

YAMAHA

ELECTRONIC PIANO

CP25



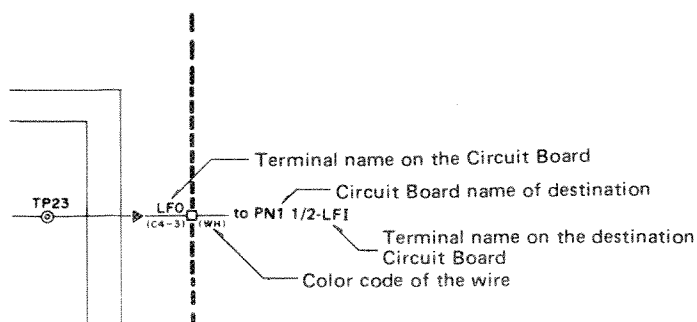
SERVICE MANUAL

CONTENTS

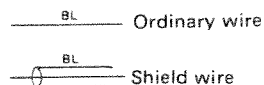
	CORDING GUIDE	1
	SPECIFICATIONS	2
	ASSEMBLY PROCEDURE	3
	DISASSEMBLY PROCEDURE	4
	PANEL LAYOUT	6
	PART NAMES AND FUNCTIONS	7
	BLOCK DIAGRAM	9
	TECHNICAL EXPLANATION	10
	ADJUSTING THE MECHANISM	14
	BASIC ADJUSTMENT PROCEDURE (ELECTRICAL)	15
	IC DATA CHART	16
DM	Circuit Board & Wiring	17
DM	Circuit Diagram	18
EFT	Circuit Board & Wiring	19
EFT	Circuit Diagram	20
PN1, PN2	Circuit Board & Wiring	21
PN1, PN2	Circuit Diagram	22
MK1, MK4	Circuit Board & Wiring, Circuit Diagram	23
JK1, JK2, AC	Circuit Board & Wiring, Circuit Diagram	24
DC	Circuit Board & Wiring, Circuit Diagram	25
	Parts List	

CODING GUIDE

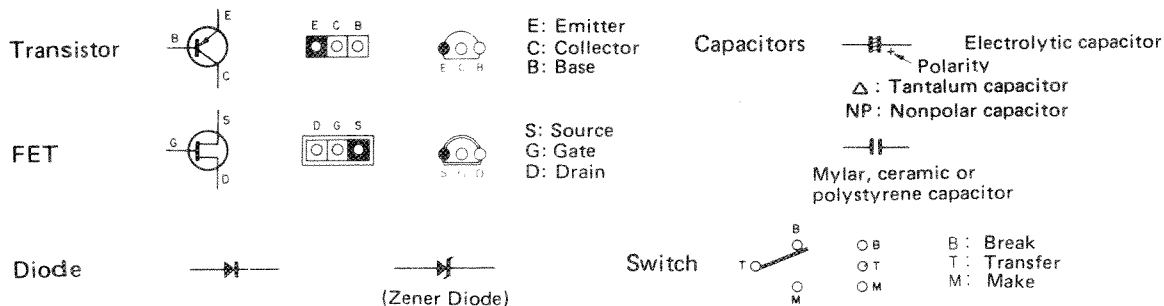
1 Wiring Notation



Note: Types of wire



2 Symbol Description



3 Abbreviations of Wire Color Codes

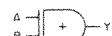
BLACK (クロ).....BL	BROWN (チャ).....BR	RED (アカ).....RE
ORANGE (ダイ).....OR	YELLOW (キイ).....YE	GREEN (ミト).....GR
BLUE (アオ).....BE	VIOLET (ムラ).....VI	GRAY (ハイ).....GY
WHITE (シロ).....WH	GRASS GREEN (クサ).....GG	SKY BLUE (ソラ).....SB
PINK (モモ).....PK	TRANSPARENT (トウメイ).....TR	

4 Relation of Color Coding and Notes

C	C=	D	D=	E	F	F=	G	G=	A	A=	B
BR	RE	OR	YE	GR	BE	VI	GY	WH	GG	SB	PK
(チャ)	(アカ)	(タイ)	(キイ)	(ミト)	(アオ)	(ムラ)	(ハイ)	(シロ)	(クサ)	(ソラ)	(モモ)

5 Logic Symbols

	MIL	YAMAHA
NOT		
NOR		
NAND		

Exclusive OR
(排他的論理和)

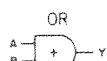
Truth Table

A	B	Y
L	L	L
H	L	H
L	H	H
H	H	L

NOT
(Inverter)

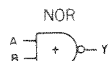
Truth Table

A	Y
L	H
H	L



Truth Table

A	B	Y
L	L	L
H	L	H
L	H	H
H	H	H



Truth Table

A	B	Y
L	L	H
H	L	L
L	H	L
H	H	L



Truth Table

A	B	Y
L	L	L
H	L	L
L	H	L
H	H	H



Truth Table

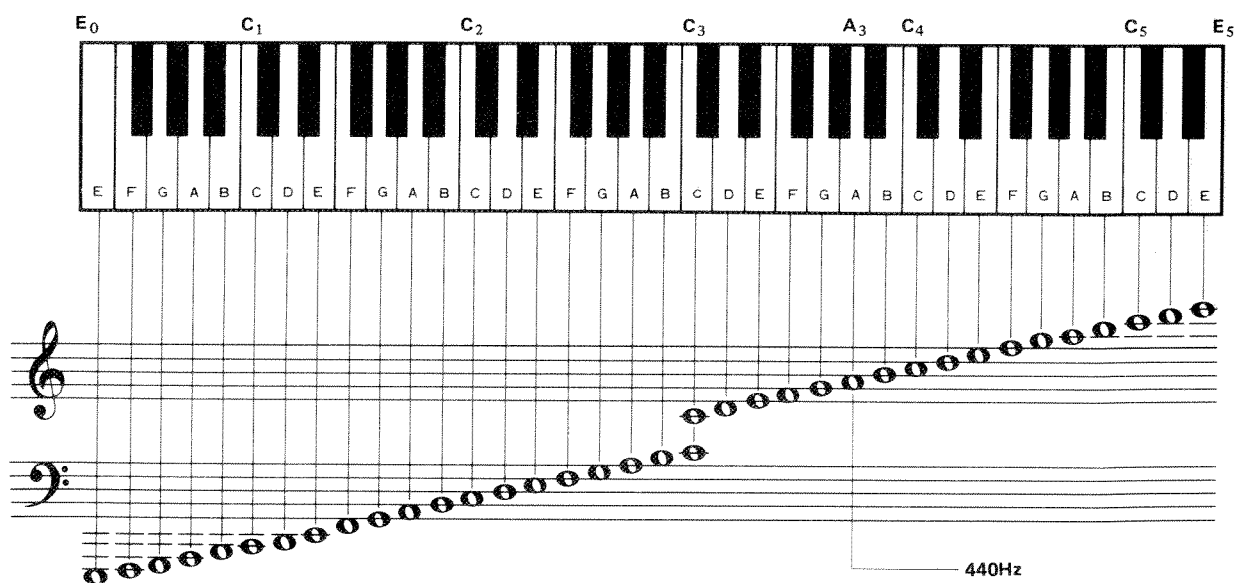
A	B	Y
L	L	H
H	L	H
L	H	H
H	H	L

SPECIFICATIONS

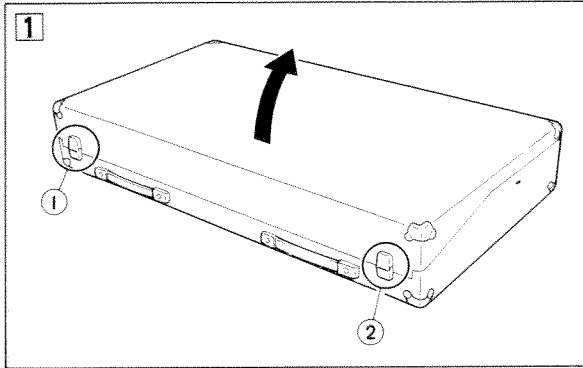
KEYBOARD	..... 61 keys ($E_0 \sim E_5$) Velocity-sensitive touch response
SINGLE mode	..... 16 note simultaneous output, max.
DUAL mode	..... 8 note simultaneous output, max.
CONTROLS	
MODE	..... DUAL/SINGLE selector
PITCH I	
PITCH II	
DECAY I	..... 8 position switch
DECAY II	..... 8 position switch
TREMOLO SPEED	
TREMOLO DEPTH	
TREMOLO ON/OFF	
FLANGER ON/OFF	
WAVE	..... 4 position switch (A,B,C,D)
FILTER	..... 4 independent selectors (1,2,3,4)
5TH, 8TH	..... Independent 5th and 8th transpose selectors
BALANCE	..... 1, 2 \longleftrightarrow 3, 4
EQUALIZER	..... Continuously variable bass and treble controls
VOLUME	

SIDE PANEL	
FOOT SW TREMOLO	
FOOT SW SUSTAIN	
OUTPUT ①, ②	..... 1/4" phone jacks
PHONES	..... 8 ohms or high impedance headphones
LINE ON/OFF	
POWER REQUIREMENTS	..... U.S. & Canadian models 120V 50/60Hz 22 Watts General model Selectable (100, 120, 220 or 240V) 22 Watts
DIMENSIONS (W x H x D)	..... 41-7/8" x 7-1/2" x 23-1/2" (1,063 x 189 x 596 mm)
WEIGHT	..... 90.4 lbs (41 kg)
STANDARD ACCESSORY	..... FC-4 footswitch

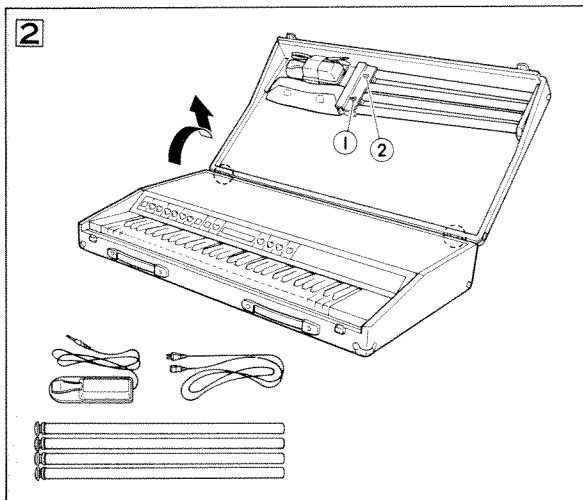
** Specifications are subject to change without notice.*



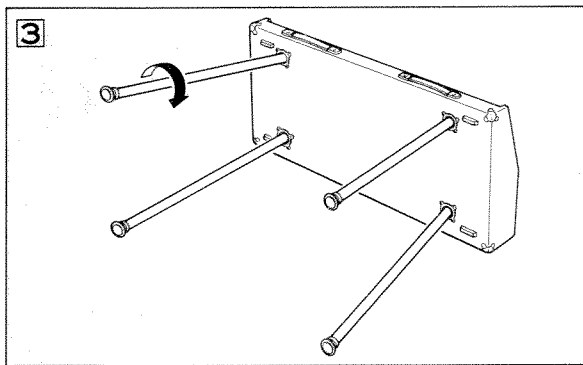
ASSEMBLY PROCEDURE



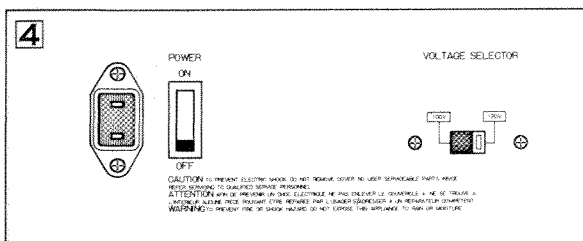
- Lay the CP25 on the floor as shown and open the lid fully by unlatching the two catches ① and ②.



- Remove the lid from the body by lifting it so as to slip it off its rear hinges.
Provided inside of the lid are the AC cord, four legs and the sustain pedal.
- Unscrew the fly nuts ① and ②, and remove the legs.



- Place the main body of the CP25 on its back edge and install each leg by screwing it into its hole in the body.
NOTE: When fitting the leg in the hole, make sure that the thread and groove are in a perfect engagement.
- Set the CP25 upright and connect the output cord to the amplifier and the sustain pedal.



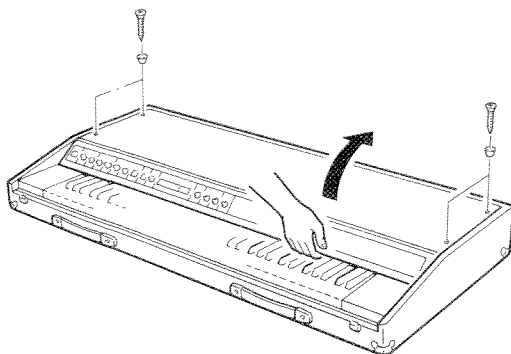
(U.S. & CANADIAN MODELS)

- Connect both the output cord to the amplifier and the sustain pedal. Set the voltage selector to the proper line voltage of that area where CP25 is used and set the switches and controls. And then connect the AC cable to the AC INLET jack on the CP25 firmly.
(→ SEE PAGE 6 & 7)

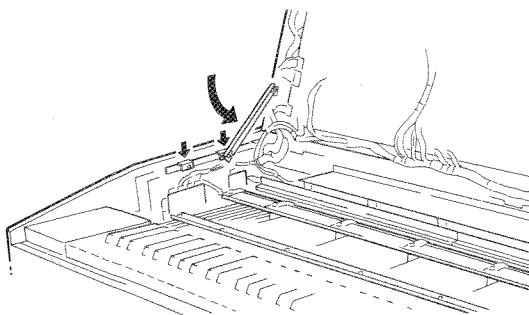
DISASSEMBLY PROCEDURE

1. Opening the lid

Remove the 4 screws holding the lid.
Grasp the panel just above the keyboard and lift up.

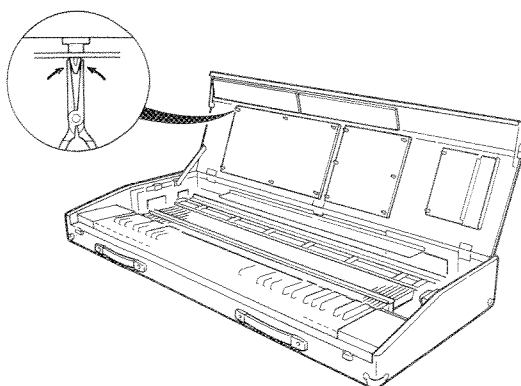


Use the stay provided to hold the lid. The stay provides two different lid angles.



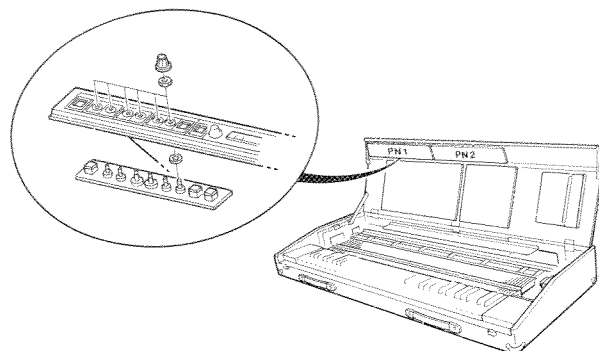
2. Removing circuit boards

Compress the board holders with pliers to release the boards.



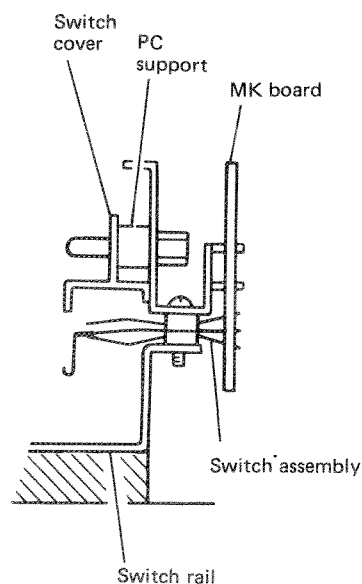
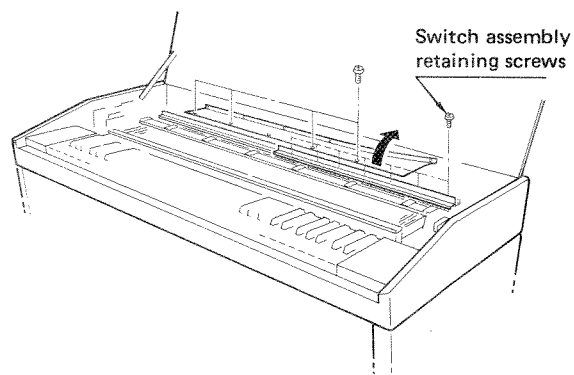
3. Removing panel boards

1) Remove all front panel knobs, hex nuts and washers.
(PN1, PN4 boards)



4. Removing the switch assembly (MK board)

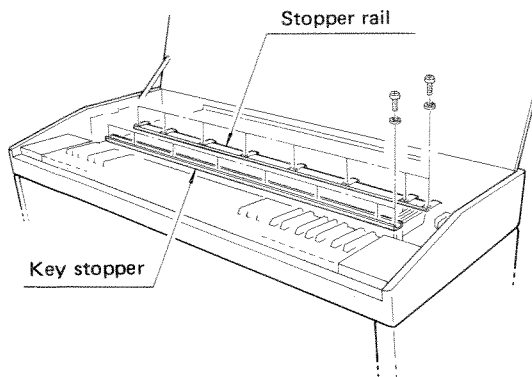
Remove the shield paper.
The switch assembly is divided into 3 separate parts. Remove the screws of the desired section or sections to be removed.



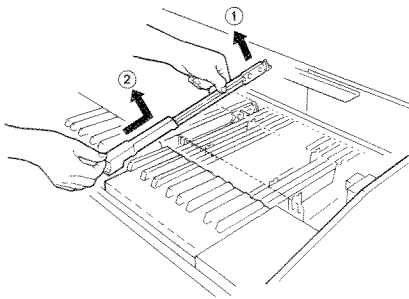
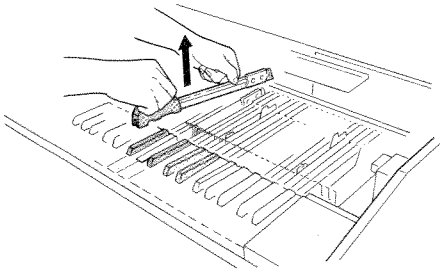
5. Removing the keys

Before removing any keys be sure to remove the switch assembly, being careful not to damage the switch contacts.

Remove the stopper rails and the key stopper screws. Reinforcing hardware is attached to the stopper rail.



Be sure to remove the black keys before removing the white keys.



TECHNICAL EXPLANATION

External specifications

The CP25 is an electronic piano with touch response, preset memories, and built-in filters. When the MODE switch is set to SINGLE, output is from a single tone generator with 16-note polyphonic capability. When the MODE switch is set to DUAL, output is from two tone generators with 8-note polyphonic capability.

Keyboard

There is a single keyboard with one make/break transfer switch for each key.

The touch-response effect is generated by counting the time between the make and break of the key switch and generating the level of the note according to the time difference (velocity sensitive).

Key assigner & channel processor

LSI YM636 (CPA) detects the pressed keys and assigns their keycode data in chronological order to the 16 note memories.

The 16 locations each contain touch response, sustain pedal, and other data. Also, because the successive notes are distributed among 16 locations, the IC calculates appropriate envelope times.

Tone generator

LSI YM722 (CPB) generates the music signal using the keycode data from YM636 (CPA) and touch response data.

The YM722 can only handle 8 notes, so two of them are used for each channel to handle 16 (in the SINGLE mode).

Two YM722s can also be used in parallel to form a dual tone generator (as in the DUAL mode).

16 notes are output in parallel from YM633, with 1–8 going to one YM722 (CPB) LSI and 9–16 going to another.

Applying VDD (–15V) to the CS terminal of the YM722s (pin 10) selects 1–8, while VSS (0V) selects 9–16. In the CP35, IC16 and IC18 apply to channels 1 through 8 while IC15 and IC17 apply to channels 9 through 16.

SINGLE MODE: 16 output channels of YM636 correspond to 16 pressed keys.

DUAL MODE: Channels 1–8 and 9–16 carry the same data forming dual 8-channel tone generators.

The octave blocks have two outputs with completely different envelopes for attack and sustain.

MEMO

.....

.....

.....

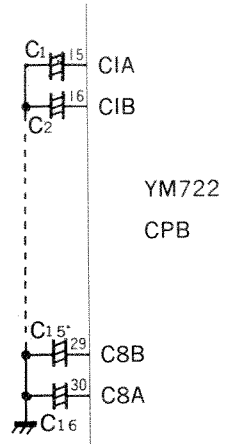
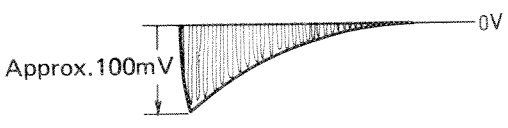
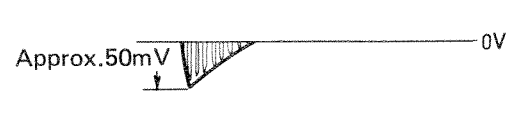
.....

.....

.....

.....

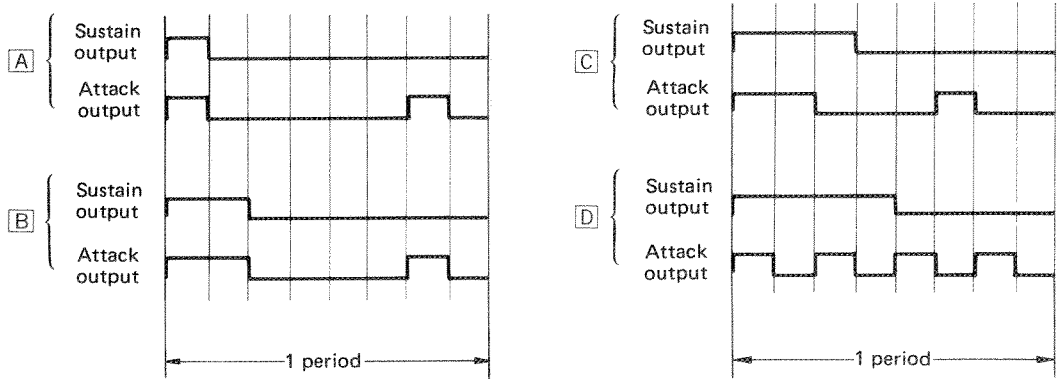
The table below gives the correspondence between output terminals, the notes output, and the output envelopes.

Terminal		Output note		Output envelope
		HS2	43	Sustain envelope 
		HS3	42	
		HS4	41	
		HS5	40	
		HS6	39	
		HA2	37	Attack envelope 
		HA3	36	
		HA4	35	
		HA5	34	
		HA6	33	

- So that the charge/discharge times of the capacitors which determine the envelopes of the 8 intervals of C1—C16 will not have any effect on the note envelopes, two capacitors are used for each note and are switched alternately in and out.
- The basic waveform that will be used to produce all music signals is selected by the A, B, C and D positions of the **WAVE** (PSW10) switch as shown in the diagram (in the DUAL mode).

WAVE 1 II

Output waveform



- By using the CH-II 5th and 8th (PSW19, 20) panel switches, the second channel can be shifted up a fifth an octave, or a twelfth from the first channel (in the DUAL mode).

	SET CONDITION	OUTPUT NOTE RANGE
Channel I		E ₀ ~ A ₃ ~ E ₆
Channel II	• 5th On	B ₀ ~ E ₄ ~ B ₆ (up a 5th)
	• 8th On	E ₁ ~ A ₄ ~ E ₇ (up an octave)
	• 5th, 8th On	B ₁ ~ E ₅ ~ B ₇ (up a twelfth)

Filters

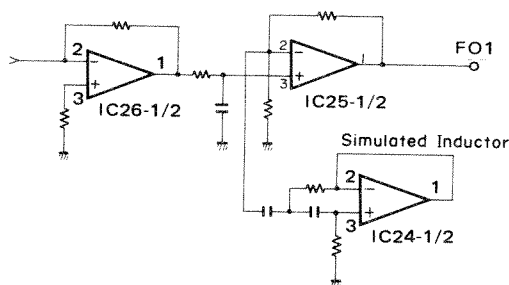
The filter circuits are constructed entirely of capacitors, resistors, and Op amps, in both filter and mixer configurations. They combine the attack outputs HA2–HA6 and the sustain outputs HS2–HS6 and send them to the filter select circuit.

Filter select circuit

The select circuit is a Schmidt trigger combining an "On" switch, a HAND and an inverter, plus a flip flop, an indicator LED, and an LED driver with an Op amp multivibrator (low-frequency oscillator) for LED flashing. FET gates (FET1–4, one for each voice) are turned on (0V) or off (–15V) to select the voice.

Mixing

Overall timbre of the signal from the output of the filter select and preset select circuits is adjusted by equalization circuitry on the DM board. A simulated semiconductor inductor is formed by IC19 2/2 which, combined with IC20 1/2, forms a peaking type equalizer. This equalizer creates a +10 dB frequency boost at 560 Hz.

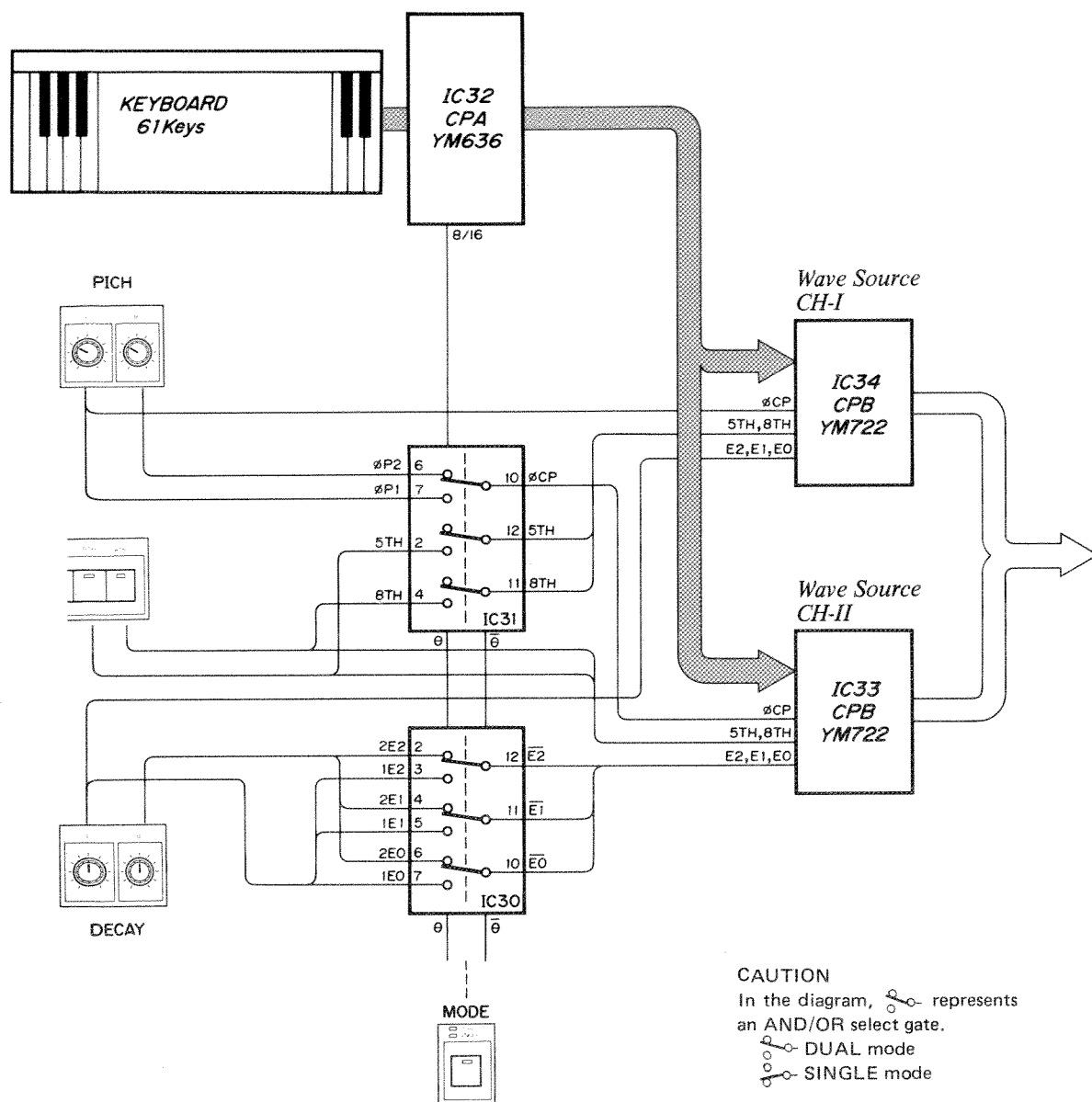


Mode switching

Function changes resulting from mode switching.

Turning the MODE switch on or off results in the following function changes:

Mode Switching		DUAL	SINGLE
MODE SW		LED lights.	LED extinguishes.
Maximum number of notes		8 notes.	16 notes.
Operational tone generators		2 channels.	1 channel.
Knob Functions	PITCH I	Functions only in channel I.	Functions in both channels I & II.
	PITCH II	Functions only in channel II.	Has no effect on pitch.
	DECAY I	Functions only in channel I.	Functions in both channels I & II.
	DECAY II	Functions only in channel II.	Has no effect on decay time.
	5th, 8th	Functions only in channel II.	Functions in both channels I & II.



MODE SWITCHING OPERATION

Key coder channel processor (YM636)

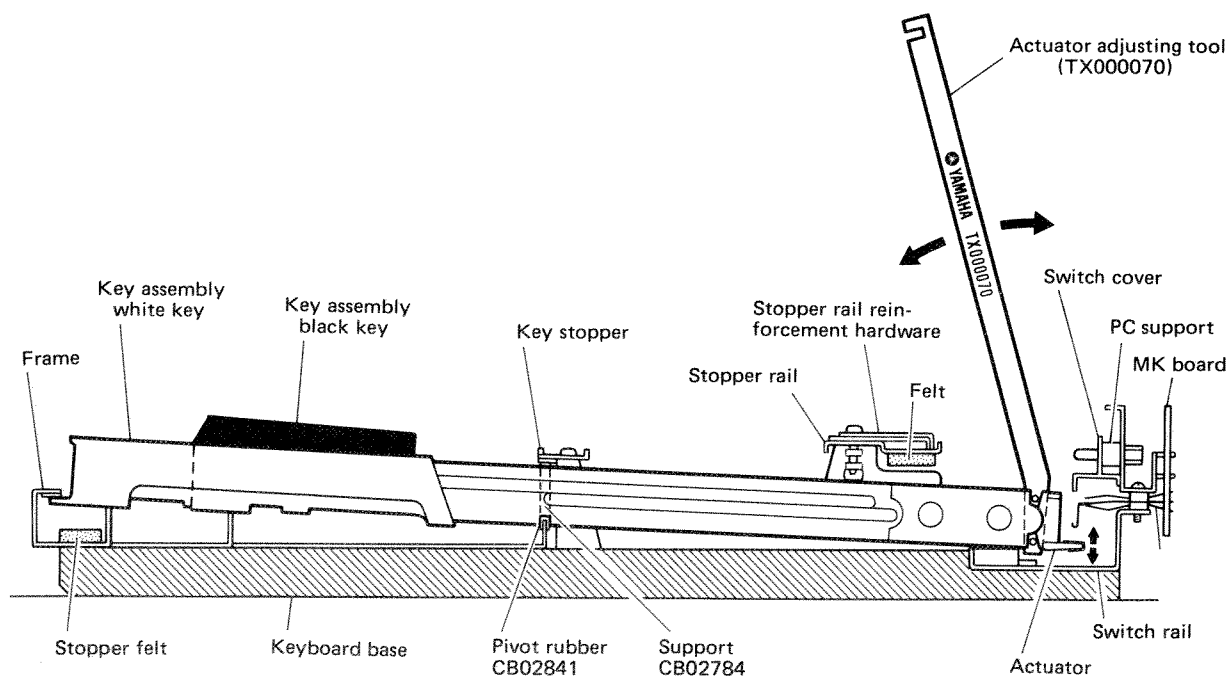
DUAL MODE	SINGLE MODE
<p>When power is switched on, the LED lights and the PN1 board MODE terminal (C3-1) goes to VSS (0V) while the $\overline{\text{MODE}}$ terminal (C3-2) goes to VDD (-15V).</p> <p>The VSS level from the MODE terminal drives pin 22 of IC32 (YM636.CPA) 8/16 to VSS. In this state, the key coder/channel processor IC (YM636.CPA) assigns 8-channel operation to the key coder function, and informs the CPB IC (YM722) of note initiation.</p>	<p>When the MODE switch is pressed, the LED is extinguished and the PN1 board MODE terminal (C3-2) goes to VSS (0V) while the $\overline{\text{MODE}}$ terminal (C3-1) goes to VDD (-15V).</p> <p>The VDD level from the MODE terminal drives pin 22 of IC32 (YM636.CPA) 8/16 to VDD. In this state the key code/channel processor IC (YM636.CPA) assigns 16-channel operation to the key coder function, and informs the CPB IC (YM722) of note initiation.</p>

Wave Source (YM722)

DUAL MODE	SINGLE MODE
<p>The YM722 CPB IC generates a tone generator waveform based on the key code data.</p> <p>Since the YM722 IC has 8-note tone generation capability, two CPB ICs must be used when in the DUAL mode: IC34 for channel I and IC33 for channel II. Channel I and channel II both use the same key code data.</p>	<p>Since the YM722 IC has 8-note tone generation capability, its function in the SINGLE mode is different from that in the DUAL mode.</p> <p>Two CPB ICs are still used, but one (IC34) handles the first 8 channels (1 through 8) and the second (IC33) handles the last 8 channels (9 through 16) in response to the 16 channel key code data from the YM636 IC. This results in 16-note simultaneous capability.</p> <p>Timing between the first and last 8 channels is accomplished by switching levels at pin 10 (CS) of the YM722: VDD for the first 8 channels and VSS for the last 8 channels.</p>

● Adjusting the velocity keying actuator

*NOTE: Actuator adjustment is preset at the factory, so no adjustment is required unless the key assembly is replaced.



Use the actuator adjusting tool to adjust the level of each key to be the same as the adjacent keys.

* If the level of a note is too low, lower the actuator by moving the adjustment tool forward. Lowering the actuator results in higher velocity thereby increasing level.

* If the level of a note is high, raise the actuator by moving the adjustment tool back. Raising the actuator results in lower velocity thereby decreasing level.

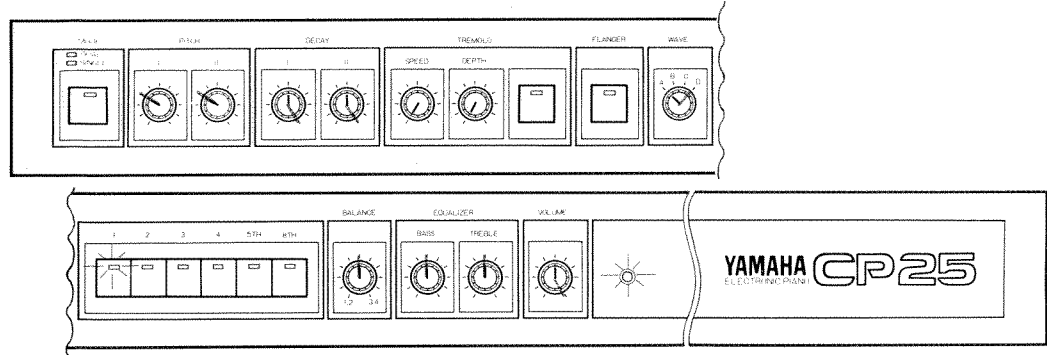
BASIC ADJUSTMENT PROCEDURE(ELECTRICAL)

1. Basic panel settings

Initial setting: When power is first turned on the following condition is obtained:

● Power indicator	LED	Lights
● Mode switch(PSW1)	LED	Lights (DUAL mode indicated)
● Filter 1 (PSW11)	LED	Lights
● Filter 3 (PSW13)	LED	Lights

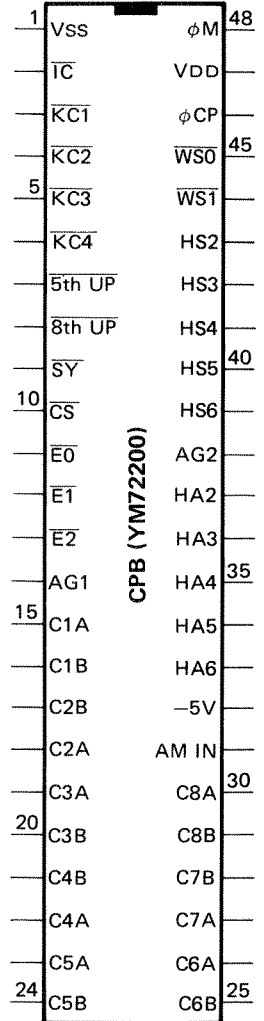
When performing adjustments, all controls should be set as shown in the illustration and chart below except as otherwise indicated.



MODE	(PSW 1)	OFF	BALANCE	(PVR 17)	Centered
PITCH I	(PVR 2)	10 o'clock position	BASS	(PVR 18)	Centered
PITCH II	(PVR 3)	10 o'clock position	TREBLE	(PVR 19)	Centered
DECAY I		fully clockwise (DECAY MAX)	VOLUME	(PVR 20)	MAXIMUM
DECAY II		fully clockwise (DECAY MAX)	TURN THE I/O PANEL LINE SW		ON
TREMOLO SPEED	(PVR 6)	MINIMUM			
TREMOLO DEPTH	(PVR 7)	MINIMUM			
TREMOLO	(PSW 8)	OFF			
FLANGER	(PSW 9)	OFF			
WAVE	(PSW 10)	fully clockwise (D position)			
FILTER 1	(PSW 11)	ON			
FILTER 2	(PSW 12)	OFF			
FILTER 3	(PSW 13)	OFF			
FILTER 4	(PSW 14)	OFF			
5TH	(PSW 15)	OFF			
8TH	(PSW 16)	OFF			

Part Name	YM722000	Function Name	CPB (Combo Piano—B) Tone Generator
-----------	----------	---------------	------------------------------------

Terminal		I/O	Description	Terminal		I/O	Description
Pin No.	Name			Pin No.	Name		
1	VSS	I	Ground (0V)	48	ϕ M	I	Master Clock (1MHz)
2	$\overline{\text{IC}}$	I	Initial Clear	47	VDD	I	DC Supply (–15V)
3	$\overline{\text{KC1}}$	I	Key Code Data	46	ϕ CP	I	Pitch Clock
4	$\overline{\text{KC2}}$	I	– do. –	45	$\overline{\text{WS0}}$	I	Wave Select Data
5	$\overline{\text{KC3}}$	I	– do. –	44	$\overline{\text{WS1}}$	I	– do. –
6	$\overline{\text{KC4}}$	I	– do. –	43	HS2	O	Sound Source Waveform (Sustain) Block 0, 1,
7	5th UP	I	Transposition Data	42	HS3	O	– do. – 2
8	8th UP	I	– do. –	41	HS4	O	– do. – 3
9	SY	I	Synchro Data	40	HS5	O	– do. – 4
10	$\overline{\text{CS}}$	I	Chip Select ^{1~8ch, 9~16ch} Synchro Select.	39	HS6	O	– do. – 5, 6
11	$\overline{\text{E0}}$	I	Envelope Data	38	AG2	I	Analog Ground
12	$\overline{\text{E1}}$	I	– do. –	37	HA2	O	Sound Source Waveform (Attack) Block 0, 1,
13	$\overline{\text{E2}}$	I	– do. –	36	HA3	O	– do. – 2
14	AG1	I	Analog Ground	35	HA4	O	– do. – 3
15	C1A	I	Envelope Setting Capacitor	34	HA5	O	– do. – 4
16	C1B	I	– do. –	33	HA6	O	– do. – 5, 6
17	C2B	I	– do. –	32	–5V	I	DC Supply (\approx –10V)
18	C2A	I	– do. –	31	AMIN	I	Minimum Level Setting
19	C3A	I	– do. –	30	C8A	I	Envelope Setting Capacitor
20	C3B	I	– do. –	29	C8B	I	– do. –
21	C4B	I	– do. –	28	C7B	I	– do. –
22	C4A	I	– do. –	27	C7A	I	– do. –
23	C5A	I	– do. –	26	C6A	I	– do. –
24	C5B	I	– do. –	25	C6B	I	– do. –



MEMO

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

DM Circuit Board & Wining

• Connector

Pin No.	Pin Name	Wire Color	Destination
1	C#	BR	MK1-C# (C1-7)
2	D	RE	MK1-D (C1-6)
3	D#	OR	MK1-D# (C1-5)
4	E	YE	MK1-E (C1-4)
5	F	GR	MK1-F (C1-3)

Pin No.	Pin Name	Wire Color	Destination
1	MODE	BE	PN1-MODE (C3-2)
2	MODE	BL	PN1-MODE (C3-1)
3	2Q2	YE	PN1-2Q2 (C1-6)
4	1Q2	BR	PN1-1Q2 (C1-3)
5	2Q1	OR	PN1-2Q1 (C1-5)
6	1Q1	PK	PN1-1Q1 (C1-2)
7	200	RE	PN1-200 (C1-4)
8	1Q0	SB	PN1-1Q0 (C1-1)
9	5TH	WH	PN2-5TH (C5-3)
10	8TH	GR	PN2-8TH (C5-4)

Pin No.	Pin Name	Wire Color	Destination
1	PV1	GR	PN1-PV1 (C1-7)
2	VSS	—	—
3	VSS	VI	PN1-VSS (C1-9)
4	VDD	GG	PN1-VDD (C1-10)
5	PV2	BE	PN1-PV2 (C1-8)

Pin No.	Pin Name	Wire Color	Destination
1	BR0	—	—
2	—	—	—
3	BR1	BR	MK1-BR1 (C3-6)
4	MK1	RE	MK1-MK1 (C3-7)
5	BR2	OR	MK1-BR2 (C3-5)
6	MK2	YE	MK1-MK2 (C3-4)
7	BR3	GR	MK1-BR3 (C3-3)
8	MK3	BE	MK1-MK3 (C3-2)
9	BR4	VI	MK4-BR4 (C3-6)
10	MK4	GY	MK4-MK4 (C3-7)

Pin No.	Pin Name	Wire Color	Destination
1	BR5	WH	MK4-BR5 (C3-5)
2	MK5	GG	MK4-MK5 (C3-4)
3	BR6	SB	MK4-BR6 (C3-3)
4	MK6	PK	MK4-MK6 (C3-2)
5	BR7	—	—
6	MK7	—	—

Pin No.	Pin Name	Wire Color	Destination
1	SUST.	SB	JK-SUST. (C1-5)
2	CK	PK	PN1-CK (C3-3)
3	—	—	—
4	WAVE1	BR	PN2-WAVE1 (C4-5)
5	WAVE0	YE	PN2-WAVE0 (C4-4)

Pin No.	Pin Name	Wire Color	Destination
1	F#	BE	MK1-F# (C1-2)
2	G	VI	MK1-G (C1-1)
3	G#	GY	MK1-G# (C2-5)
4	A	WH	MK1-A (C2-4)
5	A#	GG	MK1-A# (C2-3)
6	B	SB	MK1-B (C2-2)
7	C	PK	MK1-C (C2-1)
8	—	—	—
9	—	—	—
10	—	—	—

Pin No.	Pin Name	Wire Color	Destination
1	VSS	GY	DC-VSS (C1-1)
2	VSS	GY	DC-VSS (C1-3)
3	VDD	RE	DC-VDD (C2-4)
4	VDD	RE	DC-VDD (C2-5)
5	GND	—	—
6	GND	BL	DC-GND (C4-6)
7	+15V	—	—
8	+15V	BR	DC+15V (C4-3)
9	-15V	—	—
10	-15V	YE	DC-15V (C3-3)

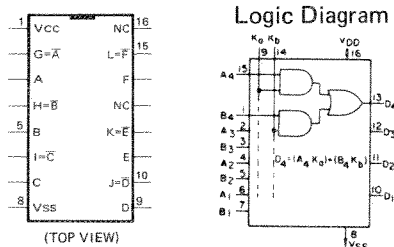
Pin No.	Pin Name	Wire Color	Destination
1	FO2	S BE	PN2-FO2 (C6-8)
2	FO1	S VI	PN2-FO1 (C6-6)
3	—	—	—
4	SW3	BR	PN2-SW3 (C5-1)
5	SW4	RE	PN2-SW4 (C5-2)
6	SW1	OR	PN2-SW1 (C4-2)
7	SW2	GR	PN2-SW2 (C4-3)

Notes)

•YM63600: IC32 (See Page 16)

•YM72200: IC33, 34 (See Page 16)

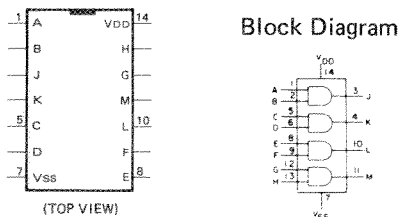
•TC4019BP: IC30, 31
Quadruple AND/OR Select Gate



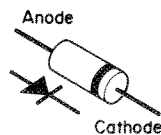
2SA1015(O,Y): Tr5
2SC752(Y): Tr1, 3

2SC509(Y): Tr2, 4

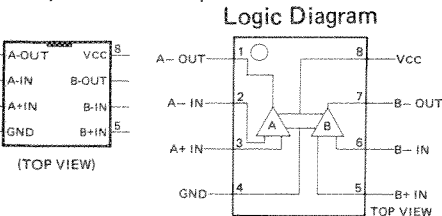
•TC4081BP: IC29
Quadruple 2-Input AND Gate



2SK105(E): FET1 ~ 4



•NJM4558DV: IC1 ~ 28
Dual Operational Amplifier



1S1555: D1 ~ 40

YAMAHA

ELECTRONIC PIANO

CP 25

PARTS LIST

CONTENTS

A. Electronic Components	1
B. Cabinet Assembly	4
C. Top Board Assembly	7
D. Keyboard Assembly	9
E. Sustainer Pedal	11

A. Electronic Components

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
* NA:10:70:30	Circuit Board, AC	#2891	A C シ ー ト			J
* NA:10:70:40	— do. — , — do. —	— do. —	"			U
* NA:10:70:50	— do. — , — do. —	— do. —	"			G
* NA:10:74:10	— do. — , — do. —	— do. —	"			C
* NA:10:70:60	— do. — , PN	#2892	P N シ ー ト			
* NA:10:70:70	— do. — , DM	#2893	D M シ ー ト			
* NA:10:70:80	— do. — , EFT	#2884	E F T シ ー ト			
* NA:10:70:90	— do. — , JK	#2887	J K シ ー ト			
* NA:10:71:10	— do. — , DC	#2888	D C シ ー ト			J
* NA:10:71:20	— do. — , — do. —	— do. —	"			U.C
* NA:10:71:30	— do. — , — do. —	— do. —	"			G
* NB:10:35:20	Power Transformer Assembly	#3851	電 源 ト ラ ン ス A s s ' y			G
* NB:10:35:30	— do. —	#3940	"			J.U
* NB:10:35:40	— do. —	— do. —	"			C
* NB:81:76:90	Switch Assembly	33 Key	ス イ ッ チ A s s ' y			
* NB:81:77:10	— do. —	28 Key	"			
NB:80:76:00	Switch Unit	6 Key	ス イ ッ チ ユ ニ ッ ト			
NB:80:76:10	— do. —	3 Key	"			
NB:81:75:70	— do. —	4 Key	"			
IG:00:11:80	IC	TC4013BP	I C	2-input NOR		
IG:00:13:90	— do. —	NJM4558DV	"	OP. Amp		
IG:00:17:00	— do. —	TC4019BP	"	AND-OR Select Gate		
IG:00:17:40	— do. —	TC4050BP	"	Hex Buffer/ Converter		
IG:00:17:60	— do. —	TC4081BP	"	2-input AND		
IG:02:74:00	— do. —	TA7220P	"	Amp		
IG:02:87:00	— do. —	μPC14315H	"	+15V Regulator		
IG:03:13:00	— do. —	NE570N	"	Compander		
IG:03:29:00	— do. —	#3290	"	BBD Driver		
IG:04:61:00	— do. —	MN3009	"	256 Stage BBD		
IT:63:60:00	— do. —	YM63600	"	CP-A (Keycoder Channel Processor)		
IT:72:20:00	— do. —	YM72200	"	CP-B (Tone Generator)		
IA:05:09:10	Transistor	2SA509(Y)	ト ラ ン ジ ス タ			
IA:10:15:70	— do. —	2SA1015(O,Y)	"			
IC:05:09:20	— do. —	2SC509(Y)	"			
IC:07:52:20	— do. —	2SC752(Y)	"			
IC:18:15:70	— do. —	2SC1815(O,Y)	"			
IE:10:12:00	FET	2SK105(F)	F E T			
IF:00:00:40	Diode	1S1555	ダ イ オ ー ド			
IF:00:02:90	LED		L E D	Power Indicator		
IH:00:04:70	Diode	1D4B1	ダ イ オ ー ド			
IK:00:03:40	Photo Coupler	P1501	フ ォ ト カ プ ラ ー			
IL:00:05:80	Mica Base		マ イ カ ベ ー ス			
CB:07:28:80	Insulation Busing		絶 縁 ブ ッ シ ュ			
HS:31:04:40	Variable Resistor	B50KΩ	ロータリーボリューム	TREBLE, BASS		
HS:31:05:50	— do. —	A10KΩ	"	MASTER VOL.		

* New Parts (新規部品) (J: Japan, U: US.American, C: Canadian, G: General)

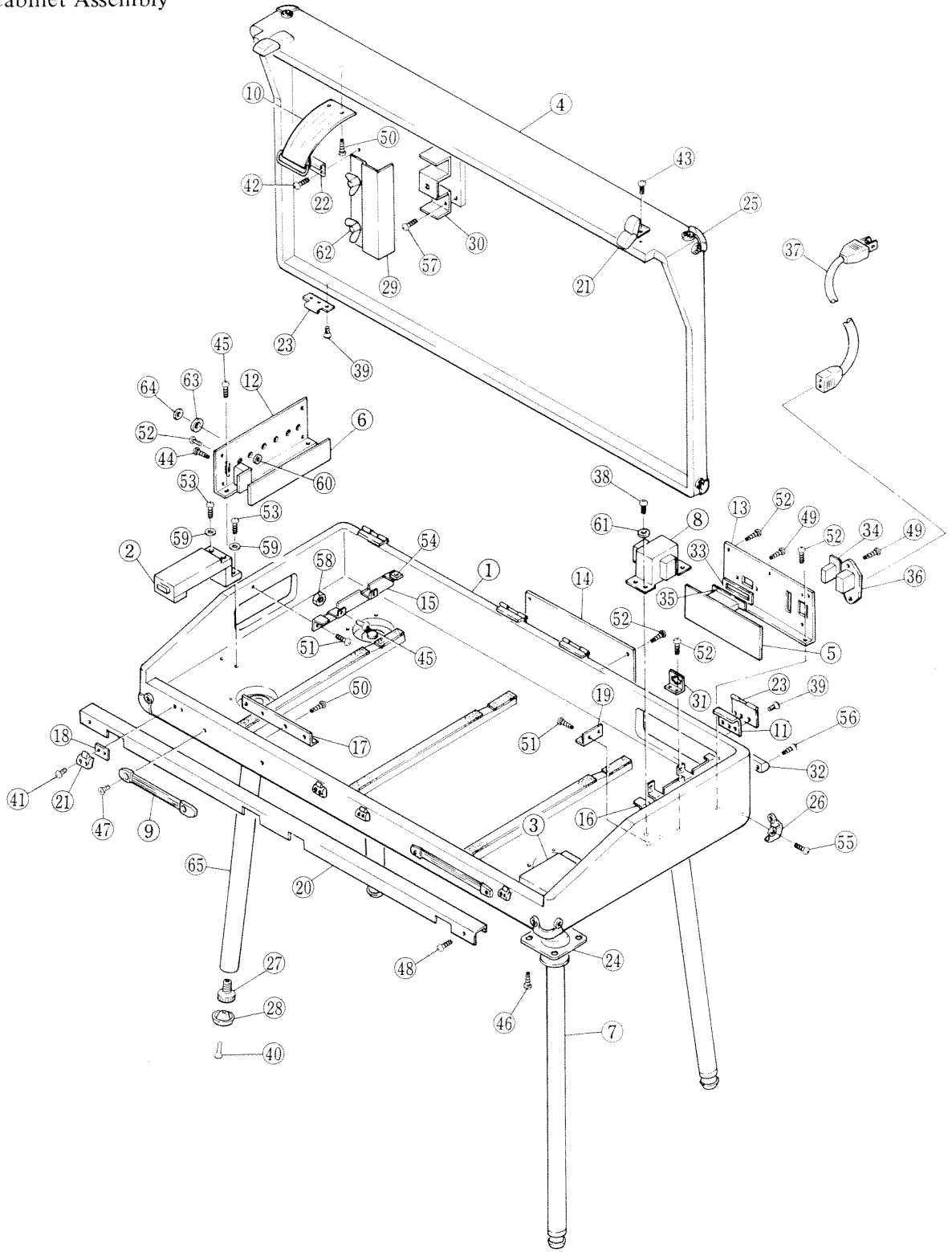
Ref. No.	Part No.	Description	部 品 名		Remarks	Common Model	Markets
	HS 31 05 70	Variable Resistor	B10K Ω	ロータリーボリューム	PITCH TREMOLO DEPTH		
	HS 31 13 30	— do. —	C100K Ω	"	TREMOLO SPEED		
	HS 31 14 20	— do. —	BH10K Ω x 2	"	BALANCE		
	HT 37 00 20	Semi Variable Resistor	B10K Ω	半 固 定 抵 抗			
	HT 37 01 00	— do. —	B50K Ω	"			
	HV 35 43 30	Flame-Proof Carbon Resistor	33 Ω	不燃化カーボン抵抗			
	HV 35 52 20	— do. —	220 Ω	"			
	HZ 00 24 10	Solid Resistor	22M Ω	ソ リ ッ ド 抵 抗			
	ED 65 22 70	Polystyrene Capacitor	270PF	スチロールコンデンサ			
	ED 65 26 80	— do. —	680PF	"			
	FL 63 64 70	B.P. Electrolytic Cap.	4.7 μ F/16V	B. P. ケ ミ コ ン			
	FL 63 71 00	— do. —	10 μ F/16V	"			
	FL 63 72 20	— do. —	22 μ F/16V	"			
	FL 66 64 70	— do. —	4.7 μ F/50V	"			
	FM 80 92 20	Electrolytic Capacitor	2200 μ F/35V	ケ ミ コ ン			
	UJ 15 91 00	— do. —	1000 μ F/35V	"			
	FZ 00 29 40	— do. —	6.8 μ F/25V	"	Low Leak		
	FZ 00 22 50	Spark Suppressor Cap.	0.022 μ F	スパークキラーコンデンサ			
	FZ 00 28 50	— do. —	0.0022 μ F	"			U
	KA 10 10 60	Power Switch		パ ワ ー ス イ ッ チ			
	KA 40 08 10	Slide Switch	4-2	スライドスイッチ	LINE SW		
	KA 40 08 30	Voltage Selector		電 圧 切 替 器			
	KA 50 17 20	Rotary Switch	1-8	ロータリースイッチ	DECAY I,II		
	KA 50 17 00	— do. —	3-4	"	WAVE		
	KA 90 17 01	Push Switch W/LED	Gray	プッシュスイッチ	MODE, TREMOLO, FLANGER 5TH, 8TH UP		
	KA 90 17 11	— do. —	White	"	PRESET		
	KB 00 03 30	Fuse	1A 250V	ヒ ュ ー ズ			J
	KB 00 03 40	— do. —	1.5A 250V	"			J
	KB 00 07 10	— do. — (Miniature)	T500mA 250V	"			G
	KB 00 07 30	— do. — — do. —	T1A 250V	"			G
	KB 00 10 60	— do. —	1A 150V	"			U.C
	KB 00 15 90	— do. —	1.5A 250V	"			U.C
	KC 00 13 00	Relay	RZ-12	リ レ ー			
	GE 30 03 50	Choke Coil	68 μ H	チ ョ ー ク コ イ ル			
	GE 90 03 40	OSC Coil	200 μ H	O S C コ イ ル			
	GE 90 05 00	Coil	CK4	コ イ ル			
	GE 90 05 30	— do. —	CK6	"			
	MG 00 10 30	AC Cord		電 源 コ ー ド			J
	MG 00 10 40	— do. —		"			U
	MG 00 10 50	— do. —		"			G
	MG 00 12 80	— do. —		"			C

※ New Parts (新規部品)

Ref. No.	Part No.				Description		部 品 名	Remarks	Common Model	Markets
	LB	20	15	40	Phone Jack	JL2B	ジ ャ ッ ク			
	LB	20	18	20	AC Inlet	2P	A C イ ン レ ッ ト			J.U.C
	LB	20	18	60	- do. -	2P	//			G
	LB	20	05	70	Fuse Holder Pin		ヒューズホルダーピン			
	LB	20	15	30	- do. -		//			
	LB	50	02	50	Connector Base Pin	5P	2.5ピッチベースピン	Top Entry		
	LB	60	24	60	- do. -	7P	//	- do. -		
	LB	60	24	90	- do. -	8P	//	- do.-		
	LB	60	24	70	- do. -	10P	//	- do. -		
	LB	50	02	70	- do. -	5P	//	Side Entry		
	LB	60	28	20	- do. -	6P	//	- do. -		
	LB	50	03	70	- do. -	5P	//	Bottom Entry		
	LB	60	30	00	- do. -	7P	//	- do. -		
	LB	60	30	70	- do. -	10P	//	- do. -		
	LB	50	02	40	Connector Housing	5P	2.5ピッチハウジング			
	LB	60	28	10	- do. -	6P	//			
	LB	60	24	40	- do. -	7P	//			
	LB	60	24	80	- do. -	8P	//			
	LB	60	24	50	- do. -	10P	//			
	LB	60	15	40	Connector Plug	9P	9 P ブ ラ グ			
	LB	60	15	50	Connector Cap	9P	9 P キ ャ ッ プ			
	LB	60	40	40	Connector Housing	8P	ハ ウ ジ ン グ			
	LB	60	39	90	Connector	8P	コ ネ ク タ ー			
	BB	00	44	30	Pin Contact		ピ ン コ ン タ ク ト			
	BB	00	49	90	- do. -		//			
	LB	60	16	70	- do. -		//			

※ New Parts (新規部品)

B. Cabinet Assembly



Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
※ 1	DA.02.46.80	Bottom Case Assembly	底 枠 集 成			
※ 2	DA.02.47.00	End Block Assembly (L)	拍 子 木 集 成 (左)			
※ 3	DA.02.45.80	— do. — (R)	” (右)			
※ 4	DA.02.47.20	Cover Assembly	蓋 集 成			

※ New Parts (新規部品)

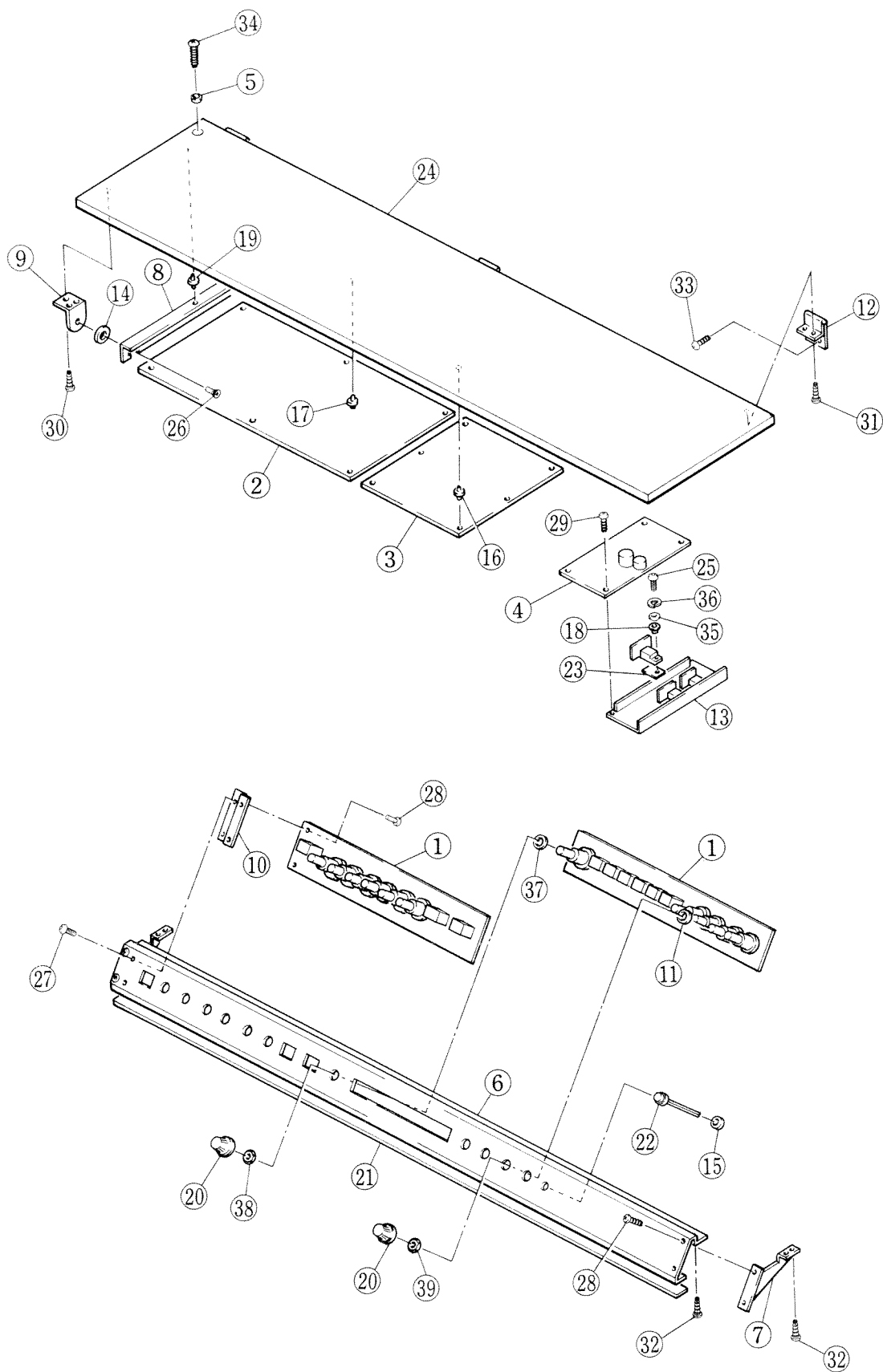
Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
※ 5	NA 10 70 30	Circuit Board, AC	#2891 AC シ ー ト			J
※	NA 10 70 40	— do. — , — do. —	— do. — "			U
※	NA 10 70 50	— do. — , — do. —	— do. — "			G
※	NA 10 74 10	— do. — , — do. —	— do. — "			C
※ 6	NA 10 70 90	— do. — , JK	#2887 JK シ ー ト			
※ 7	NB 10 34 90	Leg Assembly	脚 バ イ ブ Ass'y			
※ 8	NB 10 35 20	Power Transformer Assembly	電 源 ト ラ ン ス Ass'y			G
※	NB 10 35 30	— do. —	"			J.U
※	NB 10 35 40	— do. —	"			C
9	NB 80 59 50	Handle Assembly	取 手 Ass'y			
10	NB 80 59 60	Pedal Stopper Band	ペダル止めバンド Ass'y			
11	AA 01 46 90	Corner Angle	コ ー ナ ー ア ン グ ル			
※ 12	AA 05 25 50	I/O Panel	I/O パ ネ ル			
13	AA 05 25 60	AC Panel	電 源 パ ネ ル			J.U.C
	AA 05 25 70	— do. —	"			G
14	AA 05 26 20	Name Plate	ネ ー ム プ レ ー ト			
15	AA 05 26 30	Top Board Holder (L)	屋 根 受 金 具 (左)			
16	AA 05 26 40	— do. — (R)	" (右)			
17	AA 05 32 00	Handle Plate	取 手 取 付 金 具			
18	AA 05 32 40	Lock Plate	バ ッ チ ン 錠 プ レ ー ト			
19	AA 05 32 80	Transformer Holder	ト ラ ン ス 受 け			
※ 20	AA 05 34 60	Front Rail	ロ 金			
21	AA 80 24 50	Lock	バ ッ チ ン 錠			
22	AA 80 43 20	Holder, Pedal Stopper Band	引 掛 金 具			
23	AA 80 64 20	Latch Hinge	引 掛 蝶 番			
24	AA 80 72 00	Leg Flange	脚 フ ラ ン ジ			
25	AA 80 90 50	Corner Metal	コ ー ナ ー 金 具			
26	AA 81 47 70	— do. —	"			
27	AA 81 54 10	Leg Adjust Nut	調 整 ナ ッ ト			
28	AA 81 54 20	Leg Glide	調 整 座			
※ 29	AA 05 26 80	Leg Holder	脚 保 持 金 具			
※ 29	AA 05 44 70	Leg Holder	脚 受 金 具			
30	AA 81 54 60	— do. —	脚 受 金 具			
31	AA 81 63 00	Connector Holder	コ ネ ク タ ホ ル ダ ー			
32	CB 01 03 10	Case Leg	脚			
33	CB 81 78 90	Spacer	ス ペ ー サ ー			
34	KA 10 10 60	Power Switch	パ ワ ー ス イ ッ チ			
35	KA 40 08 30	Voltage Selector	電 圧 切 替 器			
36	LB 20 18 20	AC Inlet	2 P イ ン レ ッ ト			J.U.C
	LB 20 18 60	— do. —	"			G
37	MG 00 10 30	AC Cord	電 源 コ ー ド			J
	MG 00 10 40	— do. —	"			U
	MG 00 10 50	— do. —	"			G
	MG 00 12 80	— do. —	"			C
38	EA 34 01 50	Pan Head Screw	M4x15 BL ナ ベ 小 ネ ジ			
39	EB 23 01 40	Flat Head Screw	M3x14 Cr 皿 小 ネ ジ			
40	EB 35 02 00	— do. —	M5x20 BL "			
41	EC 23 01 60	Truss Screw	M3x16 Cr ト ラ ス 小 ネ ジ			
42	EC 33 01 20	— do. —	M3x12 BL "			
43	ED 23 01 40	Bind Screw	M3x14 Cr バ イ ン ド 小 ネ ジ			
44	ED 32 60 40	— do. —	M2.6x4 BL "			
45	ED 34 00 80	— do. —	M4x8 BL "			
46	ED 34 01 60	— do. —	M4x16 BL "			

※ New Parts (新規部品)

✖

— 6 —

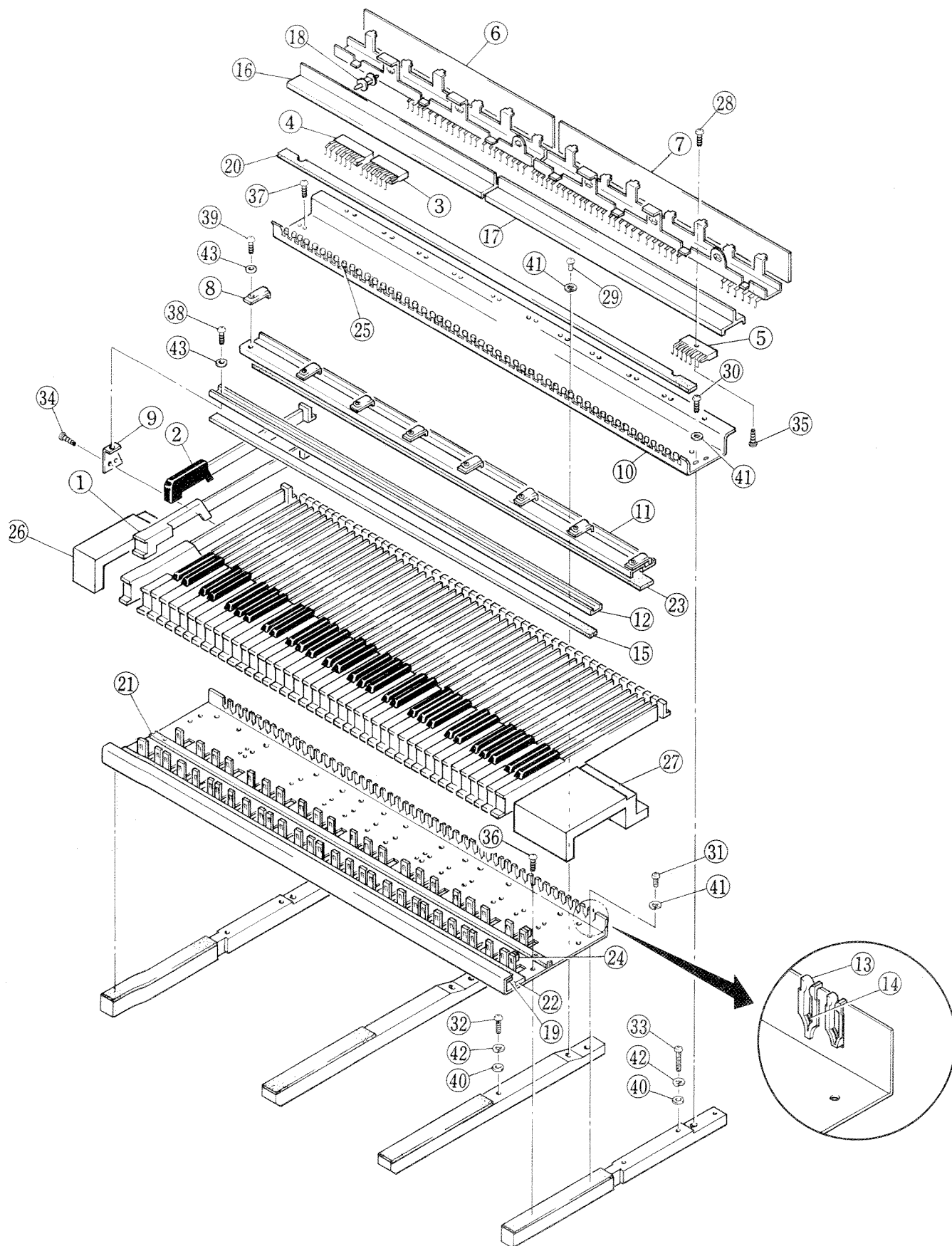
C. Top Board Assembly



Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
※ 1	NA:10:70:60	Circuit Board, PN	#2892 PN シート			
※ 2	NA:10:70:70	— do. — , DM	#2893 DM シート			
※ 3	NA:10:70:80	— do. — , EFT	#2884 EFT シート			
※ 4	NA:10:71:10	— do. — , DC	#2888 DC シート			J
※	NA:10:71:20	— do. — , — do. —	— do. — "			U.C
※	NA:10:71:30	— do. — , — do. —	— do. — "			C
5	AA:02:90:40	Washer	皿 ワッシャー			
※ 6	AA:05:24:70	Panel	パ ネ ル			
7	AA:05:24:80	Panel Stay	パ ネ ル ス テ ー			
8	AA:05:26:00	Stay	ス テ ー			
9	AA:05:26:10	Stay Holder	ス テ ー 固 定 金 具			
※ 10	AA:05:28:70	Switch Holder (B)	S W 固 定 金 具 B			
11	AA:80:58:20	Spacer	ス ペ ー サ ー			
12	AA:81:73:80	Hinge	蝶 番			
13	BA:01:50:70	Heat Sink	ヒ ー ト シ ン ク			
14	CB:01:18:30	Busing	ブ ッ シ ュ			
15	CB:02:99:30	LED Socket	LED ソ ケ ッ ト			
16	CB:03:97:50	C.B. Holder	シ ー ト ホ ル ダ ー			
17	CB:04:00:80	— do. —	"			
18	CB:07:28:80	Insulation Busing	絶 縁 ブ ッ シ ュ			
19	CB:08:70:00	C.B. Holder	シ ー ト ホ ル ダ ー			
20	CB:81:01:20	Knob	ツ マ ミ			
※ 21	CC:01:53:40	Panel Felt	パ ネ ル 貼 フェルト			
22	iF:00:02:90	LED	L E D			
23	iL:00:05:80	Mica Base	マ イ カ ベ ー ス			
24	DA:02:47:10	Top Board Assembly	屋 根 集 成			
25	EA:32:60:80	Pan Head Screw	M2.6x8 BL ナ ベ 小 ネ ジ			
26	EB:34:01:20	Flat Head Screw	M4x12 BL 皿 小 ネ ジ			
27	EC:33:00:60	Truss Screw	M3x6 BL ト ラ ス 小 ネ ジ			
28	ED:33:00:60	Bind Screw	M3x6 BL バ イ ン ド 小 ネ ジ			
29	Ei:33:00:80	Bind Tapping Screw	3x8 BL バ イ ン ド タ ッ ピ ン グ ネ ジ			
30	Ei:33:01:00	— do. —	3x10 BL "			
31	Ei:33:01:20	— do. —	3x12 BL "			
32	Ei:33:51:20	— do. —	3.5x12 BL "			
33	Ei:33:51:60	— do. —	3.5x16 BL "			
34	EM:45:03:00	Oval Head Tapping Screw	5x30 BL 丸 皿 タ ッ ピ ン グ ネ ジ			
35	EV:20:30:30	Flat Washer	3S BL 平 座 金			
36	EV:30:30:30	Spring Lock Washer	3S BL パ ネ 座 金			
37	EV:41:00:70	Toothed Lock Washer	A7S Ye 歯 付 座 金			
38	EZ:30:70:10	Hexagonal Nut	M7 Ye 特 殊 六 角 ナ ッ ト			
39	EZ:30:90:10	— do. —	M9 Ye "			

※ New Parts (新規部品)

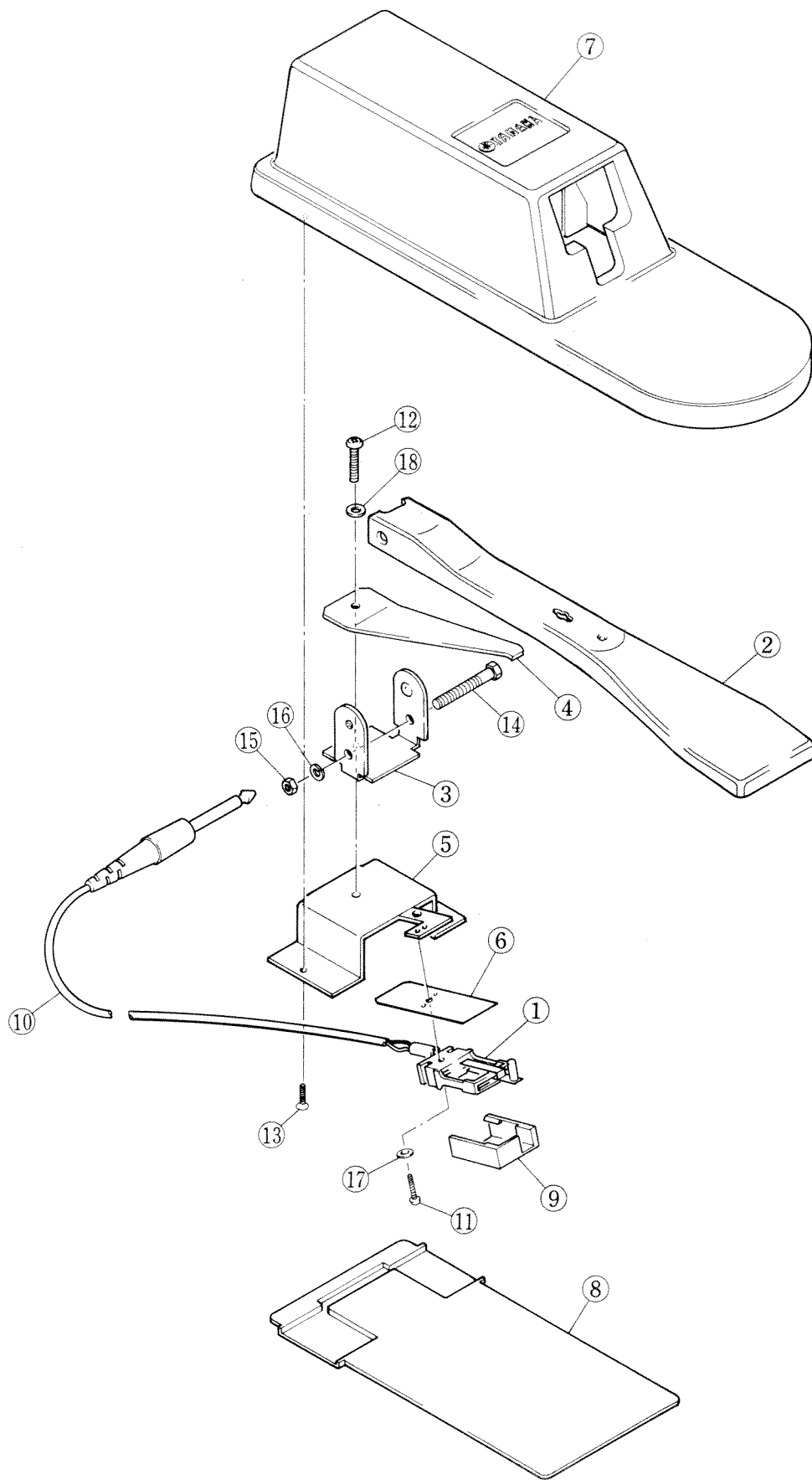
D. Keyboard Assembly



Ref. No.	Part No.	Description	部 品 名		Remarks	Common Model	Markets
1	NB:04:51:00	White Key Assembly	E'	白 鍵 Ass'y			
	NB:04:34:30	— do. —	C,F	〃			
	NB:04:34:40	— do. —	D	〃			
	NB:04:34:50	— do. —	E,B	〃			
	NB:04:34:60	— do. —	G	〃			
	NB:04:34:70	— do. —	A	〃			
2	NB:04:35:10	Black Key Assembly		黒 鍵 Ass'y			
3	NB:80:76:00	Switch Unit	6 Key	スイッチユニット			
4	NB:80:76:10	— do. —	3 Key	〃			
5	NB:81:75:70	— do. —	4 Key	〃			
6	NB:81:76:90	Switch Assembly	33 Key	ス イ ッ チ Ass'y			
※ 7	NB:81:77:10	— do. —	28 Key	〃			
8	AA:80:46:40	Guard, Stopper Rail		ストッパーレール補強金具			
9	AA:80:46:50	Stay (B)		ス テ ー (B)			
※ 10	AA:81:67:90	Switch Rail		スイッチレール			
※ 11	AA:81:68:10	Stopper Rail		ストッパーレール			
※ 12	AA:81:68:50	Key Stopper		キーストッパー			
13	CB:02:78:40	Support		サ ポ ー ト			
14	CB:02:84:10	Pivot Rubber		ピボットゴム			
15	CB:03:07:70	Key Stopper Rubber		キーストッパーゴム			
16	CB:03:97:80	Switch Cover		スイッチカバー			
※ 17	CB:04:00:60	— do. —		〃			
18	CB:81:78:10	PC Support		PC サ ポ ー ト			
19	CC:02:15:30	Stopper Felt		ストッパーフェルト			
※ 20	CC:07:04:50	— do. —		〃			
※ 21	CC:07:04:70	— do. —		〃			
※ 22	CC:07:04:90	— do. —		〃			
※ 23	CC:07:05:10	— do. —		〃			
24	CD:01:00:50	Key Guide Cloth		キーガイドクロス			
25	CH:00:02:90	Tube	Between White & White Key	ヒシチューブ			
	CH:00:03:00	— do. —	Between White & Black Key	〃			
※ 26	DA:02:47:00	End Block Assembly (L)		拍子木集成 (左)			
27	DA:02:45:80	— do. — (R)		〃 (右)			
28	EA:03:01:20	Pan Head Screw	M3x12 Ye	ナベ小ネジ			
29	EA:04:01:60	— do. —	M4x16 Ye	〃			
30	EA:05:01:60	— do. —	M5x16 Ye	〃			
31	EA:05:02:00	— do. —	M5x20 Ye	〃			
32	EA:35:03:00	— do. —	M5x30 BL	〃			
33	EA:35:03:50	— do. —	M5x35 BL	〃			
34	EJ:03:00:60	Pan Head Tapping Screw	3x6 Ye	ナベタッピングネジ			
35	EJ:03:01:20	— do. —	3x12 Ye	〃			
36	EQ:03:51:30	Round Head Wood Screw	3.5x13 Ye	丸木ネジ			
37	ES:04:01:20	Tap Tight Screw	4x12 Ye				
38	ES:04:01:50	— do. —	4x15 Ye	〃			
39	ES:04:02:00	— do. —	4x20 Ye	〃			
40	EV:20:30:50	Flat Washer	5S BL	平座金			
41	EV:30:00:50	Spring Lock Washer	5S Ye	バネ座金			
42	EV:30:30:50	— do. —	5S BI	〃			
43	EV:42:00:40	Toothed Lock Washer	B4S Ye	歯付座金			

※ New Parts (新規部品)

E. Sustainer Pedal



[illegible]

※ New Parts (新規部品)

CP25 SERVICE MANUAL

1981年12月 初版

発 行 所 日本楽器製造株式会社
電音サービス課

本文・総回路図 中部電子印刷(株)
版 下

パーツリスト 豊立設計事務所

本 文 印 刷 株式会社ブレーン企画

総回路図印刷 中部電子印刷(株)