

Easy Guitar

E-Z-E-G

SERVICE MANUAL



■ CONTENTS

SPECIFICATIONS	3
PANEL LAYOUT	4
CIRCUIT BOARD LAYOUT	5
BLOCK DIAGRAM	6
DISASSEMBLY PROCEDURE	7
LSI PIN DESCRIPTION	9
IC BLOCK DIAGRAM	11
CIRCUIT BOARDS	12
TEST PROGRAM	16
INSPECTIONS	18
MIDI IMPLEMENTATION CHART	19
PARTS LIST	
OVERALL CIRCUIT DIAGRAM	

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

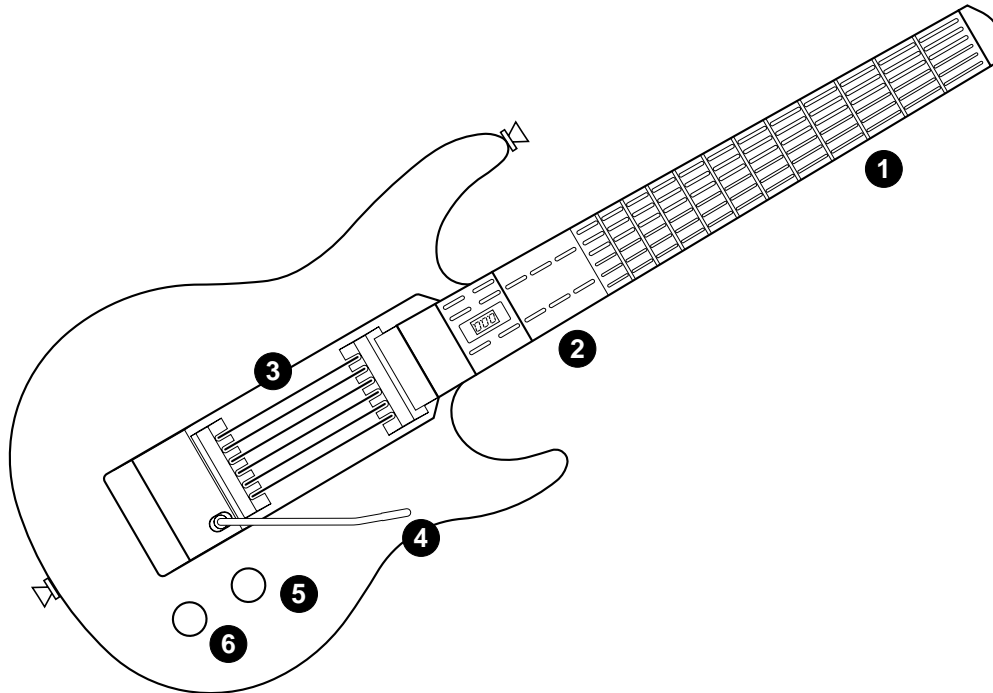
Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

■ SPECIFICATIONS

Strings	6
Frets	12
Displays	Numeric LED display, 6 x 12 fret LEDs
Voices	9 guitar, 8 bass, 3 others
Play Modes	STRUM (right hand), CHORD (left hand), BOTH (both hands)
Controls	[STANDBY/ON] switch, [VOLUME] control, tremolo arm, [STRUM] button, [CHORD] button, [BOTH] button, [DEMO] button, [SOUND] button, [SONG] button, [TEMPO] button, [BALANCE] button, [CAPO] button, [TUNING] button, VALUE [+]/[-] buttons
Songs	18 (additional songs can be loaded into internal memory from a computer)
Tremolo Arm Range	-300 – +300 cents
Tempo Range	32 – 280
Balance Range	0 – 127
Capo Range	0 – 10
Tuning	28 tuning settings in addition to normal
Connectors	DC IN 9V, PHONES/OUTPUT (mini stereo jack), MIDI IN and MIDI OUT
Maximum Output Power	0.7 W (batteries or AC adaptor)
PHONES/OUTPUT	Output impedance: 50 ohms
Speaker	5 cm
Power Supply	PA-D09 AC Power Adaptor (supplied) Six 1.5V "AA" size, R6P or equivalent batteries
Power Consumption	6.5 W (using the PA-D09 AC Power Adaptor)
Dimensions (w x d x h)	809 x 300 x 72 mm (32" x 11-3/4" x 3")
Weight	1.6 kg (3 lbs. 8oz.) (w/o batteries)
Supplied Accessories	Tremolo Arm, Strap, C-Clip x 2, Pick, AC Power Adaptor, EZ-EG Song Chord Chart, USB-MIDI Interface (UX16), CD-ROM

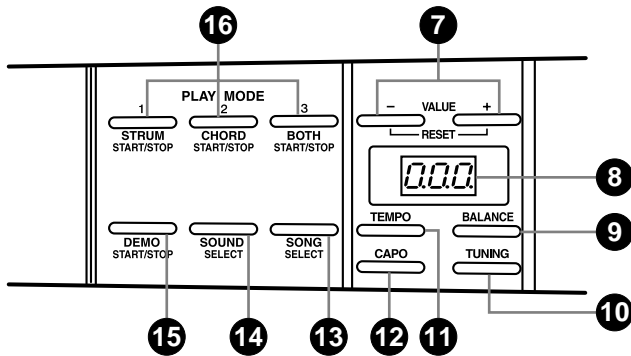
■ PANEL LAYOUT

● Body



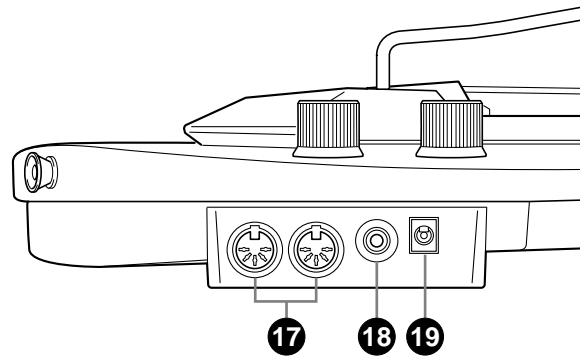
- 1 Frets
- 2 Control Section
- 3 Strings
- 4 Tremolo Arm
- 5 [VOLUME] Control knob
- 6 [STANDBY/ON] Control switch

● Control Section



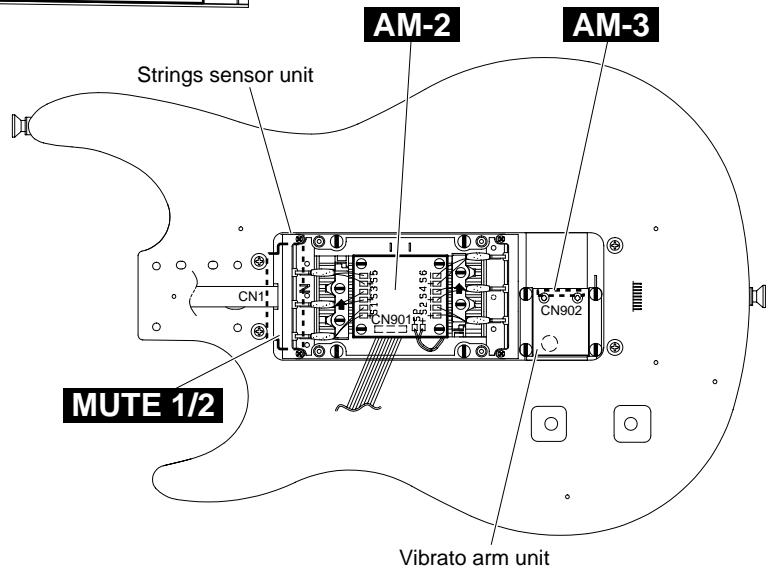
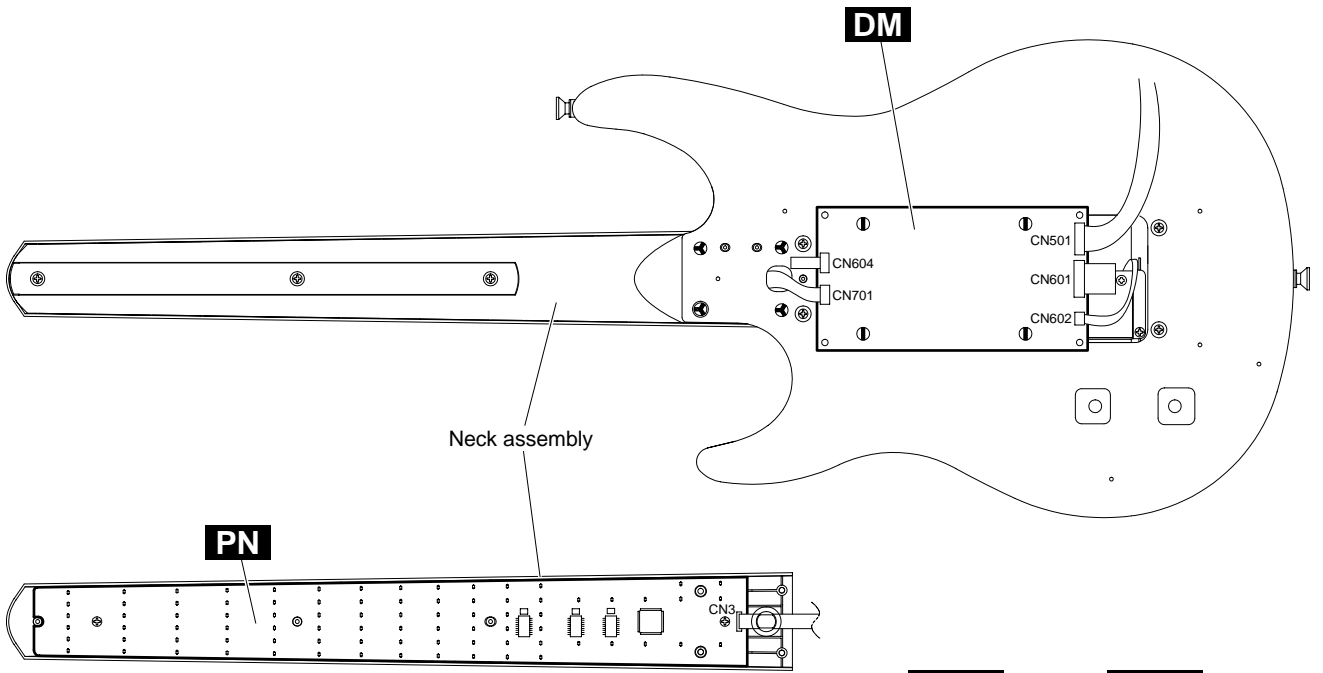
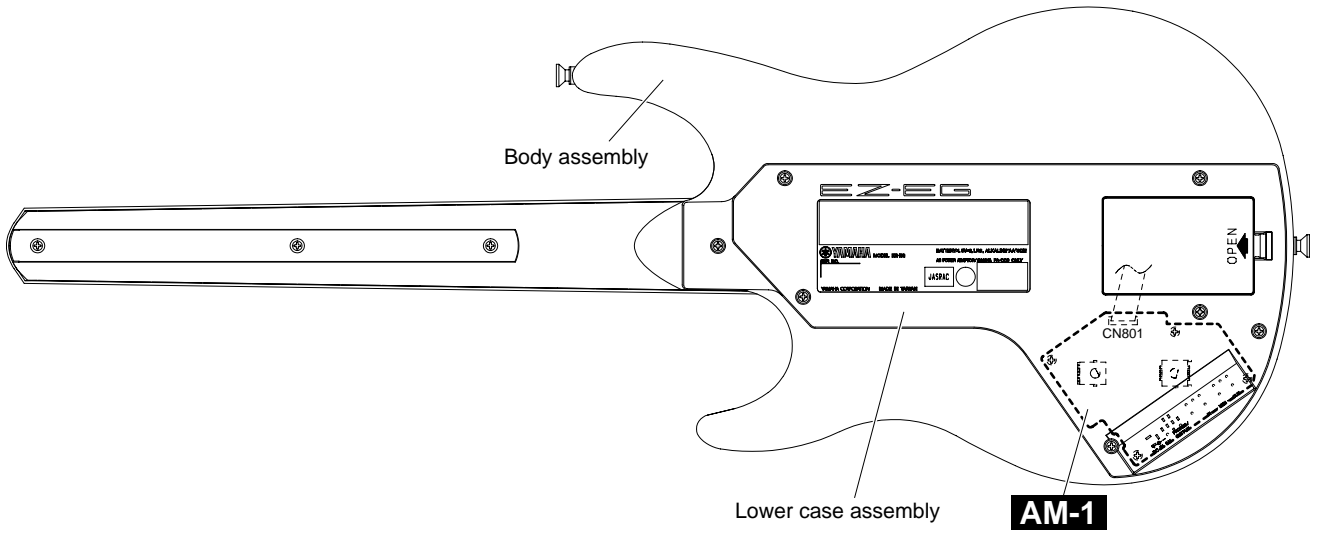
- 7 VALUE [+]/[-] buttons
- 8 Display
- 9 [BALANCE] button
- 10 [TUNING] button
- 11 [TEMPO] button
- 12 [CAPO] button
- 13 [SONG] button
- 14 [SOUND] button
- 15 [DEMO] button
- 16 PLAY MODE
[1]/[STRUM], [2]/[CHORD], [3]/[BOTH] buttons

● Connectors

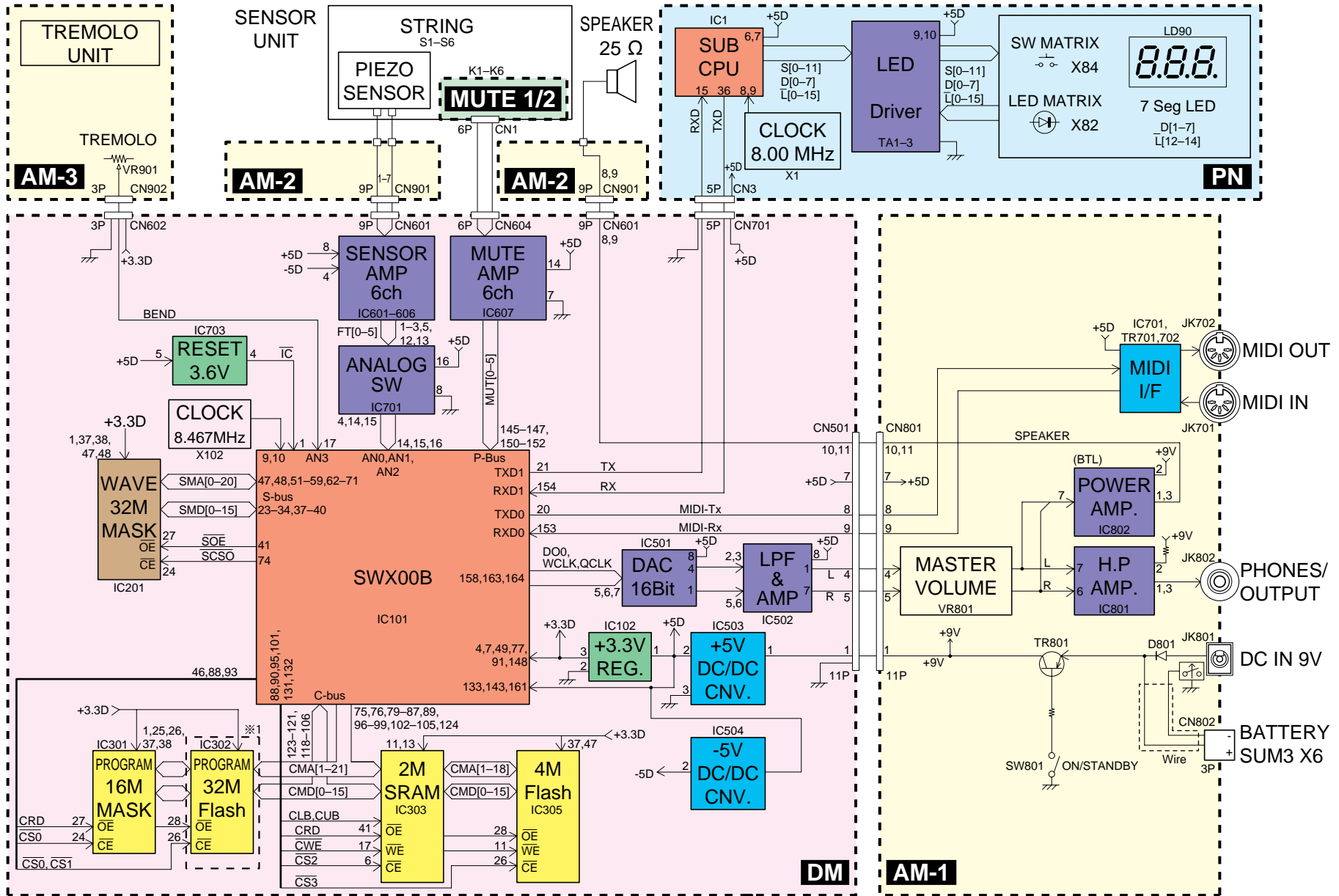


- 17 MIDI IN/MIDI OUT connectors
- 18 PHONES/OUTPUT jack
- 19 DC IN 9V jack

■ CIRCUIT BOARD LAYOUT



■ BLOCK DIAGRAM



※1 IC301 or IC302 are mounted.

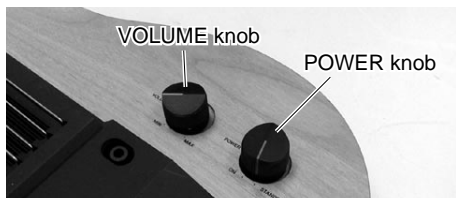
□: solder

DISASSEMBLY PROCEDURE

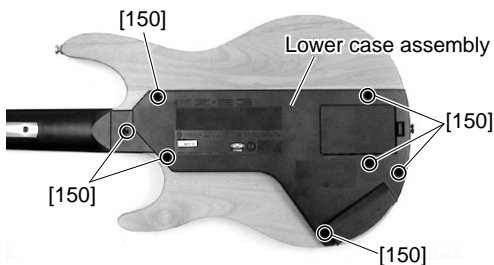
1. Lower Case Assembly

(Time required: about 5 minutes)

- 1-1 Pull out the POWER knob and the VOLUME knob. (Fig. 1)
- 1-2 Remove the seven (7) screws marked [150]. The lower case assembly can then be removed. (Fig. 2)



* The knobs differs from the product.
(Fig. 1)

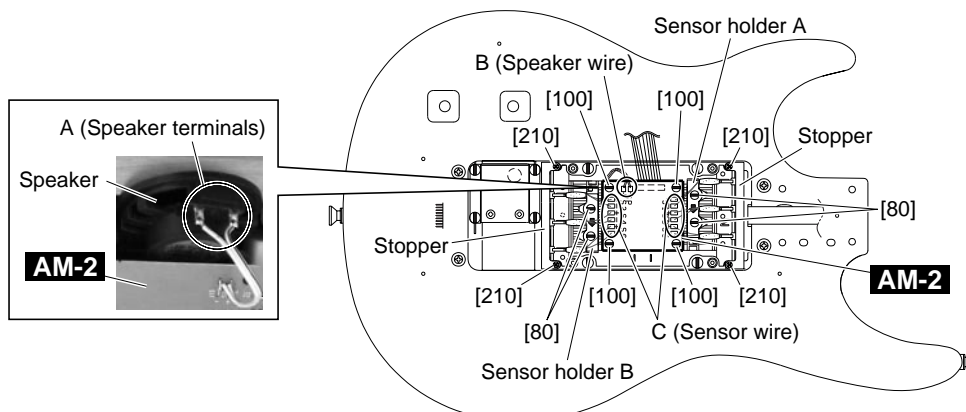


[150]: Pan Head Tapping Screw-1 3.5X12 MFZN2BL (V9401100)
(Fig. 2)

4. Sensor Holder A, Sensor Holder B, Speaker, AM-2 Circuit Board

(Time required: about 25 minutes)

- 4-1 Remove the lower case assembly. (See procedure 1.)
- 4-2 Remove the DM circuit board. (See procedure 3.)
- 4-3 Remove the four (4) screws marked [210]. The two (2) stopper can then be removed. (Fig. 5)
- 4-4 Remove the four (4) screws marked [80]. The sensor holder A and the sensor holder B can then be removed. (Fig. 5)
- 4-5 Remove the four (4) screws marked [100]. (Fig. 5)



[80]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220) [210]: Bind Head Tapping Screw-P 2.0X6 MFZN2BL (VG893800)
[100]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)

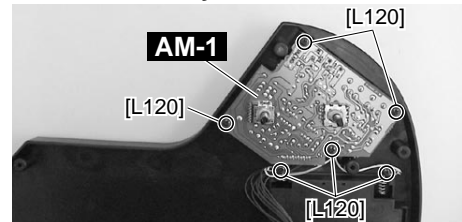
(Fig. 5)

3. DM Circuit Board

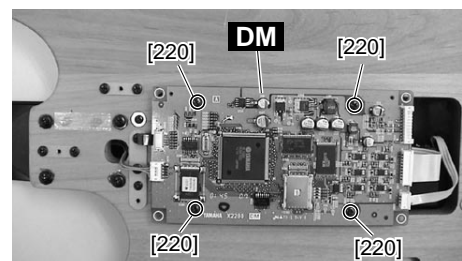
(Time required: about 10 minutes)

- 3-1 Remove the lower case assembly. (See procedure 1.)
- 3-2 Remove the four (4) screws marked [220]. The DM circuit board can then be removed. (Fig. 4)

• Lower Case Assembly



[L120]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)
(Fig. 3)



[220]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)
(Fig. 4)

5. AM-3 Circuit Board

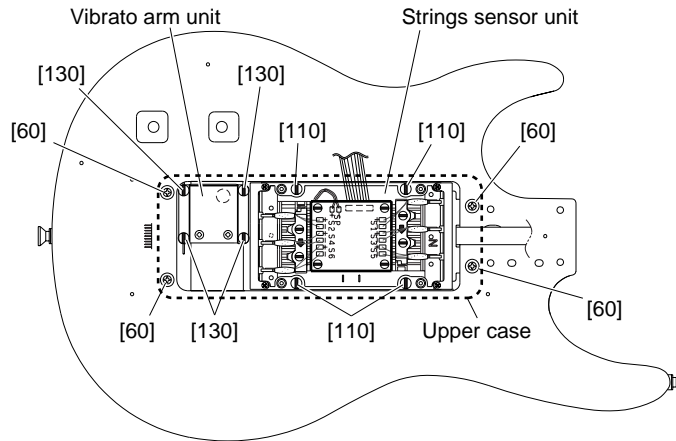
(Time required: about 15 minutes)

- 5-1 Remove the lower case assembly. (See procedure 1.)
- 5-2 Remove the DM circuit board. (See procedure 3.)
- 5-3 Remove the four (4) screws marked [130]. The vibrato arm unit can then be removed. (Fig. 6)
- 5-4 Remove the two (2) screws marked [A50]. The base A can then be removed from the vibrato arm unit. (Fig. 7)
- 5-5 Pull out the base B with AM-3 circuit board from the arm holder in the direction shown by the arrow. (Fig. 8)
- 5-6 Remove the hexagonal nut marked [A]. The AM-3 circuit board can then be removed. (Fig. 8)

6. Strings Sensor Unit, Upper Case

(Time required: about 15 minutes)

- 6-1 Remove the lower case assembly. (See procedure 1.)
- 6-2 Remove the DM circuit board. (See procedure 3.)
- 6-3 Remove the four (4) screws marked [110]. The strings sensor unit can then be removed. (Fig. 6)
- 6-4 Remove the vibrato arm unit. (See procedure 5-3.)
- 6-5 Remove the four (4) screws marked [60]. The upper case can then be removed. (Fig. 6)

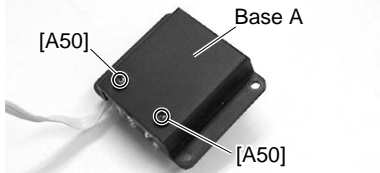


[60]: Bind Head Tapping Screw-P 3.0X30 MFZN2BL (V8529300)
 [110]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)

[130]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)

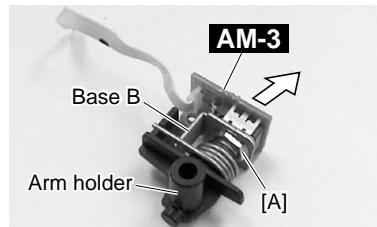
(Fig. 6)

• Vibrato Arm Unit



[A50]: Bind Head Tapping Screw-B 3.0X6 MFZN2BL (EP600230)

(Fig. 7)



(Fig. 8)

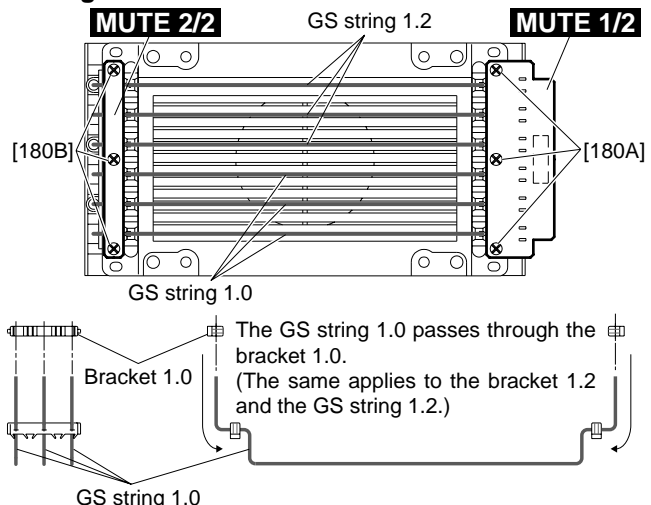
7. MUTE 1/2 Circuit Board, MUTE 2/2 Circuit Board, GS String

(Time required: about 20 minutes)

- 7-1 Remove the lower case assembly. (See procedure 1.)
- 7-2 Remove the DM circuit board. (See procedure 3.)
- 7-3 Remove the strings sensor unit. (See procedure 6.)
- 7-4 Remove the three (3) screws marked [180A]. The MUTE 1/2 circuit board can then be removed. (Fig. 9)
- 7-5 Remove the three (3) screws marked [180B]. The MUTE 2/2 circuit board can then be removed. (Fig. 9)
- 7-6 Remove the GS string with the bracket (Three each of the 1.0 and 1.2). The GS string can then be removed from the bracket. (Fig. 9)

* The brackets are comprised of the bracket 1.0 and the bracket 1.2. The GS strings are comprised of the GS string 1.0 and the GS string 1.2. Take steps to prevent errors when disassembling and assembling.

• Strings Sensor Unit



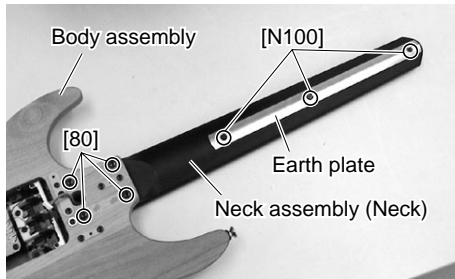
[180]: Bind Head Tapping Screw-P 2.0X6 MFZN2BL (VG893800)

(Fig. 9)

8. PN Circuit Board, Key Top Rubber

(Time required: about 8 minutes)

- 8-1 Remove the lower case assembly. (See procedure 1.)
 8-2 Remove the three (3) screws marked [N100]. The earth plate can then be removed. (Fig. 10)
 8-3 Remove the four (4) screws marked [80]. The fingerboard can then be removed. (Fig. 10, 11)

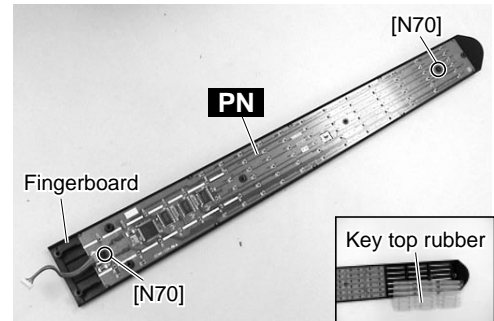


[80]: Bind Head Tapping Screw-P 4.0X35 MFZN2BL (V8525500)

[N100]: Flat Head Tapping Screw-P 3.0X16 MFZN2BL (VE009200)

(Fig. 10)

- * The neck is attached to the body. It cannot be removed.
 8-4 Remove the two (2) screws marked [N70] from the fingerboard. The PN circuit board and key top rubber can then be removed. (Fig. 11)



[N70]: Bind Head Tapping Screw-P 3.0X6 MFZN2BL (EP630220)

(Fig. 11)

LSI PIN DESCRIPTION

● MN101C027YB (XS711200) CPU

PN: IC001

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	S1	I	Switch matrix data	33	S12	I	Switch matrix data
2	S2	I		34	S13	I	
3	S3	I		35	S14	I	
4	S4	I		36	TXD	O	MIDI transmit data
5	S5	I		37	S15	I	Switch matrix data
6	VREF+	-	38	S16	I		
7	VDD	-	39	S17	I		
8	OSC2	O	Crystal oscillator (8MHz)	40	S18	I	Switch matrix data
9	OSC1	O	Crystal oscillator (8MHz)	41	L16	O	
10	VSS	-	Ground	42	L17	O	
11	XI	I	Not used	43	L18	O	LED drive data
12	XO	O	Not used	44	L19	O	
13	MMOD	I	Memory mode select (Grounded)	45	L8	O	
14	RD0	O	Rotary encoder data	46	L9	O	LED drive data
15	RXD	I	MIDI receive data	47	L10	O	
16	D0	O	LED and switch drive data	48	L11	O	
17	D1	O		49	L12	O	
18	D2	O		50	L13	O	
19	D3	O		51	L14	O	
20	D4	O	Reset	52	L15	O	LED and switch drive data
21	/RST	I		53	L7	O	
22	D5	O		54	L6	O	
23	D6	O	LED and switch drive data	55	L5	O	LED and switch drive data
24	D7	O		56	L4	O	
25	D8	O		57	L3	O	
26	D9	O	Switch matrix data	58	L2	O	Switch matrix data
27	S6	I		59	L1	O	
28	S7	I		60	L0	O	
29	S8	I	Switch matrix data	61	VREF	-	Grounded
30	S9	I		62	AD0	I	Analog input
31	S10	I		63	AD1	I	Analog input
32	S11	I		64	S0	I	Switch matrix data

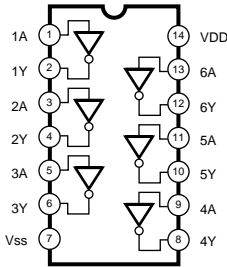
● HG73C205AFD (XU947C00) SWX00B (Tone Generator)

DM: IC101

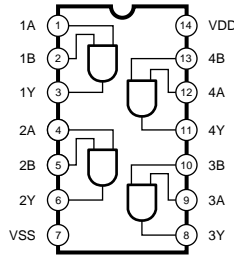
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	ICN	I	Initial clear	85	CMA3	O	Program address bus
2	RFCLKI	I	PLL Clock	86	CMA8	O	Program address bus
3	TM2	I	PLL Control	87	CMA2	O	Program address bus
4	AVDD_PLL		Power supply	88	CRD	O	read signal
5	AVSS_PLL		Ground	89	CMA1	O	Program address bus
6	MODE0	I	SWX dual mode	90	CUB	O	high byte effective signal
7	VCC7		Power supply	91	VCC91		Power supply
8	GND8		Ground	92	GHND92		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	Program address bus
14	AN0-P40	I	A/D converter	98	CMA10	O	Program address bus
15	AN1-P41	I	A/D converter	99	CMA9	O	Program address bus
16	AN2-P42	I	A/D converter	100	GND100		Ground
17	AN3-P43	I	A/D converter	101	CWE	O	write signal
18	AVDD_AN		Power supply	102	CMA16	O	Program address bus
19	AVSS_AN		Ground	103	CMA15	O	Program address bus
20	TXD0	O	for MIDI or TO-HOST	104	CMA14	O	Program address bus
21	TXD1	O	for MIDI	105	CMA13	O	Program address bus
22	EXCLK	I	Crystal oscillator	106	CMD8	I/O	Program memory Data bus
23	SMD11	I/O	Wave memory data bus	107	CMD7	I/O	Program memory Data bus
24	SMD4	I/O	Wave memory data bus	108	CMD9	I/O	Program memory Data bus
25	SMD3	I/O	Wave memory data bus	109	CMD6	I/O	Program memory Data bus
26	SMD12	I/O	Wave memory data bus	110	CMD10	I/O	Program memory Data bus
27	SMD10	I/O	Wave memory data bus	111	CMD5	I/O	Program memory Data bus
28	SMD5	I/O	Wave memory data bus	112	CMD11	I/O	Program memory Data bus
29	SMD2	I/O	Wave memory data bus	113	CMD4	I/O	Program memory Data bus
30	SMD13	I/O	Wave memory data bus	114	CMD12	I/O	Program memory Data bus
31	SMD9	I/O	Wave memory data bus	115	CMD3	I/O	Program memory Data bus
32	SMD6	I/O	Wave memory data bus	116	CMD13	I/O	Program memory Data bus
33	SMD1	I/O	Wave memory data bus	117	CMD2	I/O	Program memory Data bus
34	SMD14	I/O	Wave memory data bus	118	CMD14	I/O	Program memory Data bus
35	VCC35		Power supply	119	VCC119		Power supply
36	GND36		Ground	120	GND115		Ground
37	SMD8	I/O	Wave memory data bus	121	CMD1	I/O	Program memory Data bus
38	SMD7	I/O	Wave memory data bus	122	CMD15	I/O	Program memory Data bus
39	SMD0	I/O	Wave memory data bus	123	CMD0	I/O	Program memory Data bus
40	SMD15	I/O	Wave memory data bus	124	CMA21	O	Program address bus
41	SOE	O	read signal	125	PDT15	I/O	SWX access data bus
42	SWE	O	write signal	126	PDT14	I/O	SWX access data bus
43	SRAS	O	RAS signal	127	PDT13	I/O	SWX access data bus
44	SCAS	O	CAS signal	128	PDT12	I/O	SWX access data bus
45	REFRESH	O	REFRESH signal	129	PDT11	I/O	SWX access data bus
46	CS0	O	CS signal	130	PDT10	I/O	SWX access data bus
47	SMA0	O	Memory address bus	131	PDT9	I/O	SWX access data bus
48	SMA16	O	Memory address bus	132	PDT8	I/O	SWX access data bus
49	VCC49		Power supply	133	VCC133		Power supply
50	GND50		Ground	134	GND134		Ground
51	SMA1	O	Memory address bus	135	PDT7	I/O	SWX access data bus
52	SMA15	O	Memory address bus	136	PDT6	I/O	SWX access data bus
53	SMA2	O	Memory address bus	137	PDT5	I/O	SWX access data bus
54	SMA14	O	Memory address bus	138	PDT4	I/O	SWX access data bus
55	SMA3	O	Memory address bus	139	PDT3	I/O	SWX access data bus
56	SMA13	O	Memory address bus	140	PDT2	I/O	SWX access data bus
57	SMA4	O	Memory address bus	141	PDT1	I/O	SWX access data bus
58	SMA12	O	Memory address bus	142	PDT0	I/O	SWX access data bus
59	SMA5	O	Memory address bus	143	VCA143		Power supply
60	GND60		Ground	144	GND144		Ground
61	VCC61		Power supply	145	PAD2	I	SWX access address bus
62	SMA11	O	Memory address bus	146	PAD1	I	SWX access address bus
63	SMA6	O	Memory address bus	147	PAD0	I	SWX access address bus
64	SMA10	O	Memory address bus	148	VCC148		Power supply
65	SMA7	O	Memory address bus	149	GND149		Ground
66	SMA9	O	Memory address bus	150	PCS	I	Chip select
67	SMA17	O	Memory address bus	151	PWR	I	write enable
68	SMA8	O	Memory address bus	152	PRD	I	read enable
69	SMA18	O	Memory address bus	153	RXD0	I	for Midi or TO-HOST
70	SMA19	O	Memory address bus	154	RXD1	I	for Midi or Key scan
71	SMA20	O	Memory address bus	155	SCLKI	I	EXT Clock
72	SMA21	O	Memory address bus	156	ADIN	I	A/D converter
73	SMA22	O	Memory address bus	157	ADLR	O	A/D converter LR clock
74	SMA23	O	Memory address bus	158	DO0	O	DAC
75	CMA20	O	Program address bus	159	DO1	O	DAC
76	CMA19	O	Program address bus	160	SYSCLK	O	1/2 clock
77	VCC77		Power supply	161	VCC161		Power supply
78	GND78	O	Ground	162	GND162		Ground
79	CMA18	O	Program address bus	163	WLCK	O	for DAC LR clock
80	CMA17	O	Program address bus	164	QCLK	O	1/12 clock
81	CMA5	O	Program address bus	165	BCLK	O	IIS-DAC clock
82	CMA6	O	Program address bus	166	SYI	I	Synch signal
83	CMA4	O	Program address bus	167	IRQ0	I	Interrupt request
84	CMA7	O	Program address bus	168	NMI	I	Interrupt request

IC BLOCK DIAGRAM

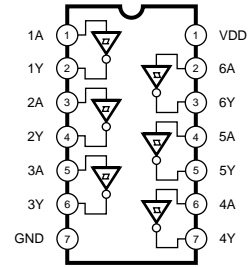
- **74HCU04DT** (XZ110A00)
Hex Inverter
DM: IC607



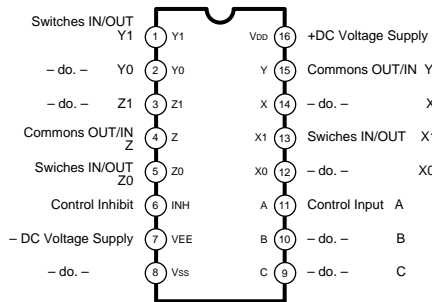
- **HD74LVC08FP** (XU720A00)
Quad 2 Input AND
DM: IC306



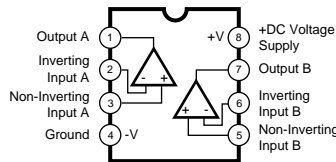
- **MM74HC14SJX** (XW104A00)
Hex Inverter
DM: IC702



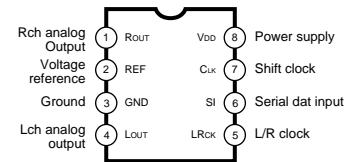
- **TC74HC4053AFT** (XV944A00)
Multiplexer/Demultiplexer
DM: IC701



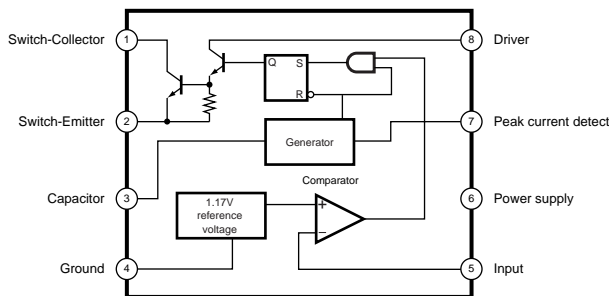
- **μPC4572G2-T1** (XF634A00)
NJM2904V(TE1) (XR532A00)
Dual Operational Amplifier
DM: IC502, 601-606



- **μPD6379AGR** (XR998A00)
D/A Converter
DM: IC501



- **M5291FP-600C** (XR858A00)
DC-DC Converter
DM: IC504

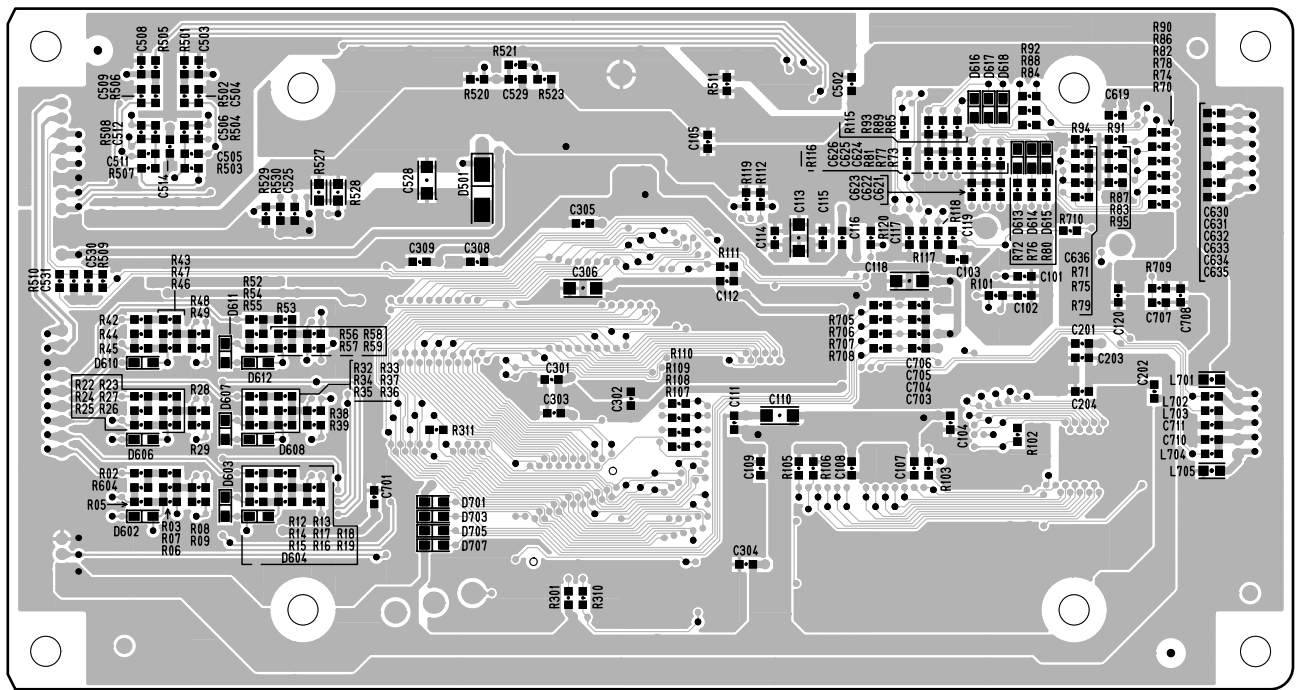
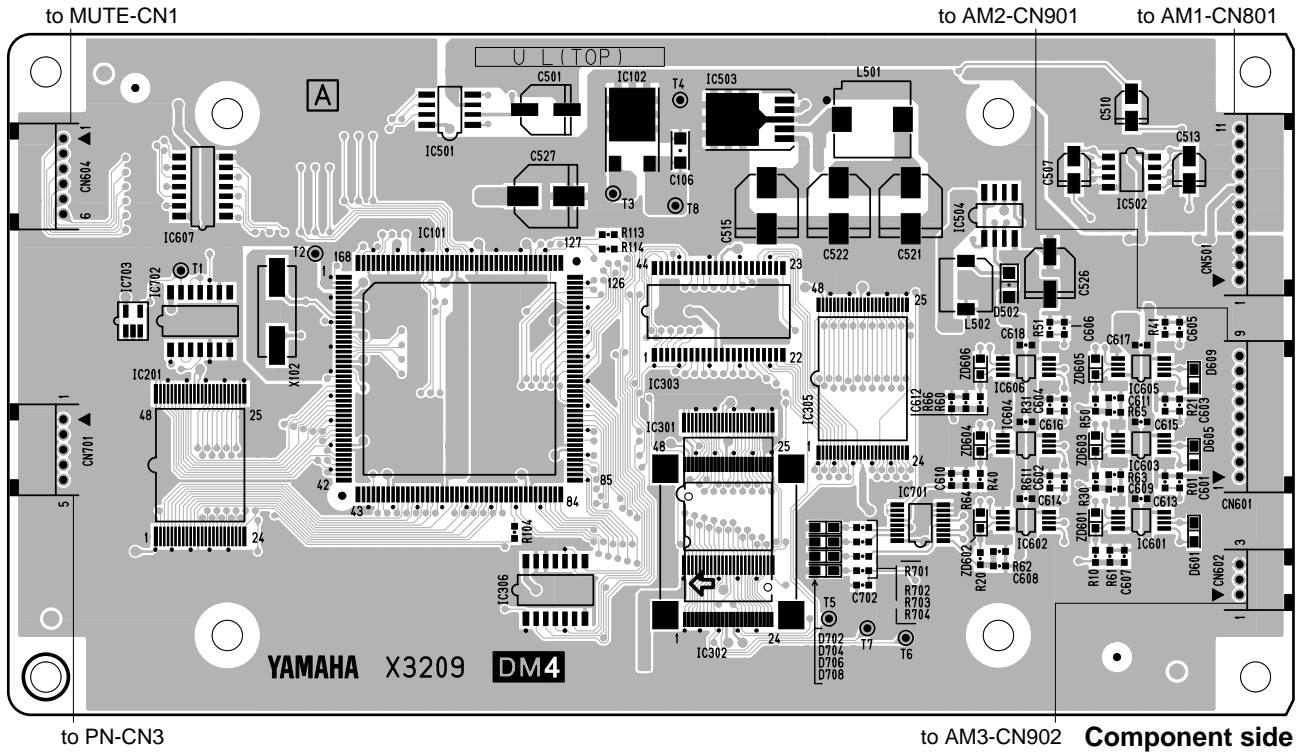


■ CIRCUIT BOARDS

AM-1 (X2281C0)	13	PN (X2282C0)	14/15
AM-2 (X2281C0)	13	MUTE 1/2 (X2284B0)	13
AM-3 (X2281C0)	13	MUTE 2/2 (X2284B0)	13
DM (X3209A0)	12		

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

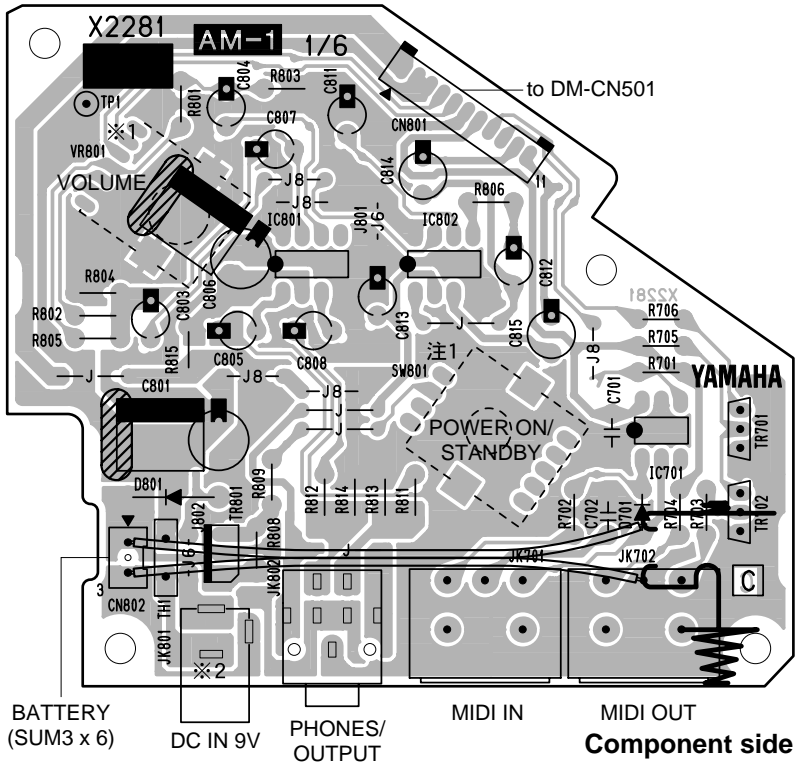
● DM Circuit Board



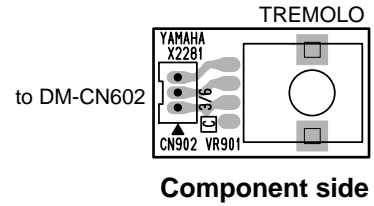
Pattern side

2NA-WA08980
(V847030.△)

● AM-1 Circuit Board



● AM-3 Circuit Board

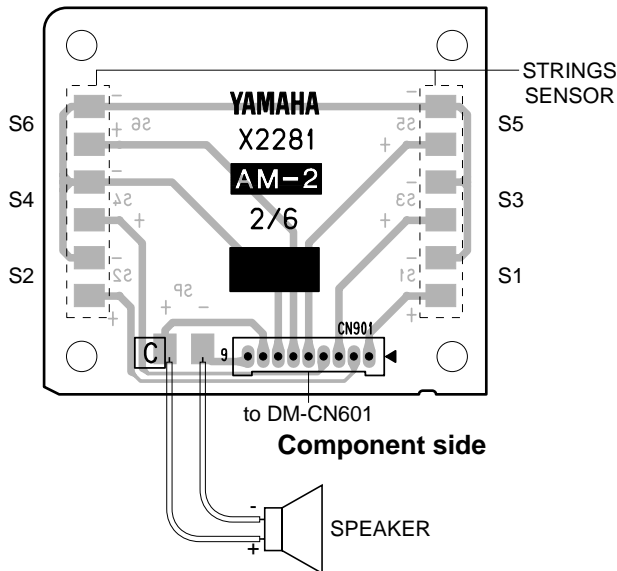


Component side

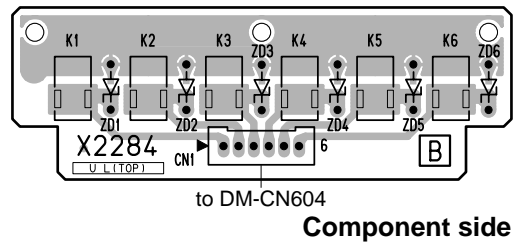
※1: VR801 and SW801 are mounted in pattern side.

※2: Do manual solder to JK801 after dip-soldering.

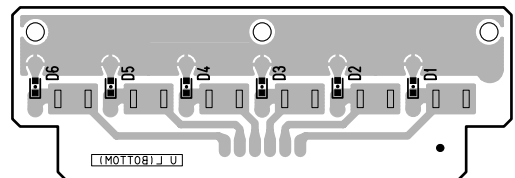
● AM-2 Circuit Board



● MUTE 1/2 Circuit Board

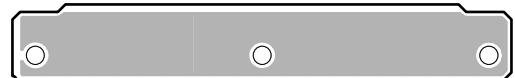


Component side



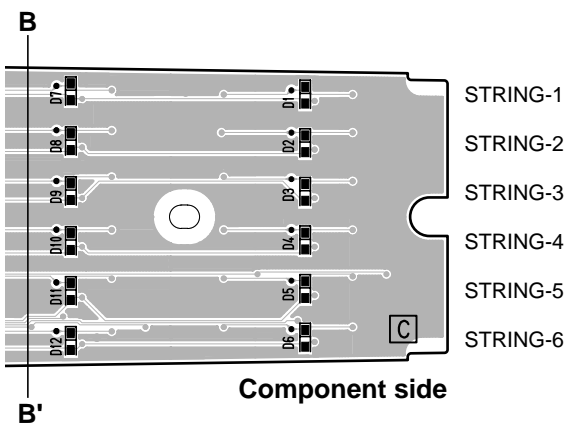
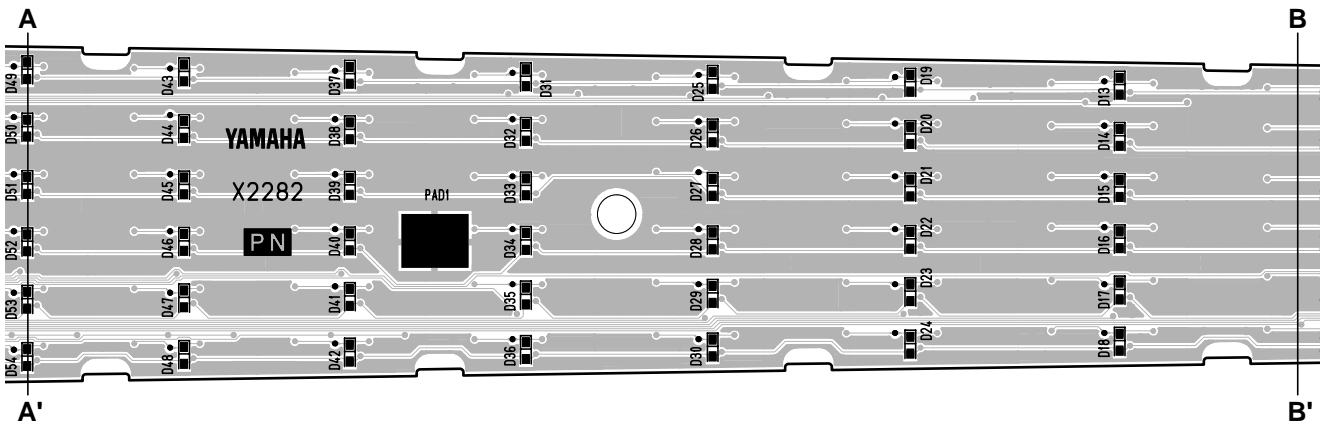
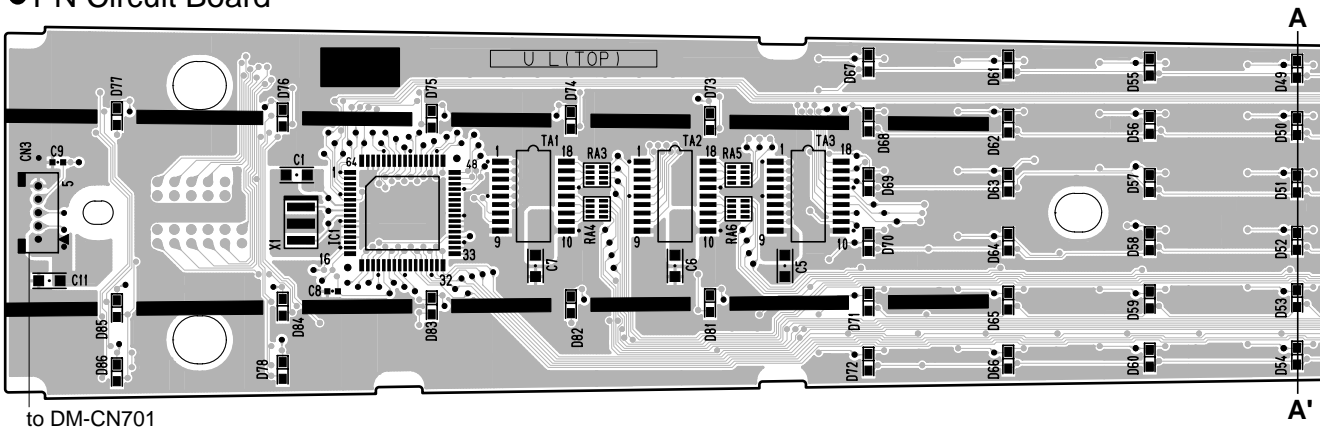
Pattern side

● MUTE 2/2 Circuit Board

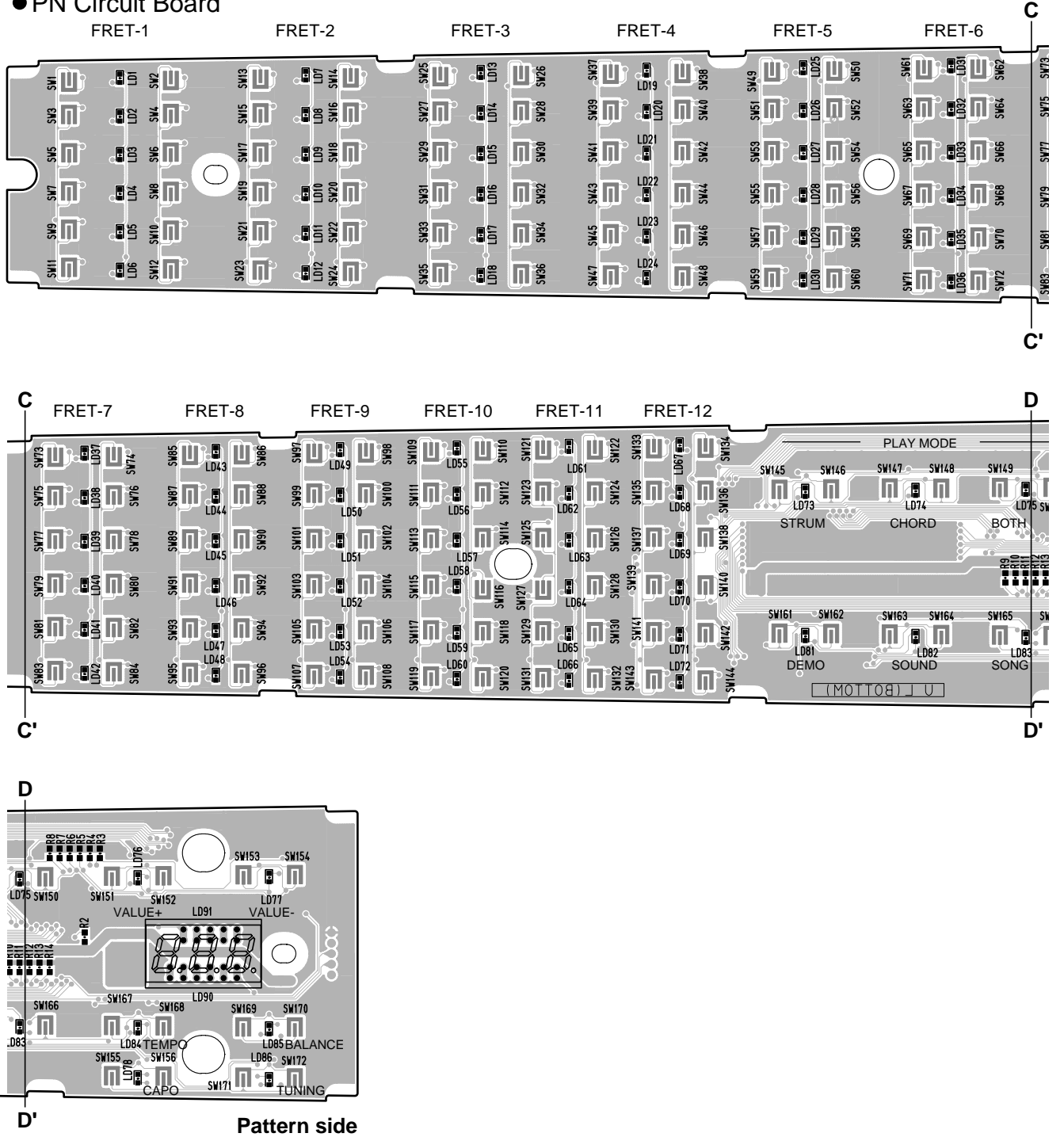


AM-1, AM-2, AM-3: 2NA-V861530
 MUTE 1/2, MUTE 2/2: 2NA-V938350

● PN Circuit Board



● PN Circuit Board



■ TEST PROGRAM

1. Preparation

PA-D09 (AC adaptor) is used.

Set the [MASTER VOLUME] to maximum.

Jigs: Frequency counter, level meter (with JIS-A filter), MIDI cable

Note) Connect a stereo plug to the [PHONES/OUTPUT] jack at 33 ohms.

Please refer to the Internet site below for information and the procedure for transferring data.

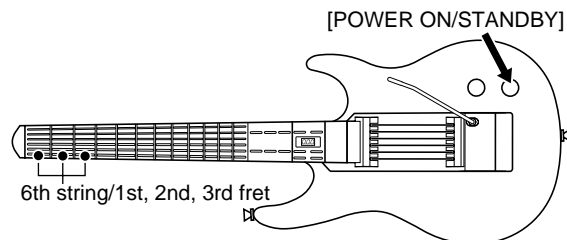
<http://www.yamahamusicsoft.com/ez-eg/>

* The UX16 USB-MIDI interface and song filer (download from the Internet site) are required.

2. How to enter the Test Mode

While pressing the 1st fret, 2nd fret and 3rd fret of 6th string, turn the [POWER ON/STANDBY] switch on.

When the test mode is activated, the sign “ *f 5 f* ” is indicated on the 7-seg. LED display.



3. Proceeding through the Test Program

1) Select the test item to be executed by pressing the [+] or [-] button.

(Use the [+] button to advance and the [-] button to return.)

2) Select the test item, then press the [STRUM] button to execute testing.

When the test result is OK, press the [STRUM] button and the currently completed test No. will be displayed. The device will then return to the test item selection mode.

* The dot will be added to the test No. display for the test item that has been completed. (Ex. *f 0 1 .*)

When the test result is NG, press the [DEMO] switch to return to the test items for selection.

4. Test items list

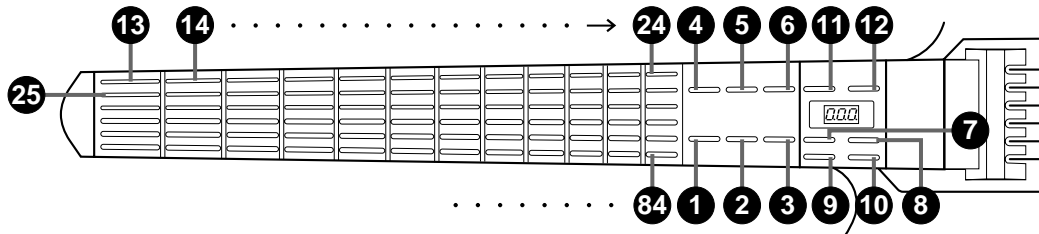
TEST No.	7-seg. LED for Each Test	Test Function and Judgment criteria
1	<i>f 0 1 . P2.4 / 8 10</i>	Displays the ROM version. ROM (Program, Wave) versions are displayed alternately on the LED.
2	<i>f 0 2 . P A S or E r r</i>	Check the ROMs. Checks all the ROMs that are connected to the CPU bus.
3	<i>f 0 3 . P A S or E r r</i>	Check the RAMs. Checks all the RAMs that are connected to the CPU bus.
4	<i>f 0 4 . P A S or E r r</i>	Check the WAVE ROMs. Checks the WAVE ROMs that are connected to the CPU bus.
6	<i>f 0 6 . P A S or E r r</i>	Check the FLASH ROMs. Checks the FLASH ROMs that are connected to the CPU bus. It takes about 3 seconds.
11	<i>f 1 1 . f 0 1</i>	Check the Sound Source (Autoscale). Outputs the sine wave from C2 to G4. Check the sound by hearing that there is not noise or abnormal sound.
13	<i>f 1 3</i>	Check the pitch. Connect the frequency counter to the [PHONES/OUTPUT] jack (either L or R). (less than 440.0 Hz +/- 1.76 Hz)
-		Decline quantity check of the volume. Connect the level meter to the [PHONES/OUTPUT] jack (L, R). Set the [MATER VOLUME] at MIN and measure. (33 ohm load) L, R: less than -70.0 dBm
14	<i>f 1 4</i>	Check the output level (R) (1 kHz). Connect the level meter to the [PHONES/OUTPUT] jack (L, R) and measure. (33 ohm load) L side: -8.0 dBm +/- 2 dB R side: -4.5 dBm +/- 2 dB Disconnect the [PHONES/OUTPUT] jack and then check that only the speakers create sound.
15	<i>f 1 5</i>	Check the output level (L) (1 kHz). Connect the level meter to the [PHONES/OUTPUT] jack (L, R) and measure. (33 ohm load) L side: -8.0 dBm +/- 2 dB R side: -45.0 dBm +/- 2 dB
19	<i>f 1 9</i>	Check the noise. Connect the level meter to the [PHONES/OUTPUT] jack (L, R) and measure. (33 ohm load) L, R: less than -75.0 dBm

TEST No.	7-seg. LED for Each Test		Test Function and Judgment criteria
20	<i>f20</i>	<i>PAS</i> or <i>Err</i>	Check the switches and the LEDs on the panel. Turn on the switches as shown on the LEDs in the sequence indicated in TABLE 1 (P.18). A sound is generated while the fret switch is on. (Without key stick) Press the [DEMO] switch to interrupt operation.
21	<i>f21</i>		Check that all the LEDs on the panel light up. Make sure that all LEDs on the panel (there are 12 button LEDs and 7-seg. LED) light up and that there are no major differences in their brightness.
25	<i>f25</i>		Check that all the fret LEDs light up. Make sure that the 12 LEDs (12 notes: octave) for the frets for each string from the 1st to the 6th light up and that there are no major differences in their brightness. Press [E5] (1st string, 12th fret) and then move to the next string. ----- All the fret LEDs will go out. Check that the all the fret LEDs go out when the [DEMO] switch is pressed.
30	<i>f30</i>	<i>PAS</i>	String check 1. Play the strings in sequence from the 1st string (the string from the row that lights up the 11th fret LED). Check that the level it was played is the maximum (the 1st fret for the string played lights up) and that the LED for 11th fret for the next row (2nd string) lights up. Then move to checking the 2nd string. (Then play the 3rd, 4th, 5th and 6th strings.) ----- String check 2. (Bar graph display from the fret LEDs.) Strum the strings several times (play the 1st through the 6th strings with one motion). Check that the peak value for each string played is displayed by LEDs. (The position of the LEDs lighting up will become more forcefully play as the strings approach the 1st fret.) Note that the if a string is not played for more than 0.8 seconds, the peak value is reset. Check that the position of the fret LEDs that light up for each string are grouped within three segments of each other when the 1st through 6th strings are strummed at approximately the same force. * Checks 1 and 2 are performed simultaneously.
33	<i>f33</i>	<i>PAS</i> or <i>Err</i>	Tremolo check. Attach the vibrato arm to the main body and then connect the MIDI cable to the MIDI IN and OUT jacks. Once the test has started, “ -P _d ” will be displayed in the 7-seg. LED. Press the vibrato arm and a C3 sound will be generated and the LED display will change to “ -P _U ”. If the vibrato arm is pulled and the inspection is OK, a C4 sound is generated and the LED display will change from “ -P _L ” to “ PAS ”.
36	<i>f36</i>	<i>PAS</i>	Mute check. While touching the ground plate with the left hand, gently touch the 1st through the 6th strings with the right hand (also test collectively by touching them simultaneously). Check that the 12 fret LEDs for the row corresponding to the strings touched come on.
37	<i>f37</i>	<i>PAS</i> or <i>Err</i>	Check the MIDI. After connecting the [MIDI IN] jack and [MIDI OUT] jack with a MIDI cable, execute the test. Check that the C4 note is output.
41	<i>f41</i>	<i>PAS</i> or <i>Err</i>	Check the ROMs. Checks all the ROMs that are connected to the CPU bus. It takes about 3 seconds.
42	<i>f42</i>	<i>PAS</i> or <i>Err</i>	Check the RAMs. Checks all the RAMs that are connected to the CPU bus. It takes about 3 seconds.
43	<i>f43</i>	<i>PAS</i> or <i>Err</i>	Check the WAVE ROMs. Checks the WAVE ROMs that are connected to the CPU bus. It takes about 15 seconds.
45	<i>f45</i>	<i>PAS</i> or <i>Err</i>	Check the FLASH ROMs. Checks the FLASH ROMs that are connected to the CPU bus. It takes about a minute.
48	<i>f48</i>		End the test mode. Exit from the test program when executing this test.

* NOTE: Time is required to complete the checks performed by test No. 41–45.

<TABLE1>

① DEMO	② SOUND	③ SONG	④ STRUM	⑤ CHORD	⑥ BOTH	⑦ TEMPO	⑧ BALANCE	⑨ CAPO
dE	Sud	Sn9	Str	Chd	bot	tPo	bl n	cAP
⑩ TUNING	⑪ -	⑫ +	⑬ 1st fret of 1st string	⑭ 2nd fret of 1st string	⑮ 12th fret of 1st string	⑯ 1st fret of 2nd string	⑰ 12th fret of 6th string	
tun	--	-+	1.0 1	1.0 2 ~	1.1 2	2.0 1 ~	6.1 2	



■ INSPECTION

(Preparation) PA-D09 (AC adaptor) is used. Set the [MASTER VOLUME] to maximum.

Jigs: Oscilloscope, voltmeter

Turn on the [POWER ON/STANDBY] switch.

- (1) Check the speaker wires.
Select SOUND No. 5 and then generate sound C3 (6th string, 8th fret). Check that there is no static and no other abnormalities with the sound.
- (2) MASTER VOLUME check.
Operate the [MASTER VOLUME] from its highest setting to its lowest setting. Check that there is no static and that the operation can be performed smoothly.
- (3) Check the sound source.
While pressing the [SOUND] button, use the [+] and [-] buttons to select the tones from No. 1 to No.5. Then at each tone, generate a sound for each string. Check that the tone changes for each No. and that there are no other abnormalities.
- (4) Pop noise check.
Connect an oscilloscope to the [PHONES/OUTPUT] jack and then turn the [POWER ON/STANDBY] switch on and off. Check that the pop noise is less than 1.0 Vp-p.
- (5) Battery operation check.
Insert a battery into the battery case. Then unplug the AC adapter from the DC-IN jack. Check that the unit performs normally by battery.
- (6) Battery charger check.
Plug the AC adapter into the DC-IN jack. Then measure the voltage of the battery terminal. Check that the main unit operates normally and that there is no voltage at the battery terminal.
- (7) Static check.
Select Sound No. 5 and play all strings (with the [MASTER VOLUME] set to maximum and all other switches at their default settings). Check that there is no static.
- (8) Check the levelness of the neck.
Place the instrument on a level surface and check for neck deformation. Make sure there is no obvious next deformation.
- (9) Check for foreign objects inside the main body.
With the power on, lift the unit up and then shake it up and down and from side to side. Check that the unit is clean and operating properly and that there is no foreign material inside the unit or the LED.
- (10) Visual inspection of the main body.
Visually inspect the condition of the entire unit including areas such as the neck switch section and the space between the fingerboard and the upper case.
Check that there are no scratches and that the unit is clean. Also check that the tops of the switches are aligned and that none of the switches is tilted or raised up. There should also be less than 0.5 mm of space between the fingerboard and the upper case.
- (11) Setting to factory settings.
Momentarily turn off the power supply. Then, while holding down E3 (6th string, 12th fret), turn the [POWER ON/STANDBY] switch on again.

Turn off the power supply to complete the inspection.

■ MIDI IMPLEMENTATION CHART

YAMAHA [Easy Guitar]
Model EZ-EG MIDI Implementation Chart

Date: 26-Nov-2002
Version: 1.0

Function...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1 - 6 x	1 - 16 *1 1 - 16 *1	
Mode Default Messages Altered	3 x *****	3 x x	
Note Number : True voice	28 - 88 *****	0 - 127 0 - 127	
Velocity Note ON Note OFF	o 9nH, v=1-127 o 9nH, v=0	o 9nH, v=1-127 o 9nH, v=0 or 8nH	
After Key's Touch Ch's	x x	x x	
Pitch Bend	o	o	
Control Change	0, 32 o 1 x 6, 38 x 7 o 10 o 11 x 64 x 71 x 72 x 73 x 74 x 84 o 91, 93, 94 x 96, 97 x 100, 101 x	o o	Bank Select Modulation wheel Data Entry Part Volume Pan Expression Sustain Harmonic Content Release Time Attack Time Brightness Portamento Cntrl Effect Depth RPN Inc,Dec RPN LSB,MSB
Prog Change : True #	o 0 - 127 *****	o 0 - 127	
System Exclusive	o *2	o *2	
Common : Song Pos. : Song Sel. : Tune	x x x	x x x	
System : Clock Real Time : Commands	o o *3	o o *3	
Aux :All Sound OFF :Reset All Cntrls :Local ON/OFF :All Notes OFF Mes- :Active Sense sages :Reset	x x x x o x	o (120,126,127) o (121) o (122) o (123-125) o x	

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

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

o: Yes
x: No

*1. EZ-EG functions as a 16-channel multi-timbral tone generator, and incoming data does not affect the panel voices or panel settings. However, the MIDI messages listed below do affect the panel voices and songs.

- MIDI Master Tuning

*2. Exclusive

<GM System ON>

F0H, 7EH, 7FH, 09H, 01H, F7H

- This message automatically restores all default settings for the instrument, with the exception of MIDI Master Tuning.

<MIDI Master Volume>

F0H, 7FH, 7FH, 04H, 01H, ll, mm, F7H

- This message allows the volume of all channels to be changed simultaneously (Universal System Exclusive).
- The values of “mm” is used for MIDI Master Tuning. (Values for “ll” are ignored.)

<MIDI Master Tuning>

F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, ll, cc, F7H

- This message simultaneously changes the tuning value of all channels.
- The values of “mm” and “ll” are used for MIDI Master Tuning.
- The default value of “mm” and “ll” are 08H and 00H, respectively. Any values can be used for “cc.”

<EZ-EG Native Parameter Change>

F0H, 43H, 7FH, 00H, 00H, ll, mm, nn, F7H

- The value which ll, mm and nn is Fuction ID, ctr 1 and ctr 2, respectively.

Transmitted	Recognized			Function ID	ctr 1	ctr 2
X	O	Clock	Internal Clock External Clock	00 00	01 01	00 7F
O	O	Fret Switch on Fret Switch off		01 02	str str	kno kno
O	O	Fret LED on Fret LED off		03 04	str str	kno kno
O	X	String Data		05	str	vel
O	X	Switch Data (Control)	[+]ON	06	00	7F
			[+]OFF	06	00	00
			[-]ON	06	01	7F
			[-]OFF	06	01	00
O	X	Switch Data (Enter)	[SOUND]ON	07	00	7F
			[SOUND]OFF	07	00	00
			[SONG]ON	07	01	7F
			[SONG]OFF	07	01	00

Note str: string number(see below)

vel: velocity of played note(00 is muted)

kno: MIDI note number(see below)

The value which is **function ID, ctr 1, ctr 2, str** and **kno** are hexadecimal form.

• **str (String number) and kno (Note number)**

Fret String (str)		Fret												
		0	1	2	3	4	5	6	7	8	9	10	11	12
1	01	40	41	42	43	44	45	46	47	48	49	4A	4B	4C
2	02	3B	3C	3D	3E	3	40	41	42	43	44	45	46	47
3	03	37	38	39	3A	F3B	3C	3D	3E	3F	40	41	42	43
4	04	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E
5	05	2D	2E	2F	30	31	32	33	34	35	36	37	38	39
6	06	28	29	2A	2B	2C	2D	2E	2F	30	31	32	33	34

*3. When the song is started, an FAH message is transmitted.

When song is stopped, an FCH message is transmitted. When the clock is set to External, both FAH (song start) and FCH(song stop) are recognized.

*4. Local ON/OFF

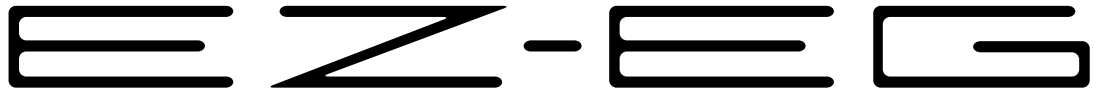
<Local ON> Bn, 7A, 7F

<Local OFF> Bn, 7A, 00

- Value for “n” is ignored

*5. Song data is not transmitted.

Easy Guitar



PARTS LIST


■ CONTENTS



OVERALL ASSEMBLY	2
STRINGS SENSOR UNIT	4
ELECTRICAL PARTS	6-11

Notes: DESTINATION ABBREVIATIONS

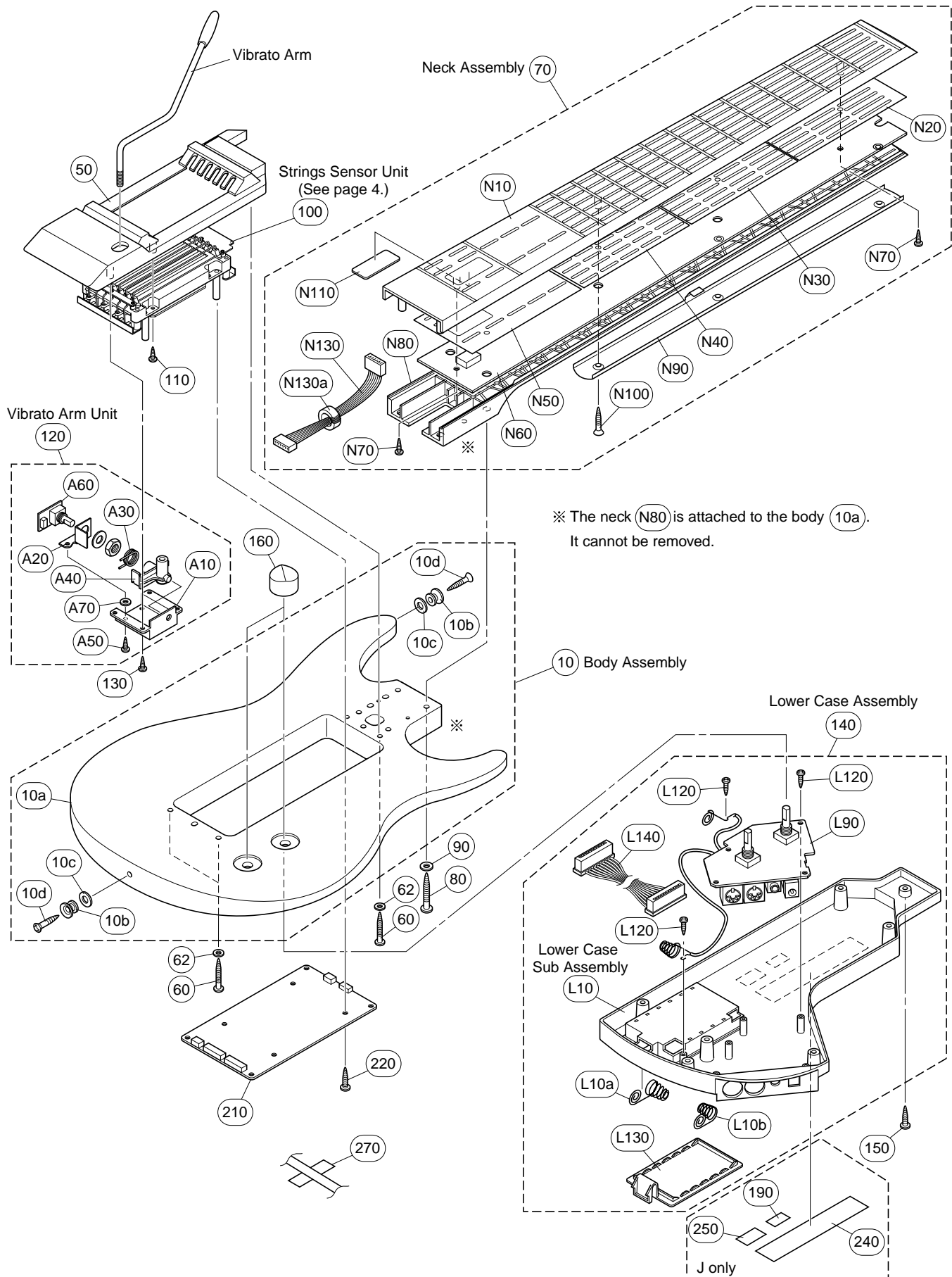
A: Australian model	M: South African model
B: British model	O: Chinese model
C: Canadian model	Q: South-east Asia model
D: German model	T: Taiwan model
E: European model	U: U.S.A. model
F: French model	V: General export model (110 V)
H: North European model	W: General export model (220 V)
I: Indonesian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

■ WARNING

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

- The numbers in “ QTY ” show quantities for each unit.
- The parts with “ - - ” in “ **PART NO.** ” are not available as spare parts.
- The mark “ } ” in the remarks column indicates that 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		EZ-EG		
	--	Overall Assembly		J (V851660)		
	--	Overall Assembly		U (WA53130)		
10	V9561200	Body Assembly				18
10a	--	Body		(V851670)		
10b	BB801510	End Pin Chrome			2	04
10c	VB793700	Felt			2	01
10d	EN230140	Oval Head Tapping Screw	3.0X25 CHROME		2	04
50	V8519900	Upper Case				07
60	V8529300	Bind Head Tapping Screw-P	3.0X30 MFZN2BL		4	01
62	V9501900	Flat Washer	3.2X10X1.0 MFZN2Y		4	01
70	V8521700	Neck Assembly				25
80	V8525500	Bind Head Tapping Screw-P	4.0X35 MFZN2BL		4	
90	ET500040	Flat Washer	4.0X10X0.8 MFZN2BL		4	01
100	V8523100	Strings Sensor Unit				16
110	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		4	01
120	V8524700	Vibrato Arm Unit				10
130	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		4	01
140	--	Lower Case Assembly		(V852750)		
150	V9401100	Pan Head Tapping Screw-1	3.5X12 MFZN2BL		7	01
160	V9342600	Knob		VOLUME, POWER ON/STANDBY	2	01
190	--	Label	JASRAC	J (V945800)		
210	AAX34830	Circuit Board	DM	J (V847030)		26
210	AAX43860	Circuit Board	DM	U (WA08980)		
220	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		4	01
240	--	Seal 1	27.4X131.1	J (V898030)		
250	--	Seal 2	17.5X31.7	J (V898040)		
270	--	Adhesive Tape	12X35	(WA85070)		
		ACCESSORIES				
	V8616100	Vibrato Arm				04
	V9547000	Pick				
	QC371700	Strap				
	WA161800	C-Clip			2	
	V8285200	AC Adaptor	PA-D09 J	J		05
	V8285300	AC Adaptor	PA-D09 UL	U		05
	V8683000	UX16		U		14
	X2289A00	CD-ROM	UX16	U		06
	V8521700	Neck Assembly				25
N10	V8518700	Fingerboard				08
N20	V8520400	Key Top Rubber A		1F-3F		05
N30	V8520600	Key Top Rubber B		4F-7F		05
N40	V8520700	Key Top Rubber C		8F-12F		05
N50	V8520900	Key Top Rubber D		Control buttons		05
N60	AAX34870	Circuit Board	PN			15
N70	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		2	01
N80	V8519300	Neck				05
N90	V8519700	Earth Plate				05
N100	VE009200	Flat Head Tapping Screw-P	3.0X16 MFZN2BL		3	01
N110	V8526800	LED Cover				03
N130	V9384000	Connector Assembly	PN 5P-200L			03
N130a	--	Ferrite Core	16X10X10	(V941160)		
	V8524700	Vibrato Arm Unit				10
A10	--	Base A		(V852500)		
A20	--	Base B		(V861620)		
A30	--	Spring		(V852520)		
A40	--	Arm Holder		(V852480)		
A50	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		2	01
A60	AAX34860	Circuit Board	AM-3			07
A70	03765370	Flat Washer	3.0X8X0.5 MFZN2Y		2	01
	--	Lower Case Assembly		(V852750)		
L10	WB698900	Lower Case Sub Assembly				
L10a	--	Spring Terminal C		(V958790)	3	
L10b	--	Spring Terminal D		(V958800)	2	
L90	AAX34840	Circuit Board	AM-1			17
L100	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		4	01
L120	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL		6	01

*: New Parts

NOTE: The parts list continues to the next page.

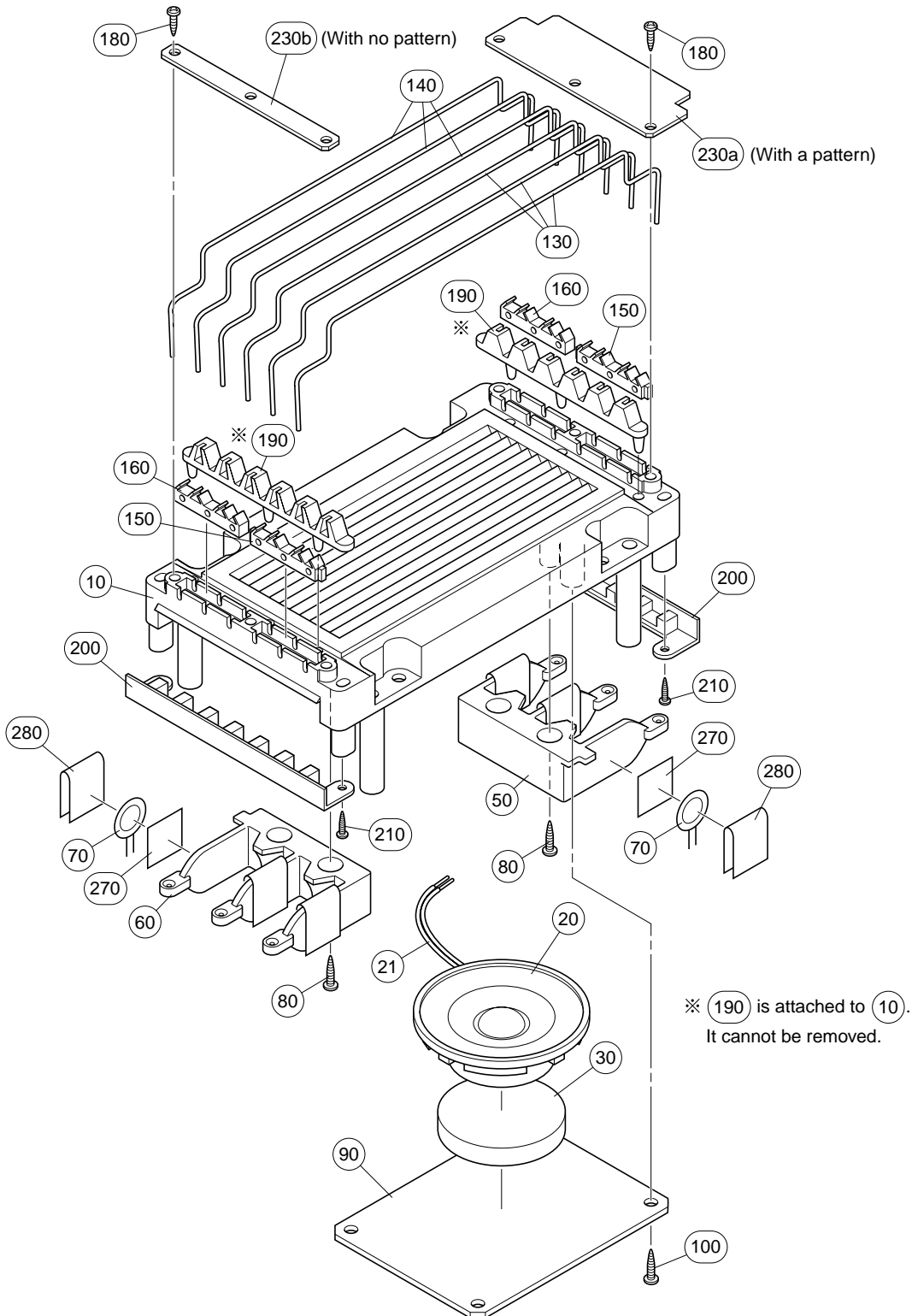
RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
L130	V8521800	Battery Cover				01
L140	--	Connector Assembly	C&C 11P 160L	(V938330)		

*: New Parts

RANK: Japan only

■ STRINGS SENSOR UNIT



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
10	V8523100	STRINGS SENSOR UNIT		EZ-EG		16
	--	Sensor Base		(V852350)		
20	X2279A00	Speaker	5cm			04
21	--	Speaker Wire	SP L=60 WHITE/RED		(V886700)	
30	V8615800	Spacer				03
50	--	Sensor Holder A			(V852320)	
60	--	Sensor Holder B			(V852330)	
70	--	Sensor	7BB12-9A6	Piezo	(V905470)	6
80	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL			4
90	AAX34850	Circuit Board	AM-2			01
100	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL			4
130	V8524500	String	1.0 GS			3
140	V8524600	String	1.2 GS			03
150	--	Bracket	1.0		(V852360)	2
160	--	Bracket	1.2		(V852740)	2
180	VG893800	Bind Head Tapping Screw-P	2.0X6 MFZN2BL			6
190	--	Vibration-proof Holder			(V852380)	2
200	--	Stopper			(V852390)	2
210	VG893800	Bind Head Tapping Screw-P	2.0X6 MFZN2BL			4
230	--	Circuit Board	MUTE		(V938350)	01
230a	AAX34880	Circuit Board	MUTE 1/2		(V938350)	07
230b	AAX39360	Circuit Board	MUTE 2/2	With no pattern	(V938350)	04
260	--	Grease	G-902S		(V946320)	
270	--	Adhesive Tape	15X50M		(V946340)	
280	--	Tape	15X25		(V946330)	6

*: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ELECTRICAL PARTS		EZ-EG		
	AA334840	Circuit Board	AM-1	(V611530)(X2281C0)		17
	AA334850	Circuit Board	AM-2	(V861530)(X2281C0)		07
	AA334860	Circuit Board	AM-3	(V861530)(X2281C0)		07
	AA334830	Circuit Board	DM	J (V847030)(X2280C0)		26
*	AA343860	Circuit Board	DM	U (WA08980)(X3209A0)		
	AA334870	Circuit Board	PN	(X2282C0)		15
	AA334880	Circuit Board	MUTE 1/2	(V938350)(X2284C0)		07
	AA339360	Circuit Board	MUTE 2/2	With no pattern (V938350)(X2284C0)		04
	AA334840	Circuit Board	AM-1	(X2281C0)		17
C0701	VD930900	Semiconductive Cera. Cap.	0.1000 25V M			01
C0702	UA354100	Mylar Capacitor	0.0100 50V J			01
C0801	UR838470	Electrolytic Cap.	470.00 16.0V			01
C0803	V4271100	Electrolytic Cap.	1.00 50.0V			
C0804	V4271100	Electrolytic Cap.	1.00 50.0V			
C0805	V6223200	Electrolytic Cap.	47.00 16.0V			01
C0806	UR838470	Electrolytic Cap.	470.00 16.0V			01
C0807	V4271100	Electrolytic Cap.	1.00 50.0V			
C0808	V6223200	Electrolytic Cap.	47.00 16.0V			01
C0811	V4271100	Electrolytic Cap.	1.00 50.0V			
C0812	V4271100	Electrolytic Cap.	1.00 50.0V			
C0813	V4270900	Electrolytic Cap.	10.00 25.0V			
C0814	UR828220	Electrolytic Cap.	220.00 10.0V			01
C0815	UR828220	Electrolytic Cap.	220.00 10.0V			01
CN801	VV067100	Connector Base Post	M2426XX 11P TE			01
D0701	VD631600	Diode	1SS133,176,HSS104			01
D0801	VV731400	Diode	2A02M			01
IC701	VG181900	Photo Coupler	PC-900V			03
IC801	XM217A00	IC	LA4525	POWER AMP. 0.65W 2CH		03
IC802	XM217A00	IC	LA4525	POWER AMP. 0.65W 2CH		03
J0000	--	Jumper Wire	0.55	(VA07890)		
-0014	--	Jumper Wire	0.55	(VA07890)		
J0801	--	Jumper Wire	0.55	(VA07890)		
J0802	--	Jumper Wire	0.55	(VA07890)		
JK701	VS739900	DIN Connector	5P TCS5076	MIDI IN		03
JK702	VS739900	DIN Connector	5P TCS5076	MIDI OUT		03
JK801	VS477200	Connector	DJ-0702-020	DC IN 9V		01
JK802	V9280100	Headphones Jack	JY-3535-01-070	PHONES/OUTPUT		02
R0701	HF456100	Carbon Resistor	1.0K 1/4 J			01
R0702	HF455220	Carbon Resistor	220.0 1/4 J			01
-0704	HF455220	Carbon Resistor	220.0 1/4 J			01
R0705	HF457100	Carbon Resistor	10.0K 1/4 J			01
R0706	HF457220	Carbon Resistor	22.0K 1/4 J			01
R0801	HF457220	Carbon Resistor	22K0K 1/4 J			01
R0802	HF457330	Carbon Resistor	33.0K 1/4 J			01
R0803	HF456330	Carbon Resistor	3.3K 1/4 J			01
R0804	HF456330	Carbon Resistor	3.3K 1/4 J			01
R0805	HF457330	Carbon Resistor	33.0K 1/4 J			01
R0806	HF457100	Carbon Resistor	10.0K 1/4 J			01
R0808	HF457470	Carbon Resistor	47.0K 1/4 J			01
R0809	HF456100	Carbon Resistor	1.0K 1/4 J			01
R0811	HF455100	Carbon Resistor	100.0 1/4 J			01
-0814	HF455100	Carbon Resistor	100.0 1/4 J			01
R0815	HF454220	Carbon Resistor	22.0 1/4 J			01
SW801	VI894000	Rotary Switch	SRBV	POWER ON/STANDBY		05
TH001	VV457600	Protector Switch	RUE090 0.90A 30V			02
TR701	IC174020	Transistor	2SC1740S R,S			01
TR702	IC174020	Transistor	2SC1740S R,S			01
TR801	VH481100	Transistor	2SB1416(TA) Q,R			01
VR801	V8614400	Rotary Variable Resistor	A10K RK14K12D0A4B	VOLUME		05
W3	--	Connector Assembly	BATTERY 3P	(V852640)		
W3a	V8522100	Spring Terminal A	(-)			03
W3b	V9401400	Spring Terminal B	(+)			01
W2	AA334850	Circuit Board	AM-2	(X2281C0)		07
	--	Connector Assembly	2426&1018 9P 180L	(V938310)		
VR901	AA334860	Circuit Board	AM-3	(X2281C0)		07
	V9353000	Rotary Variable Resistor	B 10.0K RK11K114	TREMOLO		03

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
W1	--	Connector Assembly	2426&1018 3P 100L	(V644610)		
	AAX34830	Circuit Board	DM	J (V847030)(X2280C0)		26
	AAX43860	Circuit Board	DM	U (WA08980)(X3209A0)		
C0101	UX061270	Ceramic Capacitor (chip)	27P 50V J			
C0102	UX061270	Ceramic Capacitor (chip)	27P 50V J			
C0103	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0105	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0106	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0107	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0109	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0110	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0111	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0112	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0113	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0114	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0117	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0118	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0119	UX145100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0120	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0201	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0202	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0203	UX063100	Ceramic Capacitor (chip)	1000P 50V K			01
C0204	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0301	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0305	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0306	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0308	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0309	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0501	UF037470	Electrolytic Cap. (chip)	47 16V			01
C0502	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0503	UX063220	Ceramic Capacitor (chip)	2200P 50V K			01
C0504	UX062330	Ceramic Capacitor (chip)	330P 50V J			
C0505	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0506	UX063220	Ceramic Capacitor (chip)	2200P 50V K			01
C0507	UF066100	Electrolytic Cap. (chip)	1 50V			01
C0508	UX063220	Ceramic Capacitor (chip)	2200P 50V K			01
C0509	UX062330	Ceramic Capacitor (chip)	330P 50V J			
C0510	UF037100	Electrolytic Cap. (chip)	10 16V			01
C0511	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0512	UX063220	Ceramic Capacitor (chip)	2200P 50V K			01
C0513	UF066100	Electrolytic Cap. (chip)	1 50V			01
C0514	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0515	UF148100	Electrolytic Cap. (chip)	100 25V UUR1E1			01
C0521	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C0522	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C0525	UX062820	Ceramic Capacitor (chip)	820P 50V K			01
C0526	UF037470	Electrolytic Cap. (chip)	47 16V			01
C0527	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C0528	V4297100	Monolithic Ceramic Cap.	1.000 16V K			01
C0529	UX063220	Ceramic Capacitor (chip)	2200P 50V K			01
C0530	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0531	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0601	UX062330	Ceramic Capacitor (chip)	330P 50V J			
-0606	UX062330	Ceramic Capacitor (chip)	330P 50V J			
C0607	UX135330	Ceramic Capacitor (chip)	0.3300 16V Z			01
-0612	UX135330	Ceramic Capacitor (chip)	0.3300 16V Z			01
C0613	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0619	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0621	UX135330	Ceramic Capacitor (chip)	0.3300 16V Z			01
-0626	UX135330	Ceramic Capacitor (chip)	0.3300 16V Z			01
C0630	V9760900	Varistor (chip)	VCM18RN260DS1L	J		
-0635	V9760900	Varistor (chip)	VCM18RN260DS1L	J		
C0636	UX135330	Ceramic Capacitor (chip)	0.3300 16V Z			01
C0701	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
-0703	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0704	UX062330	Ceramic Capacitor (chip)	330P 50V J			
-0706	UX062330	Ceramic Capacitor (chip)	330P 50V J			
C0707	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0708	UX064100	Ceramic Capacitor (chip)	0.0100 50V K			01

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C0711	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
CN501	VV068500	Connector Base Post	M2426XXR 11P SE			
CN601	VV068300	Connector Base Post	M2426XXR 9P SE			01
CN602	VV067700	Connector Base Post	M2426XXR 3P SE			01
CN604	VV068000	Connector Base Post	M2426XXR 6P SE			01
CN701	VV067900	Connector Base Post	M2426XXR 5P SE			
D0501	VZ060500	Diode	SFPB-62V			01
D0502	VB493900	Diode	MA221			01
D0601	VV220700	Diode	RB501V-40			01
-0612	VV220700	Diode	RB501V-40			01
D0613	VV617300	Diode	RB751V-40 TE17			01
-0618	VV617300	Diode	RB751V-40 TE17			01
D0701	VV617300	Diode	RB751V-40 TE17			01
-0708	VV617300	Diode	RB751V-40 TE17			01
IC101	XU947C00	IC	HG73C205AFD	SWX00B		09
IC102	XS516A00	IC	UPC2933T-E1	REGULATOR +3.3V		03
IC102	X0638A00	IC	UPC2933AT-E1			03
IC201	X2363100	IC	MX23L3211TC-10	MASK ROM 16M WAVE		08
IC301	X2531300	IC	MX23L1610TC-10	J MASK ROM 16M PROGRAM		
IC302	X4181A00	IC	MR27V1602E	U P2ROM 16M PROGRAM		
IC303	X2343A00	IC	CY62136VLL-70ZIT	SRAM 2M(128KX16)		08
IC305	X2310A00	IC	MX29LV400BTC-70	FRASH 4M(256KX16)		06
IC306	XU720A00	IC	HD74LVC08FP	AND		01
IC501	XR998A00	IC	UPD6379AGR	DAC		04
IC502	XF634A00	IC	UPC4572G2-T1	OP AMP		02
IC503	XR404A00	IC	PQ1CZ1T	DC-DC CONVERTER		05
IC504	XR858A00	IC	M5291FP-600C	DC-DC CONVERTER		03
IC601	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
-606	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
IC607	XZ110A00	IC	74HCU04DT	INVERTER		01
IC701	XV944A00	IC	TC74HC4053AFT	MULTIPLEXER		03
IC702	XW104A00	IC	MM74HC14SJX	INVERTER		01
IC703	X3048A00	IC	PST596DNR	SYSTEM RESET		02
L0501	V8589900	Choke Coil	150U SLF10145T-151			02
L0502	V8589700	Choke Coil	330U SLF7045T-331M			02
L0701	VL139600	Chip Solid Inductance	BLM21B050SPT 5ohm			01
L0702	RG005220	Carbon Resistor	220 0.1 J			
L0703	VY656700	Chip Inductance	600U BK1608HS601			01
L0704	VY656700	Chip Inductance	600U BK1608HS601			01
L0705	VL139600	Chip Solid Inductance	BLM21B050SPT 5ohm			01
R0001	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0002	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0003	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0005	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0007	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0008	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0009	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0010	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0012	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0017	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0018	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0019	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0020	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0021	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0022	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0027	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0028	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0029	RG008390	Carbon Resistor (chip)	390K 0.1 J			
R0030	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0031	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0032	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0037	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0038	RG008470	Carbon Resistor (chip)	470K 0.1 J			
R0039	RG008470	Carbon Resistor (chip)	470K 0.1 J			
R0040	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0041	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0042	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0047	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0048	RG008470	Carbon Resistor (chip)	470K 0.1 J			
R0049	RG008470	Carbon Resistor (chip)	470K 0.1 J			

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0050	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0051	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0052	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0057	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0058	RG008470	Carbon Resistor (chip)	470K 0.1 J			
R0059	RG008470	Carbon Resistor (chip)	470K 0.1 J			
R0060	RG006560	Carbon Resistor (chip)	5.6K 0.1 J			
R0061	RG008100	Carbon Resistor (chip)	100K 0.1 J			
-0066	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0070	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0071	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0072	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0073	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0074	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0075	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0076	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0077	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0078	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0079	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0080	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0081	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0082	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0083	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0084	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0085	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0086	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0087	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0088	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0089	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0090	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0091	RG009990	Carbon Resistor (chip)	10M 0.1 J			01
R0092	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0093	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0094	RG006390	Carbon Resistor (chip)	3.9K 0.1 J			
R0095	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0101	RG005220	Carbon Resistor (chip)	220 0.1 J			
R0102	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0103	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0104	RG004100	Carbon Resistor (chip)	10 0.1 J			
R0105	RG007470	Carbon Resistor (chip)	47K 0.1 J			
R0106	RG007470	Carbon Resistor (chip)	47K 0.1 J			
R0107	RG004470	Carbon Resistor (chip)	47 0.1 J			
-0110	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0111	RG007470	Carbon Resistor (chip)	47K 0.1 J			
R0112	RG007470	Carbon Resistor (chip)	47K 0.1 J			
R0113	RG004100	Carbon Resistor (chip)	10 0.1 J			
R0114	RG004100	Carbon Resistor (chip)	10 0.1 J			
R0115	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0116	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0117	RG007470	Carbon Resistor (chip)	47K 0.1 J			
-0120	RG007470	Carbon Resistor (chip)	47K 0.1 J			
R0301	RG006470	Carbon Resistor (chip)	4.7K 0.1 J			
R0310	RG000000	Carbon Resistor (chip)	0 0.1 J			
R0311	RG000000	Carbon Resistor (chip)	0 0.1 J			
R0501	RG006220	Carbon Resistor (chip)	2.2K 0.1 J			
R0502	RG007220	Carbon Resistor (chip)	22K 0.1 J			
-0504	RG007220	Carbon Resistor (chip)	22K 0.1 J			
R0505	RG006220	Carbon Resistor (chip)	2.2K 0.1 J			
R0506	RG007220	Carbon Resistor (chip)	22K 0.1 J			
-0508	RG007220	Carbon Resistor (chip)	22K 0.1 J			
R0509	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0510	RG004470	Carbon Resistor (chip)	47 0.1 J			
R0511	RG004100	Carbon Resistor (chip)	10 0.1 J			
R0520	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			
R0521	RG005270	Carbon Resistor (chip)	270 0.1 J			
R0523	RG006270	Carbon Resistor (chip)	2.7K 0.1 J			
R0527	RD253100	Carbon Resistor (chip)	1.0 0.1 J			01
R0528	RD253100	Carbon Resistor (chip)	1.0 0.1 J			01
R0529	RG006330	Carbon Resistor (chip)	3.3K 0.1 J			
R0530	RG006100	Carbon Resistor (chip)	1.0K 0.1 J			

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R0604	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0611	RG008100	Carbon Resistor (chip)	100K 0.1 J			
R0701	RG006470	Carbon Resistor (chip)	4.7K 0.1 J			
-0704	RG006470	Carbon Resistor (chip)	4.7K 0.1 J			
R0705	RG005680	Carbon Resistor (chip)	680 0.1 J			
-0708	RG005680	Carbon Resistor (chip)	680 0.1 J			
R0709	RG007100	Carbon Resistor (chip)	10K 0.1 J			
R0710	RG005220	Carbon Resistor (chip)	220 0.1 J			
X0102	VZ703600	Quartz Crystal Unit	8.4672MHz SMD-49			03
ZD601	VU170900	Zener Diode	UDZ 2.0BTE-17 2.0V			01
-606	VU170900	Zener Diode	UDZ 2.0BTE-17 2.0V			01
	AAX34870	Circuit Board	PN	(X2282C0)		15
C0001	VV020700	Monolithic Ceramic Cap.	10.000 10V K			01
C0005	VV020700	Monolithic Ceramic Cap.	10.000 10V K			01
-0007	VV020700	Monolithic Ceramic Cap.	10.000 10V K			01
C0008	UX145100	Ceramic Capacitor (chip)	0.0100 50V K			01
C0009	UX062100	Ceramic Capacitor (chip)	100P 50V J			01
C0011	VV020700	Monolithic Ceramic Cap.	10.000 10V K			01
CN003	VV066500	Connector Base Post	M2426XX 5P TE			01
D0001	VT332900	Diode	1SS355 TE-17			01
-0078	VT332900	Diode	1SS355 TE-17			01
D0081	VT332900	Diode	1SS355 TE-17			01
-0086	VT332900	Diode	1SS355 TE-17			01
IC001	XS711200	IC	MN101C027YB	CPU		06
LD001	V8573500	LED	KPH-1608SRC-PRV	1F-1Str		01
LD002	V8573500	LED	KPH-1608SRC-PRV	1F-2Str		01
LD003	V8573500	LED	KPH-1608SRC-PRV	1F-3Str		01
LD004	V8573500	LED	KPH-1608SRC-PRV	1F-4Str		01
LD005	V8573500	LED	KPH-1608SRC-PRV	1F-5Str		01
LD006	V8573500	LED	KPH-1608SRC-PRV	1F-6Str		01
LD007	V8573500	LED	KPH-1608SRC-PRV	2F-1Str		01
LD008	V8573500	LED	KPH-1608SRC-PRV	2F-2Str		01
LD009	V8573500	LED	KPH-1608SRC-PRV	2F-3Str		01
LD010	V8573500	LED	KPH-1608SRC-PRV	2F-4Str		01
LD011	V8573500	LED	KPH-1608SRC-PRV	2F-5Str		01
LD012	V8573500	LED	KPH-1608SRC-PRV	2F-6Str		01
LD013	V8573500	LED	KPH-1608SRC-PRV	3F-1Str		01
LD014	V8573500	LED	KPH-1608SRC-PRV	3F-2Str		01
LD015	V8573500	LED	KPH-1608SRC-PRV	3F-3Str		01
LD016	V8573500	LED	KPH-1608SRC-PRV	3F-4Str		01
LD017	V8573500	LED	KPH-1608SRC-PRV	3F-5Str		01
LD018	V8573500	LED	KPH-1608SRC-PRV	3F-6Str		01
LD019	V8573500	LED	KPH-1608SRC-PRV	4F-1Str		01
LD020	V8573500	LED	KPH-1608SRC-PRV	4F-2Str		01
LD021	V8573500	LED	KPH-1608SRC-PRV	4F-3Str		01
LD022	V8573500	LED	KPH-1608SRC-PRV	4F-4Str		01
LD023	V8573500	LED	KPH-1608SRC-PRV	4F-5Str		01
LD024	V8573500	LED	KPH-1608SRC-PRV	4F-6Str		01
LD025	V8573500	LED	KPH-1608SRC-PRV	5F-1Str		01
LD026	V8573500	LED	KPH-1608SRC-PRV	5F-2Str		01
LD027	V8573500	LED	KPH-1608SRC-PRV	5F-3Str		01
LD028	V8573500	LED	KPH-1608SRC-PRV	5F-4Str		01
LD029	V8573500	LED	KPH-1608SRC-PRV	5F-5Str		01
LD030	V8573500	LED	KPH-1608SRC-PRV	5F-6Str		01
LD031	V8573500	LED	KPH-1608SRC-PRV	6F-1Str		01
LD032	V8573500	LED	KPH-1608SRC-PRV	6F-2Str		01
LD033	V8573500	LED	KPH-1608SRC-PRV	6F-3Str		01
LD034	V8573500	LED	KPH-1608SRC-PRV	6F-4Str		01
LD035	V8573500	LED	KPH-1608SRC-PRV	6F-5Str		01
LD036	V8573500	LED	KPH-1608SRC-PRV	6F-6Str		01
LD037	V8573500	LED	KPH-1608SRC-PRV	7F-1Str		01
LD038	V8573500	LED	KPH-1608SRC-PRV	7F-2Str		01
LD039	V8573500	LED	KPH-1608SRC-PRV	7F-3Str		01
LD040	V8573500	LED	KPH-1608SRC-PRV	7F-4Str		01
LD041	V8573500	LED	KPH-1608SRC-PRV	7F-5Str		01
LD042	V8573500	LED	KPH-1608SRC-PRV	7F-6Str		01
LD043	V8573500	LED	KPH-1608SRC-PRV	8F-1Str		01
LD044	V8573500	LED	KPH-1608SRC-PRV	8F-2Str		01
LD045	V8573500	LED	KPH-1608SRC-PRV	8F-3Str		01

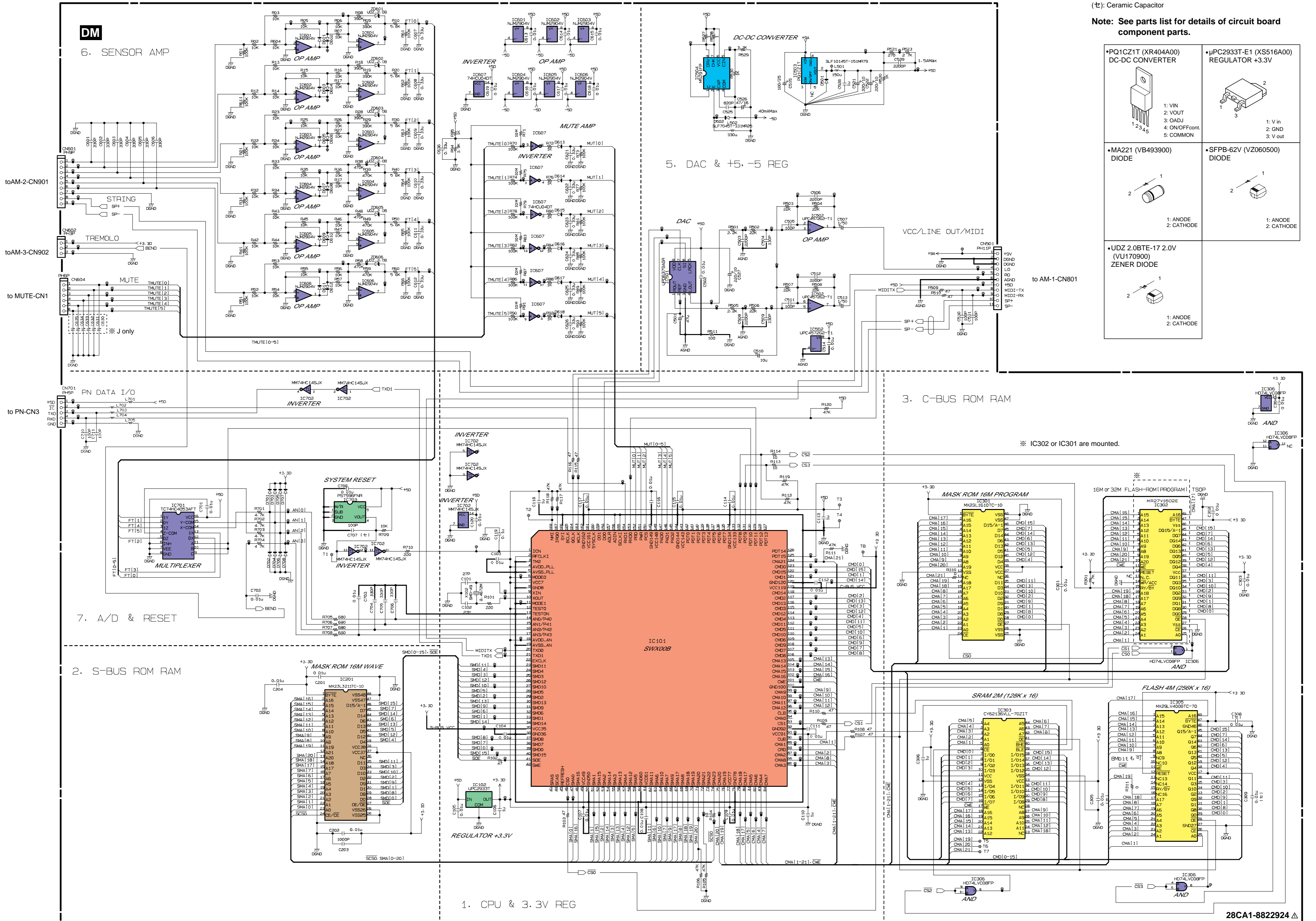
*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD046	V8573500	LED	KPH-1608SRC-PRV	8F-4Str		01
LD047	V8573500	LED	KPH-1608SRC-PRV	8F-5Str		01
LD048	V8573500	LED	KPH-1608SRC-PRV	8F-6Str		01
LD049	V8573500	LED	KPH-1608SRC-PRV	9F-1Str		01
LD050	V8573500	LED	KPH-1608SRC-PRV	9F-2Str		01
LD051	V8573500	LED	KPH-1608SRC-PRV	9F-3Str		01
LD052	V8573500	LED	KPH-1608SRC-PRV	9F-4Str		01
LD053	V8573500	LED	KPH-1608SRC-PRV	9F-5Str		01
LD054	V8573500	LED	KPH-1608SRC-PRV	9F-6Str		01
LD055	V8573500	LED	KPH-1608SRC-PRV	10F-1Str		01
LD056	V8573500	LED	KPH-1608SRC-PRV	10F-2Str		01
LD057	V8573500	LED	KPH-1608SRC-PRV	10F-3Str		01
LD058	V8573500	LED	KPH-1608SRC-PRV	10F-4Str		01
LD059	V8573500	LED	KPH-1608SRC-PRV	10F-5Str		01
LD060	V8573500	LED	KPH-1608SRC-PRV	10F-6Str		01
LD061	V8573500	LED	KPH-1608SRC-PRV	11F-1Str		01
LD062	V8573500	LED	KPH-1608SRC-PRV	11F-2Str		01
LD063	V8573500	LED	KPH-1608SRC-PRV	11F-3Str		01
LD064	V8573500	LED	KPH-1608SRC-PRV	11F-4Str		01
LD065	V8573500	LED	KPH-1608SRC-PRV	11F-5Str		01
LD066	V8573500	LED	KPH-1608SRC-PRV	11F-6Str		01
LD067	V8573500	LED	KPH-1608SRC-PRV	12F-1Str		01
LD068	V8573500	LED	KPH-1608SRC-PRV	12F-2Str		01
LD069	V8573500	LED	KPH-1608SRC-PRV	12F-3Str		01
LD070	V8573500	LED	KPH-1608SRC-PRV	12F-4Str		01
LD071	V8573500	LED	KPH-1608SRC-PRV	12F-5Str		01
LD072	V8573500	LED	KPH-1608SRC-PRV	12F-6Str		01
LD073	V8573500	LED	KPH-1608SRC-PRV	STRUM <PLAY MODE>		01
LD074	V8573500	LED	KPH-1608SRC-PRV	CHORD <PLAY MODE>		01
LD075	V8573500	LED	KPH-1608SRC-PRV	BOTH <PLAY MODE>		01
LD078	V8573500	LED	KPH-1608SRC-PRV	CAPO		01
LD081	V8573500	LED	KPH-1608SRC-PRV	DEMO		01
LD082	V8573500	LED	KPH-1608SRC-PRV	SOUND		01
LD083	V8573500	LED	KPH-1608SRC-PRV	SONG		01
LD084	V8573500	LED	KPH-1608SRC-PRV	TEMPO		01
LD085	V8573500	LED	KPH-1608SRC-PRV	BALANCE		01
LD086	V8573500	LED	KPH-1608SRC-PRV	TUNING		01
LD090	V9366300	LED Display	LB-303VK	7-seg. Display		07
R0002	RG000000	Carbon Resistor (chip)	0 0.1 J			
R0003	RG007100	Carbon Resistor (chip)	10K 0.1 J			
-0014	RG007100	Carbon Resistor (chip)	10K 0.1 J			
RA003	RE045100	Resistor Array	100X4			01
-006	RE045100	Resistor Array	100X4			01
TA001	V7723400	Transistor Array	TD62381F(EL)			04
TA002	V7723400	Transistor Array	TD62381F(EL)			04
TA003	V8566600	Transistor Array	TD62785F(EL)			
X0001	VY681200	Ceramic Resonator	8MHz CSTCC8.00MG			01
K1	AAX34880	Circuit Board	MUTE 1/2	(V938350)(X2284C0)		07
--	--	Contact		(V928710)		
-6	--	Contact		(V928710)		
W1	--	Connector Assembly	2426&1018 6P 60L	(V938320)		
	AAX39360	Circuit Board	MUTE 2/2	With no pattern (V938350)(X2284C0)		04
	X2279A00	Speaker	5cm			04
	--	Sensor	7BB12-9A6	Poezo (V905470)	6	

*: New Parts

RANK: Japan only



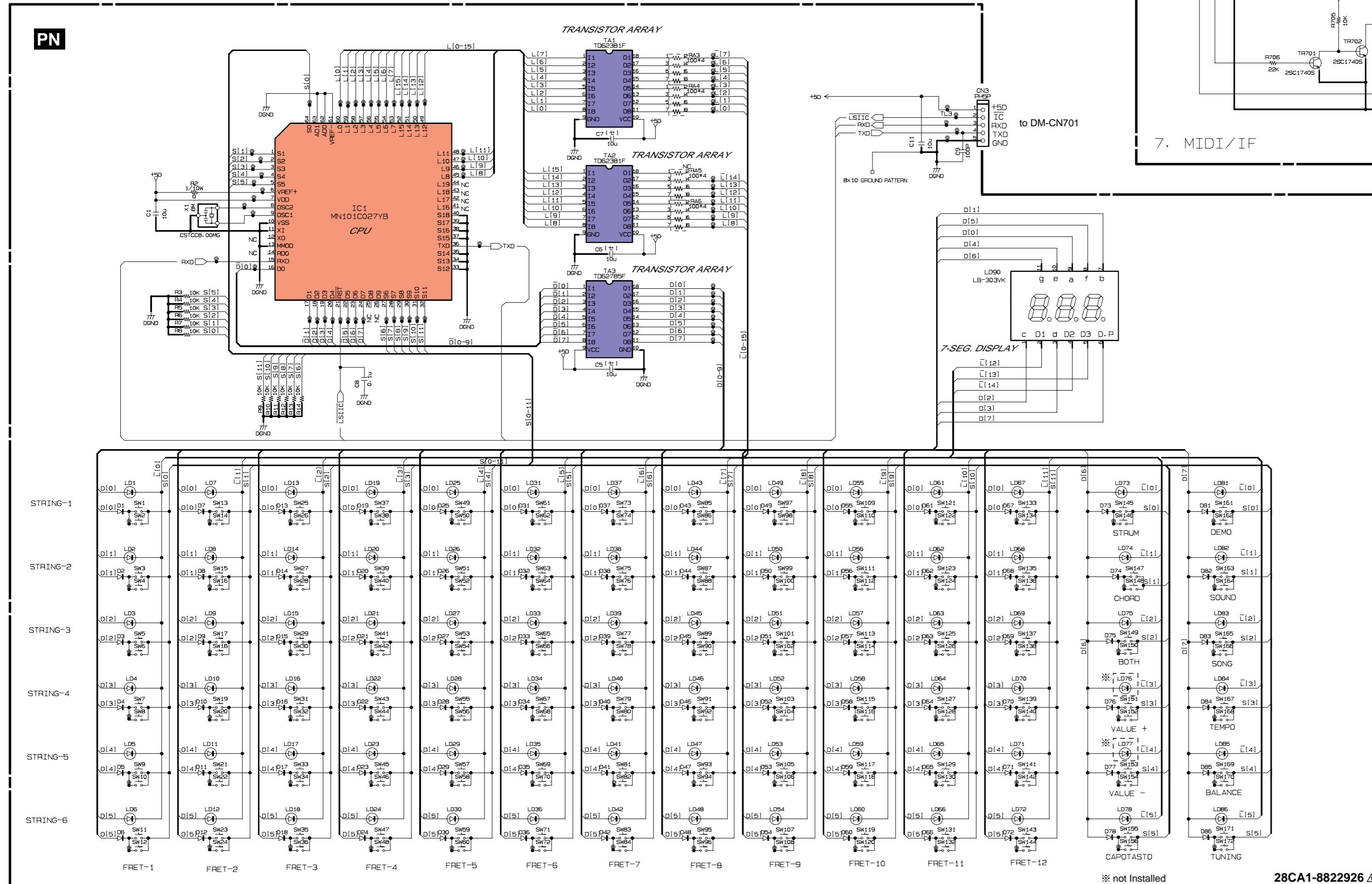
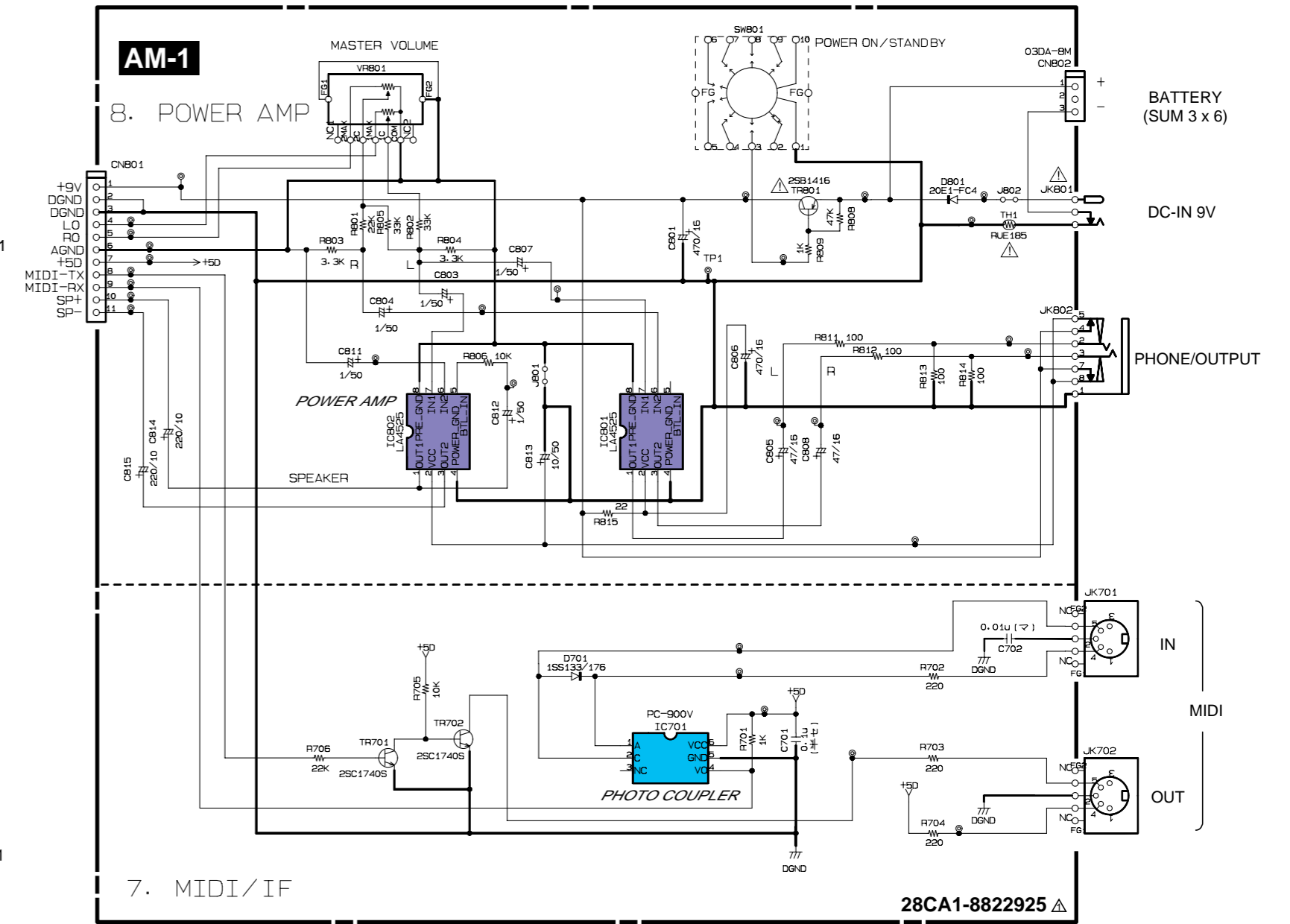
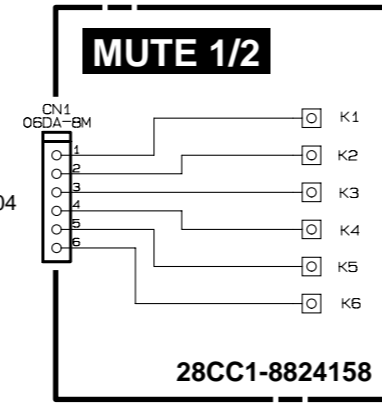
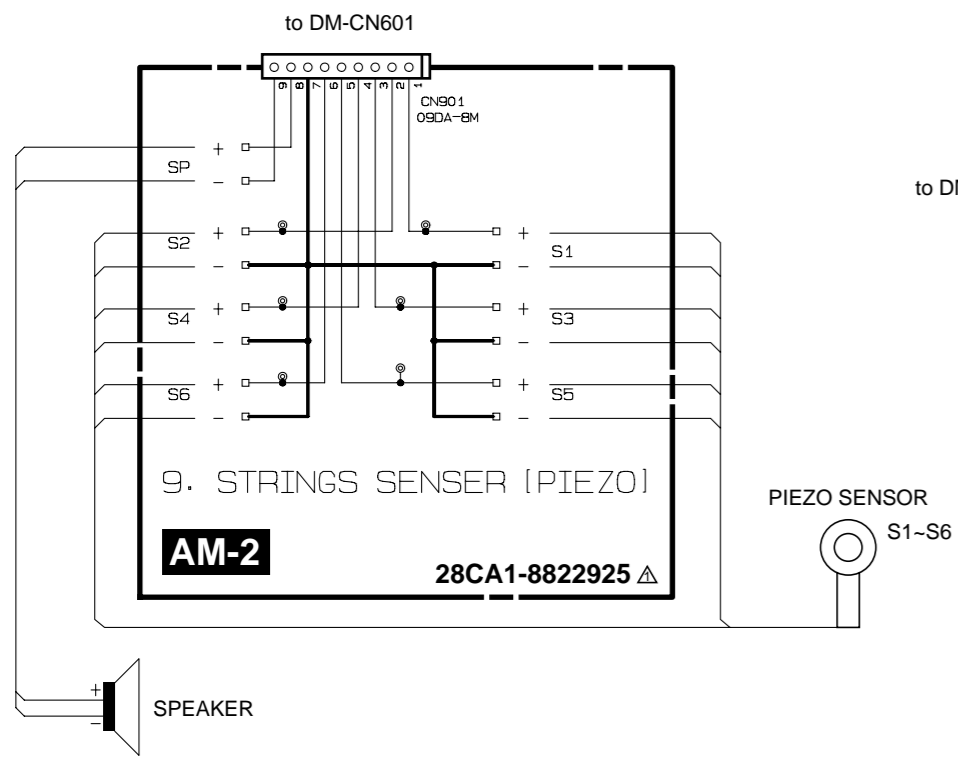
(τ): Ceramic Capacitor

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

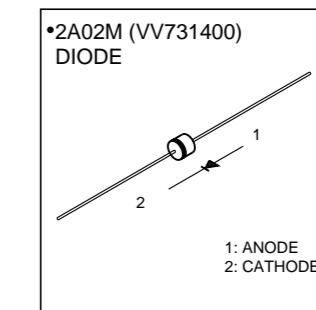
PQ1CZ1T (XR404A00) DC-DC CONVERTER 1: VIN 2: VOUT 3: OADJ 4: ON/OFFcont. 5: COMMON	μPC2933T-E1 (XS516A00) REGULATOR +3.3V 1: V in 2: GND 3: V out
MA221 (VB493900) DIODE 1: ANODE 2: CATHODE	SFPB-62V (VZ060500) DIODE 1: ANODE 2: CATHODE
UDZ 2.0BTE-17 2.0V (VU170900) ZENER DIODE 1: ANODE 2: CATHODE	

EZ-EG OVERALL CIRCUIT DIAGRAM 2/2 (AM-1, AM-2, AM-3, MUTE 1/2, PN)

EZ-EG



(▽): Mylar Capacitor
(≠): Semiconductive Cera Cap



TO SERVICE PERSONNEL
Critical Components Information
Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
Note: See parts list for details of circuit board component parts.

28CA1-8822926 Δ

EZ-EG

EZ-EG