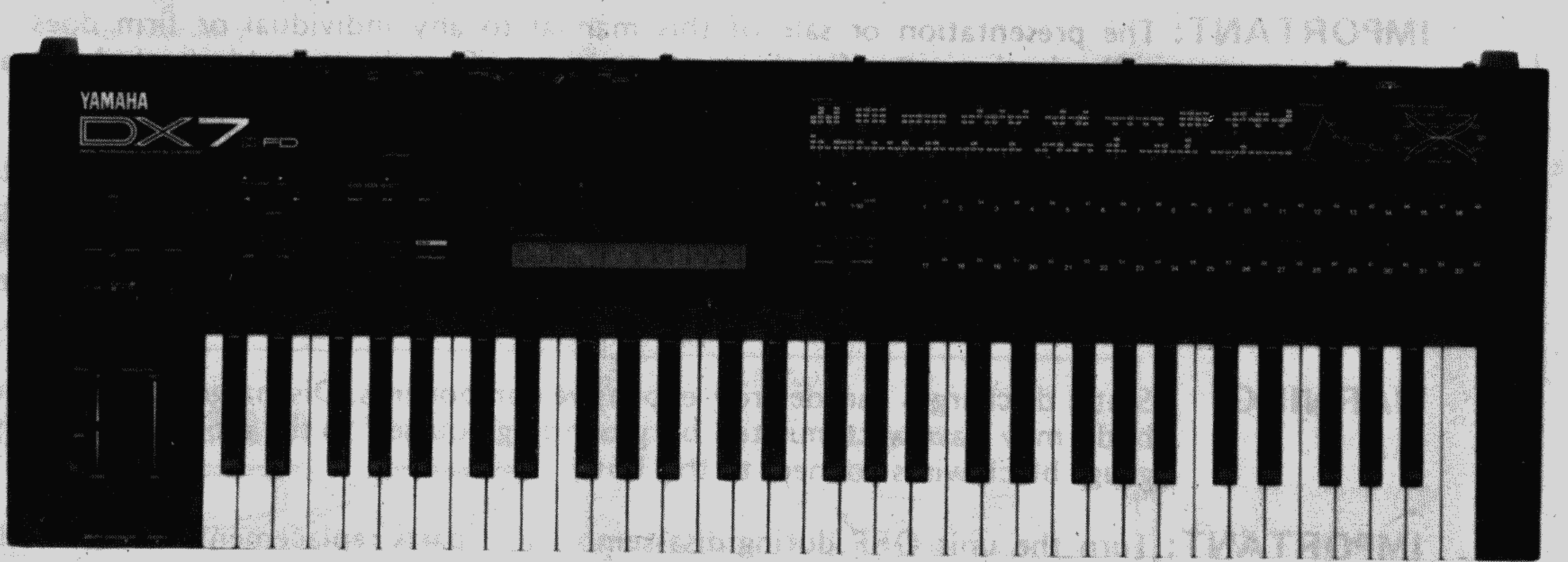
DIGITAL PROGRAMMABLE ALGORITHM SYNTHESIZER

DX7 II·FD/D

SERVICE MANUAL



DX7 II •FD

DX7 II •D

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006725

Koba no GomiCares

SINCE 1887 YAMAHA
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DX7 FD

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: The 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 principle-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 buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

This product uses a lithium battery for memory back-up.

WARNING: Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board, solder using the connection terminals provided on the battery cells. Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disassemble the batteries.
- Never heat batteries or throw them into fire.

ADVARSEL!

Lithiumbatteri. Eksplosionsfare.

Udskiftning må kun foretages af en sagkyndig, og som beskrevet i servicemanualen.

kobanoGomiCares

SPECIFICATIONS

- **Keyboard** 61 keys (C1 ~ C6), with Initial/After touch
- **Tone Generator** FM tone Generator (6 operators 32 algorythms)
- **Simultaneous Note Output (Reverse priority)**
  1-voice: 16 notes (Single play)
  2-voice: 8 notes (Dual play)
  2-voice: 16 notes (Split play)
- **Internal Memory** 64 voices/32 performances, 2 micro tunings, 1 system set-up
- **External ROM Memory** 128 voices/64 performances, micro tuning, fractional level scaling
- **External Memory** RAM cartridge (Optional, RAM4) = Internal Memory
  *Micro floppy disk (Optional, MF2DD) = Internal Memory × 40, MIDI exclusive data
- **Control Sliders and switches**
  Volume slider, Continuous sliders CS1, CS2 (Data entry)
  Data entry switch × 2,
  Mode setting switch × 12,
  Voice switch × 32
- **Controls** PITCH BEND WHEEL, MODULATION WHEEL
- **External Control Terminals**
  BREATH CONTROL, SUSTAIN, FOOT SWITCH (Sustain, Portamento, Key hold, Soft), FOOT CONTROL 1 (Volume, Modulation, Voice parameter), FOOT CONTROL 2 (Volume, Modulation).
  RAM·ROM CARTRIDGE SLOT
  MIDI IN—OUT—THRU
- **Output Terminals** Output A/MIX-B, Headphones
- **Disk Drive** 3.5″ Micro Floppy Disk Drive, built-in.
  2DD 1M Bytes (120K bytes when formatting)
- **Display** LC: 40 letters × 2 lines (illuminated)
  LED: 7 segments × 2
- **Dimensions (W × H × D), Weight**
  999 × 85.8 × 333.7 mm,
  10.5 kg/11.2 kg* (*DX7II FD)
- **Power Supply, Power Consumption**
  U.S. & Canadian Models:
  120V, 50/60Hz
  General Model :
  110V/220V/240V 50Hz
- **Standard Accessories** Music holder, ROM cartridge, 3.5″ Micro floppy disk (MF2DD)
- **Optional Accessories**

RAM Cartridge	RAM4
Flight Case	LC-7IIF
Hard Case	LC-7IIF
Soft Case	SC-7IIS
Cartridge Adaptor	ADP1

  Foot Switch FC4/FC5, Foot Controller FC7, Breath Controller BC1, Stand LG-100, MIDI Cable MIDI 01/03/15, 3.5″ Micro Floppy Disk MF2DD.

PANEL LAYOUT

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CIRCUIT BOARDS LAYOUT

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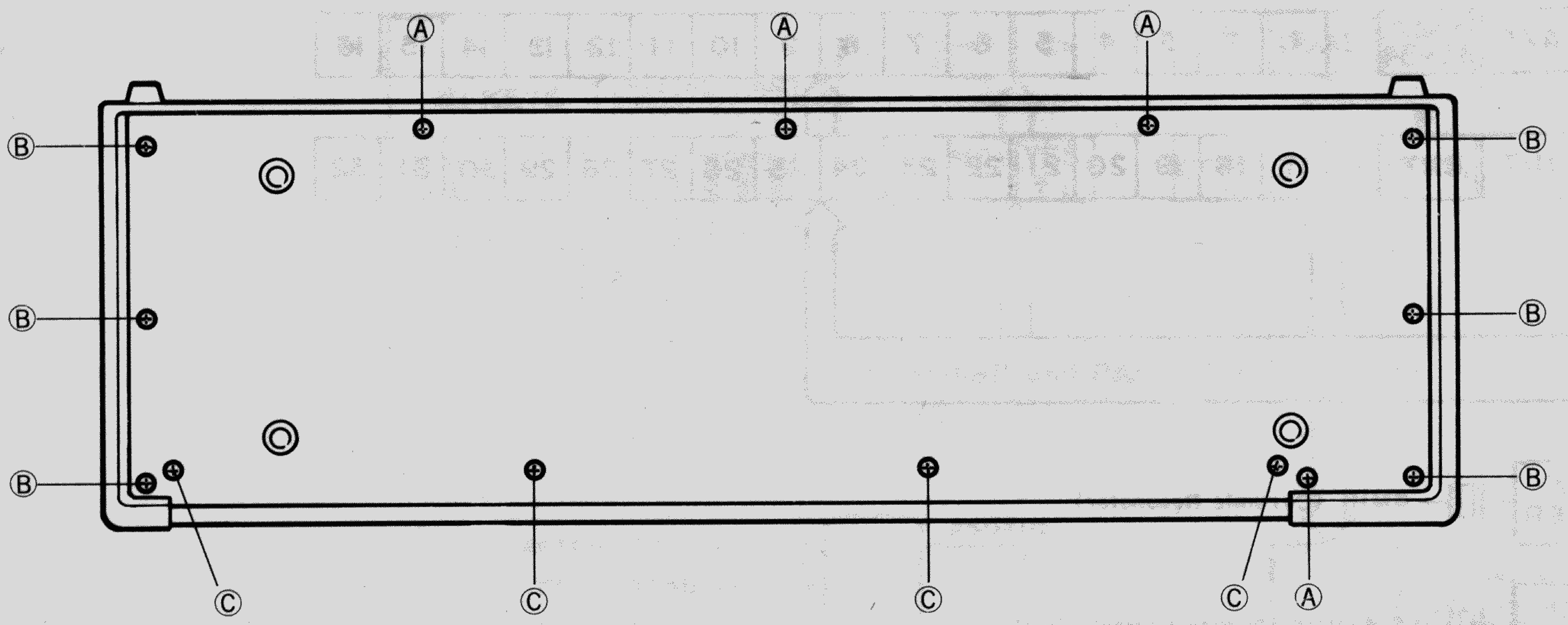
BLOCK DIAGRAM

■ DISASSEMBLY PROCEDURE

1. Bottom Panel Removal (Refer to fig. 1.)

Remove the 14 screws (Ⓐ4 × 6 Bind tapping screw, 4 pcs. Ⓑ4 × 12 Bind head screw, 6 pcs. Ⓒ4 × 8 Bind head screw, 4 pcs.) and then remove the bottom panel as shown in figure 1.



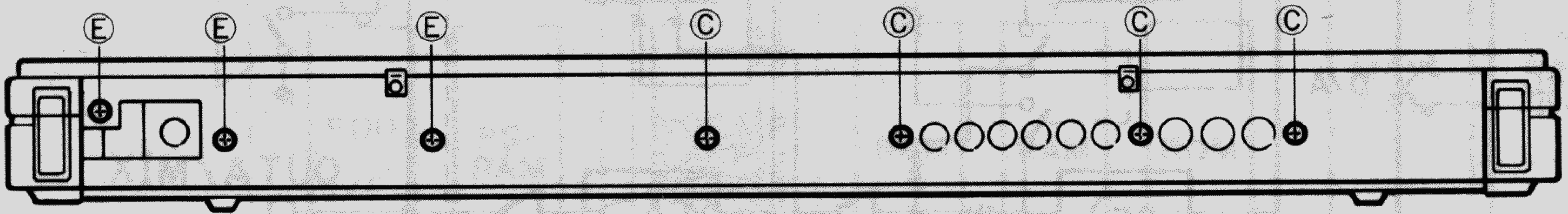
< fig. 1 >

2. DM Circuit Board and Power Supply Unit Removal (Refer to fig. 1 and fig. 2.)

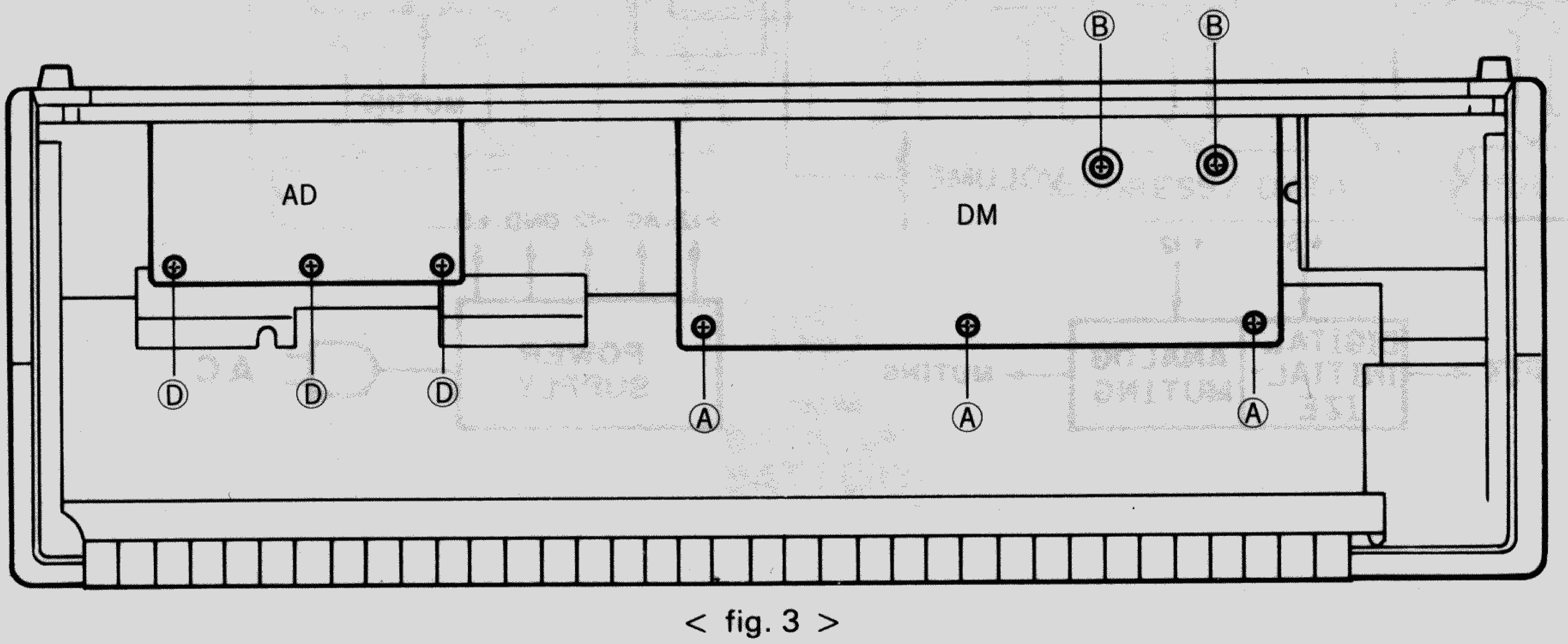
•Remove the bottom panel. (Refer to step 1).

2-1. To remove the DM circuit board, remove the 9 screws. (Ⓐ4 × 8 Bind head screw, 3 pcs. Ⓑ3 × 20 Bind tapping screw, 2 pcs. Ⓒ4 × 12 Bind head screw, 4 pcs.).

2-2. To remove the power supply unit, remove the 6 screws. (Ⓓ4 × 8 Bind head screw, 3 pcs. Ⓔ4 × 12 Bind head screw, 3 pcs.).



< fig. 2 >



< fig. 3 >

3. Floppy Disk Drive (FDD) Assembly Removal (Refer to fig. 4). — *DX7II-FD model only —

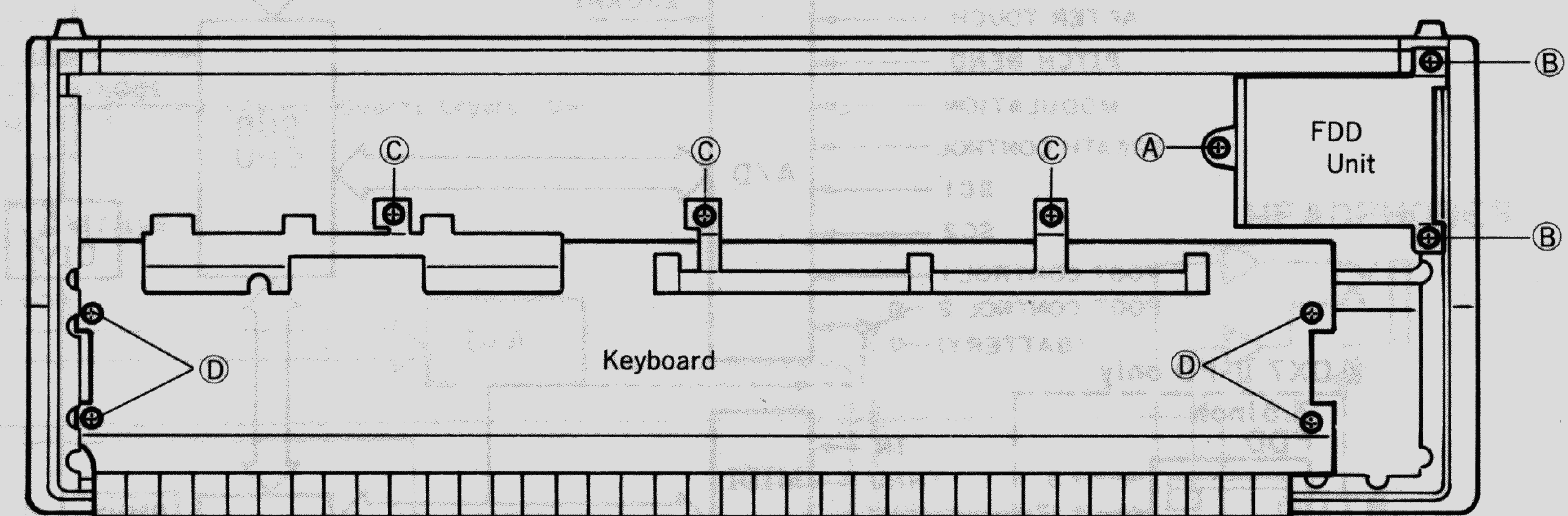
- •Remove the bottom panel. (Refer to step 1).
- •Remove the DM circuit board. (Refer to step 2-1).

Remove the 3 screws (Ⓐ 4 × 8 Bind tapping screw, 1 pc. Ⓑ 4 × 10 Bind tapping screw, 2 pcs.) and then remove the FDD assembly.

4. Keyboard Unit Removal (Refer to fig. 4).

- •Remove the bottom panel. (Refer to step 1).
- •Remove the DM circuit board and the power supply unit. (Refer to step 2).

Remove the 3 angle brackets fixing screws (Ⓒ 3 × 8 Bind tapping screws) and the 4 keyboard flame fixing screws (Ⓓ 4 × 16 Bind tapping screws) then remove the keyboard unit.

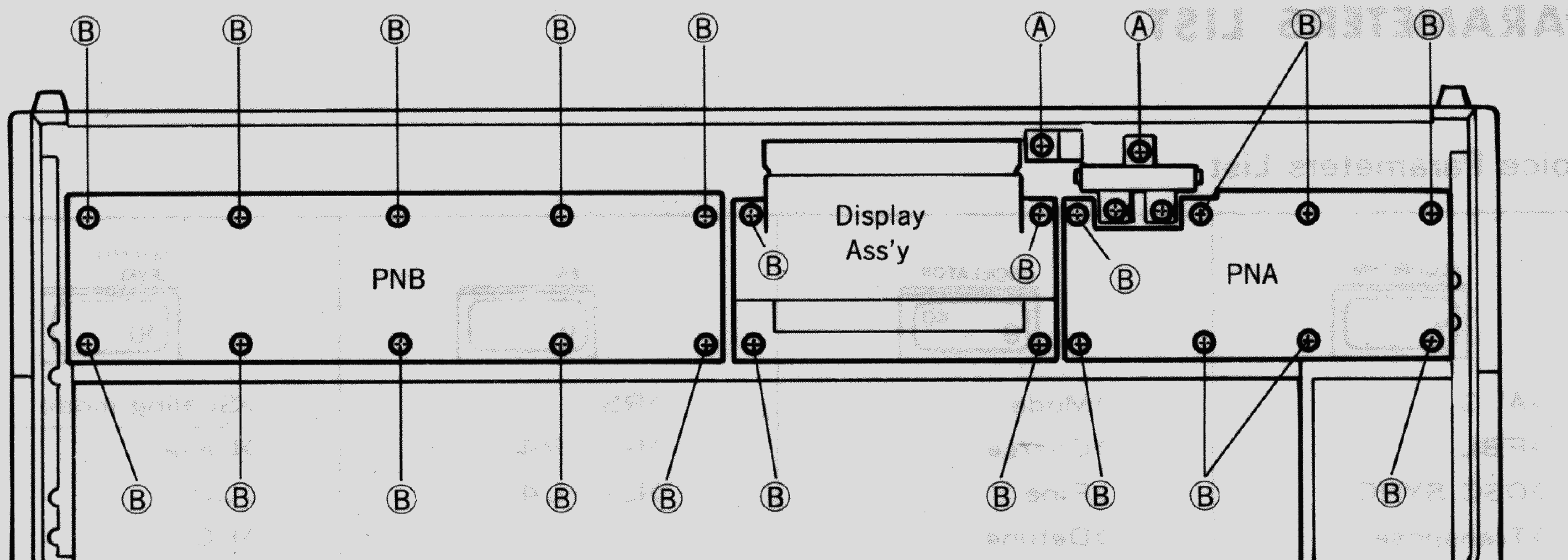


< fig. 4 >

5. PNA Circuit Board, PNB Circuit Board and LCD/LED Display Assembly Removal (Refer to fig. 5).

- •Remove the bottom panel. (Refer to step 1).
- •Remove the DM circuit board and the power supply unit. (Refer to step 2).
- •Remove the FDD assembly. (Refer to step 3). — *DX7II-FD model only —
- •Remove the keyboard unit. (Refer to step 4).

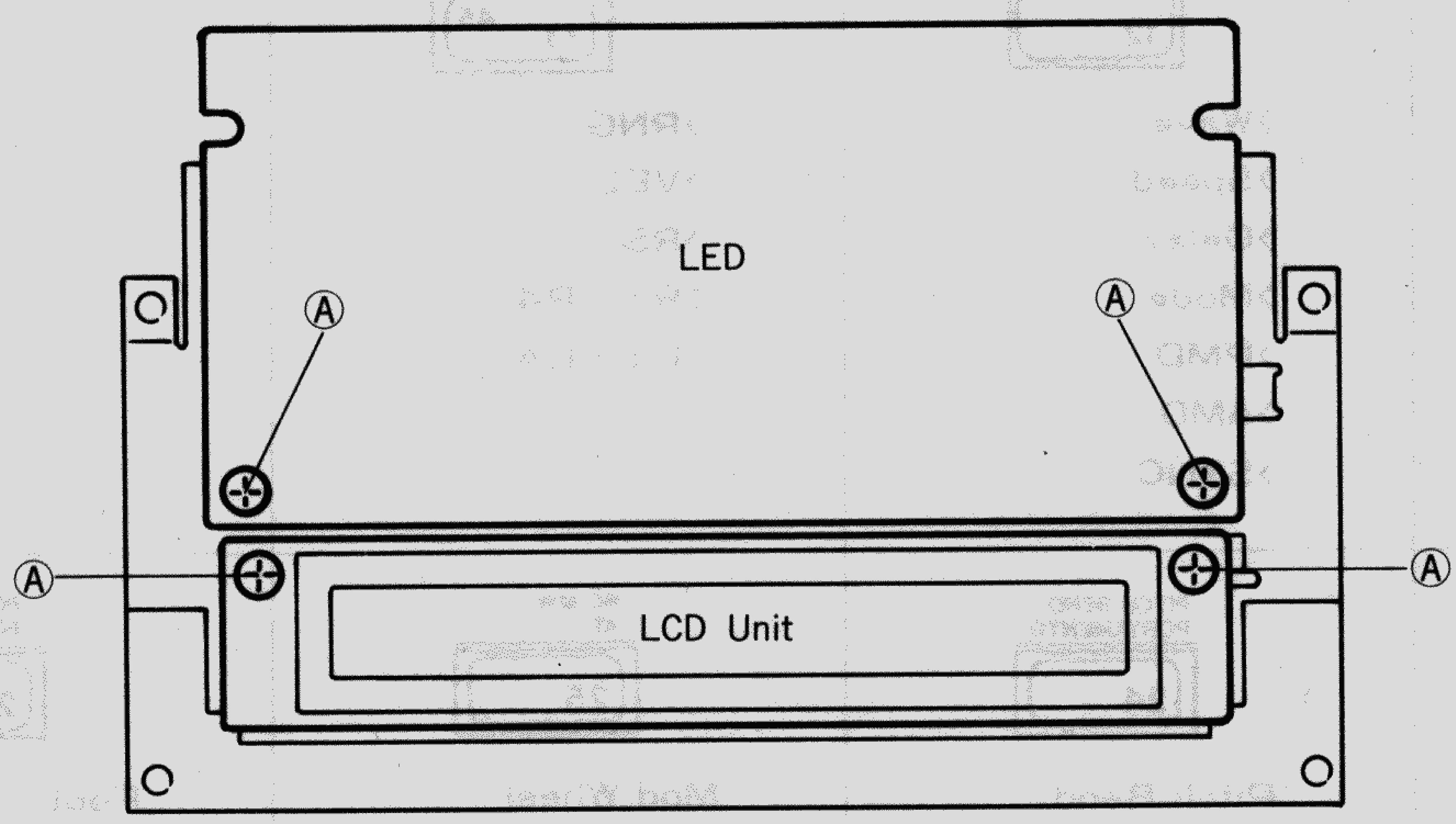
Remove the 5 screws (Ⓐ 4 × 8 Bind tapping screws) and then remove the cartridge guide assembly and the bushing.
Remove the 22 screws (Ⓑ 4 × 8 Bind tapping screws) and then remove the PNA circuit board, the PNB circuit board and the display assembly together.



< fig. 5 >

★ Display Assembly/Disassembly

Remove the filter which is attached with double-sided tape. (Be careful not to damage it). Remov 4 screws (Ⓐ3 × 6 Flat head screws) and then remove the LCD unit and the LED circuit board fron chassis. (Refer to fig. 6).



< fig. 6 >

6. Wheel Assembly and Headphone (HP) Circuit Board Removal (Refer to fig. 7).

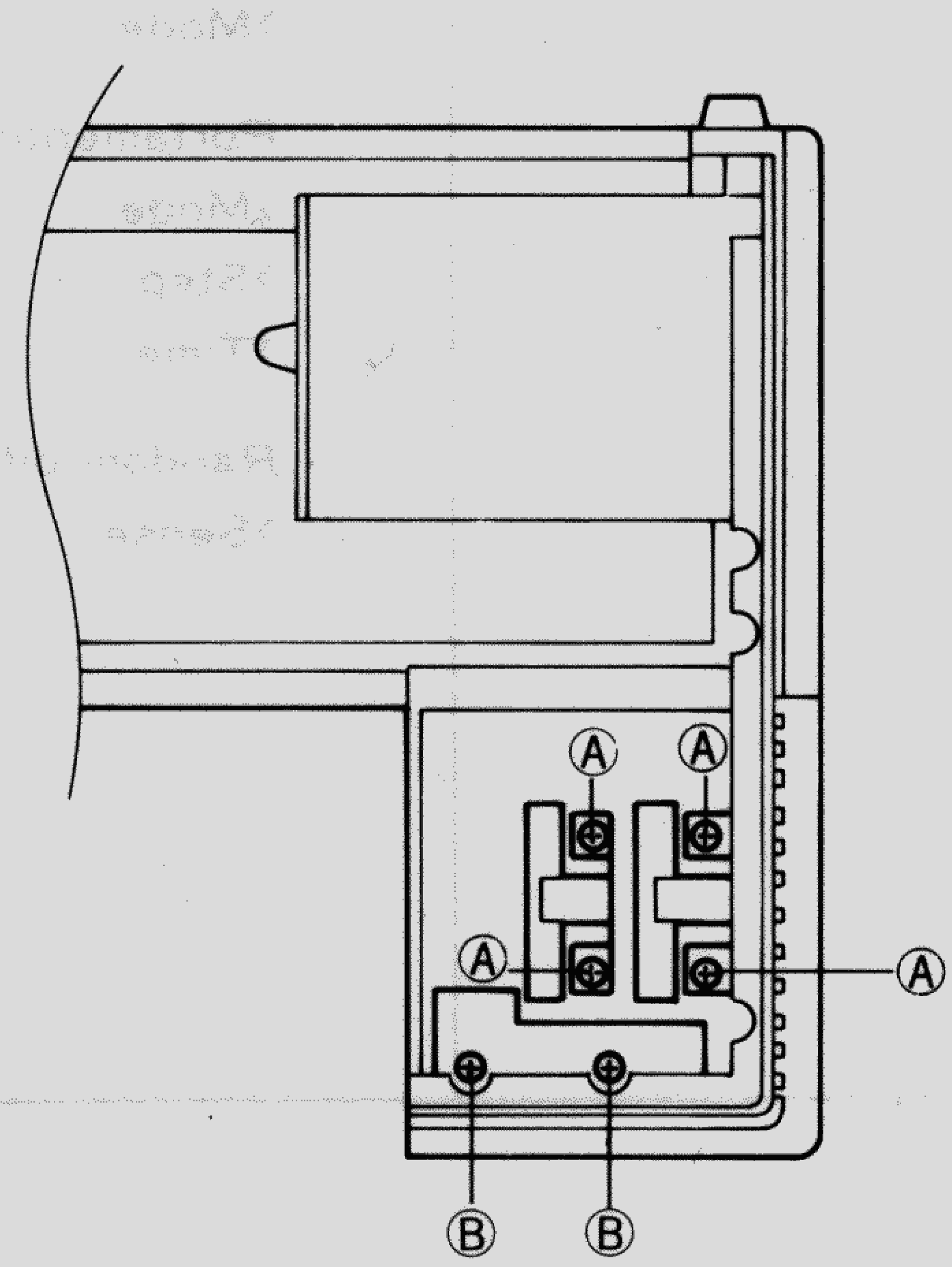
- Remove the bottom panel. (Refer to step 1).
- Remove the DM circuit board. (Refer to step 2-1).

6-1. To remove each wheel assembly, remove the 2 screws. (Ⓐ3 × 8 Bind tapping screws).

6-2. To remove the HP circuit board:

- Remove the power supply unit. (Refer to step 2-2).
- Remove the keyboard unit. (Refer to step 4).

Now remove the 2 screws (Ⓑ3 × 8 Bind tapping screws) and then remove the HP circuit board.



< fig. 7 >

● Voice Parameters List

ALGORITHM 7 >ALG >FBL >OSC.SYNC >Transpose >Voice name	**OSCILLATOR** 8 40 >Mode >Coarse >Fine >Detune	**EG** 9 >RS >R1~R4 >L1~L4	**OUTPUT LEVEL** 10 >Scaling mode >Level >LD >LC >BP >RC >RD >OFST Fractional scaling
SENSITIVITY 11 >Velocity >AMS >PMS(ALL OP)	**LFO** 12 >Wave >Speed >Delay >Mode >PMD >AMD >SYNC	**PITCH EG** 13 45 >RNG >VEL >RS >R1~R4 >L1~L4	
KEY MODE 23 >Key assign mode >Unison detune	**PITCH BEND PORTAMENTO** 24 Pitch Bend >Range >Step >Mode Portamento >Mode >Step >Time Random pitch >Sense	**BC MW AT** 25 Mod.Wheel >P.MOD >A.MOD >EG.Bias Breath Control >P.MOD >A.MOD >EG.Bias >P.Bias After touch >P.MOD >A.MOD >EG.Bias >P.Bias	**FC1 FC2** 26 Foot control 1 >CS 1 >P.MOD >A.MOD >EG.Bias >VOL Foot control 2 >P.MOD >A.MOD >EG.Bias >VOL MIDI IN control >P.MOD >A.MOD >EG.Bias >VOL

● PERFORMANCE Parameters List

FS CS [27 59]	VOISE MODE [28 60]	MICRO TUNE [29 61]	PAN [30 62]
Sustain foot switch >A >B Foot switch >Select >A >B >Range (>Select=softのとき) Continuous slider 1 >Select >A >B Continuous slider 2 >Select >A >B	>Voice mode >Total volume >Balance >Dual Detune >Split point	>Micro tuning table select >Key >A >B >EG forced damping Note shift >A >B >Performance name	PAN >Mode >Range >Select PAN EG >R1~R4 >L1~L4

■ INITIALIZING

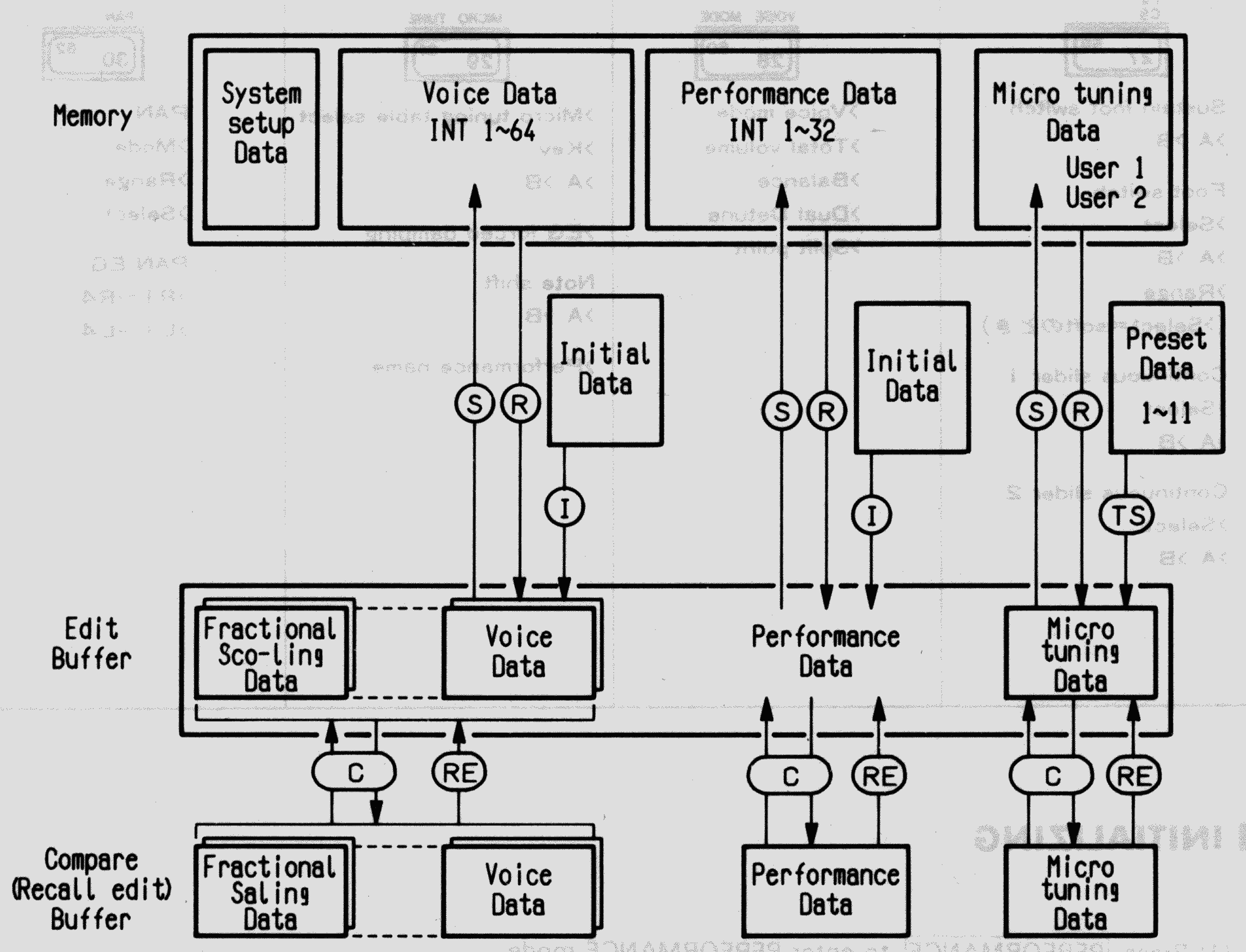
(1) Press PERFORMANCE to enter PERFORMANCE mode.
(2) Press EDIT to enter EDIT mode.
(3) Then push 14 46 repeatedly until the following message appears.

```
Initialize >Voice A >Voice B >Performance
```

(4) Move the cursor to the kind of data you want to initialize, the press YES .
The LCD display will ask you to reconfirm Are you sure?
(5) If you are, answer YES again.
(6) Initialization is thus Completed !

■ MEMORY CONFIGURATION

The chart shows the data flow.



S =Store, R =Recall, C =Compare RE =Recall edit

I =Initialize, TS =Micro tuning table select

ERROR MESSAGES

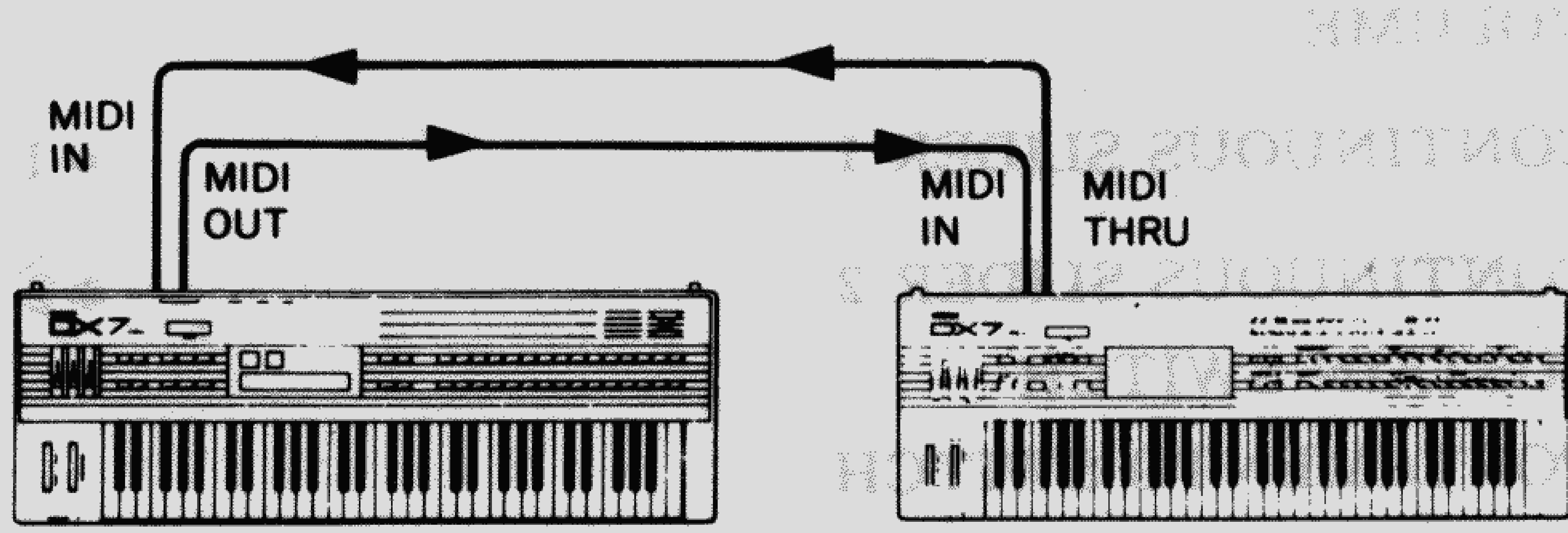
(1) Internal and Cartridge Data Access

LCD Display	ERROR Message
Memory protected !	This message will be displayed when Memory Protect is set to ON, protecting data such as voice, PERFORMANCE, and Micro tuning in the internal or cartridge memories. To store data in the internal memory, turn off the internal Memory Protect function. To store data in the cartridge, set the cartridge Memory Protect switch to OFF.
Memory protected ! (CRT/fractional)	Cartridge Memory Protect is set to ON for fractional scaling data when storing voices using fractional scaling. Set Memory Protect to OFF for the cartridge, and turn the memory protect switch of the cartridge OFF as well.
Cartridge not ready !	The cartridge is either not inserted or is improperly inserted. Reinsert the cartridge correctly into the slot before carrying out such operations as data access, store, save or load with the cartridge.
Cartridge not ready ! (CRT/fractional)	The cartridge for fractional scaling data is not inserted, or improperly inserted, when carrying out operations such as data access, store, save or load of voice data using fractional scaling. Reinsert a RAM cartridge formatted for fractional scaling.
Cartridge format err ! Format err !	The desired data cannot be accessed due to the inappropriate bank format of the cartridge for storing or saving data or improper bank specification. Make sure that the bank format is appropriate for the specified bank. Re-formatting may be necessary.
Cartridge format err ! (CRT/fractional)	The bank format of the cartridge is not for fractional scaling when storing voice data using fractional scaling. The cartridge not for fractional scaling data is inserted or the desired data cannot be accessed due to the improper bank specification when loading voice data using fractional scaling. Make sure that the bank format is appropriate for the specified bank. Re-formatting may be necessary.

(2) Data Access

LCD Display	ERROR Message
**Disk err File not found! Retry? y/n	Attempting to read a disk with no data. Insert a disk containing data and press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Disk space full! Retry? y/n	No disk memory space available. No more data can be stored. Use another formatted disk and press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Unformat disk! Retry? y/n	An operation other than formatting was attempted with an unformatted disk inserted. Insert a formatted disk and press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Disk protected! Retry? y/n	Data writing or formatting has been attempted with a disk that is protected. Take out the disk and slide the memory protect to OFF, the reinsert it and press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Illegal changed! Retry? y/n	Duplication operation is attempted using the original disk. Press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Can't read/write! Retry? y/n	Abnormal data reading or writing has occured, or an operation was carried out without a disk inserted. In the former case, press [+1/ON] a few times. If the problem persists, the cause may be one of the following: (Press [−1/OFF] to abort the operation.) (1) The floppy disk is deformed—data cannot be accessed. (2) The disk drive head is dirty—data cannot be accessed. For (2), cleaning the head should solve the problem. For any other causes, please contact a certified serviceperson.
**Disk err Illegal disk! Retry? y/n	The disk format is not compatible with the DX7II FD. Insert a disk formatted by the DX7II FD and press [+1/ON] to continue or [−1/OFF] to stop.
**Disk err Directory full! Retry? y/n	The disk is full and has no room for additional data storage. Insert a new disk and press [+1/ON] to continue the operation, or press [−1/OFF] to stop and create more storage area on the same disk by deleting existing files.
**Disk err File exist! Retry? y/n	Back-up was attempted on a disk which already contains data. Press [+1/ON] to erase existing data and write new data or press [−1/OFF] to abort data writing.

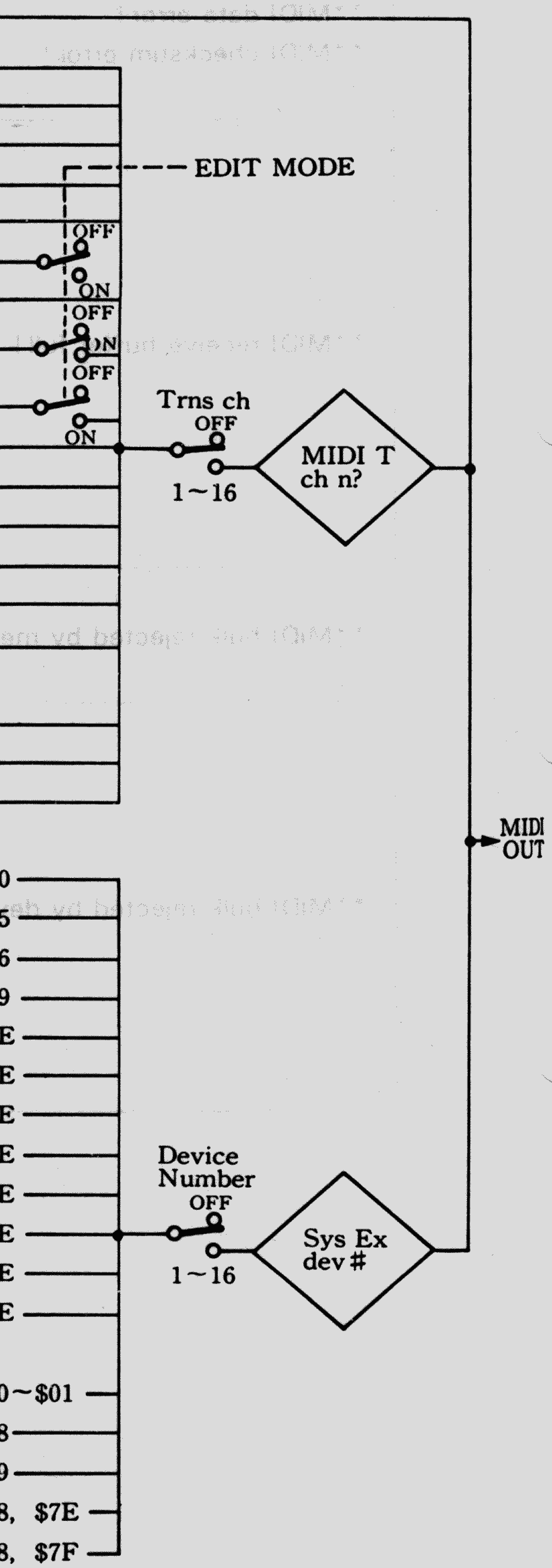
(3) MIDI Data Reception

LCD Display	ERROR Message
**MIDI data error ! **MIDI checksum error !	Abnormal MIDI data reception has occured. Repeat the operation. The display will indicate whether the transmitting MIDI device can be turned ON after the receiving device has been turned ON.
**MIDI receive buffer full !	Indicates a single reception of bulk data which exceeds the maximum storage capacity. This rarely occurs. The display will indicate if a loop connection is produced. 
**MIDI bulk rejected by memory protect !	32 voice data, 32 performance data and 2 micro tuning data are not received because the internal memory protect function is set to ON. Set it to OFF.
**MIDI bulk rejected by dev# conflict !	No data is transmitted because of a mismatch of the device No. with the transmitting device. Match the No. to the transmitting device. ● The LCD display will indicate [f] when the transmission of fractional scaling data is attempted with an inappropriate cartridge installed. ● The LCD display will indicate [T] when the performance mode, in which micro tuning data is used, is implemented with an inappropriate cartridge installed.

MIDI DATA FORMAT

[1] Transmission Requirements

ACTIVE SENSING		$FE
NOTE ON/OFF		$9n
MODULATION WHEEL		$Bn, $01
BREATH CONTROL		$Bn, $02
FOOT CONTROL		$Bn, $04
PORTAMENTO TIME		$Bn, $05
DATA ENTRY		$Bn, $06
VOLUME		$Bn, $07
CONTINUOUS SLIDER 1	*1	$Bn, $05~$1F
CONTINUOUS SLIDER 2	*2	$Bn, $05~$1F
SUSTAIN SWITCH		$Bn, $40
PORTAMENTO SWITCH		$Bn, $41
SOSTENUTO		$Bn, $42
SOFT		$Bn, $43
DATA ENTRY +1		$Bn, $60
DATA ENTRY −1		$Bn, $61
PROGRAM CHANGE		$Cn
AFTER TOUCH		$Dn
PITCH BENDER		$En
VOICE EDIT BUFFER		$F0, $43, $0S, $00
SUPPLEMENT EDIT BUFFER		$F0, $43, $0S, $05
PACKED 32 SUPPLEMENT		$F0, $43, $0S, $06
PACKED 32 VOICE		$F0, $43, $0S, $09
PACKED 32 PERFORMANCE		$F0, $43, $0S, $7E
PERFORMANCE EDIT BUFFER		$F0, $43, $0S, $7E
SYSTEM SETUP		$F0, $43, $0S, $7E
MICRO TUNING EDIT BUFFER		$F0, $43, $0S, $7E
MICRO TUNING IN MEMORY		$F0, $43, $0S, $7E
MICRO TUNING IN CARTRIDGE		$F0, $43, $0S, $7E
FRACTIONAL SCALING EDIT BUFFER		$F0, $43, $0S, $7E
FRACTIONAL SCALING IN CARTRIDGE		$F0, $43, $0S, $7E
VOICE PARAMETER CHANGE		$F0, $43, $1S, $00~$01
SUPPLEMENT PARAMETER CHANGE		$F0, $43, $1S, $18
PERFORMANCE PARAMETER CHANGE		$F0, $43, $1S, $19
MICRO TUNING PARAMETER CHANGE		$F0, $43, $1S, $18, $7E
FRACTIONAL SCALING PARAMETER CHANGE		$F0, $43, $1S, $18, $7F



*1 BALANCE $Bn, $08 in EDIT MODE
*2 DATA ENTRY $Bn, $06 in EDIT MODE

[2] Transmission Data

[2]-1 Channel Information

Transmission is possible only when 1~ 16 is specified as the transmission channel.

1) Channel voice message

1 Key ON/OFF

Status	1 0 0 1 n n n n	(9n)	n=channel No.
Note No.	0 k k k k k k k		k=36(C1)~96(C6)
Velocity	0 v v v v v v v	(v≠0)	Key ON
	0 0 0 0 0 0 0 0	(v=0)	Key OFF

2 Control change

Status	1 0 1 1 n n n n	(Bn)	n=channel No.
Control No.	0 c c c c c c c		
Control Value	0 v v v v v v v		

Control No.

c=1	Modulation wheel	v=0~127
c=2	Breath control	v=0~127
c=4	Foot control	v=0~127
c=5	Portamento time	v=0~127
c=6	Data entry slider	v=0~127
c=7	Volume	v=0~127
c=5~ c=31	Continuous slider	v=0~127
c=64	Sustain SW	v=0: OFF, 127: ON
c=65	Portamento SW	v=0: OFF, 127: ON
c=66	Sostenuto	v=0: OFF, 127: ON
c=67	Soft	v=0: OFF, 127: ON
c=96	Data entry +1	
c=97	Data entry −1	

3 Program change

Status	1 1 0 0 n n n n	(Cn)	n=channel No.
Program No.	0 p p p p p p p		p=0~63: INTERNAL p=64~127: CARTRIDGE

4 After touch

Status	1 1 0 1 n n n n	(Dn)	n=channel No.
Value	0 v v v v v v v		v=0~127

5 Pitch bender

Status	1 1 1 0 n n n n	(En)	n=channel No.
Value (LSB)	0 u u u u u u u		
Value (MSB)	0 v v v v v v v		

Resolution 7bit

The transmission data are as follows:

MSB		LSB		
00000000	(00)	00000000	(00)	Min.
01000000	(40)	00000000	(00)	Mid.
01111111	(7F)	01111110	(7E)	Max.

[2]-2 System Information

1) System real time message

Active sensing

Status	1 1 1 1 1 1 1 0	(FE)

2) System exclusive message

Transmission is possible only when the device No. is set to 1~16.

1 Parameter change

Status	1 1 1 1 0 0 0 0	(F0)	
ID No.	0 1 0 0 0 0 1 1	(43)	
Substatus/ device No.	0 0 0 1 n n n n	(1n)	
Parameter group No.	0 g g g g g h h		
Parameter No.	0 p p p p p p p		
Data	0 d d d d d d d		Single or multiple bytes
	0 d d d d d d d		
EOX	1 1 1 1 0 1 1 1	(F7)	

There are seven parameter group Nos. and parameter Nos.

Parameter	g	h	p	No. of data byte
Voice	0	0	0~127	1
	0	1	0~28	1
Supplement Note 3)	6	0	0~73	1
Performance	6	1	0~52	1
System set-up	6	1	64~	1
Micro tuning	6	0	126	3 Note 1)
Fractional scaling	6	0	127	4 Note 2)

NOTE 1

Data bytes

0kkkkkkk	key number		total of 3 bytes
0hhhhhhh	data (high)	0-84 binary	
01111111	data (low)	0-127 binary	

NOTE 2

Data bytes

00000ppp	operator number		total of 4 byte
00kkkkkk	key group number		
0hhhhhhh	data (high)	0-1 binary	
01111111	data (low)	0-127 binary	

NOTE 3

Under the Supplement parameter change, DX7 function parameter change will be transmitted along with the above.

● **Fractional Scaling Parameter Change**

Operator number

P	Operator
0	op 6
1	op 5
2	op 4
3	op 3
4	op 2
5	op 1

Key group number

K	Key	Data	
0	offset	−128~127	(Complement of 2)
1	C#-2~ C-1	0 ~256	(Binary)
2	C#-1~D#-1		
3	E-1 ~F#-1		
4	G-1 ~ A-1		
5	A#-1~ C0		
6	C#0 ~ D#0		
7	E0 ~ F#0		
8	G0 ~ A0		
9	A#0 ~ C1		
10	C#1 ~ D#1		
11	E1 ~ F#1		
12	G1 ~ A1		
13	A#1 ~ C2		
14	C#2 ~ D#2		
15	E2 ~ F#2		
16	G2 ~ A2		
17	A#2 ~ C3		
18	C#3 ~ D#3		
19	E3 ~ F#3		
20	G3 ~ A3		
21	A#3 ~ C4		
22	C#4 ~ D#4		
23	E4 ~ F#4		
24	G4 ~ A4		
25	A#4 ~ C5		
26	C#5 ~ D#5		
27	E5 ~ F#5		
28	G5 ~ A5		
29	A#5 ~ C6		
30	C#6 ~ D#6		
31	E6 ~ F#6		
32	G6 ~ A6		
33	A#6 ~ C7		
34	C#7 ~ D#7		
35	E7 ~ F#7		
36	G7 ~ A7		
37	A#7 ~ C8		
38	C#8 ~ D#8		
39	E8 ~ F#8		
40	G8		

2 Bulk data

For
- Voice edit buffer
- Supplement edit buffer
- Packed 32 supplement
- Packed 32 voice

Status	1 1 1 1 0 0 0 0	(F0)
ID No.	0 1 0 0 0 0 1 1	(43)
Substatus/ device No.	0 0 0 0 n n n n	(0n)
Format No.	0 f f f f f f f	
Byte count (MSB)	0 b b b b b b b	
Byte count (LSB)	0 b b b b b b b	
Data	0 d d d d d d d	
	↓	
	0 d d d d d d d	
Checksum	0 e e e e e e e	
EOX	1 1 1 1 0 1 1 1	(F7)

Format No.	Data	Byte count
0	Voice edit buffer	155
5	Supplement edit buffer	49
6	Packed 32 supplement	1120
9	Packed 32 voice	4096

● **When using universal Bulk Damp**

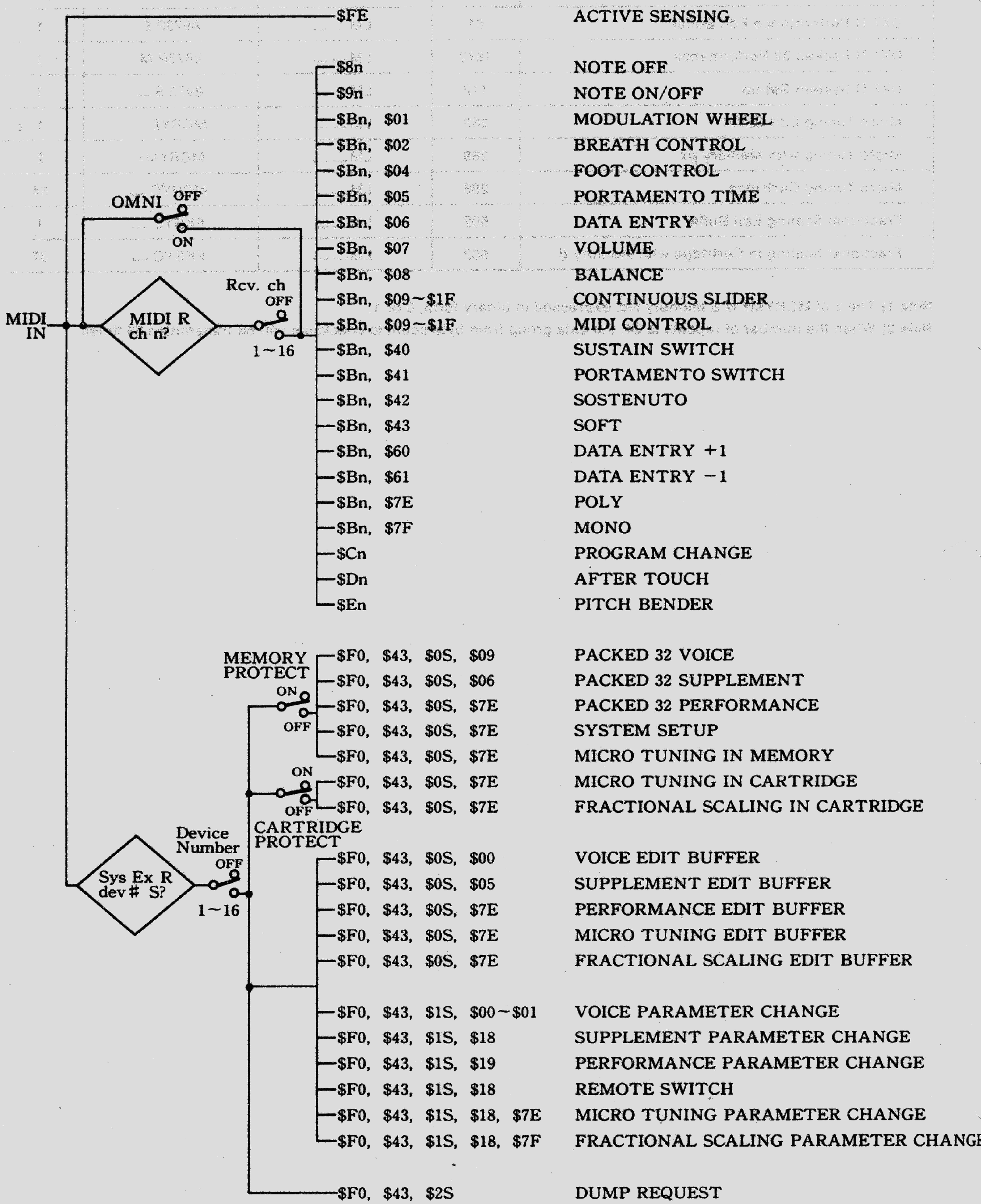
Status	1 1 1 1 0 0 0 0	(F0)	
ID No.	0 1 0 0 0 0 1 1	(43)	
Substatus/ device No.	0 0 0 0 n n n n	(0n)	
Format No.	0 1 1 1 1 1 1 0	(7E)	
Byte count (MSB)	0 b b b b b b b		Repeat group
Byte count (LSB)	0 b b b b b b b		
Classification	0 a a a a a a a	ASCII'L	
name	0 a a a a a a a	'M	
(4 bytes)	0 a a a a a a a	'␣	
	0 a a a a a a a	'␣	
Data format	0 m m m m m m m	ASCII	
name (6 bytes)	↓		
	0 m m m m m m m		
Data	0 d d d d d d d		
	↓		
	0 d d d d d d d		
Checksum	0 e e e e e e e		
EOX	1 1 1 1 0 1 1 1	(F7)	

Data	Byte count	Classification name	Data format name	No. of repeats
DX7 II Performance Edit Buffer	61	LM␣␣	8973P E	1
DX7 II Packed 32 Performance	1642	LM␣␣	9873P M	1
DX7 II System Set-up	112	LM␣␣	8973 S␣	1
Micro Tuning Edit Buffer	266	LM␣␣	MCRYE	1
Micro Tuning with Memory #x	266	LM␣␣	MCRYMx	2
Micro Tuning Cartridge	266	LM␣␣	MCRYC␣	64
Fractional Scaling Edit Buffer	502	LM␣␣	FKSYE␣	1
Fractional Scaling in Cartridge with Memory #	502	LM␣␣	FKSYC␣	32

Note 1) The x of MCRYMx is a memory No. expressed in binary form, 0 or 1.

Note 2) When the number of repeats is 64, the data group from byte count to checksum will be transmitted 64 times.

[3] Reception Requirements



[4] Reception Data

[4]-1 Channel Information

There are two types of MIDI reception channels for channel messages: A and B.

Single mode	: Only A is effective
Dual mode	: Only A is effective
Split mode	: A, B independent The split point function is effective when A = B, assigning A to the lower half and B to the upper half.

1) Channel voice message

1 Key OFF

Status	1 0 0 0 n n n n	(8n)	n = channel No.
Note No.	0 k k k k k k k		k = 0(C_{-2}) ~ 127(G_8)
Velocity	0 v v v v v v v		Ignore vs

2 Key ON/OFF

Status	1 0 0 1 n n n n	(9n)	n = channel No.
Note No.	0 k k k k k k k		k = 0(C_{-2}) ~ 127(G_8)
Velocity	0 v v v v v v v		v = 1 ~ 127 Key ON
	0 0 0 0 0 0 0 0		Key OFF

3 Control change

Status	1 0 1 1 n n n n	(Bn)
Control No.	0 c c c c c c c	
Control Value	0 v v v v v v v	

c = 1	Modulation wheel	v = 0 ~ 127
c = 2	Breath control	v = 0 ~ 127
c = 4	Foot control	v = 0 ~ 127
c = 5	Portamento time	v = 0 ~ 127
c = 6	Data entry slider	v = 0 ~ 127
c = 8	Balance	v = 0 ~ 127
c = 9-31	Continuous slider	v = 0 ~ 127
c = 9-31	MIDI control	v = 0 ~ 127
c = 64	Sustain SW	v = 0 ~ 63: OFF, 64 ~ 127: ON
c = 65	Portamento SW	v = 0 ~ 63: OFF, 64 ~ 127: ON
c = 66	Sosutenuto	v = 0 ~ 63: OFF, 64 ~ 127: ON
c = 67	Soft	v = 0 ~ 63: OFF, 64 ~ 127: ON
c = 96	Date entry + 1	
c = 97	Data entry − 1	

The continuous sliders can be assigned to certain internal effects.
MIDI control can be assigned in the same way as foot control.

4 Program change

Status	1 1 0 0 n n n n	(Cn)	n = channel No.
Program No.	0 p p p p p p p		p = 0 ~ 127

0 ~ 31 select internal PERFORMANCE combinations in PERFORMANCE mode.
32 ~ 63 select cartridge PERFORMANCE combinations.
Values over 63 repeat this order of selection (INT 1 ~ 32 → CRT 1 ~ 32).
In Single, Dual or Split mode, 0 ~ 63 select INT voices, 64 ~ 127 CRT voices.

5 After touch

Status	1 0 1 1 n n n n	(Dn)	n = channel No.
Value	0 v v v v v v v		v = 0 ~ 127

6 Pitch bender

Status	1 1 1 0 n n n n	(En)	n = channel No.
Value (LSB)	0 u u u u u u u		
Value (MSB)	0 v v v v v v v		

Operates with only the MSB data.

MSB

00000000	Min.
01000000	Mid.
01111111	Max.

2) Channel mode message

1 Poly/All note off

1 0 1 1 n n n n	(Bn)
0 1 1 1 1 1 1 0	(7E) Poly/All note off
0 0 0 0 0 0 0 0	

2 Mono/All note off

1 0 1 1 n n n n	(Bn)
0 1 1 1 1 1 1 1	(7F) Mono/All note off
0 mmmmmmm	Set to the Mono mode with only m = 1 recognized. Ignore when m = 1.

[4]-2 System Information

1) System real time messages

Active sensing

Status	1 1 1 1 1 1 1 0	(FE)

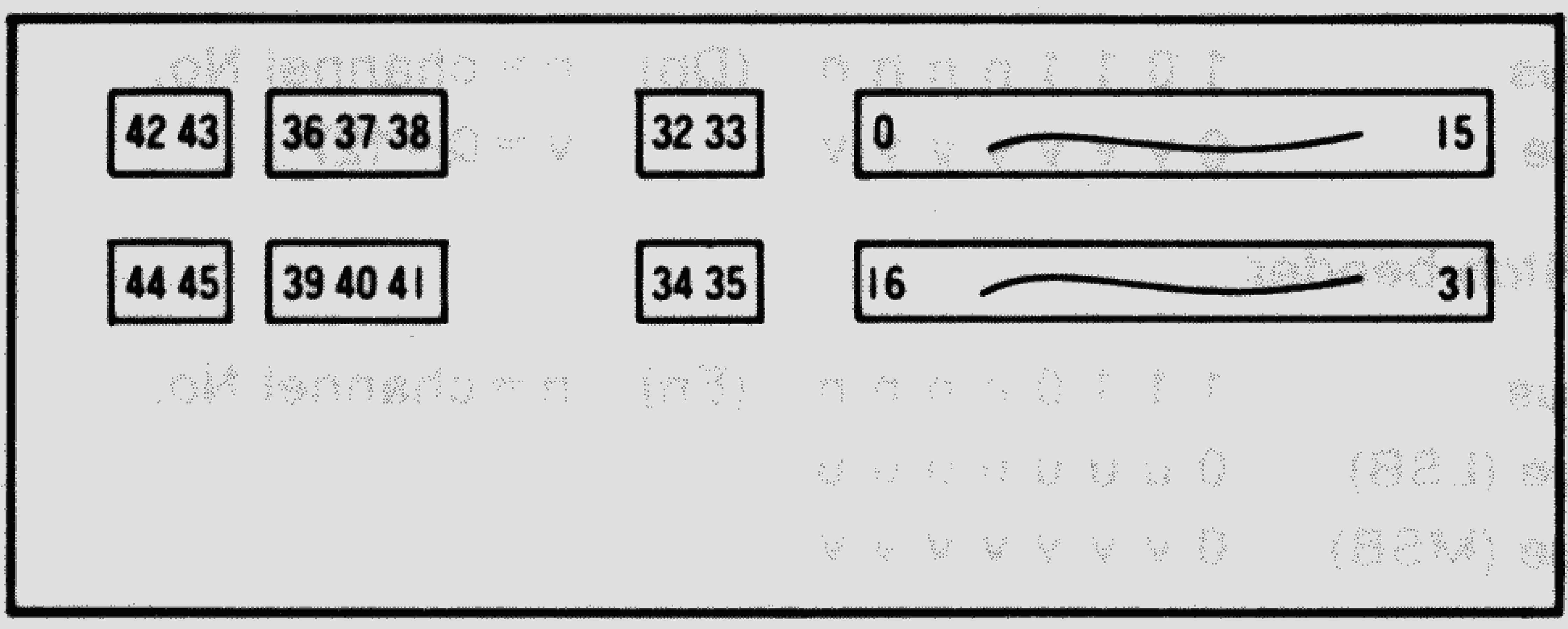
Upon reception of the code, sensing will start. When there is no status byte or data for 300 msec, the MIDI reception buffer is cleared and the on-going sound turned OFF.

2) System exclusive messages

1 Parameter change (Switch remote)

Status	1 1 1 1 0 0 0 0	(F0)
ID No.	0 1 0 0 0 0 1 1	(43)
Substatus/ device No.	0 0 0 1 n n n n	(1n)
Parameter group No.	0 0 0 1 1 0 1 1	(1B)
Switch No.	0 m m m m m m m	
Data	0 d d d d d d d	d=0: OFF d=127: ON
EOX	1 1 1 1 0 1 1 1	(F7)

All the panel switches are controlled.
The switch numbers are follows:



2 Parameter change
Same as for transmission

3 Bulk data
Same as for transmission

4 Dump request

For { Voice edit buffer (f=0)
Supplement edit buffer (f=5)
Packed 32 supplement (f=6)
Packed 32 voice (f=9)

Status	1 1 1 1 0 0 0 0	(F0)
ID No.	0 1 0 0 0 0 1 1	(43)
Substatus/ device No.	0 0 1 0 n n n n	(2n)
Format No.	0 f f f f f f f	f=0, 5, 6, 9
EOX	1 1 1 1 0 1 1 1	(F7)

- **Universal bulk dump**

Status	1 1 1 1 0 0 0 0	(F0)
ID No.	0 1 0 0 0 0 1 1	(43)
Substatus/ device No.	0 0 1 0 n n n n	(2n)
Format No.	0 1 1 1 1 1 1 0	(7E)
Classification name (ASCII 4 letters)	0 a a a a a a a ↓ 0 a a a a a a a	
Data format name (ASCII 6 letters)	0 m m m m m m m ↓ 0 m m m m m m m	
EOX	1 1 1 1 0 1 1 1	

Classification name and data format name are same as for transmission.

[Digital Programmable Algorithm Synthesizer] Date : 11/21, 1986
Model DX7-2 MIDI Implementation Chart Version : 1.0

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16	memorized
	Changed	1 - 16	1 - 16	
Mode	Default	3	1, 2, 3, 4	memorized
	Messages	x	POLY, MONO(M=1)	
	Altered	XXXXXXXXXXXXXX	x ※2	
Note Number		36 - 96 ※1	0 - 127 ※2	
	True voice	XXXXXXXXXXXXXX	1 - 127	
Velocity	Note ON	o 9nH,v=1-127	o v=1-127	
	Note OFF	x 9nH,v=0	x	
After Touch	Key's	x	x	
	Ch's	o ※1	o ※2	
Pitch Bender		o ※1	o 0-12 semi ※2	7 bit resolution
Control Change	1	o ※1	o ※2	Modulation wheel
	2	o ※1	o ※2	Breath control
	4	o ※1	o ※2	Foot Controller
	5	x	o ※2	Portamento time
	6	o ※1	x	Data entry knob
	7	o ※1	o ※2	Volume
	8/10	x / x	o / o ※2	Balance / Pan
	64	o ※1	o ※2	Sustain foot sw
	65	o ※1	o ※2	Portamento f sw
	66	o ※1	o ※2	Sostenuto
	67	o ※1	o ※2	Soft
	96/97	o / o ※1	o / o ※2	Data entry +1/-1
	5-31	o ※1	o (11-31) ※2	Continuous slidr
Prog Change		o 0 - 127 ※1	o 0 - 127 ※2	
	True #	XXXXXXXXXXXXXX	0 - 127	64-127:Cartridge
System Exclusive		o ※3	o ※3	Voice parameters
System Common	Song Pos	x	x	
	Song Sel	x	x	
	Tune	x	x	
System Real Time	Clock	x	x	
	Commands	x	x	
Aux Messages	Local ON/OFF	x	x	
	All Notes OFF	x	o (126,127)	
	Active Sense	o	o	
	Reset	x	x	

Notes: ※1 = transmit if transmit channel is not off.
※2 = receive if receive channel is not off.
※3 = transmit/receive if device number is not off.

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO o : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO x : No

LSI DATA TABLE

• HD6805S1A33P (IG105300) CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss		Ground	15	B3	I/O	
2	INT	I	Interrupt	16	B4	I/O	
3	Vcc		DC Supply	17	B5	I/O	Port B
4	EXTAL	I	Clock	18	B6	I/O	
5	XTAL	I		19	B7	I/O	
6	NUM		Ground (not user's application)	20	A0	I/O	
7	TIMER	I	Timer control	21	A1	I/O	
8	C0	I/O		22	A2	I/O	
9	C1	I/O	Port C	23	A3	I/O	Port A
10	C2	I/O		24	A4	I/O	
11	C3	I/O		25	A5	I/O	
12	B0	I/O		26	A6	I/O	
13	B1	I/O	Port B	27	A7	I/O	
14	B2	I/O		28	RES	I	Reset

• HD63B03YP (XA444001) MAIN-CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss	I	Ground	33	Vcc		DC Supply (+5V)
2	XTAL	I	Clock (8MHz)	34	V15	O	
3	EXTAL	I		35	A14	O	
4	MP0	I	Mode program	36	A13	O	
5	MP1	I		37	A12	O	Address bus
6	RES	I	Reset	38	A11	O	
7	STBY	I	Stand-by mode signal	39	A10	O	
8	NMi	I	Non-maskable interrupt	40	A9	O	
9	P20	I/O		41	A8	O	
10	P21	I/O		42	Vss		Ground
11	P22	I/O		43	A7	O	
12	P23	I/O	Port 2	44	A6	O	
13	P24	I/O		45	A5	O	
14	P25	I/O		46	A4	O	Address bus
15	P26	I/O		47	A3	O	
16	P27	I/O		48	A2	O	
17	P50	I/O		49	A1	O	
18	P51	I/O		50	A0	O	
19	P52	I/O		51	D7	I/O	
20	P53	I/O	Port 5	52	D6	I/O	
21	P54	I/O		53	D5	I/O	
22	P55	I/O		54	D4	I/O	Data bus
23	P56	I/O		55	D5	I/O	
24	P57	I/O		56	D2	I/O	
25	P60	I/O		57	D1	I/O	
26	P61	I/O		58	D0	I/O	
27	P62	I/O		59	BA	O	Bus available
28	P63	I/O		60	LIR	O	Load instruction resistor
29	P64	I/O	Port 6	61	R/W	O	Read/Write control
30	P65	I/O		62	WR	O	Write
31	P66	I/O		63	RD	O	Read
32	P67	I/O		64	E	O	Enable

• M58990P-1 (IG106100) Analog Digital Converter

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	IN3	I		15	2-6	O	Digital data output
2	IN4	I		16	REF(−)		Reference voltage (−)
3	IN5	I	Analog data in	17	2-8	O	
4	IN6	I		18	2-4	O	
5	IN7	I		19	2-3	O	Digital data output
6	START	I	Start data in	20	2-2	O	
7	EOC	O	End of conversion data output	21	2-1	O	
8	2-5	O	Digital data output	22	ALE	I	Address latch enable data in
9	OE	I	Output enable data in	23	ADD A	I	
10	CLK	I	Clock data in	24	ADD B	I	Address data in
11	Vcc		Supply power (+5V)	25	ADD C	I	
12	REF(+)		Reference voltage (+)	26	IN 0	I	
13	GND		Supply power (0V)	27	IN 1	I	Analog data in
14	2-7	O	Digital data output	28	IN 2	I	

• YM2604 (XA489001) OPSII (Operator-S)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss	I	DC supply (0V)	33	DA7	O	
2	D6	I/O	Data buses	34	DA8	O	
3	D7	I/O		35	DA9	O	
4	$\overline{DS}$	I	—	36	DA10	O	
5	$\overline{WR}$	I	Read write control	37	DA11	O	Digital code for analog convert
6	—	—		38	DA12	O	
7	—	—	Non connection	39	DA13	O	
8	—	—		40	DA14	O	
9	SH1	O	Sample and hold data	41	DA15	O	
10	SH2	O		42	DA16	O	
11	SYNC	O		43	E1	I	
12	F1	I		44	E2	I	
13	F2	I		45	E3	I	
14	F3	I	Frequency data (from EGS)	46	E4	I	
15	F4	I		47	E5	I	
16	F5	I		48	E6	I	Envelope data (from EGS)
17	Vss	I	DC supply (0V)	49	E7	I	
18	F6	I		50	E8	I	
19	F7	I		51	E9	I	
20	F8	I		52	E10	I	
21	F9	I		53	E11	I	
22	F10	I	Frequency data (from EGS)	54	E12	I	
23	F11	I		55	KON	I	Key ON data
24	F12	I		56	D0	I/O	
25	F13	I		57	D1	I/O	
26	F14	I		58	D2	I/O	
27	DA2	O		59	D3	I/O	Data buses
28	DA3	O		60	D4	I/O	
29	DA4	O	Digital code for analog convert	61	D5	I/O	
30	DA5	O		62	VDD	I	DC supply (+5V)
31	DA6	O		63	ϕ1	I	Master clock pulse
32	Vss	I		64	ϕ2	I	

• YM3609 (XA898001) Envelope Generator

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vcc		Power supply	33	Vss	.	Ground
2	NC			34	ϕ2	I	Clock IN
3	E6	O		35	$\overline{TEST}$	I	Test pin
4	E7	O		36	D0	I	
5	E8	O		37	D1	I	
6	E9	O	Envelope data	38	D2	I	Data bus
7	E10	O		39	D3	I	
8	E11	O		40	NC		
9	E12	O		41	NC		
10	NC			42	NC		
11	NC			43	D4	I	
12	NC			44	D5	I	Data bus
13	KON	O	Key on data	45	D6	I	
14	F1	O		46	D7	I	
15	F2	O		47	NC		
16	F3	O		48	A0	I	
17	F4	O		49	A1	I	
18	F5	O	Frequency data	50	A2	I	Address bus
19	F6	O		51	A3	I	
20	F7	O		52	A4	I	
21	F8	O		53	NC		
22	F9	O		54	NC		
23	NC			55	$\overline{CE1}$	I	Chip enable
24	NC			56	$\overline{CE2}$	I	
25	NC			57	NC		
26	F10	O		58	NC		
27	F11	O	Frequency data	59	$\overline{SYNC}$	I	Synchro pulse
28	F12	O		60	E1	O	
29	F13	O		61	E2	O	
30	F14	O		62	E3	O	Envelope data
31	$\overline{IC}$	I	Initial clear	63	E4	O	
32	Vcc		Power supply	64	E5	O	

• PCM54HP (XA566001) Digital Analog Converter

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vpot		Not used	15	DA4		Bit 13
2	DA16		Bit 1 (MSB)	16	DA3		Bit 14
3	DA15		Bit 2	17	DA2		Bit 15
4	NC		Not used	18	LSB		Bit 16
5	DA14		Bit 3	19	V_0		Voltage Output
6	DA13		Bit 4	20	FBR		Not used
7	DA12		Bit 5	21	INV		Summing Junction
8	DA11		Bit 6	22	GND		Common
9	DA10		Bit 7	23	I_0		Current Output
10	DA9		Bit 8	24	NC		Not Used
11	DA8		Bit 9	25	OFF·S		Not Used
12	DA7		Bit 10	26	+Vcc		+15V
13	DA6		Bit 11	27	ADJ		Not Used
14	DA5		Bit 12	28	−Vcc		−15V

• WD1772PH-02 (XB623001) Floppy Disk Controller/formatter

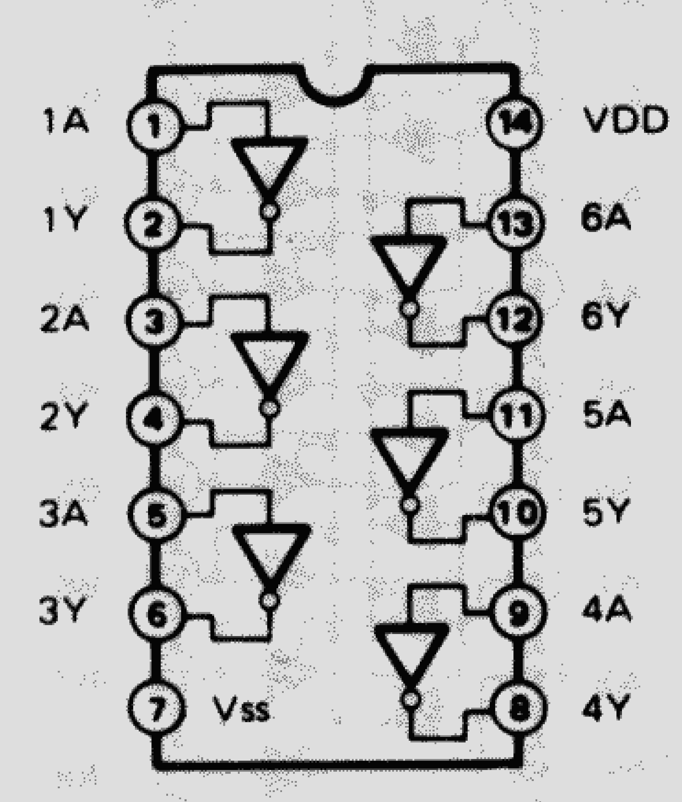
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	$\overline{CS}$	I	Chip select	15	Vcc		Power supply
2	R/$\overline{W}$	I	Read/Write control	16	STEP	O	Step pulse
3	A0	I	Address bus	17	DIRC	O	Direction control
4	A1	I		18	CLK	I	Clock IN
5	DAL0	I/O		19	$\overline{RD}$	I	Read data
6	DAL1	I/O		20	MO	O	Motor ON
7	DAL2	I/O		21	WG	O	Write gate
8	DAL3	I/O		22	$\overline{WD}$	O	Write data
9	DAL4	I/O	Data access lines	23	$\overline{TR00}$	I	Track 00 signal
10	DAL5	I/O		24	$\overline{IP}$	I	Index pulse
11	DAL6	I/O		25	$\overline{WPRT}$	I	Write protect
12	DAL7	I/O		26	$\overline{DDEN}$	I	Double density request
13	$\overline{MR}$	I	Master reset	27	DRQ	O	Data request
14	Vss		Ground	28	INTRQ	O	Interrupt request

• μPD8255AC-2 (XA052001) I/O PORT A-D

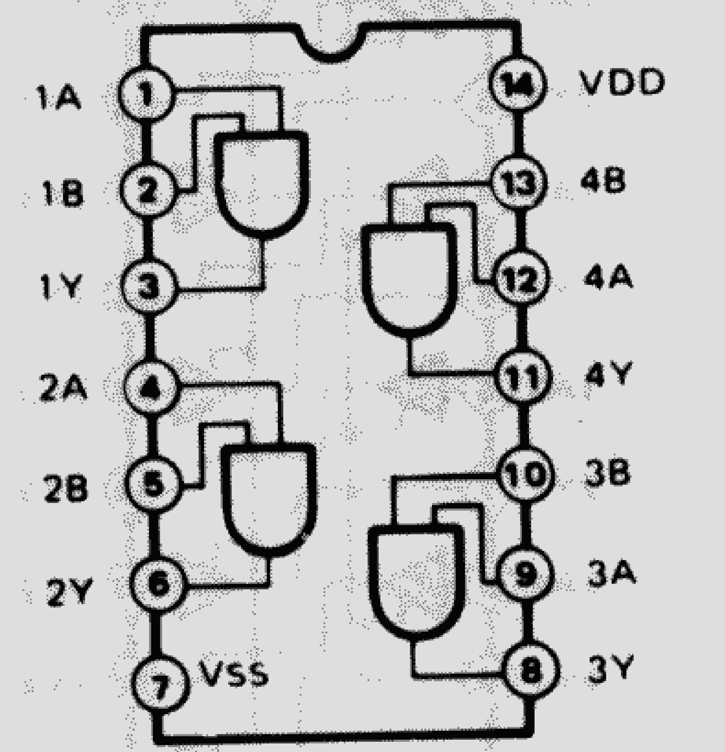
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PA3			40	PA4		
2	PA2		Port A	39	PA5		Port A
3	PA1			38	PA6		
4	PA0			37	PA7		
5	$\overline{RD}$		Read control	36	$\overline{WR}$		Write control
6	$\overline{CS}$		Chip Select	35	RST		Reset
7	GND		DC Supply (0V)	34	D0	I/O	
8	A1		Port address	33	D1	I/O	
9	A0			32	D2	I/O	
10	PC7			31	D3	I/O	Data bus
11	PC6			30	D4	I/O	
12	PC5			29	D5	I/O	
13	PC4			28	D6	I/O	
14	PC0		Port C	27	D7	I/O	
15	PC1			26	Vcc		DC Supply
16	PC2			25	PB7		
17	PC3			24	PB6		
18	PB0			23	PB5		Port B
19	PB1		Port B	22	PB4		
20	PB2			21	PB3		

IC BLOCK DIAGRAM

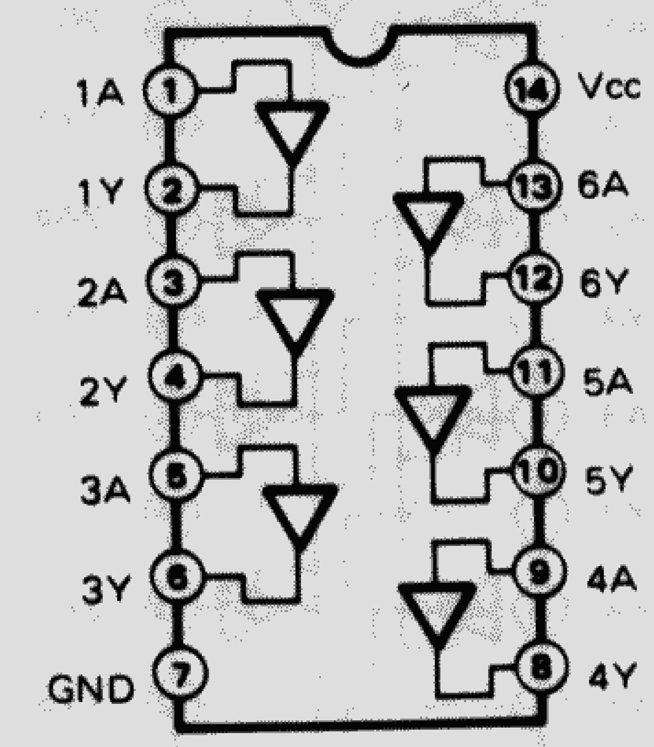
- **HD7405** (IG105500)
  TC40H004P (IG051000)
  Hex Inverter



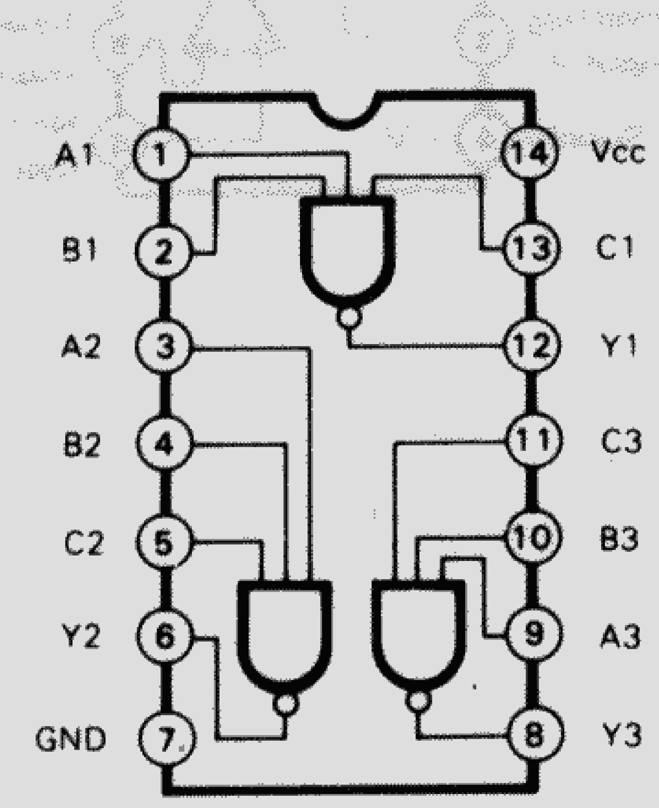
- **SN74HC08N** (IR000850)
  Quad 2 Input AND



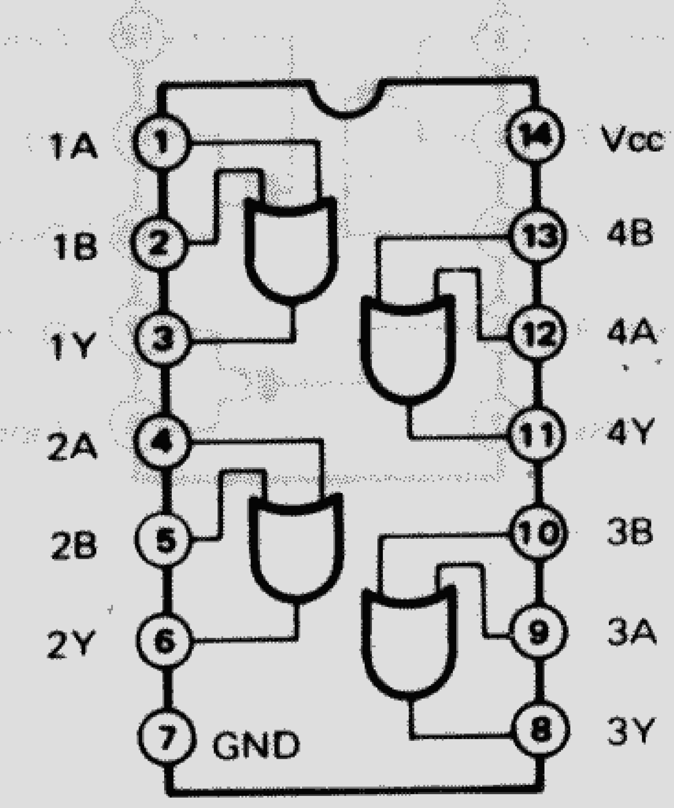
- **HD74LS14P** (IG049600)
  Hex Inverter



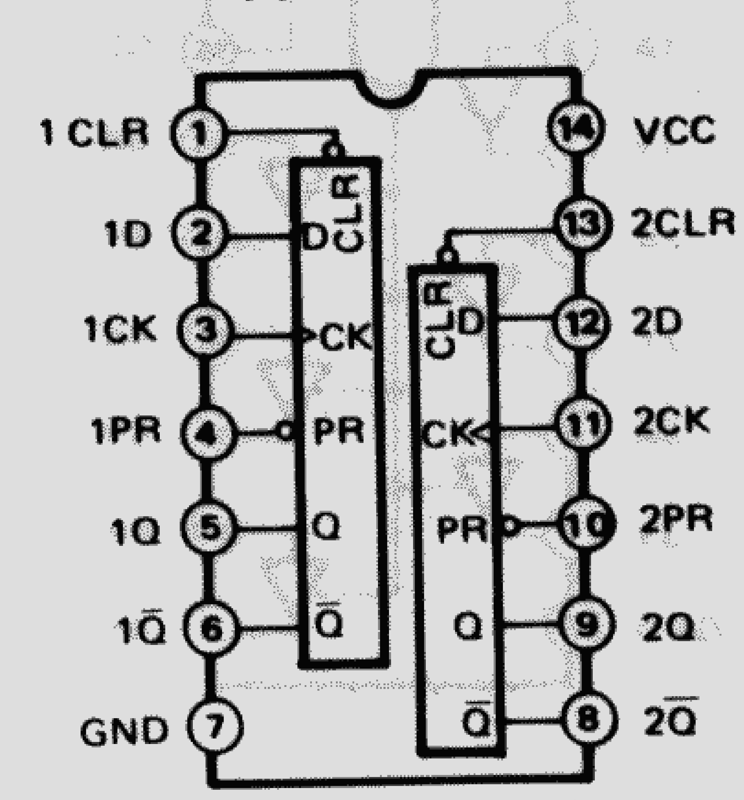
- **TC40H010P** (iG100200)
  Triple 3 Input NAND



- **SN74HC32N** (IR003250)
  TC40H032P (IG052800)
  Quad 2 Input OR

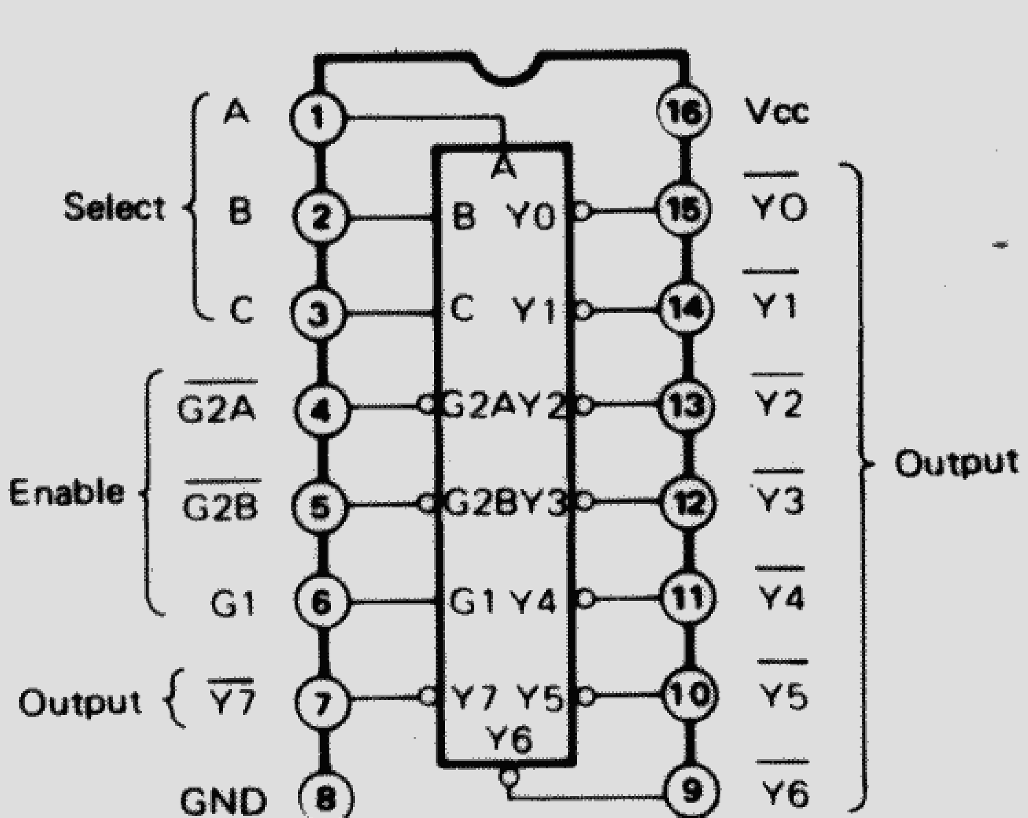


- **TC40H074P** (IG051100)
  Dual D-Type Flip-Flop

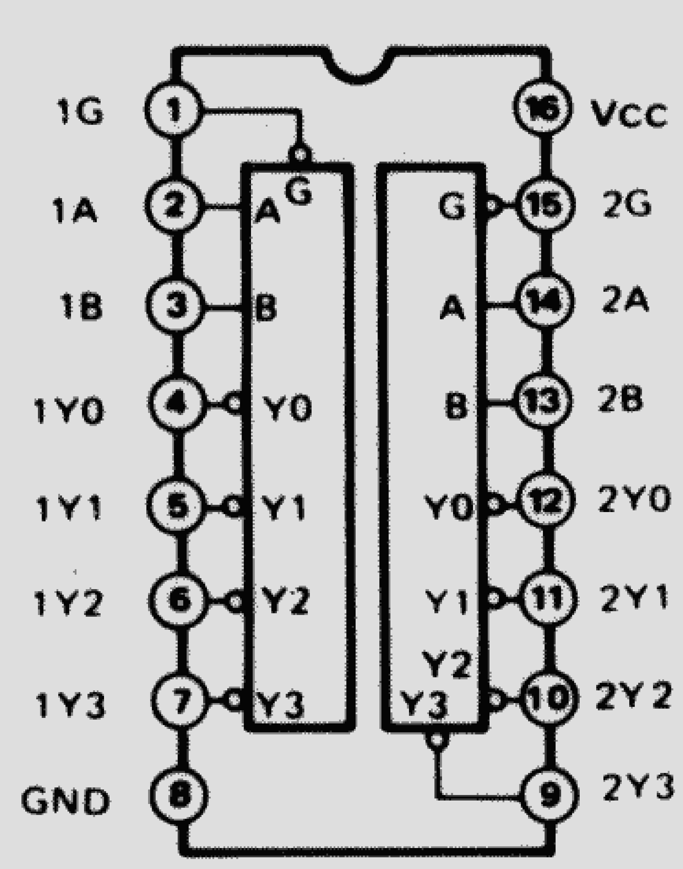


INPUTS				OUTPUTS	
PR	CLR	CLK	D	Q	Q̄
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Q_0	$\bar{Q}_0$

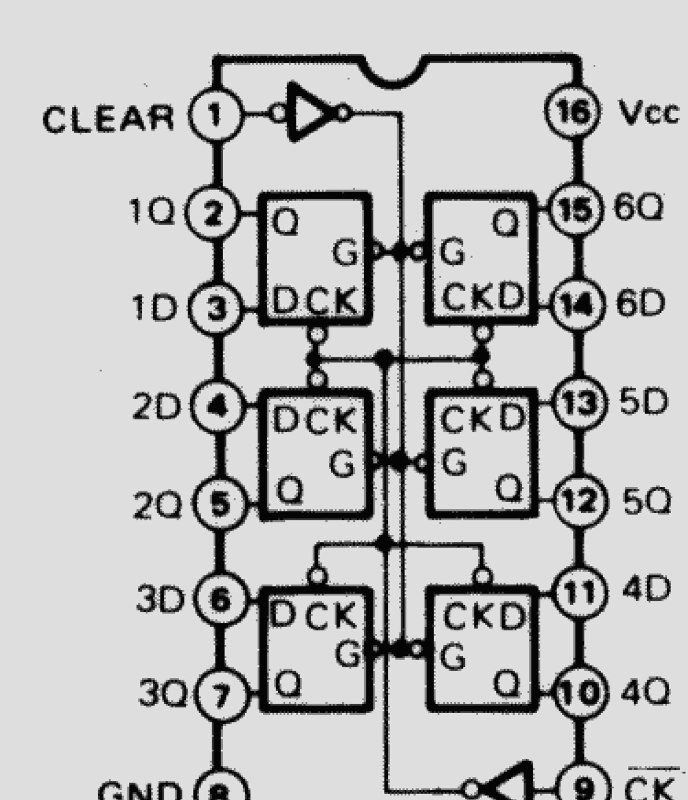
- **TC74HC138P** (IR013800)
  TC40H138P (IG111900)
  3 to 8 Demultiplexer



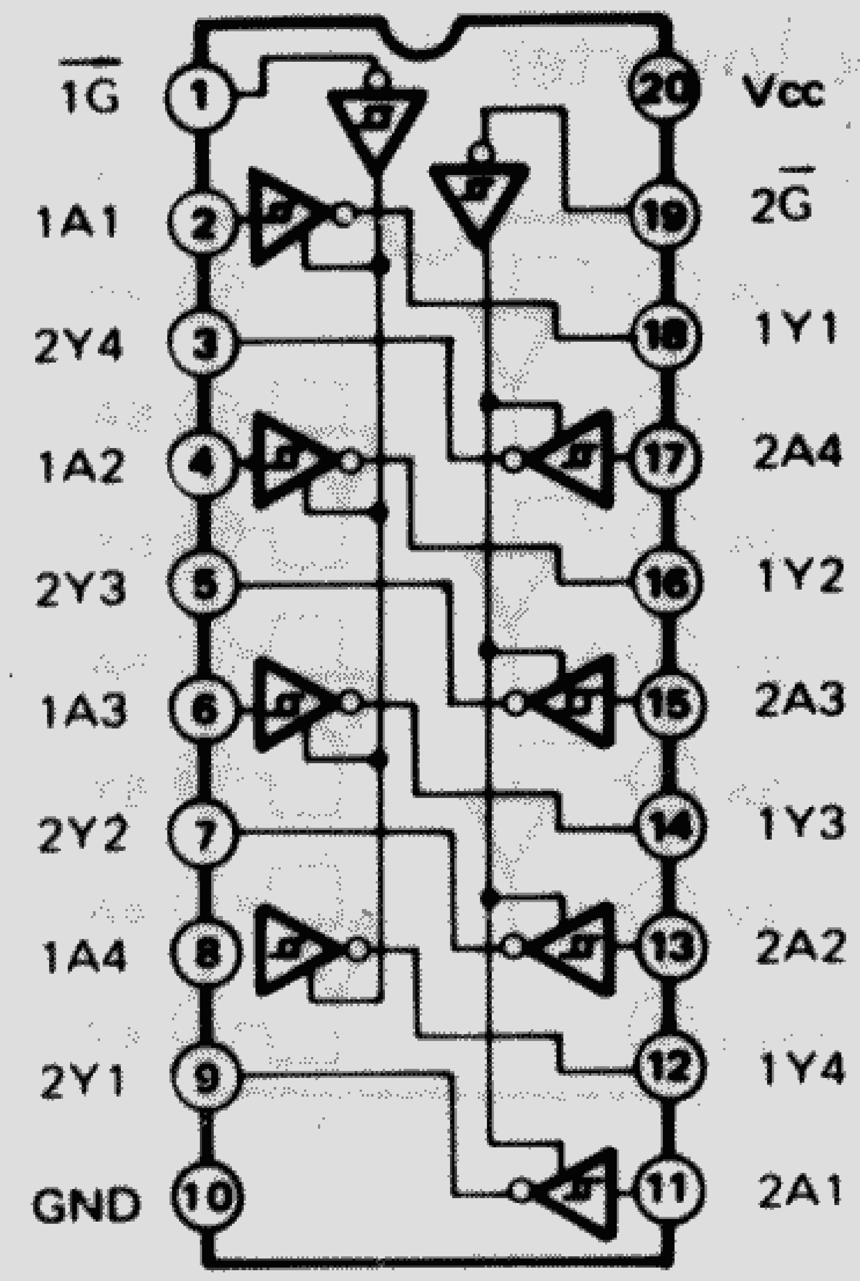
- **TC40H139P** (IG078300)
  Dual 2 to 4 Demultiplexer



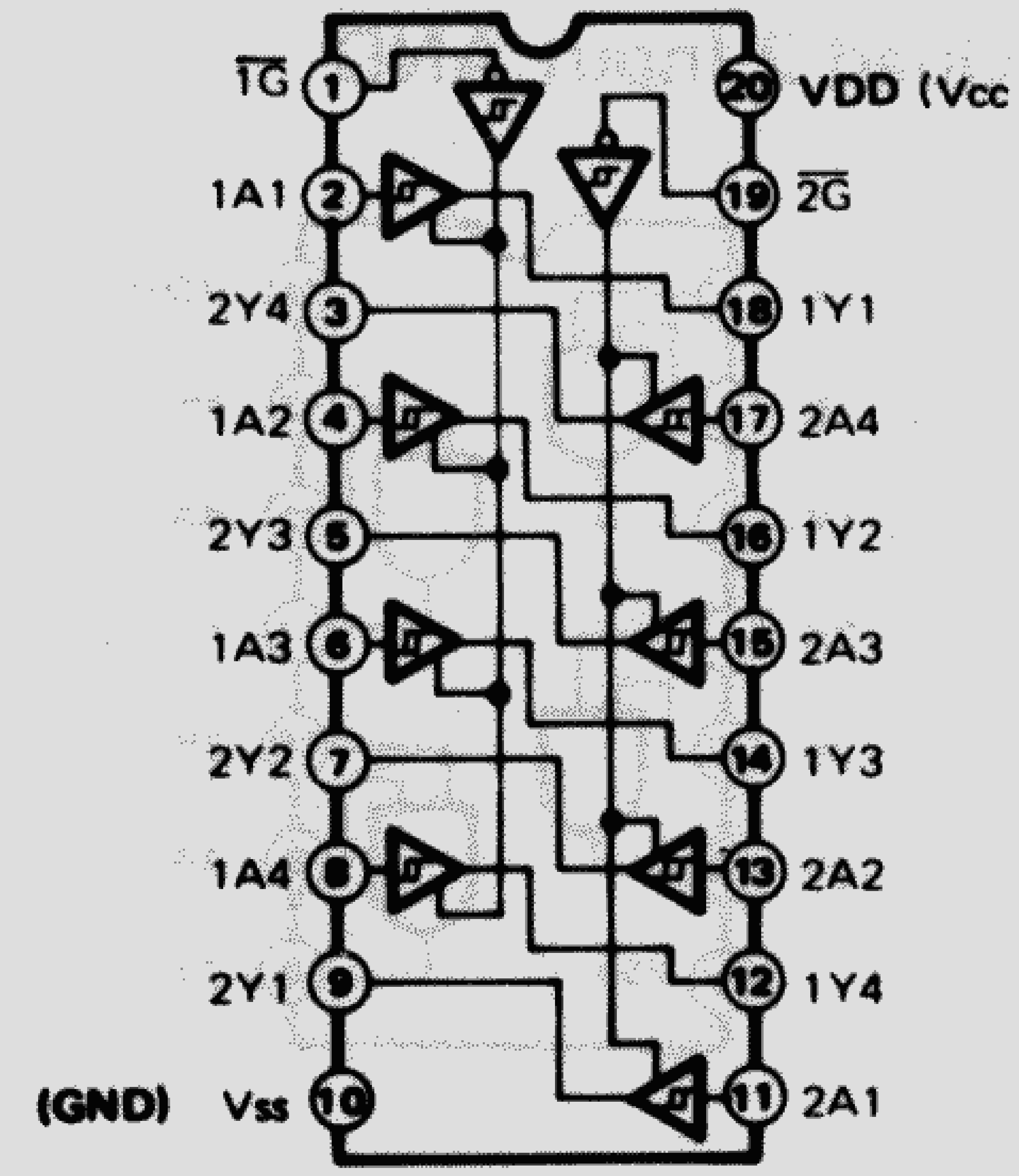
- **HD74LS174P** (IG050000)
  TC40H174P (IG064100)
  Hex D-Type Flip-Flop



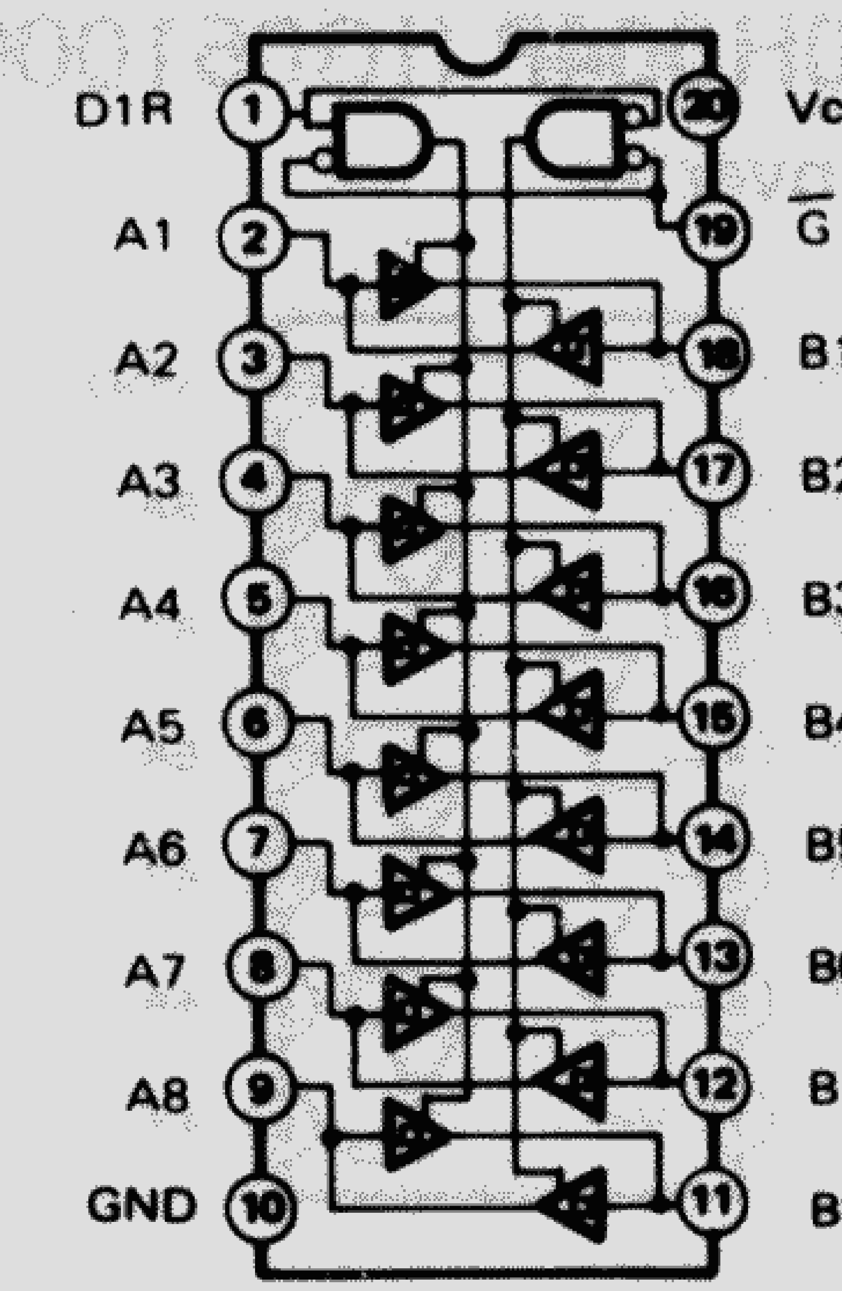
- **TC40H240P** (IG068100)
Octal Bus Inverter



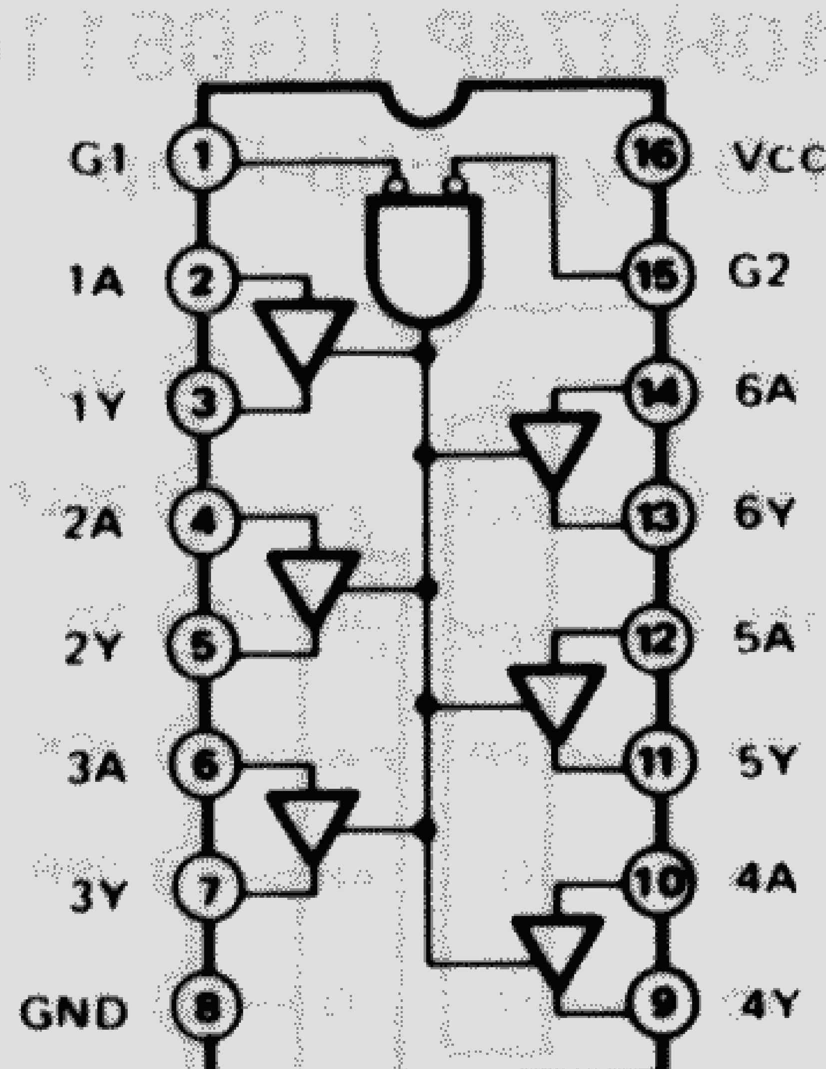
- **HD74LS244P** (IG060000)
Octal 3-State Bus Buffer



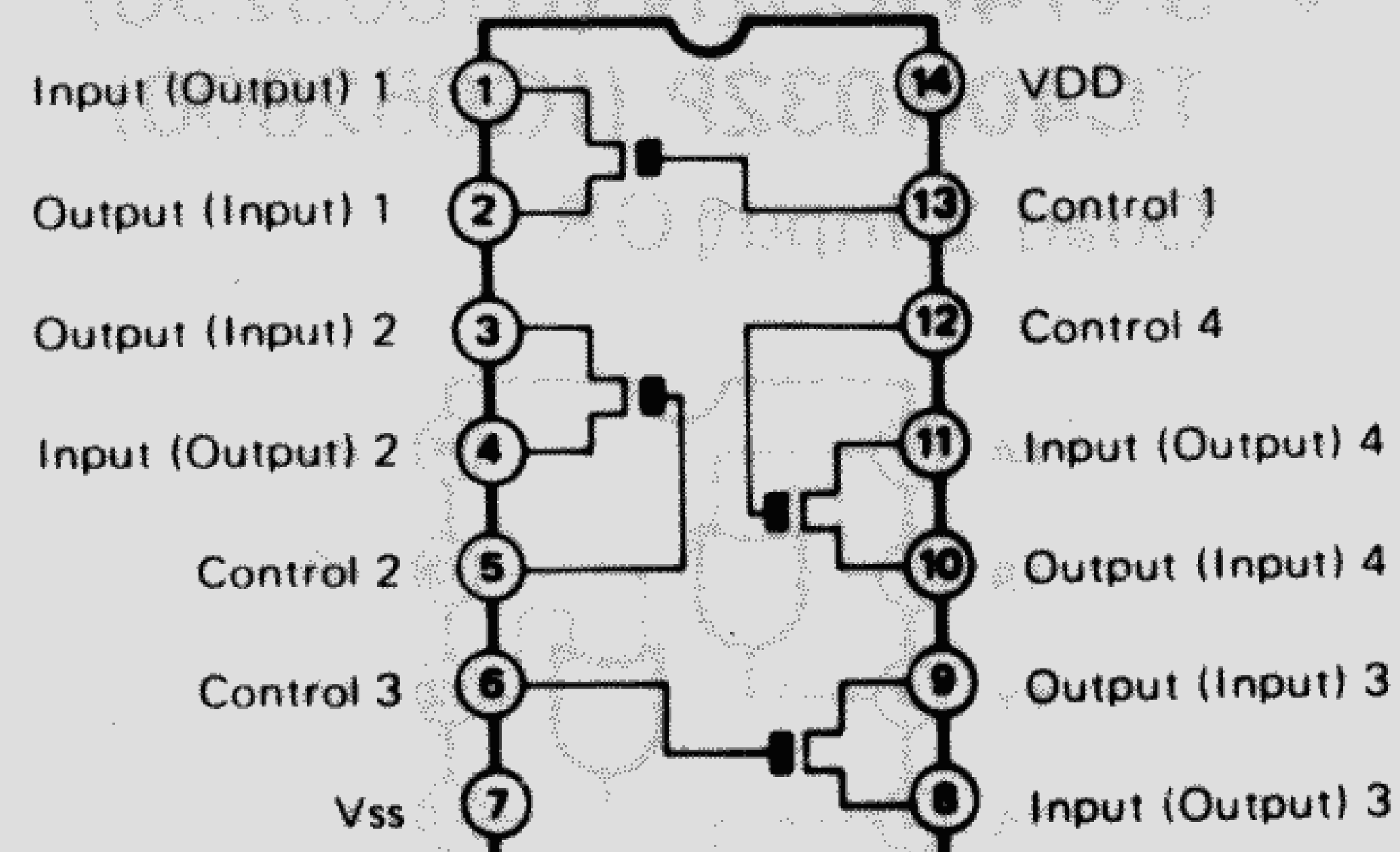
- **MC74HC245N** (IR024570)
Octal 3-State Bus Transceiver



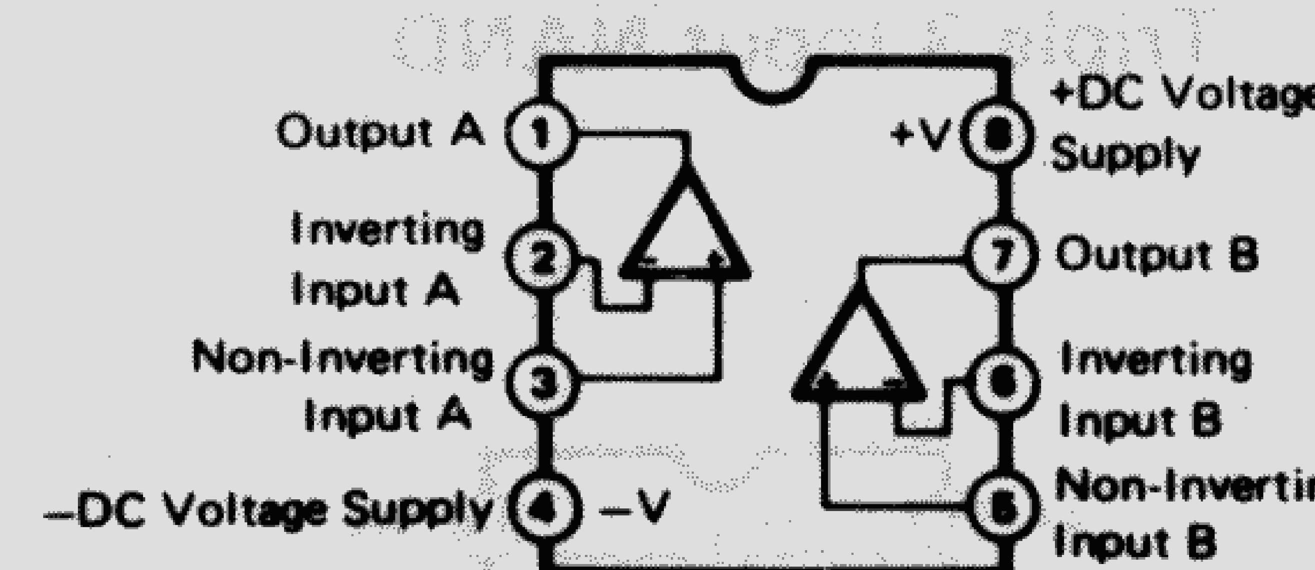
- **HD74LS365AP** (IG103200)
Hex 3-State Bus Buffer



- **TC4066BP** (IG001270)
Quad Bilateral Switch



- **NJM4558DV** (IG001390)
Dual Operation Amplifier



■ CIRCUIT BOARDS（シート基板図）

● DM Circuit Board

‹Components side›

Notes)

Circuit Boards: XB240D

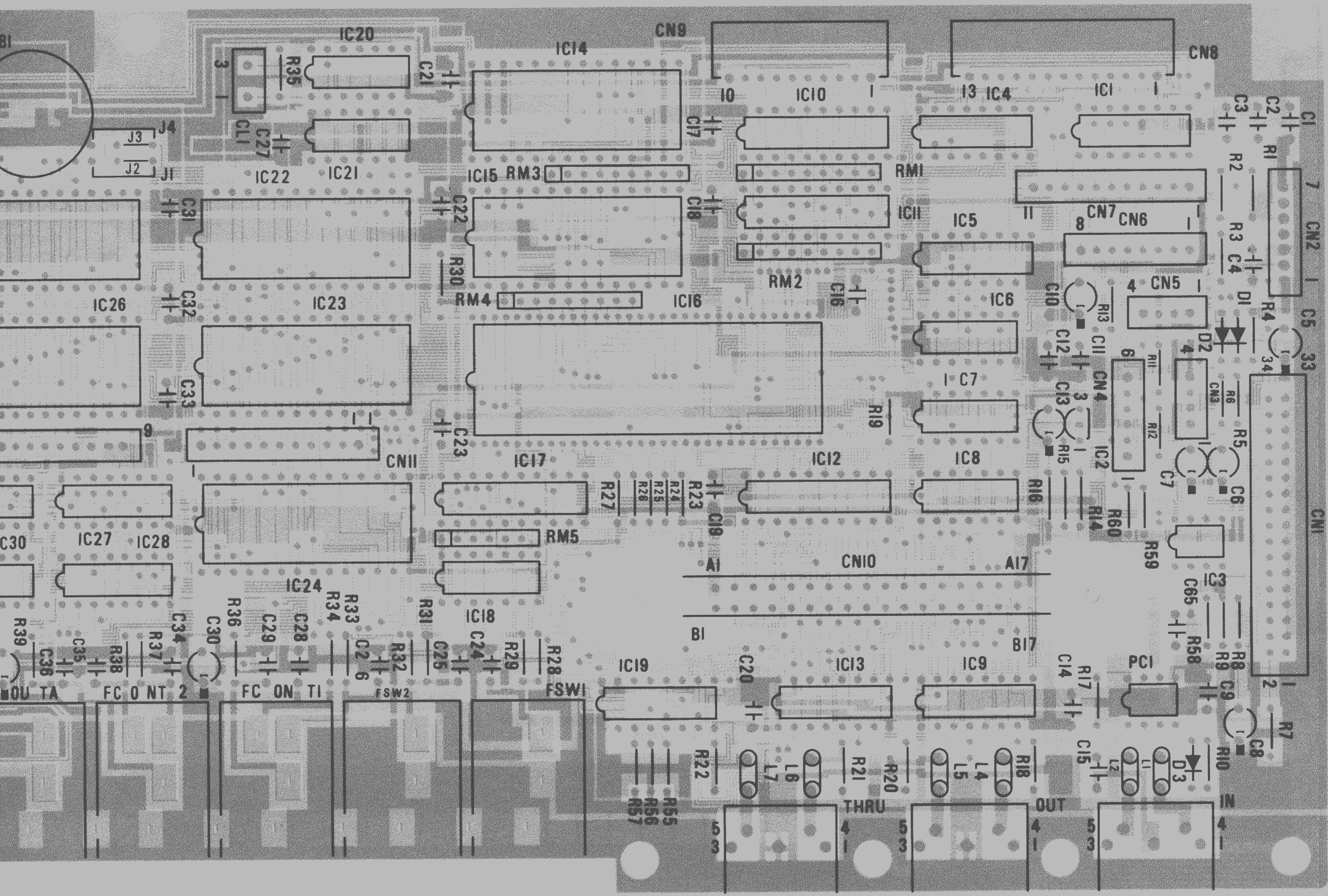
IC1, 4, 27:	TC40H138P (IG111900) DEC DEMP
2:	PST518B-2 (IG116200) SYSTEM RESET
3:	NJM4558DV (IG001390) OP AMP.
5*:	TC40H174P (IG064100) DFF
6*, 18:	HD7405 (IG105500) INV
7:	HD74LS14P (IG049600) INV
8:	TC74HC32N (IR003250) OR
9:	HD74LS174P (IG050000) DFF
10, 11:	TC40H240P (IG068100) INV
12:	MC74HC245N (IR024570) TRAN
13, 19:	HD74LS365AP (IG103200) DRIVER
14:	M58990P-1 (IG106100) ADC
15:	HD6805S1A33P (IG105300) CPU
16:	HD63B03YP (XA444001) MPU
17:	HD74LS244P (IG060000) DRIVER
20, 33, 40:	TC40H004P (IG051000) INV
21, 41:	TC40H074P (IG051100) DFF
22*:	HM65256BLP-12 (XB243001) PSRAM
23:	973V100 (XC314002) EPROM
24*:	WD1772PH-02 (XB623001) FDC
25, 26:	TC5564PL-15 (XB013001) SRAM 8KX8
28:	TC74HC138P (IR013800) DECO-8
29:	TC40H032P (IG052800) OR
30:	SN74HC10N (IR001050) NAND
31:	TC4066BP (IG001270) ANALOG SW
32:	YM3609 (XA89001) EGM
34:	YM2604 (XA489001) OPS2
35:	TC40H139P (IG078300) DECODER
36, 39:	SN74HC08N (IR000850) AND
37:	PCM54HP (XA566001) DAC
YA3:	HYBRID (XB622002)
PC1:	TLP552
Tr1:	2SA9335 Q, R
2:	2SC1740S R, S

D1 ～4:	1SS133
RM1 ～4:	Resistor Array 10KΩX8
5*:	Resistor Array 1KΩX5
L1, 2, 4 ～7, 11:	FL Coil
EMI1 ～3:	0.022μ
CR1:	Quartz Crystal Unit 9.4265MHz
CL1:	Ceramic Resonator 8MHz
B1:	Lithium Battery CR2032-P5-2

* : DX7II-FD Only

3NA-VB74310 ⚠ DX7II-D
3NA-VB74410 ⚠ DX7II-FD

Koba no GomiCares



〈Components side〉

) DEC DEMP
SYSTEM RESET
0) OP AMP.
) DFF
V
) INV
0) OR
00) DFF
) INV
70) TRAN
200) DRIVER
ADC
5300) CPU
01) MPU
00) DRIVER
) INV
) DFF
43001) PSRAM

23: 973V100 (XC314002) EPROM
24*: WD1772PH-02 (XB623001) FDC
25, 26: TC5564PL-15 (XB013001) SRAM 8KX8
28: TC74HC138P (IR013800) DECO-8
29: TC40H032P (IG052800) OR
30: SN74HC10N (IR001050) NAND
31: TC4066BP (IG001270) ANALOG SW
32: YM3609 (XA89001) EGM
34: YM2604 (XA489001) OPS2
35: TC40H139P (IG078300) DECODER
36, 39: SN74HC08N (IR000850) AND
37: PCM54HP (XA566001) DAC
YA3: HYBRID (XB622002)

PC1: TLP552

Tr1: 2SA9335 Q, R
2: 2SC1740S R, S

D1 ~ 4: 1SS133

RM1 ~ 4: Resistor Array 10KΩX8
5*: Resistor Array 1KΩX5

L1, 2, 4 ~ 7, 11: FL Coil

EMI1 ~ 3: 0.022μ

CR1: Quartz Crystal Unit 9.4265MHz

CL1: Ceramic Resonator 8MHz

B1: Lithium Battery CR2032-P5-2

* : DX7II-FD Only

CN1

DM

*DX7II-FD only

Pin No.	Pin Name	Wire Color	Destination
1	$\overline{\text{DCR}}$		FDD-CN1
2	DISK CHANGE		FDD-CN1
3	GND		FDD-CN1
4	$\overline{\text{INVSE}}$		FDD-CN1
5	GND		FDD-CN1
6	–		FDD-CN1
7	GND		FDD-CN1
8	$\overline{\text{IP}}$		FDD-CN1
9	GND		FDD-CN1
10	$\overline{\text{DSO}}$		FDD-CN1
11	GND		FDD-CN1
12	$\overline{\text{DSI}}$		FDD-CN1
13	GND		FDD-CN1
14	–		FDD-CN1
15	GND		FDD-CN1
16	$\overline{\text{MTON}}$		FDD-CN1
17	GND		FDD-CN1
18	$\overline{\text{DIRC}}$		FDD-CN1
19	GND		FDD-CN1
20	$\overline{\text{STEP}}$		FDD-CN1
21	GND		FDD-CN1
22	$\overline{\text{WD}}$		FDD-CN1
23	GND		FDD-CN1
24	$\overline{\text{WG}}$		FDD-CN1
25	GND		FDD-CN1
26	$\overline{\text{TR00}}$		FDD-CN1
27	GND		FDD-CN1
28	$\overline{\text{WPRT}}$		FDD-CN1
29	GND		FDD-CN1
30	$\overline{\text{RD}}$		FDD-CN1
31	GND		FDD-CN1
32	$\overline{\text{HEAD SELECT}}$		FDD-CN1
33	GND		FDD-CN1
34	–		FDD-CN1

CN2

DM

Pin No.	Pin Name	Wire Color	Destination
1	Vcc	VI	MW-1
2	IN2	GY	MW-2
3	GND	WH	MW-3
4	IN3	OR	HP/BC-4
5		YE	HP/BC-5
6		GR	HP/BC-6
7	Vcc	BE	HP/BC-7

CN3

DM

Pin No.	Pin Name	Wire Color	Destination
1	IN1	BR	PB-3
2	Vcc	RE	PB-2
3	+2.5	OR	PB-1
4	GND	YE	PB-4

CN4

DM

Pin No.	Pin Name	Wire Color	Destination
1	VR2	RE	PNA-CN1-1
2	VR3	WH	PNA-CN1-2
3	Vcc	WH	PNA-CN1-3
4	IN4	WH	PNA-CN1-4
5	IN5	WH	PNA-CN1-5
6	GND	WH	PNA-CN1-6

CN5

DM

Pin No.	Pin Name	Wire Color	Destination
1	IN0	WH	PC-7
2	GND	BL	PC-8
3	+12	OR	PC-3
4	–12	BE	PC-1

CN6

DM

Pin No.	Pin Name	Wire Color	Destination
1	S9	BR	PNB-CN4-1
2	S10	RE	PNB-CN4-2
3	S11	OR	PNB-CN4-3
4	S12	YE	PNB-CN4-4
5	S13	GR	PNB-CN4-5
6	S14	BE	PNB-CN4-6
7	S15	VI	PNB-CN4-7
8	S16	GY	PNB-CN4-8

CN7

DM

Pin No.	Pin Name	Wire Color	Destination
1	SA	BR	PNB-CN3-1
2	SB	RE	PNB-CN3-2
3	SC	OR	PNB-CN3-3
4	S1	YE	PNB-CN3-4
5	S2	GR	PNB-CN3-5
6	S3	BE	PNB-CN3-6
7	S4	VI	PNB-CN3-7
8	S5	GY	PNB-CN3-8
9	S6	WH	PNB-CN3-9
10	S7	GG	PNB-CN3-10
11	S8	SB	PNB-CN3-11

CN8

DM

Pin No.	Pin Name	Wire Color	Destination
1	C	RE	MK-CN1-1
2	B	WH	MK-CN1-2
3	A#	WH	MK-CN1-3
4	A	WH	MK-CN1-4
5	G#	WH	MK-CN1-5
6	G	WH	MK-CN1-6
7	F#	WH	MK-CN1-7
8	F	WH	MK-CN1-8
9	E	WH	MK-CN1-9
10	D#	WH	MK-CN1-10
11	D	WH	MK-CN1-11
12	C#	WH	MK-CN1-12
13	CL	WH	MK-CN1-13

CN9

DM

Pin No.	Pin Name	Wire Color	Destination
1	M5	RE	MK-CN2-1
2	M4	WH	MK-CN2-2
3	M3	WH	MK-CN2-3
4	M2	WH	MK-CN2-4
5	M1	WH	MK-CN2-5
6	B1	WH	MK-CN2-6
7	B2	WH	MK-CN2-7
8	B3	WH	MK-CN2-8
9	B4	WH	MK-CN2-9
10	B5	WH	MK-CN2-10

CN10 (RAM Cartridge)

DM

Pin No.	Pin Name
1	GND
2	CD0
3	CD1
4	CD2
5	CD3
6	CD4
7	CD5
8	CD6
9	CD7
10	$\overline{\text{CE1}}$
11	$\overline{\text{CE2}}$
12	$\overline{\text{RD}}$
13	CA15
14	CA16
15	CT0
16	CT1
17	+5

Pin No.	Pin Name
18	$\overline{\text{WE}}$
19	CA0
20	CA1
21	CA2
22	CA3
23	CA4
24	CA5
25	CA6
26	CA7
27	CA8
28	CA9
29	CA10
30	CA11
31	CA12
32	CA13
33	CA14
34	PROT

CN11

Pin No.	Pin Name	Wire Color	Destination
1	D0	RE	LED-CN3-1
2	D1	WH	LED-CN3-2
3	D2	WH	LED-CN3-3
4	D3	WH	LED-CN3-4
5	D4	WH	LED-CN3-5
6	D5	WH	LED-CN3-6
7	D6	WH	LED-CN3-7
8	D7	WH	LED-CN3-8
9	A0	WH	LED-CN3-9
10	A1	WH	LED-CN3-10
11	$\overline{\text{WR}}$	WH	LED-CN3-11

CN12

DM

Pin No.	Pin Name	Wire Color	Destination
1	E	RE	LED-CN4-1
2	R/$\overline{\text{W}}$	WH	LED-CN4-2
3	$\overline{\text{CS}}$	WH	LED-CN4-3
4	$\overline{\text{CS1}}$	WH	LED-CN4-4
5	$\overline{\text{CS2}}$	WH	LED-CN4-5
6	Vcc	WH	LED-CN4-6
7	Vcc	WH	LED-CN4-7
8	GND	WH	LED-CN4-8
9	GND	WH	LED-CN4-9

CN13

DM

Pin No.	Pin Name	Wire Color	Destination
1	HR	BR	HP-1
2	HL	RE	HP-2
3	GND	BL	HP-3

CN14

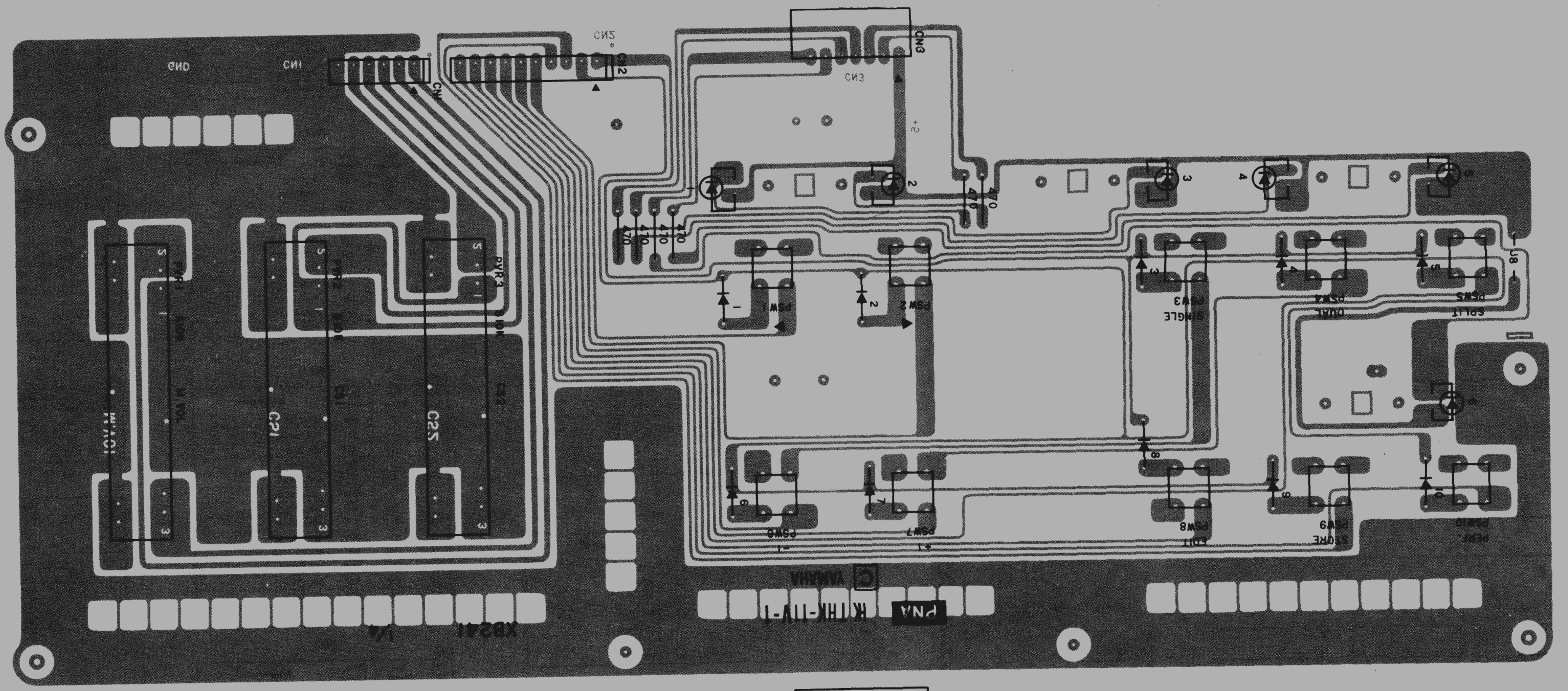
DM

Pin No.	Pin Name	Wire Color	Destination
1	+12	OR	AD-CN1-1
2	E	BL	AD-CN1-2
3	–12	BE	AD-CN1-3
4	+5	RE	AD-CN1-4
5	+5	RE	AD-CN1-5
6	E	BL	AD-CN1-6
7	E	BL	AD-CN1-7

DX7II·FD/D
DX7II·FD/D

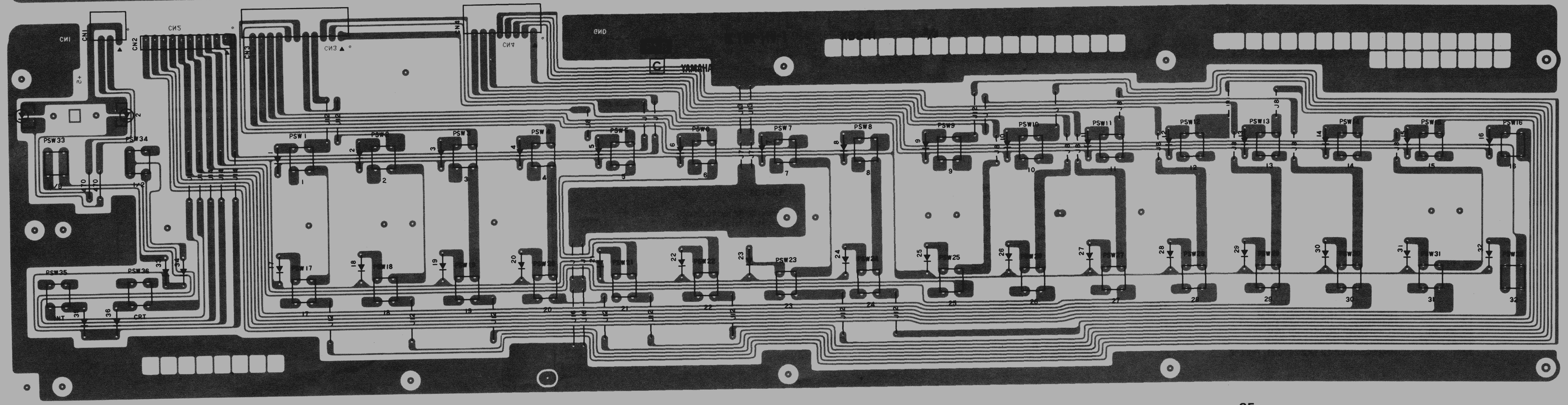
● PN Circuit Boards

PNA



〈Components side〉

PNB



〈Components side〉

〔PNA Circuit Board〕

Notes)

Circuit Board: XB241C
D1 ～ 10: 1SS133
LED1 ～ 6: SLC22UR RED
PSW1 ～ 10: Push Switch KHH10908

PNA — CN11

Pin No.	Pin Name	Wire Color	Destination
1	VR2	RE	DDM-CN4-1
2	VR3	WH	DDM-CN4-2
3	Vcc	WH	DDM-CN4-3
4	CS1	WH	DDM-CN4-4
5	CS2	WH	DDM-CN4-5
6	GND	WH	DDM-CN4-6

PNA — CN12

Pin No.	Pin Name	Wire Color	Destination
1	SB	RE	PNB-CN2-1
2	SC	WH	PNB-CN2-2
3	S9	WH	PNB-CN2-3
4	S10	WH	PNB-CN2-4
5	S11	WH	PNB-CN2-5
6	S12	WH	PNB-CN2-6
7	S13	WH	PNB-CN2-7
8	S14	WH	PNB-CN2-8
9	S15	WH	PNB-CN2-9
10	S16	WH	PNB-CN2-10

PNA — CN3

Pin No.	Pin Name	Wire Color	Destination
1	VDD	RE	LED-CN2-1
2	PBM	WH	LED-CN2-2
3	KSF	WH	LED-CN2-3
4	SINGLE	WH	LED-CN2-4
5	DUAL	WH	LED-CN2-5
6	SPLIT	WH	LED-CN2-6
7	PERF	WH	LED-CN2-7

〔PNB Circuit Board〕

Notes)

Circuit Board: XB241C
D1 ～ 36: 1SS133
LED1, 2: SLC22UR RED
PSW1 ～ 36: Push Switch KHH10908

PNB — CN1

Pin No.	Pin Name	Wire Color	Destination
1	Vcc	RE	LED-CN5-1
2	PB7	WH	LED-CN5-2
3	1/2	WH	LED-CN5-3

PNB — CN2

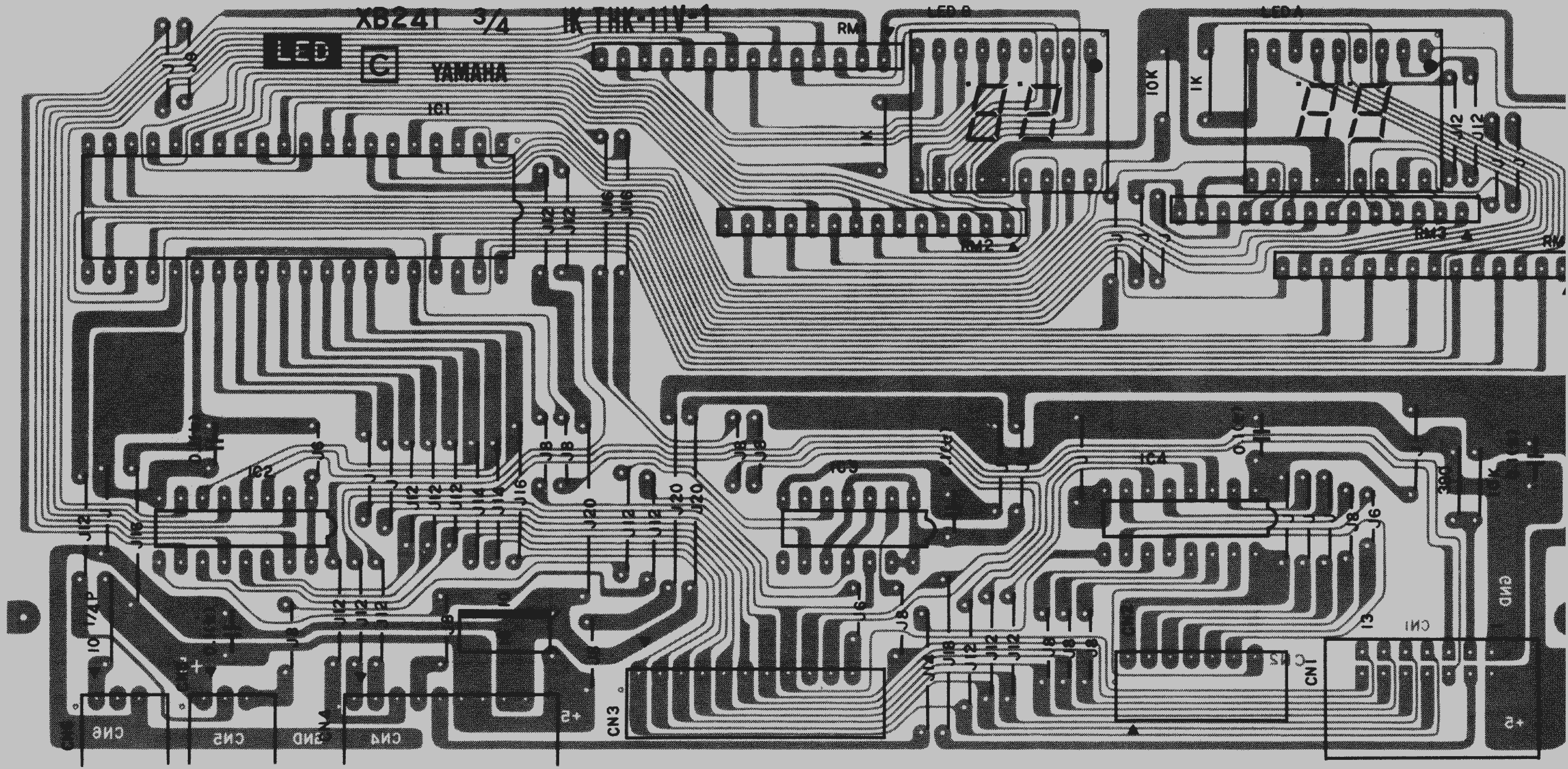
Pin No.	Pin Name	Wire Color	Destination
1	SB	RE	PNA-CN2-1
2	SC	WH	PNA-CN2-2
3	S9	WH	PNA-CN2-3
4	S10	WH	PNA-CN2-4
5	S11	WH	PNA-CN2-5
6	S12	WH	PNA-CN2-6
7	S13	WH	PNA-CN2-7
8	S14	WH	PNA-CN2-8
9	S15	WH	PNA-CN2-9
10	S16	WH	PNA-CN2-10

PNB — CN3

Pin No.	Pin Name	Wire Color	Destination
1	SA	BR	DM-CN7-1
2	SB	RE	DM-CN7-2
3	SC	OR	DM-CN7-3
4	S1	YE	DM-CN7-4
5	S2	GR	DM-CN7-5
6	S3	BE	DM-CN7-6
7	S4	VI	DM-CN7-7
8	S5	GY	DM-CN7-8
9	S6	WH	DM-CN7-9
10	S7	GG	DM-CN7-10
11	S8	SB	DM-CN7-11

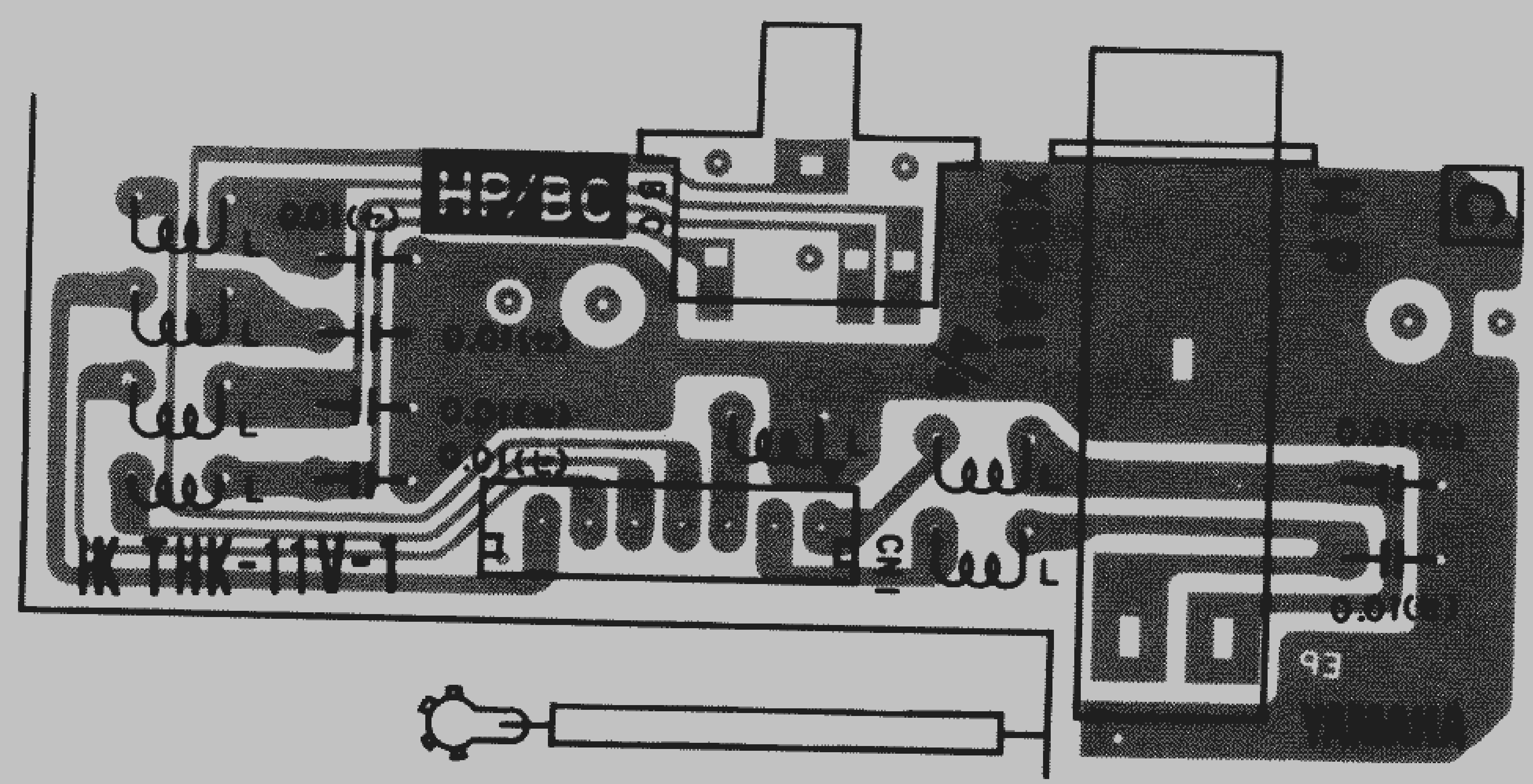
PNB — CN4

Pin No.	Pin Name	Wire Color	Destination
1	S9	BR	DM-CN6-1
2	S10	RE	DM-CN6-2
3	S11	OR	DM-CN6-3
4	S12	YE	DM-CN6-4
5	S13	GR	DM-CN6-5
6	S14	BE	DM-CN6-6
7	S15	VI	DM-CN6-7
8	S16	GY	DM-CN6-8



‹Components side

H.P



‹Components side›

〔H.P. Circuit Board〕

Notes)

Circuit Boards: XB241C

L: FL Coil 20μH

HP CN1

Pin No.	Pin Name	Wire Color	Destination
1	HR	BR	DM-CN13-1
2	HL	RE	DM-CN13-2
3	GND	BL	DM-CN13-3
4	BC1	OR	DM-CN2-4
5	BC2	YE	DM-CN2-5
6	BC3	GR	DM-CN2-6
7	BC4	BE	DM-CN2-7

〔LED Circuit Board〕

Notes)

Circuit Board: XB241C

IC1: μPD8255AC-2 (XA052001) CPU PPI
2, 4: TC40H174P (IG064100) DFF
3: TC40H074P (IG051100) DFF

LED Display: SL-1283-20
LED A: 〈7 Segment + Dot〉X2 RED
LED B: 〈7 Segment + Dot〉X2 RED

RM1 ～4: RKC1/4B7S 1KX7J

(セ) marked: Semiconductive Ceramic Cap.

LED CN1

Pin No.	Pin Name	Wire Color	Destination
1	Vss		LCD-CN1
2	VDD		LCD-CN1
3	V0		LCD-CN1
4	A0		LCD-CN1
5	R/$\overline{W}$		LCD-CN1
6	E		LCD-CN1
7	D0		LCD-CN1
8	D1		LCD-CN1
9	D2		LCD-CN1
10	D3		LCD-CN1
11	D4		LCD-CN1
12	D5		LCD-CN1
13	D6		LCD-CN1
14	D7		LCD-CN1

LED CN2

Pin No.	Pin Name	Wire Color	Destination
1	VDD	RE	PNA-CN3-1
2	PBM	WH	PNA-CN3-2
3	KSF	WH	PNA-CN3-3
4	SINGLE	WH	PNA-CN3-4
5	DUAL	WH	PNA-CN3-5
6	SPLIT	WH	PNA-CN3-6
7	PERF	WH	PNA-CN3-7

LED CN3

Pin No.	Pin Name	Wire Color	Destination
1	D0	RE	DM-CN11-1
2	D1	WH	DM-CN11-2
3	D2	WH	DM-CN11-3
4	D3	WH	DM-CN11-4
5	D4	WH	DM-CN11-5
6	D5	WH	DM-CN11-6
7	D6	WH	DM-CN11-7
8	D7	WH	DM-CN11-8
9	A0	WH	DM-CN11-9
10	A1	WH	DM-CN11-10
11	$\overline{WR}$	WH	DM-CN11-11

LED CN4

Pin No.	Pin Name	Wire Color	Destination
1	E	RE	DM-CN12-1
2	R/$\overline{W}$	WH	DM-CN12-2
3	$\overline{CS}$	WH	DM-CN12-3
4	$\overline{CS1}$	WH	DM-CN12-4
5	$\overline{CS2}$	WH	DM-CN12-5
6	Vcc	WH	DM-CN12-6
7	Vcc	WH	DM-CN12-7
8	GND	WH	DM-CN12-8
9	GND	WH	DM-CN12-9

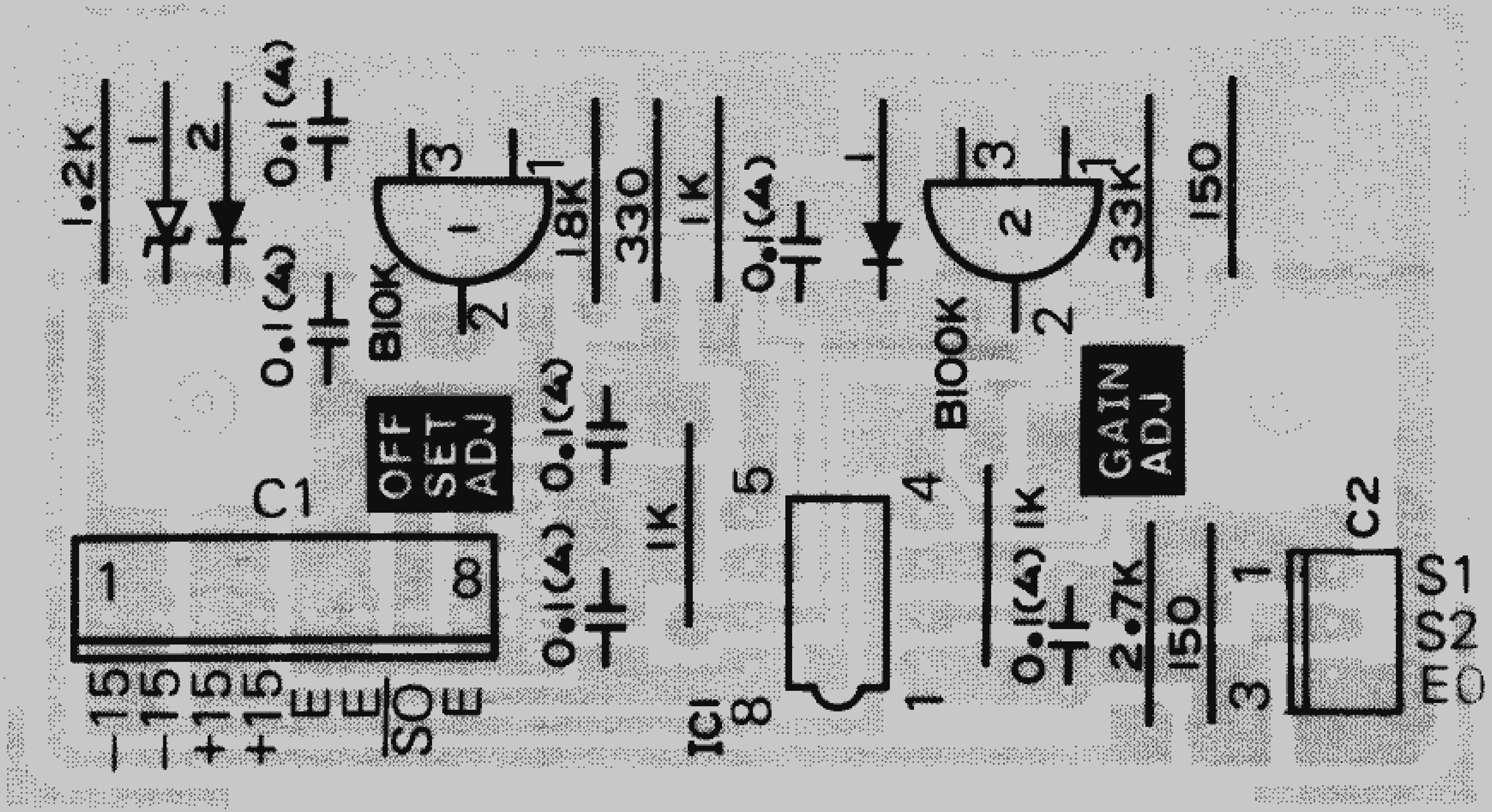
LED CN5

Pin No.	Pin Name	Wire Color	Destination
1	Vcc	RE	PNB-CN1-1
2	PB7	WH	PNB-CN1-2
3	1/2	WH	PNB-CN1-3

LED CN6

Pin No.	Pin Name	Wire Color	Destination
1	Vcc	RE	LCD
2	–	–	
3	GND	BL	LCD

● PC Circuit Board



〈Components side〉

Notes)

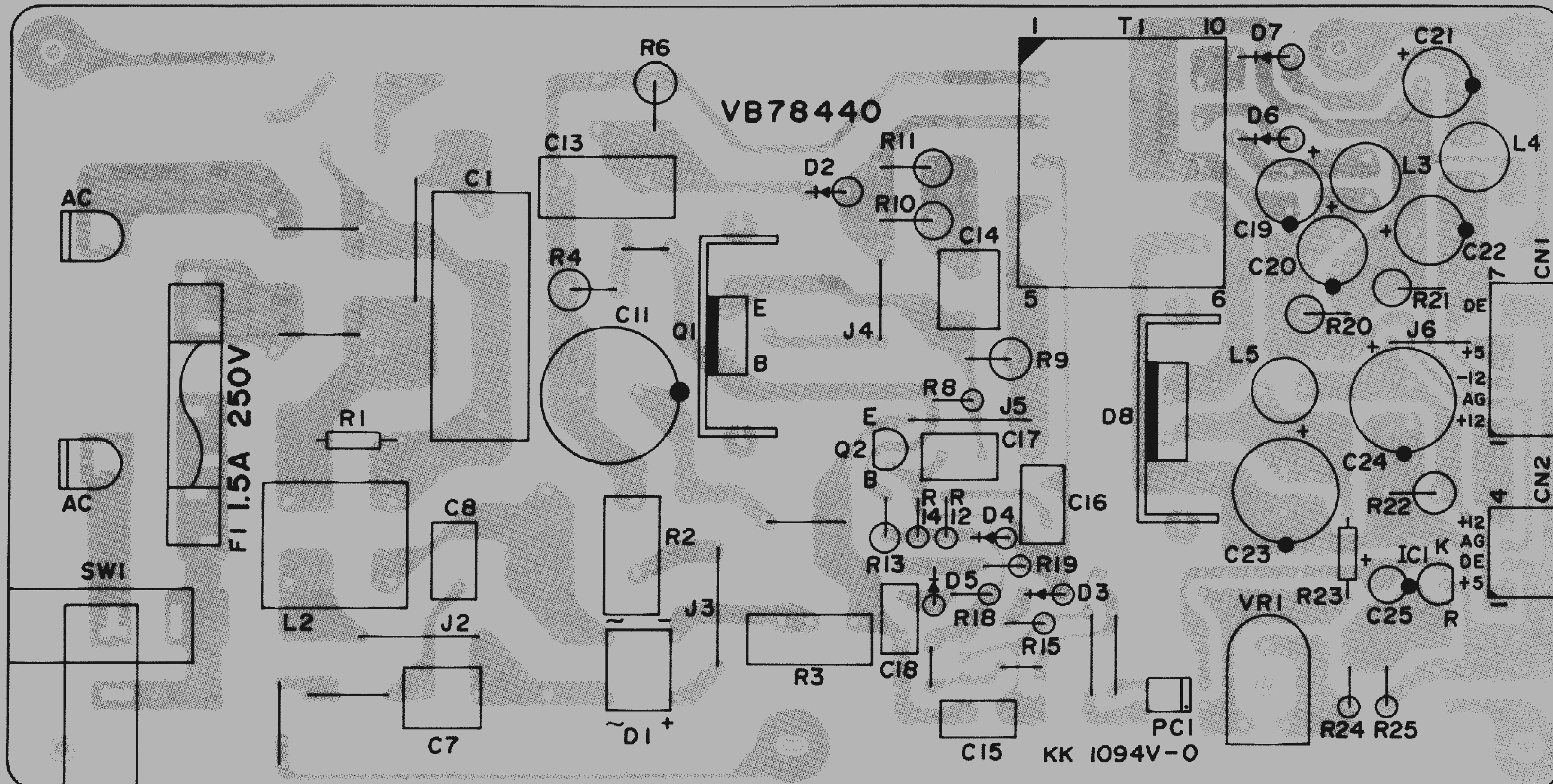
Circuit Board:	LC31333
IC1:	NJM4558DV (IG001390) OP AMP.
1, 2:	Diode 1SS1555
1:	Zener Diode 05Z5.1

CN1

Pin No.	Pin Name	Wire Color	Destination
1	–15	BE	DM-CN5-4
2	–15	–	
3	+15	OR	DM-CN5-3
4	+15	–	
5	E	–	
6	E	–	
7	OUT	WH	DM-CN5-1
8	E	BL	DM-CN5-2

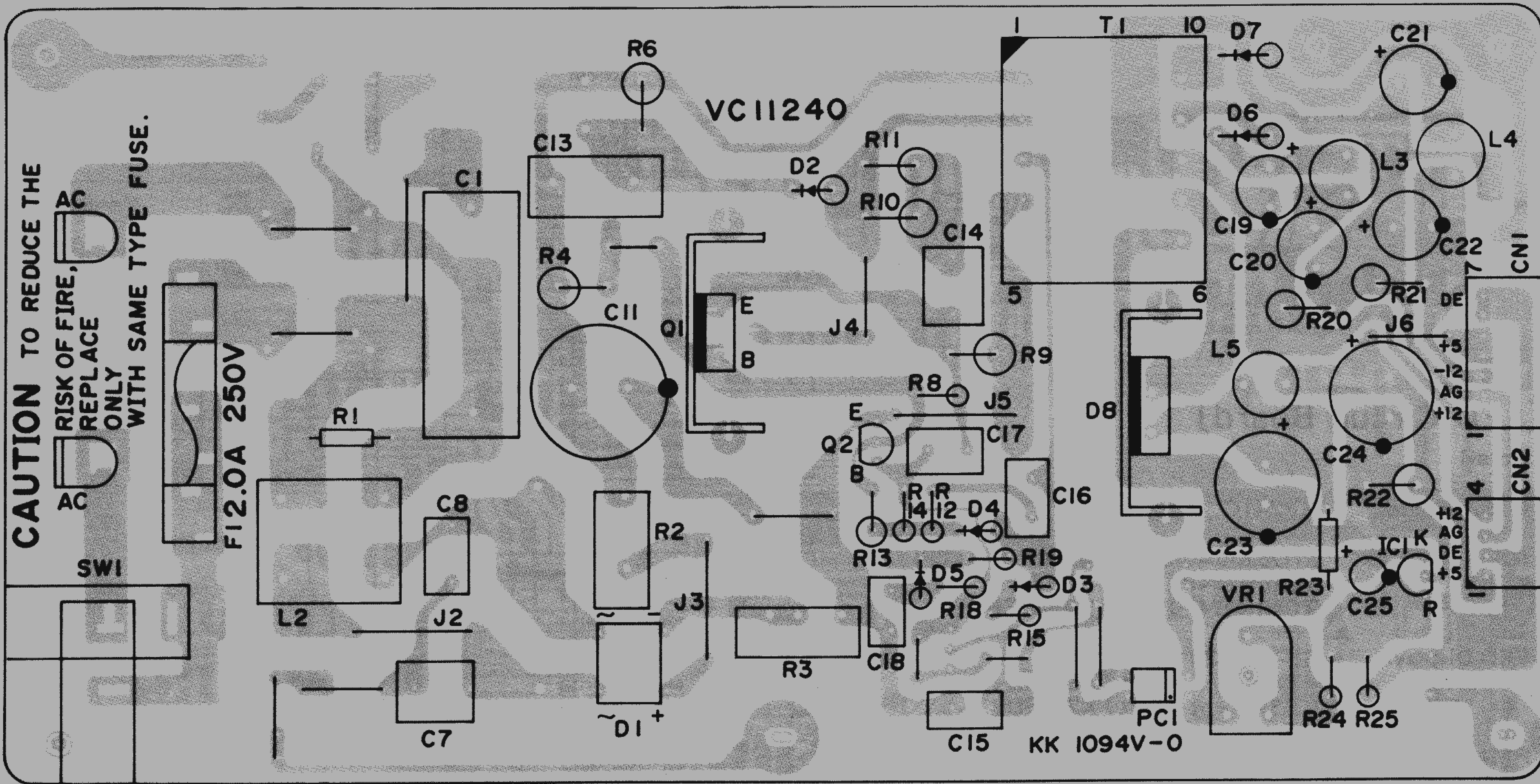
● AD Circuit Boards

Japanese



<Components side>

U.S.A.



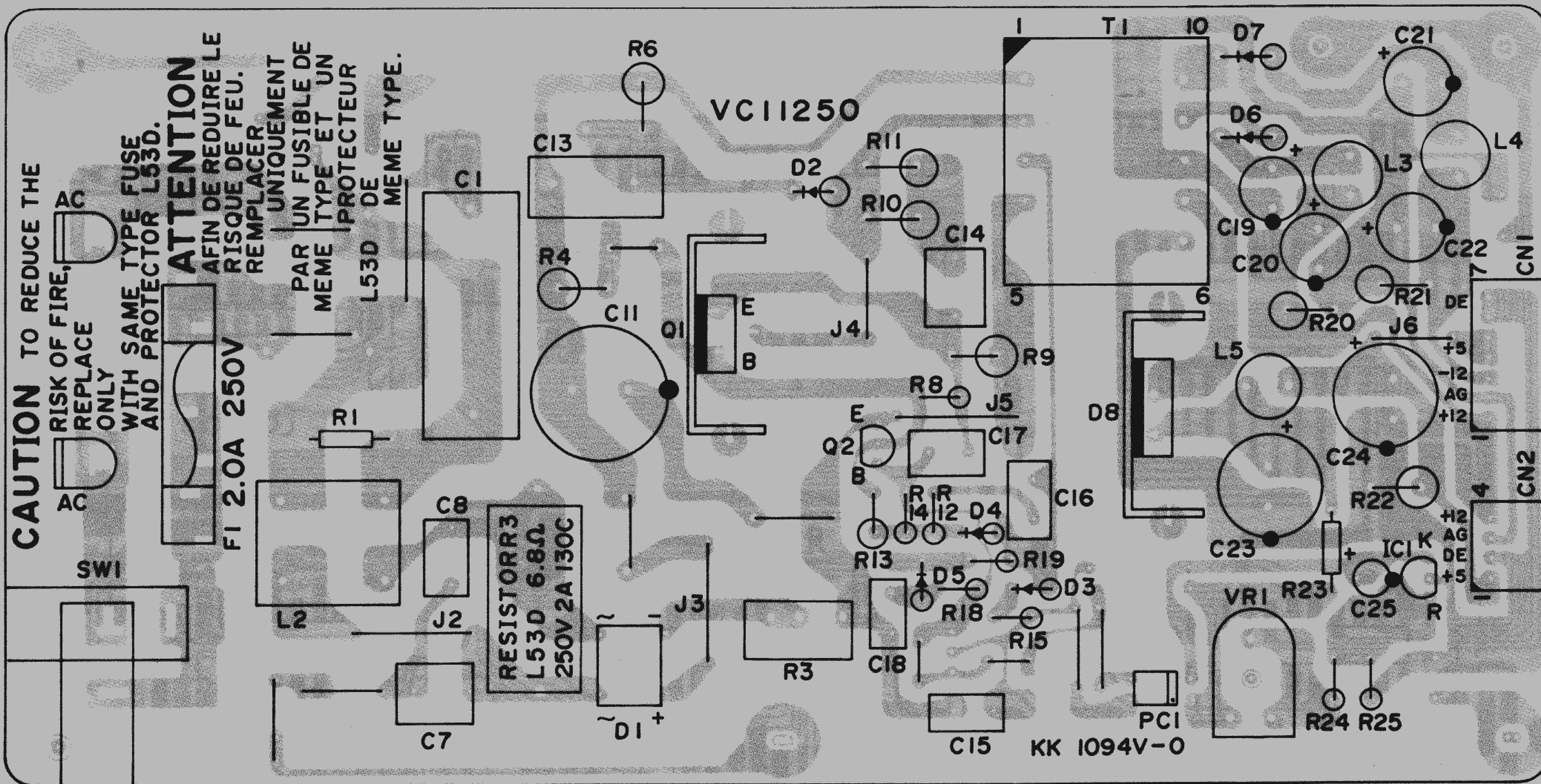
〈Components side〉

AD CN1

Pin No.	Pin Name	Wire Color	Destination
1	+12	OR	DM-CN14-1
2	E	BL	DM-CN14-2
3	–12	BE	DM-CN14-3
4	+5	RE	DM-CN14-4
5	+5	RE	DM-CN14-5
6	E	BL	DM-CN14-6
7	E	BL	DM-CN14-7

AD CN2

Pin No.	Pin Name	Wire Color	Destination
1	+5	RE	FDD-CN2-1
2	E	BL	FDD-CN2-2
3	E	BL	FDD-CN2-3
4	+12	OR	FDD-CN2-4



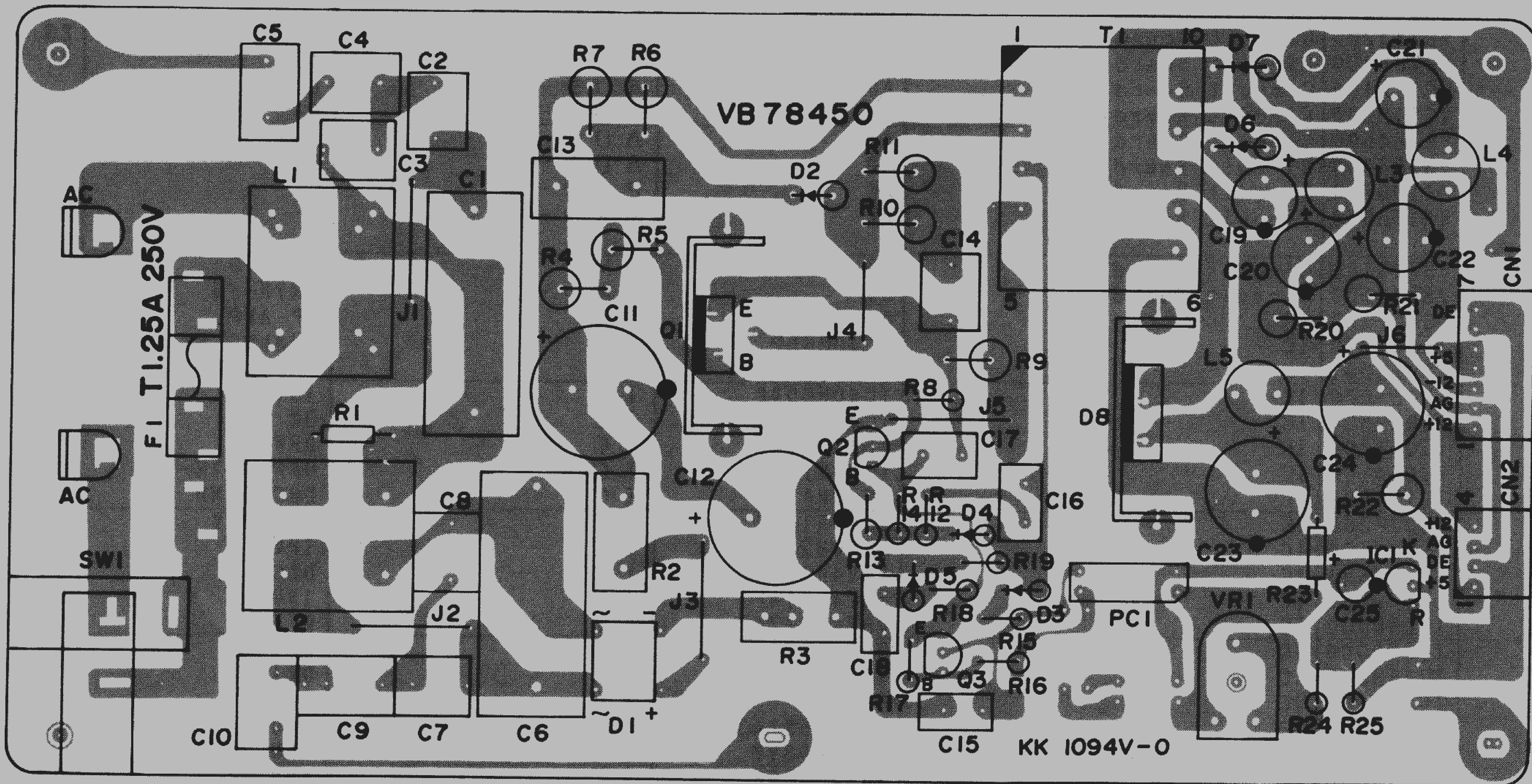
<Components side>

Notes)

Market:	Japanese (J), U.S.A. (U), Canadian (C)
IC	
IC1:	μPC1093J
Photo Coupller	
PC1:	PC-817
Transistor	
Q1:	2SC3570, or 2SC2929
2:	2SC2655
Diode	
D1:	Diode Bridge S1WB40
2:	ERB4406
3 ~ 5:	1SS84
6, 7:	ERB4402
8:	5KQ30
Carbon Resistor	
R1, 8, 12, 23 ~ 25:	1/4W
20 ~ 22:	1/2W
Metal Oxide Film Resistor	
R2, 3 (J, U):	1.8Ω 3W
4:	120kΩ 2W
6:	33kΩ 2W
9:	1Ω 2W
10, 11:	240Ω 2W
13:	56Ω 1W
Fuse Resistor	
R3 (C):	6.8Ω 3W

Flame Proof Carbon Resistor	
R14:	560Ω 1/4W
15, 19:	56Ω 1/2W
18:	150Ω 1/4W
Metallized Paper Cap.	
C1 (J, C):	0.1μ 125V
1 (U):	0.22μ 125V
Ceramic Cap.	
C7, 8:	2200P 250V
13:	0.01μ 250V
14:	1000P 1000V
Mylar Cap.	
C15 ~ 18:	0.047μ 50V
Electrolytic Cap.	
C11:	100μ 200V
19 ~ 22:	220μ 25V
23, 24:	2200μ 10V
25:	1μ 50V
Choke Coil	
L1, 2 (J, C):	10mH
2 (U):	20mH
3 ~ 5:	47μH
Fuse	
F1 (J):	1.5A 250V
1 (U, C):	2.0A 250V

YG-4035-013 (J) ⚠1
YG-4035-016 (U) ⚠1
YG-4035-017 (C) ⚠1



<Components side>

Notes)

Market: North European (H), West German (D), Australian (A)

IC
- IC1: μPC1093J

Photo Coupller
- PC1: PC-511

Transistor
- Q1: 2SC3531
- 2: 2SC2655
- 3: 2SC1815

Diode
- D1: Diode Bridge S1WB60
- 2: ERB44-06
- 3 ~ 5: 1SS84
- 6, 7: ERB44-02
- 8: 5KQ30

Carbon Resistor
- R1, 8, 12, 16, 17
- 23 ~ 25: 1/4W
- 20 ~ 22: 1/2W

Wire Wound Resistor
- R2, 3: 4.3Ω 5W

Metal Oxide Film Resistor
- R4, 5: 120KΩ 2W
- 6, 7: 68KΩ 2W
- 9: 1Ω 2W
- 10, 11: 560Ω 2W
- 13: 82Ω 1W

Flame Proof C. Resistor
- R14: 510Ω 1/4W
- 15, 19: 56Ω 1/4W
- 18: 200Ω 1/4W

Metallized Paper Cap.
- C1, 6 (H, A): 0.1μ 125V
- 1, 6 (D): 0.47μ 250V

Ceramic Cap.
- C2, 3, 7, 8: 1000P 250V
- 4, 5, 9, 10: 2200P 250V
- 13: 0.01μ 250V
- 14: 100P 1000V

Mylar Cap.
- C15 ~ 18: 0.047μ 50V

Electrolytic Cap.
- C11, 12: 100μ 200V
- 19 ~ 22: 220μ 25V
- 23, 24: 2200μ 10V
- 25: 1μ 50V

Choke Coil
- L 1 (H, A), 2 (D): 20mH
- 1 (D): 40mH
- 2 (H, A): 10mH
- 3 ~ 5: 47μH

Fuse
- F1: 1.25A 250V

YG-4035-014 (H, A) ⚠
YG-4035-015 (D) ⚠

West German

‹Components side›

DX7

DIGITAL PROGRAMMABLE ALGORITHM SYNTHESIZER

DX7 II·FD/D

PARTS LIST

Notes DESTINATION ABBREVIATIONS

J	: : Japanese model	A	: Australian model
U	: U.S.A. model	E	: European model
C	: Canadian model	D	: West German model
X	: General model	B	: British model
M	: South African model	I	: Indonesian model
H	: North European model		

■ELECTRICAL PARTS（電気部品）

	Ref. No.	Part No.	Description		部品名	Remarks	ランク
*		VB743100	Circuit Board	DM	ＤＭシート	DX7II-D	
*		VB744100	Circuit Board	DM	ＤＭシート	DX7II-FD	73
*		VB743200	Circuit Board	PN	ＰＮシート		23
*		VB743200	Circuit Board	PNA(PN)	ＰＮＡシート		23
*		VB743200	Circuit Board	PNB(PN)	ＰＮＢシート		23
*		VB743200	Circuit Board	LED(PN)	ＬＥＤシート		23
*		VB743200	Circuit Board	HP(PN)	ＨＰシート		23
*		VB784400	Circuit Board	AD	ＡＤシート	J	17
*		VC112400	Circuit Board	AD	ＡＤシート	U	
*		VC112500	Circuit Board	AD	ＡＤシート	C	
*		VB784500	Circuit Board	AD	ＡＤシート	H,A	
*		VB784600	Circuit Board	AD	ＡＤシート	D	
		NA109720	Circuit Board	PC	ＰＣシート		07
		NA115670	Circuit Board	MK	ＭＫシート		09
*		VB743100	Circuit Board	DM	ＤＭシート	DX7II-D	
*		VB744100	Circuit Board	DM	ＤＭシート	DX7II-FD	73
		IG001390	IC	NJM4558DV	ＩＣ	OP AMP.	03
		IG001270	IC	TC4066BP	ＩＣ	ANALOG SW	05
*		XB013001	IC	TC5564PL-15	ＩＣ	SRAM 8KX8	20
		IG051000	IC	TC40H004P	ＩＣ	INV	03
		IG052800	IC	TC40H032P	ＩＣ	OR	03
		IG051100	IC	TC40H074P	ＩＣ	DFF	04
		IG064100	IC	TC40H174P	ＩＣ	DFF DX7II-FD	05
		IG111900	IC	TC40H138P	ＩＣ	DEC DEMP	04
		IG078300	IC	TC40H139P	ＩＣ	DECODER	05
		IG068100	IC	TC40H240P	ＩＣ	INV	07
		IR013800	IC	TC74HC138P	ＩＣ	DECO-8	05
		IG049600	IC	HD74LS14P	ＩＣ	INV	05
		IG050000	IC	HD74LS174P	ＩＣ	DFF	05
		IG060000	IC	HD74LS244P	ＩＣ	DRIVER	06
		IG103200	IC	HD74LS365AP	ＩＣ	DRIVER	03
		IG105500	IC	HD7405	ＩＣ	INV	03
		IG105300	IC	HD6805S1A33P	ＩＣ	CPU	08
*		XA444001	IC	HD63B03YP	ＩＣ	MPU	12
		IR000850	IC	SN74HC08N	ＩＣ	AND	03
*		IR001050	IC	SN74HC10N	ＩＣ	NAND	02
		IR003250	IC	SN74HC32N	ＩＣ	OR	03
*		IR024570	IC	MC74HC245N	ＩＣ	TRAN	06
		IG106100	IC	M58990P-1	ＩＣ	ADC	09
		IG116200	IC	PST518B-2	ＩＣ	SYSTEM RESET	04
*		XA489001	IC	YM2604	ＩＣ	OPS2	14
*		XA898001	IC	YM3609	ＩＣ	EGM	15
*		XA566001	IC	PCM54HP	ＩＣ	DAC	12
*		XB243001	IC	HM65256BLP-12	ＩＣ	PSRAM DX7II-FD	12
*		XB622001	IC	YA3	ＩＣ	HYBRID	17
*		XB623001	IC	WD1772PH-02	ＩＣ	FDC DX7II-FD	12
*		XC314002	IC	973V100	ＩＣ	EPROM	26
		IK000470	Photo Coupller	TLP552	フォトカプラ		06
		IA093300	Transistor	2SA933S Q,R	トランジスタ		03
		IC174000	Transistor	2SC1740S R,S	トランジスタ		03
		IF003450	Diode	1SS133	ダイオード		01
		VB187500	Resistor Array	EXB-F9E103J5	抵抗アレイ		01
		VC378000	Resistor Array	RKC1/8B5 1KX5J	抵抗アレイ	DX7II-FD	01
		FS685100	Semiconductive Cera. Cap.	0.01μ 25V	半導体セラコン		01
		FS683330	Semiconductive Cera. Cap.	3300P 25V	半導体セラコン		01
		FZ004110	Semiconductive Cera. Cap.	0.1μ 16V	半導体セラコン		01
		VB835000	Coil	20μ FL5R200QNT	コイル		01
		FZ006970	EMI Filter	0.022μ LS MT	ＬＣフィルターＥＭＩ		02
		QU005200	Quartz Crystal Unit	9.4265MHz NR-18	水晶振動子		05
		VB657100	Ceramic Resonator	8MHz CST8MT	セラミック振動子		02
		VC017500	Phone Jack	HLJ4306	ホーンジャック	MONAURAL	02
*		VC130700	Phone Jack	HLJ4306	ホーンジャック	STEREO	02
*		VC130900	Phone Jack	HLJ4306	ホーンジャック	MONAURAL	02
		LB500520	DIN Jack	5P TCS4650	ＤＩＮジャック		03
		VB436300	Socket	34P	ソケット		07
		LB606050	IC Socket	DL2-28A	ＩＣソケット		05
		VB436900	Lithium Battery	CR2032-P5-2	リチュウム電池		05
*		VB743200	Circuit Board	PN	ＰＮシート		23
*		VB743200	Circuit Board	PNA(PN)	ＰＮＡシート		23
*		VB743200	Circuit Board	PNB(PN)	ＰＮＢシート		23
*		VB743200	Circuit Board	LED(PN)	ＬＥＤシート		23
*		VB743200	Circuit Board	HP(PN)	ＨＰシート		23
		IG051100	IC	TC40H074P	ＩＣ	DFF	04
		IG064100	IC	TC40H174P	ＩＣ	DFF	05
*		XA052001	IC	μPD8255AC-2	ＩＣ	I/O PORT	07
		IF003450	Diode	1SS133	ダイオード		01
		IF002000	LED	SLC22UR RED	ＬＥＤ		02
*		VC063800	LED Display	SL-1283-20	ＬＥＤディスプレイ		06

*New Parts（新規部品）

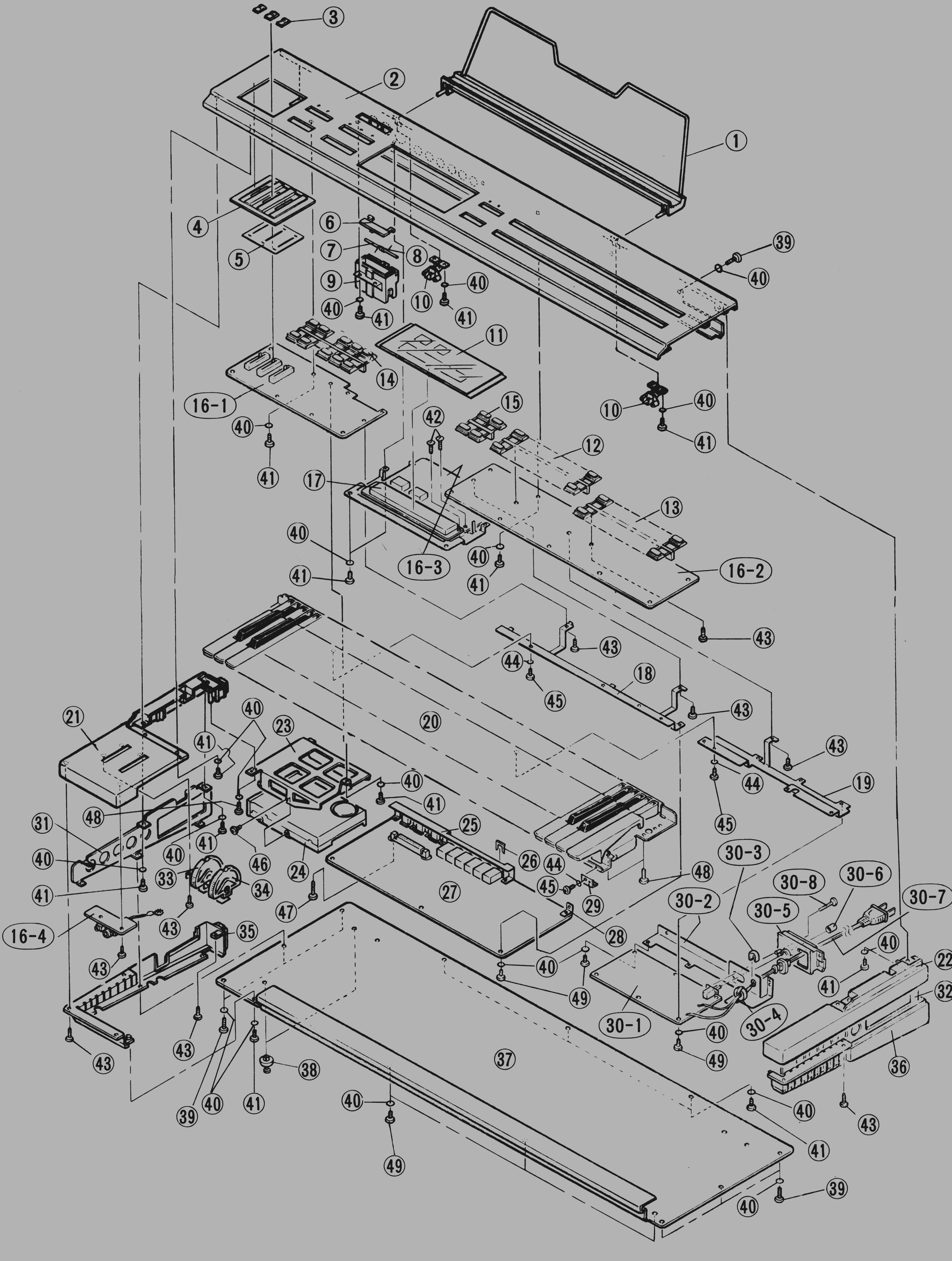
ランク：Japan only

	Ref. No.	Part No.	Description		部品名	Remarks	ランク
*		VB774100	Spacer		ＬＥＤスペーサー		01
*		VC377900	Resistor Array	RKC1/4B7S 1KX7J	抵抗アレイ		02
		FS685100	Semiconductive Cera. Cap.	0.01μ 25V	半導体セラコン		01
		FZ004110	Semiconductive Cera. Cap.	0.1μ 16V	半導体セラコン		01
		VB835000	Coil	20μ FL5R200QNT	コイル		01
*		VC250600	Slide Pot.	B 10K EWA-NFOC	スライドボリューム		03
*		VC250800	Slide Pot.	A 10K EWA-NFOC	スライドボリューム		03
		KA907030	Push Switch	KHH10908	プッシュスイッチ		01
		LB203090	Phone Jack	HLJ0521	ホーンジャック	STEREO	02
		LB302010	Phone Jack	HSJ0912	ホーンジャック	ST MINI	02
*		VB784400	Circuit Board	AD	ＡＤシート	J	17
*		VC112400	Circuit Board	AD	ＡＤシート	U	
*		VC112500	Circuit Board	AD	ＡＤシート	C	
*		VB784500	Circuit Board	AD	ＡＤシート	H,A	
*		VB784600	Circuit Board	AD	ＡＤシート	D	
*		IX801910	IC	μPC1093J	ＩＣ	REGULATOR	
		IK000480	Photo Coupler	PC-817	フォトカプラ	J,U,C	03
		IK000490	Photo Coupler	PC-511	フォトカプラ	H,D,A	
		IX552940	Transistor	2SC2655	トランジスタ		
*		IX801920	Transistor	2SC3570	トランジスタ	J,U,C	
*		IX801930	Transistor	2SC3531	トランジスタ	H,D,A	
		IC181550	Transistor	2SC1815	トランジスタ	H,D,A	03
		IH001740	Diode	ERB4406	ダイオード		01
		IF001380	Diode	1SS84	ダイオード		01
		IF008590	Diode	ERB4402	ダイオード		01
*		IX801940	Diode	5KQ30	ダイオード		
		IX553160	Diode Bridge	S1WB40	ダイオードブリッジ	J,U,C	03
		IX553900	Diode Bridge	S1WB60	ダイオードブリッジ	H,D,A	04
		HL328120	Metal Oxide Film Resistor	120KΩ 2W	酸金抵抗		01
		HL323100	Metal Oxide Film Resistor	1Ω 2W	酸金抵抗		01
		HL333180	Metal Oxide Film Resistor	1.8Ω 3W	酸金抵抗	J,U	01
		HL427330	Metal Oxide Film Resistor	33KΩ 2W	酸金抵抗	J,U,C	01
*		HX801010	Metal Oxide Film Resistor	240Ω 2W	酸金抵抗	J,U,C	
		HL314560	Metal Oxide Film Resistor	56Ω 1W	酸金抵抗	J,U,C	01
		HL327680	Metal Oxide Film Resistor	68KΩ 2W	酸金抵抗	H,D,A	01
		HL325560	Metal Oxide Film Resistor	560Ω 2W	酸金抵抗	H,D,A	01
		HL414820	Metal Oxide Film Resistor	82Ω 1W	酸金抵抗	H,D,A	01
		HV554560	Flame Proof C.Resistor	56Ω 1/4W	不燃化カーボン抵抗		01
		HV555560	Flame Proof C.Resistor	560Ω 1/4W	不燃化カーボン抵抗	J,U,C	01
		HV455150	Flame Proof C.Resistor	150Ω 1/4W	不燃化カーボン抵抗	J,U,C	01
*		HX801020	Flame Proof C.Resistor	510Ω 1/4W	不燃化カーボン抵抗	H,D,A	
*		HX801030	Flame Proof C.Resistor	200Ω 1/4W	不燃化カーボン抵抗	H,D,A	
*		HX801040	Wire Wound Resistor	4.3Ω 5W	セメント抵抗	H,D,A	
		HX551300	Fuse Resistor	6.8Ω 5W	ヒューズ抵抗	C	
		FZ004330	Metallized Paper Cap.	0.1μ 125V	ＭＰコン	J,C,H,A	03
		FZ004470	Metallized Paper Cap.	0.22μ 125V	ＭＰコン	U	04
		FR155470	Metallized Paper Cap.	0.47μ 250V	ＭＰコン	D	06
		FX551060	Ceramic Cap.	2200P 250V	セラコン		03
		FI324100	Ceramic Cap.	0.01μ 250V	セラコン		01
		FX551140	Ceramic Cap.	1000P 1000V	セラコン		
		FH213100	Ceramic Cap.	1000P 500V	セラコン	H,D,A	01
*		FX800230	Ceramic Cap.	100P 1000V	セラコン	H,D,A	
*		FX800240	Electrolytic Cap.	100μ 200V	電解コンデンサ		
*		FX800250	Electrolytic Cap.	2200μ 10V	電解コンデンサ		
		XX804220	Choke Coil	FL9H470K-40	チョークコイル		02
*		GX800610	Choke Coil	NFR6UA103	チョークコイル	J,C,H,A	
*		GX800620	Choke Coil	NFR5UA203	チョークコイル	H,D,A	
*		GX800630	Choke Coil	NFR4E403A	チョークコイル	D	
		HX551310	Variable Resistor	RVF08P 1KΩ	ボリューム		
*		KX800440	Switch	ESB8213V	スイッチ		
		KB000340	Fuse	1.5A 250V	ヒューズ	J	01
		KB001240	Fuse	2.0A 250V ST4	ヒューズ	U,C	03
		KB000680	Fuse	EAK 1.25A 250V	ヒューズ	H,D,A	02
		NA109720	Circuit Board	PC	ＰＣシート		07
		IG001390	IC	NJM4558DV	ＩＣ	OP AMP.	03
		IF000460	Diode	1S1555	ダイオード		01
		IF002670	Zener Diode	05Z5.1 5.1V	ツェナーダイオード		01
		HT370250	Trimmer Potentiometer	B 50K 3P EVN	半固定ボリューム		02
		HT370260	Trimmer Potentiometer	B 100K 3P EVN	半固定ボリューム		02
		NA115670	Circuit Board	MK	ＭＫシート		09
		IF003450	Diode	1SS133	ダイオード		01
*		VC068500	LCD Unit	DMC40267V-YGR	ＬＣＤユニット		22
*		GX800440	Power Transformer	TYA024	電源トランス	J,U	
*		GX800650	Power Transformer	TYA023	電源トランス	C	
*		GX800660	Power Transformer	TM163A	電源トランス	H,D,A	

※New Parts（新規部品）

ランク：Japan only

■OVERALL ASSEMBLY

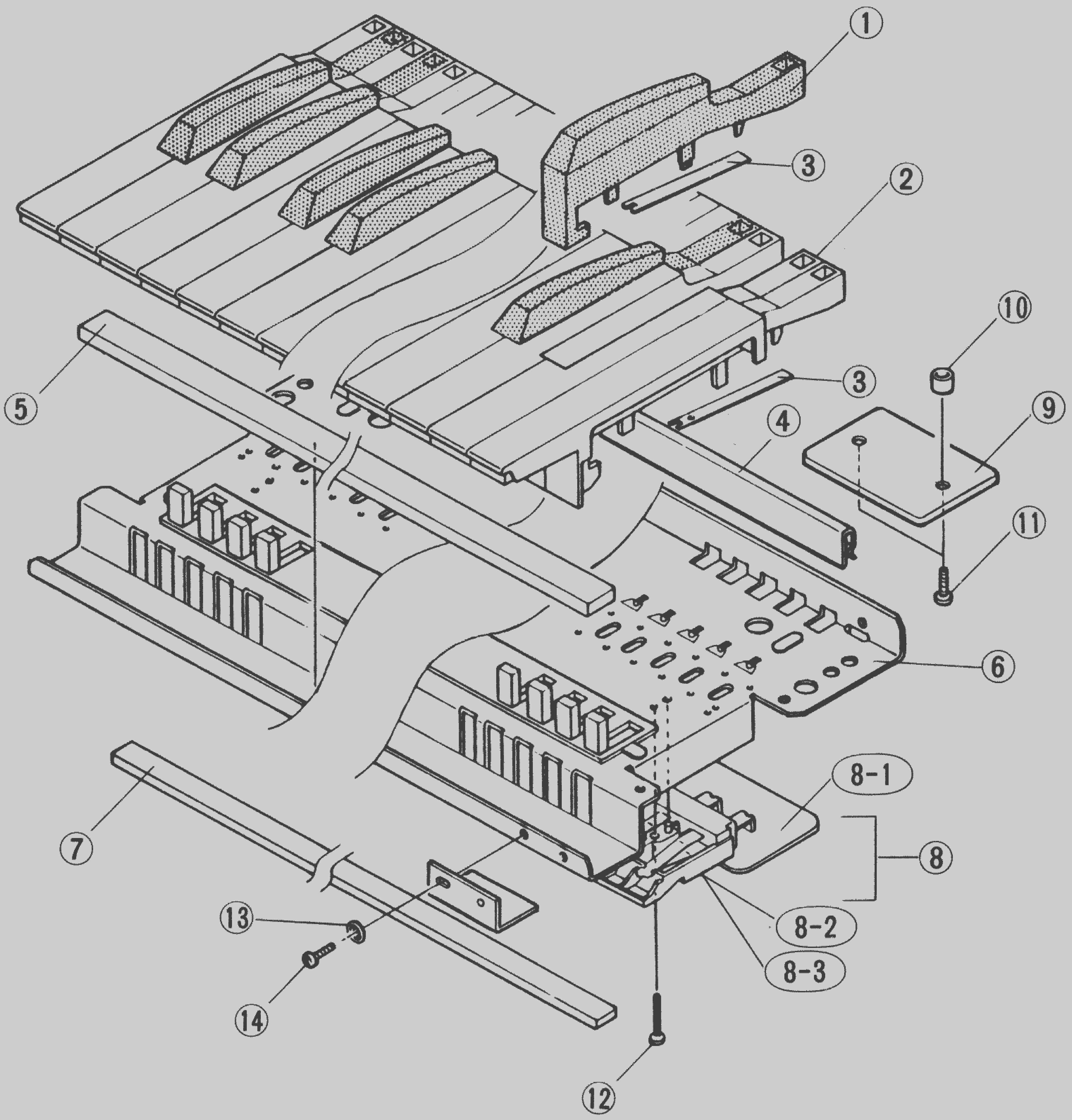


	Ref. No.	Part No.	Description		部品名	Remarks	ランク
*	1	VC362800	Music Rest Assembly		譜面板Ａｓｓ'ｙ		07
*	2	VC091900	Control Panel		コントロールパネル	DX7II-D	27
*	2	VB775900	Control Panel		コントロールパネル	DX7II-FD	27
*	3	VB774000	Knob		ツマミ		01
*	4	VB775300	Escutcheon		ｽﾗｲﾄﾞﾎﾞﾘｭｰﾑｴｽｶｯｼｮﾝ		04
*	5	VC143600	Dust Proof Cloth		防塵クロス		
	6	VB670700	Cover		蓋		
	7	VB670800	Shaft		軸		
	8	AA826090	Spring		スプリング		01
	9	VC143500	Cartridge Guide Assembly		ｶｰﾄﾘｯｼﾞｶﾞｲﾄﾞAss'y		05
*	10	VB779800	Bushing		譜面板ブッシュ		01
*	11	VB779000	Filter		保護板		
*	12	VB775800	Knob	D	ノブ		04
*	13	VC165800	Knob	E	ノブ		04
*	14	VC165900	Knob	F	ノブ		04
*	15	VC166000	Knob	G	ノブ		03
*	16	VB743200	Circuit Board	PN	ＰＮシート		
	16-1		Circuit Board	PNA	ＰＮＡシート		
	16-2		Circuit Board	PNB	ＰＮＢシート		
	16-3		Circuit Board	LED	ＬＥＤシート		
	16-4		Circuit Board	HP	ＨＰシート		
*	17	VC068500	LCD Unit	DMC40267V-YGR	ＬＣＤユニット		22
*	18	VB774700	Angle Bracket	DM	ＤＭアングル		05
*	19	VB773800	Angle Bracket	AD	ＡＤアングル		04
*	20	VC093200	Keyboard Assembly	FS C61	鍵盤Ａｓｓ'ｙ		51
*	21	VB776300	End Block	Left	拍子木（左）		08
*	22	VB776200	End Block	Right	拍子木（右）		07
*	23	VB774400	Angle Bracket		ＦＤＤ金具	DX7II-FD	04
*	24	VC948100	FDD Unit	3.5" JU-363-2	機構ユニット	DX7II-FD	
*	25	VB775400	Angle Bracket	JK	ＪＫアングル		03
	26	LB301910	Angle		Ｕ字金具		01
*	27	VB743100	Circuit Board	DM	ＤＭシート	DX7II-D	
*	27	VB744100	Circuit Board	DM	ＤＭシート	DX7II-FD	73
	28	AA833840	Angle Bracket	DM	シートアングル		01
*	29	VB773700	Angle Bracket	MK	アングル		01
*	30-1	VB784400	Circuit Board	AD	ＡＤシート	J	17
*	30-1	VC112400	Circuit Board	AD	ＡＤシート	U	
*	30-1	VC112500	Circuit Board	AD	ＡＤシート	C	
*	30-1	VB784500	Circuit Board	AD	ＡＤシート	H,A	
*	30-1	VB784600	Circuit Board	AD	ＡＤシート	D	
*	30-2	VB774900	Panel		ＡＣパネル	J	04
*	30-2	VB775000	Panel		ＡＣパネル	U	
*	30-2	VB775100	Panel		ＡＣパネル	C	
*	30-2	VB775200	Panel		ＡＣパネル	H,D,A	
	30-3	CB811230	Cord Strain Relief	SR-6N-4	コードストッパー	U	02
	30-3	CB806850	Cord Strain Relief	SR-6N3-4	コードストッパー	C	02
	30-3	CB072750	Cord Strain Relief	4N-4	コードストッパー	H	01
	30-3	CB032840	Cord Strain Relief	SR-5N-4	コードストッパー	D,A	01
*	30-4	VC362700	Ferrite Core	FR25/15/12-1400	フェライトコア		04
*	30-5	VB773900	Escutcheon		ＡＣエスカッション		02
	30-6	CB825380	Push Button		プッシュボタン		01
	30-7	MG001820	AC Cord	7A 3.0M	電源コード	J	05
	30-7	MG000100	AC Cord	10A 12FT	電源コード	U	08
	30-7	MG000270	AC Cord	10A 3.3M	電源コード	C	09
	30-7	VC309900	AC Cord	2.5A 3.3M	電源コード	H	
	30-7	MG000450	AC Cord	6A 3.5M	電源コード	D	
	30-7	MG001300	AC Cord	7.5A 3.05M	電源コード	A	
	30-8	ED330166	Bind Head Screw	3.0×16 FCM3BL	バインド小ネジ	PACK	01
*	31	VB774600	Shield Plate	Left	シールド板（左）		
*	32	VB774500	Shield Plate	Right	シールド板（右）		
*	33	VC093000	Wheel Assembly		ホイールＡｓｓ'ｙ	PITCH	
*	34	VC093100	Wheel Assembly		ホイールＡｓｓ'ｙ	MODULATION	
*	35	VC092500	Side Board	Left	側板（左）	DX7II-D	07
*	35	VB776100	Side Board	Left	側板（左）	DX7II-FD	07
*	36	VB776000	Side Board	Right	側板（右）		07
*	37	VB774300	Bottom Board		底板		18
*	38	VC999400	Foot		ゴム脚		01
	39	ED340126	Bind Head Screw	4.0×12 FCM3BL	バインド小ネジ	PACK	01
	40	EV413046	Toothed Lock Washer	φ4.0 FCM3BL	歯付座金	PACK	01
	41	EI340086	Bind Tapping Screw	4.0×8 FCM3BL	バインドＴＰネジ	PACK	01
	42	EY980730	Flat Head Screw	3.0×6 ZMC2BL	皿小ネジ		01
	43	EI330086	Bind Tapping Screw	3.0×8 FCM3BL	バインドＴＰネジ	PACK	01
	44	EV413036	Toothed Lock Washer	φ3.0 FCM3BL	歯付座金	PACK	01
	45	ED330086	Bind Head Screw	3.0×8 FCM3BL	バインド小ネジ	PACK	01
	46	ED330066	Bind Head Screw	3.0×6 FCM3BL	バインド小ネジ	PACK	01
	47	EI330206	Bind Tapping Screw	3.0×20 FCM3BL	バインドＴＰネジ	PACK	01
	48	EI340166	Bind Tapping Screw	4.0×16 FCM3BL	バインドＴＰネジ	PACK	01
	49	ED340086	Bind Head Screw	4.0×8 FCM3BL	バインド小ネジ	PACK	01

*New Parts（新規部品）

ランク：Japan only

■ KEYBOARD ASSEMBLY

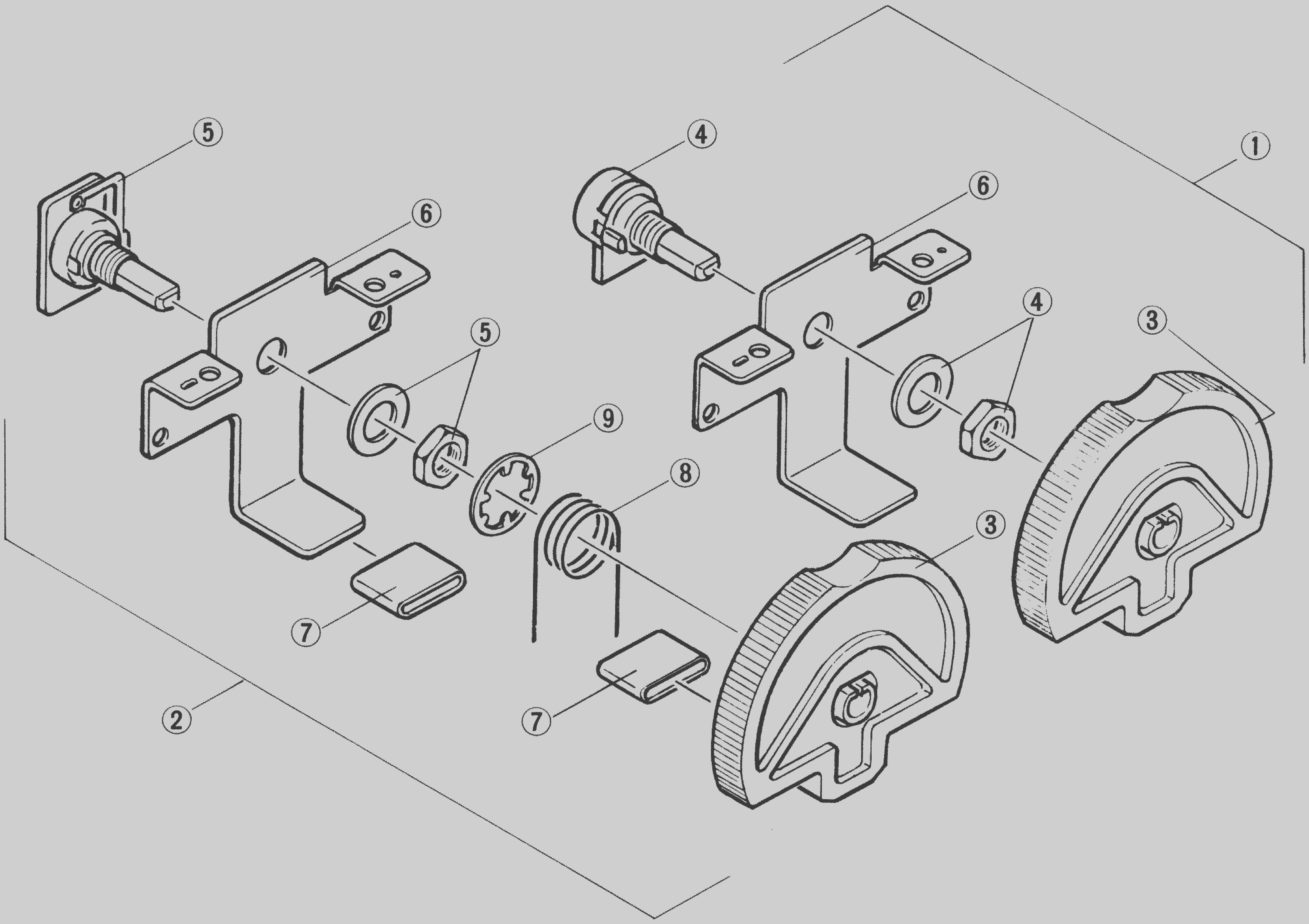


Ref. No.	Part No.	Description		部品名	Remarks	ランク
*	VC093200	Keyboard Assembly	FS C61	鍵盤Ass'y		51
1	NB107600	Key Assembly		黒鍵Ass'y		03
2	NB107540	Key Assembly	C,F	白鍵Ass'y		03
2	NB107550	Key Assembly	D	白鍵Ass'y		03
2	NB107560	Key Assembly	B,E	白鍵Ass'y		03
2	NB107570	Key Assembly	G	白鍵Ass'y		03
2	NB107580	Key Assembly	A	白鍵Ass'y		03
2	NB107590	Key Assembly	C'	白鍵Ass'y		03
3	AA055430	Spring		鍵バネ		02
4	CB045760	Stopper		ストッパー		02
5	PB000470	Sensor PC		PCセンサー		16
6	AA055380	MK Frame		MKフレーム		09
7	CC030570	Felt	821×6×3 WH	フェルト		03
8	NB116200	MK Switch Unit	FS	MKスイッチユニット		19
8-1	NA115670	Circuit Board	MK	MKシート		09
8-2	NB107120	Switch Assembly	12Q FS	スイッチAss'y		08
8-3	NB107110	Switch Assembly	13K FS	スイッチAss'y		08
9	NA109720	Circuit Board	PC	PCシート		07
10	EZ000460	Spacer	4.0×5	スペーサー		01
11	EI330106	Bind Tapping Screw	3.0×10 ZMC2BL	バインドTPネジ	PACK	01
12	EI330166	Bind Tapping Screw	3.0×16 FCM3BL	バインドTPネジ	PACK	01
13	EV413036	Toothed Lock Washer	φ3.0 FCM3BL	歯付座金	PACK	01
14	ED330086	Bind Head Screw	3.0×8 FCM3BL	バインド小ネジ	PACK	01

＊New Parts（新規部品）

ランク：Japan only

WHEEL ASSEMBLY



	Ref. No.	Part No.	Description		部品名	Remarks	ランク
*	1	VC093100	Wheel Assembly		ホイールAss'y	MODULATION	
*	2	VC093000	Wheel Assembly		ホイールAss'y	PITCH	
*	3	VC091700	Wheel		ホイール		01
	4	HS412160	Rotary Pot.	B 10KΩ	ロータリーボリューム	MODULATION	03
*	5	VC363100	Rotary Pot.	B 10KΩ	ロータリーボリューム	PITCH	04
	6	VC091600	Frame		フレーム		01
	7	CB819020	Wheel Tube		ホイールチューブ		02
*	8	VC792800	Return Spring		リターンスプリング	PITCH	01
	9	EW600110	Wheel Ring	12.0	CS形止め輪	PITCH	01

* New Parts（新規部品）

ランク：Japan only