <p>OK: ["PAS"] NG: ["Err"]</p>
	---: Factory Set	<p>All RAMs are initialized and set to the factory preset date when executing this test. Set the [STANDBY/ON] switch to ON with the [DEMO] button pressed and held.</p> <p>Turn the power off.</p>

Table 1. SW test Item

No	SW	Display	Note	No	SW	Display	Note
1	A-B REPEAT	501	C2	10	HI-HAT	510	A2
2	START/STOP	502	C#2	11	BACKING	511	A#2
3	REC	503	D2	12	PAD	512	B2
4	BRAKE/TAP	504	D#2	13	KIT	513	C3
5	DEMO	505	E2	14	SONG	514	C#3
6	CLICK	506	F2	15	TEMPO	515	D3
7	HAND PERC.	507	F#2	16	VOLUME	516	D#3
8	BASS	508	G2	17	VOLUME	517	E3
9	SNARE	509	G#2	18	DIAL	0**	F3



# Digital Percussion **DD-55**

# PARTS LIST

■ CONTENTS

OVERALL ASSEMBLY ..... 2  
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Note) 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 (220V)
I: Indonesian model	N,X: General export model
J: Japanese model	Y: Export model

■ WARNING

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

- The numbers in "QTY" shows quantities for each unit.
- The parts with "--" in "Part No." are not available as spare parts.
- The second letter of the shaded ( ) part number is I, not one.
- The second letter of the shaded ( ) part number is O, not zero.





REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		OVERALL ASSEMBLY		DD55		
10	--	Overall Assembly	FE	J,U,W,C		
		Upper Case Assembly		(V740240)		
		Bottom Case Assembly		(V740450)		
* 20	<b>V7404600</b>	Battery Cover Assembly				
* 30	<b>V7406300</b>	Knob				
* 50	<b>V7404700</b>	Knob, Encoder Black				
60	<b>VL921100</b>	Bind Head Tapping Screw-B	3.0X12 MFZN2BL		16	03
80	<b>VQ074600</b>	Adhesive Tape	12X50		3	01
100	<b>VA126100</b>	Connector Assembly	2P	(V739570)		03
160	--					
		ACCESSORIES				
	<b>VU487100</b>	Stick			2	05
* 70	<b>V7710300</b>	Pedal	SWITCH			10
* 80	<b>V7710400</b>	Pedal	PIEZZO			10
		Upper Case Assembly		(V740450)		
* U10	<b>V7405900</b>	Upper Case Sub Assembly				
U10a	--	Speaker Cloth		(V740710)	2	
U10b	--	Port Cloth		(V740720)	2	
U10c	--	Cushion	125X10XT1	(V741840)	2	
* U20	<b>V7406800</b>	Pad-L Assembly			4	
* U30	<b>V7406900</b>	Pad-S Assembly	Y2718		3	
U40	--	Cushion	30X30XT1	(V741810)	7	
* U50	<b>V7319200</b>	PN Switch	VOLUME			
* U60	<b>V7319300</b>	PN Switch	DEOMO/CLICK			
* U70	<b>V7319400</b>	PN Switch	PART MUTE			
* U80	<b>V7385600</b>	PN Switch	START			
* U90	<b>V7406100</b>	Lens, LED				
U95	--	Dust Proof Cloth	55X6XT0.35	(V771120)	2	
U100	<b>VF073800</b>	Slider	LC			01
U110	<b>BB005650</b>	Brush	YCUT-MEH			02
U130	<b>EP600250</b>	Bind Head Tapping Screw-B	3.0X8 MFZN2Y		18	01
U135	<b>EP640410</b>	Bind Head Tapping Screw-B	4.0X8 MFZN2Y		8	01
U140	--	Adhesive Tape	12X50	(VA12610)	5	03
* U200	<b>V7077900</b>	Circuit Board	DD			
U210	<b>XY639A00</b>	Speaker	8.0cm 4 ohm 4 W		2	07
U220	--	Connector Assembly	4P 430,180	(V739580)		
	<b>V7404600</b>	Bottom Case Assembly				
L10	--	Bottom Case		(V740620)		
* L20	<b>V7060200</b>	Spring Terminal			5	
* L30	<b>V7060500</b>	Contact Spring +				
* L40	<b>V7060700</b>	Contact Spring -				
L50	<b>CB043750</b>	Foot	BLACK T1.6		4	01
L60	--	Cushion	360X10XT1	(V741920)		
L70	--	Cushion	450X10XT1	(V741910)	2	
L80	--	Cushion	125X10XT1	(V741840)	2	
L90	--	Cushion	40X20XT1	(V741930)	2	
L100	--	Dust Proof Cloth	40X13X0.5	(V771130)	6	
L110	--	Dust Proof Cloth	13X13X0.5	(V771140)		
	<b>V7406800</b>	Pad-L Assembly				
P10	--	Pad Rubber		(VU48660)		
P20	<b>VJ067700</b>	Adhesive Tape	30			03
* P30	<b>V7407000</b>	Piezo Electricity Pickup	EFBS46C43DA1			
P40	<b>VU641800</b>	Adhesive Tape	D-300			
P50	<b>VV019900</b>	Vibration-proof Tape	25X150X2 ECS			01
	<b>V7406900</b>	Pad-S Assembly	Y2718			
S10	--	Pad Rubber		(VR79800)		
* S20	<b>VJ067700</b>	Adhesive Tape	30			03
* S30	<b>V7407000</b>	Piezo Electricity Pickup	EFBS46C43DA1			
* S40	<b>VS416800</b>	Adhesive Tape	12X25			
S50	<b>VV019900</b>	Vibration-proof Tape	25X150X2 ECS			01



\*New parts

RANK: Japan only

# ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	<b>V7077900</b>	ELECTRICAL PARTS Circuit Board	DD	(XZ868F0)		
	<b>V7077900</b>	Circuit Board	DD	(XZ868F0)		
	<b>EP600190</b>	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			01
	<b>V7773500</b>	Shield Cover				01
	<b>V7860200</b>	Cord Holder				01
	--	Jumper Wire	0.55	(VA07890)		
C0101	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0102	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0103	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0111	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0112	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0113	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0114	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0115	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0121	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0122	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0123	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0124	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0125	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0131	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0132	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0151	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0152	<b>FG612100</b>	Ceramic Cap.-B	100P 50V K			01
C0191	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0192	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0210	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0310	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0320	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0321	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0401	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0402	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0461	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0462	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0500	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0501	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0502	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0503	<b>UR866220</b>	Electrolytic Cap.	2.20 50.0V			01
C0504	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0505	<b>UR866220</b>	Electrolytic Cap.	2.20 50.0V			01
C0506	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0512	<b>UR827470</b>	Electrolytic Cap.	47.00 10.0V			01
C0516	<b>FG613470</b>	Ceramic Capacitor-B	4700P 50V K			01
C0517	<b>UR866220</b>	Electrolytic Cap.	2.20 50.0V			01
C0522	<b>UR827470</b>	Electrolytic Cap.	47.00 10.0V			01
C0526	<b>FG613470</b>	Ceramic Capacitor-B	4700P 50V K			01
C0527	<b>UR866220</b>	Electrolytic Cap.	2.20 50.0V			01
C0550	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0551	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0552	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0610	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0611	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0631	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
-0633	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0700	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0710	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0711	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0721	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0731	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0741	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0750	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0751	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0761	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0771	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0781	<b>FG644100</b>	Electrolytic Cap.	0.0100 50V Z			01
C0800	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0801	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0802	<b>UR827330</b>	Electrolytic Cap.	33.00 10.0V			01
C0803	<b>UR837100</b>	Electrolytic Cap.	10.00 16.0V			01

\*New parts

RANK: Japan only

REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0804	<b>UR848100</b>	Electrolytic Cap.	100.00 25.0V			01
C0811	<b>V6490000</b>	Monolithic Ceramic Cap.	1.000 25V Z			01
C0812	<b>FG612470</b>	Ceramic Capacitor-B	470P 50V K			01
C0821	<b>V6490000</b>	Monolithic Ceramic Cap.	1.000 25V Z			01
C0822	<b>FG612470</b>	Ceramic Capacitor-B	470P 50V K			01
C0831	<b>UA354470</b>	Mylar Capacitor	0.0470 50V J			01
C0831	<b>UA654470</b>	Mylar Capacitor	0.0470 50V J			01
C0832	<b>UA354470</b>	Mylar Capacitor	0.0470 50V J			01
C0832	<b>UA654470</b>	Mylar Capacitor	0.0470 50V J			01
C0833	<b>UR837470</b>	Electrolytic Cap.	47.00 16.0V			01
C0841	<b>UA354470</b>	Mylar Capacitor	0.0470 50V J			01
C0841	<b>UA654470</b>	Mylar Capacitor	0.0470 50V J			01
C0842	<b>UA354470</b>	Mylar Capacitor	0.0470 50V J			01
C0842	<b>UA654470</b>	Mylar Capacitor	0.0470 50V J			01
C0843	<b>UR837470</b>	Electrolytic Cap.	47.00 16.0V			01
C0900	<b>VK373000</b>	Electrolytic Cap.	4700 25.0V			03
C0901	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0902	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0921	<b>UR867100</b>	Electrolytic Cap.	10.00 50.0V			01
C0922	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0923	<b>UR867100</b>	Electrolytic Cap.	10.00 50.0V			01
C0924	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0925	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0926	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0927	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0931	<b>UR867100</b>	Electrolytic Cap.	10.00 50.0V			01
C0932	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0933	<b>UR828100</b>	Electrolytic Cap.	100.00 10.0V			01
C0941	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
C0942	<b>VC694800</b>	Semiconductive Cera. Cap.	0.1000 25V Z			01
CA701	<b>V4654200</b>	Ceramic Capacitor Array	470P 50V M			01
CN460	<b>VI878100</b>	Cable Holder	51048 3P TE			01
CN461	<b>VI878100</b>	Cable Holder	51048 3P TE			01
CN860	<b>LB918040</b>	Base Post Connector	XH 4P TE			01
CN911	<b>LB918020</b>	Base Post Connector	XH 2P TE			01
D0410	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0410	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0420	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0420	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0430	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0430	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0440	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0440	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0450	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0450	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0610	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0610	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0621	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0621	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0622	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0622	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0712	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0712	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0722	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0722	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0732	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0732	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0742	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0742	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0752	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0752	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0762	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0762	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0772	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0772	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0782	<b>VB941200</b>	Diode	1SS133,1SS176			01
D0782	<b>VD631600</b>	Diode	1SS133,176,HSS104			01
D0901	<b>VL723600</b>	Diode	20E1-FC4			01
D0901	<b>VY717100</b>	Diode	LT2A02-E			01
D0902	<b>VL723600</b>	Diode	20E1-FC4			01



\*New parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
D0902	<b>VY717100</b>	Diode	LT2A02-E		01
D0931	<b>VB941200</b>	Diode	1SS133,1SS176		01
D0931	<b>VD631600</b>	Diode	1SS133,176,HSS104		01
D0932	<b>VB481900</b>	Diode	11ES4		01
D0932	<b>VF195600</b>	Diode	11ES4 TA1		01
D0933	<b>VB481900</b>	Diode	11ES4		01
D0933	<b>VF195600</b>	Diode	11ES4 TA1		01
EC460	<b>VU481300</b>	Encoder	REB161 PVB 15F		03
FZ900	<b>V2559600</b>	Fuse	3.00A J		01
HS800	--	Heat Sink		(V735760)	
IC100	<b>XU947C00</b>	IC	HG73C205AFD	SWX00B	09
IC150	<b>XR902A00</b>	IC	IC-PST591D-2	RESET	02
IC190	<b>XT333A00</b>	IC	UPC29M33HF	REGURATOR +3.3V	03
IC210	<b>X0004100</b>	IC		ROM 32M	
IC310	<b>XT954B00</b>	IC	M5M51008CFP-55H	SRAM 1M	06
IC310	<b>XW486A00</b>	IC	M5M51008CFP-55H	SRAM 1M	07
IC310	<b>XY909A00</b>	IC	UPD431000AGW	SRAM 1M	07
IC320	<b>XT954B00</b>	IC	M5M51008CFP-55H	SRAM 1M	06
IC320	<b>XW486A00</b>	IC	M5M51008CFP-55H	SRAM 1M	07
IC320	<b>XY909A00</b>	IC	UPD431000AGW	SRAM 1M	07
IC500	<b>XM145A00</b>	IC	UPD63200GS	DAC	07
IC550	<b>XF633A00</b>	IC	UPC4572HA	OP AMP	02
IC610	<b>VG181900</b>	Photo Coupler	PC-900V		03
IC710	<b>XZ824A00</b>	IC	SN74HC4066NSR	ANALOG SWITCH	
IC750	<b>XZ824A00</b>	IC	SN74HC4066NSR	ANALOG SWITCH	
IC790	<b>XZ824A00</b>	IC	SN74HC4066NSR	ANALOG SWITCH	
IC800	<b>XQ619A00</b>	IC	LA4705NA	POWER AMP 17W	05
IC920	<b>XU814A00</b>	IC	PQ05RD11	REGURATOR +5V	03
IC930	<b>XT625A00</b>	IC	S-81250SGY-Z	REGURATOR +5V	02
IC940	<b>XM927A00</b>	IC	AN78L05-(TA)	REGURATOR +5V	01
IS210	<b>VK863100</b>	IC Socket	DICF-42CS-E		03
J0001	--	Jumper Wire	0.55	(VA07890)	
-0003	--	Jumper Wire	0.55	(VA07890)	
JK610	<b>VJ107200</b>	DIN Connector	5P YKF51-5050	MIDI IN	01
JK620	<b>VJ107200</b>	DIN Connector	5P YKF51-5050	MIDI OUT	01
JK630	<b>VB312600</b>	Phone Jack	YKB21-5012	PEDAL 2	02
JK780	<b>VB312600</b>	Phone Jack	YKB21-5012	PEDAL 1	02
JK850	<b>LB101870</b>	Phone Jack	YKB21-5006	PHONES/OUTPUT	03
JK901	<b>LB302260</b>	Connector	HEC0470-01-630	DC IN 12V	02
L0600	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0600	<b>V2993400</b>	Coil	R-5C.20U		01
L0611	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0611	<b>V2993400</b>	Coil	R-5C.20U		01
L0612	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0612	<b>V2993400</b>	Coil	R-5C.20U		01
L0621	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0621	<b>V2993400</b>	Coil	R-5C.20U		01
L0622	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0622	<b>V2993400</b>	Coil	R-5C.20U		01
L0630	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
-0632	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0630	<b>V2993400</b>	Coil	R-5C.20U		01
-0632	<b>V2993400</b>	Coil	R-5C.20U		01
L0710	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0711	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0720	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0721	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0730	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0731	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0740	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0741	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0750	<b>VF456600</b>	Coil	STB00180W		01
L0770	<b>VF456600</b>	Coil	STB00180W		01
L0760	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0761	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0780	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0780	<b>V2993400</b>	Coil	R-5C.20U		01
L0781	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0781	<b>V2993400</b>	Coil	R-5C.20U		01
L0791	<b>VB835000</b>	Coil	FL5R200QNT		01

\*New parts

RANK: Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
L0791	<b>V2993400</b>	Coil	R-5C.20U		01
L0851	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
-0853	<b>VB871100</b>	Ferrite Beads	BL02RN2-R62		01
L0851	<b>V2993400</b>	Coil	R-5C.20U		01
-0853	<b>V2993400</b>	Coil	R-5C.20U		01
L0900	<b>VI486800</b>	Line Filter	SU10VD-20020		03
LD400	<b>VF107400</b>	LED Display	SL-1351-60		05
LD441	<b>VE148800</b>	LED	SLZ190B-05-T1 RE		01
-445	<b>VE148800</b>	LED	SLZ190B-05-T1 RE		01
R0000	<b>HF755150</b>	Carbon Resistor	150.0 1/4 J		01
-0015	<b>HF755150</b>	Carbon Resistor	150.0 1/4 J		01
R0101	<b>HF757100</b>	Carbon Resistor	10.0K 1/4 J		01
R0102	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0103	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0104	<b>HF754470</b>	Carbon Resistor	47.0 1/4 J		01
R0113	<b>HF754470</b>	Carbon Resistor	47.0 1/4 J		01
R0114	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0115	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0121	<b>HF754470</b>	Carbon Resistor	47.0 1/4 J		01
-0123	<b>HF754470</b>	Carbon Resistor	47.0 1/4 J		01
R0124	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
-0127	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0128	<b>HF754470</b>	Carbon Resistor	47.0 1/4 J		01
R0131	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0132	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0134	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0135	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0136	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0151	<b>HF757100</b>	Carbon Resistor	10.0K 1/4 J		01
R200	<b>HF755150</b>	Carbon Resistor	150.0 1/4 J		01
-207	<b>HF755150</b>	Carbon Resistor	150.0 1/4 J		01
R0401	<b>HF757100</b>	Carbon Resistor	10.0K 1/4 J		01
-0404	<b>HF757100</b>	Carbon Resistor	10.0K 1/4 J		01
R0411	<b>HF758100</b>	Carbon Resistor	100.0K 1/4 J		01
-0415	<b>HF758100</b>	Carbon Resistor	100.0K 1/4 J		01
R0421	<b>HF755180</b>	Carbon Resistor	180.0 1/4 J		01
-0428	<b>HF755180</b>	Carbon Resistor	180.0 1/4 J		01
R0461	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0462	<b>HF757470</b>	Carbon Resistor	47.0K 1/4 J		01
R0463	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0464	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0512	<b>HF756150</b>	Carbon Resistor	1.5K 1/4 J		01
R0515	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01
R0516	<b>HF756220</b>	Carbon Resistor	2.2K 1/4 J		01
R0522	<b>HF756150</b>	Carbon Resistor	1.5K 1/4 J		01
R0525	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01
R0526	<b>HF756220</b>	Carbon Resistor	2.2K 1/4 J		01
R0610	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01
R0611	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0621	<b>HF757220</b>	Carbon Resistor	22.0K 1/4 J		01
R0622	<b>HF757100</b>	Carbon Resistor	10.0K 1/4 J		01
R0623	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0624	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0631	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01
R0632	<b>HF756100</b>	Carbon Resistor	1.0K 1/4 J		01
R0633	<b>HF757220</b>	Carbon Resistor	22.0K 1/4 J		01
R0634	<b>HF758220</b>	Carbon Resistor	220.0K 1/4 J		01
R0635	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0636	<b>HF755220</b>	Carbon Resistor	220.0 1/4 J		01
R0711	<b>HF757330</b>	Carbon Resistor	33.0K 1/4 J		01
R0712	<b>HF757150</b>	Carbon Resistor	15.0K 1/4 J		01
R0713	<b>HF758100</b>	Carbon Resistor	100.0K 1/4 J		01
R0714	<b>HF757220</b>	Carbon Resistor	22.0K 1/4 J		01
R0715	<b>HF757330</b>	Carbon Resistor	33.0K 1/4 J		01
R0721	<b>HF757330</b>	Carbon Resistor	33.0K 1/4 J		01
R0722	<b>HF757150</b>	Carbon Resistor	15.0K 1/4 J		01
R0723	<b>HF758100</b>	Carbon Resistor	100.0K 1/4 J		01
R0724	<b>HF757220</b>	Carbon Resistor	22.0K 1/4 J		01
R0725	<b>HF757330</b>	Carbon Resistor	33.0K 1/4 J		01
R0731	<b>HF757330</b>	Carbon Resistor	33.0K 1/4 J		01

\*New parts

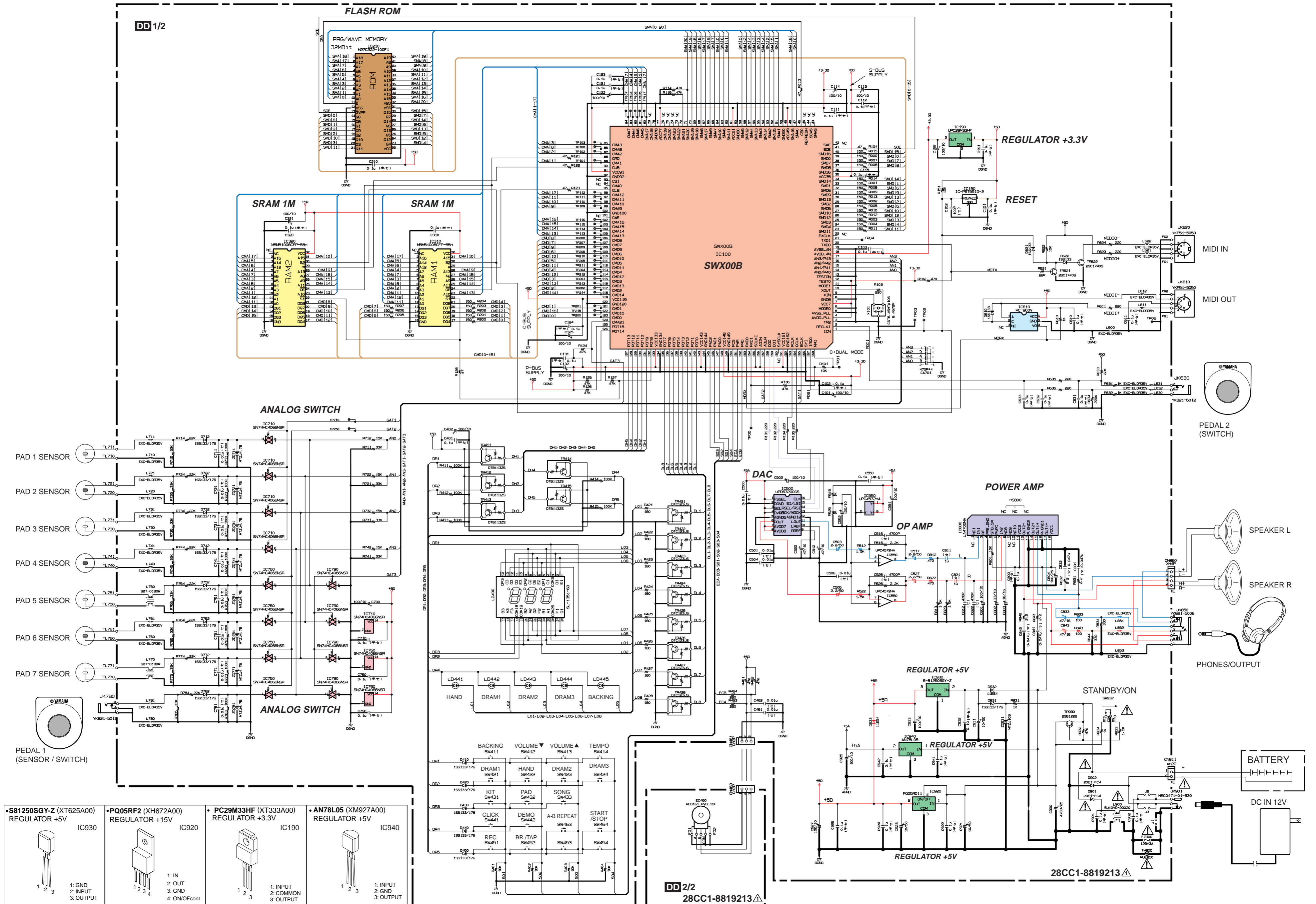
RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0732	HF757150	Carbon Resistor	15.0K 1/4 J			01
R0733	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0734	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0735	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0741	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0742	HF757150	Carbon Resistor	15.0K 1/4 J			01
R0743	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0744	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0745	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0753	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0754	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0755	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0763	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0764	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0765	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0773	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0774	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0775	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0783	HF758100	Carbon Resistor	100.0K 1/4 J			01
R0784	HF757220	Carbon Resistor	22.0K 1/4 J			01
R0785	HF757330	Carbon Resistor	33.0K 1/4 J			01
R0801	HF757100	Carbon Resistor	10.0K 1/4 J			01
R0812	HF755470	Carbon Resistor	470.0K 1/4 J			01
R0813	HF756150	Carbon Resistor	1.5K 1/4 J			01
R0822	HF755470	Carbon Resistor	470.0K 1/4 J			01
R0823	HF756150	Carbon Resistor	1.5K 1/4 J			01
R0831	HF753220	Carbon Resistor	2.2 1/4 J			01
R0832	HF753220	Carbon Resistor	2.2 1/4 J			01
R0833	HF755100	Carbon Resistor	100.0 1/4 J			01
R0834	HF755330	Carbon Resistor	330.0 1/4 J			01
R0841	HF753220	Carbon Resistor	2.2 1/4 J			01
R0842	HF753220	Carbon Resistor	2.2 1/4 J			01
R0843	HF755100	Carbon Resistor	100.0 1/4 J			01
R0844	HF755330	Carbon Resistor	330.0 1/4 J			01
R0931	HF756100	Carbon Resistor	1.0K 1/4 J			01
R0932	HF757470	Carbon Resistor	47.0K 1/4 J			01
R0933	HF756150	Carbon Resistor	1.5K 1/4 J			01
R0934	HF756100	Carbon Resistor	1.0K 1/4 J			01
TR411	VT817300	Digital Transistor	DTB113ZS TP			01
-415	VT817300	Digital Transistor	DTB113ZS TP			01
TR421	VK165500	Digital Transistor	DTC123JS TP			01
-428	VK165500	Digital Transistor	DTC123JS TP			01
TR621	IC174070	Transistor	2SC1740S R,S			01
TR622	IC174070	Transistor	2SC1740S R,S			01
TR930	VU819500	Transistor	2SB1340			03
TR930	V7542400	Transistor	2SB1226			01
* WH001	--	Connector Assembly	3P	(V739590)		01
X0101	V2192500	Ceramic Resonator	8.4672M CST8.46MT			01
X0101	V7867300	Ceramic Resonator	8.46M EF0MC8464A38			01
ZD711	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD721	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD731	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD741	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD751	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD761	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD771	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD781	VG437100	Zener Diode	MTZ J 4.7B 4.7V			01
ZD931	VG439500	Zener Diode	MTZ J 10.0B 10.0V			01
ZD931	VQ296000	Zener Diode	MTZJ10B 10.0V			01
	VF073800	Slider	LC			01
	BB005650	Brush	YCUT-MEH			02
	XY639A00	Speaker	8.0cm 4 ohm 4 W		2	07
	V7407000	Piezo Electricity Pickup	EFBS46C43DA1			
	V7407000	Piezo Electricity Pickup	EFBS46C43DA1			

\*New parts

RANK: Japan only



<p>•S81250SGY-Z (XT625A00) REGULATOR +5V IC930</p> <p>1: GND 2: INPUT 3: OUTPUT</p>	<p>•PQ05RF2 (XH672A00) REGULATOR +15V IC920</p> <p>1: IN 2: OUT 3: GND 4: ON/OFF cont.</p>	<p>•PC29M33HF (XT333A00) REGULATOR +3.3V IC190</p> <p>1: INPUT 2: COMMON 3: OUTPUT</p>	<p>•AN78L05 (XM927A00) REGULATOR +5V IC940</p> <p>1: INPUT 2: GND 3: OUTPUT</p>
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**DD 2/2**  
 28CC1-8819213

( ) : Ceramic Capacitor  
 ( ) : Mylar Capacitor  
 ( ) : Semiconductive Ceramic Capacitor  
 Note: See parts list for details of circuit board component parts.

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