SERVICE MANUAL

i2/i3

Interactive Music Workstation

CONTENTS

KORG

1. SPECIFICATIONS

Tone generation method	:	AI square synthesis system (full digital processing)
Tone generator	:	32 voices 32 oscillators (Single Mode) 16 voices 32 oscillators (Double Mode)
Keyboard	:	i2; 76 key with aftertouch sensitive FS-E76 i3; 61 key with aftertouch sensitive FS-61 KG2
Waveform memory	:	i2; 16M bit Mask ROM x 4 341 MULTI sounds & 164 Drum sounds i3; 16M bit Mask ROM x 3 340 MULTI sounds & 164 Drum sounds
Sampling frequency	:	31.25kHz
Programs	:	ROM ... 128 programs + 1 drum program (for General MIDI) ROM ... 64 programs + 5 drum programs RAM ... 64 programs + 2 drum programs
Styles	:	ROM ... 48 styles RAM ... 4 styles Card .. 4 styles
Arrangements	:	RAM ... 64 arrangements
Backing sequencer	:	10 songs
Sequencer	:	10 songs 100 patterns 16 tracks & 16 timbers / 1 song
Sequencer memory	:	40,000 events / Backing sequences + Songs 15,000 events / User styles
Effects	:	47 multi digital effects
Memory backup	:	RAM (Global + Program + Style + Arrange data)
Card slot	:	Style data card slot
Pedals	:	Damper pedal, Assignable pedal/switch 1 and 2, EC5
Outputs	:	L/MONO, R & PHONES
MIDI	:	IN, OUT & THRU

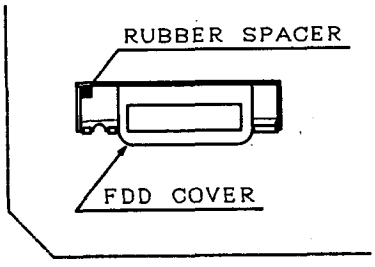
Indicators	:	240 x 64 dots LCD indicator with EL backlight
Floppy disk drive	:	3.5 inch / 2DD disk drive(720k byte for MS-DOS format)
Dimensions	:	i2; 1,283(W) x 384(D) x 122(H)mm i3; 1,076(W) x 384(D) x 122(H)mm
Weight	:	i2; 17.3kg(38.1lbs.) i3; 14.7kg(32.4lbs.)
Power consumption	:	11W

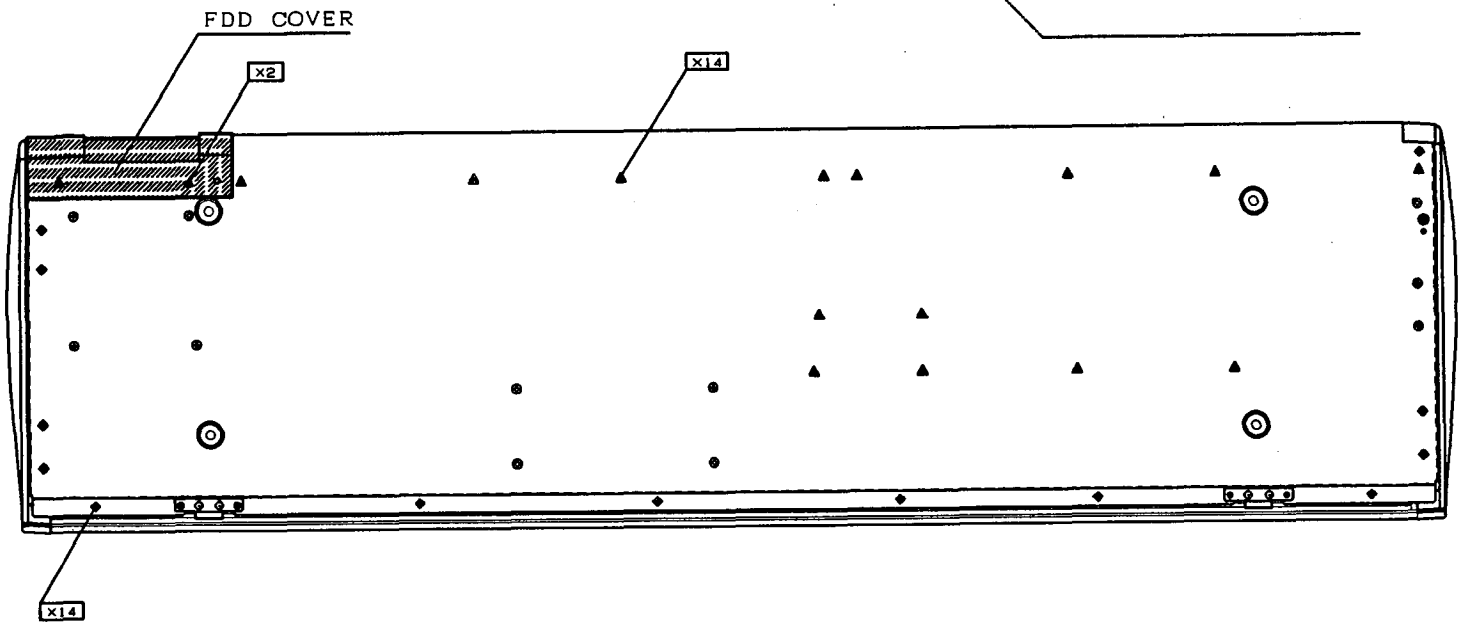
※ Specifications are subject to change without notice.

2. DISASSEMBLY

WHOLE ASSEMBLY
(for i2)

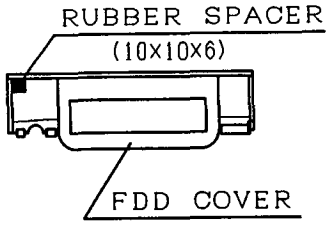
MARK	SCREW
◆	TS SSE BZMC 4X10
▲	BT B BZMC 4X10
■	
●	

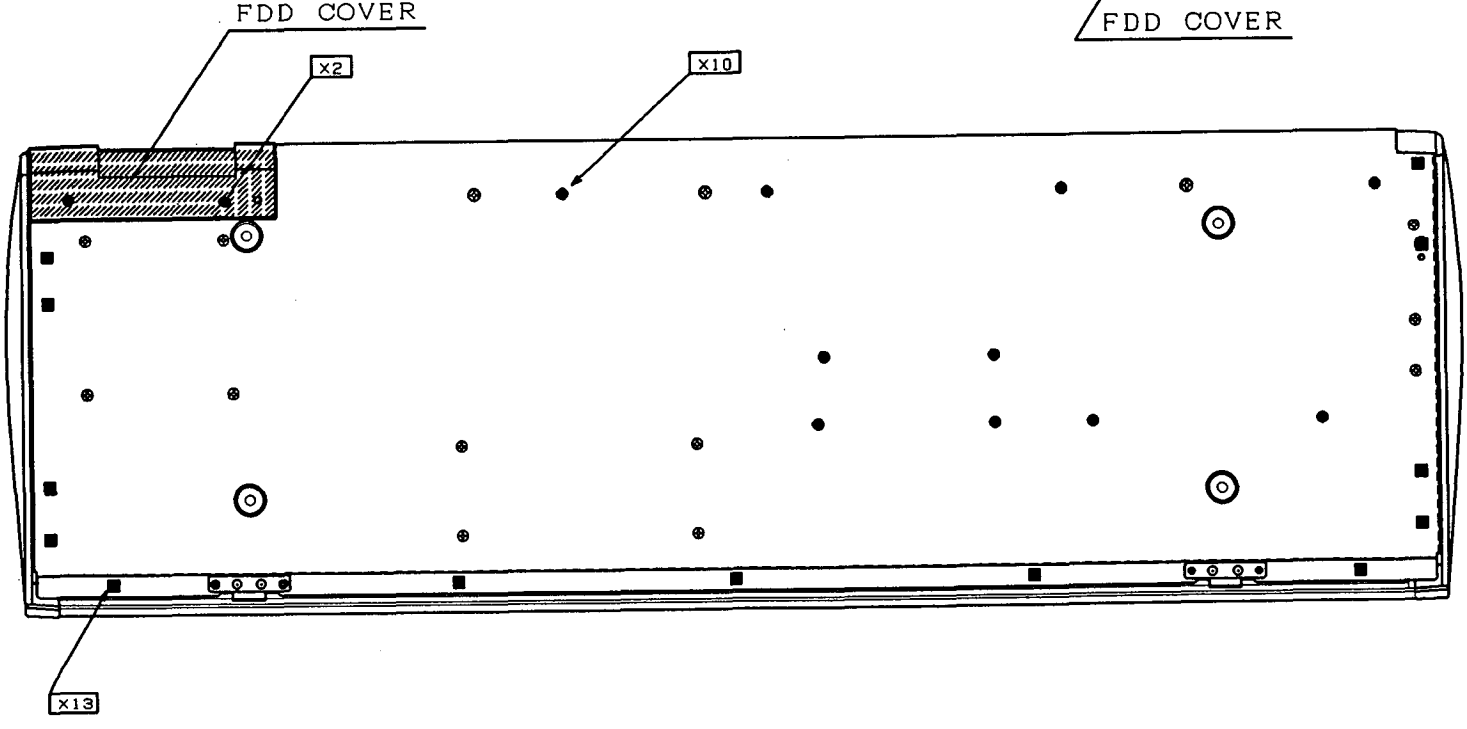




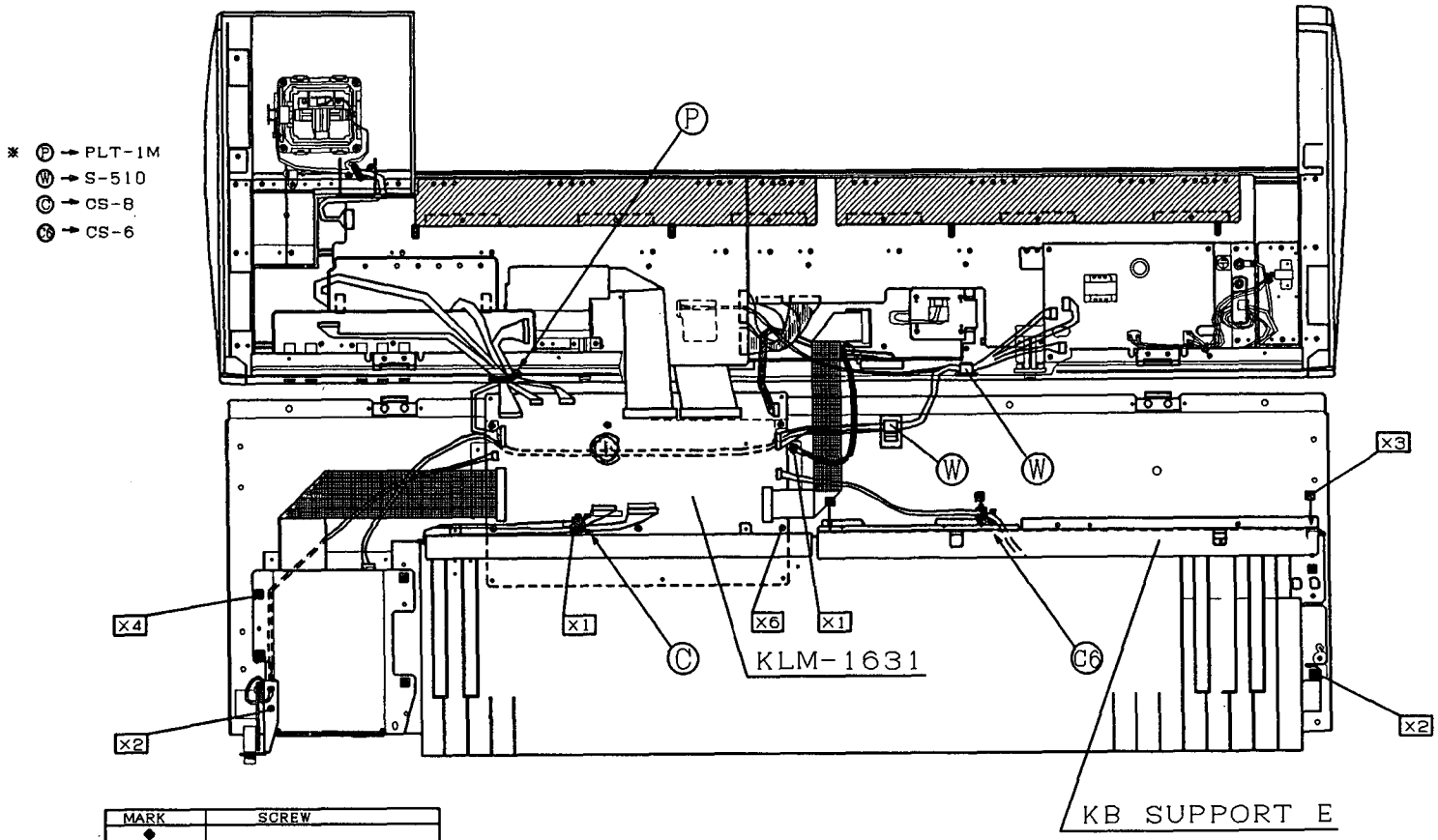
WHOLE ASSEMBLY(1/2)
(for i3)

MARK	SCREW
◆	
▲	
■	TS SSE BZMC 4X10
●	BT B BZMC 4X10





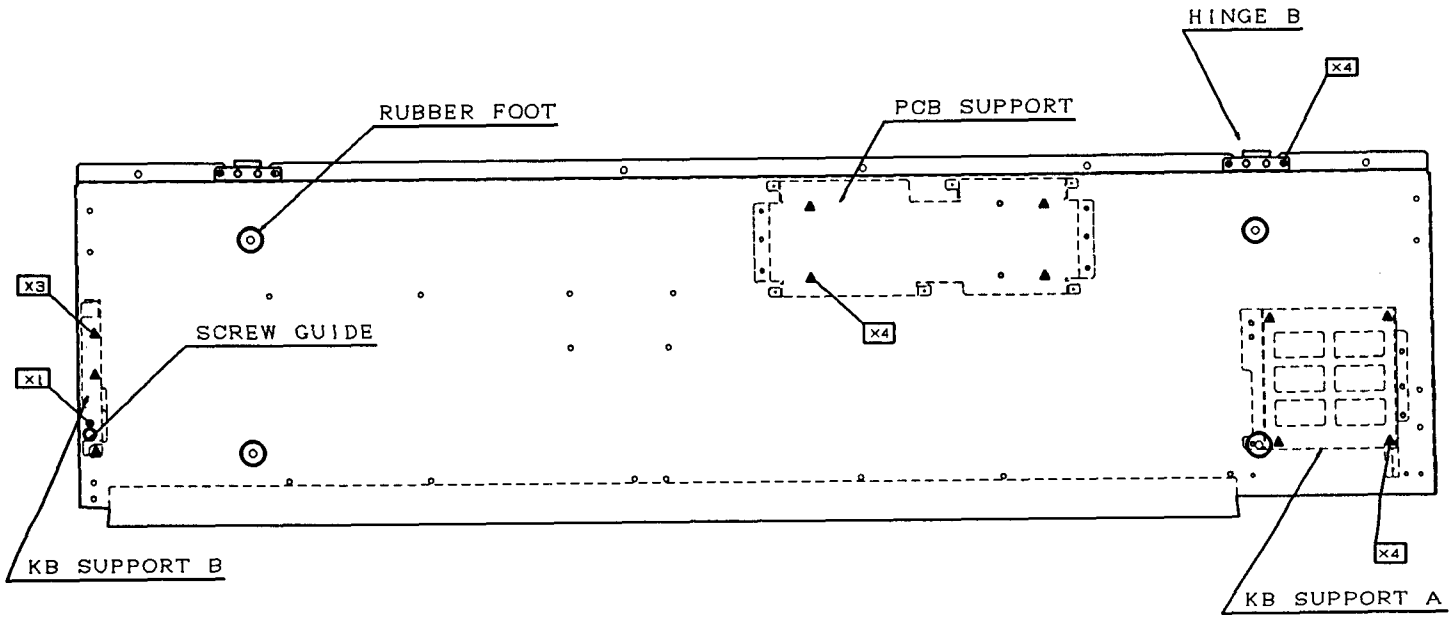
WHOLE ASSEMBLY(2/2)
(for i3)



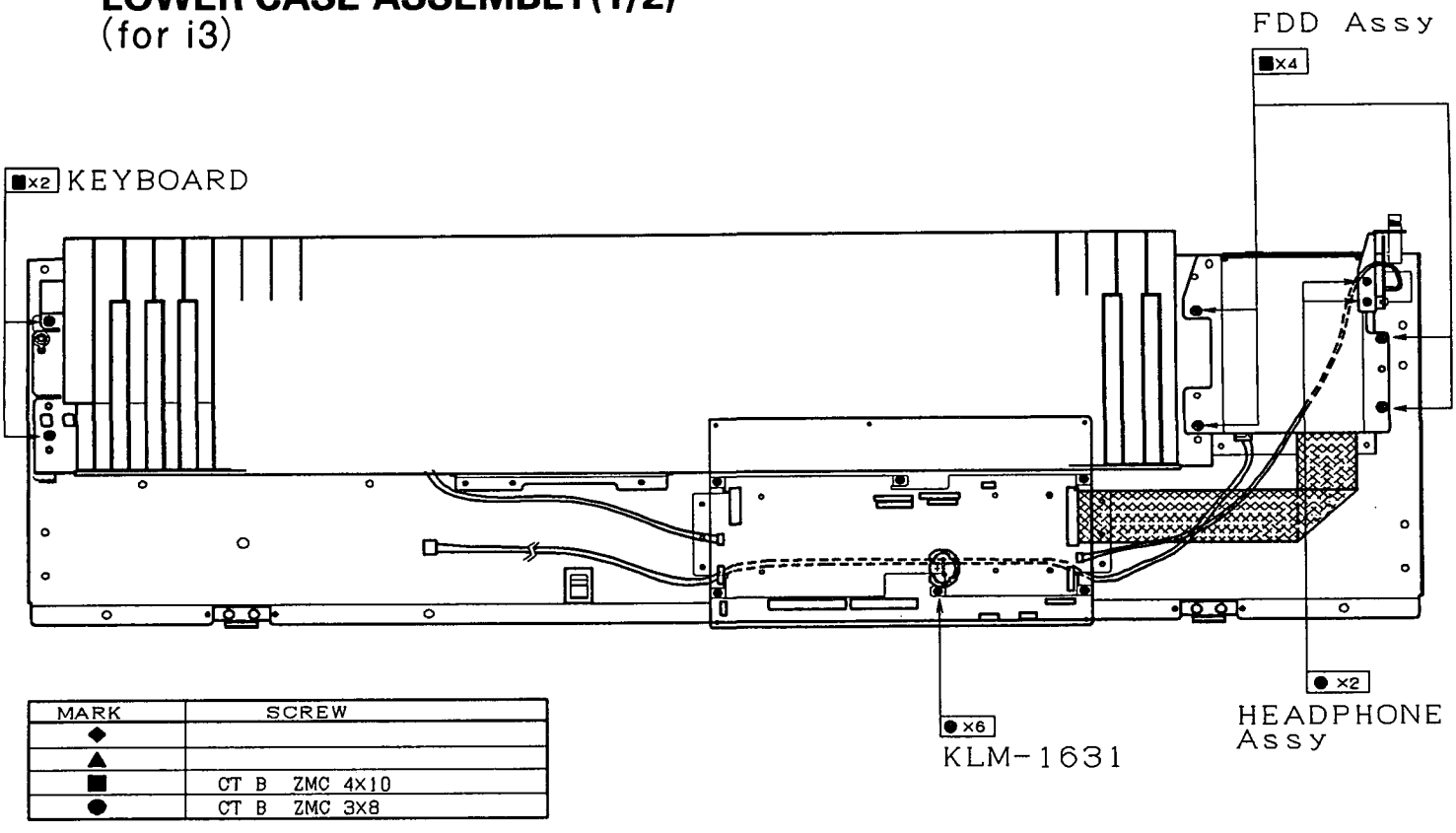
MARK	SCREW
◆	
▲	
■	BT B ZMC 4X10
●	BT B ZMC 3X8

LOWER CASE ASSEMBLY
(for i2)

MARK	SCREW
◆	
▲	BT B BZMC 4X10
■	
●	BT B BZMC 3X8

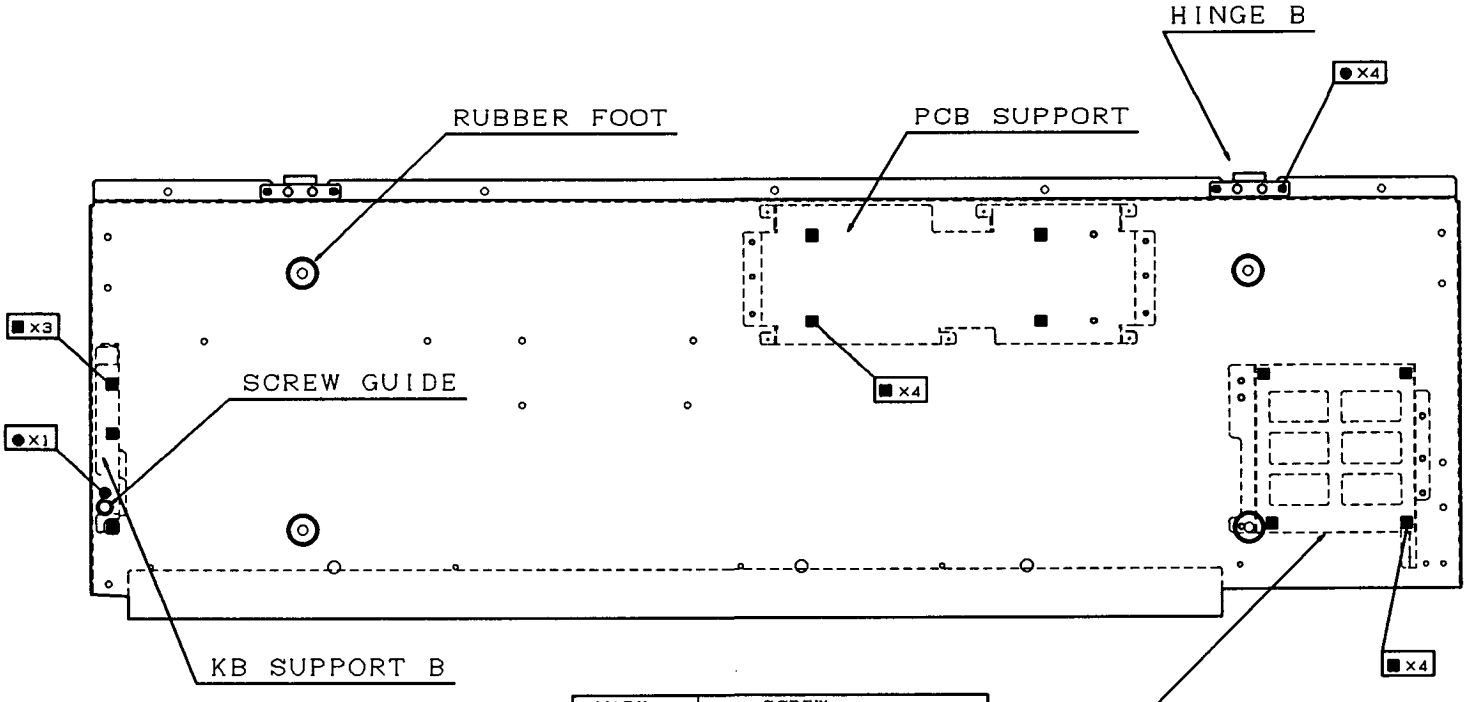


LOWER CASE ASSEMBLY(1/2)
(for i3)



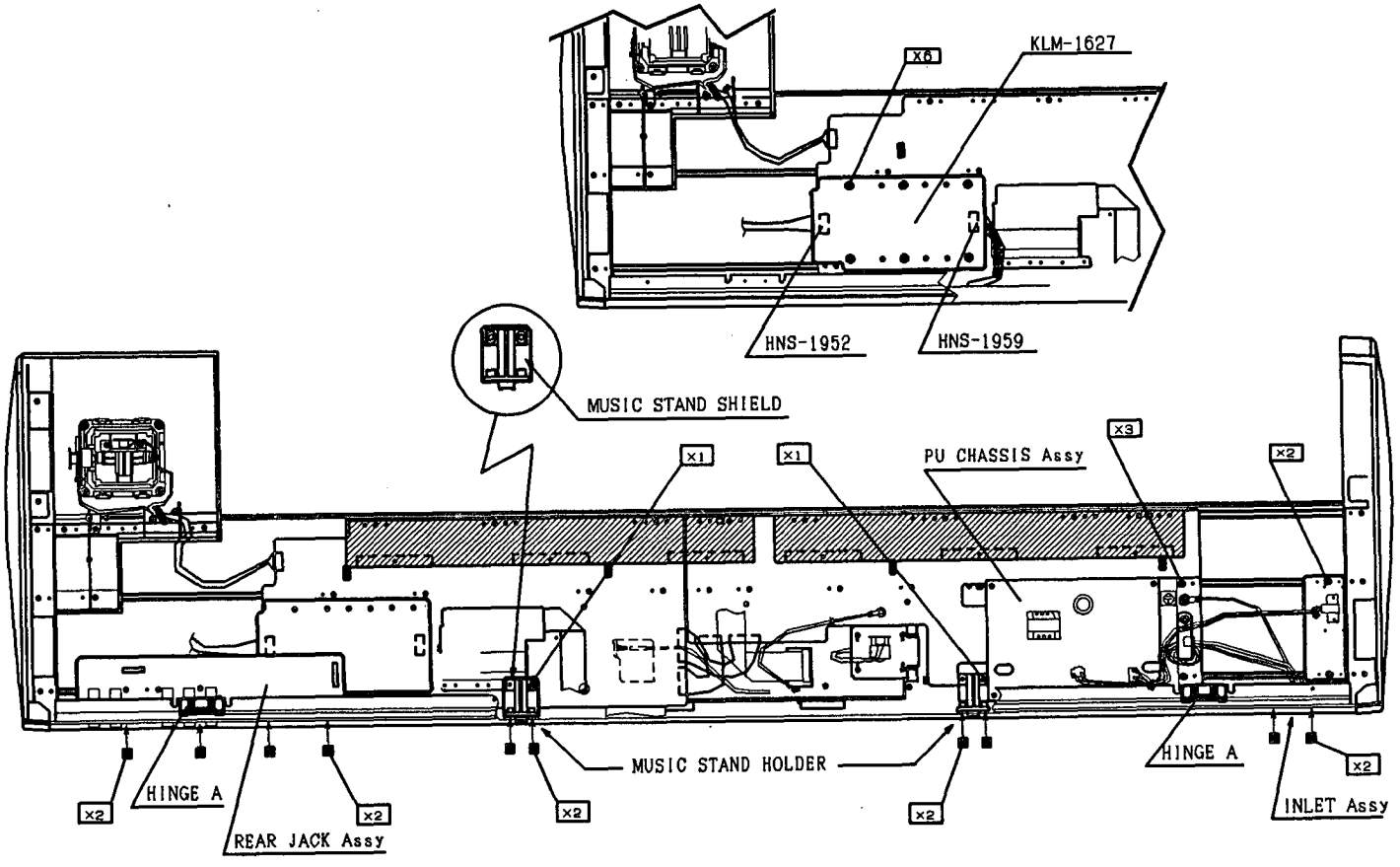
MARK	SCREW
◆	
▲	
■	CT B ZMC 4X10
●	CT B ZMC 3X8

LOWER CASE ASSEMBLY(2/2)
(for i3)



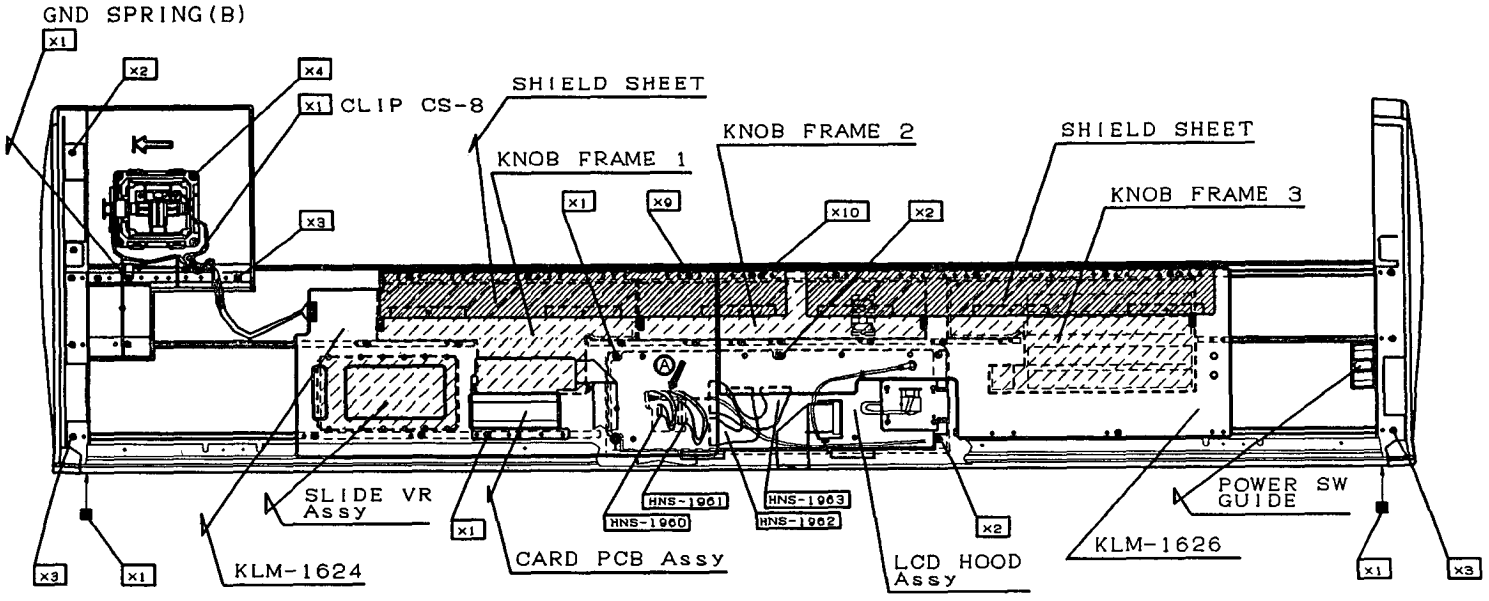
MARK	SCREW
◆	
▲	
■	BT B BZMC 4X10
●	BT B BZMC 3X8

PANEL ASSEMBLY(1/2)
(for i2)



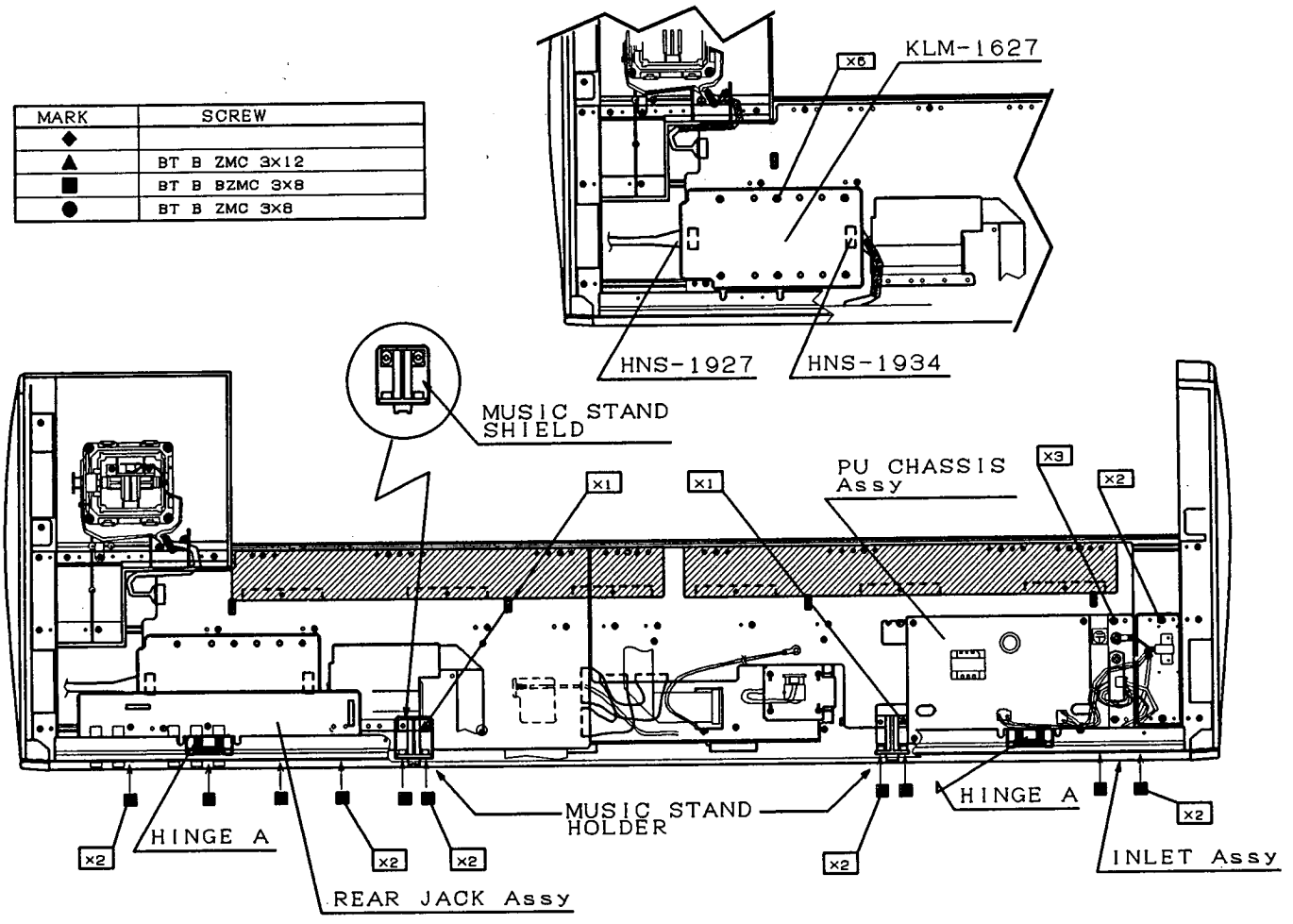
PANEL ASSEMBLY(2/2)
(for i2)

MARK	SCREW
◆	
▲	
■	BT B BZMC 3X8
●	BT B ZMC 3X8



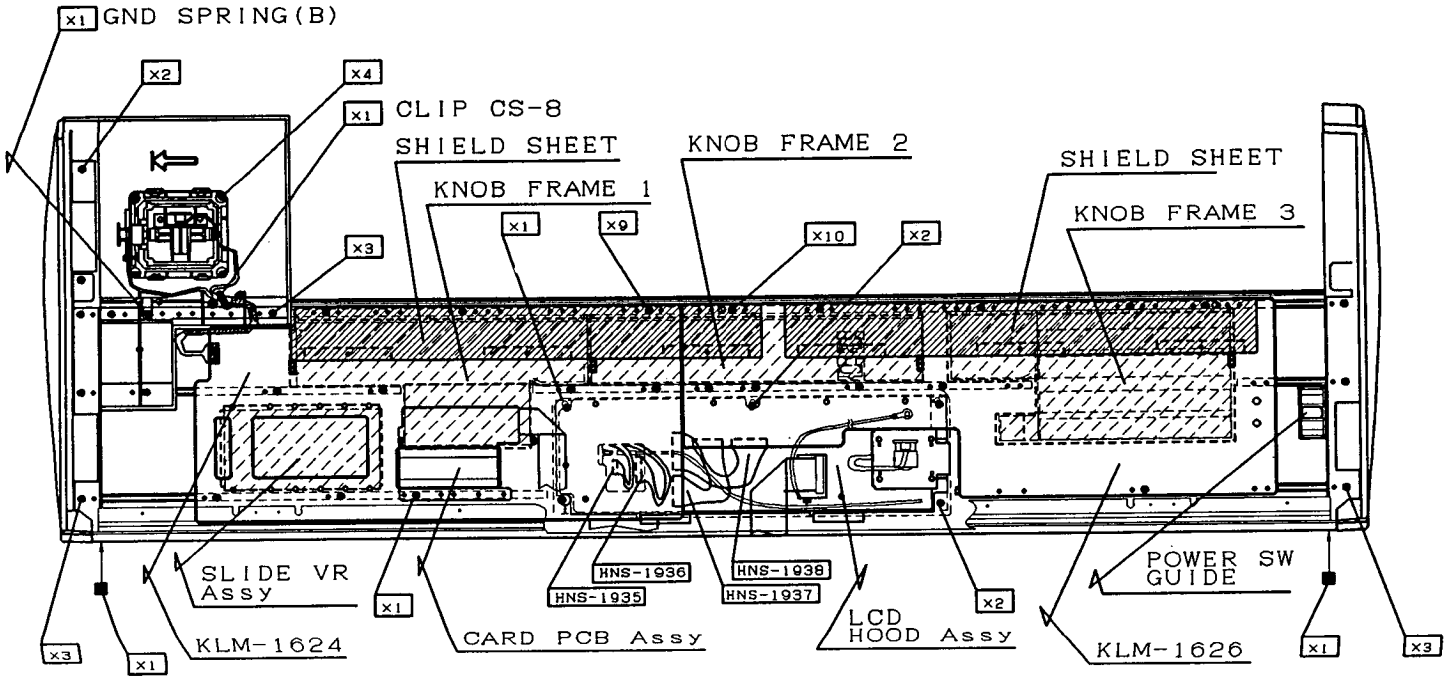
PANEL ASSEMBLY(1/2)
(for i3)

MARK	SCREW
◆	
▲	BT B ZMC 3×12
■	BT B BZMC 3×8
●	BT B ZMC 3×8

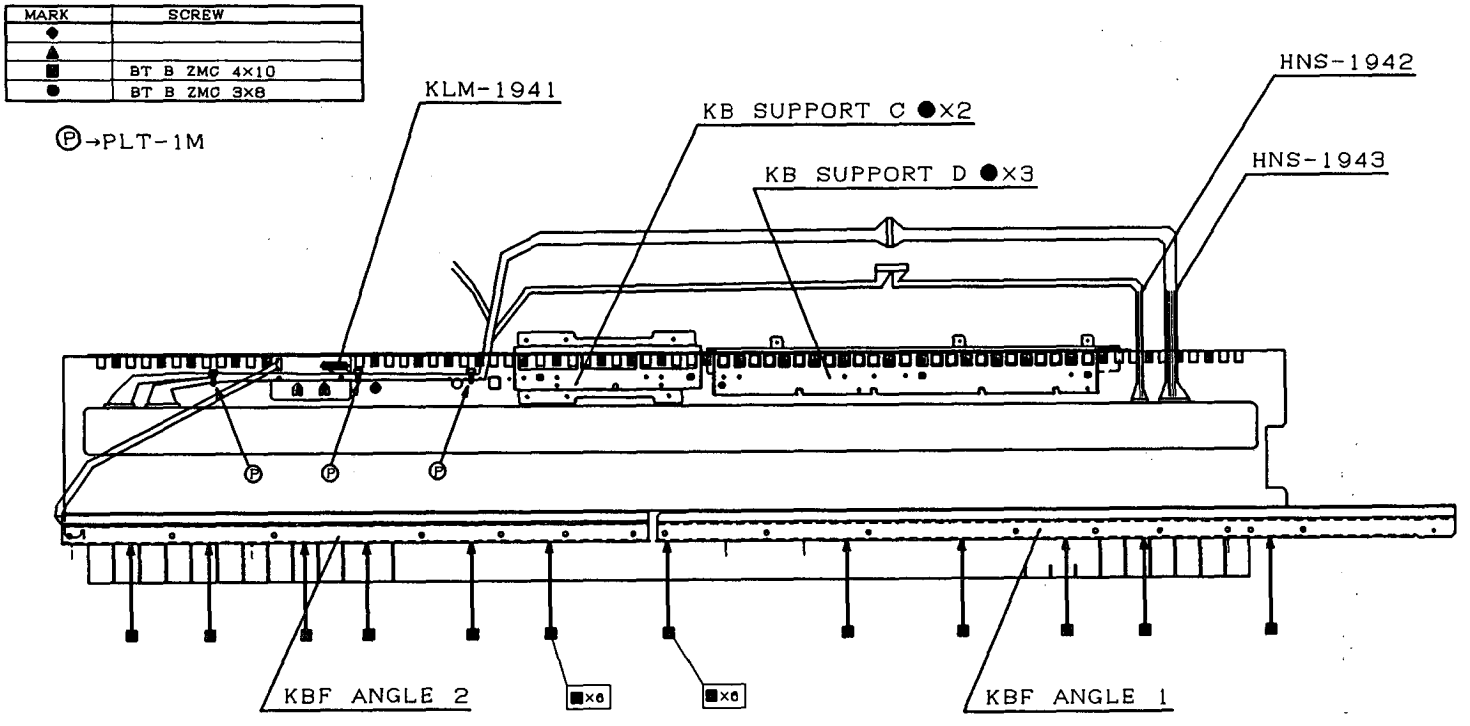


PANEL ASSEMBLY(2/2)
(for i3)

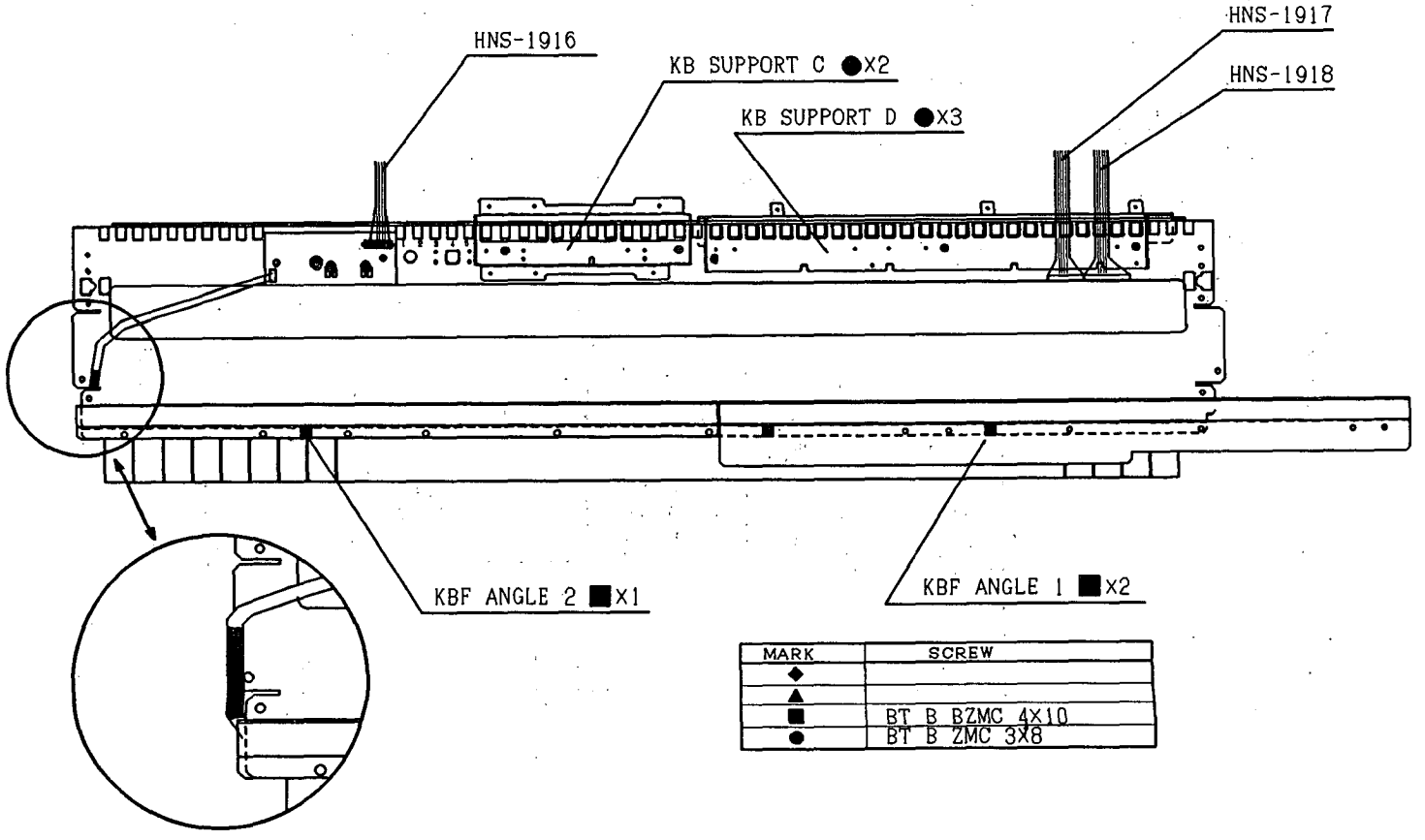
MARK	SCREW
◆	
▲	
■	BT B BZMC 3×8
●	BT B ZMC 3×8



KEYBOARD ASSEMBLY
(for i2)



KEYBOARD ASSEMBLY
(for i3)



PU CHASSIS ASSEMBLY

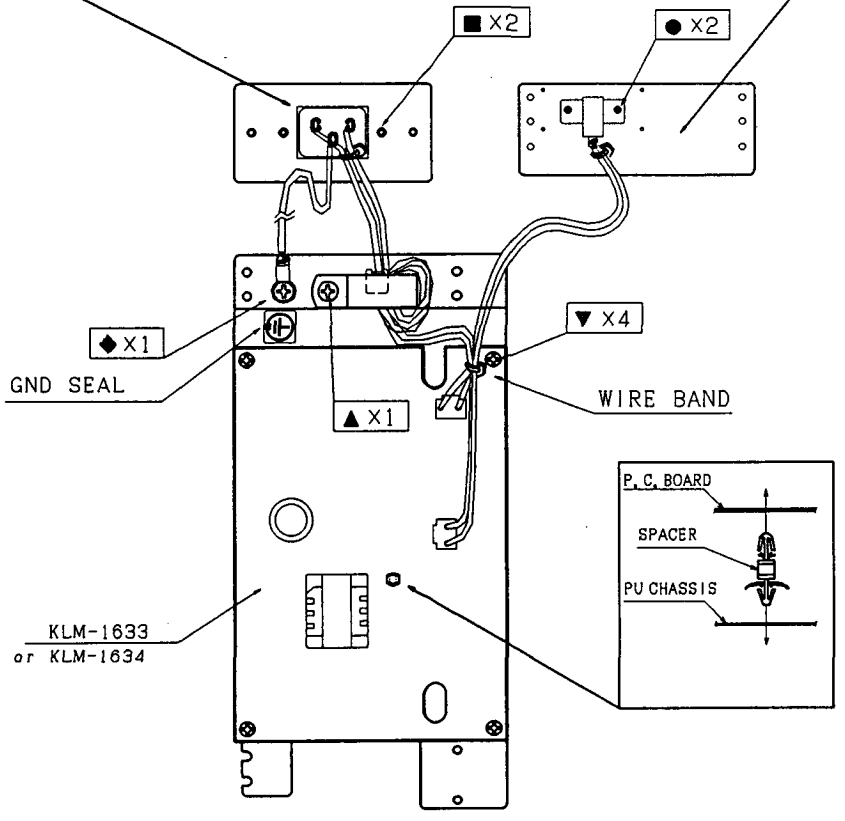
	SCREWS
◆	TS SSE ZMC 4×10
▲	BT B ZMC 4×10
■	BT B BZMC 3×8
●	CT B BZMC 3×8
▼	BT B ZMC 3×8

INLET SOCKET Assy

PRODUCT	HARNESS
X-181(i3)	HNS-1919
X-281(i2)	HNS-1944

POWER SW Assy

PRODUCT	HARNESS
X-181(i3)	HNS-1920
X-281(i2)	HNS-1945



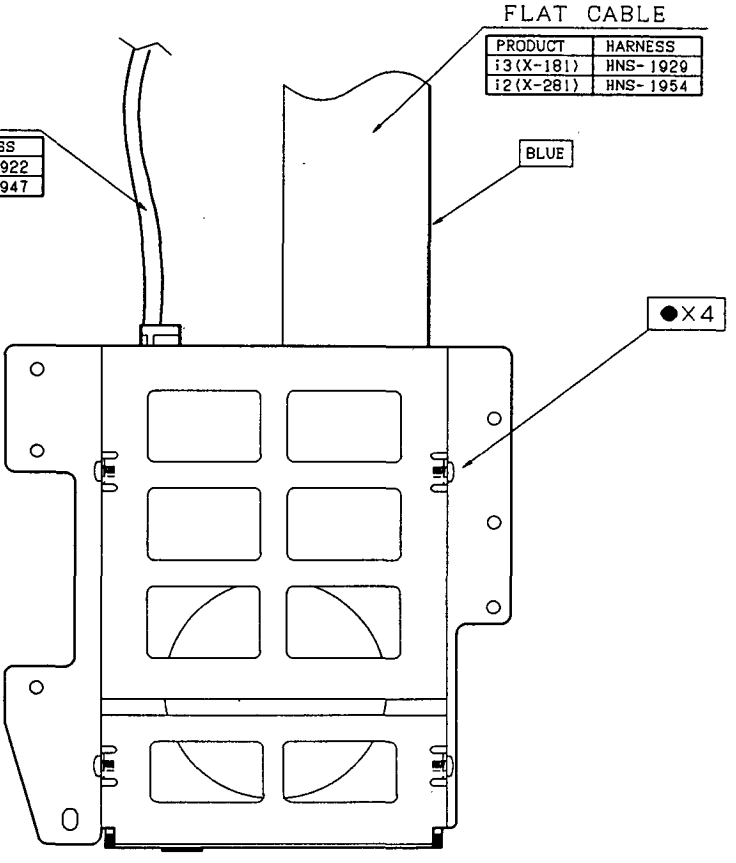
FDD ASSEMBLY

HARNESS

PRODUCT	HARNESS
i3(X-181)	HNS-1922
i2(X-281)	HNS-1947

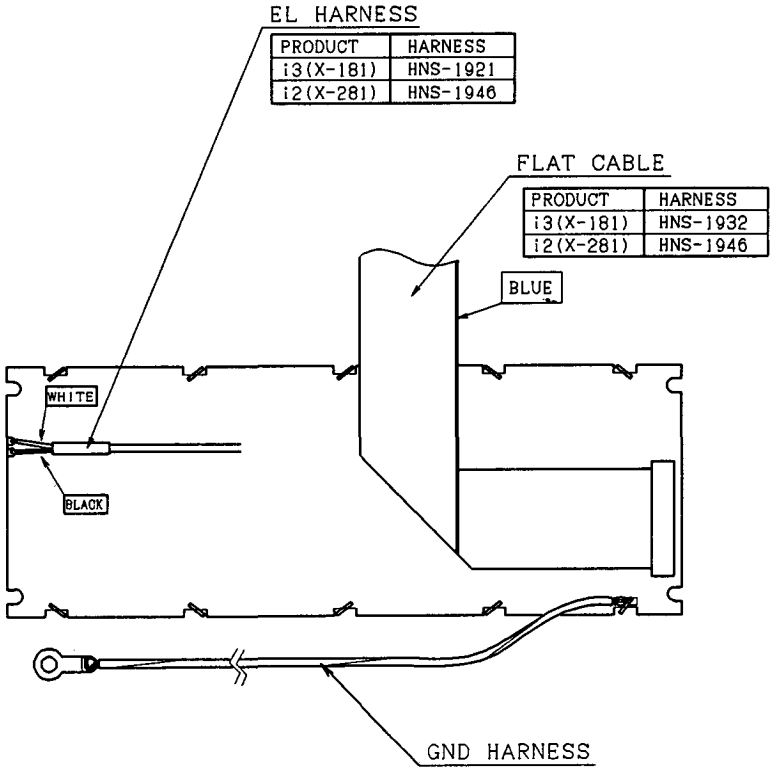
FLAT CABLE

PRODUCT	HARNESS
i3(X-181)	HNS-1929
i2(X-281)	HNS-1954

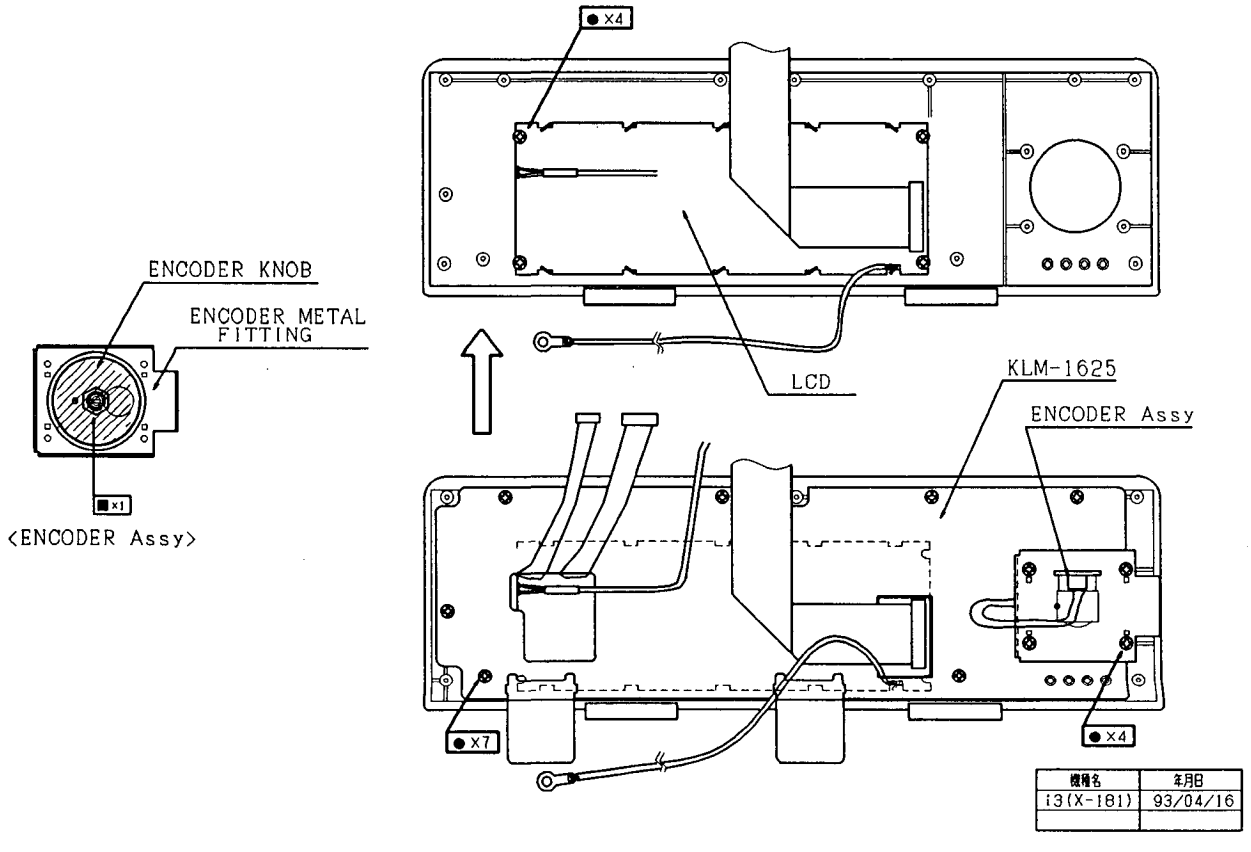


MARK	SCREW
●	CT B ZMC 3×6

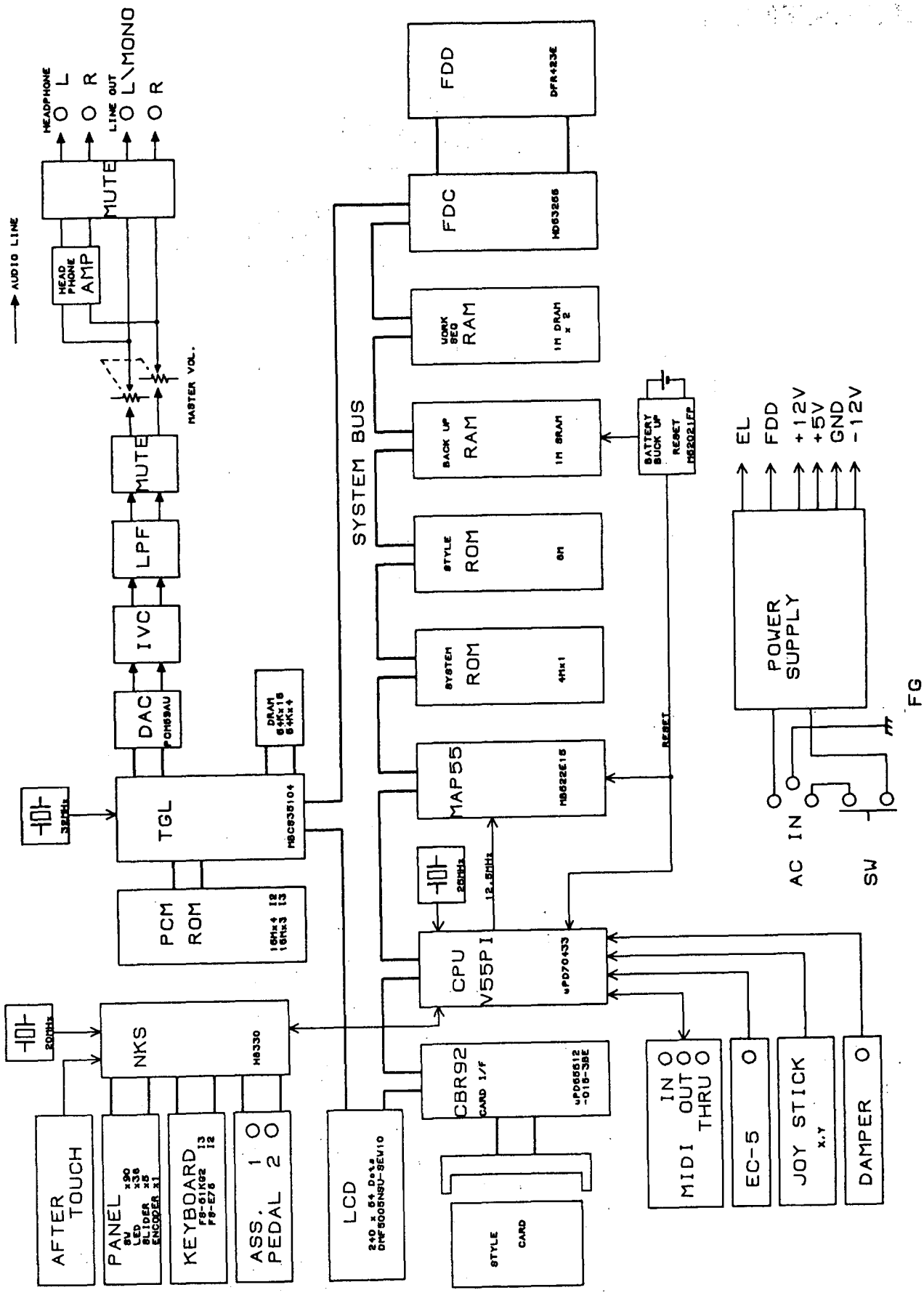
LCD ASSEMBLY



LCD HOOD ASSEMBLY

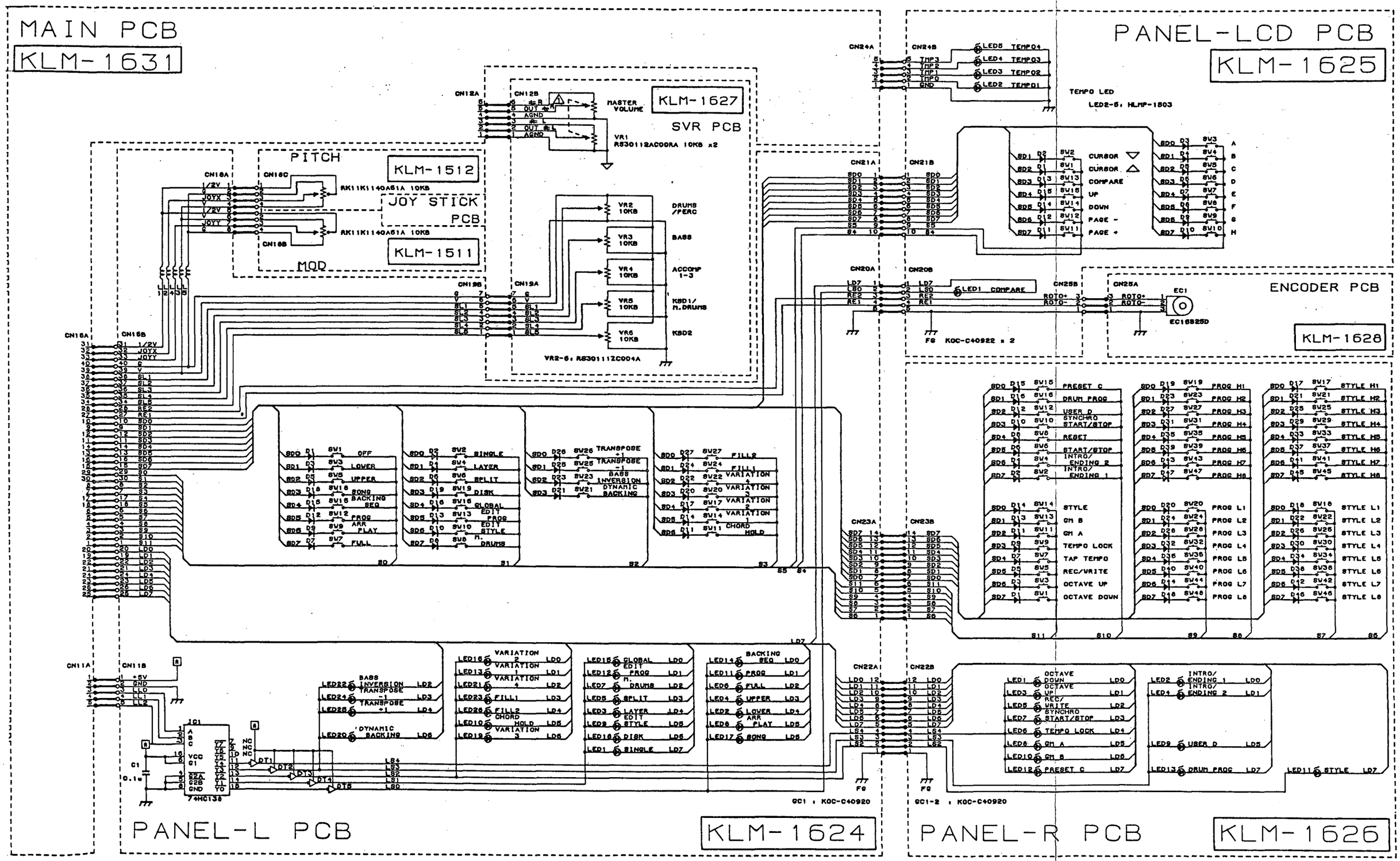


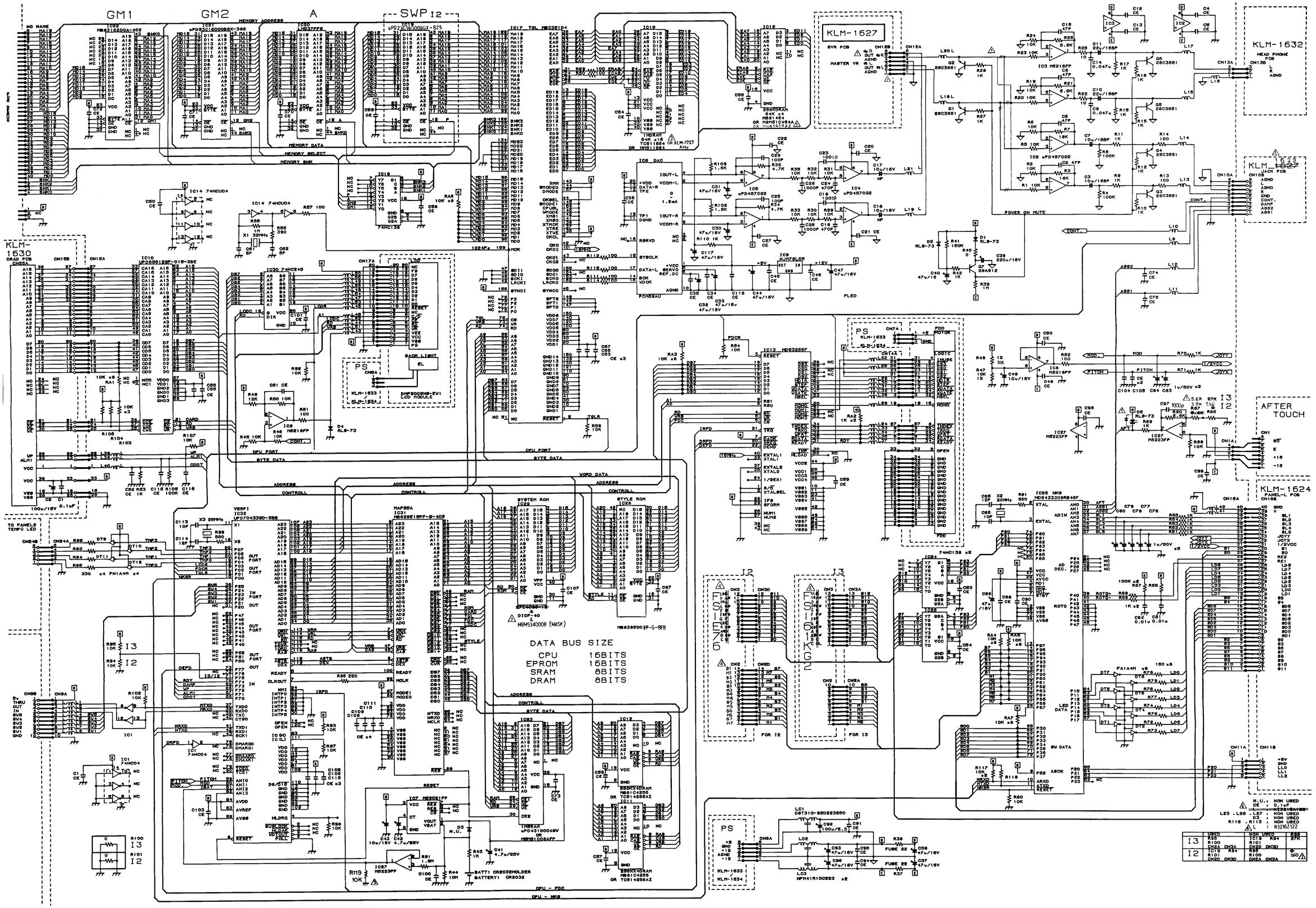
3. BLOCK DIAGRAM



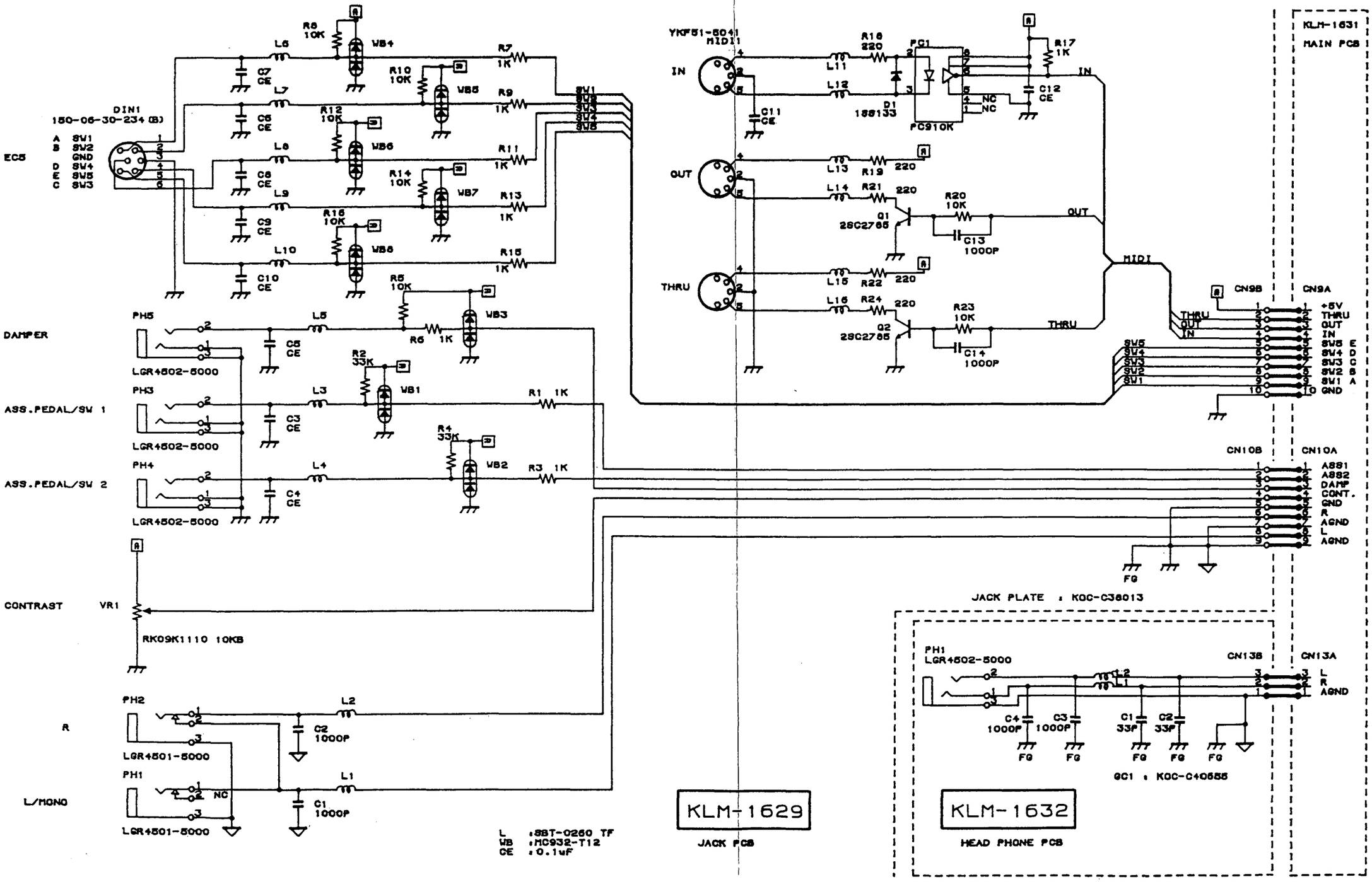
4. CIRCUIT DIAGRAM

KLM-1624-28 & JOYSTICK

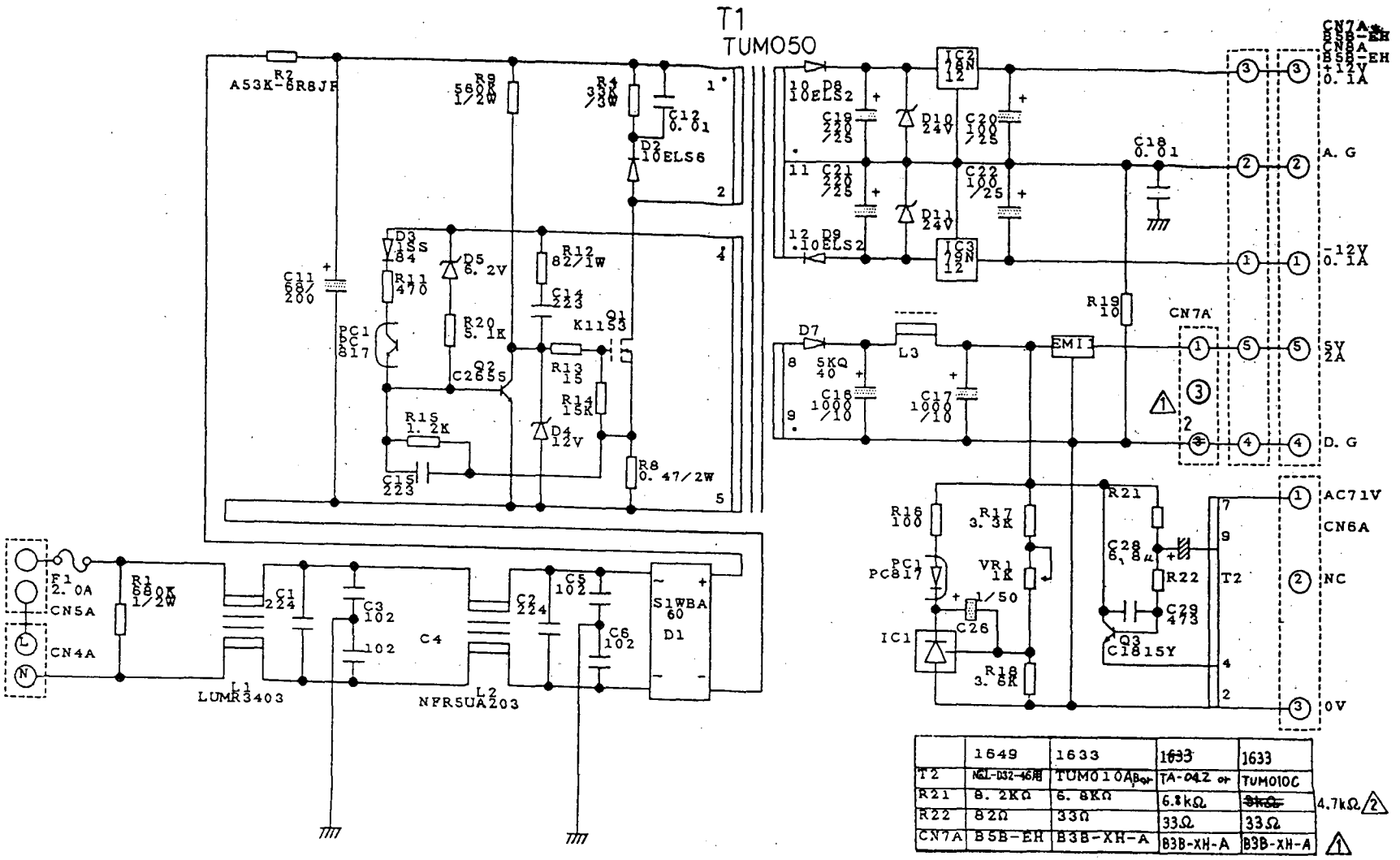




	USED		NON USED		R88
I3	R100		R101		47K
	CN8A CN9A		CN8D CN9D		
I2	R101		R100		560
	CN2D CN3D		CN2A CN3A		

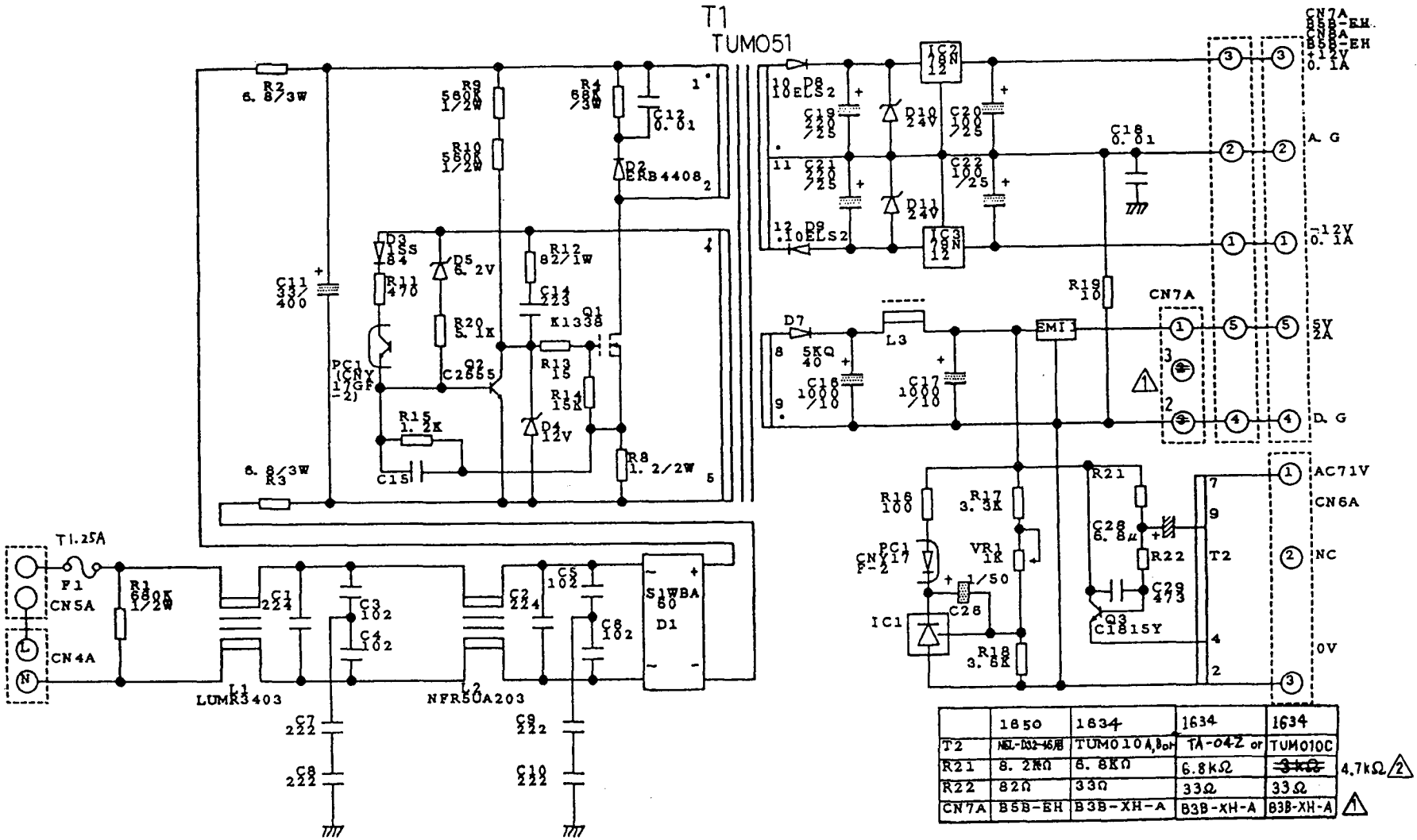

DIN1
150-06-30-234 (B)
A SW1
B SW2
GND
D SW4
E SW5
C SW3
EC5
R6 10K
WB4
L6
C7 CE
R7 1K
R10 10K
WB5
L7
C6 CE
R9 1K
R12 10K
WB6
L8
C8 CE
R11 1K
R14 10K
WB7
L9
C9 CE
R13 1K
R16 10K
WB8
L10
C10 CE
R15 1K
SW1
SW2
SW3
SW4
SW5
R5 10K
WB3
PH5
DAMPER
L5
C5 CE
R6 1K
LGR4502-5000
R2 33K
WB1
PH3
ASS.PEDAL/SW 1
L3
C3 CE
R1 1K
LGR4502-5000
R4 33K
WB2
PH4
ASS.PEDAL/SW 2
L4
C4 CE
R3 1K
LGR4502-5000
CONTRAST
VR1
RK09K1110 10KB
PH2
R
L2
C2 1000P
LGR4501-5000
PH1
L/MONO
NC
L1
C1 1000P
LGR4501-5000
L :SST-0260 TF
WB :MC932-T12
CE :0.1uF
KLM-1629
JACK PCB
YKF51-5041
MIDI1
IN
OUT
THRU
L11
L12
C11 CE
R18 220
PC1
D1
1SS133
PC910K
R17 1K
C12 CE
NC
NC
L13
R19 220
L14
R21 220
Q1
2SC2785
R20 10K
C13 1000P
L15
R22 220
L16
R24 220
Q2
2SC2785
R23 10K
C14 1000P
MIDI
KLM-1631
MAIN PCB
CN9B
CN9A
+5V
THRU
OUT
IN
SW5 E
SW4 D
SW3 C
SW2 B
SW1 A
GND
CN10B
CN10A
ASS1
ASS2
DAMP
CONT.
GND
R
AGND
L
AGND
FG
JACK PLATE : KOC-C38013
PH1
LGR4502-5000
CN13B
CN13A
L
R
AGND
C4 1000P
C3 1000P
C1 33P
C2 33P
FG
GC1 : KOC-C40555
KLM-1632
HEAD PHONE PCB

KLM-1633 FOR 100V/117V



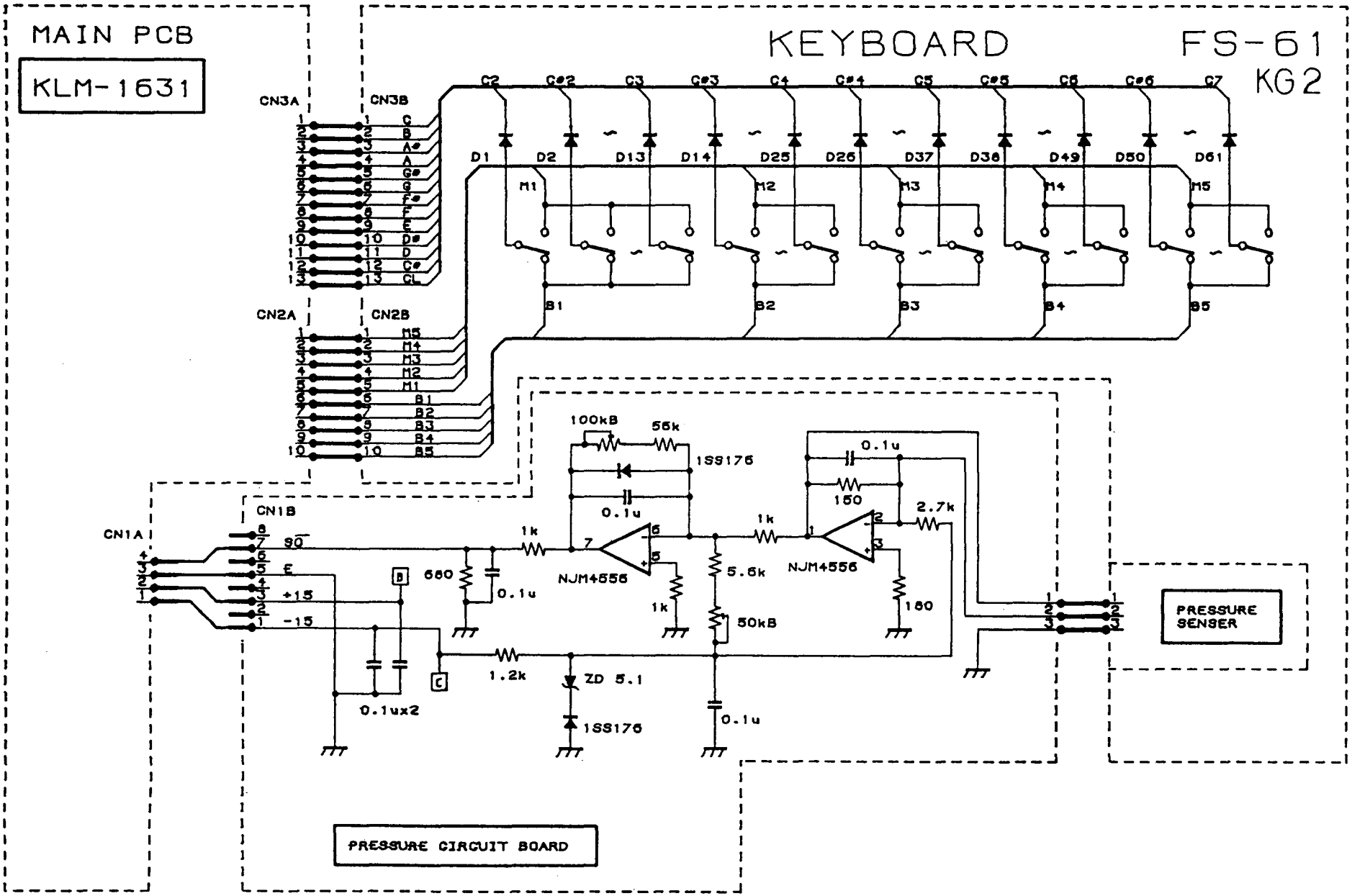
	1649	1633	1633	1633
T2	NGL-D32-46AB	TUM010AB or	TA-042 or	TUM010C
R21	8.2KΩ	6.8KΩ	6.8kΩ	~~3KΩ~~ 4.7kΩ ⚠2
R22	82Ω	33Ω	33Ω	33Ω
CN7A	B5B-EH	B3B-XH-A	B3B-XH-A	B3B-XH-A ⚠1

KLM-1634 FOR 220V/230V/240V

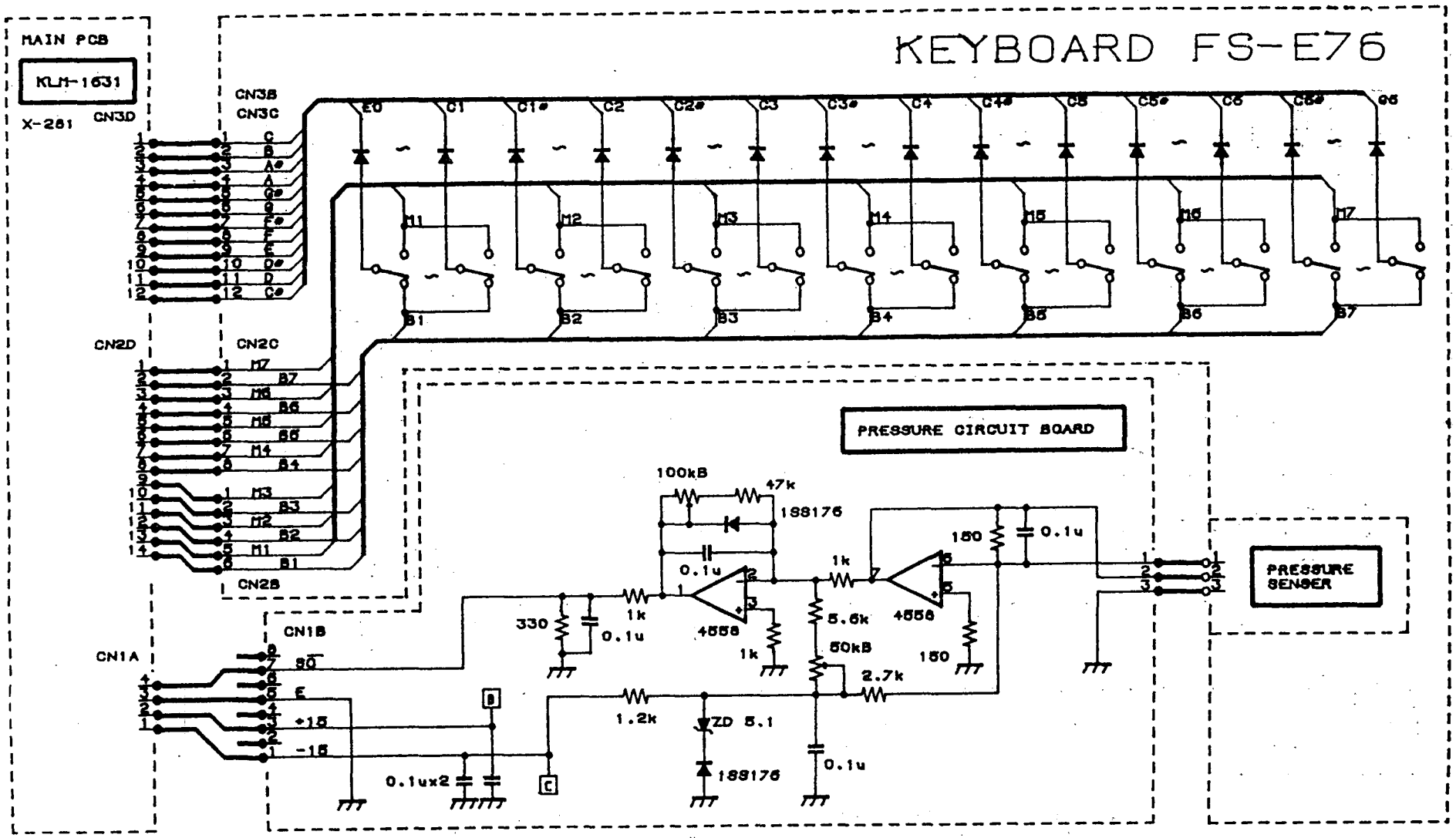


	1850	1634	1634	1634
T2	NEL-M2-16B	TUM010A,B or	TA-042 or	TUM010C
R21	8.2kΩ	6.8kΩ	6.8kΩ	~~3kΩ~~ 4.7kΩ ⚠2
R22	82Ω	33Ω	33Ω	33Ω
CN7A	B5B-EH	B3B-XH-A	B3B-XH-A	B3B-XH-A ⚠1

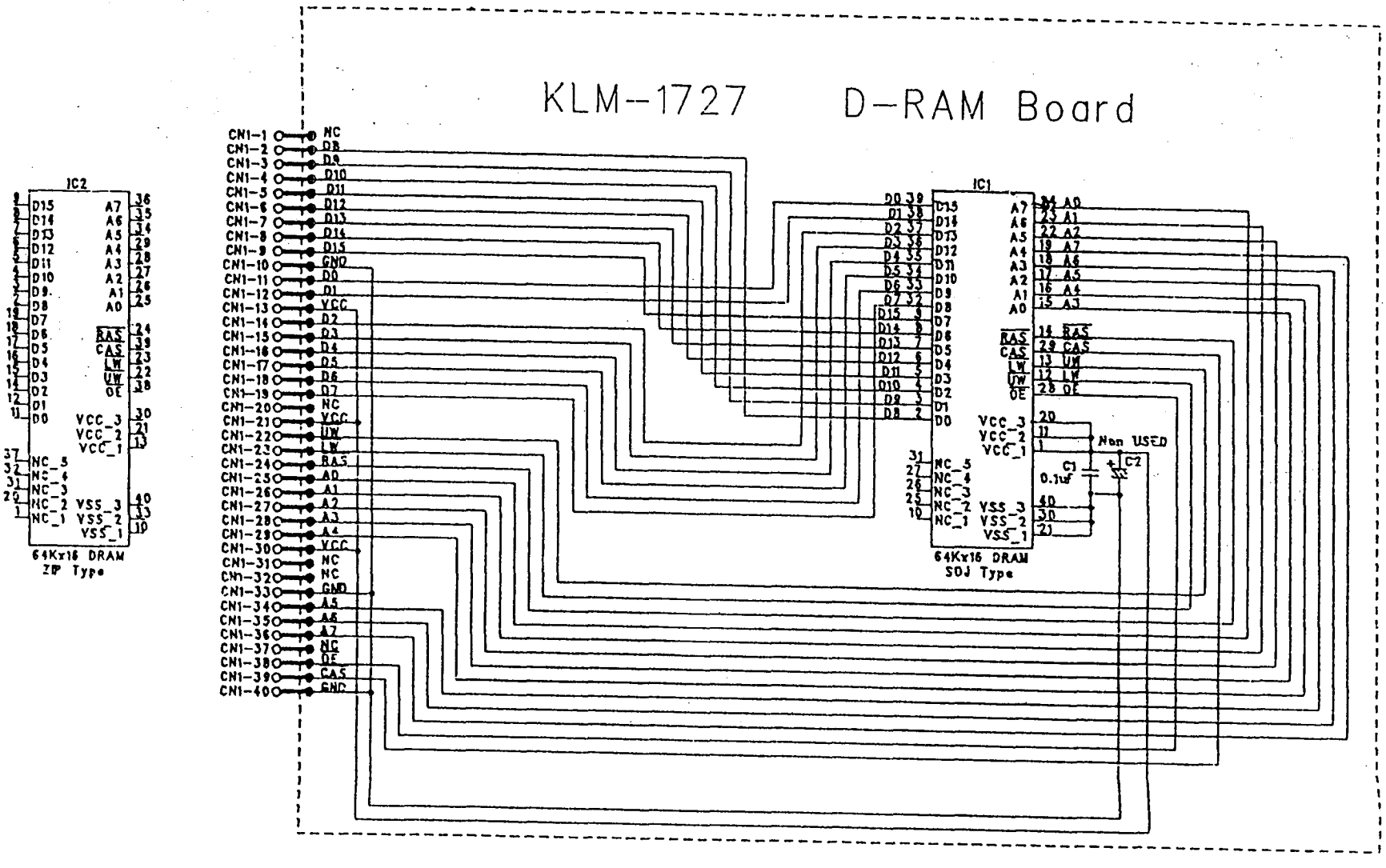
KEYBOARD & PRESSURE CIRCUIT (FOR i3)



KEYBOARD & PRESSURE CIRCUIT (FOR i2)

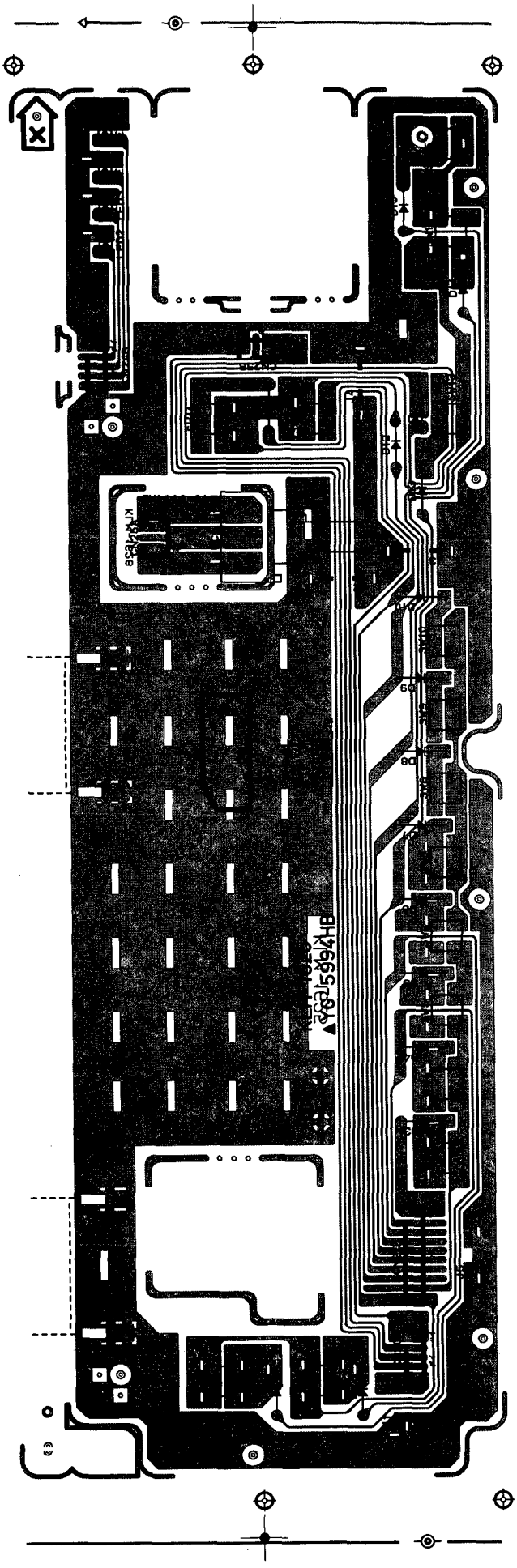


KLM-1727

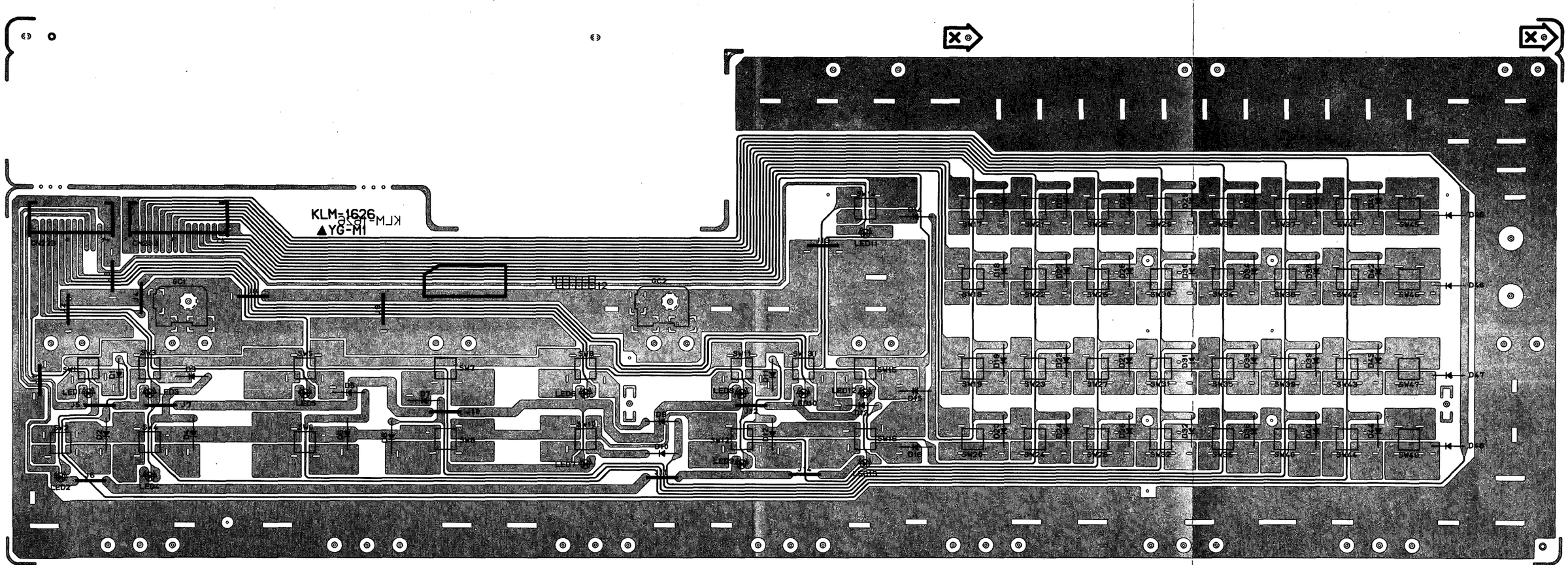

KLM--1727 D-RAM Board
IC2
64Kx16 DRAM
ZIP Type
IC1
64Kx16 DRAM
SOJ Type
Non USED
C1
0.1uF
C2
CN1-1 NC
CN1-2 D8
CN1-3 D9
CN1-4 D10
CN1-5 D11
CN1-6 D12
CN1-7 D13
CN1-8 D14
CN1-9 D15
CN1-10 GND
CN1-11 D0
CN1-12 D1
CN1-13 VCC
CN1-14 D2
CN1-15 D3
CN1-16 D4
CN1-17 D5
CN1-18 D6
CN1-19 D7
CN1-20 NC
CN1-21 VCC
CN1-22 UW
CN1-23 LW
CN1-24 RAS
CN1-25 A0
CN1-26 A1
CN1-27 A2
CN1-28 A3
CN1-29 A4
CN1-30 VCC
CN1-31 NC
CN1-32 NC
CN1-33 GND
CN1-34 A5
CN1-35 A6
CN1-36 A7
CN1-37 NC
CN1-38 OE
CN1-39 CAS
CN1-40 GND

5. P.C. BOARDS

KLM-1625/1628



ぶひん面シルク


KLM-1626
▲YG-M1
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
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SW41
SW42
SW43
SW44
SW45
SW46
SW47
SW48
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
LED1
LED2
LED3
LED4
LED5
LED6
LED7
LED8
LED9
LED10
LED11
LED12
LED13
LED14
LED15
LED16
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
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IC159
IC160
IC161
IC162
IC163
IC164
IC165
IC166
IC167
IC168
IC169
IC170
IC171
IC172
IC173
IC174
IC175
IC176
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IC178
IC179
IC180
IC181
IC182
IC183
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IC186
IC187
IC188
IC189
IC190
IC191
IC192
IC193
IC194
IC195
IC196
IC197
IC198
IC199
IC200
IC201
IC202
IC203
IC204
IC205
IC206
IC207
IC208
IC209
IC210
IC211
IC212
IC213
IC214
IC215
IC216
IC217
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IC219
IC220
IC221
IC222
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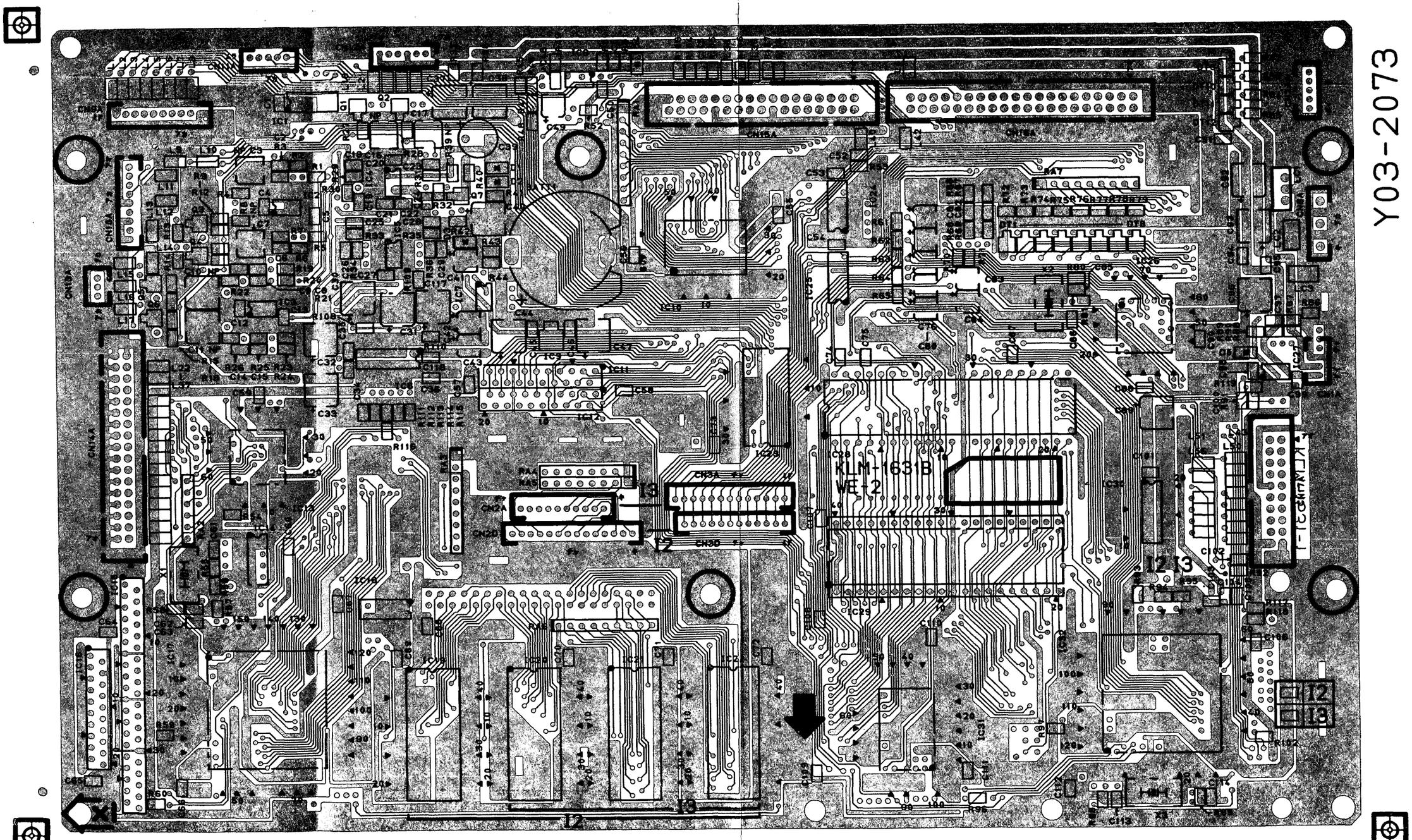

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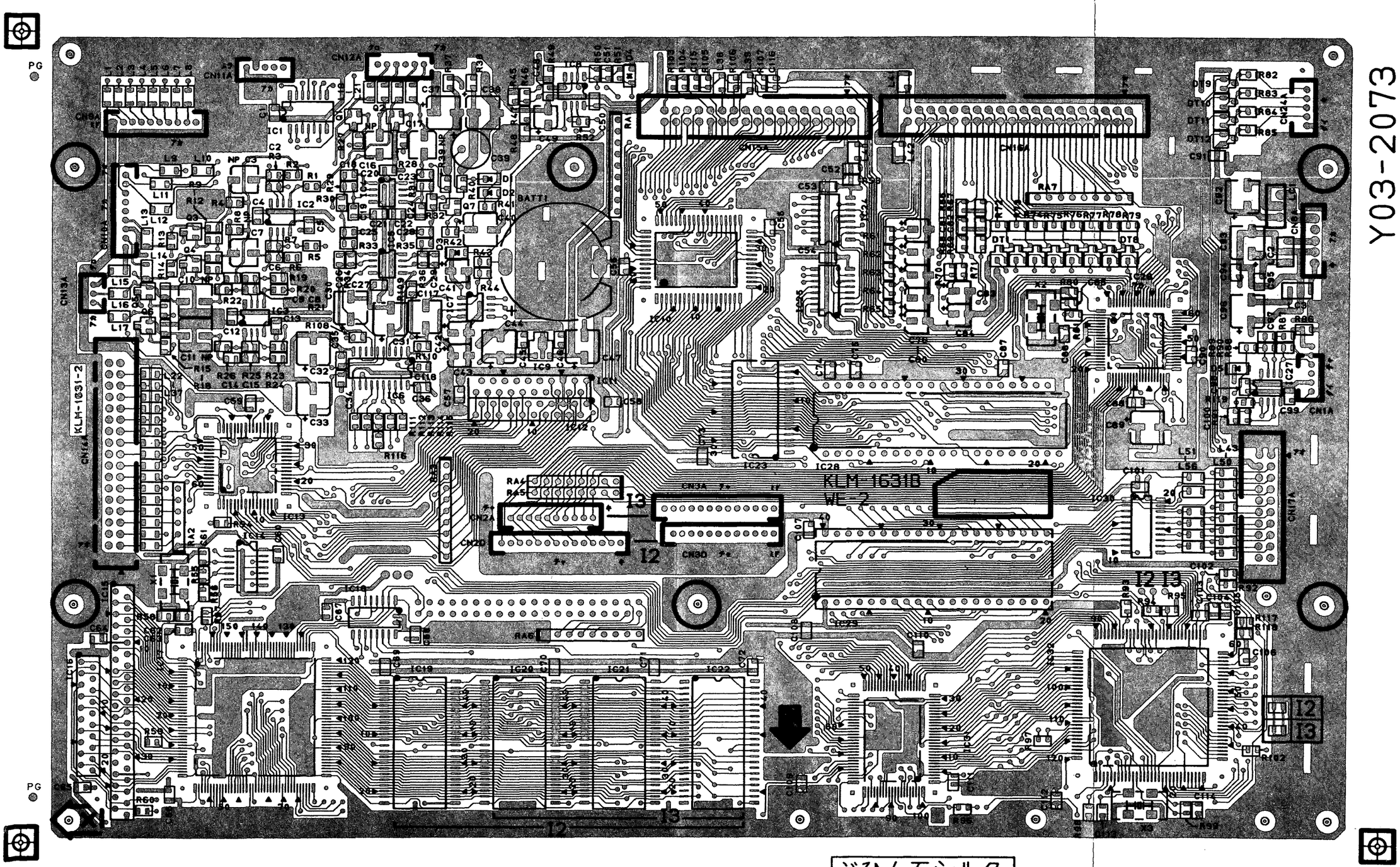
NO CONPONENT SIDE

KLM-1631B



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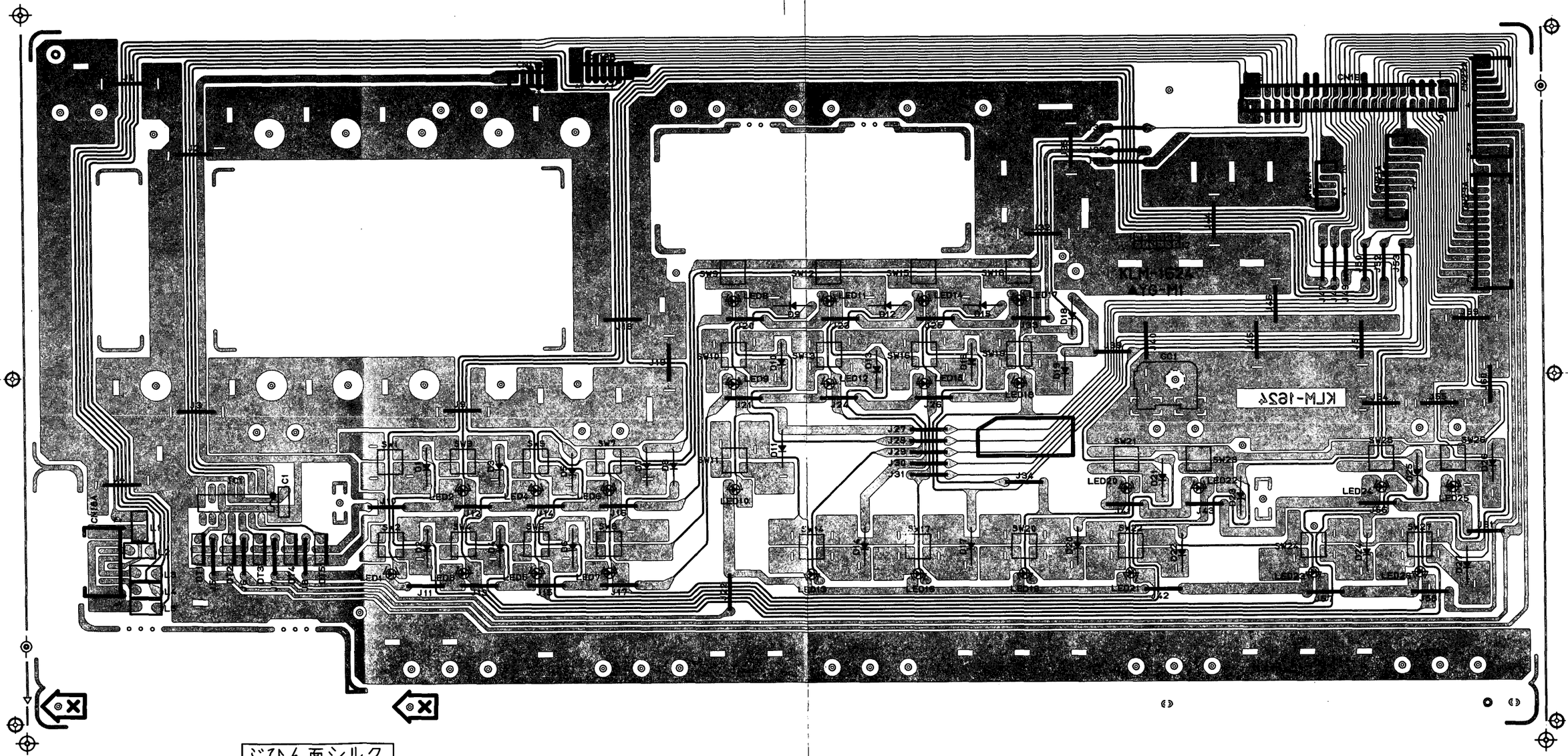
ぶひん面シルク

CONPONENT SIDE



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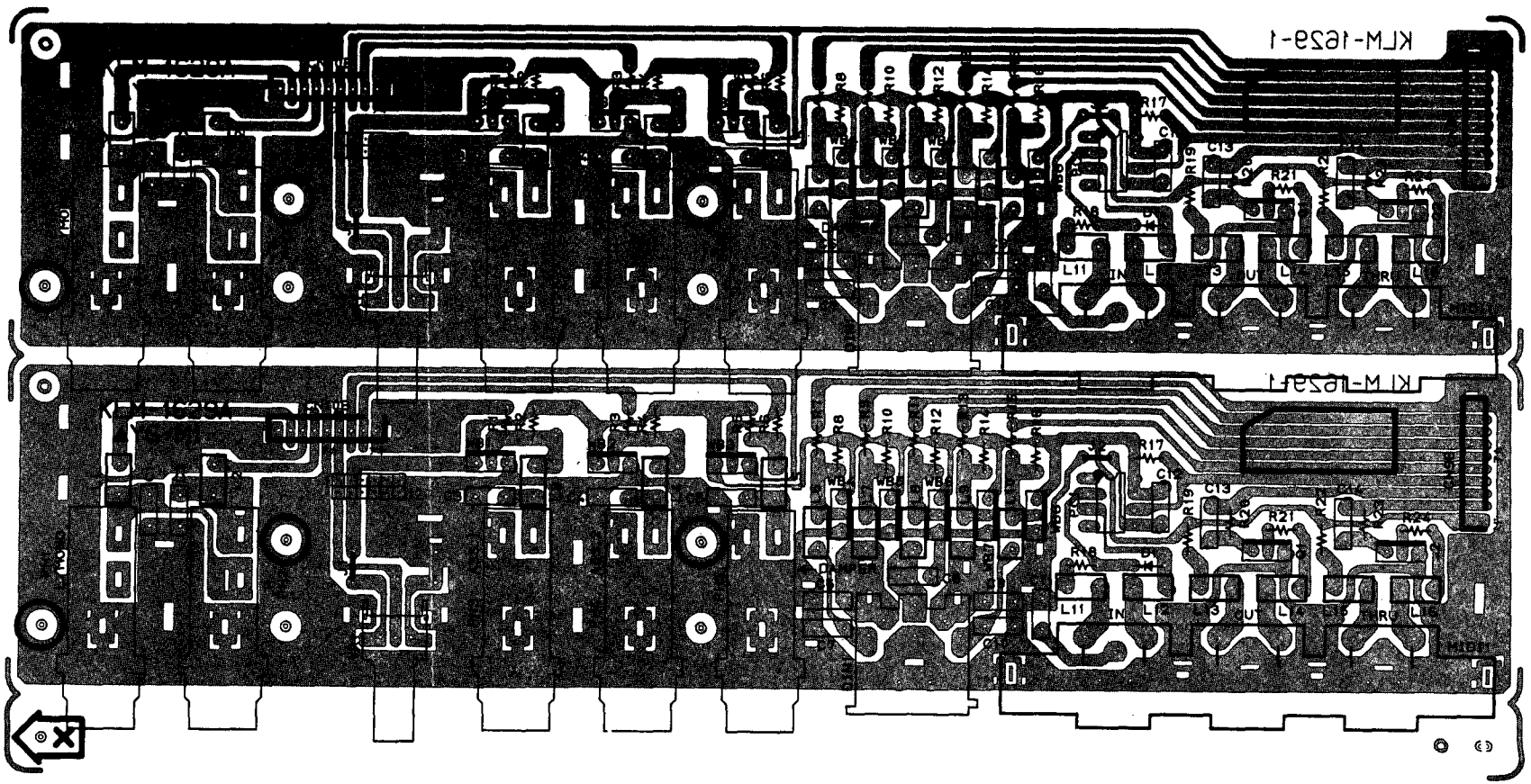

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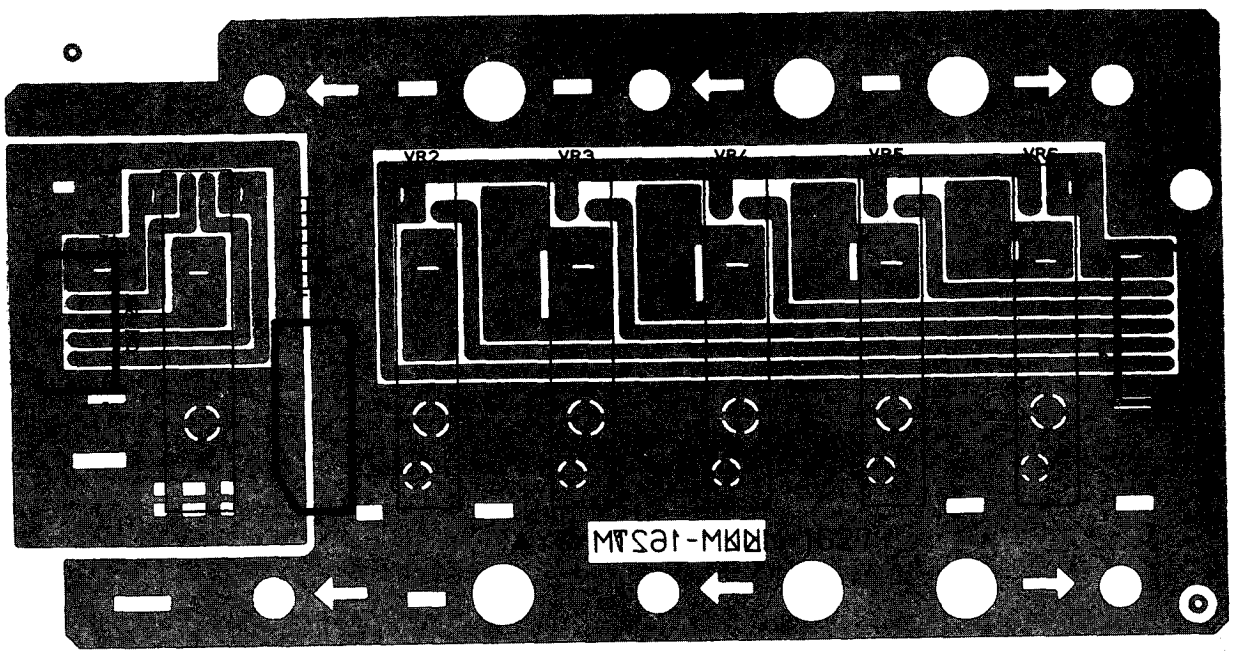
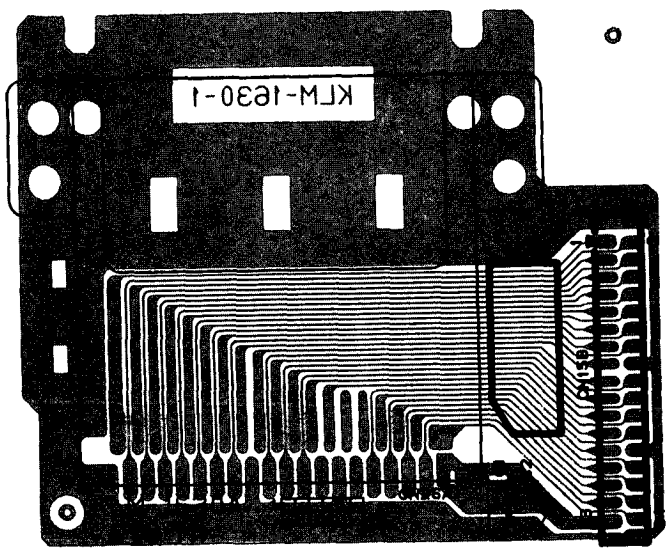
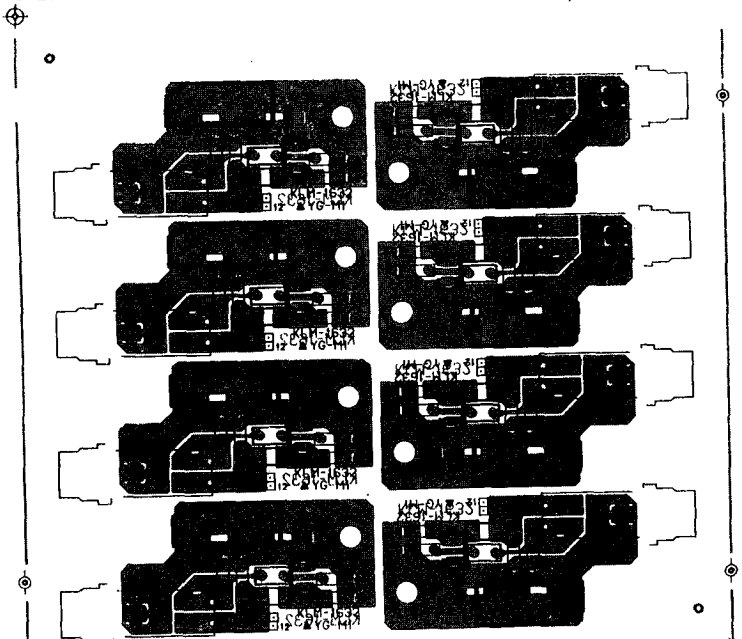
KLM-1627



KLM-1630A



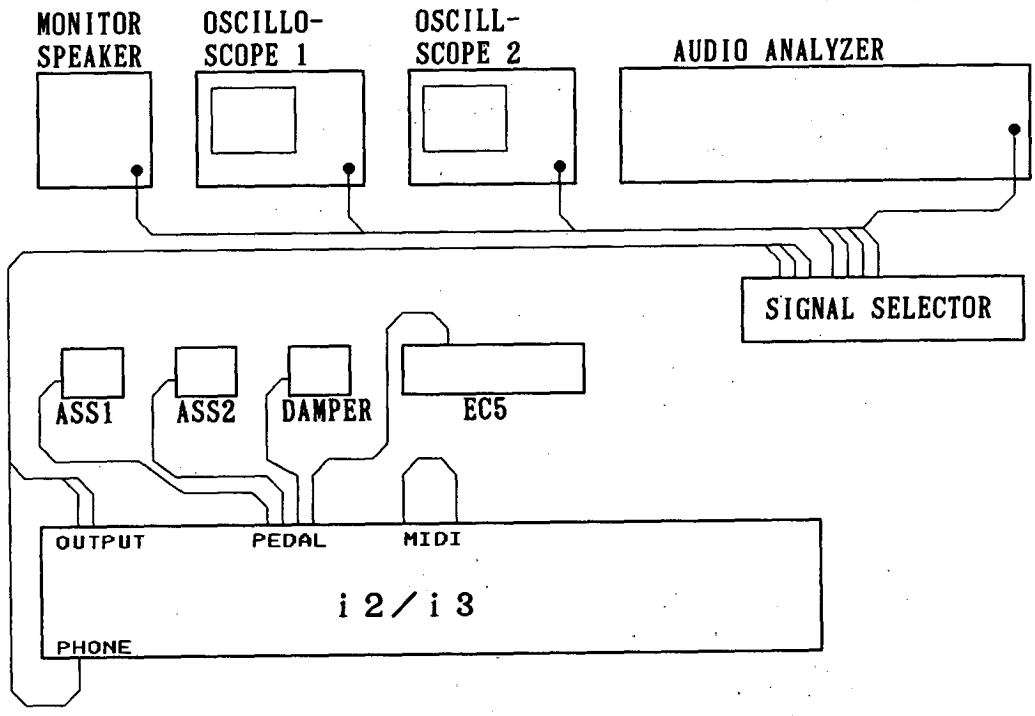
KLM-1632



6. DIAGNOSTIC TEST

The i2/i3 has a test mode for checking various functions. When entering the test mode, the internal data of the i2/i3 is initialized. Hence, if the i2/i3 contains any necessary data, save this data on a floppy disk before intialization. The figure below shows the equipment and settings required for conducting the tests.

○ Standard Setup



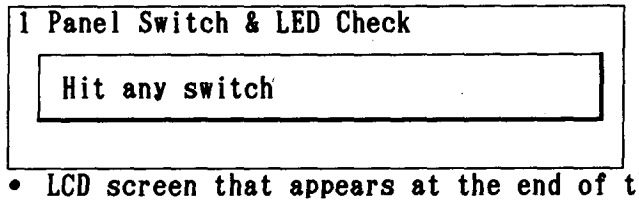
- Connect MIDI IN to MIDI OUT with a MIDI cable.
- Insert an i2/i3 inspection card (SRC-512) into the slot.
- Insert a blank disk for inspection into the disk drive.

★ Entering Test Mode

- Turn the power switch ON while pressing both the [ARR PLAY] and [EDIT STYLE] keys. Several tests are automatically run inside the unit when the test mode is started (internal inspection). If the results of these tests are all normal, the system moves on to external test Item 1, <Panel Switch & LED>.

X: Updataed data of system ROM
Y: Version number of system ROM

- LCD screen at the start of the test mode.
  (In the case of the i2, " i2 " is indicated on the screen.)



- LCD screen that appears at the end of the internal tests.

Internal test items(○ : ON, ⊗ : OFF)

• System ROM Checksum	⊗ ⊗ ⊗ ⊗
• Internal RAM Check	⊗ ⊗ ⊗ ○
• RAM Card Check	⊗ ⊗ ○ ⊗
• LCD RAM Check	⊗ ⊗ ○ ○
• NKS I/F Check	⊗ ○ ⊗ ⊗
• TGL I/F Check	⊗ ○ ⊗ ○
• Battery Check	⊗ ○ ○ ⊗
• Card Battery Check	⊗ ○ ○ ○
• MIDI Check	○ ⊗ ⊗ ⊗
• PCM ROM Verify	○ ⊗ ⊗ ○
• Style ROM Verify	○ ⊗ ○ ⊗

- During the internal tests, TEMPO/VALUE LEDs light up to indicate the test setup currently being conducted.
- If an abnormality is detected during the internal test, an error message appears on the LCD screen with the TEMPO/VALUE LED indicating the current test step.

※ Note:

- Defferent tests will take place depending on which switches you press while turning the power ON, as indicated below:

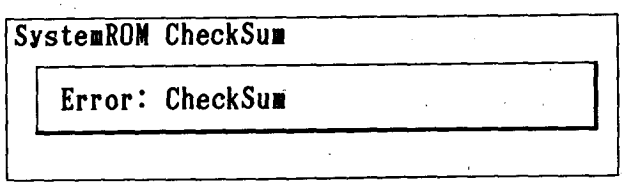
[EDIT STYLE]+[ARR PLAY] : Mode for conducting all the test items
[EDIT STYLE]+[PROG] : Mode for not conducting the CARD and MIDI tests
[EDIT STYLE]+[BACKING SEQ] : Mode for not conducting the MIDI test
[EDIT STYLE]+[SONG] : Mode for not conducting the CARD test
[EDIT STYLE]+[DISK] : Mode for initializing interanl RAM
[EDIT STYLE] : Mode for indicating only system ROM version number

★ Internal test

※ During the internal test, if an abnormality is detected, the test is interrupted at that point. Pressing [PROG NUM8] enables the system to proceed to following test item.

○ Internal test item 1
<System ROM Checksum> Internal Test#01

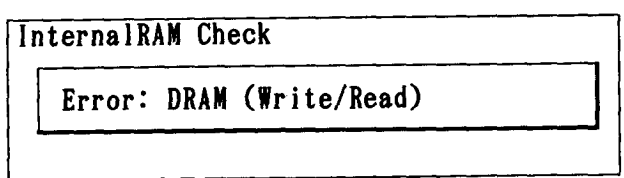
- Takes checksum of the System ROM and conducts the testing of the System ROM and the Bus line.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
● ● ● ●

○ Internal test item 2
<Internal RAM Check> Internal Test#02

- Conducts a write/read test of the Internal RAM(IC11,12,23).
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/ VALUE LEDs light up follows



TEMPO/VALUE LED
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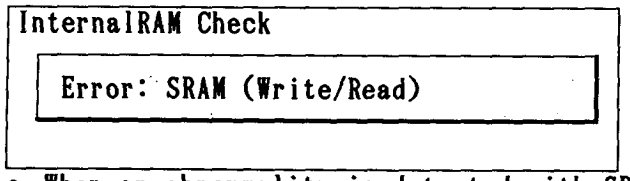
- When an abnormality is detected with DRAM(IC11,12)



TEMPO/VALUE LED
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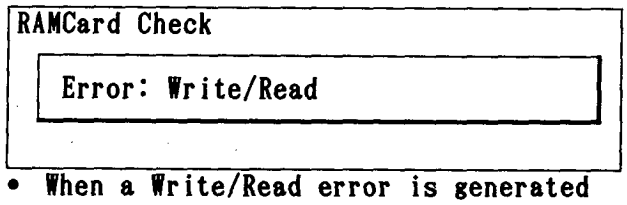
• When an abnormality is detected with SRAM(IC23)

○ Internal test item 3

<RAM Card Check> Internal Test#03

• Conducts a write/read test of the RAM Card.
• If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
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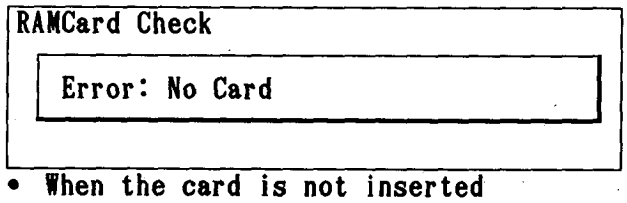
• When a Write/Read error is generated



TEMPO/VALUE LED
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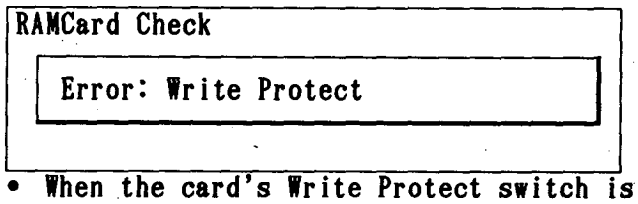
• When the card is not inserted



TEMPO/VALUE LED
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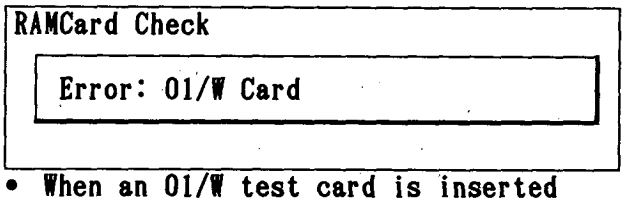
• When the card's Write Protect switch is ON



TEMPO/VALUE LED
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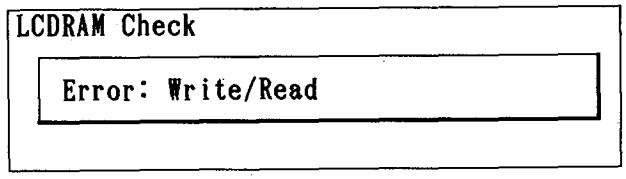
• When an 01/M test card is inserted

○ Internal test item 4

<LCD RAM Check> Internal Test#04

- Conducts a write/read test of the RAM inside the LCD module.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
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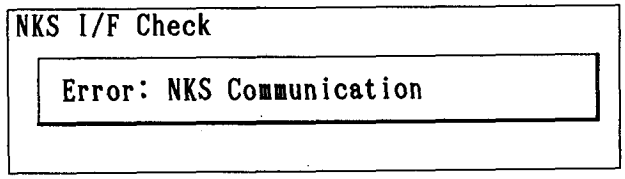
○ Internal test item 5

<NKS I/F Check> Internal Test#05

- Conducts an I/F check of the NIGEL KEYBOARD SCANNER(IC26).
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
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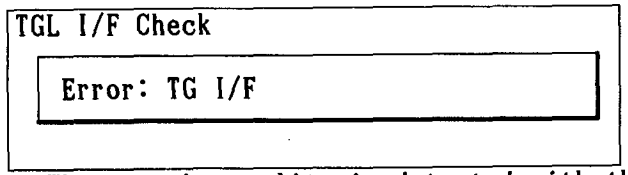
○ Internal test item 6

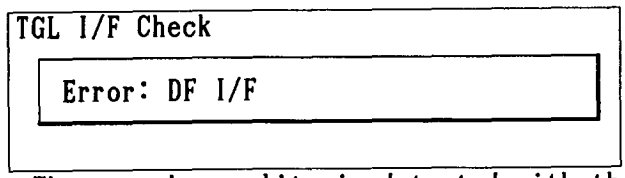
<TGL I/F Check> Internal Test#06

- Conducts an I/F check of the TGL(IC17).
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
● ○ ● ○

• When an abnormality is detected with the I/F of the TG section



TEMPO/VALUE LED
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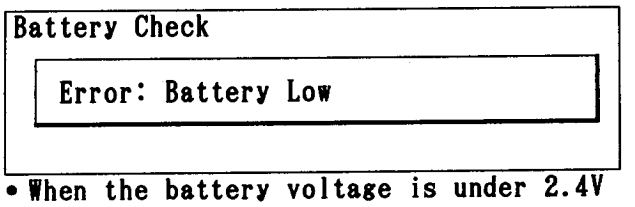
• When an abnormality is detected with the I/F of the DF section

○ Internal test item 7

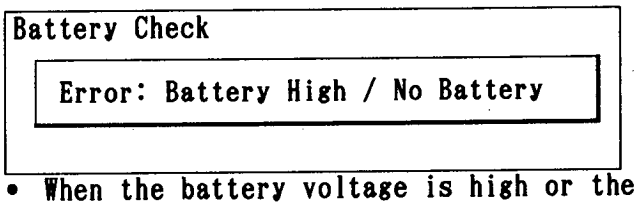
<Battery Check> Internal Test#07

- Conducts a test of the Backup Battery.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
● ○ ○ ●

• When the battery voltage is under 2.4V



TEMPO/VALUE LED
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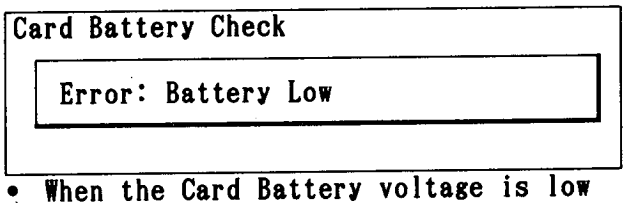
• When the battery voltage is high or the battery is not installed

○ Internal test item 8

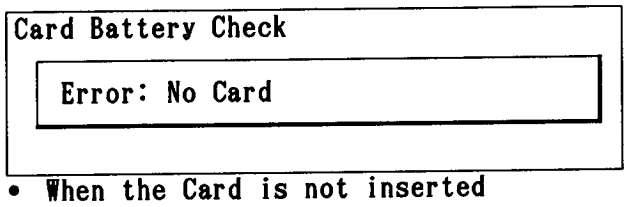
<Card Battery Check> Internal Test#08

- Conducts a test of the Card Battery(terminal).
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
● ○ ○ ○

• When the Card Battery voltage is low



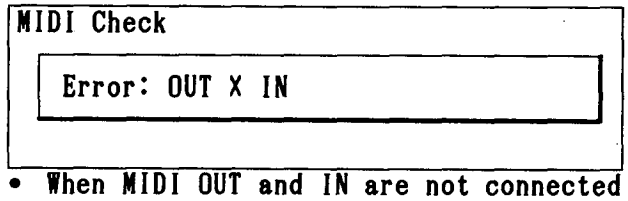
TEMPO/VALUE LED
● ○ ○ ○

• When the Card is not inserted

○ Internal test item 9

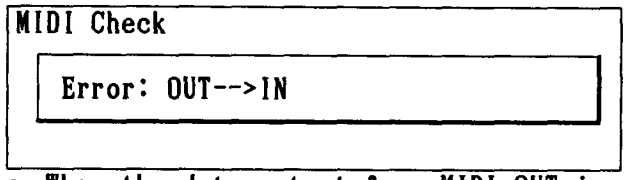
<MIDI Check> Internal Test#09

- Connects the IN and OUT and conducts a test on whether MIDI data output from the OUT is correctly input via the IN.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
○ ⊗ ⊗ ⊗

- When MIDI OUT and IN are not connected



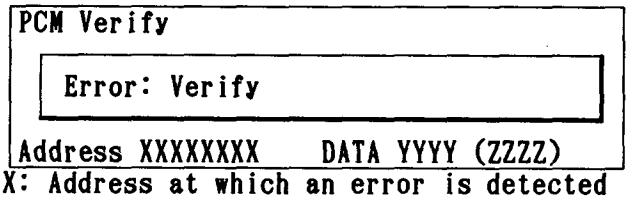
TEMPO/VALUE LED
○ ⊗ ⊗ ⊗

- When the data output from MIDI OUT is not correctly input to MIDI IN

○ Internal test item 10

<PCM Verify> Internal Test#10

- Conducts a test of the PCM ROM Bus line.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



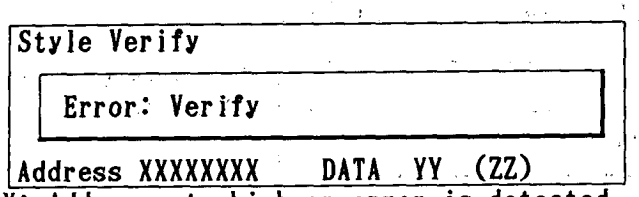
TEMPO/VALUE LED
○ ⊗ ⊗ ○

X: Address at which an error is detected
Y: Data (erroneous value) read at that time
Z: Expected value

○ Internal test item 11

<Style Verify> Internal Test#11

- Conducts a test of the Style ROM Bus line.
- If an abnormality is detected, the LCD screen displays the following and the TEMPO/VALUE LEDs light up as follows:



TEMPO/VALUE LED
○ ⊗ ○ ⊗

X: Address at which an error is detected
Y: Data (erroneous value) read at that time
Z: Expected value

★ External test

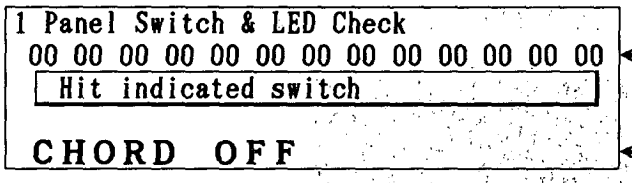
○ Basic operating specifications

[PROG NUM 8]	:	Advances the test step
[PAGE+]	:	Advances the test item
[PAGE-]	:	Returns the test item
[A]～[H]	:	Directly specifies and runs the test step
[ARR BANK 1]	:	Directly specifies the panel switch & LED test
[ARR BANK 2]	:	Directly specifies the LCD check
[ARR BANK 3]	:	directly specifies the MDE check
[ARR BANK 4]	:	Directly specifies the level check
[ARR BANK 5]	:	Directly specifies the noise check
[ARR BANK 6]	:	Directly specifies the A/D converter check
[ARR BANK 7]	:	Directly specifies the keyboard and aftertouch check
[ARR BANK 8]	:	Directly specifies the menu
[ARR NUM 1]	:	Directly specifies the preload
[ARR NUM 2]	:	Directly specifies the disk drive check

○ External test item 1

<Panel Switch & LED> External Test#1

- Checks whether all the LEDs are lit (including the access lamp for the FDD).
- Check whether the LCD backlight is normally lit.
- Press the switches according to the sequence indicated on the LCD screen.



←The bit image of the switch currently being pressed is indicated.

←The switch to press next is indicated.

00 00 00 00 00 00 00 00 00 00 00 00 00
s0 s1 s2 s3 s4 s5 s6 s7 s8 s9 s10s11
O O
sd7sd6sd5sd4 sd3sd2sd1sd0

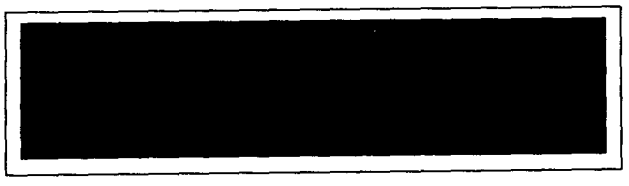
***	sd0	sd1	sd2	sd3	sd4	sd5	sd6	sd7
s0	CHORD_OFF	CHORD_LOWER	CHORD_UPPER	SONG	B_SEQ	PROG	ARR_PLAY	CHORD_FULL
s1	KEY_SINGLE	KEY_LAYER	KEY_SPLIT	DISK	GLOBAL	EDIT_PROG	EDIT_STY	KEY_DRUM
s2	XPOSE_PLUS	XXPOSE_MINUS	B_INVERSION	D_VELOCITY	---	---	---	---
s3	FILL2	FILL1	VARIATION4	VARIATION3	VARIATION2	VARIATION1	CHORD_HOLD	---
s4	---	CURSOR_DOWN	CURSOR_UP	COMPARE	VALUE_UP	VALUE_DOWN	PAGE_MINUS	PAGE_PLUS
s5	A	B	C	D	E	F	G	H
s6	STYLE_H1	STYLE_H2	STYLE_H3	STYLE_H4	STYLE_H5	STYLE_H6	STYLE_H7	STYLE_H8
s7	STYLE_L1	STYLE_L2	STYLE_L3	STYLE_L4	STYLE_L5	STYLE_L6	STYLE_L7	STYLE_L8
s8	PROG_H1	PROG_H2	PROG_H3	PROG_H4	PROG_H5	PROG_H6	PROG_H7	PROG_H8
s9	PROL_L1	PROL_L2	PROL_L3	PROL_L4	PROL_L5	PROL_L6	PROL_L7	PROL_L8
s10	PRESET_C1	DRUM_KIT	USER	SYNC_SS	RESET	START_STOP	INTRO_ENDING2	INTRO_ENDING1
s11	STYLE	PRESET_B	PRESET_A	TEMPO_LOCK	TAP_TEMPO	REC_WRITE	OCTAVE_UP	OCTAVE_DOWN

- Check that the LED of the switch to be pressed next is lit in red (if it has one).
- Upon completing the testing of all the switches, proceed to the following test item.

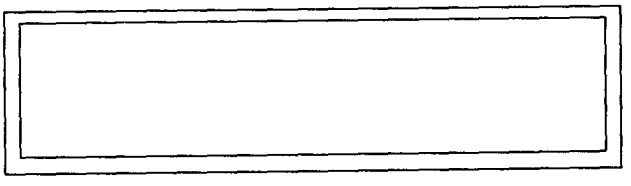
○ External test item 2

<LCD Check> External Test#2

- Check whether all dots of the LCD are lit.
- Turn the CONTRAST knob fully to the right and check that the LCD screen turns to a solid display. Then turn the knob slowly to the left and check that the solid display becomes gradually lighter. The display should disappear when the knob is fully turned to the left.



- Press [PROG NUM 8].
- Check that the LCD screen is completely black.

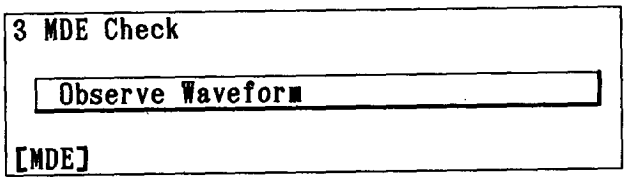


- Press [PROG NUM 8] and proceed to the following test item.

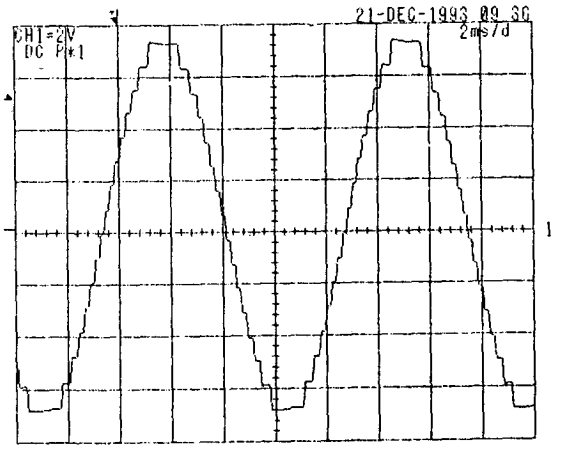
○ External test item 3

<MDE Check> External Test#3

※ Measure the master volume at MAX.



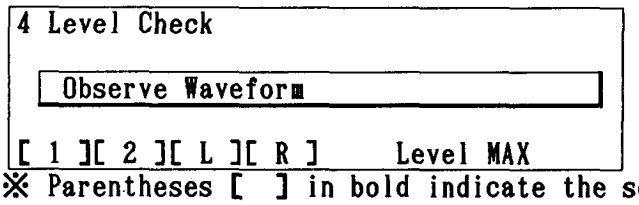
- Check whether the output waveform from the OUTPUT L/MONO is normal (see Fig.1).
- Press [PROG NUM 8] and proceed to the following test item.



○ External test item 4

<Level Check> External Test#4

※ Measure the PHONE L, PHONE R under a load of 32 ohms.
Measure by turning the master volume to MAX.
Measure both OUTPUT L/MONO and OUTPUT R with the plug inserted.



※ Parentheses [ ] in bold indicate the selected output.

- Measure the output level of OUTPUT L/MONO.
- Check that it is within the test range indicated in the table below and the output frequency is normal.
- Check that the observed waveform is sinusoidal without distortion as shown in Figure 2.
- Press [PROG NUM 8] and check likewise OUTPUT R, PHONE L and PHONE R.
- Regarding OUTPUT L/MONO, OUTPUT R operate the master volume and check that the waveform level changes smoothly and reaches 0 when the volume is turned to MIN.

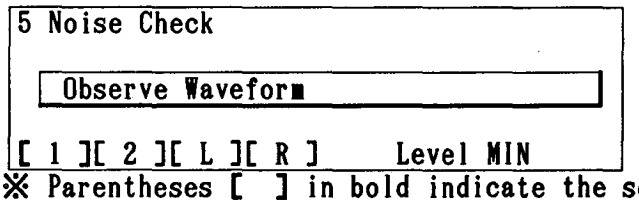
• Output level test range

	Output signal level	Frequency
OUT L	16.5 dBu ~ 17.7 dBu	488 Hz
OUT R	16.5 dBu ~ 17.7 dBu	412 Hz
PHONE L	1.8 dBu ~ 2.8 dBu	548 Hz
PHONE R	1.8 dBu ~ 2.8 dBu	610 Hz

○ External test item 5

<Noise Check> External Test#5

※ Measure by turning the master volume to MAX.
Measure both OUTPUT L/MONO and OUTPUT R with the plug inserted.

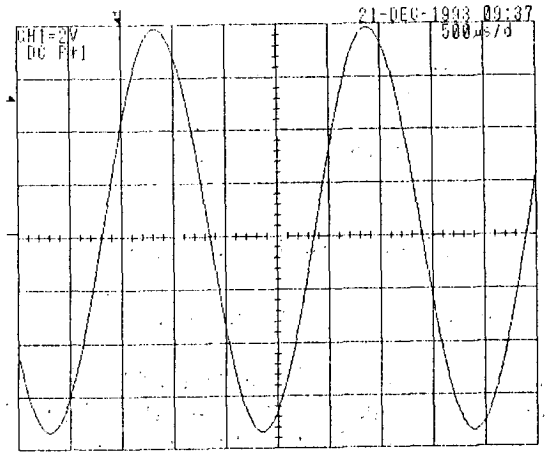


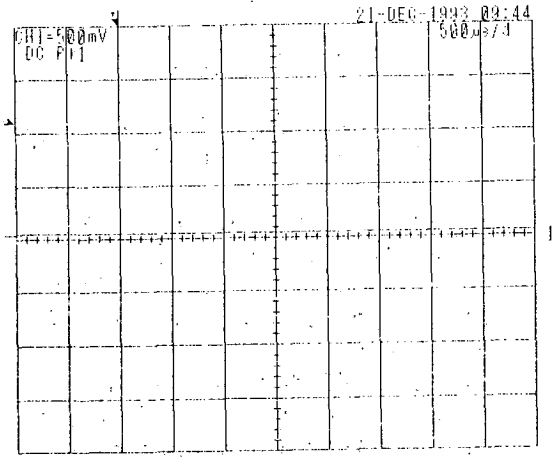
※ Parentheses [ ] in bold indicate the selected output.

- Measure the noise level of OUTPUT L/MONO.
- Check that the level is within the test range as indicated in the table below.
- Check that the output waveform level is 0 as shown in Figure 3.
- Press [PROG NUM 8] and test OUTPUT R, PHONE L and PHONE R likewise.

• Noise level test range

	Output signal level
OUT L	−87.0 dBu or under
OUT R	−87.0 dBu or under
PHONE L	−87.0 dBu or under
PHONE R	−87.0 dBu or under

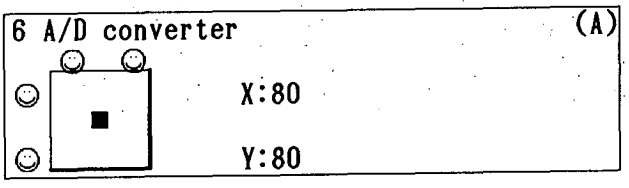




* External test item 6

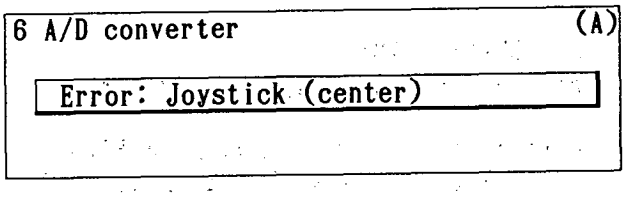
<A/D converter> External Test#6

※ Care should be taken not to touch the joystick when starting this test.



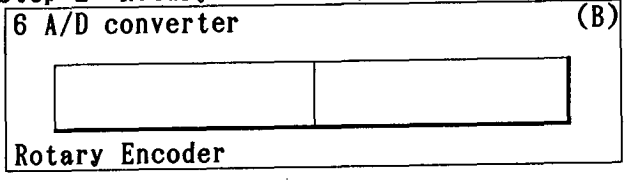
☺: This indication appears upon reaching a maximun (minimum) value.
X: Direction X: Min=00, MAX=FF, MID=80
■: Moves in correspondence with the joystick movement.
Y: Direction Y: MIN=00, MAX=FF, MID=80

- Move the joystick up, down, right and left and check whether X and Y reach the maximum and minimum values.
- If an A/D read value with the joystick in neutral, the following indication appears at the start of the test:

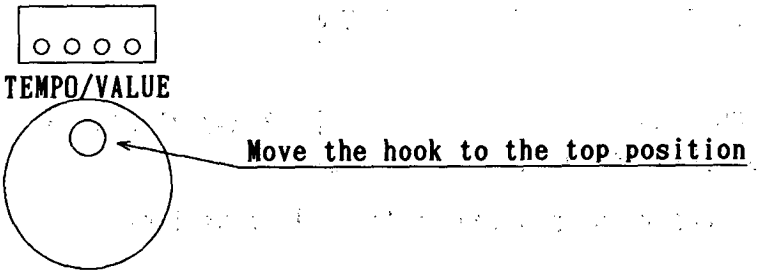


- When the test is completed, proceed to the following test.

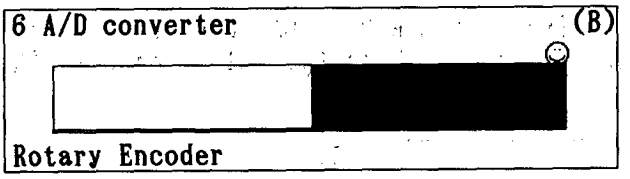
Step 2 <Rotary Encoder (TEMPO/VALUE LED)>



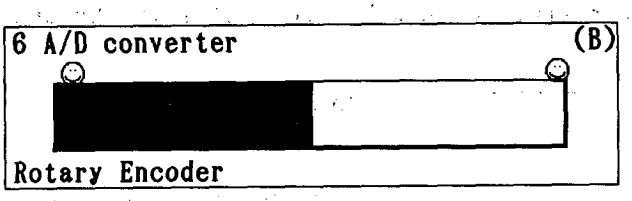
- Turn the rotary encoder and bring the finger hook to the top position (TEMPO/VALUE LED lights up).



- When the TEMPO/VALUE LED gose out, slowly turn the rotary encoder clockwise four times. Check that each TEMPO/VALUE LED lights up from the left to the right with every turn.
- When the fourth turn is completed (the finger hook reaching the top), check that " ☺ " appears. (All four TEMPO/VALUE LEDs light up then.)

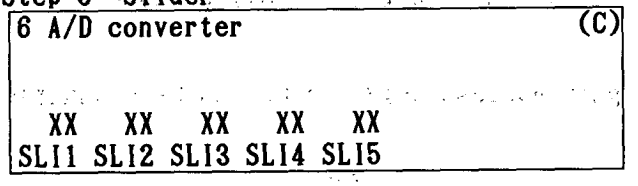


- When the TEMPO/VALUE LED gose out, slowly turn the rotary encoder counterclockwise four times.
- When the fourth turn is completed (the finger hook reaching the top), check that " ☺ " appears. (All four TEMPO/VALUE LEDs light up then.)



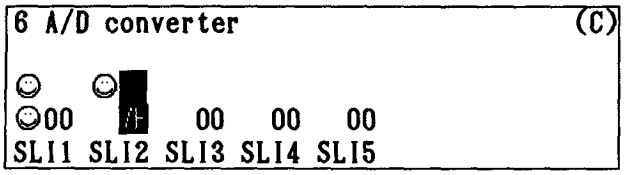
- Press [PROG NUM 8] and proceed to the following test.

Step 3 <Slider>



XX:MAX=7F,MIN=00

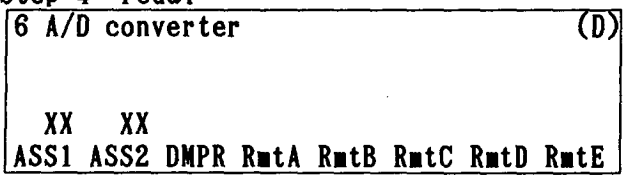
- Move the OUTPUT MIXER sliders (DRUMS/PERC, BASS, ACCOMP1 to 3, KBD1/M.DRUMS, KBD2) respectively from MIN to MAX and check that the maxmum and minimum values (00 to 7F) appear. " ☺ " will appear when the value reaches MAX and /or MINI.



XX:MAX=7F,MIN=00

- When the test is completed, proceed to the following test.

Step 4 <Pedal>

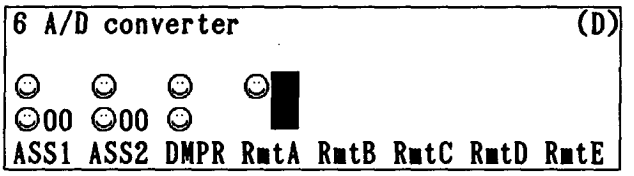


XX:MAX=7F,MIN=00

- Move ASSIGN 1 and 2 respectively from MIN to MAX and check that the maximum and minimum values (00 to 7F) appear. When the value reaches MAX or MIN, " ☺ " will appear.

XX:MAX=7F,MIN=00

- Turn DAMPER and Rmt A to E (EC5) ON and OFF respectively and check that " ☺ " appears.

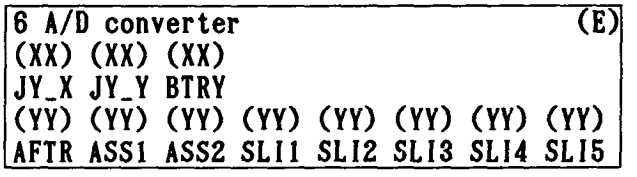


XX:MAX=7F,MIN=00

- When the test is completed, procced to the following test.

Step 5 <A/D moniter>

※ This test step is for repair purpose only and not to be conducted during a normal test.



XX:MAX=FF,MIN=00

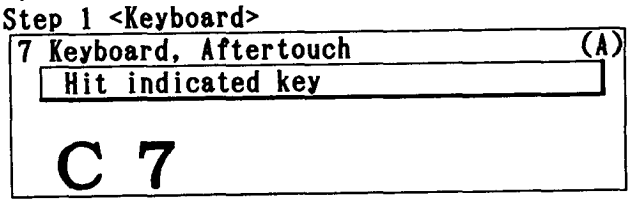
YY:MAX=7F,MIN=00

- Test step for monitoring respective A/D values.
- When the A/D values change, the change can be read in real time.

○ External test item 7

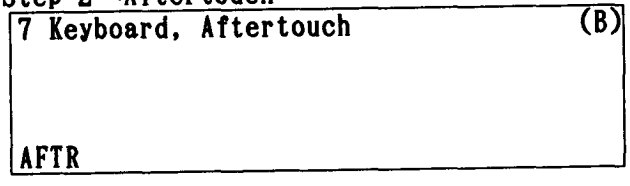
<Keyboard,Aftertouch> External Test#7

Step 1 <Keyboard>

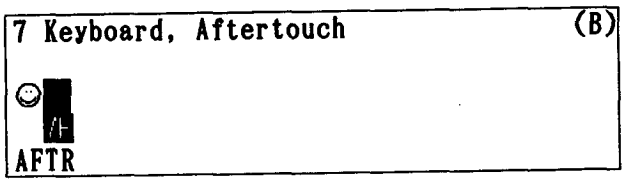


- Hit the keyboard from the highest key downward as indicated on the LCD screen.
- The velocity value must be within the range from 20 to 100 in order to proceed to the following key.
- When the lowest key is hit, proceed to the following test.

Step 2 <Aftertouch>



- Press any key with a finger and check whether the value changes smoothly, reaching 7F when pressed strongly.

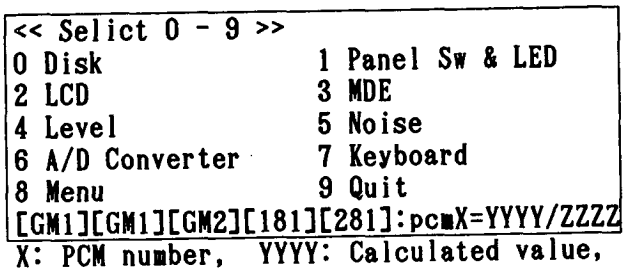


- Press [PROG NUM 8].

○ External test item 8

<MENU> External Test#8

※ For the normal test, proceed to the following test item by pressing [PROG NUM 8].



X: PCM number, YYYY: Calculated value, ZZZZ: Expected value

- With this test item, respective test items can be specified directly by pressing [ARR BANK 0-9].
- Pressing [A] to [E] enables to take the checksum of the corresponding PCM ROM (IC19 to IC22).

  [A] : [GM1]=pcmA=IC22=3300
  [B] : [GM1]=pcmB=IC22=B800
  [C] : [GM2]=pcmC=IC21=D9C6
  [D] : [181]=pcmD=IC20=E379
  [E] : [281]=pcmE=IC19=40AB (for i2 only)

- Press [PROG NUM 8] to proceed to the following test item.

○ External test item 9

<Preload> External Test#9

※ Since this item is for a factory test, end this test mode by pressing [PAGE+] when using this mode for the purpose of a repair.

★ End of the test

- Upon switching to normal mode, load the PRELOAD data or the user data with the "LOAD ALL DATA" function in the disk mode.
- When the PRELOAD data is loaded, check the following:

Preload check

```
ARR:11 Mick&Keith
       STYLE:P11 Open Rock   SPLIT:C4
♩=130  CHORD:                XPOSE:0
▶KBD1:A47 DistGuitar OCTAVE=-1 DRUM:5
DURM PERC BASS ACC1 ACC2 ACC3 LOWERUPPER
PLAY PLAY PLAY PLAY PLAY PLAY ---- ON
```

- Check that the screen displays the indication as shown above.
- Press the C2 key, then press [START/STOP] to check the playing.
- Withdraw the disk and cards, turn the power OFF to end the test.

★ FDD test

○ External test item 0

<Disk Check> External Test#0

```
0 Disk Check                    (X)

  Insert a disk

[FUL][SUB]
```

X: Indicates the timing of an error generated.

X=1 : Before formatting
X=2 : When formatting
X=3 : When verifying after the formatting
X=4 : When writing all the sectors
X=5 : When reading all the sectors
X=6 : When initializing the boot sector and the FAT
X=7 : When writing a file
X=8 : When reading and verifying a file

- Turn the power ON while pressing [EDIT STYLE] and [PROG] simultaneously.
- Press [ARR NUM 2].
- Insert the test disk (a 2DD disk formatted with i2, i3 or X3) and press [A] to start the test.

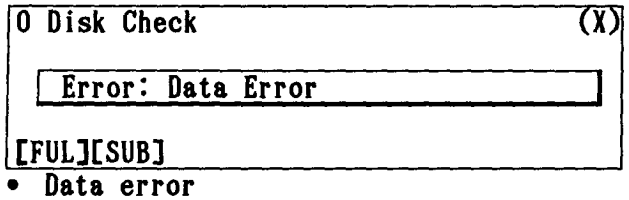
```
0 Disk Check

  Processing...

[FUL][SUB]
```

- When [B] is pressed, part of test (format type checking of the disk) is omitted and the testing can be conducted using unformatted disk.
- You should usually use [A].

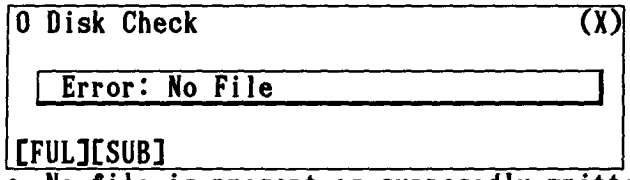
- If an abnormality is detected, the following messages appear:

```
0 Disk Check                    (X)

  Error: Drive not Ready

[FUL][SUB]
```

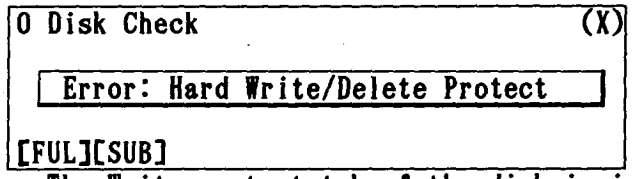
- The disk is not inserted.



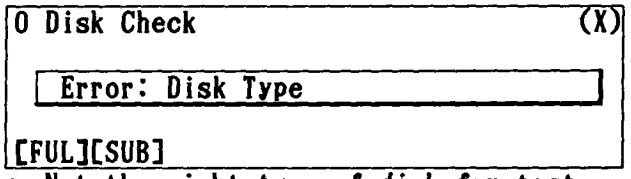
• Data error



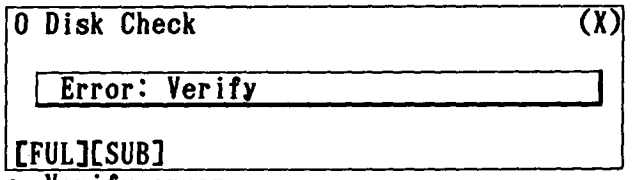
• No file is present as supposedly written for the testing.



• The Write protect tab of the disk is in the ON position.

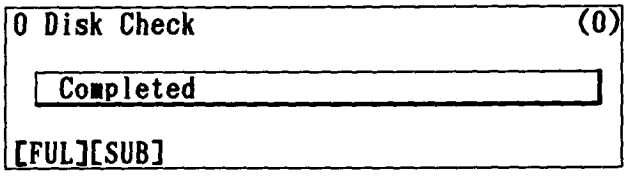


• Not the right type of disk for test.



• Verify error

• When the following message appears, end the test by turning the power OFF.

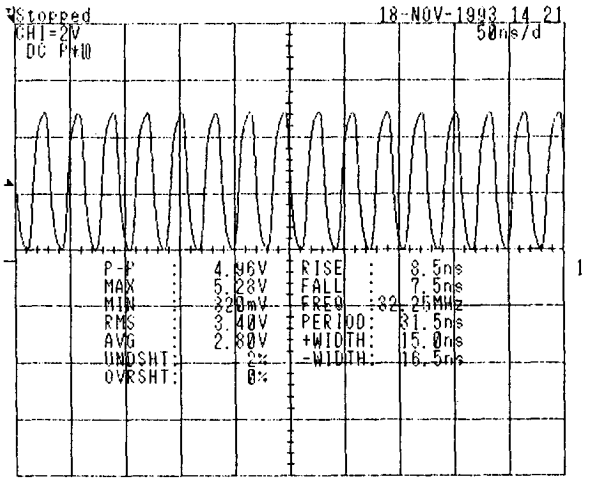


7. CHECK POINTS

1.Clock Generator - TGL

From 6pin of IC14
To 159pin(MCK) of IC17

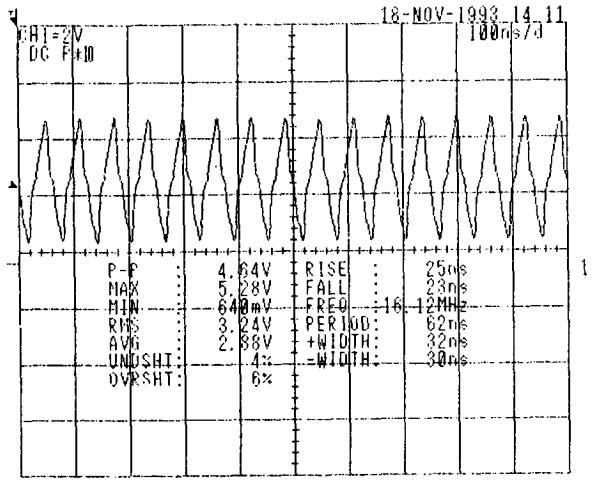
f=32MHz



2.TGL - FDC

From 151pin(CKOO) of IC17
To 40pin(EXTAL1) of IC13

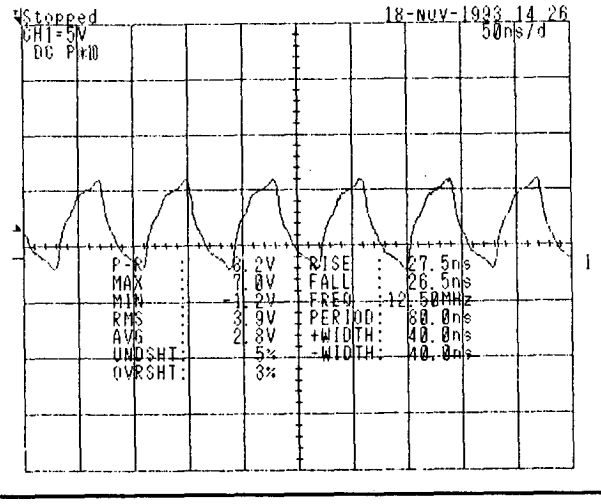
f=16MHz



3.CPU - MAP55A

From 7pin(CLKOUT) of IC32
To 92pin(MCLK) of IC31

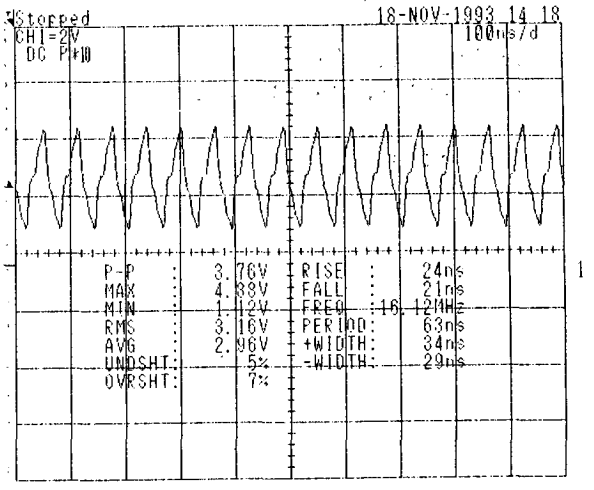
f=12.5MHz



4.TGL - DAC

From 43pin(CKO1) of IC17
To 15pin(SYSCLK) of IC6

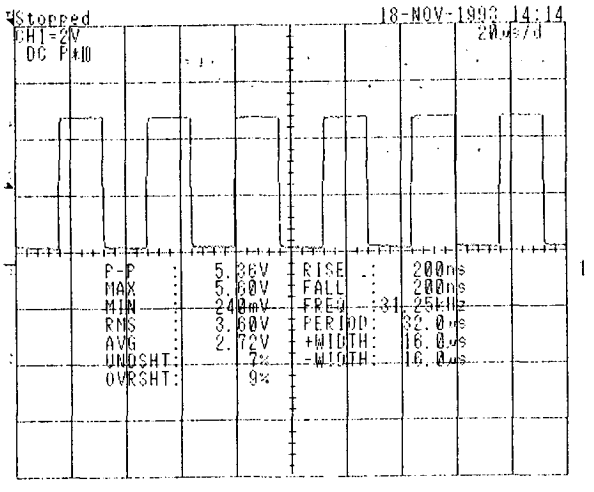
f=16.12MHz



5.TGL - DAC

From 152pin(LRCKO) of IC17
To 16pin(WDCK) of IC6

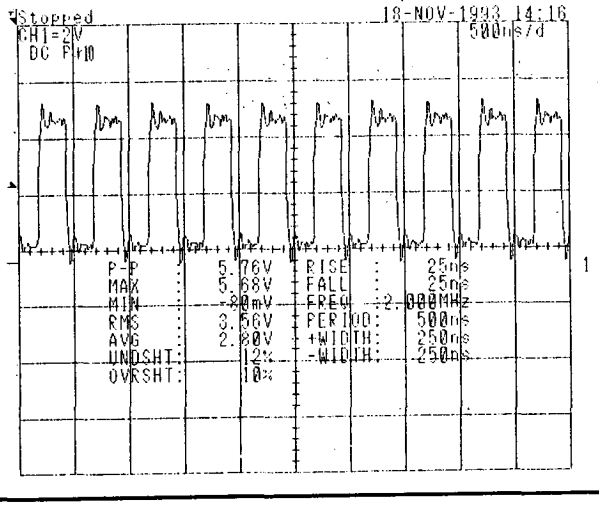
f=31.25KHz



6.TGL - DAC

From 153pin(BCKO) of IC17
To 14pin(BCK) of IC6

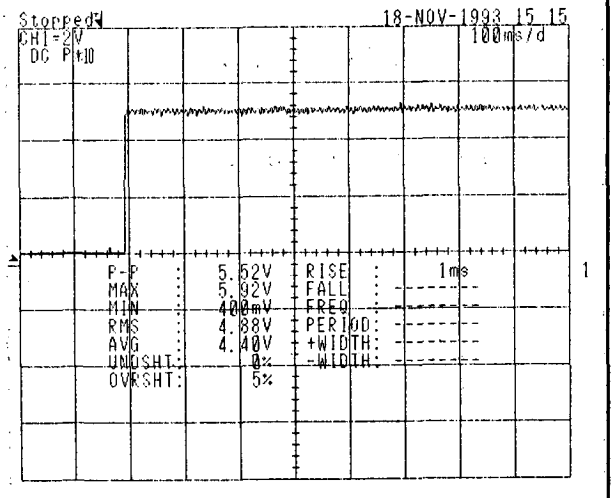
f=2.0MHz



7.Reset - CPU / MAP55A / SRAM

From 7pin of IC7
To 8pin(RESET) of IC8,
89pin(RES) of IC31,
30pin(CE2) of IC23

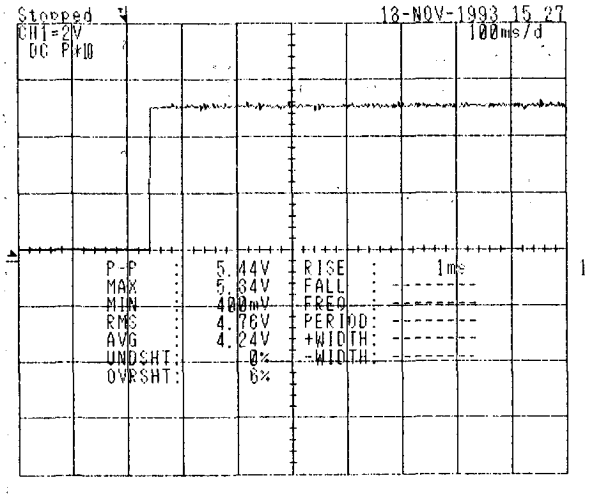
※ when turn the power on



8.CPU - TGL

From 16pin(P01) of IC32
To 2pin(RESET) of IC17

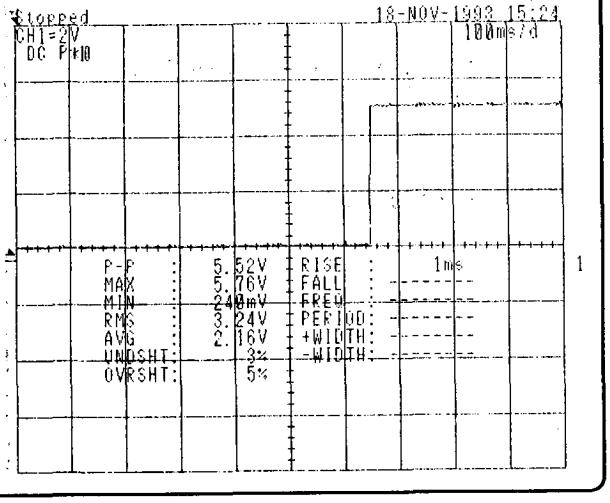
※ when turn the power on



9.CPU - NKS

From 15pin(P00) of IC32
To 1pin(RESET) of IC26

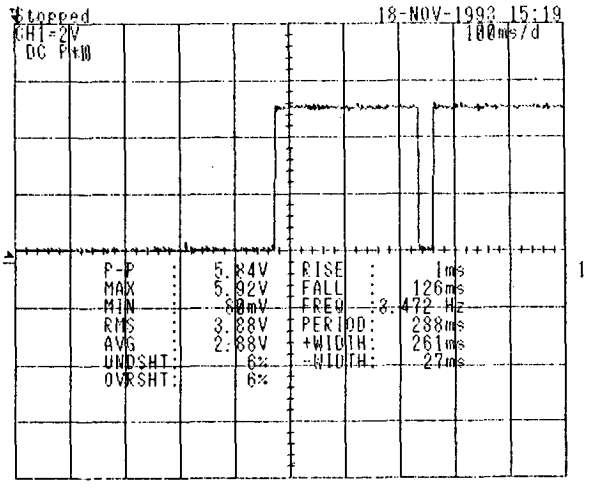
※ when turn the power on



10.CPU - FDC

From 17pin(PO2) of IC32
To 3pin(RESET) of IC13

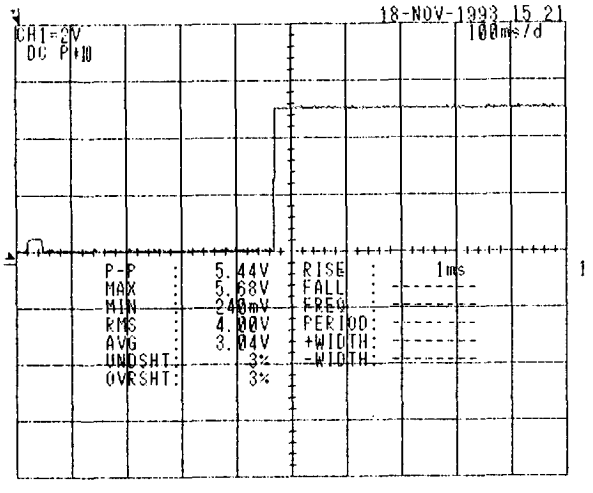
※ when turn the power on



11.CPU - LCD

From 18pin(PO3) of IC32
To 10pin(RESET) of LCD

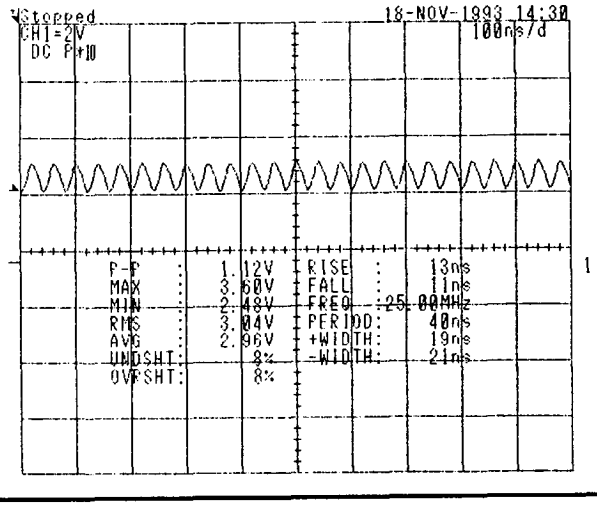
※ when turn the power on



12.XTAL - CPU

11pin(X1) and 12pin(X2)
of IC32

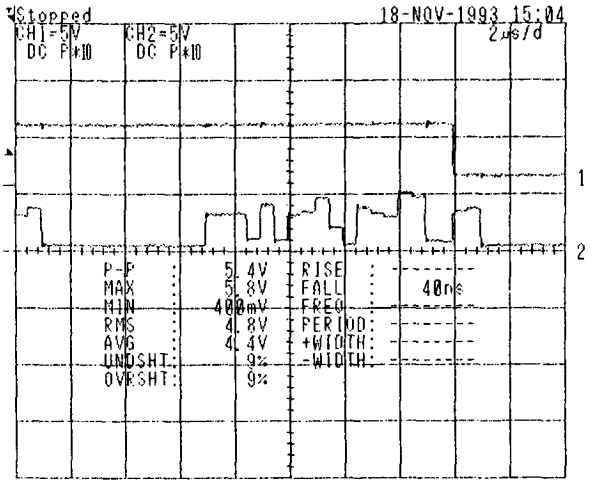
f=25.0MHz



13.TGL - DAC

From 155pin(SDOO) of IC17
To 17pin(DATA-L) of IC6

CH1: LRCK
CH2: DATA-L



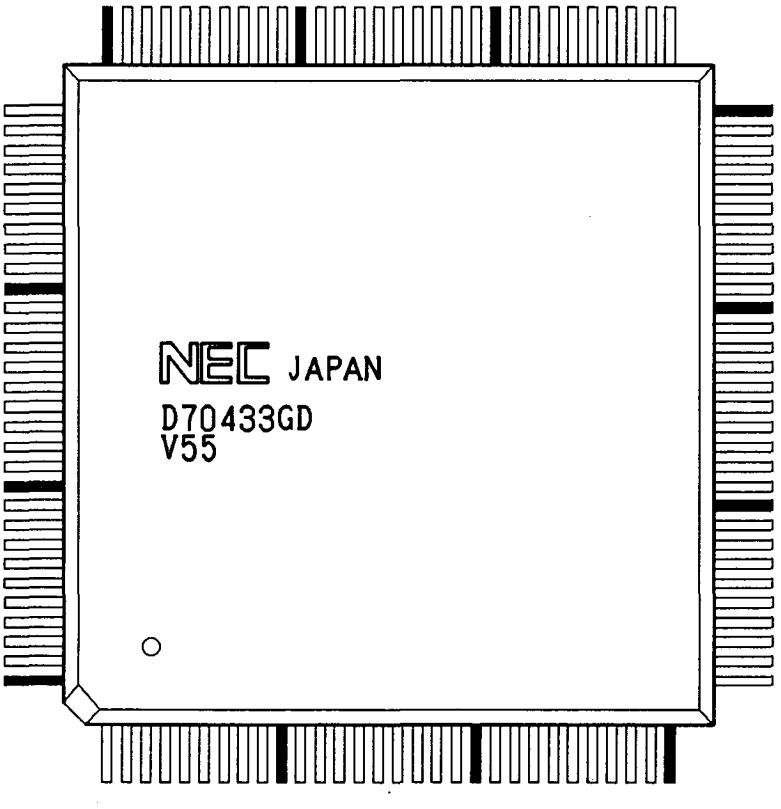
8. REFERENCE DATA

MAIN ICs

CPU:	UPD70433GD-5BB(V55PI)	IC32
DECODER:	MB622E15PF(MAP55A)	IC13
TONE GENERATOR:	MBCS35104(TGL)	IC17
CARD BUFFER:	MB65612GF-015-3BE(CBR92)	IC10
KEY SCANNING:	HD6433308B46F(NKS)	IC20
SYSTEM ROM:	UPD27C4096-12	IC29
SYSTEM RAM:	UPD431000AGW-70L(1M SRAM)	IC23
DRAM:	TC511664BZ-10/80(64K x 16) for multi digital effect	IC15
	MB81464-10PSZ-G-BB-RS2(64K x 4) for multi digital effect	IC16
	MB81C4256	IC11,12
WAVE ROM:	MB8316200-15PF-G-402-HT(for GM1)	IC22
	UPD23C16000BGX-385(for GM2)	IC21
	LH537FFS	IC20
STYLE ROM:	MB838200BP-G-8F8	IC28
FD CONTROLLER:	HD63266FP	IC13
D/A CONVERTOR:	PCM69AU	IC6

UPD70433GD-5BB (CPU)

PIN ASSIGNMENT



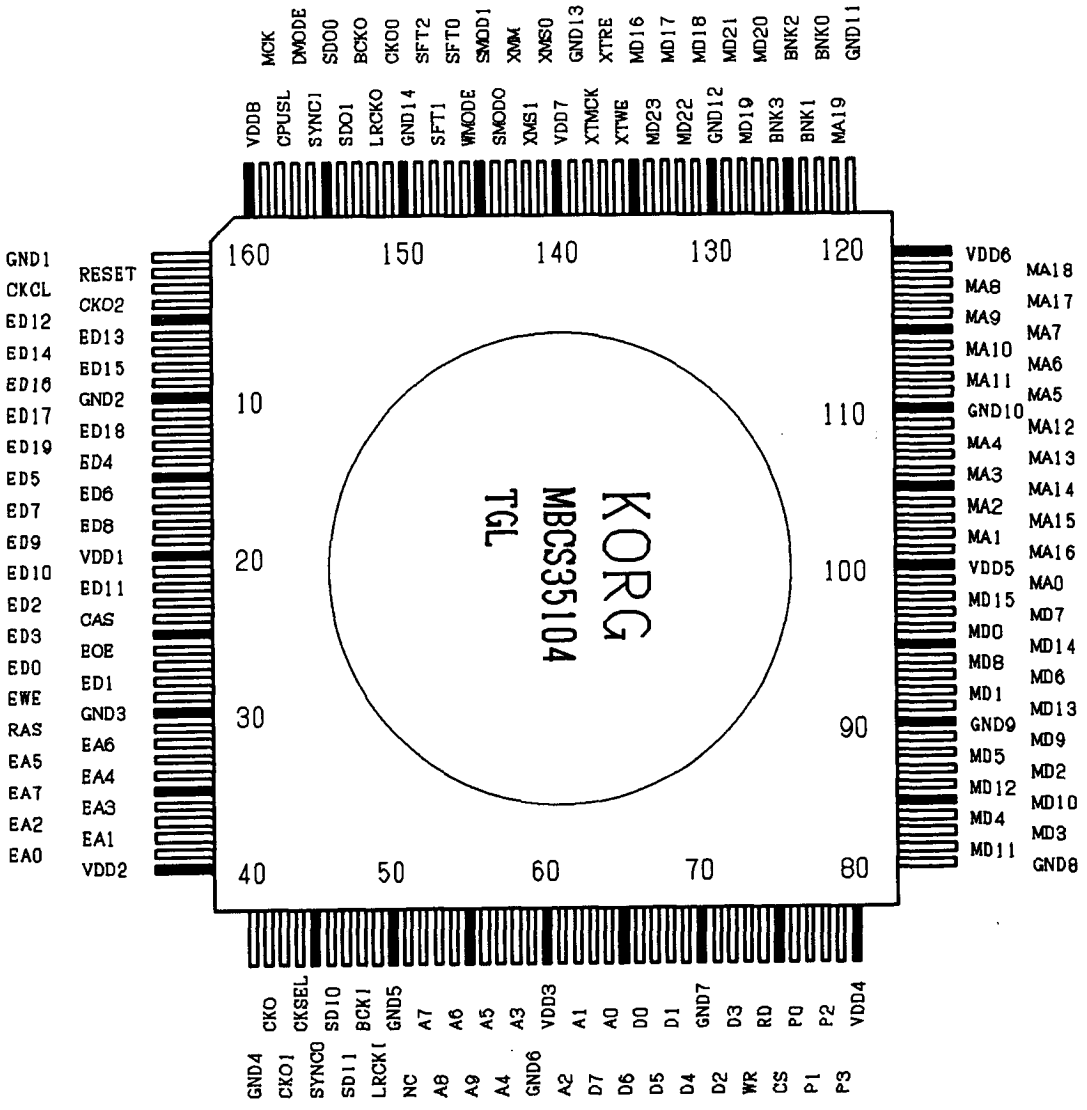
UPD70433GD-5BB (CPU)

PIN FUNCTION

PIN NAME	I/O	FUNCTION
P00-P07	I/O	PORT 0
NMI	I	NON MASKABLE INTERRUPT
INTP0-INTP5	I	EXTERNAL INTERRUPT REQUEST
P20-P21	I/O	PORT 2
TXD0-TXD1	0	TRANSMIT DATA OUTPUT
RXD0-RXD1	I	RECEIVE DATA INPUT
TXC	0	TRANSMIT CLOCK OUTPUT
$\overline{CTS0}$	I	ENABLING SIGNAL INPUT
SCK1	0	SIRIAL CLOCK OUTPUT
P40-P47	I/O	PORT 4
P50-P52	I/O	PORT 5
ANI0-ANI3	I	ANALOG SIGNAL INPUT
P70-P77	I/O	PORT 7
DMARQ0-DMARQ1	I	DMA REQUEST SIGNAL INPUT
GND	---	GROUND
VDD	---	+5V POTENTIAL
AVSS	---	ANALOG GROUND
AVDD	---	ANALOG +5V POTENTIAL
AVREF	I	REFERENCE POTENTIAL INPUT FOR A/D CONVERTER
$\overline{RESET}$	I	SYSTEM RESET SIGNAL INPUT
X1, X2	I	SYSTEM CLOCK INPUT
CLKOUT	0	SYSTEM CLOCK OUTPUT
$\overline{ASTB}$	0	ADDRESS STROBE SIGNAL OUTPUT
$\overline{RD}$	0	DATA READ STROBE SIGNAL OUTPUT
$\overline{WRL}$	0	LOW BIT DATA WRITE STROBE SIGNAL OUTPUT
$\overline{WRH}$	0	HIGHT BIT DATA WRITE STROBE SIGNAL OUTPUT
READY	I	READY SIGNAL INPUT
$\overline{DEX}$	0	DATA BUS ENABLE SIGNAL OUTPUT
$\overline{RAS}$	0	DRAM ROW ADDRESS LATCH TIMMING SIGNAL OUTPUT
D8/$\overline{D16}$	I	BUS SIZE SELECT INPUT
$\overline{BUSLOCK}$	0	BUS LOCK SIGNAL OUTPUT
$\overline{POLL}$	I	POLL SIGNAL INPUT
HLDRQ	I	BUS HOLD REQUEST SIGNAL INPUT
HLDAK	0	BUS HOLD ACKNOWLEDGE SIGNAL OUTPUT
AD0-AD15	I/O	ADDRESS/DATA SIGNAL
A16-A23	0	ADDRESS SIGNAL OUTPUT
$\overline{IORD}$	0	I/O READ STROBE SIGNAL OUTPUT
$\overline{IOWR}$	0	I/O WRITE STROBE SIGNAL OUTPUT
$\overline{DMAAK0}$-$\overline{DMAAK1}$	0	DMA ACKNOWLEDGE SIGNAL OUTPUT
$\overline{TCE0}$-$\overline{TCE1}$	0	DMA FINISH SIGNAL OUTPUT

MBCS35104 (TGL)

PIN ASSIGNMENT



MBCS35104 (TGL)

PIN FUNCTION

PIN NAME	I/O	FUNCTION
VDD	---	+5V
VSS	---	Ground
Rest	I	System Rest
MCK	I	Master Clock
CKO	O	32MHz
CKO0-1	O	CLK/2 duty 50% output
CKO2	O	CLK/4 duty 50% output
CKSEL	I	Phase Analog Select for CKO0
CKCL	I	CKO0 Reset input
XMM	I	for Test mode
XMS2-0	I	for Test mode
XTMCK	I	for Test mode
XTRE	I	for Test mode
XTWE	I	for Test mode

--------- for CPU ----------		
CPUSL	I	CPU select V25/H8
CS	I	Chip select
WR	I	CPU WRITE pulse
RD	I	CPU READ pulse
A0-9	I	CPU Address Bus
D0-9	I/O	CPU Data Bus
P0-3	O	Output Port
--------- for PCM ROM ----------		
MD0-15	I/O	PCM Memory Data Bus 0-15
MD16-23	I	PCM Memory Data Bus 16-23 (for 2TGs mode)
MA0-19	O	PCM Memory Address Bus
BNK0-3	O	PCM Memory Bank Select
DMODE	I	DECODE Mode Select H: Decode BNK# L: Thru BNK#
WMODE	I	PCM Memory -word Select H: 64 osc. , 2TGs Mode L: 32 osc. , 1TG Mode
SYNCO	O	Counter Synchro Output (only 2TGs Mode)
SYNCI	I	Counter Synchro Input (only 2TGs Mode)
--------- for Serial Interface ----------		
SDO0-1	O	Serial Data Outout 0,1 SDO0: C ch & D ch SDO1: A ch & B ch
BCKO	O	Bit Clock Output (2MHz, 500nsec.)
LRCKO	O	LR Clock Output L: R ch H: L ch
SDI0-1	I	Serial Data Input 0,1 SDI0: C ch & D ch SDI1: A ch & B ch
BCKI	I	Bit Clock Input (2MHz, 500nsce.)
LRCKI	I	LR Clock Input L: R ch H: L ch
SMOD0-3	I	Serial I/F Format Select
--------- for DRAM ----------		
EA0-7	O	DRAM Address
ED0-19	I/O	DRAM Data
EWE	O	DRAM WE
EOE	O	DRAM OE
RAS	O	DRAM RAS
CAS	O	DRAM CAS

TGL check points

1. Voltage check of power supply

Check that a voltage of +5V (±5%) is input at the VDD pin.

$$4.75V \leqq VDD \leqq 5.25V$$

2. Check of input/output pins, regardless of the CPU interface setting

PIN NAME	FUNCTION
BCKO	2.0 MHz bit clock signal outputs to the D/A converter.
LRCKO	31.25 KHz L/R clock signal output to the D/A converter.

If the voltage level of these pins is +3V or less, check the soldering of peripheral pins and the voltage of connected the device.
Also, if any of these pins is 0V or +5V, check to see whether RESET(TGRES) or the master clock(32.0MHz) has been input. If RESET and MCK are normal,, and the test mode setting pins have been set as below,
check the soldering and the pattern on the circuit board.

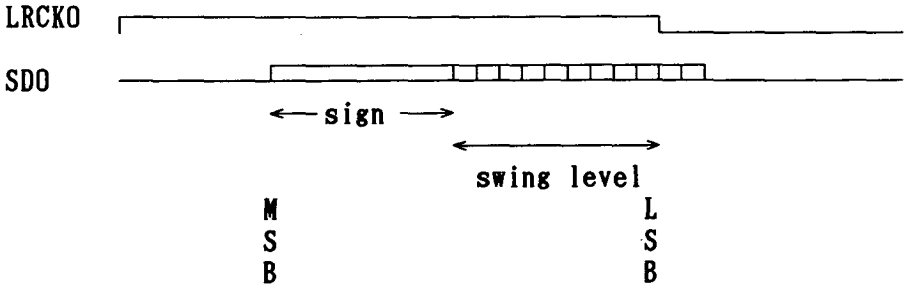
3. Check of input/output pins, when the key on

PIN NAME	FUNCTION
XCS, XWE	Control signal from the CPU

During KEY ON or PROG. CHANGE, check that a low level pulse signal is input from the CPU to the above pins(XSC, XWE). If these signals cannot be observed with the oscilloscope, check the CPU and its peripheral circuits.

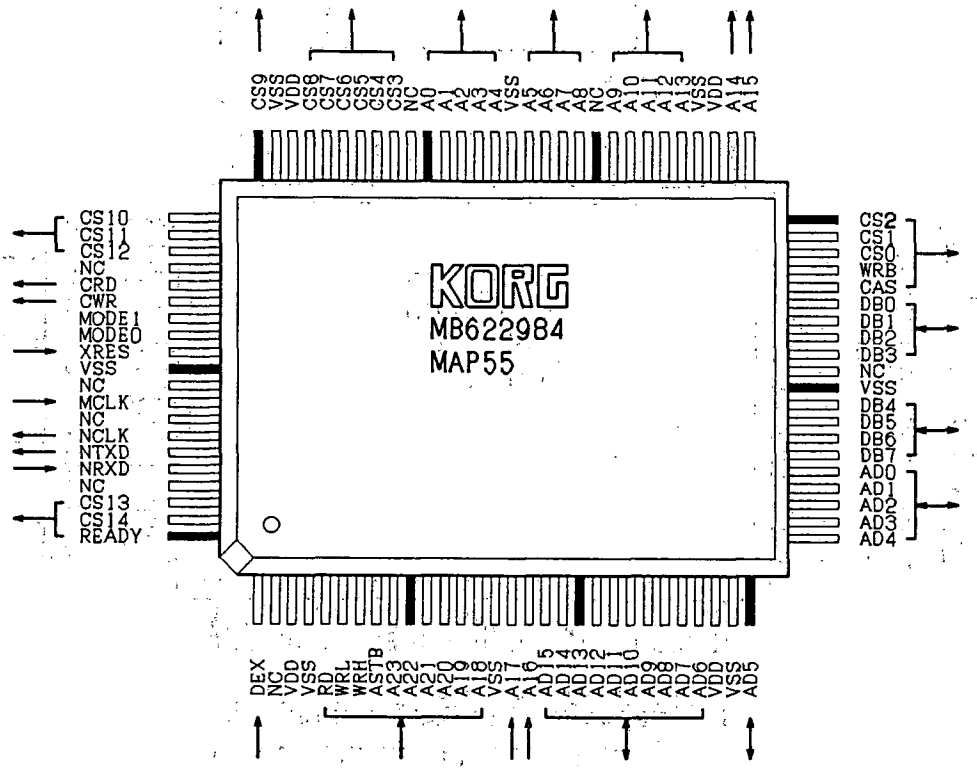
PIN NAME	FUNCTION
SDO0, SDO1	serial data output to the D/A converter

In case of observing the waveform with the oscilloscope, it is best to input the LRCKO clock signal to the external trigger input of the oscilloscope. If the serial data cannot be output, check the PCM address bus. To find whether normal serial data is output or not, check whether there is a different bit from the code bit at the left side of the leading and the trailing edge of LRCKO on the oscilloscope screen.



MB622E15 (MAP55A)

PIN ASSIGNMENT



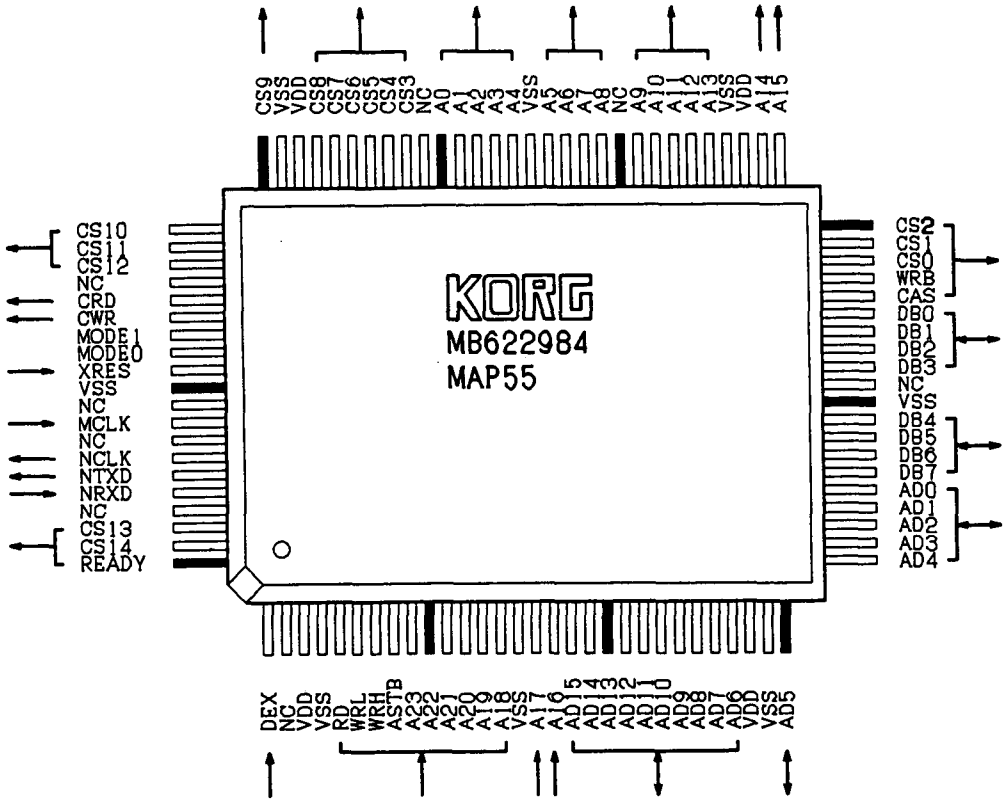
MB622E15 (MAP55A)

PIN FUNCTIONS

PIN NO	PIN NAME	I/O	FUNCTION
1	DEX	I	V55 DEX INPUT
5	RD	I	V55 RD INPUT
6	WRL	I	V55 WRL INPUT
7	WRH	I	V55 WRH INPUT
8	ASTB	I	V55 ASTB INPUT
9-14	A23-18	I	ADDRESS INPUT A23-16
16,17	A17-16	I	
18-27	AD15-6	I/O	MULTIPLEX DATA BUS A15-0
30-35	AD5-0	I/O	
36-39	DB7-4	I/O	8BIT DATA BUS
42-45	DB3-0	I/O	
46	CAS	O	DRAM CAS OUTPUT
47	WRB	O	WRITE PULSE OUTPUT
48-50	CS0-2	O	CHIP SELECT OUTPUT
51,52	A15,14	O	ADDRESS LATCH OUTPUT
55-59	A13-9	O	
62-64	A8-6	O	
66-71	A5-0	O	
72-77	CS3-8	O	CHIP SELECT OUTPUT
80-83	CS9-12	O	
85	CRD	O	VDC READ PULSE OUTPUT
86	CWR	O	VDC WRITE PULSE OUTPUT
87,88	MODE1-0	I	DECODE MODE SELECT
89	XRES	I	SYSTEM RESET INPUT
92	MCLK	I	MASTER CLOCK INPUT
94	NCLK	O	SERIAL I/F CLOCK OUTPUT
95	NTXD	O	SERIAL I/F TRANSMIT DATA OUTPUT
96	NRXD	I	SERIAL I/F RECIEVE DATA INPUT
98,99	CS13,14	O	CHIP SELECT OUTPUT
100	READY	O	V55 READY OUTPUT

UPD65612-015-3BE (CBR92)

PIN ASSIGNMENT



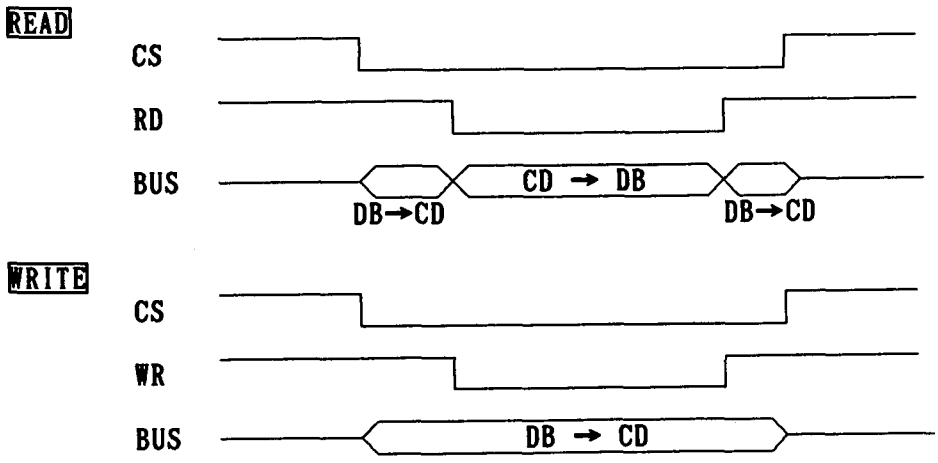
UPD65612-015-3BE (CBR92)

PIN FUNCTIONS

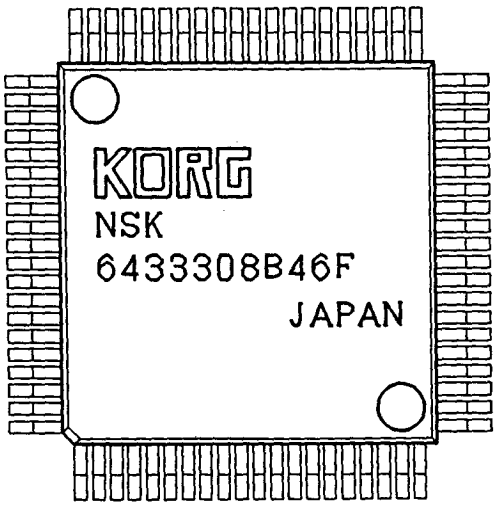
PIN NAME	I/O	FUNCTION
A16-0	I	ADDRESS INPUT
CS	I	CHIP SELECT INPUT
RD	I	READ STROBE INPUT
WR	I	WRITE STROBE INPUT
CCE	O	CARD CHIP SELECT OUTPUT
COE	O	CARD OUTPUT ENABLE
CAF-0(CA16-0)	O	CARD ADDRESS OUTPUT
DB7-0	I/O	CPU DATA BUS
CD7-0	I/O	CARD DATA BUS

UPD65612-015-3BE (CBR92)

TIMMING CHART



HD6433308B46F (NKS)
PIN ASSIGNMENT

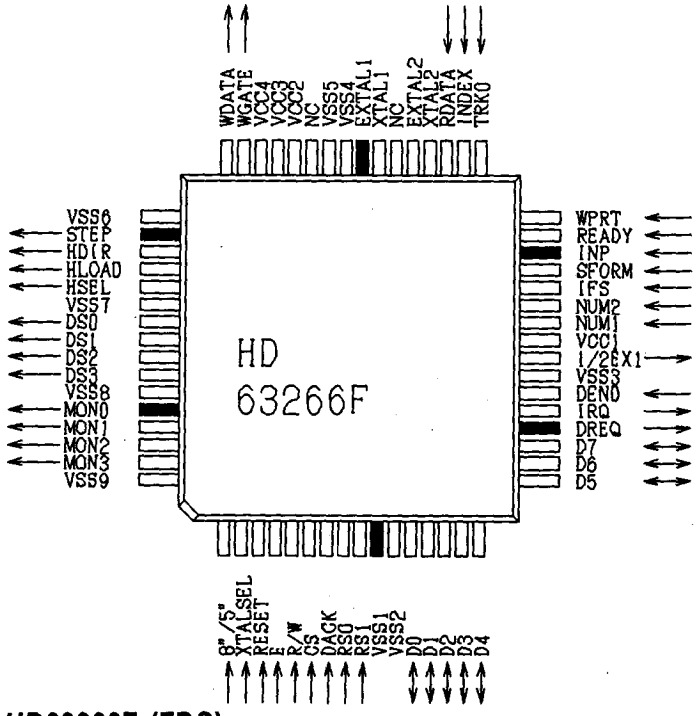


HD6433308B46F (NKS)
PIN FUNCTIONS

PIN NAME	I/O	FUNCTION
Vcc	---	POTENTIAL (+)
Vss	---	GROUND
XTAL	I	CRYSTAL INPUT
EXTAL	I	EXTERNAL CLOCK
SYSCK	O	SYSTEM CLOCK
RES	I	RESET SIGNAL
STBY	I	STANDBY SIGNAL
MD0,MD1	I	MODE SELECT
A0-A15	O	ADDRESS BUS
D0-D7	I/O	DATA BUS
AS	O	ADDRESS STROBE
RD	O	READ SIGNAL
WR	O	WRITE SIGNAL
WAIT	I	WAIT SIGNAL
NMI	I	NON MASKABLE INTERRUPT SIGNAL
IRQ0-IRQ7	I	INTERRUPT REQUEST SIGNAL
FTCI	I	COUNTER CLOCK
FTOA,FTOB	O	OUTPUT COMPARE SIGNAL
FTIA-FTID	I	INPUT CAPTURE SIGNAL
TMCI0,TMCI1	I	COUNTER CLOCK
TMRI0,TMRI1	I	COUNTER RESET SIGNAL
TMO0,TMO1	O	TIMMER SIGNAL
PW0,PW1	O	PWM TIMMER SIGNAL
TxD0,TxD1	O	SERIAL TRANSMIT DATA
RxD0,RxD1	I	SERIAL RECEIVE DATA
SCK0,SCK1	I/O	SERIAL CLOCK
AN0-AN7	I	ANALOG SIGNAL
ADTRG	I	EXTERNAL TRIGGER FOR A/D CONVERTOR
AVcc	---	ANALOG POTENTIAL (+)
AVss	---	ANALOG GROUND
DA0,DA1	O	D/A SIGNAL
AVcc	---	ANALOG POTENTIAL (+)
AVss	---	ANALOG GROUND
P10-P17	I/O	PORT1
P20-P27	I/O	PORT2
P30-P37	I/O	PORT3
P40-P47	I/O	PORT4
P50-P57	I/O	PORT5
P60-P67	I/O	PORT6
P70-P77	I	PORT7
P80-P87	I/O	PORT8
P90-P97	I/O	PORT9

HD63266F (FDC)

PIN ASSIGNMENT

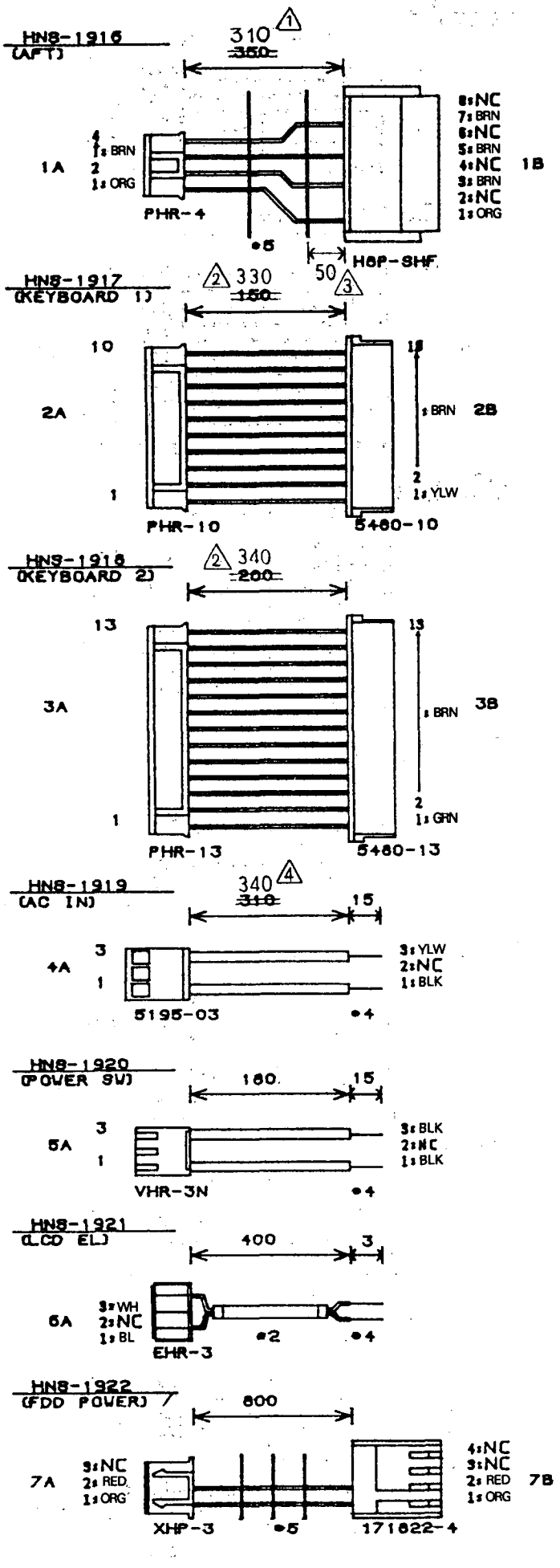


HD63266F (FDC)

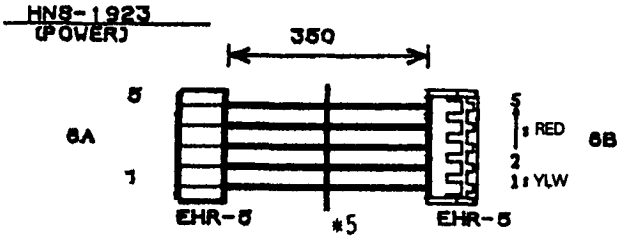
PIN I/O

PIN NO	I/O	PIN NAME	PIN NO	I/O	PIN NAME
1	I	8"/5"	33	I	TRK0
2	I	XTALSEL	34	I	INDEX
3	I	RESET	35	I	RDATA
4	I	E,(RD)	36	---	XTAL2
5	I	R/W(WR)	37	---	EXTAL2
6	I	CS	38	---	NC
7	I	DACK	39	---	XTAL1
8	I	RAS0	40	---	EXTAL1
9	I	RAS1	41	---	Vss4
10	---	Vss1	42	---	Vss5
11	---	Vss2	43	---	NC
12	I/O	D0	44	---	Vcc2
13	I/O	D1	45	---	Vcc3
14	I/O	D2	46	---	Vcc4
15	I/O	D3	47	O	WGATE
16	I/O	D4	48	O	WDATA
17	I/O	D5	49	---	Vss6
18	I/O	D6	50	O	STEP
19	I/O	D7	51	O	HDIR
20	O	DREQ	52	O	HLOAD
21	O	IRQ	53	O	HSEL
22	I	DEND	54	---	Vss7
23	---	Vss3	55	O	DS0
24	O	1/2EX1	56	O	DS1
25	---	Vcc1	57	O	DS2
26	I	NUM1	58	O	DS3
27	I	NUM2	59	---	Vss8
28	I	IFS	60	O	MON0
29	I	SFORM	61	O	MON1
30	I	INP	62	O	MON2
31	I	READY	63	O	MON3
32	I	WPRT	64	---	Vss9

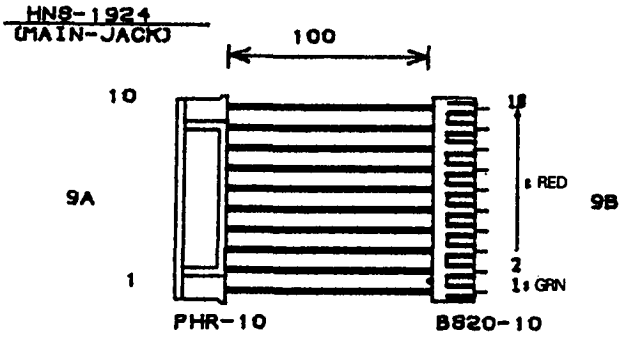
FOR HARNESSES



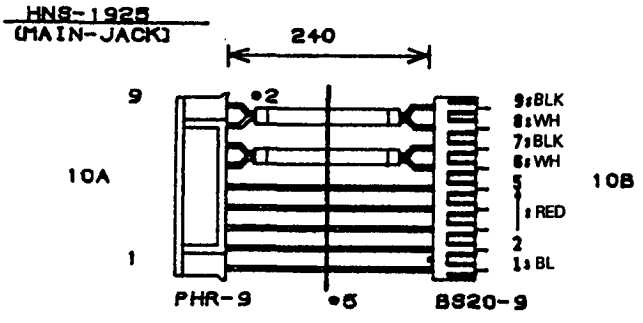
HNS-1923
(POWER)



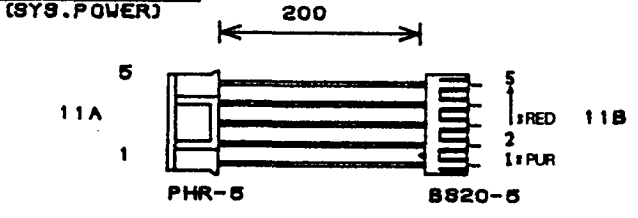
HNS-1924
(MAIN-JACK)



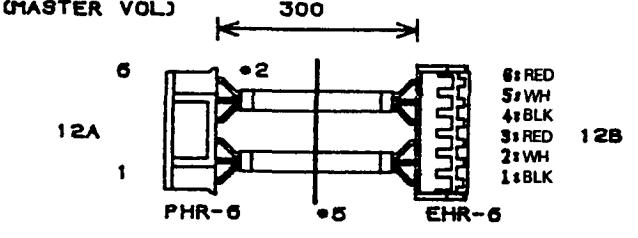
HNS-1925
(MAIN-JACK)



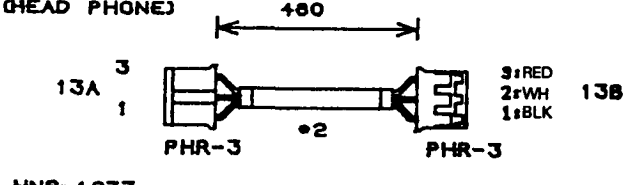
HNS-1926
(SYS.POWER)



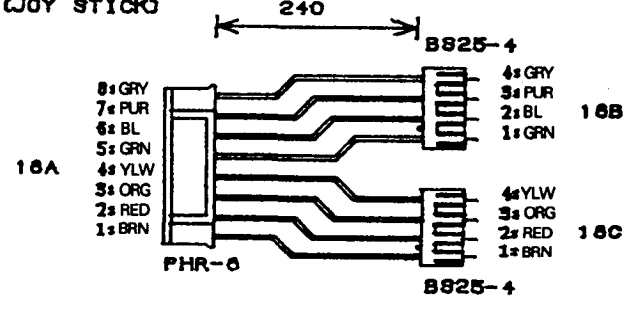
HNS-1927
(MASTER VOL)



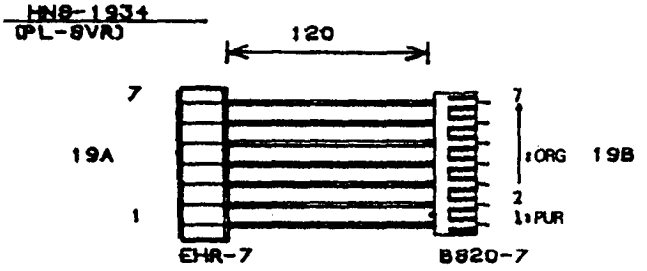
HNS-1928
(HEAD PHONE)



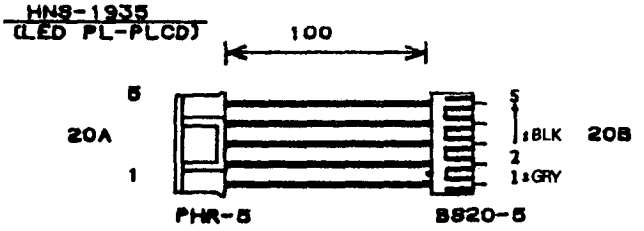
HNS-1933
(JOY STICK)



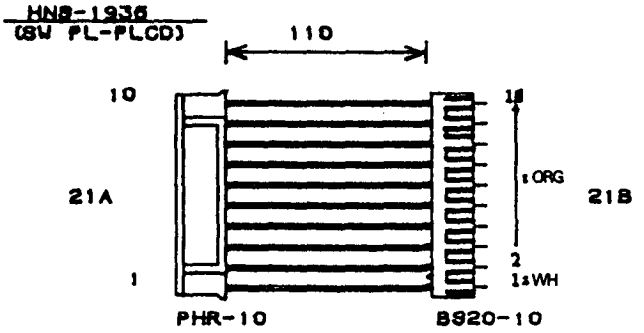
HNS-1934
(PL-SVR)



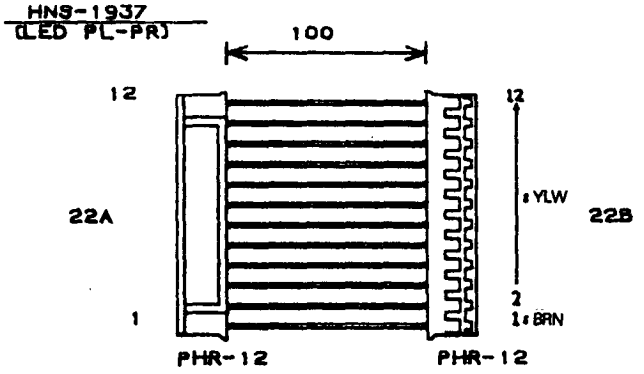
HNS-1935
(LED PL-PLCD)



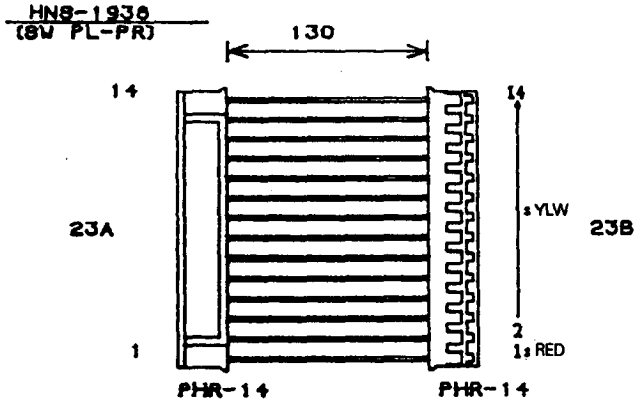
HNS-1936
(SW PL-PLCD)



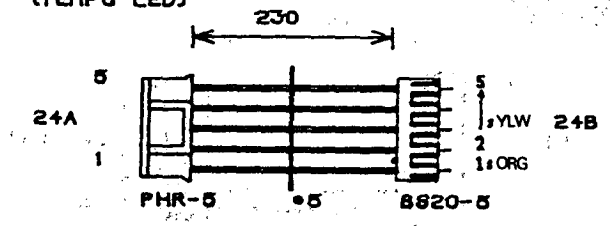
HNS-1937
(LED PL-PR)



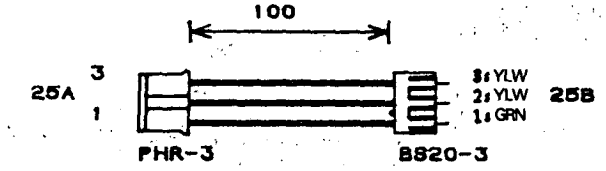
HNS-1938
(SW PL-PR)



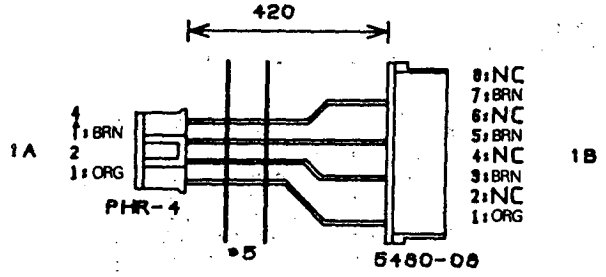
HNS-1939
(TEMPO LED)



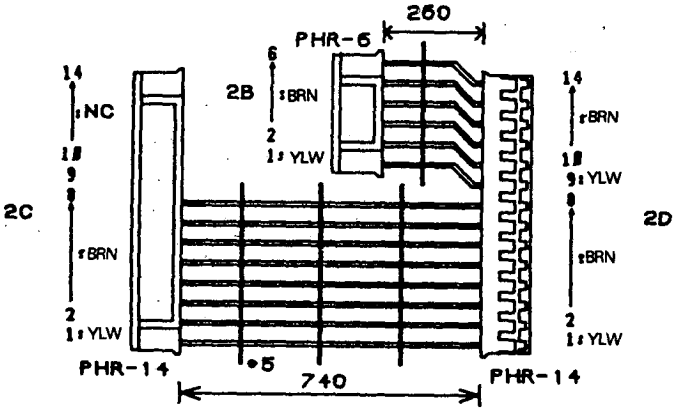
HNS-1940
(PLCD-RE)



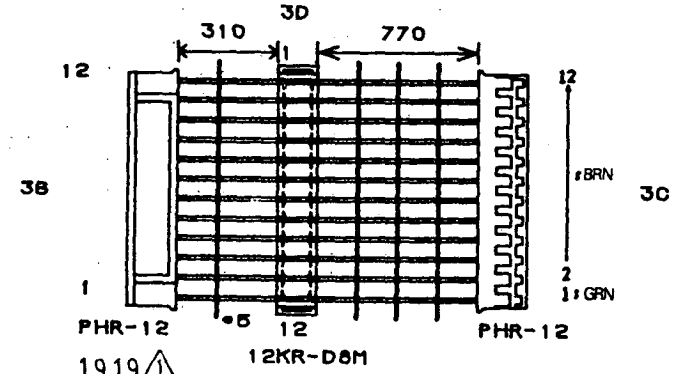
HNS-1941
(AFT)



HNS-1942
(KEYBOARD 1)

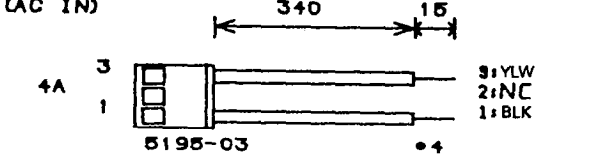


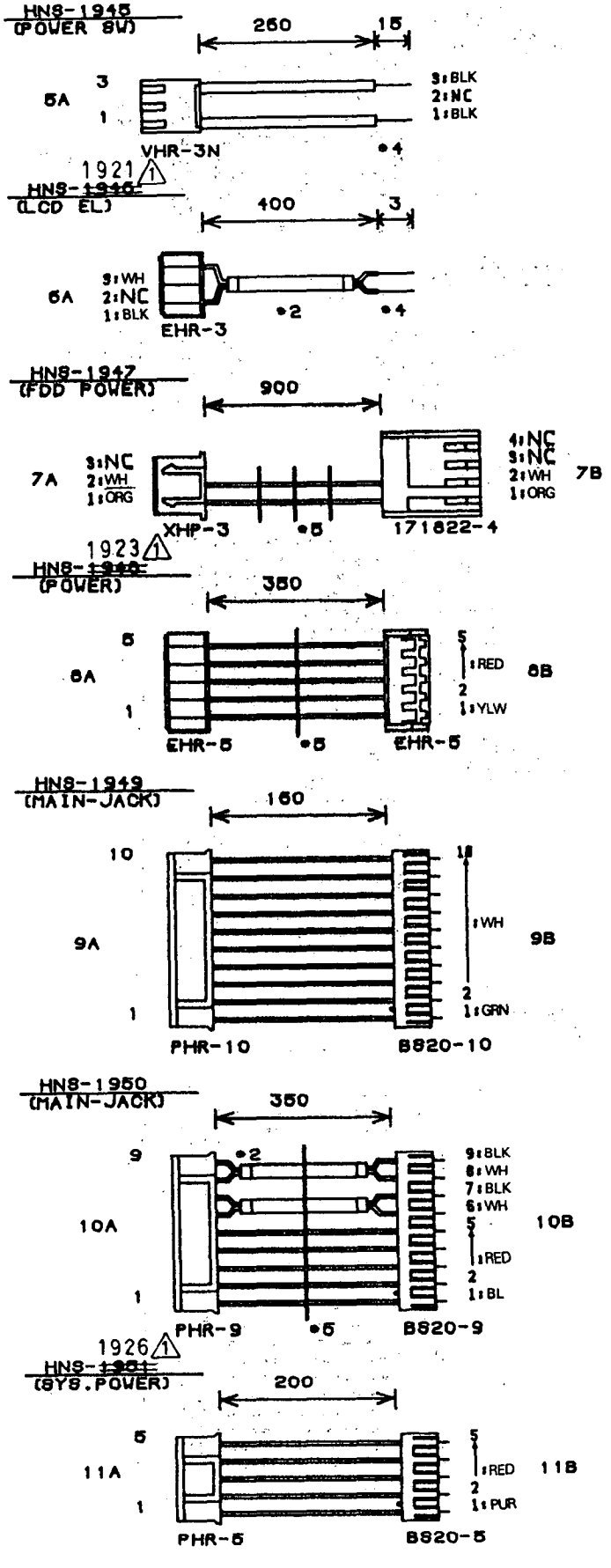
HNS-1943
(KEYBOARD 2)



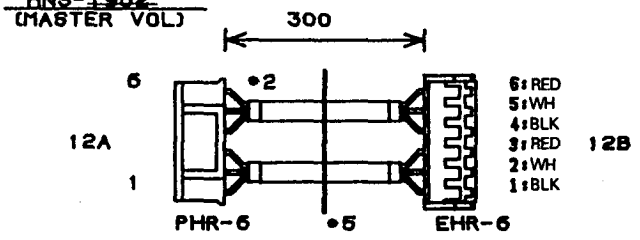
1919 ⚠

HNS-1944
(AC IN)

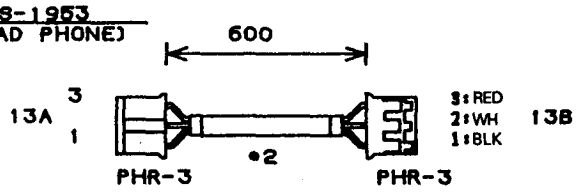



HNS-1945
(POWER SW)
260
15
5A
3
1
3:BLK
2:NC
1:BLK
VHR-3N
•4
1921
HNS-1946
(LCD EL)
400
3
6A
3:WH
2:NC
1:BLK
•2
•4
EHR-3
HNS-1947
(FDD POWER)
900
7A
3:NC
2:WH
1:ORG
4:NC
3:NC
2:WH
1:ORG
7B
XHP-3
•5
171822-4
1923
HNS-1948
(POWER)
350
8A
5
1
5
2
1:RED
1:YLW
8B
EHR-5
•5
EHR-5
HNS-1949
(MAIN-JACK)
160
9A
10
1
1:WH
1:GRN
9B
PHR-10
8820-10
HNS-1950
(MAIN-JACK)
350
10A
9
1
•2
9:BLK
8:WH
7:BLK
6:WH
5:RED
2:BL
10B
PHR-9
•5
8820-9
1926
HNS-1951
(SYS.POWER)
200
11A
5
1
5
2
1:RED
1:PUR
11B
PHR-5
8820-5

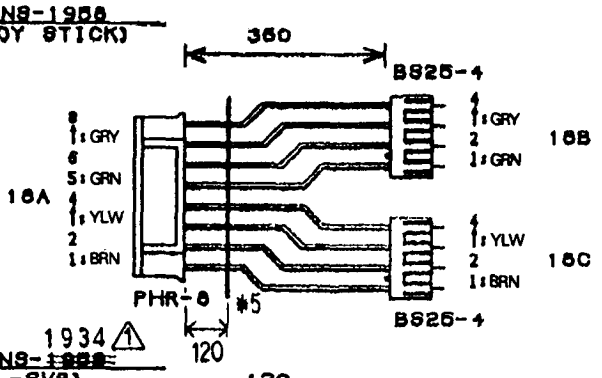
1927⚠1
HNS-1952
(MASTER VOL)



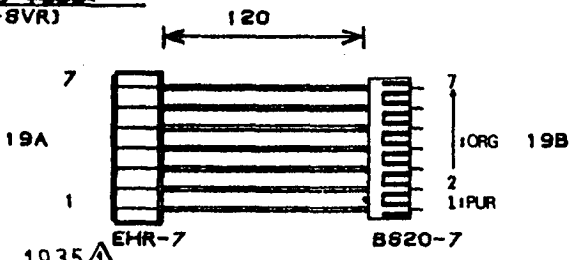
HNS-1953
(HEAD PHONE)



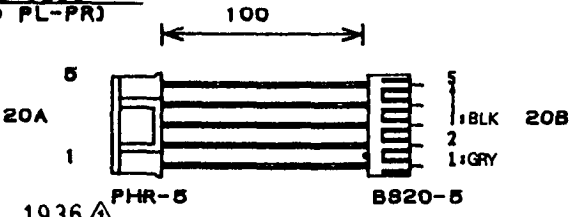
HNS-1958
(JOY STICK)



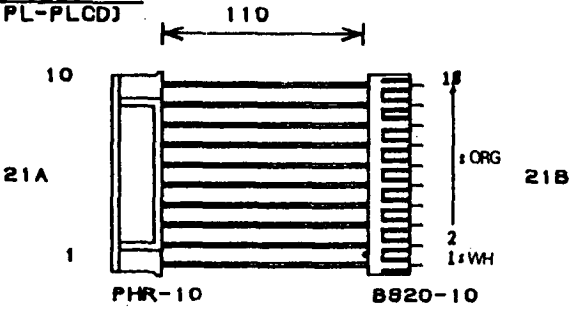
1934⚠1
HNS-1958
(PL-SVR)



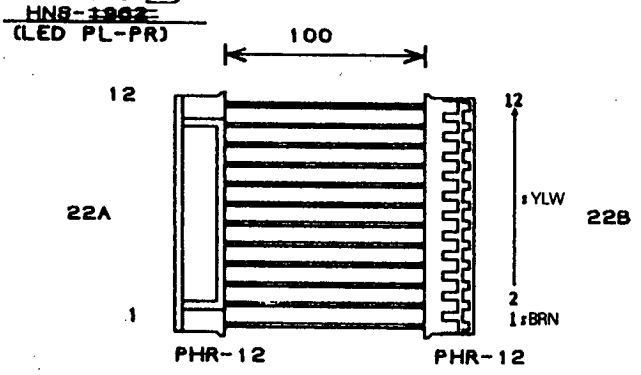
1935⚠1
HNS-1960
(LED PL-PR)



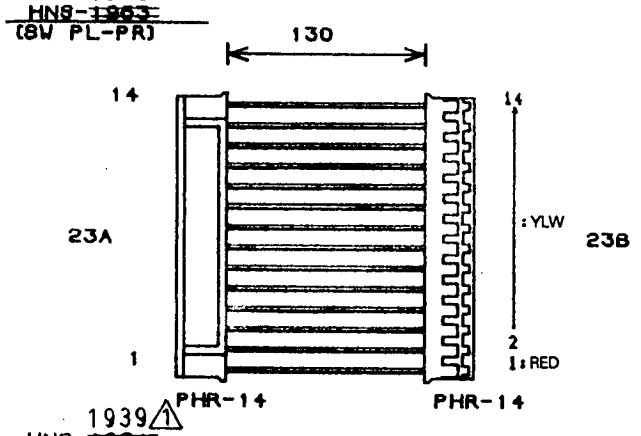
1936⚠1
HNS-1961
(SW PL-PLCD)



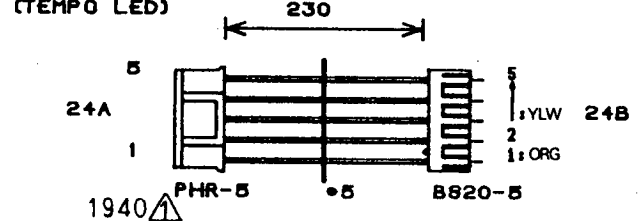
1937⚠1
HNS-~~1962~~
(LED PL-PR)



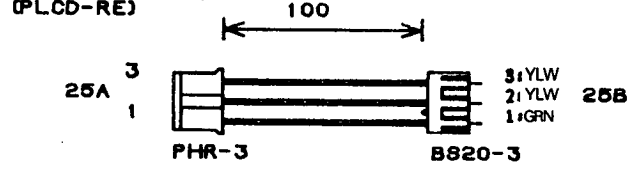
1938⚠1
HNS-~~1963~~
(SW PL-PR)



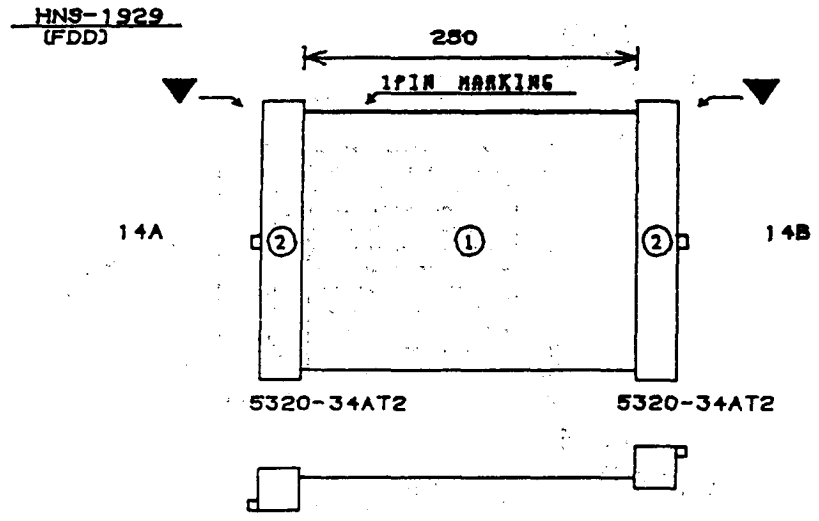
1939⚠1
HNS-~~1964~~
(TEMPO LED)

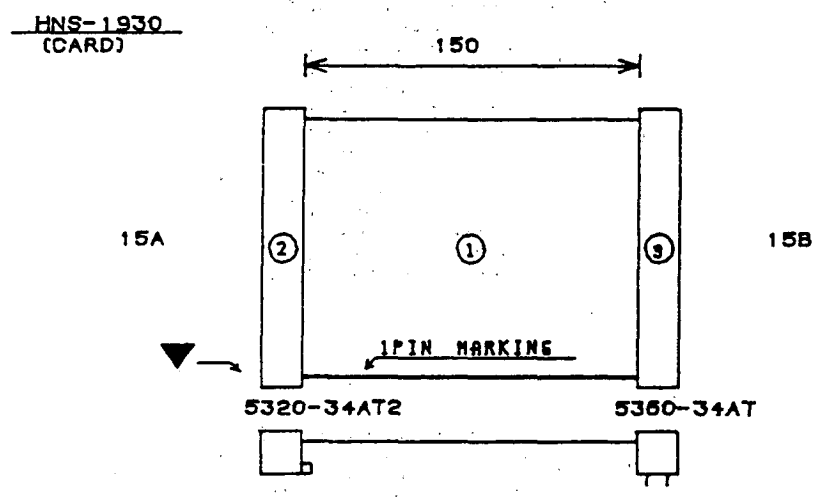


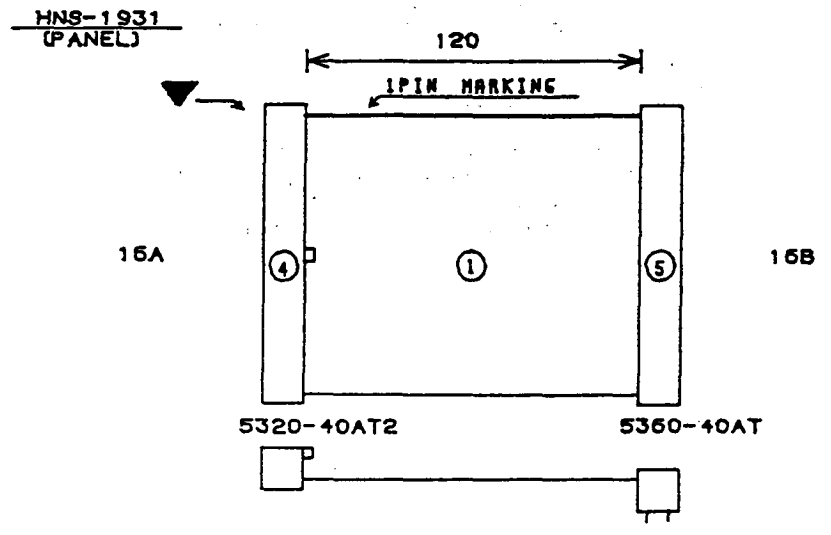
1940⚠1
HNS-~~1965~~
(PLCD-RE)



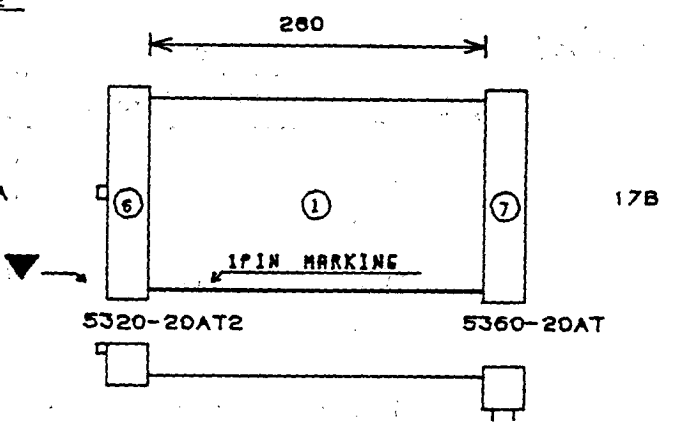
FOR FLAT CABLE



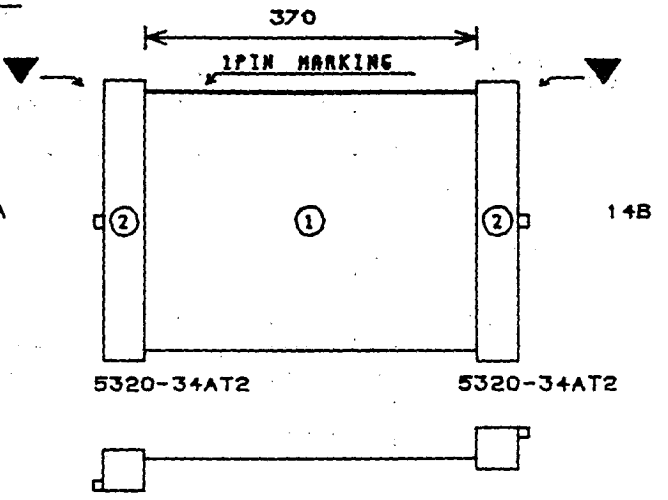




HNS-1932
(LCD)

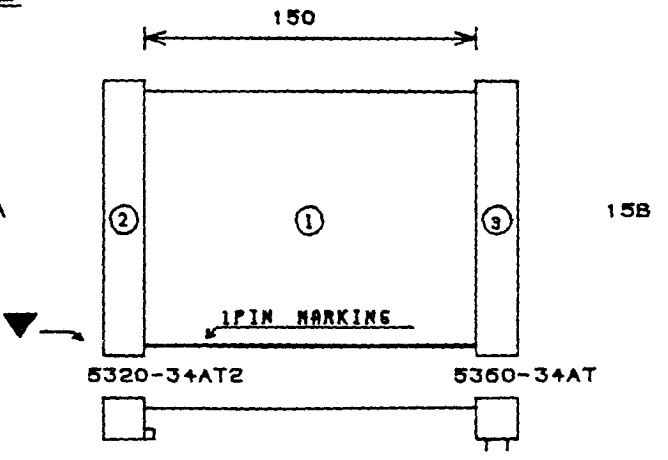


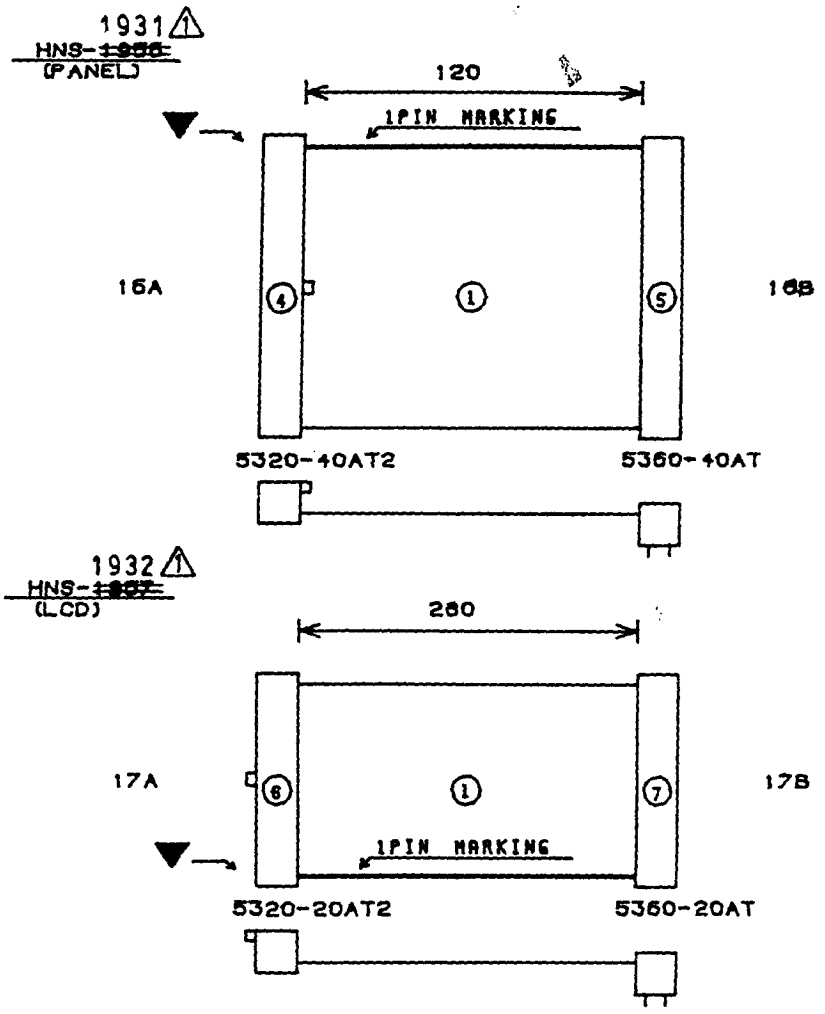
HNS-1954
(FDD)



1930 ⚠1

~~HNS-1955~~
(CARD)




1931
HNS-~~1966~~
(PANEL)
120
1PIN MARKING
16A
16B
4
1
5
5320-40AT2
5360-40AT
1932
HNS-~~1967~~
(LCD)
280
17A
17B
6
1
7
1PIN MARKING
5320-20AT2
5360-20AT

FOR MULTI Sounds

No.	MultiSound	GM1	GM2	typeA	typeB
000	[A.Piano 1]	...	011	...	...
001	[A.Piano1LP]	...	011	...	...
002	[A.Piano 2]	...	010	...	...
003	[E.Piano 1]	006	...	...	...
004	[E.Piano1LP]	006	...	...	...
005	[E.Piano 2]	001	...	004	...
006	[E.Piano2LP]	001	...	004	...
007	[Soft EP]	...	009	...	...
008	[Soft EP LP]	...	009	...	...
009	[Hard EP]	...	...	009	...
010	[Hard EP LP]	...	...	009	...
011	[PianoPad 1]	...	...	002	...
012	[PianoPad 2]	...	...	002	...
013	[Clav]	005	002	...	...
014	[Clav LP]	005	002	...	...
015	[Harpsicord]	008	...	...	...
016	[HarpsicdLP]	008	...	...	...
017	[PercOrgan1]	...	...	007	...
018	[PercOrg1LP]	...	...	007	...
019	[PercOrgan2]	002	004	...	...
020	[PercOrg2LP]	002	004	...	...
021	[Organ 1]	...	...	006	...
022	[Organ 1 LP]	...	...	006	...
023	[Organ 2]	...	...	006	...
024	[Organ 2 LP]	...	...	006	...
025	[Organ 3]	...	012	...	...
026	[Organ 4]	...	...	012	...
027	[Organ 5]	...	...	009	...
028	[RotaryOrg1]	004	...	...	...
029	[RotaryOrg2]	...	...	011	...
030	[PipeOrgan1]	006	...	...	...
031	[PipeOrg1LP]	006	...	...	...
032	[PipeOrgan2]	...	...	007	...
033	[PipeOrg2LP]	...	...	007	...
034	[PipeOrgan3]	009	...	...	...
035	[PipeOrg3LP]	009	...	...	...
036	[Musette]	006	...	...	...
037	[Musette V]	006	...	...	...
038	[Bandneon]	...	...	012	...
039	[BandneonLP]	...	...	012	...

No.	MultiSound	GM1	GM2	typeA	typeB
040	[Accordion]	009	...	...	...
041	[AcordionLP]	009	...	...	...
042	[Harmonica]	011	...	...	...
043	[G.Guitar]	002	008	...	...
044	[G.GuitarLP]	002	008	...	...
045	[F.Guitar]	002	006	...	...
046	[F.GuitarLP]	002	006	...	...
047	[F.Guitar V]	002	004	...	...
048	[A.Gtr Harm]	...	...	002	...
049	[E.Guitar 1]	001	007	...	...
050	[E.Guitr1 V]	001	007	...	...
051	[E.Guitar 2]	...	...	009	...
052	[E.Guitar 3]	...	005	...	...
053	[MuteGuitar]	002	006	...	...
054	[Funky Gtr]	...	...	006	...
055	[FunkyGtr V]	...	...	005	...
056	[E.Gtr Harm]	...	...	005	...
057	[DistGuitar]	019	...	...	...
058	[Dist GtrLP]	019	...	...	...
059	[DistGuitrV]	019	...	...	...
060	[Over Drive]	016	...	...	...
061	[OverDrv LP]	016	...	...	...
062	[OverDrv F4]	008	...	...	...
063	[MuteDstGtr]	...	...	021	...
064	[MtDstGtr V]	...	...	021	...
065	[PowerChord]	...	...	047	...
066	[PowerChd V]	...	...	008	...
067	[OverDvChrd]	008	...	043	...
068	[Gtr Slide]	...	...	002	...
069	[GtrSlide V]	...	...	002	...
070	[Sitar 1]	002	...	...	...
071	[Sitar 2]	...	...	006	...
072	[Sitar 2 LP]	...	...	006	...
073	[Santur]	003	...	...	...
074	[Bouzouki]	...	...	005	...
075	[BouzoukiLP]	...	...	005	...
076	[Banjo]	005	...	...	...
077	[Shamisen]	004	002	...	...
078	[Koto]	006	...	...	...
079	[Uood]	...	...	003	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

No.	MultiSound	GM1	GM2	typeA	typeB
080	[Harp]	...	010	...	...
081	[MandlinTrm]	...	...	007	...
082	[A.Bass 1]	...	006	...	...
083	[A.Bass1 LP]	...	006	...	...
084	[A.Bass 2]	...	...	006	...
085	[A.Bass2 LP]	...	...	006	...
086	[E.Bass 1]	002	004	...	...
087	[E.Bass1 LP]	002	004	...	...
088	[E.Bass 2]	...	...	008	...
089	[E.Bass2 LP]	...	...	008	...
090	[Pick Bass1]	004	002	...	...
091	[PicBass1LP]	004	002	...	...
092	[Pick Bass2]	...	...	008	...
093	[Fretless]	001	004	...	...
094	[FretlessLP]	001	004	...	...
095	[Slap Bass1]	006	001	...	...
096	[Slap Bass2]	003	002	...	...
097	[SlpBass2LP]	003	002	...	...
098	[Slap Bass3]	...	...	010	...
099	[SynthBass1]	003	002	...	...
100	[SynBass1LP]	003	002	...	...
101	[SynthBass2]	003	002	...	...
102	[SynBass2LP]	003	002	...	...
103	[House Bass]	...	...	006	...
104	[FM Bass]	...	...	004	...
105	[FM Bass LP]	...	...	004	...
106	[Kalimba]	...	002	...	...
107	[Music Box]	001	001	...	...
108	[MusicBoxLP]	001	001	...	...
109	[Log Drum]	...	...	005	...
110	[Marimba]	...	005	...	...
111	[Xylophone]	...	007	...	...
112	[Vibe]	...	005	...	...
113	[Celesta]	...	002	...	...
114	[Glocken]	...	005	...	...
115	[BrightBell]	...	003	...	...
116	[B.Bell LP]	...	003	...	...
117	[Metal Bell]	...	002	...	...
118	[M.Bell LP]	...	002	...	...
119	[Gamelan]	...	...	004	...

No.	MultiSound	GM1	GM2	typeA	typeB
120	[Pole]	...	...	001	...
121	[Pole LP]	...	...	001	...
122	[Tubular]	005	...	...	...
123	[Split Drum]	...	008	004	...
124	[Split Bell]	...	017	007	...
125	[Flute]	...	007	...	...
126	[Pan Flute]	003	...	...	...
127	[PanFluteLP]	003	...	...	...
128	[Shakuhachi]	006	...	...	...
129	[ShakhachLP]	006	...	...	...
130	[Bottle]	003	...	...	...
131	[Recorder]	005	...	...	...
132	[Ocarina]	002	...	...	...
133	[Oboe]	007	...	...	...
134	[EnglishHrn]	015	...	...	...
135	[Eng.HornLP]	015	...	...	...
136	[BasoonOboe]	004	008	...	...
137	[BsonOboeLP]	004	008	...	...
138	[Clarinet]	011	...	...	...
139	[ClarinetLP]	011	...	...	...
140	[Bari Sax]	011	...	...	...
141	[Bari.SaxLP]	011	...	...	...
142	[Tenor Sax]	013	...	...	...
143	[T.Sax LP]	013	...	...	...
144	[Alto Sax]	009	...	...	...
145	[A.Sax LP]	009	...	...	...
146	[SopranoSax]	012	...	...	...
147	[S.Sax LP]	012	...	...	...
148	[Tuba]	001	006	...	...
149	[Tuba LP]	001	006	...	...
150	[Horn]	001	012	...	...
151	[FlugelHorn]	...	...	007	...
152	[Trombone 1]	003	005	...	...
153	[Trombone 2]	001	008	...	...
154	[Trumpet]	006	003	...	...
155	[Trumpet LP]	006	003	...	...
156	[Mute TP]	009	...	...	...
157	[Mute TP LP]	009	...	...	...
158	[Brass 1]	...	...	009	...
159	[Brass 1 LP]	...	...	009	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

No.	MultiSound	GM1	GM2	typeA	typeB
160	[Brass 2]	004	...	...	...
161	[Brass 2 LP]	004	...	...	...
162	[StringEns.]	009	004	005	...
163	[StrEns. V1]	009	004	005	...
164	[StrEns. V2]	009	004	005	...
165	[StrEns. V3]	009	004	004	...
166	[AnaStrings]	005	...	...	...
167	[PWM]	005	...	...	...
168	[Violin]	010	...	...	...
169	[Cello]	006	...	...	...
170	[Cello LP]	006	...	...	...
171	[Pizzicato]	...	007	...	...
172	[Voice]	002	...	...	...
173	[Choir]	006	...	...	...
174	[Soft Choir]	001	...	...	...
175	[Air Vox]	004	...	...	...
176	[Doo Voice]	007	...	...	...
177	[DooVoiceLP]	007	...	...	...
178	[Syn Vox]	002	...	...	...
179	[Syn Vox LP]	002	...	...	...
180	[White Pad]	002	...	...	...
181	[Ether Bell]	004	...	...	...
182	[E.Bell LP]	004	...	...	...
183	[Mega Pad]	002	...	...	...
184	[Spectrum 1]	...	...	003	...
185	[Spectrum 2]	...	...	002	...
186	[Stadium]	002	...	...	...
187	[Stadium NT]	002	...	...	...
188	[BrushNoise]	013	...	...	...
189	[BruNoiseNT]	001	...	...	...
190	[Steel Drum]	004	...	...	...
191	[SteelDrmLP]	004	...	...	...
192	[BrushSwirl]	013	...	...	...
193	[Belltree]	001	...	...	...
194	[BelltreeNT]	001	...	...	...
195	[BeltreV NT]	001	...	...	...
196	[Tri Roll]	004	...	...	...
197	[TriRoll NT]	001	...	...	...
198	[Telephon]	002	...	...	...
199	[TelephonNT]	001	...	...	...

No.	MultiSound	GM1	GM2	typeA	typeB
200	[Clicker]	003	...	...	...
201	[Clicker NT]	001	...	...	...
202	[Crickets 1]	001	...	...	...
203	[Cricktslnt]	001	...	...	...
204	[Crickets 2]	...	...	001	...
205	[Cricktslnt]	...	...	001	...
206	[Magic Bell]	...	...	001	...
207	[Sporing]	...	001	...	...
208	[Rattle]	...	002	...	...
209	[Kava 1]	...	...	001	...
210	[Kava 2]	...	...	001	...
211	[Fever 1]	001	...	...	...
212	[Fever 2]	001	...	...	...
213	[Zappers 1]	...	...	001	...
214	[Zappers 2]	...	...	001	...
215	[Bugs]	...	014	...	...
216	[Surfy]	001	...	...	...
217	[SleighBell]	002	...	...	...
218	[Elec Beat]	...	...	002	...
219	[Idling]	...	003	...	...
220	[EthnicBeat]	...	...	013	...
221	[Taps]	001	001	004	...
222	[Tap 1]	001	...	002	...
223	[Tap 2]	001	...	002	...
224	[Tap 3]	001	...	002	...
225	[Tap 4]	001	001	001	...
226	[Tap 5]	001	001	...	...
227	[Orch Hit]	001	...	...	...
228	[SnareRl/Ht]	...	...	002	...
229	[Syn Snare]	001	...	...	...
230	[Rev Snare]	...	...	013	...
231	[PowerSnare]	...	001	...	...
232	[Orch Perc]	002	002	001	...
233	[Crash Cym]	013	...	...	...
234	[CrashCymLP]	013	...	...	...
235	[CrashLP NT]	001	...	...	...
236	[China Cym]	002	...	...	...
237	[Splash Cym]	002	...	...	...
238	[Orch Crash]	...	...	013	...
239	[Tite HH]	001	...	...	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

No.	MultiSound	GM1	GM2	typeA	typeB
240	[Tite HH NT]	001	...	...	...
241	[Bell Ride]	...	002	...	...
242	[Ping Ride]	...	002	...	...
243	[Timpani]	...	001	...	...
244	[Timpani LP]	...	001	...	...
245	[Cabasa]	013	...	...	...
246	[Cabasa NT]	001	...	...	...
247	[Agogo]	...	001	...	...
248	[Cow Bell]	...	001	...	...
249	[Low Bongo]	...	001	...	...
250	[Claves]	...	001	...	...
251	[Timbale]	...	001	...	...
252	[WoodBlock1]	...	001	...	...
253	[WoodBlock2]	...	001	...	...
254	[WoodBlock3]	...	001	...	...
255	[Taiko Hit]	...	001	...	...
256	[Syn Claves]	...	001	...	...
257	[Melo Tom]	...	001	...	...
258	[ProccesTom]	001	...	...	...
259	[Syn Tom 1]	...	001	...	...
260	[Syn Tom 2]	...	002	...	...
261	[VocalSnare]	...	...	002	...
262	[Zap 1]	...	...	001	...
263	[Zap 2]	...	...	001	...
264	[Fret Zap 1]	001	...	...	...
265	[Fret Zap 2]	001	...	...	...
266	[Vibra Slap]	013	...	...	...
267	[Indust]	...	...	001	...
268	[Thing]	...	...	002	...
269	[Thing NT]	...	...	001	...
270	[FingerSnap]	...	...	001	...
271	[FingSnapNT]	...	...	001	...
272	[Tambourine]	...	001	...	...
273	[Hand Clap]	...	001	...	...
274	[HandClapNT]	...	001	...	...
275	[Gun Shot]	001	...	...	...
276	[Castanet]	...	001	...	...
277	[CastanetNT]	...	001	...	...
278	[Snap]	...	...	001	...
279	[Snap NT]	...	...	001	...

No.	MultiSound	GM1	GM2	typeA	typeB
280	[Gt Scratch]	001	...	...	...
281	[Side Stick]	...	001	...	...
282	[SideStikNT]	...	001	...	...
283	[TimbleSide]	...	...	001	...
284	[TimblSidNT]	...	...	001	...
285	[Syn Rim]	...	001	...	...
286	[Syn Rim NT]	...	001	...	...
287	[Open HH]	...	001	...	...
288	[OpenSyn HH]	001	...	...	...
289	[CloseSynHH]	...	001	...	...
290	[Sagat]	...	...	001	...
291	[Sagat NT]	...	...	001	...
292	[Sagatty]	...	...	001	...
293	[Sagatty NT]	...	...	001	...
294	[JingleBell]	002	...	...	...
295	[Taiko]	...	002	...	...
296	[Slap Bongo]	...	...	001	...
297	[Open Conga]	...	001	...	...
298	[Slap Conga]	...	...	001	...
299	[Palm Conga]	...	...	001	...
300	[Mute Conga]	...	001	...	...
301	[Tabla 1]	...	...	001	...
302	[Tabla 2]	...	...	001	...
303	[Maracas]	...	001	...	...
304	[SynMaracas]	...	001	...	...
305	[SynMarcsNT]	...	001	...	...
306	[MuteTriang]	001	...	...	...
307	[OpenTriang]	...	001	...	...
308	[Guiro]	...	002	...	...
309	[Guiro LP]	...	002	...	...
310	[Scratch Hi]	001	...	...	...
311	[ScratchHiNT]	001	...	...	...
312	[Scratch Lo]	001	...	...	...
313	[ScratcLoNT]	001	...	...	...
314	[ScratchDbl]	...	...	001	...
315	[ScratDblNT]	...	...	001	...
316	[Mini 1a]	...	001	009	...
317	[Digital 1]	...	002	008	...
318	[VS 102]	...	...	010	...
319	[VS 48]	...	001	009	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

No.	MultiSound	GM1	GM2	typeA	typeB
320	[VS 52]	...	001	009	...
321	[VS 58]	009	001	...	...
322	[VS 71]	...	001	009	...
323	[VS 72]	...	001	009	...
324	[VS 88]	...	001	009	...
325	[VS 89]	...	001	009	...
326	[13-35]	...	001	009	...
327	[DWGSOrgan1]	...	001	009	...
328	[DWGSOrgan2]	...	001	009	...
329	[DWGS E.P.]	...	001	009	...
330	[Saw]	009	001	...	...
331	[Square]	009	001	...	...
332	[Ramp]	...	001	009	...
333	[Pulse 25%]	...	001	009	...
334	[Pulse 8%]	...	001	009	...
335	[Pulse 4%]	...	001	009	...
336	[Syn Sine]	...	010	...	...
337	[Sine]	001	009	...	...
338	[DJ Kit 1]	009	001	009	...
339	[DJ Kit 2]	010	010	016	...
340	[A.Piano 3]	...	...	...	088

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385
typeA: LH537FFS typeB: UPD23C16000BGX-835

FOR DRUM Sounds

No.	DrumSound	GM1	GM2	typeA	typeB
000	[Fat Kick]	...	...	001	...
001	[Rock Kick]	...	...	001	...
002	[Ambi.Kick]	...	...	001	...
003	[Crisp Kick]	...	...	001	...
004	[Punch Kick]	...	...	001	...
005	[Real Kick]	...	001	...	...
006	[Dance Kick]	...	...	001	...
007	[Gated Kick]	...	...	001	...
008	[ProcesKick]	...	001	...	...
009	[Metal Kick]	...	001	...	...
010	[Syn Kick 1]	...	001	...	...
011	[Syn Kick 2]	...	...	001	...
012	[Syn Kick 3]	...	...	001	...
013	[Orch B.Drm]	...	...	001	...
014	[Snare 1]	...	...	001	...
015	[Snare 2]	...	...	001	...
016	[Snare 3]	...	...	001	...
017	[Snare 4]	...	...	001	...
018	[PicloSnare]	...	...	001	...
019	[Soft Snare]	...	...	001	...
020	[LightSnare]	...	001	...	...
021	[TightSnare]	...	...	001	...
022	[Ambi.Snare]	...	...	001	...
023	[Rev Snare]	...	...	001	...
024	[RollSnare1]	...	...	001	...
025	[RollSnare2]	...	...	001	...
026	[Rock Snare]	...	001	...	...
027	[GatedSnare]	...	001	...	...
028	[PowerSnare]	...	001	...	...
029	[Syn Snare1]	...	001	...	...
030	[Syn Snare2]	001	...	...	...
031	[Gun Shot]	001	...	...	...
032	[Brush Slap]	...	001	...	...
033	[BrushSwish]	001	...	...	...
034	[BrushSwirl]	001	...	...	...
035	[Brush Tap]	...	001	...	...
036	[Side Stick]	...	001	...	...
037	[Syn Rim]	...	001	...	...
038	[VocalSnr 1]	...	...	001	...
039	[VocalSnr 2]	...	...	001	...
040	[Crash Cym]	001	...	...	...
041	[Crash LP]	001	...	...	...
042	[China Cym]	001	...	...	...
043	[China LP]	001	...	...	...
044	[Splash Cym]	001	...	...	...
045	[Splash LP]	001	...	...	...
046	[Orch Crash]	...	...	001	...
047	[OrchCym LP]	...	...	001	...
048	[Tite HH]	001	...	...	...
049	[Open HH]	...	001	...	...
050	[Pedal HH]	001	...	...	...
051	[CloseSynHH]	...	001	...	...
052	[Open SynHH]	001	...	...	...
053	[Sagat]	...	...	001	...
054	[Ride Edge]	...	001	...	...
055	[Ride Cup]	...	001	...	...
056	[Ride Cym 1]	...	...	001	...
057	[Ride Cym 2]	...	...	001	...
058	[Tom Hi]	...	001	...	...
059	[Tom Lo]	...	001	...	...
060	[ProcessTom]	001	...	...	...
061	[SynTom1 Hi]	...	001	...	...
062	[SynTom1 Lo]	...	001	...	...
063	[Syn Tom 2]	...	001	...	...
064	[Brush Tom]	...	001	...	...
065	[Agogo]	...	001	...	...
066	[Lo Bongo]	...	001	...	...
067	[Hi Bongo]	...	001	...	...
068	[Slap Bongo]	...	...	001	...
069	[Claves]	...	001	...	...
070	[Syn Claves]	...	001	...	...
071	[Open Conga]	...	001	...	...
072	[Slap Conga]	...	...	001	...
073	[Palm Conga]	...	...	001	...
074	[Mute Conga]	...	001	...	...
075	[Baya 1]	...	...	001	...
076	[Baya 2]	...	...	001	...
077	[Tabla 1]	...	...	001	...
078	[Tabla 2]	...	...	001	...
079	[Tabla 3]	...	...	001	...
080	[Maracas]	...	001	...	...
081	[Cabasa]	001	...	...	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

No.	DrumSound	GM1	GM2	typeA	typeB
082	[SynMaracas]	...	001	...	...
083	[MuteTriang]	001	...	...	...
084	[OpenTriang]	...	001	...	...
085	[Tambourine]	...	001	...	...
086	[Cowbell]	...	001	...	...
087	[SynCowbell]	001	...	...	...
088	[R-Timbal]	...	...	001	...
089	[Hi Timbal]	...	001	...	...
090	[Lo Timbal]	...	001	...	...
091	[WoodBlock1]	...	001	...	...
092	[WoodBlock2]	...	001	...	...
093	[WoodBlock3]	...	001	...	...
094	[Hand Claps]	...	001	...	...
095	[Syn Claps]	...	...	001	...
096	[Zap 1]	...	...	001	...
097	[Zap 2]	...	...	001	...
098	[Scratch Hi]	001	...	...	...
099	[Scratch Lo]	001	...	...	...
100	[ScratchDbl]	...	...	001	...
101	[Thing]	...	...	001	...
102	[Mute Cuica]	...	001	...	...
103	[Open Cuica]	...	001	...	...
104	[Vibraslap]	001	...	...	...
105	[Guiro S]	...	001	...	...
106	[Guiro L]	...	001	...	...
107	[Castanet]	...	001	...	...
108	[FingerSnap]	...	...	001	...
109	[Timbales]	...	...	001	...
110	[Kalimba 1]	...	001	...	...
111	[Kalimba 2]	...	001	...	...
112	[Marimba 1]	...	001	...	...
113	[Marimba 2]	...	001	...	...
114	[Marimba 3]	...	001	...	...
115	[Marimba 4]	...	001	...	...
116	[Xylofon 1]	...	001	...	...
117	[Xylofon 2]	...	001	...	...
118	[Xylofon 3]	...	001	...	...
119	[Log Drum 1]	...	...	001	...
120	[Log Drum 2]	...	...	001	...
121	[Log Drum 3]	...	...	001	...
122	[Log Drum 4]	...	...	001	...

No.	DrumSound	GM1	GM2	typeA	typeB
123	[Log Drum 5]	...	...	001	...
124	[Snap]	...	...	001	...
125	[BrightBell]	...	001	...	...
126	[Metal Bell]	...	001	...	...
127	[Gamelan 1]	...	...	001	...
128	[Gamelan 2]	...	...	001	...
129	[Celeste]	...	001	...	...
130	[Glocken]	...	001	...	...
131	[Vibe 1]	...	001	...	...
132	[Vibe 2]	...	001	...	...
133	[Vibe 3]	...	001	...	...
134	[Vibe 4]	...	001	...	...
135	[Pole]	...	...	001	...
136	[TubulBell1]	001	...	...	...
137	[TubulBell2]	001	...	...	...
138	[TubulBell3]	001	...	...	...
139	[Gt Scratch]	001	...	...	...
140	[Chic 1]	...	...	001	...
141	[Chic 2]	...	...	001	...
142	[Spectrum 1]	...	...	001	...
143	[Spectrum 2]	...	...	001	...
144	[Stadium]	001	...	...	...
145	[BrushNoise]	001	...	...	...
146	[Gt Slide]	...	...	001	...
147	[Bell Tree]	001	...	...	...
148	[Tri Roll]	001	...	...	...
149	[JingleBell]	001	...	...	...
150	[Whistle S]	001	...	...	...
151	[Whistle L]	001	...	...	...
152	[Timpani]	...	001	...	...
153	[Taiko Hi]	...	001	...	...
154	[Taiko Lo]	...	001	...	...
155	[Music Box1]	...	001	...	...
156	[Music Box2]	001	...	...	...
157	[Clicker 1]	001	...	...	...
158	[Clicker 2]	001	...	...	...
159	[Clicker 3]	001	...	...	...
160	[Crickets]	001	...	...	...
161	[Orch Hit]	001	...	...	...
162	[Metronome1]	...	001	...	...
163	[Metronome2]	...	001	...	...

GM1: MB8316200-15PF-G-402-HT GM2: UPD23C16000BGX-385 typeA: LH537FFS typeB: UPD23C16000BGX-835

10. PARTS LIST
(for i3)

PART CODE	PART NAME/SPECIFICATION	P.C.BOARD	NOTE	Q'TY
001151100	P.C.BOARD ASSEMBLY KLM-1511/12	M.PART	JOYSTICK	1
001162400	P.C.BOARD ASSEMBLY KLM-1624	M.PART	PANEL-L	1
001162500	P.C.BOARD ASSEMBLY KLM-1625/28	M.PART	PANEL/ENCODER	1
001162600	P.C.BOARD ASSEMBLY KLM-1626	M.PART	PANEL-R	1
001162700	P.C.BOARD ASSEMBLY KLM-1627	M.PART	SLIDE VR	1
001162900	P.C.BOARD ASSEMBLY KLM-1629	M.PART	JACK	1
001163000	P.C.BOARD ASSEMBLY KLM-1630	M.PART	CARD	1
001163100	P.C.BOARD ASSEMBLY KLM-1631	M.PART	MAIN	1
001163200	P.C.BOARD ASSEMBLY KLM-1632	M.PART	HEADPHONE	1
002163300	POWER SUPPLY UNIT KLM-1633JUC	M.PART	117US	1
		M.PART	117CN	1
		M.PART	117EX	1
		M.PART	100JP	1
002163400	POWER SUPPLY UNIT KLM-1634 E	M.PART	220GE	1
		M.PART	240GE	1
		M.PART	240AU	1
		M.PART	240AF	1
		M.PART	230GE	1
		M.PART	230FR	1
		M.PART	230SE	1
		M.PART	230WG	1
		M.PART	230SC	1
		M.PART	240UK	1
304000070	TR 2SA812-T1 (M5-7)	1631		1
304020020	TR 2SC2785 T K	1629		2
304020110	TR BN1A4M-T	1624		5
304020230	TR 2SC3661-TA/TB(3K)	1631		6
304030130	TR FA1A4M-T1B	1631		8
304030140	TR FN1A4M-T1B	1631		4
312010700	LED GL3HD43	1624		26
		1625		1
		1626		13
312011200	LED HLMP-1503 (GREEN)	1625		4
313002500	LCD DMF5005NS-EW1	M.PART		1
314000300	DIODE 1S-2473 T-77	1624		27
		1625		15
		1626		48
314001300	DIODE 1SS-133 T-77	1629		1
314001400	DIODE RLS-73 TE-11	1631		4
315000400	DOUBLE DIODE MC932-T12	1629		8
320001071	IC UPD74HC138C	1624	HC-MOS	1
320001316	IC UPD65612GF-015-3BE	1631	CBR92	1
320001328	IC UPD70433GD-5BB	1631	CPU	1
320001343	IC UPD23C16000BGX-385	1631	WAVE_ROM(GM2)	1
320003202	IC TC511664Z-10	1631	D_RAM	1
320004538	IC HD63266F	1631	FDC	1

PART CODE	PART NAME/SPECIFICATION	P.C.BOARD	NOTE	Q'TY
320004539	IC HD6433308F10	1631	NKS	1
320012066	IC MB81464-10PSZ-G-BB-RS2	1631	D_RAM	1
320012098	IC MB81C4256-70PSZ-G	1631	D_RAM	2
320012141	IC MBCS35104-001PF-G-BND	1631	TGL	1
320012144	IC MBM27C4096-12Z-G	1631	4M EP_ROM	1
320012146	IC MB622E15PF-G-LBND	1631	MAP55A	1
320012148	IC MB8316200A-15PF-G-402-HT	1631	WAVE_ROM(GM1)	1
320012152	IC MB838200BP-G-8F8	1631	STYLE ROM	1
320013052	IC LH537FFS	1631	WAVE_ROM(A)	1
324001006	IC UPD74HCU04GS-E2 (SOP)	1631	HC_MOS	1
324001015	IC UPC4570G2-E2 (SOP)	1631	OP_AMP	3
324001066	IC UPD431000AGW-70L-E2	1631	1M S_RAM	1
324004011	IC HD74HC04FPER	1631	HC_MOS	1
324004050	IC HD74HC138FPER	1631	HC_MOS	3
324004092	IC HD74HC245FPER	1631	HC_MOS	1
324009004	IC NJM78L05UA-TE2	1631	REGULATER	1
324011002	IC M5223FP-600C (8P SOP)	1631	OP_AMP	1
324011004	IC M5216FP-600C-TP3	1631	OP_AMP	1
324011006	IC M5218FP-600C (8P SOP)	1631	OP_AMP	1
324011013	IC M62021FP-600C	1631	RESET	1
324036002	IC PCM69AU-T1(SELECTED)	1631	DAC	1
330001400	PHOTO COUPLER PC-910K	1629		1
334000500	SB COIL SBT-0260 TF	1624		5
		1629		17
		1632		2
335400060	CRYSTAL OSC SX-1 25.000MHZ	1631		1
335400080	CRYSTAL OSC SX-1 32.000MHZ	1631		1
335400090	CRYSTAL OSC SX-1 20.000MHZ	1631		1
360023600	VR RK11K1140(X-011/012) 10KB	1511	JOYSTICK	1
		1512	JOYSTICK	1
362006400	VR RK09K1110 10KB	1629	CONTRAST	1
365009200	SLIDE VR RS30111-181 10KB	1627	INST.VR	5
365009300	SLIDE VR RS30112-181 10KBX2	1627	MASTER VR	1
370004000	ROTARY ENCODER EC16B25D (N08)	1628		1
375007800	POWER SW ESB-8213V	M.PART		1
375010500	TOUCH SW EVQ-PAC09K-A	1624		27
		1625		15
		1626		48
420004800	KEYBOARD FS-61 KG2	M.PART		1
435000700	FDD DFR423E02A (1MB)	M.PART		1
450002300	PHONE JACK LGR4502-5000 (STEREO)	1629		3
		1632		1
450002400	PHONE JACK LGR4501-5000 (MONO)	1629		2
471060500	CONNECTOR TOP B5B-EH-A	1631		1
471070300	CONNECTOR TOP B3B-PH-K-S	1628		1
		1632		1

PART CODE	PART NAME/SPECIFICATION	P.C.BOARD	NOTE	Q'TY
471070400	CONNECTOR TOP B4B-PH	1631		1
471070500	CONNECTOR TOP B5B-PH-K-S	1624		1
		1631		2
471070600	CONNECTOR TOP B6B-PH-K-S	1631		1
471070900	CONNECTOR TOP B9B-PH-K-S	1631		1
471071000	CONNECTOR TOP B10B-PH	1624		1
		1631		2
471071300	CONNECTOR TOP B13B-PH	1631		1
472060600	CONNECTOR SIDE S6B-EH	1627		1
472060700	CONNECTOR SIDE S7B-EH	1627		1
472070800	CONNECTOR SIDE S8B-PH	1624		1
472071200	CONNECTOR SIDE S12B-PH-K-S	1624		1
		1626		1
472071400	CONNECTOR SIDE S14B-PH-K-S	1624		1
		1626		1
474011300	CARD CONNECTOR HGC-0338-01-010	1630		1
474014400	HEADER 20P 5332-20T2	1631		1
474014600	HEADER 34P 5332-34T2	1631		2
474014703	HEADER 40P 5332-40GS1	1631		1
474018800	DIN CONNECTOR 150-06-30-234(B)	1629		1
475001916	HARNESS HNS-1916 4P	M.PART	TOUCH SENCER	1
475001917	HARNESS HNS-1917 10P	M.PART	KEYBOARD	1
475001918	HARNESS HNS-1918 13P	M.PART	KEYBOARD	1
475001919	HARNESS HNS-1919 2P	M.PART	INLET	1
475001920	HARNESS HNS-1920 2P	M.PART	POWER SW	1
475001921	HARNESS HNS-1921 3P	M.PART	EL	1
475001922	HARNESS HNS-1922 3P	M.PART	FDD	1
475001923	HARNESS HNS-1923 5P	M.PART	POWER SUPPLY	1
475001924	HARNESS HNS-1924 (BOARD IN) 10P	1629		1
475001925	HARNESS HNS-1925 (BOARD IN) 9P	1629		1
475001926	HARNESS HNS-1926 (BOARD IN) 5P	1624		1
475001927	HARNESS HNS-1927 6P	M.PART	MASTER VR	1
475001928	HARNESS HNS-1928 3P	M.PART	ENCODER	1
475001929	HARNESS HNS-1929 34P	M.PART	FDD	1
475001930	HARNESS HNS-1930 (BOARD IN) 34P	1630		1
475001931	HARNESS HNS-1931 40P	1624		1
475001932	HARNESS HNS-1932 20P	M.PART	LCD	1
475001933	HARNESS HNS-1933 (BOARD IN) 4P	1511		1
475001934	HARNESS HNS-1934 (BOARD IN) 7P	1624		1
475001935	HARNESS HNS-1935 (BOARD IN) 5P	1625		1
475001936	HARNESS HNS-1936 (BOARD IN) 10P	1625		1
475001937	HARNESS HNS-1937 12P	M.PART	PL-PR	1
475001938	HARNESS HNS-1938 14P	M.PART	PL-PR	1
475001939	HARNESS HNS-1939 (BOARD IN) 5P	1625		1
475001940	HARNESS HNS-1940 (BOARD IN) 3P	1625		1
480001403	IC SOCKET 40P DICF-40CS-E	1631		1

PART CODE	PART NAME/SPECIFICATION	P.C.BOARD	NOTE	Q'TY
480010380	DIN JACK YKF51-5041 (3P)	1629		1
500012900	X-631 RUBBER SPACER KOC-F40424	M.PART		1
500018500	RUBBER FOOT FF-001	M.PART		4
520001700	LITHIUM BATTERY CR2032VPX	1631		1
525000100	DATA LINE FILTER ESD-R-25D-B	M.PART		1
540007200	WIRE BAND PLT-1M	M.PART		5
540008600	SPIRAL CLIP CS-8	M.PART		6
540008601	SPIRAL CLIP CS-6	M.PART		1
540012400	INLET SOCKET PA-125-10	M.PART		1
540014700	WIRE CLAMP S510 BLACK	M.PART		2
540020000	PCB SPACER SPLS-4	M.PART		1
575015000	LED SPACER LS-15-6.5 L=6.5MM	1624		26
		1625		1
		1626		13
575015900	LED SPACER LS-15-8 L=8MM	1625		4
580032600	X-181 MUSIC STAND SHIELD C40931	M.PART		1
580032700	X-181 PCB SHIELD SHEET C40932	M.PART		1
600003200	AC CORD UC-948-J02	M.PART	117EX	1
600003300	AC CORD UC-953-J01	M.PART	117US	1
		M.PART	117CN	1
600003500	AC CORD SC-304-J01	M.PART	240AU	1
600003800	AC CORD DC-480-J01	M.PART	100JP	1
600004700	AC CORD EC-652-E03	M.PART	220GE	1
		M.PART	240GE	1
		M.PART	240AF	1
		M.PART	230GE	1
		M.PART	230FR	1
		M.PART	230WG	1
		M.PART	230SC	1
600005100	AC CORD KP-610 GTBS-3	M.PART	240UK	1
620018400	ROTARY ENCODER KNOB	M.PART		1
620021600	X-825M POWER SW KNOB BLK	M.PART		1
630019000	X-181 LCD WINDOW KOC-E40351	M.PART		1
640084600	GROUNDING CONTACT	1632		1
640084901	GND SPRING (B) KOC-C40659	M.PART		1
641021900	X-943 JACK PLATE	M.PART		1
641034700	X-181 PANEL KOC-C10119	M.PART		1
641037700	X-181 LOWER CASE KOC-C10131	M.PART		1
641037800	X-181 HINGE A KOC-C40911-1	M.PART		2
641037801	X-181 HINGE B KOC-C40911-2	M.PART		2
641037900	X-181 METAL FITTING OF POWER SW	M.PART		1
641038000	X-181 METAL FITTING OF INLET	M.PART		1
641038100	X-181 CARD ANGLE KOC-C40909	M.PART		1
641038200	X-181 KB SUPPORT A KOC-C30406	M.PART		1
641038300	X-181 KB SUPPORT B KOC-C40906	M.PART		1
641038400	X-181 KB SUPPORT C KOC-C30407	M.PART		1

PART CODE	PART NAME/SPECIFICATION	P.C.BOARD	NOTE	Q'TY
641038500	X-181 PP SUPPORT PLATE C40907	M.PART		1
641038600	X-181 METAL FITTING OF ENCODER	M.PART		1
641038700	X-181 SIDE CHASSIS L C10133-1	M.PART		1
641038800	X-181 SIDE CHASSIS R C10133-2	M.PART		1
641038900	X-181 PCB SUPPORT PLATE C20271	M.PART		1
641039000	X-181 KBF ANGLE 1 KOC-C30405-1	M.PART		1
641039100	X-181 KBF ANGLE 2 KOC-C30405-2	M.PART		1
641039200	X-181 FDD ANGLE KOC-C30408	M.PART		1
641039300	X-181 PU CHASSIS KOC-C30409	M.PART		1
641040600	X-181 MUSIC STAND KOC-C30410	M.PART		1
641040900	X-181 GND SPRING (C) C40920	1624		1
		1626		2
641041108	X-181 KB SUPPORT D KOC-C20274	M.PART		1
641041109	X-181 KB SUPPORT E KOC-C30145	M.PART		1
644006200	X-011/012 WHEEL SPRING	M.PART		2
644006800	X-181 GND SPRING KOC-C40922	1625		2
646038900	X-011/012 JOYSTICK FRAME	M.PART		1
646039000	X-011/012 VR PLATE	M.PART		1
646039100	X-011/012 WHEEL SUPPORT	M.PART		1
646039200	X-011/012 JOYSTICK LEVER	M.PART		1
646039300	X-011/012 JOYSTICK WHEEL	M.PART		1
646040000	X-011/012 JOYSTICK COVER	M.PART		1
646044700	X-181 SIDE PLATE L KOC-E10078	M.PART		1
646044800	X-181 SIDE PLATE R KOC-E10080	M.PART		1
646044900	X-181 JOYSTICK PANEL E10082	M.PART		1
646045000	X-181 FDD COVER KOC-E20147	M.PART		1
646045100	X-181 POWER SW GUIDE E40347	M.PART		1
646045200	X-181 CARD GUIDE KOC-E40349	M.PART		1
646045300	X-181 MUSIC STAND HOLDER	M.PART		2
646045400	X-181 SIDE PLATE KOC-E40350	M.PART		1
646046100	X-181 KNOB FRAME1 ASSY H30042	M.PART		1
646046200	X-181 KNOB FRAME2 ASSY H30043	M.PART		1
646046300	X-181 KNOB FRAME3 ASSY H30044	M.PART		1
646046400	X-181 LCD HOOD ASSY KOC-H30045	M.PART		1
646046500	X-181 SLIDE VR ESCUSHION ASSY	M.PART		1
646047400	X-181 SCREW GUIDE KOC-E40353	M.PART		1
649007400	BATTERY HOLDER	1631		1

(for i2)

PART CODE	PART NAME/IDENTIFICATION	P.C.BOARD	NOTE	Q'TY
001151100	P.C.BOARD ASSEMBLY KLM-1511/1512	M.PART	JOYSTICK	1
001162400	P.C.BOARD ASSEMBLY KLM-1624	M.PART	PANEL-L	1
001162500	P.C.BOARD ASSEMBLY KLM-1625/1628	M.PART	PANEL/ENCODER	1
001162600	P.C.BOARD ASSEMBLY KLM-1626	M.PART	PANEL-R	1
001162700	P.C.BOARD ASSEMBLY KLM-1627	M.PART	SLIDE VR	1
001162900	P.C.BOARD ASSEMBLY KLM-1629	M.PART	JACK	1
001163000	P.C.BOARD ASSEMBLY KLM-1630	M.PART	CARD	1
001163101	P.C.BOARD ASSEMBLY KLM-1631	M.PART	MAIN	1
001163200	P.C.BOARD ASSEMBLY KLM-1632	M.PART	HEADPHONE	1
002163300	POWER SUPPLY UNIT KLM-1633JUC	M.PART	117US	1
		M.PART	117CN	1
		M.PART	117EX	1
		M.PART	100JP	1
002163400	POWER SUPPLY UNIT KLM-1634 E	M.PART	220GE	1
		M.PART	240GE	1
		M.PART	240AU	1
		M.PART	240AF	1
		M.PART	230GE	1
		M.PART	230FR	1
		M.PART	230SE	1
		M.PART	230WG	1
		M.PART	230SC	1
		M.PART	240UK	1
304000070	TR 2SA812-T1 (M5-7)	1631		1
304020020	TR 2SC2785 T K	1629		2
304020110	TR BN1A4M-T	1624		5
304020230	TR 2SC3661-TA/TB(3K)	1631		6
304030130	TR FA1A4M-T1B	1631		8
304030140	TR FN1A4M-T1B	1631		4
312010700	LED GL3HD43	1624		26
		1625		1
		1626		13
312011200	LED HLMP-1503 (GREEN)	1625		4
313002500	LCD DMF5005NS-EW1	M.PART		1
314000300	DIODE 1S-2473 T-77	1624		27
		1625		15
		1626		48
314001300	DIODE 1SS-133 T-77	1629		1
314001400	DIODE RLS-73 TE-11	1631		4
315000400	DOUBLE DIODE MC932-T12	1629		8
320001071	IC UPD74HC138C	1624	HC_MOS	1
320001316	IC UPD65612GF-015-3BE	1631	CBR92	1
320001328	IC UPD70433GD-5BB	1631	CPU	1
320001343	IC UPD23C16000BGX-385	1631	WAVE_ROM(GM2)	1
320001399	IC UPD23C16000BGX-825 (S)	1631	WAVE_ROM(SWP)	1
320003202	IC TC511664BZ-10/80	1631	D_RAM	1

PART CODE	PART NAME/IDENTIFICATION	P.C.BOARD	NOTE	Q'TY
320004538	IC HD63266F	1631	FDC	1
320004539	IC HD6433308RB46F	1631	NKS	1
320012066	IC MB81464-10PSZ-G-BB-RS2	1631	D_RAM	1
320012098	IC MB81C4256-70PSZ-G	1631	D_RAM	2
320012141	IC MBCS35104-001PF-G-BND	1631	TGL	1
320012144	IC MBM27C4096-12Z-G	1631	4M EP_ROM	1
320012146	IC MB622E15PF-G-LBND	1631	MAP55A	1
320012148	IC MB8316200A-15PF-G-402-HT	1631	WAVE_ROM	1
320012152	IC MB838200BP-G-8F8	1631	STYLE_ROM	1
320013052	IC LH537FFS	1631	WAVE_ROM	1
324001006	IC UPD74HCU04GS-E2 (SOP)	1631	HC_MOS	1
324001015	IC UPC4570G2-E2 (SOP)	1631	OP_AMP	3
324001066	IC UPD431000AGW-70L-E2	1631	1M S_RAM	1
324004011	IC HD74HC04FPER	1631	HC_MOS	1
324004050	IC HD74HC138FPER	1631	HC_MOS	3
324004092	IC HD74HC245FPER	1631	HC_MOS	1
324009004	IC NJM78L05UA-TE2	1631	REGULATER	1
324011002	IC M5223FP-600C (8P SOP)	1631	OP_AMP	1
324011004	IC M5216FP-600C-TP3	1631	OP_AMP	1
324011006	IC M5218FP-600C (8P SOP)	1631	OP_AMP	1
324011013	IC M62021FP-600C	1631	RESET	1
324036002	IC PCM69AU-T1(SELECTED)	1631	DAC	1
330001400	PHOTO COUPLER PC-910K	1629		1
334000500	SB COIL SBT-0260 TF	1624		5
		1629		17
		1632		2
335400060	CRYSTAL OSC SX-1 25.000MHZ	1631		1
335400080	CRYSTAL OSC SX-1 32.000MHZ	1631		1
335400090	CRYSTAL OSC SX-1 20.000MHZ	1631		1
360023600	VR RK11K1140(X-011/012) 10KB	1511		1
		1512		1
362006400	VR RK09K1110 10KB	1629		1
365009200	SLIDE VR RS30111ZC004A 10KB	1627		5
365009300	SLIDE VR RS30112AC00RA 10KBX2	1627		1
370004000	ROTARY ENCODER EC16B25D (N08)	1628		1
375007800	POWER SW ESB-8213V	M.PART		1
375010500	TOUCH SW EVQ-PAC09K-A	1624		27
		1625		15
		1626		48
420004500	KEYBOARD FS-E76	M.PART		1
435000700	FDD DFR423E02A (1MB)	M.PART		1
450002300	PHONE JACK LGR4502-5000 (STEREO)	1629		3
		1632		1
450002400	PHONE JACK LGR4501-5000 (MONO)	1629		2
471060500	CONNECTOR TOP B5B-EH-A	1631		1
471070300	CONNECTOR TOP B3B-PH	1628		1

PART CODE	PART NAME/IDENTIFICATION	P.C.BOARD	NOTE	Q'TY
471070300	CONNECTOR TOP B3B-PH	1631		1
		1632		1
471070400	CONNECTOR TOP B4B-PH	1631		1
471070500	CONNECTOR TOP B5B-PH-K-S	1624		1
		1631		2
471070600	CONNECTOR TOP B6B-PH	1631		1
471070900	CONNECTOR TOP B9B-PH-K-S	1631		1
471071000	CONNECTOR TOP B10B-PH	1624		1
		1631		1
471071200	CONNECTOR TOP B12B-PH	1631		1
471071400	CONNECTOR TOP B14B-PH	1631		1
472060600	CONNECTOR SIDE S6B-EH	1627		1
472060700	CONNECTOR SIDE S7B-EH	1627		1
472070800	CONNECTOR SIDE S8B-PH-K-S	1624		1
472071200	CONNECTOR SIDE S12B-PH-K-S	1624		1
		1626		1
472071400	CONNECTOR SIDE S14B-PH-K-S	1624		1
		1626		1
474011300	CARD CONNECTOR HGC-0338-01-010	1630		1
474014400	HEADER 20P 5332-20T2	1631		1
474014600	HEADER 34P 5332-34T2	1631		2
474014703	HEADER 40P 5332-40GS1	1631		1
474018800	DIN CONNECTOR 150-06-30-234(B)	1629		1
475001941	HARNESS HNS-1941	M.PART		1
475001942	HARNESS HNS-1942	M.PART		1
475001943	HARNESS HNS-1943	M.PART		1
475001945	HARNESS HNS-1945	M.PART		1
475001947	HARNESS HNS-1947	M.PART		1
475001949	HARNESS HNS-1949 (BOARD IN)	1629		1
475001950	HARNESS HNS-1950 (BOARD IN)	1629		1
475001953	HARNESS HNS-1953	M.PART		1
475001954	HARNESS HNS-1954	M.PART		1
475001958	HARNESS HNS-1958 (BOARD IN)	1511		1
480001403	IC SOCKET 40P DICF-40CS-E	1631		1
480010380	DIN JACK YKF51-5041 (3P)	1629		1
500012900	X-631 RUBBER SPACER	M.PART		1
500018500	RUBBER FOOT FF-001	M.PART		4
520001700	LITHIUM BATTERY CR2032VPX	1631		1
525000100	DATA LINE FILTER ESD-R-25D-B	M.PART		1
540007200	WIRE BAND PLT-1M	M.PART		7
540008600	SPIRAL CLIP CS-8	M.PART		4
540008601	SPIRAL CLIP CS-6	M.PART		1
540012400	INLET SOCKET PA-125-10	M.PART		1
540014700	WIRE CLAMP S510 BLACK	M.PART		2
540019300	CLIP B-3T	M.PART		1
540020000	PCB SPACER SPLS-4	M.PART		1

PART CODE	PART NAME/IDENTIFICATION	P.C.BOARD	NOTE	Q'TY
575015000	LED SPACER LS-15-6.5 L=6.5㎜	1624		26
		1625		1
		1626		13
575015900	LED SPACER LS-15-8 L=8MM	1625		4
580032600	X-181 MUSIC STAND SHIELD 40931	M.PART		1
580032700	X-181 PCB SHIELD SHEET C40932	M.PART		2
600003200	AC CORD UC-948-J02	M.PART	117EX	1
600003300	AC CORD UC-953-J01	M.PART	117US	1
		M.PART	117CN	1
600003500	AC CORD SC-304-J01	M.PART	240AU	1
600003800	AC CORD DC-480-J01	M.PART	100JP	1
600004700	AC CORD EC-652-E03	M.PART	220GE	1
		M.PART	240GE	1
		M.PART	240AF	1
		M.PART	230GE	1
		M.PART	230FR	1
		M.PART	230WG	1
		M.PART	230SC	1
600005100	AC CORD KP-610 GTBS-3 KS-31AY	M.PART	240UK	1
620018400	ROTARY ENCODER KNOB KOC-E40220	M.PART		1
620021600	X-825M POWER SW KNOB BLK	M.PART		1
630019000	X-181 LCD WINDOW KOC-E40351	M.PART		1
640084600	GROUNDING CONTACT KOC-C40655	1632		1
640084901	GND SPRING (B) KOC-C40659	M.PART		1
641021900	X-943 JACK PLATE	M.PART		1
641037800	X-181 HINGE A KOC-C40911-1	M.PART		2
641037801	X-181 HINGE B KOC-C40911-2	M.PART		2
641037900	X-181 METAL FITTING OF POWER SW	M.PART		1
641038000	X-181 METAL FITTING OF INLET	M.PART		1
641038100	X-181 CARD ANGLE KOC-C40909	M.PART		1
641038200	X-181 KB SUPPORT A KOC-C30406	M.PART		1
641038300	X-181 KB SUPPORT B KOC-C40906	M.PART		1
641038400	X-181 KB SUPPORT C KOC-C30407	M.PART		1
641038500	X-181 PP SUPPORT PLATE C40907	M.PART		1
641038600	X-181 METAL FITTING OF ENCODER	M.PART		1
641038700	X-181 SIDE CHASSIS L C10133-1	M.PART		1
641038800	X-181 SIDE CHASSIS R C10133-2	M.PART		1
641038900	X-181 PCB SUPPORT PLATE C20271	M.PART		1
641039200	X-181 FDD ANGLE KOC-C30408	M.PART		1
641039300	X-181 PU CHASSIS KOC-C30409	M.PART		1
641040600	X-181 MUSIC STAND KOC-C30410	M.PART		1
641040800	X-281 PANEL KOC-C10134	M.PART		1
641040900	X-181 GND PLATE(C) KOC-C40920	1624		1
		1626		2
641041000	X-281 LOWER CASE KOC-C10135	M.PART		1
641041100	X-281 KBF ANGLE 1 KOC-C30413-1	M.PART		1

PART CODE	PART NAME/IDENTIFICATION	P.C.BOARD	NOTE	Q'TY
641041101	X-281 KBF ANGLE 2 KOC-C30413-2	M.PART		1
641041108	X-181 KB SUPPORT D KOC-C20274	M.PART		1
641041109	X-181 KB SUPPORT E KOC-C30415	M.PART		1
644006200	X-011/012 WHEEL SPRING	M.PART		2
644006800	X-181 GND SPRING KOC-C40922	1625		2
646038900	X-011/012 JOYSTICK FRAME	M.PART		1
646039000	X-011/012 VR PLATE	M.PART		1
646039100	X-011/012 WHEEL SUPPORT	M.PART		1
646039200	X-011/012 JOYSTICK LEVER	M.PART		1
646039300	X-011/012 JOYSTICK WHEEL	M.PART		1
646040000	X-011/012 JOYSTICK COVER	M.PART		1
646044700	X-181 SIDE PLATE L KOC-E10078	M.PART		1
646044800	X-181 SIDE PLATE R KOC-E10080	M.PART		1
646044900	X-181 JOYSTICK PANEL E10082	M.PART		1
646045000	X-181 FDD COVER KOC-E20147	M.PART		1
646045100	X-181 POWER SW GUIDE E40347	M.PART		1
646045200	X-181 CARD GUIDE KOC-E40349	M.PART		1
646045300	X-181 MUSIC STAND HOLDER	M.PART		2
646045400	X-181 SIDE PLATE KOC-E40350	M.PART		1
646046100	X-181 KNOB FRAME1 ASSY H30042	M.PART		1
646046200	X-181 KNOB FRAME2 ASSY H30043	M.PART		1
646046300	X-181 KNOB FRAME3 ASSY H30044	M.PART		1
646046400	X-181 LCD HOOD ASSY KOC-H30045	M.PART		1
646046500	X-181 SLIDE VR ESCUSHION ASSY	M.PART		1
646047400	X-181 SCREW GUIDE KOC-E40353	M.PART		1
649007400	BATTERY HOLDER	1631		1

MEMO

MEMO

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

ADVARSEL!

Lithiumbatteri – Eksplosionsfare ved fejlagtig handtering.
Udskiftning má kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverand ø ren.

ADVERSEL

Lithiumbatteri – Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverand ø ren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

CAUTION

Danger of explosion if battery is incorrectly replaced .
Replace only with the same or equivalent type recommended by the equipment manufacturer .
Discard used batteries according to manufacturer 's instructions.

KORG

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