

SILENT *Guitar* SLG-100N

SERVICE MANUAL



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EG 011620

20011220-62000



YAMAHA

HAMAMATSU, JAPAN

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.

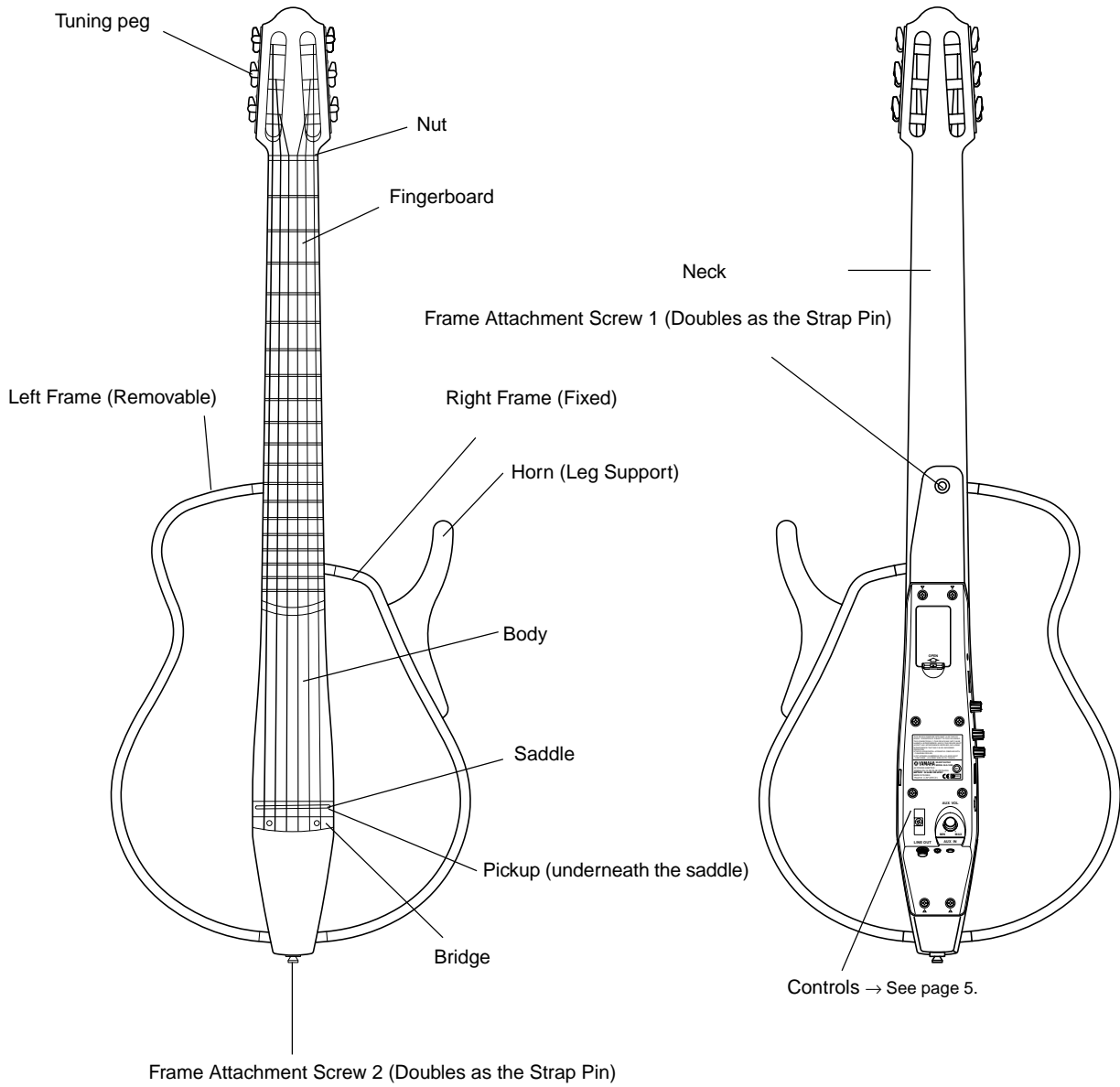
■ SPECIFICATIONS

Neck	Mahogany
Body	Maple
Fingerboard	Rosewood
Bridge	Rosewood
Frame Unit	Maple
Strings	Nylon Guitar Strings
Sensors	B-BAND
Connectors/Controls	<ul style="list-style-type: none"> • AUX IN • AUX IN Level Control • LINE OUT jack (monaural) • PHONES jack (stereo) • Volume • BASS control • TREBLE control • REVERB switch (OFF/1/2) • PHONES switch (ON/OFF) • LINE OUT Jack with POWER Switch (Inserting a plug into the jack switches the power on)
Power Supply	<ul style="list-style-type: none"> • AC Adaptor/6F22 (S-006P) battery x1 dual power source * Recommended AC Adaptors: PA-D09, PA-1E, PA-3B
Battery Life	<p>Continuous Use</p> <ul style="list-style-type: none"> • Using Manganese battery : approximately 13.5 hours • Using Alkaline battery : approximately 24 hours <p>With the reverb activated</p> <ul style="list-style-type: none"> • Using Manganese battery : approximately 2 hours • Using Alkaline battery : approximately 7.5 hours
Input/Output Specifications	<p>Input Level</p> <ul style="list-style-type: none"> • AUX IN: -40 dBm/1kHz sine wave (REVERB OFF) <p>Output Level</p> <ul style="list-style-type: none"> • LINE OUT: -27 dBm/10k Ω • PHONES (L/R): -31 dBm/39 Ω
Power Consumption	<p>Using AC adaptor (PA-D09)</p> <ul style="list-style-type: none"> • REVERB OFF: 1.9 W 1- 2 : 2.4 W <p>Using battery</p> <ul style="list-style-type: none"> • REVERB OFF: 0.2 W 1- 2 : 0.6 W
String Length	650 mm (25-9/16")
Dimensions	<p>965 (L) x 365 (W) x 80 (H) mm</p> <p>38" (L) x 14-3/8" (W) x 3-1/8" (H)</p> <p>(with the left frame attached and to the end of the strap pin)</p>
Weight	approximately 1.8 kg (3 lbs. 15 oz.)
Accessories	<p>AC adaptor (PA-D09),</p> <p>* May not be in your area.</p> <p>Stereo earphones, Soft case</p>

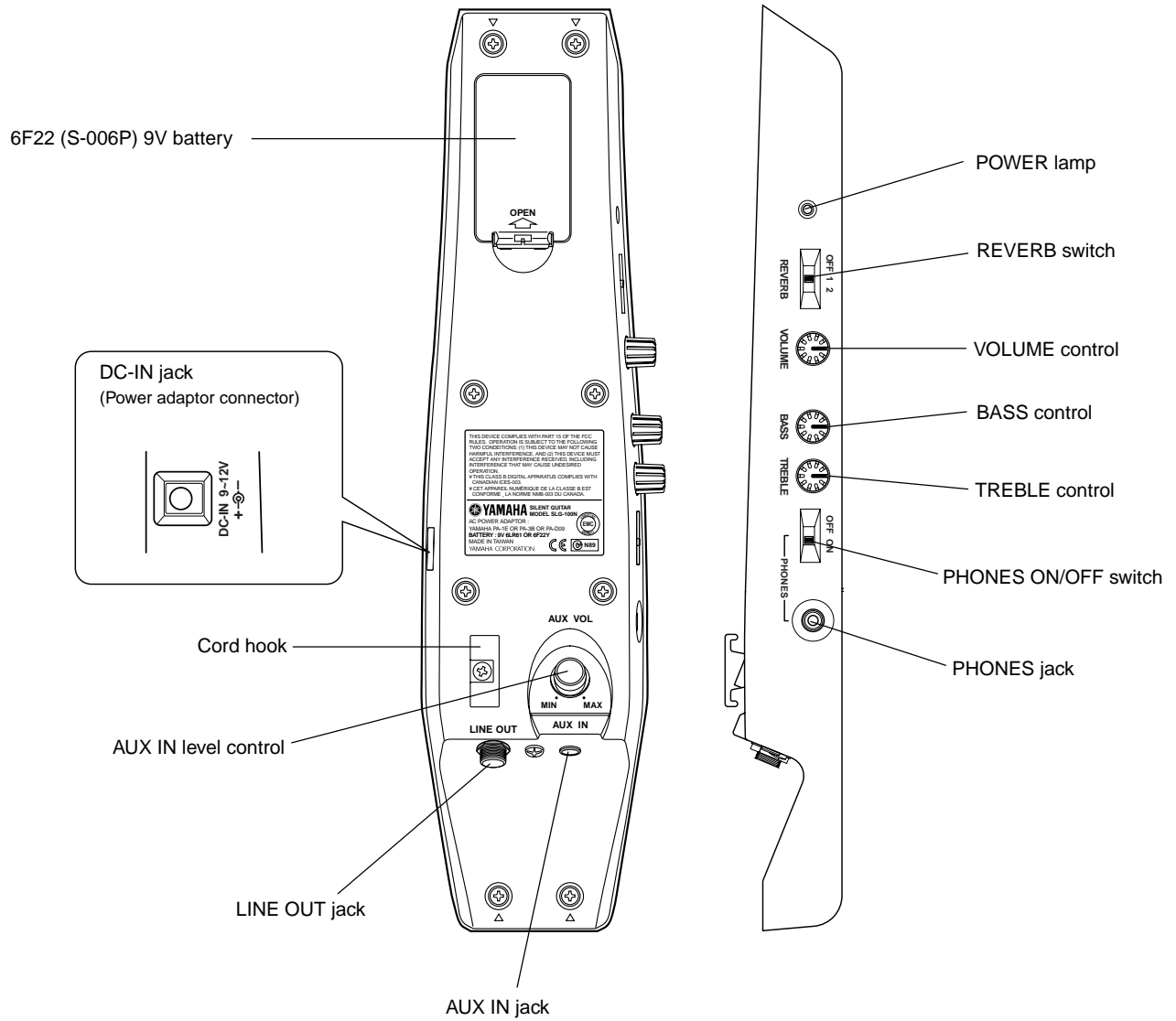
■ PANEL LAYOUT

• Front

• Rear



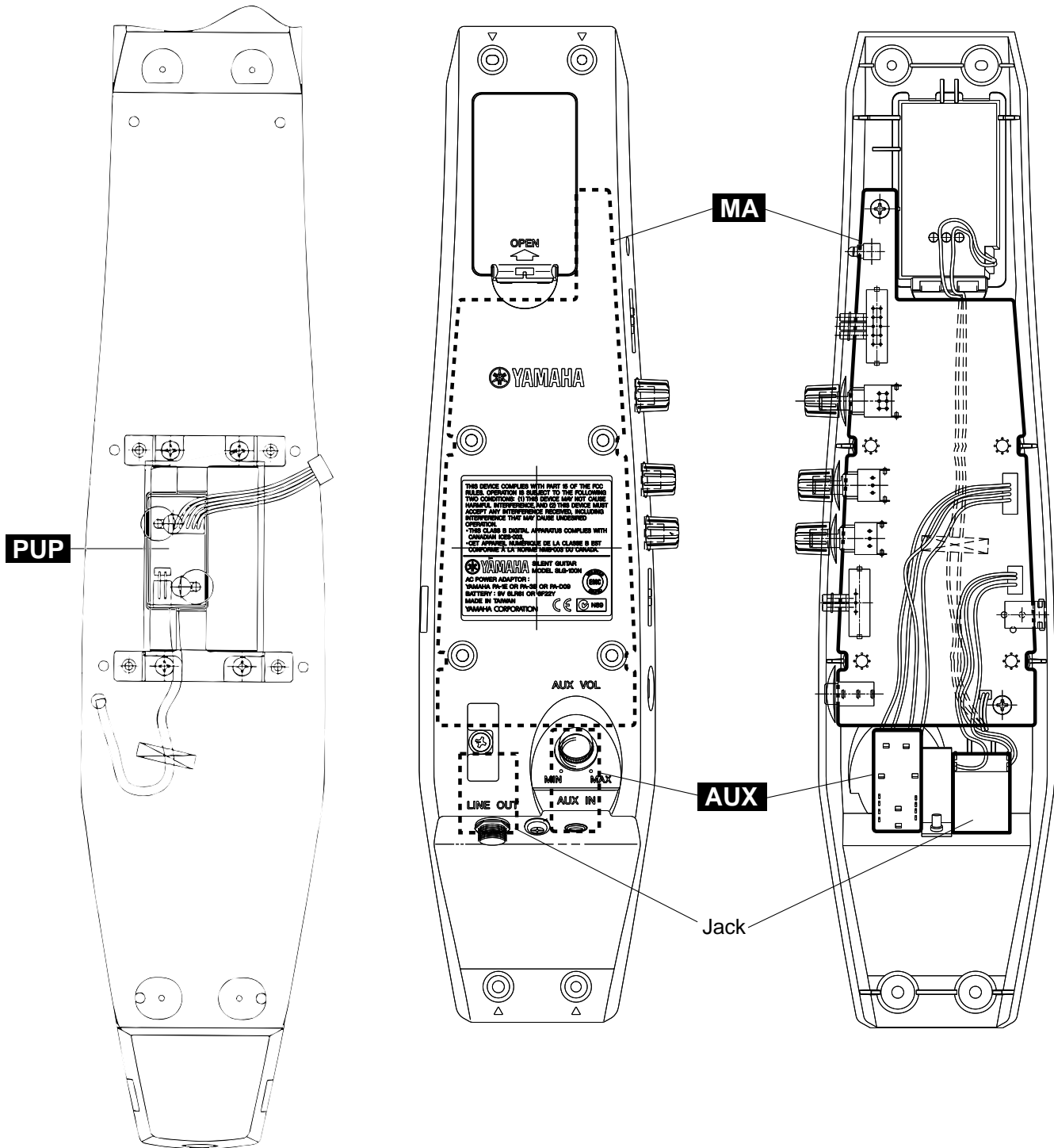
• Controls



■ CIRCUIT BOARD LAYOUT

- Body (rear view)
(underneath the panel assembly)

- Panel Assembly



DISASSEMBLY PROCEDURE

Preparations

Make the following preparations;

- Turn off the power switch.
- Remove the battery cover and battery.

1. Left Frame (Time required: About 2 minutes)

1-1 Loosen the adjusting bolt (front) marked [E15] and the adjusting bolt (rear) marked [E16]. The left frame can then be removed. (Fig.1)

2. Bracket Assembly, Bracket, Sleeve (Time required: About 5 minutes each)

2-1 Remove the left frame. (See procedure 1.)

2-2 Bracket Assembly:

Remove the two (2) screws marked [D05]. The upper bracket assembly can then be removed from the left frame. (Fig.1)

The lower bracket assembly can be removed in the same manner.

2-3 Bracket, Sleeve:

Remove the two (2) screws marked [E19]. The upper bracket and the upper sleeve can then be removed. (Fig.1)

The lower bracket and the lower sleeve can be removed in the same manner.

3. Right Frame (Time required: About 2 minutes)

3-1 Remove the four (4) screws marked [E22]. The right frame can then be removed with the horn. (Fig.1)

4. Horn, Right Bracket (Time required: About 5 minutes each)

4-1 Remove the right frame. (See procedure 3.)

4-2 Horn:

Remove the two (2) screws marked [D08]. The horn can then be removed. (Fig.1)

4-3 Right Bracket:

Remove the two (2) screws marked [E21]. The upper right bracket can then be removed. (Fig.1)

The lower right bracket can be removed in the same manner.

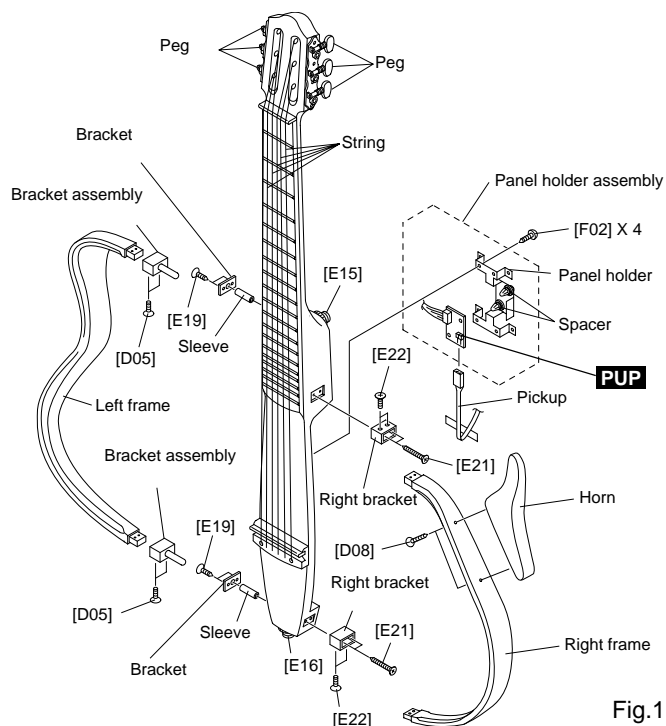


Fig.1

[D05]: Flat Head Tapping Screw-2
3.0X8 (QC667000)

[D08]: Flat Head Tapping Screw
3.5X20 (QC667100)

[E15]: Adjusting Bolt, Front
M6.0XP1X25 (QC653400)

[E16]: Adjusting Bolt, Rear
M6.0XP1X12 (QC653500)

[E19]: Flat Head Tapping Screw
3.0X14 ZMC2BL (QC699200)

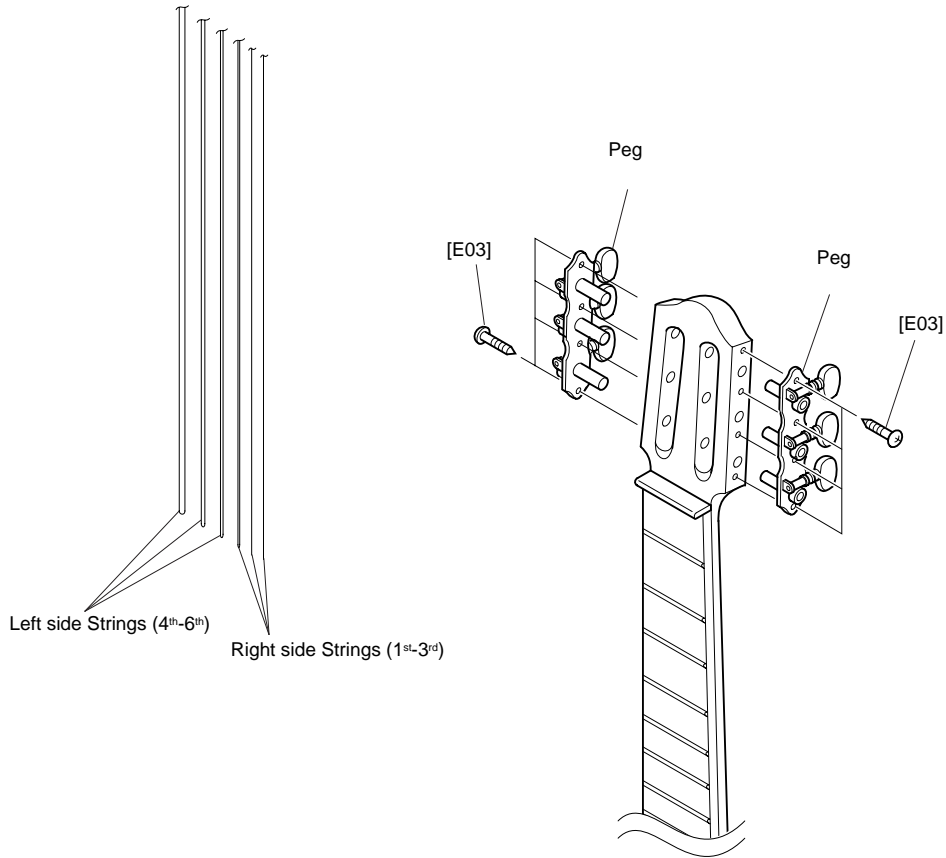
[E21]: Flat Head Tapping Screw
3.0X14 ZMC2BL (QC699200)

[E22]: Flat Head Tapping Screw-2
3.0X8 (QC667000)

[F02]: Bind Head Tapping Screw-1
3.0X10 ZMC2BL (20404200)

5. Peg (Time required: About 5 minutes)

- 5-1 Remove the three (3) strings in left side (4th-6th strings) and right side (1st-3rd strings) each. (Fig.2)
- 5-2 Remove the four (4) screws marked [E03] in left and right each. The left and right pegs can then be removed. (Fig.2)



[E03]: Round Head Wood Screw 2.1X8 (03714060)

Fig.2

6. Panel Assembly (Time required: About 2 minutes)

- 6-1 Remove the four (4) screws marked [F05] and the four (4) screws marked [F06]. The panel assembly can then be removed. (Fig.3)

7. MA Circuit Board, AUX Circuit Board, Jack (LINE Connector Assembly)

(Time required: About 5 minutes each)

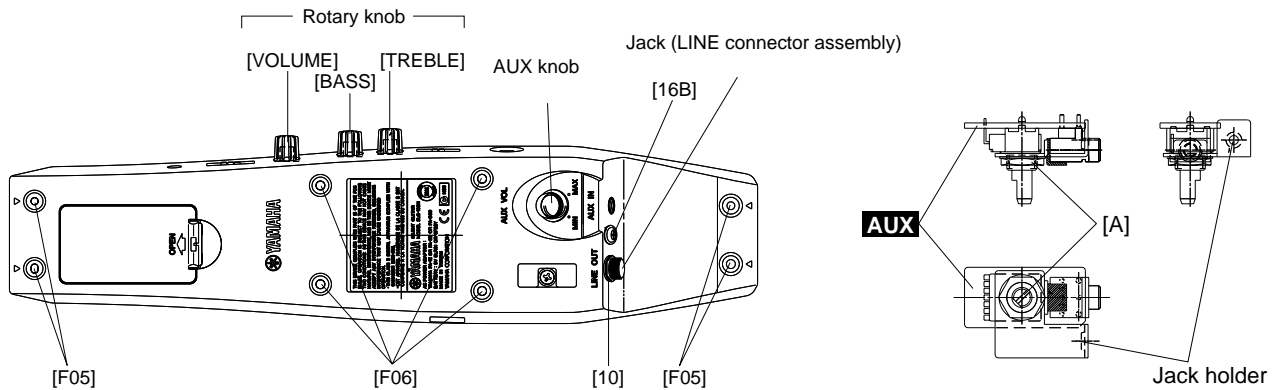
- 7-1 Remove the panel assembly. (See procedure 6.)
- 7-2 **MA Circuit Board:**
Pull out the three (3) rotary knobs for [VOLUME], [BASS] and [TREBLE]. (Fig.3, 4)
Remove the two (2) screws marked [16A]. The MA circuit board can then be removed. (Fig.4)
- 7-3 **AUX Circuit Board:**
Pull out the AUX knob and remove the screw marked [16B]. The AUX circuit board can then be removed with the jack holder. (Fig.3, 4, 5)
Remove the hexagonal nut marked [A]. The jack holder can then be removed from the AUX circuit board. (Fig.5)
- 7-4 **Jack (LINE Connector Assembly):**
Remove the hexagonal nut marked [10]. The jack (LINE connector assembly) can then be removed. (Fig.3, 4)

8. PUP Circuit Board (Time required: About 5 minutes)

- 8-1 Remove the panel assembly. (See procedure 6.)
- 8-2 Remove the four (4) screws marked [F02]. The panel holder assembly can then be removed. (Fig.1)
- 8-3 Remove the PUP circuit board from the two (2) spacers. (Fig.1)

9. Pickup (Time required: About 5 minutes)

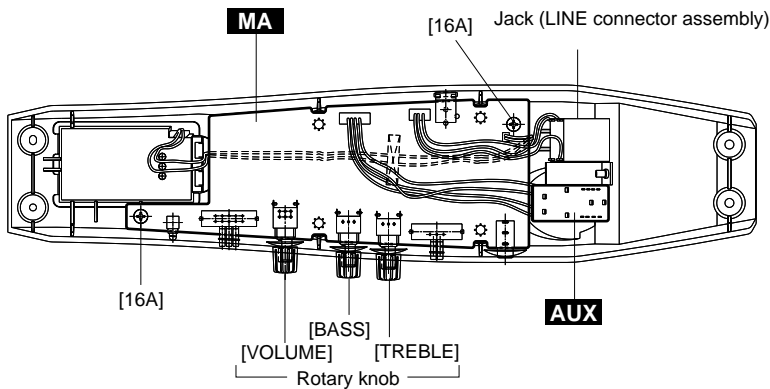
- 9-1 Remove the panel assembly. (See procedure 6.)
- 9-2 Turn each pegs and loosen the strings. (Fig.1, Photo.1)
- 9-3 Remove the bridge saddle. (Photo.1)
- 9-4 Remove the pickup from the slot on the bridge. (Photo.1)
- 9-5 Disconnect the connector from the PUP circuit board. (Fig.1)



- [F05]: Bind Head Tapping Screw-1 3.0X10 ZMC2BL (20404200)
- [F06]: Bind Head Tapping Screw-B 3.0X10 ZMC2BL (EP600140)
- [10]: Hexagonal Nut (AA820860)
- [16B]: Bind Head Tapping Screw-B 3.0X10 ZMC2BL (EP600140)

[A]: Hexagonal Nut
Fig.5

Fig.3



- [16A]: Bind Head Tapping Screw-B 3.0X10 ZMC2BL (EP600140)

Fig.4

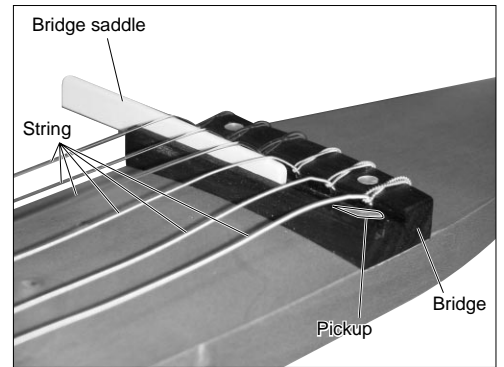


Photo.1

LSI PIN DESCRIPTION

● YSS234 (XN299A00) DSP (Digital Sound Processor)

MA: IC01

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	MD4	I/O	External RAM interface data	33	AVDD	-	DC A+5Vs bus
2	MD3	I/O		34	VDD	-	DC D+5V
3	MD0	I/O		35	TST0	-	DC D+5V
4	MD1	I/O		36	TST1	-	DC D+5V
5	MD2	I/O		37	DOEN	-	DC D+5V
6	MCKO	O	Master clock output	38	SDO1	O	N.C.
7	XO	O	Crystal oscillator connection	39	SDO0	O	N.C.
8	XI	I	Crystal oscillator connection	40	WC	O	N.C.
9	ER0	I	Early refraction preset select	41	BCO	O	N.C.
10	ER1	I		42	MA0	O	External RAM interface address
11	ER2	I		43	MA1	O	
12	REV0	I		44	MA2	O	
13	REV1	I	45	MA3	O		
14	REV2	I	46	MA4	O		
15	MUTEN	I	DC D+5V	47	MA5	O	
16	ICN	I	Initial clear	48	MA6	O	
17	PRG	I	DC D+5V	49	MA7	O	
18	MODE	I	Preset mode (H=DC +5V)	50	MA12	O	
19	VSS	-	Ground	51	MA14	O	
20	AVSS	-	Ground	52	VSS	-	Ground
21	CVA	-	N.C.	53	MA10	O	External RAM interface address
22	AORL	O	N.C.	54	MA011	O	
23	AORR	O	N.C.	55	MA09	O	
24	CHL	I	Sample hold capacitor connection	56	MA8	O	
25	AIL	I	Lch ADC input	57	MA13	O	
26	VDD	-	DC D+5V	58	VDD	-	DC D+5V
27	AIR	I	Rch ADC input	59	WEN	I	Write enable
28	CHR	I	Sample hold capacitor connection	60	OEN	I	Output enable
29	AOFL	O	Lch DAC output	61	CEN	I	Chip select
30	AOFR	O	Rch DAC output	62	MD7	I/O	External RAM interface data
31	AVDD	-	DC A+5V	63	MD6	I/O	
32	CVB	I	Rch midpoint voltage	64	MD5	I/O	

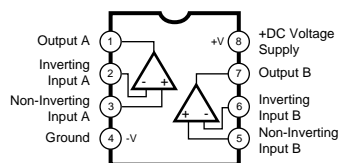
IC BLOCK DIAGRAM

● NJM3404AM (XM527A00)

Dual Operational Amplifier

MA: IC08-13

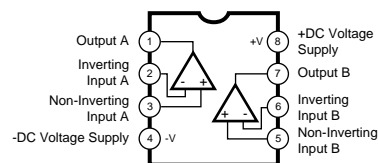
PUP: IC15



● NJM3414AM (XR294A00)

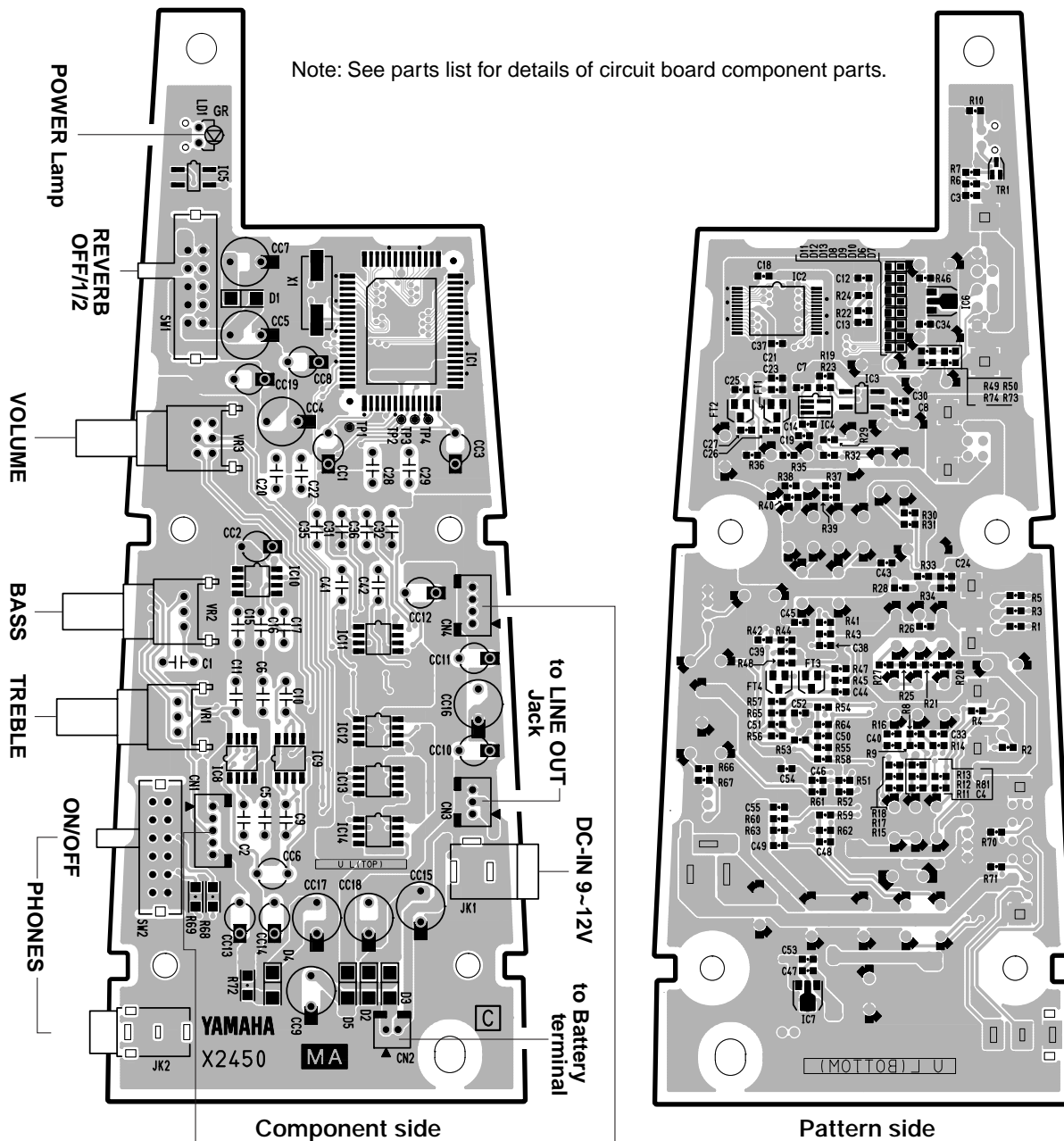
Dual Operational Amplifier

MA: IC14

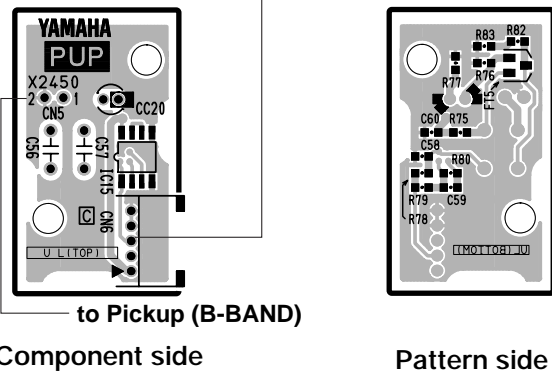


CIRCUIT BOARDS

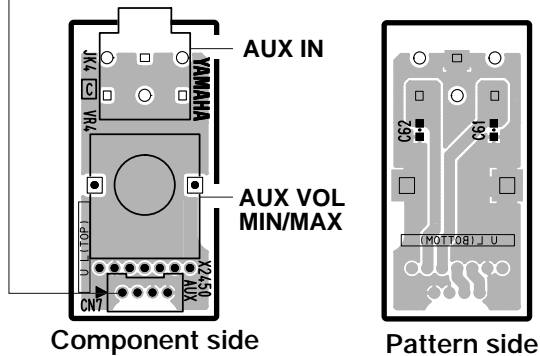
• MA Circuit Board



• PUP Circuit Board



• AUX Circuit Board



■ INSPECTIONS

1. Required Equipment

- High-sensitivity AC voltmeter (level meter)
- Battery (006P) or power adapter (PA-D09)

2. Noise Level Measurement

- Load resistance
 - [PHONES] jack: 39Ω (right and left each)
 - [LINE OUT] jack: $10k\Omega$
- (1) Turn on the power to the main unit, turn on the [PHONES] switch, and check that the power LED (green) lights up.
 - (2) Connect the level meter to the [PHONES] jack.
 - (3) Turn the [VOLUME], [BASS] and [TREBLE] control dials to the right most position (MAX).
 - (4) Stop the strings vibrating, measure the noise level, and check that the noise levels for both right and left channels are -60dBm or less.
 - (5) Disconnect the level meter from the [PHONES] jack and connect it to the [LINE OUT] jack instead.
 - (6) Stop the strings vibrating, measure the noise level, and check that the noise level is -60dBm or less.

3. Reverberation Inspection

- (1) Connect a headphone to the [PHONES] jack.
- (2) Pluck a string, switch the [REVERB] switch from “OFF” to “1” and then to “2”, and check that the following effect is present at both right and left headphone outputs.

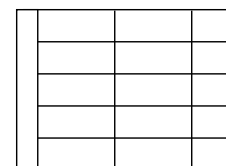
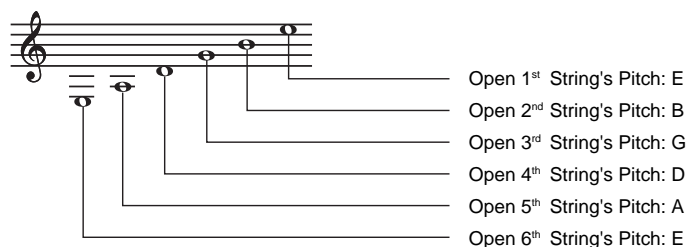
REVERB	Mode (reverberating time)
1	HALL (1.0 sec)
2	HALL (3.0 sec)

- (3) Turn the [VOLUME] control dial to the left most position (MIN).
- (4) Disconnect the headphone from the [PHONES] jack.

TUNING

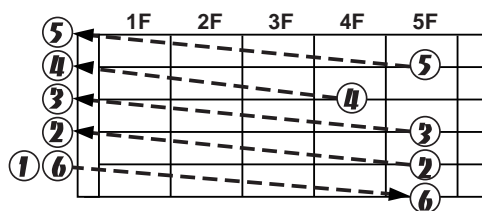
Use a tuning meter, pitch pipe, tuning fork, piano, etc., and to the open strings to the pitches shown below.

- If the string's pitch is high, loosen the string until the string's pitch is slightly lower than the tuning pitch, then tune while raising the string's pitch.

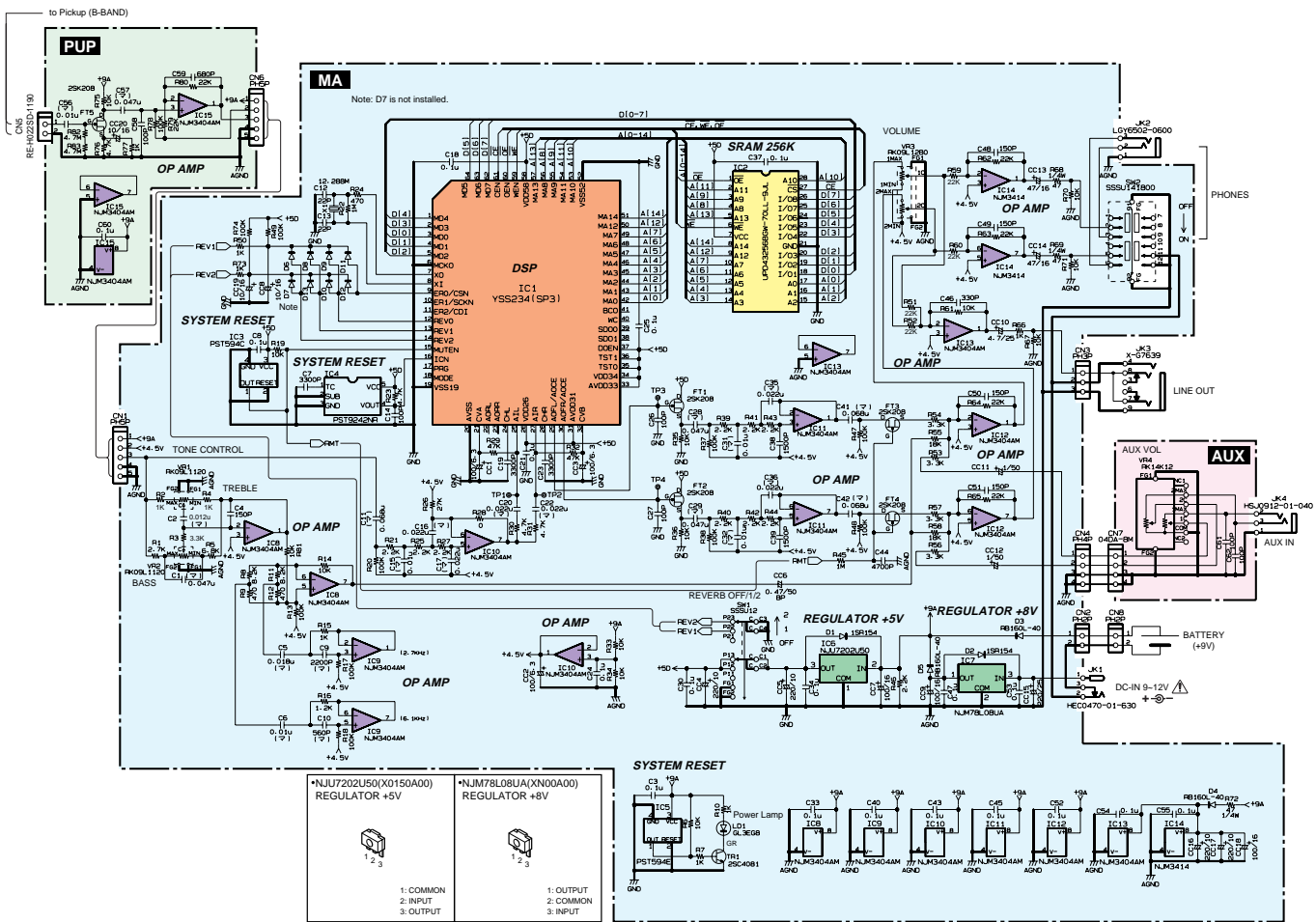


- Play the **standard pitch "lah"** (A3: 440Hz) on a tuning fork, etc., and tune the **open 5th string** to the same pitch.
- Play the pitch produced by pressing the **5th string at the 5th fret**, and tune the **open 4th string** to the same pitch.
- Play the pitch produced by pressing the **4th string at the 5th fret**, and tune the **open 3rd string** to the same pitch.
- Play the pitch produced by pressing the **3rd string at the 4th fret**, and tune the **open 2nd string** to the same pitch.
- Play the pitch produced by pressing the **2nd string at the 5th fret**, and tune the **open 1st string** to the same pitch.
- Play the pitch produced by pressing the **6th string at the 5th fret**, and tune the pitch at the 5th fret of the 6th string to the pitch produced by the **open 5th string**.

Open 1st String's Pitch: E
 Open 2nd String's Pitch: B
 Open 3rd String's Pitch: G
 Open 4th String's Pitch: D
 Open 5th String's Pitch: A
 Open 6th String's Pitch: E



OVERALL CIRCUIT DIAGRAM



(M): Mylar Capacitor

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

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.

STE-GA00P-04 Δ

SILENT *Guitar*

SLG-100N

PARTS LIST


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Notes : DESTINATION ABBREVIATIONS

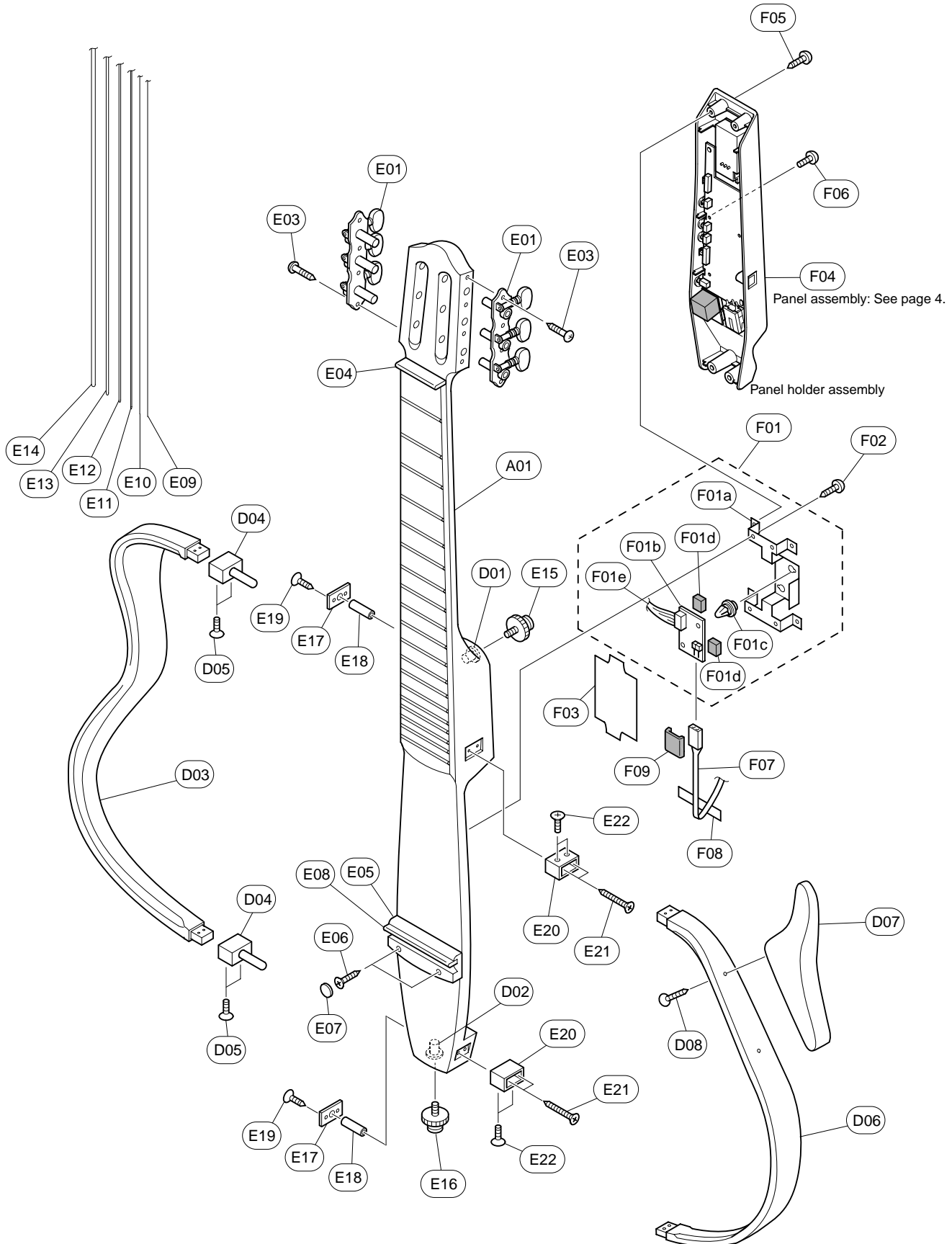
A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q: South-east Asia model
D: German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
I :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

■ WARNING

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

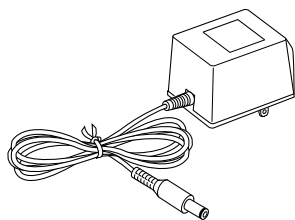
- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■)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

OVERALL ASSEMBLY

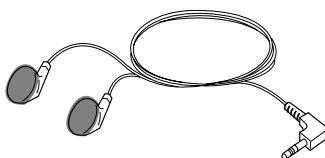


• Accessories

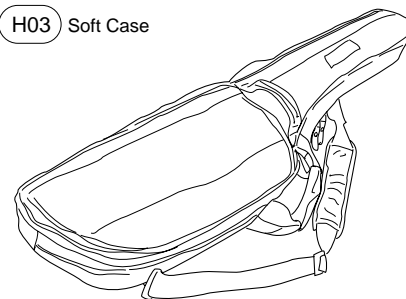
H01 AC Adapter



H02 Stereo Earphones



H03 Soft Case

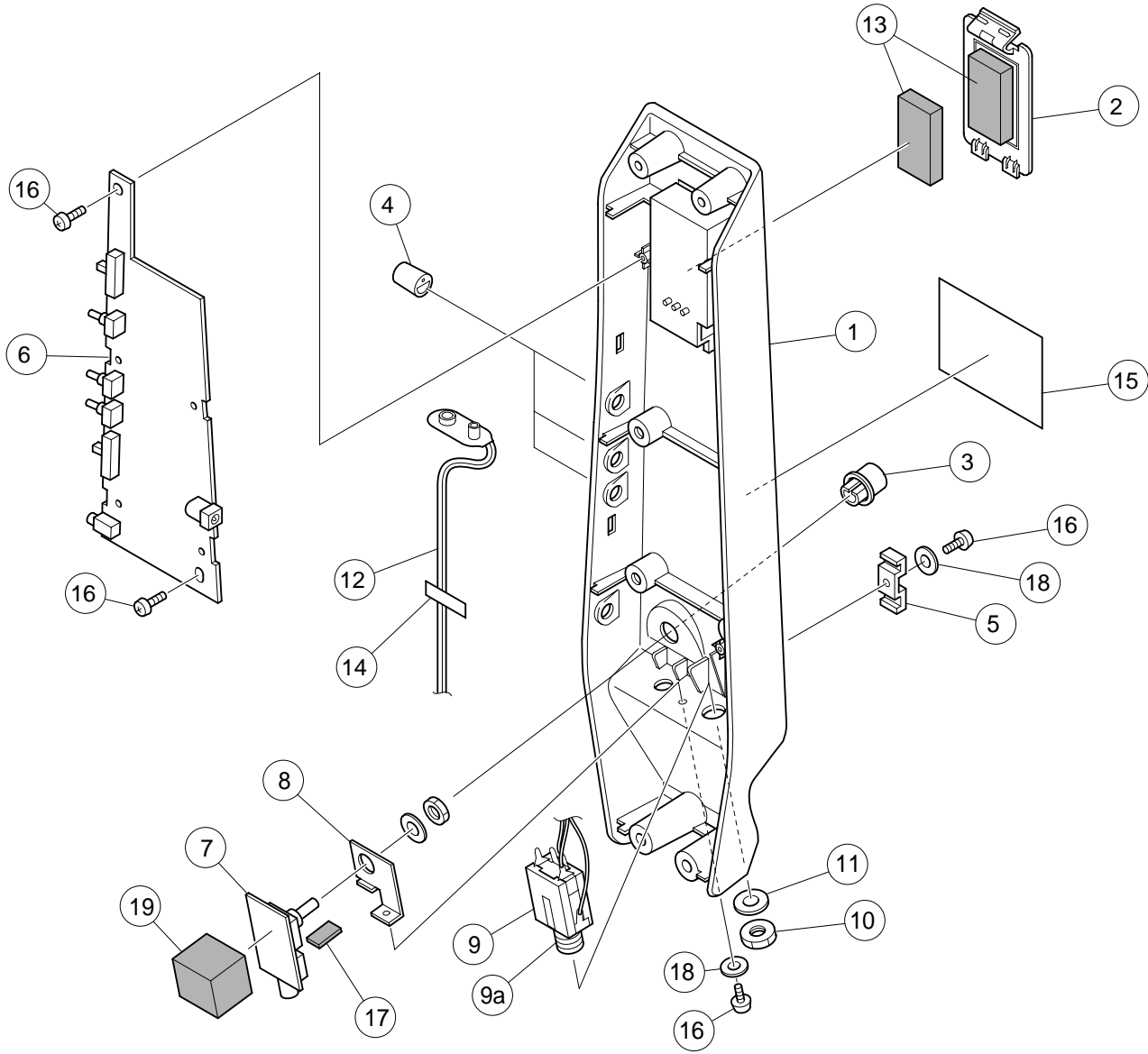


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
A01	--	OVERALL ASSEMBLY Body		SLG-100N		
* D01	24173400	Nut	S M6.0XP1 L=13	#0186130		
* D02	QC665900	Nut	S M6.0XP1 L=10	#0186100		
* D03	QC653700	Left Frame				
* D04	QC655100	Bracket Assembly			2	
* D05	QC667000	Flat Head Tapping Screw-2	3.0X8(Black Chrome)		4	
* D06	QC653600	Right Frame				
* D07	QC655400	Horn	Maple			
* D08	QC667100	Flat Head Tapping Screw	3.5X20(Black Chrom)		2	
* E01	QC666400	Tuning Machine Assembly	Pingway RM-1388	(Gold) 1set		
E03	03714060	Round Head Wood Screw	2.1X8 (Brass)		8	01
* E04	QC656400	Nut	Urea 50mm (White)			
* E05	QC655200	Bridge	Indian Rosewood			
E06	20454100	Oval Head Wood Screw	2.4X16 (Chrome)		2	01
E07	03377460	Cap	M5.0 (White)		2	01
* E08	QC656500	Bridge Saddle	Urea 82mm (White)			
E09	--	String 1	CG S11	(QA33300)		
E10	--	String 2	CG S12	(QA33310)		
E11	--	String 3	CG S13	(QA33320)		
E12	--	String 4	CG S14	(QA25310)		
E13	--	String 5	CG S15	(QA25320)		
E14	--	String 6	CG S16	(QA25330)		
* E15	QC653400	Adjusting Bolt, Front	M6.0XP1X25 (Black)			
* E16	QC653500	Adjusting Bolt, Rear	M6.0XP1X12 (Black)			
* E17	QC693600	Bracket	(Black)		2	
* E18	QC653300	Sleeve	(Blue)		2	
* E19	QC699200	Flat Head Tapping Screw	3.0X14 ZMC2BL	(Black)	4	
* E20	QC653100	Right Bracket	(Black)		2	
* E21	QC699200	Flat Head Tapping Screw	3.0X14 ZMC2BL	(Black)	4	
* E22	QC667000	Flat Head Tapping Screw-2	3.0X8(Black Chrome)		4	
F01	--	Panel Holder Assembly		(QC66260)		
* F01a	QC660000	Panel Holder				
* F01b	V8729900	Circuit Board	PUP			
* F01c	QC662400	Spacer	ACBS-2 (PINGOOD)		2	
F01d	--	Sponge	8X8 t=7	(QC68960)	2	
F01e	--	Connector Assembly	PUP PHR-5P L=70	(QC66180)		
* F02	20404200	Bind Head Tapping Screw-1	3.0X10 ZMC2BL	(Black)	4	
F03	--	Aluminum Sheet		(QC66250)		
F04	--	Panel Assembly		(QC66720)		
* F05	20404200	Bind Head Tapping Screw-1	3.0X10 ZMC2BL	(Black)	4	
F06	EP600140	Bind Head Tapping Screw-B	3.0X10 ZMC2BL	(Black)	4	01
F07	QC624400	Pickup	B-Band 29S			
F08	--	Adhesive Tape	12X50 t=0.2	(QC66730)		
* F09	QC679000	Cushion	8X12 t=1			
		ACCESSORIES				
* H01	V8285200	AC Adapter	PA-D09 J	J		
* H01	V8285300	AC Adapter	PA-D09 UL	U,C		
* H01	V8285400	AC Adapter	PA-D09 CE	H		
* H02	QC667400	Stereo Earphones				
* H03	QC666900	Soft Case				

*: New Parts

RANK: Japan only

■ PANEL ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	PANEL ASSEMBLY		SLG-100N (QC66720)		
* 1	QC659900	Control Panel	(Black)			
* 2	QC660200	Battery Cover	(Black)			
3	V2300100	AUX Knob		AUX VOL		04
4	QC187700	Rotary Knob		VOLUME,BASS,TREBLE	3	05
5	VC407100	DC Cord Column				02
* 6	V8729700	Circuit Board	MA			
* 7	V8729800	Circuit Board	AUX			
* 8	QC660100	Jack Holder				
9	--	Connector Assembly	LINE PHR-3P	(QC66160)		
9a	LB201120	Jack	JL2B X-G7639	LINE OUT		03
10	AA820860	Hexagonal Nut	(Black)			01
11	AA820850	Flat Washer	(Black)			01
* 12	QC661500	Connector Assembly	BT PHR-2P L=280	with Battery snap		
13	--	Sponge	20X37 t=4 (Gray)	(QC66190)	2	
14	--	Adhesive Tape	5X20 t=0.2	(QC66730)		
15	--	Name Plate Sticker		(QC66230)		
16	EP600140	Bind Head Tapping Screw-B	3.0X10 ZMC2BL	(Black)	4	01
* 17	QC679000	Cushion	8X12 t=1			
* 18	QC689700	Flat Washer	3.0X8X0.5 ZMC2BL	(Black)	2	
19	--	Cushion	20X20X13 (Black)	(QC70870)		

*: New Parts

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ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ELECTRICAL PARTS		SLG-100N		
*	V8729700	Circuit Board	MA	(V872950)(X2450C0)		
*	V8729800	Circuit Board	AUX	(V872950)(X2450C0)		
*	V8729900	Circuit Board	PUP	(V872950)(X2450C0)		
*	V8729700	Circuit Board	MA	(V872950)(X2450C0)		
*	QC662200	LED Holder	LEH5-4.5T			
C01	UA654470	Mylar Capacitor	0.047u 50V J			01
C02	UA354120	Mylar Capacitor	0.012u 50V J			01
C03	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C04	US062150	Ceramic Capacitor-SL(chip)	150P 50V J			01
C05	UA654180	Mylar Capacitor	0.018u 50V J			01
C06	UA654100	Mylar Capacitor	0.01u 50V J			01
C07	US063330	Ceramic Capacitor-B (chip)	3300P 50V K			01
C08	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C09	UA653220	Mylar Capacitor	2200P 50V J			01
C10	UA652560	Mylar Capacitor	560P 50V J			02
C11	UA654680	Mylar Capacitor	0.068u 50V J			02
C12	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C13	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C14	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C15	UA654100	Mylar Capacitor	0.01u 50V J			01
C16	UA654220	Mylar Capacitor	0.022u 50V J			01
C17	UA654220	Mylar Capacitor	0.022u 50V J			01
C18	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C19	US063330	Ceramic Capacitor-B (chip)	3300P 50V K			01
C20	UA654220	Mylar Capacitor	0.022u 50V J			01
C21	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C22	UA654220	Mylar Capacitor	0.022u 50V J			01
C23	US063330	Ceramic Capacitor-B (chip)	3300P 50V K			01
C24	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C25	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C26	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C27	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C28	UA654470	Mylar Capacitor	0.047u 50V J			01
C29	UA654470	Mylar Capacitor	0.047u 50V J			01
C30	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C31	UA654100	Mylar Capacitor	0.01u 50V J			01
C32	UA654100	Mylar Capacitor	0.01u 50V J			01
C33	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C34	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C35	UA654220	Mylar Capacitor	0.022u 50V J			01
C36	UA654220	Mylar Capacitor	0.022u 50V J			01
C37	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C38	US063150	Ceramic Capacitor-B (chip)	1500P 50V K			01
C39	US063150	Ceramic Capacitor-B (chip)	1500P 50V K			01
C40	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C41	UA654680	Mylar Capacitor	0.068u 50V J			02
C42	UA654680	Mylar Capacitor	0.068u 50V J			02
C43	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C44	US063470	Ceramic Capacitor-B (chip)	4700P 50V K			01
C45	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C46	US062330	Ceramic Capacitor-SL(chip)	330P 50V J			01
C47	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
C48	US062150	Ceramic Capacitor-SL(chip)	150P 50V J			01
-51	US062150	Ceramic Capacitor-SL(chip)	150P 50V J			01
C52	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
-55	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
CC01	UM388100	Electrolytic Capacitor-KS	100u 6.3V			01
-03	UM388100	Electrolytic Capacitor-KS	100u 6.3V			01
* CC04	V6796100	Electrolytic Capacitor-KS	220u 10V			
* CC05	V6796100	Electrolytic Capacitor-KS	220u 10V			
CC06	UN865470	Electrolytic Capacitor-BP	0.47u 50V			01
CC07	UM398100	Electrolytic Capacitor-KS	100u 16V			01
CC08	UM397100	Electrolytic Capacitor-KS	10u 16V			01
CC09	UM398100	Electrolytic Capacitor-KS	100u 16V			01
CC10	UM406470	Electrolytic Capacitor-KS	4.7u 25V			01
CC11	UM416100	Electrolytic Capacitor-KS	1u 50V			01
CC12	UM416100	Electrolytic Capacitor-KS	1u 50V			01
CC13	UM397470	Electrolytic Capacitor-KS	47u 16V			01

*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
CC14	UM397470	Electrolytic Capacitor-KS	47u 16V			01
* CC15	UU148220	Electrolytic Capacitor-FW	220u 25V			
* CC16	V6796100	Electrolytic Capacitor-KS	220u 10V			
* CC17	V6796100	Electrolytic Capacitor-KS	220u 10V			
CC18	UM398100	Electrolytic Capacitor-KS	100u 16V			01
CC19	UM397100	Electrolytic Capacitor-KS	10u 16V			01
CN1	VB390100	Connector Base Post	5P B5B-PH-K-S	to PUP-CN6		01
CN2	VB389800	Connector Base Post	2P B2B-PH-K-S	to Battery 9V		01
CN3	VB389900	Connector Base Post	3P B3B-PH-K-S	to LINE OUT		01
CN4	VB390000	Connector Base Post	4P B4B-PH-K-S	to AUX-CN7		01
D01	VT532500	Diode	1SR154-400 (1A)			01
D02	VT532500	Diode	1SR154-400 (1A)			01
D03	VS597600	Diode	RB160L-40			01
-05	VS597600	Diode	RB160L-40			01
D06	VT332900	Diode	1SS355			01
D08	VT332900	Diode	1SS355			01
-13	VT332900	Diode	1SS355			01
FT1	VR043100	FET	2SK208-Y			01
-4	VR043100	FET	2SK208-Y			01
IC01	XN299A00	IC	YSS234 (SP3)	DSP		11
* IC02	X2200A00	IC	UPD43256BGW-70LL-9	SRAM 256K		
IC03	XT627A00	IC	PST594C-MMP4P	SYSTEM RESET		03
IC04	XZ000A00	IC	PST9242NR	SYSTEM RESET		01
IC05	XT657A00	IC	PST594E-MT	SYSTEM RESET		03
IC06	X0150A00	IC	NJU7202U50	REGULATOR +5V		03
IC07	XN000A00	IC	NJM78L08UA	REGULATOR +8V		01
IC08	XM527A00	IC	NJM3404AM	OP AMP		03
-13	XM527A00	IC	NJM3404AM	OP AMP		03
IC14	XR294A00	IC	NJM3414AM	OP AMP		02
JK1	LB302260	Connector	HEC0470-01-630	DC-IN 9-12V		02
JK2	VJ573000	ST Mini Jack	JC-6	PHONES		01
LD1	VR043700	LED	Green GL3EG8	POWER lamp		01
R01	RD356270	Carbon Resistor (chip)	2.7K 63M J			01
R02	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R03	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R04	RD356100	Carbon Resistor (chip)	1.0K 63M J			01
R05	RD356680	Carbon Resistor (chip)	6.8K 63M J			01
R06	RD357100	Carbon Resistor (chip)	10K 63M J			01
R07	RD356100	Carbon Resistor (chip)	1K 63M J			01
R08	RD356820	Carbon Resistor (chip)	8.2K 63M J			01
R09	RD355470	Carbon Resistor (chip)	470 63M J			01
R10	RD356100	Carbon Resistor (chip)	1K 63M J			01
R11	RD356820	Carbon Resistor (chip)	8.2K 63M J			01
R12	RD355470	Carbon Resistor (chip)	470 63M J			01
R13	RD358100	Carbon Resistor (chip)	100K 63M J			01
R14	RD357100	Carbon Resistor (chip)	10K 63M J			01
R15	RD356100	Carbon Resistor (chip)	1K 63M J			01
R16	RD356120	Carbon Resistor (chip)	1.2K 63M J			01
R17	RD358100	Carbon Resistor (chip)	100K 63M J			01
R18	RD358100	Carbon Resistor (chip)	100K 63M J			01
R19	RD357100	Carbon Resistor (chip)	10K 63M J			01
R20	RD358100	Carbon Resistor (chip)	100K 63M J			01
R21	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R22	RD359100	Carbon Resistor (chip)	1M 63M J			01
R23	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R24	RD355470	Carbon Resistor (chip)	470 63M J			01
R25	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R26	RD357270	Carbon Resistor (chip)	27K 63M J			01
R27	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R28	RD350000	Carbon Resistor (chip)	0 63M J			01
R29	RD357470	Carbon Resistor (chip)	47K 63M J			01
R30	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R31	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R32	RD357470	Carbon Resistor (chip)	47K 63M J			01
R33	RD357100	Carbon Resistor (chip)	10K 63M J			01
-36	RD357100	Carbon Resistor (chip)	10K 63M J			01
R37	RD358100	Carbon Resistor (chip)	100K 63M J			01
R38	RD358100	Carbon Resistor (chip)	100K 63M J			01
R39	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
-44	RD356220	Carbon Resistor (chip)	2.2K 63M J			01

*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R45	RD359100	Carbon Resistor (chip)	1M 63M J			01
R46	RD356220	Carbon Resistor (chip)	2.2K 63M J			01
R47	RD358100	Carbon Resistor (chip)	100K 63M J			01
-49	RD358100	Carbon Resistor (chip)	100K 63M J			01
R50	RD356100	Carbon Resistor (chip)	1K 63M J			01
R51	RD357220	Carbon Resistor (chip)	22K 63M J			01
R52	RD357220	Carbon Resistor (chip)	22K 63M J			01
R53	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R54	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R55	RD357180	Carbon Resistor (chip)	18K 63M J			01
R56	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R57	RD356330	Carbon Resistor (chip)	3.3K 63M J			01
R58	RD357180	Carbon Resistor (chip)	18K 63M J			01
R59	RD357220	Carbon Resistor (chip)	22K 63M J			01
R60	RD357220	Carbon Resistor (chip)	22K 63M J			01
R61	RD357100	Carbon Resistor (chip)	10K 63M J			01
R62	RD357220	Carbon Resistor (chip)	22K 63M J			01
-65	RD357220	Carbon Resistor (chip)	22K 63M J			01
R66	RD356100	Carbon Resistor (chip)	1K 63M J			01
R67	RD357100	Carbon Resistor (chip)	10K 63M J			01
R68	RD154470	Carbon Resistor (chip)	47 1/4W J			01
R69	RD154470	Carbon Resistor (chip)	47 1/4W J			01
R70	RD357100	Carbon Resistor (chip)	10K 63M J			01
R71	RD357100	Carbon Resistor (chip)	10K 63M J			01
R72	RD154470	Carbon Resistor (chip)	47 1/4W J			01
R73	RD356100	Carbon Resistor (chip)	1K 63M J			01
R74	RD358100	Carbon Resistor (chip)	100K 63M J			01
R81	RD357100	Carbon Resistor (chip)	10K 63M J			01
* SW1	V8350200	Slide Switch	SSSU124900	REVERB(OFF/1/2)		
* SW2	V8190000	Slide Switch	SSSU141800	PHONES(OFF/ON)		
TR1	VQ986700	Transistor	2SC4081			01
* VR1	V8349900	Rotary Variable Resistor	B10K RK09L1120	TREBLE		
* VR2	V8349900	Rotary Variable Resistor	B10K RK09L1120	BASS		
* VR3	V8349800	Rotary Variable Resistor	A10Kx2 RK09L12B0	VOLUME		
X1	VY891500	Quartz Crystal Unit	12.288MHz SMD-49			03
* C61	V8729800	Circuit Board	AUX	(V872950)(X2450C0)		
C62	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C62	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
CN7	--	Connector Assembly	AUX 4P L=100	to MA-CN4 (V875540)		
* JK4	VC310700	Jack	ST. HSJ0912-01-040	AUX IN		
VR4	V3175800	Rotary Variable Resistor	A10Kx2 RK14K12D0A6	AUX VOL		03
* C56	V8729900	Circuit Board	PUP	(V872950)(X2450C0)		
C57	UA654100	Mylar Capacitor	0.01u 50V J			01
C57	UA654470	Mylar Capacitor	0.047u 50V J			01
C58	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C59	US062680	Ceramic Capacitor-SL(chip)	680P 50V J			01
C60	US145100	Ceramic Capacitor-F (chip)	0.1u 25V Z			01
CC20	UI337100	Electrolytic Capacitor	10u 16V			01
* CN5	V9083500	Connector Base Post	2P MB2P-90H	to Pickup (B-Band)		
CN6	VB858400	Connector Base Post	5P S5B-PH-K-S	to MA-CN1		01
FT5	VR043100	FET	2SK208-Y			01
IC15	XM527A00	IC	NJM3404AM	OP AMP		03
R75	RD357100	Carbon Resistor (chip)	10K 63M J			01
R76	RD356470	Carbon Resistor (chip)	4.7K 63M J			01
R77	RD356100	Carbon Resistor (chip)	1K 63M J			01
R78	RD358100	Carbon Resistor (chip)	100K 63M J			01
R79	RD357220	Carbon Resistor (chip)	22K 63M J			01
R80	RD357220	Carbon Resistor (chip)	22K 63M J			01
R82	RD359470	Carbon Resistor (chip)	4.7M 63M J			01
R83	RD359470	Carbon Resistor (chip)	4.7M 63M J			01
	LB201120	Jack	JL2B X-G7639	LINE OUT		03
	QC624400	Pickup	B-Band 29S			

*: New Parts

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