

Product

Specifications for

Super High Speed

Kiosk Printer

NP-226/326

Revision 0.01 2004.05.14 Provisional version
Revision 0.02 2004.07.09 Provisional version

《Notice》 ·All features and specifications described are subject to change without notice.

Record of revision-1

Rev.	No.	Description			Approval	PIC
		Page	Item	Change		
0.01	-		New release (Provisional)			Abe 2004.05.14
0.02	-	1	Overview	Add Paper size, cut type , interface P, U		Abe 2004.07.09
		1	Feature	Modified 4),5),8),9)		
		2	Configuration	Add & Modify Options		
		3,4	Basic specification	Devide 226 and 326		
		4	Interface	Add parallel, USB		
		4	Cutter life	Changed to 500,000 cut		
		4	Near empty	Detection value 22.5→22.0		
				Modified ※1		
		5	PrintArea,Cut position	Add NP-226		
		6	Power input connector	Add		
		7	Safety regulation	UL60950→UL60950-1		
		8,9	External dimension	Add		
		10	Interface (parallel)	Add		
		11	Interface (serial)	Transfer speed 4800→115200		
		11	Interface (USB)	Add		
		12	Connector connection	Delete 9)		
		12	USB DataSignal Input connector	Add		
		13	Parallel DataSigna l Input connector	Add		
		13	CN6 autocutter	Delet S2-1~		
		14	CN8 Operation panel	Delete Receive data~		
		15	Dip switch (S1,S2)	Modified ※S1~,※S2-5~ Added		
		17	Error detection	Delete presenter error Add Exit sensor information		
		18	Presenter	Delete		
		18	Partition drive	Modified		
		19	Removal of paper jam	Delete		
		19	Paper holder unit	Add		
		20,35	No paper sensor	Delete		
		20,35	Compulsory eject	Delete		
		21,37	Presenter setting	Delete		
		21	Horizontal tab	Add NP-226		
		21	Command table	※Delete Command~		
		22	Horizontal tab	Add NP-226		
		26	Set bit image mode	Add NP-226		
		27	Set Horizontal tab position	Add NP-226		
		30	Sending printer status	Delete bit 5		
		37	Register NV bit image	Add NP-226		
		38	Select partition drive	Add NP-226		

Read Carefully Before Using the Printer

Wrong handling of the printer may cause its performance declined and the product damaged. Please read the notes below before handling.

1. Static discharge prevention must be made for installation and removal of the printer to protect IC and other electrical parts. Connect it to the earth ground. It is also requested to remove the static from body of the person before handling, especially, the input terminal.
2. Avoid excessive force to the input terminal for handling.
3. When any type of paper, other than specified in this manual, is used, it may cause deterioration of the print quality and thermal head reliability.

Examples of troubles

- 1) Print quality deterioration by using low sensitivity paper.
 - 2) Thermal head wears due to roughness of paper surface.
 - 3) Sticking between heat receipt layer and thermal head, and vibration noise during printing.
 - 4) Print ink disappears on low print durability paper.
 - 5) Electrolyte corrosion on thermal head due to low quality of heat receipt layer.
4. Avoid printing with no paper loaded. It damages platen and thermal head, printer life will be shorten.
 5. Do not scrabble thermal head with sharp edge or something hard, or give impact. The heat element may be damaged.
 6. Set the power of printer off before connecting or removing connectors.
 7. When printing in high speed under low temperature of high humidity environment, the paper may be stained by moisture that appears from paper, or the printer may have condensation. Avoid dew from dropping down to the thermal head that may cause electrolyte corrosion. Turn the power off until any dew is removed.
 8. The printer is not protected from water or dew formed. Do not water the printer or handle it with a wet hand, which may cause damage to the printer due to short circuit, or heat or fire.
 9. The printer is not protected from dust or dirt. If it is used at dusty place, the thermal head may be damaged or paper feed is not operated properly.
 10. When cooling the printer with a fan, avoid the printer's paper outlet from locating fan's air inlet. It may cause mal-function of printer.
 11. Reflection type of infrared ray sensors are used at some locations in the printer. Direct sun light may cause mal-function of printer. Avoid from such a location for installation.
 12. This printer does not support any operations caused by the commands or control commands not specified in this manual.
 13. The printer's main structure parts use plated steel. However, rust may be caused to the cut section.
 14. In order to prevent excess current, please put elemental device to external 24V power line (Please refer to the power supply specification for the details), and also put fuse.
 15. Please plug off the printer when you do not use the product for a long time. Please also insert paper between the platen.
 16. When paper jam occurred, please make sure to slowly remove the paper to paper exit direction after head up status.
 17. The product is designed to use with general electronic devices (Computer, PC, OA, others). This is not designed and not guaranteed to use with extremely high quality, high reliability product or product whose failure may danger human life (Atomic power control device, aerospace aircraft devices, Transportation devices, Traffic signal devices, Ignition control devices, Medical devices, other safety equipments: we call "Specific application" thereafter). Users take full responsibility for using with such specific application.
 18. The product uses part that includes GaAs (Gallium arsenide). Please do not break the product, no chemical splitting ,otherwise it may harm human with such part broken pieces.

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1. Overview

1.1 Overview

The printer is categorized as following.

NP – 326 * *
① ② ③

- ① Paper width (Factory setting)
 - 2: 2 inch (58mm)
 - 3: 3 inch (80mm)
- ② Cut type (Factory setting)
 - F: Full cut
 - P: Partial cut
- ③ Interface (Factory setting)
 - R: Serial (RS232C)
 - P: Parallel (Centronics)
 - U: USB (V2.0 FULL SPEED)

1.2 Features

This module printer is designed on the basis of our long experience as a printer manufacturer. Individual unit such as printer mechanism, controller board and auto-cutter is assembled in compact with our reliable design concept.

Simple integration to the system requiring only power and data supplies, that contributes to the short development time and improvement of product reliability.

- 1) Important areas such as paper entrance and auto-cutter guide are designed professionally on the basis of our long experience as a printer manufacturer.
- 2) Small, compact and light weight. Easy to integrate into various kinds of system.
- 3) Short development time.
- 4) Ultra high speed and quality of printing
- 5) Either serial, parallel or USB interface are available.
- 6) Various barcode symbols, 1-D and 2-D (QR code) are available.
- 7) Various kinds of application are available.
- 8) Paper cramp function available.
- 9) User-friendly moving type of roll paper holder with paper end sensor.
- 10) Windows drivers (Windows95/98/NT4.0/2000/XP) are available.
- 11) Easy to write/rewrite F/W by using flash memory. Also, 3 patterns of registration are available with Fixed bit image.

1.3 Configuration (Under review)

The printer consists of the following components.

Product Name				NP-226	NP-326
Description	Specification	Part No.	Q'ty		
NP-226	-	-	1	○	
NP-326	-	-	1		○
Thermal Paper	W58xØ **(Inner Ø12)	24-X***	1	○	
Thermal Paper	80xØ 48mm(Inner Ø12)	24-X121	1		○
Paper holder	PH-8L	-	1	○	○
Options					
Open/Close lever	-	-	1	○	○
Exit sensor	-	-	1	○	○

2. Specifications

2.1 Basic specifications (Under review)

No.	Specifications	NP-226	NP-326
1	Print specs.	Line thermal dot	
		432 dots	576 dots
		8 dots / mm	
		54mm	72 mm
		Max. 220 mm / sec	
		Head temp. more than 35 °C/ ASCII full print Except for communication time	
		6. Print digits	
		Font A (12×24)	36 digits (Font A)
		Font B (9×17)	48 digits (Font B)
		Kanji (24 x 24)	18 digits
2	Character specs.	0.125 mm	
		1.50×3.00 mm	
		1.13×2.13 mm	
		3.00x3.00mm	
		JIS C 6226 (Full size)	
		Katakana character set (Half size)	
		Extended Graphic character set (Half size)	
		Code 858 (Half size)	
		International character (Half size)	
		Korean	
		KSX1001:1992 (Full size)	
		Katakana character set (Half size) *2	
		Extended Graphic character set (Half size) *2	
		Code 858 (Half size)	
		Chinese	
		GB18030-2000 (Half / Full size)	
		Greek	
		Code 1253 (Full size)	
		Polish	
		Code 1250 (Half size)	
		Russian	
		Code 1251 (Half size)	
		Scandinavian	
		Code 1252 (Half size)	
		Turkish	
		Code 1254 (Half size)	
		3. Character modification	
		Double width	
		Vertical double	
		Quadruple	
		Bold	
		Double strike	
		Inverted	
		90°clockwise rotation	
		Underline	
		4. Line spacing (Default)	
		4.25 mm (1/6 inch)	
3	Print mode	ANK mode Bit image mode Barcode mode	

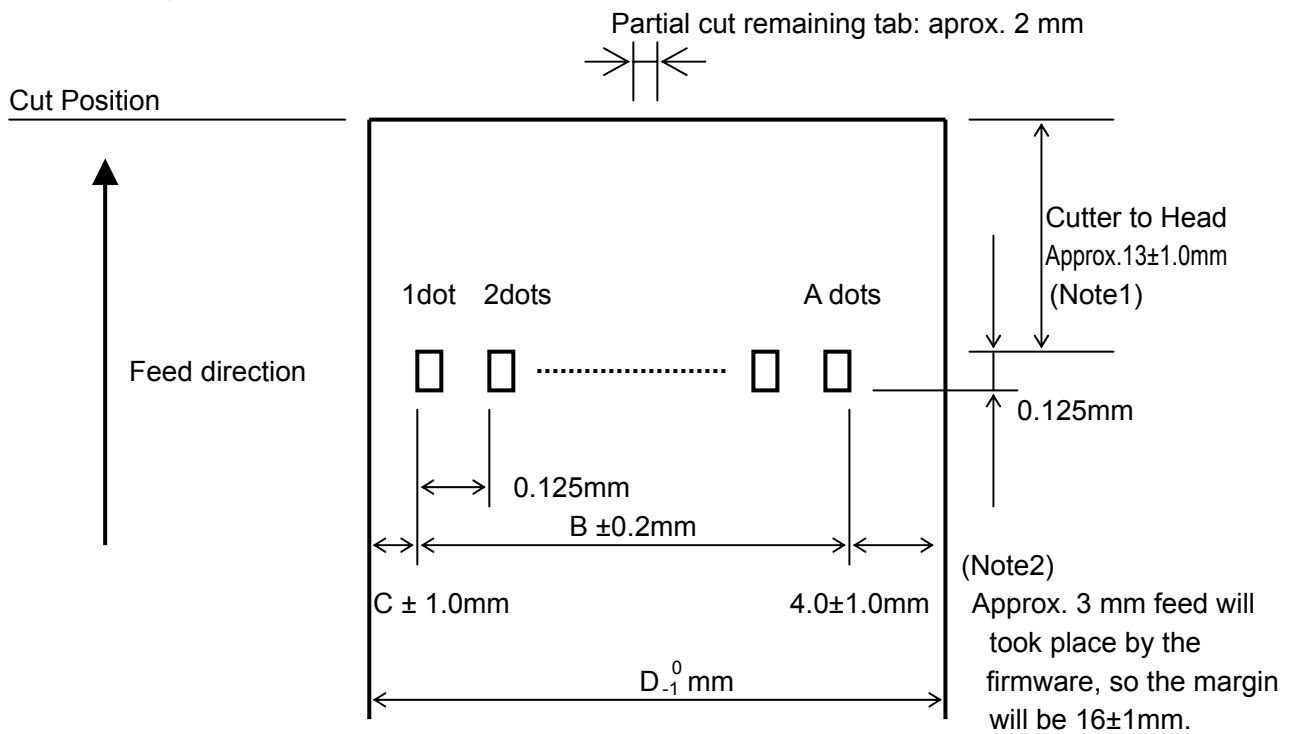
*1 It can be changed by the condition

*2 KSX 1001:1992 Loading font.

No.	Specifications		NP-226	NP-326
4	Barcode specs	1. 1-D symbology	UPC-A	
			UPC-E	
			EAN-13 (JAN-13)	
			EAN-8 (JAN-8)	
			CODE39	
			ITF	
			CODABAR	
			CODE128	
5	Interface	2. 2-D symbology	QR code	
		1. Serial (R type)	RS232c compliant	
		2. Parallel (P type)	Centronics compliant	
		3. USB (U type)	V2.0 FULL SPEED	
6	Auto-cutter	1. Cut method	Slide type	
		2. Applicable paper	Thermal 60 - 80 (micro)	
		3. Cut cycle	30 cuts / minute	
		4. Cut mode (by Factory option setting before ship)	Total cut Partial cut (a 2mm tab left at the center)	
		5. Life time	500,000 cuts	
7	Paper specs.	1. Paper width	58.0 ± 0.1 mm	80.0 ± 0.1 mm
		2. Max. diameter	Ø83 mm	
		3. Core diameter	Inner Ø12mm Outer Ø18mm	
		4. Papers recommended	TF50KS-E2D (Nihon Seishi)	
			PD160R-N (Shin Oji Seishi) HP220AB1 (Mitsubishi Seishi)	
8	Receiving buffer		Approx. 10K bytes	
9	Operation SW		ALMLED OUT Line feed SW input	
10	Weight	Net weight	approx. ** kg	approx. 1 kg
11	Near empty	Detection value Condition Sensor	Approx. Ø22.0 ± 1 mm Paper core is inner Ø 12 and outer Ø 18 Reflection photo sensor ※1	

※1: Printer cannot detect Near empty more than above value (22.0mm) due to reflection photo sensor used.

2.2 Printing area and cut position



Note2: Please take care not to take the paper very hard after the partial cut, which cause heavy load on platen and might cause the poor print quality on the head part of next line. To avoid such problem, please take care by feeding approx. 1 mm at the beginning of print or by take the paper to the direction to left or right.

Note3: The cut mode (full cut or partial cut) is set by the factory. No change of cut mode is done by the command setting.

	A	B	C	D
NP-226	432	54	2	58
NP-326	576	72	4	80

2.3 Power supply specifications (Under review)

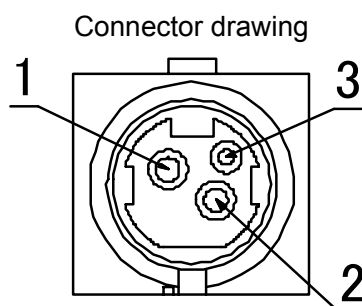
1) Power supply input connector

Optional AC adapter will be used for this printer (Power to be supplied from outside)

Connector on printer side : TCS7960-532010 Hosiden or equivalent

Connector on Adapter side : TCP8927-631100 Hosiden or equivalent

No	Function
1	+24V
2	GND
3	N.C
Shell	FG



2) Power voltage : DC24V±5%

3) Current consumption *1, *2

	NP-226		NP-326	
	1 partition	2 partition	1 partition	2 partition
Standby	Approx. **A	Approx. **A	Approx. **A	Approx. **A
Printing average of 25%	Approx. **A	Approx. **A	Approx. **A	Approx. **A
Printing average of 100%	Approx. **A	Approx. **A	Approx. **A	Approx. **A

*1: A sufficient volume of power supply is required to maintain print quality due to high peak current that may run according to printing.

*2: If power supply cable is excessively long, the operation may become unstable. Cable should be made as short as possible. If not available, connect cables near the printer and place an electrolysis condenser of 2200μ between power supply and ground. Voltage resistance should be higher than 35V.

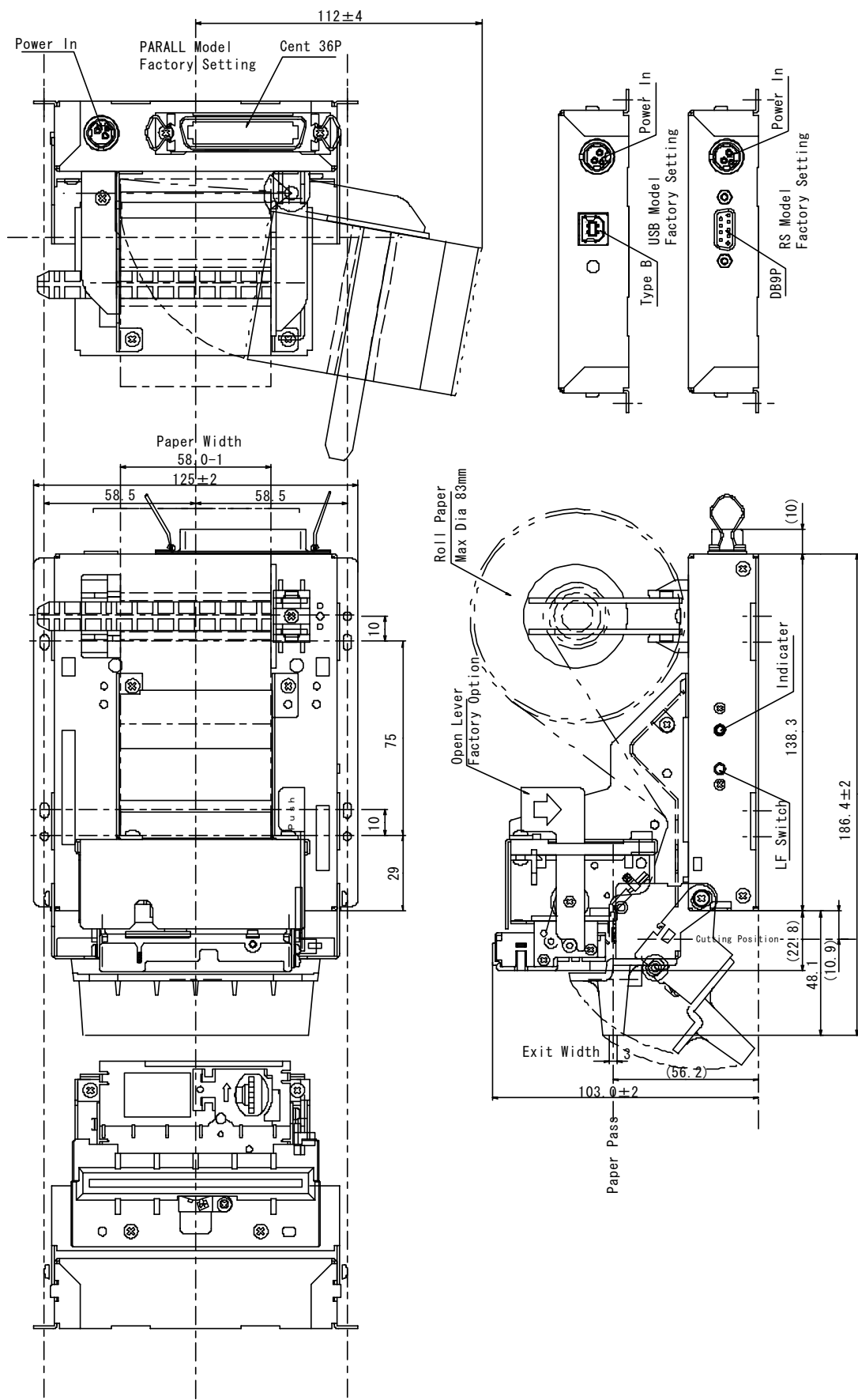
* For preventing from static electric discharge, make sure to connect FG wire.

2.4 Reliability

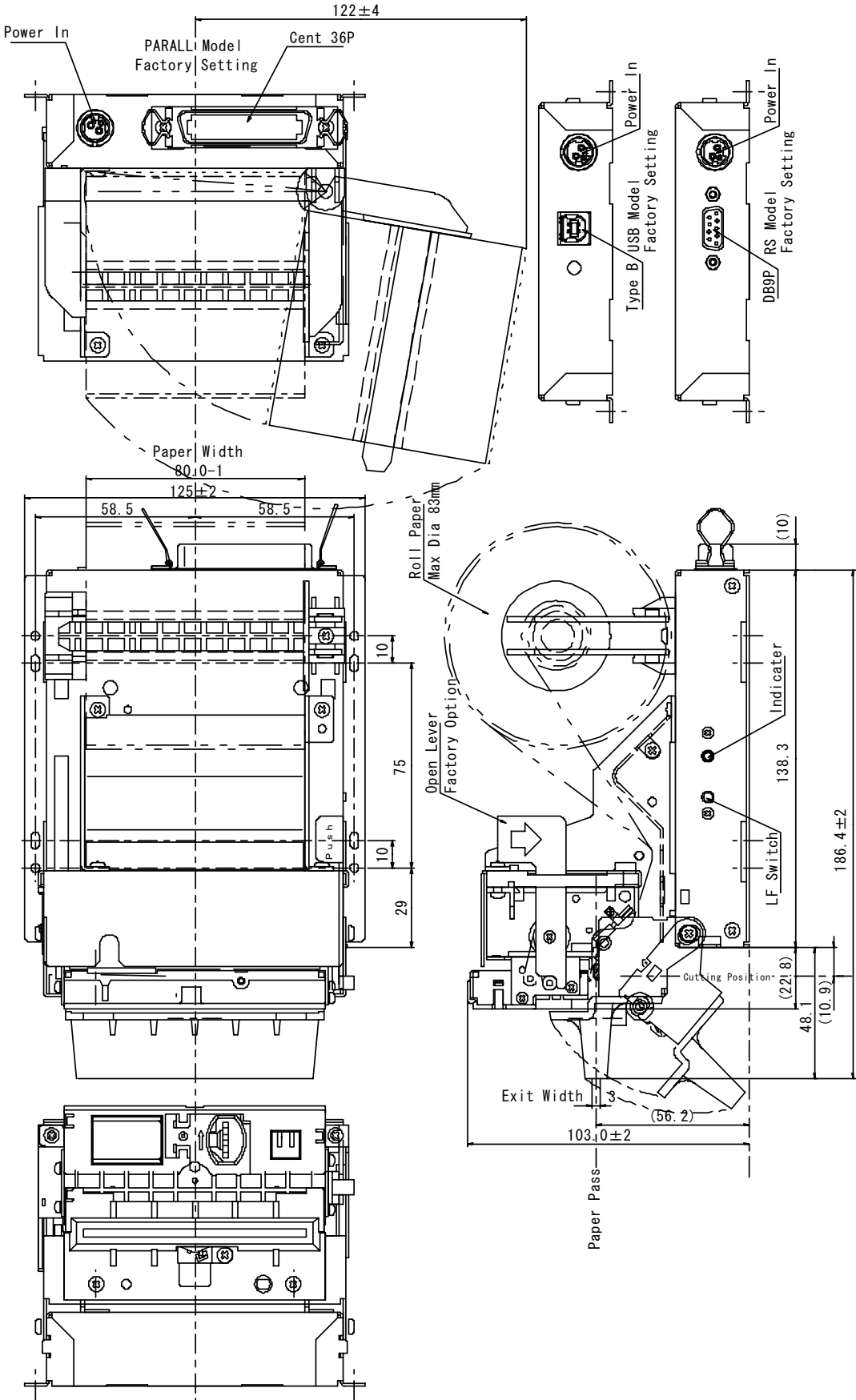
- 1) Head life : Average resistance change rate to head less than 15%, except defects caused by dust or others
 - Pulse : More than 100 million pulses (with recommended paper)
 - Wear distance : More than 100 km (with recommended paper)
- 2) Cutter life : 500,000 cut
- 3) Operation environment : Temperature 5 – 45°C, no condensation
Humidity 35-85%RH
- 4) Storage environment : Temperature -10 - 60°C
Humidity 35-90%RH
- 5) Safety regulation
 - CE marking (To be certified)
 - UL60950-1 (To be certified)
- 6) EMC
 - EMI : EN55022 (To be certified)
 - EMS : EN55024(To be certified)
 - VCCI : Class A (To be certified)
 - FCC : Class A (To be certified)
- 7) USB compliant test (To be certified)

2.5 Dimensions

1) NP-226



2) NP-326



3. Interface specifications

3.1 Parallel interface (Centronics compliant)

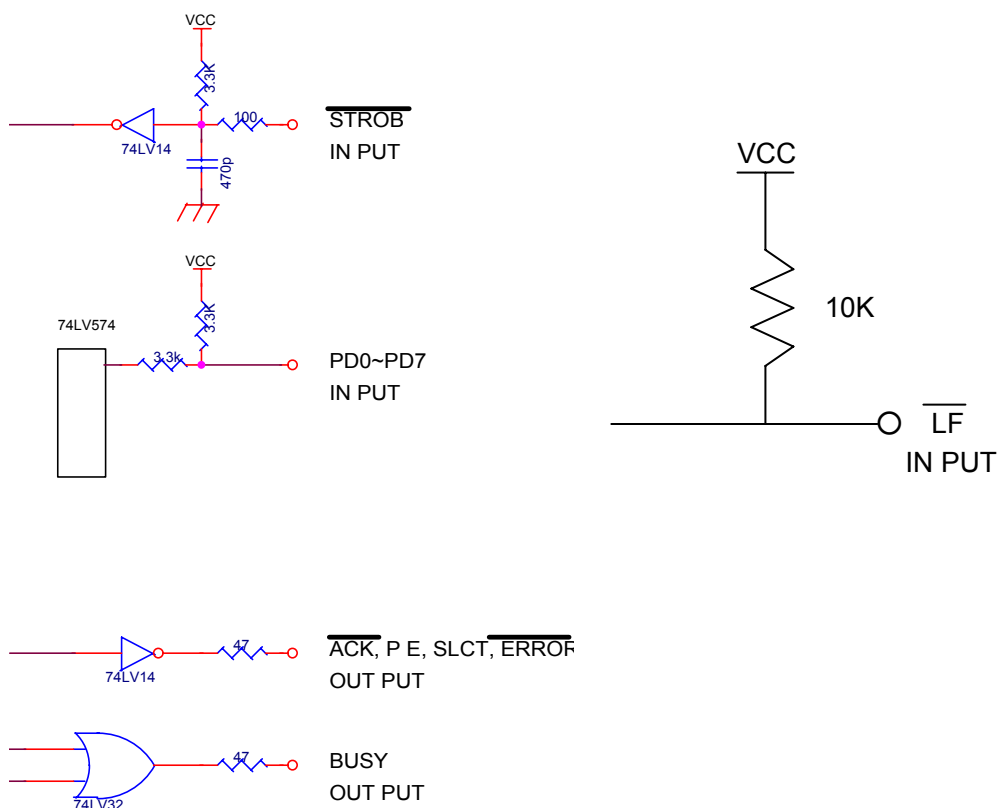
- 1) Data input : 8 bit parallel method(DATA 0 – DATA 7)
- 2) Control signals : /ACK, BUSY, /STB, /ERROR, PE, SLECT
- 3) Input signal to a printer
 - DATA 0 – 7 : 8 bit parallel signal(positive logic)
 - /STB : Signal to read 8 bit data(negative logic)
 - /LF : Signal to feed paper to print mechanism(negative logic)
- 4) Output signal from a printer
 - /ACK : Enquiry signal for 8 bit data. It's also pulse signal which is output after BUSY signals (negative logic)
 - BUSY : Indicate BUSY status of the printer. Inputs new data at LOW status (positive logic)
 - /ERROR : This signal becomes LOW when a printer is in the alarm status.
In the LOW status, all control circuits in the printer stops (negative logic)
 - PE : Outputs when roll paper becomes empty (positive logic)
 - SLCT : Signal to indicate on-line status (positive logic)

5) Input/Output signal level

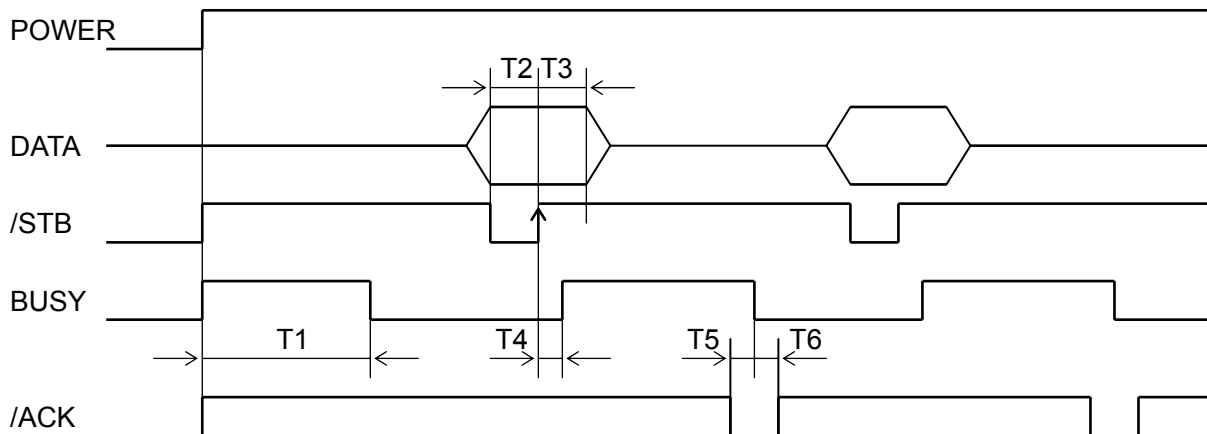
	Code	Standard value			Unit
		Min.	TYP.	Max.	
Input low level	V _{IL}	-	-	0.8	V
Input high level	V _{IH}	3.25	-	5.25	V
Output low level*	V _{OL}	-	-	0.7	V
Output high level	V _{OH}	3.25	-	-	V

*I_{OL}4mA

6) Input/Output Circuits conditions



7) Timing chart



T1 = 3500msec (Max) T4 = 500nsec (Max)
 T2, T3 = 500nsec (Min) T5, T6 = 4 μ sec(TYP)

8) Receive control

When BUSY signal stays at LOW, it is feasible to receive data from host computer.
 But not feasible when BUSY signal stays at HIGH.

3.2 Serial interface (RS-232C compliant)

- 1) Synchronization : Asynchronous
- 2) Transmission speed: 9600, 19200, 38400, 115200bps (user selectable)
- 3) A word consists of

Start bit : 1bit
 Data bit : 7 or 8 bit (user selectable)
 Parity bit : odd, even or no parity (user selectable)
 Stop bit : more than 1 bit

4) Signal polarity

RS-232C

Mark = Logic "1" (-3V -- -12V)
 Space = Logic "0" (+3V -- +12V)

5) Receive data (RD signal)

RS-232C

Mark = 1
 Space = 0

6) Reception control (DTR signal)

RS-232C

Mark = 1
 Space = 0

3.3 USB interface (V2.0 FULL SPEED compliant)

- 1) Version : V2.0 FULL SPEED (12Mbps)
- 2) Port : Upstream port (B jack)
- 3) Power : Self powered

3.4 Connector connections

- 1) J1 Power input
- 2) CN2 Connect to printer mechanism (head)
- 3) CN3 Connect to printer mechanism (motor)
- 4) CN4 Connect to printer mechanism (sensors)
- 5) CN5 Data signal input
- 6) CN6 Connect to autocutter
- 7) CN7 Connect to auxiliary sensor (paper near empty sensor)
- 8) CN8 Connect to operation panel

3.5 Connector signal details

1) Power input connector

Printer side connector : TCS7960-532010 (Hosiden)

Mating connector : TCP8927-53-1100, TCP8935-53-1100 (Hosiden) Equivalent

Pin No.	Signal name	Input/Output	Function
1	VH	Input	Power DC +24V
2	GND	-	Power ground
3	N.C	-	
Shell	FG	-	FG

* A sufficient volume of power supply is required to maintain print quality due to high peak current that may run according to printing. If power supply cable is excessively long, the operation may become unstable. Cable should be as short as possible. If not available, connect cables near the printer and place an electrolysis condenser of 2200 μ between power supply and ground. Voltage resistance should be higher than 35V. Make sure to connect FG wire to prevent from ESD problems.

2) Serial data signal input connector (R type)

Printer side connector: JEC-9S (JST) equivalent

Mating connector: JEC-9P (JST) equivalent

Pin No.	Signal	In/Output	Function	Remarks
2	RXD	Input	Serial transmit data	
3	TXD	Output	Serial receive data	
4	DTR	Output	Data transmit permit signal	Connect to No.7
5	GND	-	GND for signal	
7	DTR	Output	Data transmit permit signal	Connect to No.4
8	CTS	Input	Transmit permit signal	
1, 6, 9	N.C	-		

3) USB data Signal Input Connector (U type)

Printer side connector: B jack DUSB-BRA42-T11(DDK) or equivalent

Host side Connector: B plug

Pin No.	Signal	In/Output	Function	Remarks
1	VBUS	Input	Power line	Non-twist power supply line
2	D-	In/Output	Data line	Twist pair signal line
3	D+	In/Output	Data line	Twist pair signal line
4	GND	-	Power line	Non-twist power supply line
Shell	Shield	-		

* Use USB cable which conforms to the standard (FULL SPEED)

* We do not support the operation by using a cable out of the standard.

4) Parallel data signal input connector (P type)

Printer side connector: 57-40360 (DDK) equivalent

Mating connector: 57F-40360-20N (DDK) equivalent

Pin No.	Signal	In/Output	Function	Remarks
1	/STB	Input	Data read assign signal	
2	PD0	Input	Parallel print data 0	
3	PD1	Input	Parallel print data 1	
4	PD2	Input	Parallel print data 2	
5	PD3	Input	Parallel print data 3	
6	PD4	Input	Parallel print data 4	
7	PD5	Input	Parallel print data 5	
8	PD6	Input	Parallel print data 6	
9	PD7	Input	Parallel print data 7	
10	/ACK	Output	Data processing end signal	
11	BUSY	Output	Receive data not ready signal	
12	PE	Output	No paper signal	
13	SLECT	Output	Connection select signal	
14	Not fixed		※1	For extension
19	GND	-	Common ground	
32	/ERROR	Output	Control stop signal	
36	Not fixed		※1	For extension
15-18 20-31 33-35	N.C	-		

※ 14 and 36 are kept as "HIGH". Do not connect them.

5) CN6 Auto cutter sensor (control switch), motor

Printer side connector : 5483-04AX (Molex)

Mating connector : 5480-04 (Molex)

Pin No.	Signals	Input/output	Functions
1	M+	Output	Motor drive signal
2	M-	Output	Motor drive signal
3	CSW1	Input	HP detect SW output
4	CSW2	-	HP detect SW GND

6) CN7 Auxiliary sensor (paper near empty sensor)

Printer side connector: 53047-0310(Molex)

Mating connector: 51021-0300(Molex)

Pin No.	Signal name	In/Output	Functions	Remarks
1	LED+	Output	Anode of LED	
2	PNE	Input	Collector of phototransistor	At High Paper out
3	SG	-	Signal ground	Cathode or emitter connect

* Valid when DIP SW S2-7 is on.

* When PNE signal is "High", PE signal of CN5 outputs. Printing operation is not affected.

7) CN8 Connect to operation panel

Printer side connector: 53047-0310(Molex)

Mating connector 51021-0300(Molex)

Pin No.	Signal name	In/Output	Functions	Remarks
1	/LF	Input	Paper feed signal input	Active at L
2	ALM	Output	Printer error signal Output	Output in printer error
3	SG	-	Signal ground	

- 1) Paper feed is executed according to the paper feed pitch set by ESC 2, ESC 3. However, if there is no paper, line feed is not executed.
- 2) While paper feed signal is at "L", set Power on to activate self-diagnostic printing.
- 3) ALM signal (for operation panel) indicates printer statuses as follows:

A protective resistance is incorporated on the board, a light diode can be located between 2 and 3. 2: anode and cathode.

Display pattern	Printer status	How to solve the problem
1 0 _____	Normal status Print (receive) ready	
1 0 _____	No paper	Load the paper
1 0 _____	Head up status	Set head down
1 0 _____ 0.2sec	F/W write mode	Set the power on again
1 0 _____ 0.2sec	Presenter in cramp status	Pull out the clamped paper
1 0 _____ 2.2sec	Head temp high (80°C)	Printer returns normal at head temp of 60°C
1 0 _____ 2.2sec	Wrong head connection	Connect head cable properly
1 0 _____ 0.2sec	Auto-cutter error	Remove jammed paper and turn power on again
1 0 _____ 0.2sec 1.0sec	Presenter error	

4. Functions

4.1 Function setting

4.1.1 DIP switch S1

	Function	ON	OFF	Factory setting		
				R	P	U
S1-1	Interface 1	Serial	Parallel	ON	OFF	OFF
S1-2	Interface 2	USB	Serial /Parallel	OFF	OFF	ON
S1-3	Select fixed division	2 partition	Automatic partition drive	OFF	OFF	OFF
S1-4	Baud rate	Refer to the following table		OFF	OFF	OFF
S1-5				OFF	OFF	OFF
S1-6	Parity check	Yes	No	OFF	OFF	OFF
S1-7	Parity bit	Odd	Even	OFF	OFF	OFF
S1-8	Data bit	7 bit	8 bit	OFF	OFF	OFF

※S1-1 is effective when the S2-2 is OFF.

Baud rate

	9,600bps	19,200bps	38,400bps	115,200bps
S1-4	OFF	OFF	ON	ON
S1-5	OFF	ON	OFF	ON

4.1.2 DIP switch S2

	Function	ON	OFF	Factory setting		
				R	P	U
S2-1	Auto cutter	Yes	No	ON	ON	ON
S2-2	Character set	Please refer to the following table		OFF	OFF	OFF
S2-3				OFF	OFF	OFF
S2-4	Japanese kanji code	Shift JIS	JIS	OFF	OFF	OFF
S2-5	Reserved			OFF	OFF	OFF
S2-6	Flash ROM	Rewrite	Normal	OFF	OFF	OFF
S2-7	Near empty	Yes	No	ON	ON	ON
S2-8	Print density	Thick	Standard	OFF	OFF	OFF

Note:

1. When S2-1 OFF and If autocutter is connected, the autocutter activates consecutively and paper is cut off. It may cause paper jam.
2. For writing ROM, set the DIP switches as stated below and turn the power on after changing CN8 NO.1 pin LF to "L" position or while pressing the paper feed switch on the operation panel. After the operation, set the power off.
3. Rewriting Flash ROM boot program: S2-6 ON and S2-2 ON.
4. Rewriting Flash ROM F/W: S2-6 ON and S2-2 OFF.
5. Use S2-6 in OFF position. If set ON to use, the program may be destroyed.
6. Please keep OFF for S2-5.

7. Character table select

	Japanese	Korean	Chinese	Greek
S2-2	OFF	OFF	ON	ON
S2-3	OFF	ON	OFF	ON

Japanese JIS C 6226 : Full size

Katakana character set + Extended Graphics character set + Code page 858 + International character : Half size

Korean KSX 1001:1992 : Full size

Katakana character set + Extended Graphic character set + Code page 858 : Half size

Chinese GB18030-2000 : Half / Full size

Greek Code page 1253 : Full size (1 byte code)

Please refer to the select character code table for other language.

4.1.3 Self diagnostic print

1) By performing self-diagnostic print following items are checked.

- a) Proper function of control circuitry
- b) Proper function of printer mechanism
- c) Print quality
- d) Control F/W version
- e) DIP switch setting status
- f) Correct function of paper out sensor
- g) Head wide (automatically detected)

2) Start and end of self diagnostic print

Set the power on while pressing the FEED switch and release the FEED switch after the printer mechanism activates to start self-printing.

The self diagnostic print automatically ends when a preset number of characters are finished printing. While printing, the printer is in Off-line mode.

4.1.4 No paper sensor

No paper sensor is mounted on the paper path in the printer mechanism.

It detects no paper status of the roll paper. When detecting no paper status, the printer sends PE signal to the host and stop printing. Pay special attention to the end of roll paper. The end should not be glued to the core of the roll. If no paper status is detected, replace the roll paper.

4.2 Processing error

1) Error detection details

Name	Status	BUSY	PE	/ERR OR	232C status	PL status	Removal
Comm. error	232C Comm. error Parity Overrun Flaming Data “?” print	-	-	-	-	-	Align comm. condition
Paper near empty	Paper remain sense CN7 sensor	L	H	H	0bit 1	-	Load paper
Head up	Head up	L	L	L	1bit 1	On	Head up lever down
Paper end	No paper	L	H	L	2bit 1	On	Load paper
Head temp high	Over 80°C	L	L	L	3bit 1	Flash	Return normal with 60°C
Cutter error	Cutter jam	L	H	L	4bit 1	Flash	Remove jam and Turn on again
Eject sensor information	Paper at the exit sensor	L	L	H	6bit 1	-	Remove paper

When the above errors are detected except transmission error and paper low end error, printer stops all operations and outputs error signal.

In the case of serial interface:

Error bit in the status information is set to “ON”.

2) Return to normal status from error statuses

Remove causes of error statuses and turn the power on again to return to normal. When this process is activated, at the time of power switch turned off, the printer will be initialized, so that settings are required again.

If data remains in the buffer, attention should be paid

4.3 Buffer full print

If there remains data in the buffer after one line of data is received, printer automatically prints preceding data. The volume of buffer full data varies depending on ASCII characters or bit images.

4.4 Partition drive

The fixed drive (1 or 2 partition drives) or “automatic partition drive” can be selected by the DIP switch and commands. It should be selected according to the power supply and print duty.

1) Fixed partition

	Function	ON	OFF
S1-3	Fixed partition select	2 partitions	Automatic partition drive

- 1) 2 fixed partition select may decrease print speed.
- 2) 2 fixed partition select may decrease print quality.

2) Automatic partition drive

	1 partition	2 partitions
NP-226	Less than 248 dots	Higher than 249 dots
NP-326	Less than 352 dots	Higher than 353 dots

1. Automatic partition drive select will automatically change the print speed according to print ratio. Print noise may appear.
2. The default value selected by commands will be the fixed partition selected by the DIP switch. Refer to the section 5.3.
3. Automatic partition select may decrease print quality.

4.5 Select Full size and half size character

Character	How to select			
Japanese	Command[FS &],[FS .] or Switching Shift JIS code			
Korean	Command[FS &], [FS .]			
Chinese	Please refer to the followings			
		1 byte code (Half size)	2 byte code (Full size)	4 byte code (Full size)
	1 st byte	00 h ~ 80 h	81 h ~ FE h	81 h ~ FE h
	2 nd byte		40 h ~ 7E h 80 h ~ FE h	30 h ~ 39 h
	3 rd byte			81 h ~ FE h
	4 th byte			30 h ~ 39 h
Greek	No switch (Only Full size)			
Polish	No switch (Only half size)			
Russian	No switch (Only half size)			
Scandinavian	No switch (Only half size)			
Turkish	No switch (Only half size)			

4.6 Paper holder mounting (Under review)

5. Control commands

5.1 Control command table

	Control codes	Functions	Pages
1	HT	Horizontal tab	22
2	CR	Carriage return	22
3	LF	Print and line feed	22
4	FF	Page feed	22
5	ESC C n	Page length set for n lines	22
6	ESC SP n	Character right space set	22
7	ESC ! n	Print mode overall set	23
■8	ESC % n	Down load character set/reset	23
■9	ESC & s n m a Dn	Down load character definition	23
10	ESC * m n1 n2 Dn	Bit image mode set	26
11	ESC – n	Underline set/reset	28
12	ESC 2	1/6 inches line feed set	28
13	ESC 3 n	Smallest line feed pitch set	28
14	ESC @	Initialize printer	28
15	ESC D n1 n2 --- NUL	Set horizontal tab position	28
16	ESC E n	Bold print set/reset	29
17	ESC G n	Double strike print set/reset	29
18	ESC J n	Print and smallest pitch line feed	29
■19	ESC R n	Select international character	29
20	ESC c 5 n	Feed switch enable/disable	30
21	ESC d n	Print and n line feed	30
▲22	ESC t n	Select character code table	30
23	ESC v	Send printer status	31
24	ESC { n	Inverted character set/reset	31
25	ESC V n	Character 90° clockwise rotation set/reset	31
26	ESC \$ n1 n2	Absolute position set	32
27	ESC ¥ n1 n2	Relative position set	32
28	GS k n Dn NUL	Barcode print	32
29	GS w n	Barcode width select	32
30	GS h n	Barcode height select	32
31	GS H n	HRI character print position select	33
32	GS f n	HRI character style select	33
33	GS * n1 n2 Dn	Download bit image define	33
34	GS / m	Download bit image print	34
35	ESC = n	Data input control	34
36	ESC a n	Position align	34
37	ESC i	Cut	34
38	ESC T n	Select character table	35
39	ESC q S E M	QR code print	36
40	GS T n	Register Fixed bit image	38
41	GS P n	Print Fixed bit image	38
42	GS d Dn	Download firmware	38
43	DC1	Reset software	38
44	GS % n	Partition drive select	39
45	GS ~ n	Print density set	39
46	FS ! n	Japanese Kanji overall print mode setting	39

	Control codes	Functions	Pages
▲47	FS &	Japanese Kanji mode setting	40
48	FS – n	Japanese Kanji underline set / reset	40
▲49	FS .	Japanese Kanji mode reset	40
■50	FS C n	Japanese Kanji code select	40
51	FS S n1 n2	Japanese Kanji space setting	40
52	FS W n	Japanese Kanji Double height and width set / reset	41
53	ESC s n	Sending the printer information	41
54	GS :	Macro definition, start and end	41
55	GS ^ n1 n2 n3	Macro define	42
56	GS B n	Black/white reverse print set/reset	42
57	ESC b n1 n2 n3 Dn	Raster bit image	43
■58	FS 2 a1 a2 Dn	Definition of additional characters	44

▲ It is effective when selected Japanese or Korean character

■ It is effective when selected Japanese character

5.2 Printer driver

Please apply the driver stated below for using NP-325R under Windows environment. Refer to the User's Manual for a driver.

- 1) Windows 95/98: NII printer driver Windows 95/98, Version 1.00
- 2) Windows NT4.0: NII printer driver Windows NT4.0, Version 1.00
- 3) Windows 2000/XP: NII printer driver Windows 2000/XP, Version 1.00
- 4) Windows 2000/XP: NII printer driver Windows 2000/XP USB, Version 1.00

5.3 Control command details

1) Horizontal tab : << HT >>

Code : [09] h

Shift the print position to the next horizontal tab position

* Horizontal tab position is set by [horizontal tab set] command.

* The default of horizontal tab position is every 8th character (9th digit, 17th digit, 25th digit and 33rd digit) in font A.

* Maximum digit position for NP226 is 33rd and for NP-326 is 41st.

* If the next tab position is not set, this command is ignored.

2) Carriage return : << CR >>

Code : [0D] h

This command is ignored.

3) Line feed : << LF >>

Code : [0A] h

Prints data stored in the input buffer and executes line feed according to data of feed pitch.

4) Page feed : << FF >>

Code : [0C] h

* Prints data in the print line buffer and executes page feed to the head of next page according to the page length in the setting.

5) "n" line page length setting: << ESC C n >>

Code : [1B] h + [43] h + n * [01≤n≤FF] h

Sets a page length for "n" lines with current line feed pitch.

* Position is set to the head of page

* Line pitch change after setting will not change page length.

* Default value for "n" is [42] h for 66 lines.

* If printer is initialized, the head of page is also initialized.

6) Setting right space of a character: << ESC SP n >>

Code : [1B] h + [20] h + n * [00≤n≤20] h

Sets the right space of a character by unit of dot (1/203 of an inch). In the case of double width mode, the space will be doubled. The default value of "n" is [00] h.

7) Overall print mode setting: << ESC ! n >>

Code : [1B] h + [21] h + n * [00≤n≤FF] h

Sets print mode. "n" has following meanings

Bit	Function	Values	
		0	1
0	Character font	Font A	Font B
1	Undefined	-	-
2	Undefined	-	-
3	Bold	Reset	Set
4	Double height	Reset	Set
5	Double width	Reset	Set
6	Undefined	-	-
7	Underline	Reset	Set

- * If double height and double width are set at the same time quadruple character will be formed.
- * All of the printed characters will be underlined except for the 90° rotated characters and spaces created by horizontal tab.
- * Underline width is determined by the value set in [Underline set/reset] section.
The default value is "1".
- * Different sizes of character mixed such as double width and normal size can be printed.
- * The default value of "n" is [00]h.
- * Font B is only effective when select Japanese mode AND select overseas code, domestic code or code 858 with character code table select command.

8) Download characters set/reset : << ESC % n >>

- * Effective only when select Japanese mode

Code : [1B] h + [25] h + n * [00≤n≤FF]h

Setting or resetting the characters to be downloaded.

- * Only LSB (b0) is valid for "n" value. LSB (b0) has the following meanings.

b0	Function
0	Resets download chraracter
1	Sets download chraracter

Default value is "n" = [00]h

9) Definition of download character :<< ESC & s n m a Dn >>

- * Effective only when select Japanese mode

Code : [1B] h + [26] h + s + n + m + a + Dn

* [s = 03] h

* [20≤n≤7E] h

* [20≤m≤7E] h

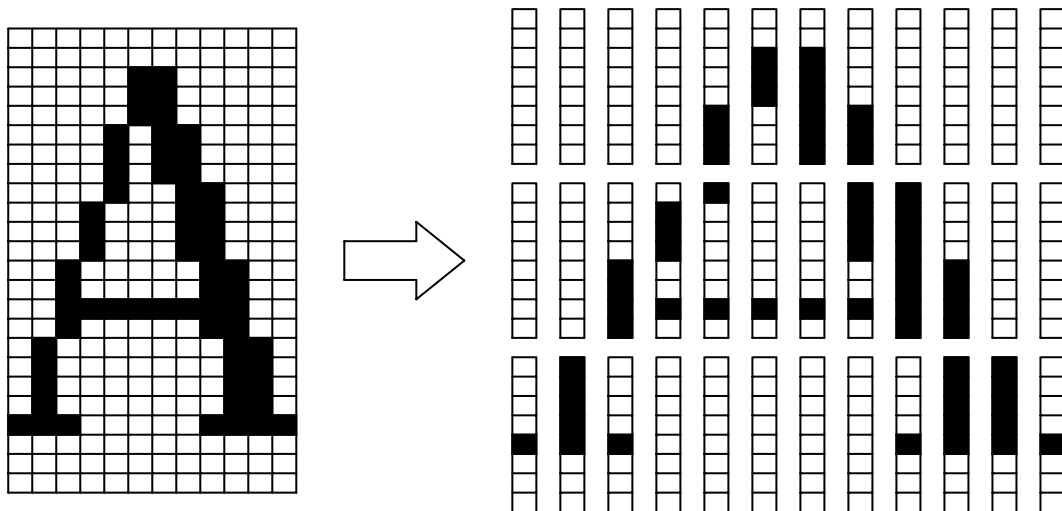
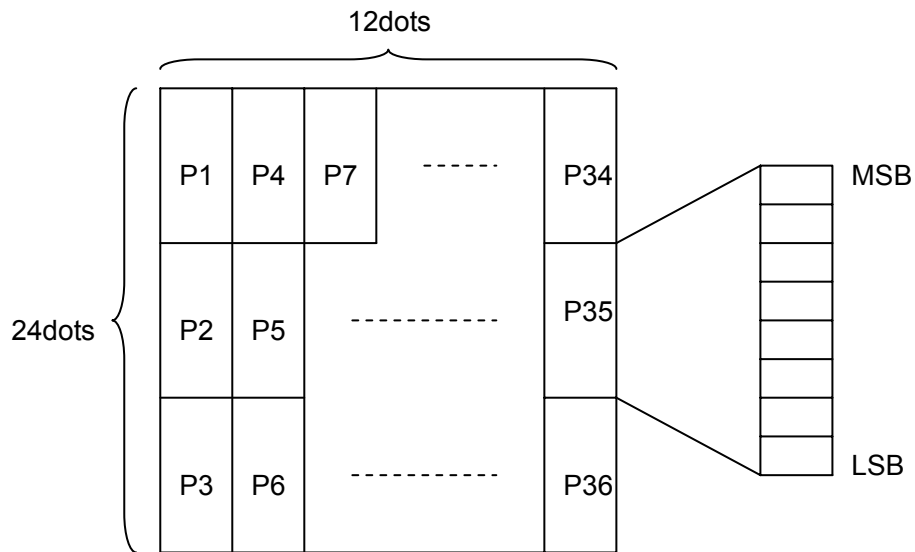
* font A [01≤a≤0C] h

* font B [01≤a≤09] h

Definition of download character(such as alpha numeric).

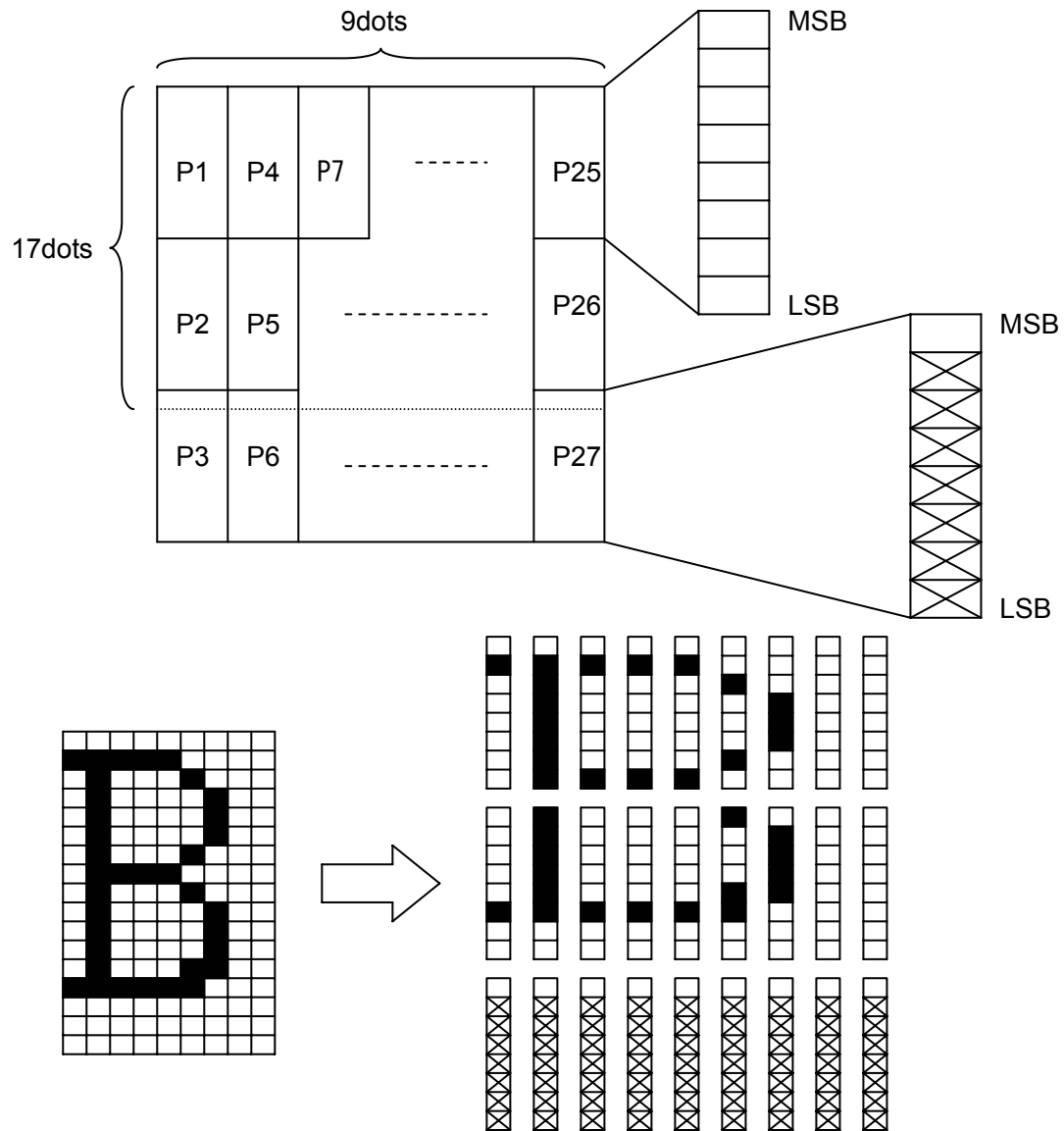
1. "s" indicates a number of bytes in a vertical direction and "a" is a number of dots in horizontal direction.
2. "n" indicates the start character code, and "m" means the end character code. If only 1 character should be defined, then n = m.
3. Definable characters are from <20>h to <7E>h in ASCII code (95 characters).
4. "Dn" indicates the data to be defined. It indicates the "a" dots pattern from the left. Remaining area on the right of a character is filled with spaces.
5. Once a download character is defined, it remains valid until the download character is redefined, printer is initialized, or the power is turned off.
6. Only area specified will be reset.

< Reference >
 In the case of Font A



P1= [00] h,P4= [00] h,P7= [00] h,P10= [00] h,...
 P2= [00] h,P5= [00] h,P8= [0F] h,P11= [72] h,...
 P3= [08] h,P6= [F8] h,P9= [08] h,P12= [00] h,...

< Reference >
In the case of Font B



10) Bit image mode set: << ESC * m n1 n2 Dn >>

Code: [1B] h + [2A] h + m + n1 + n2 + Dn * [m = indicated below] h

* [00≤n1≤FF] h

* [00≤n2≤02] h

Data is printed in bit image by following the bit image mode specified by “m”.

* Print total dots divided by 256, quotient is n2 and remainder is n1.

* Total dots in bit image mode are n1 + (256 x n2).

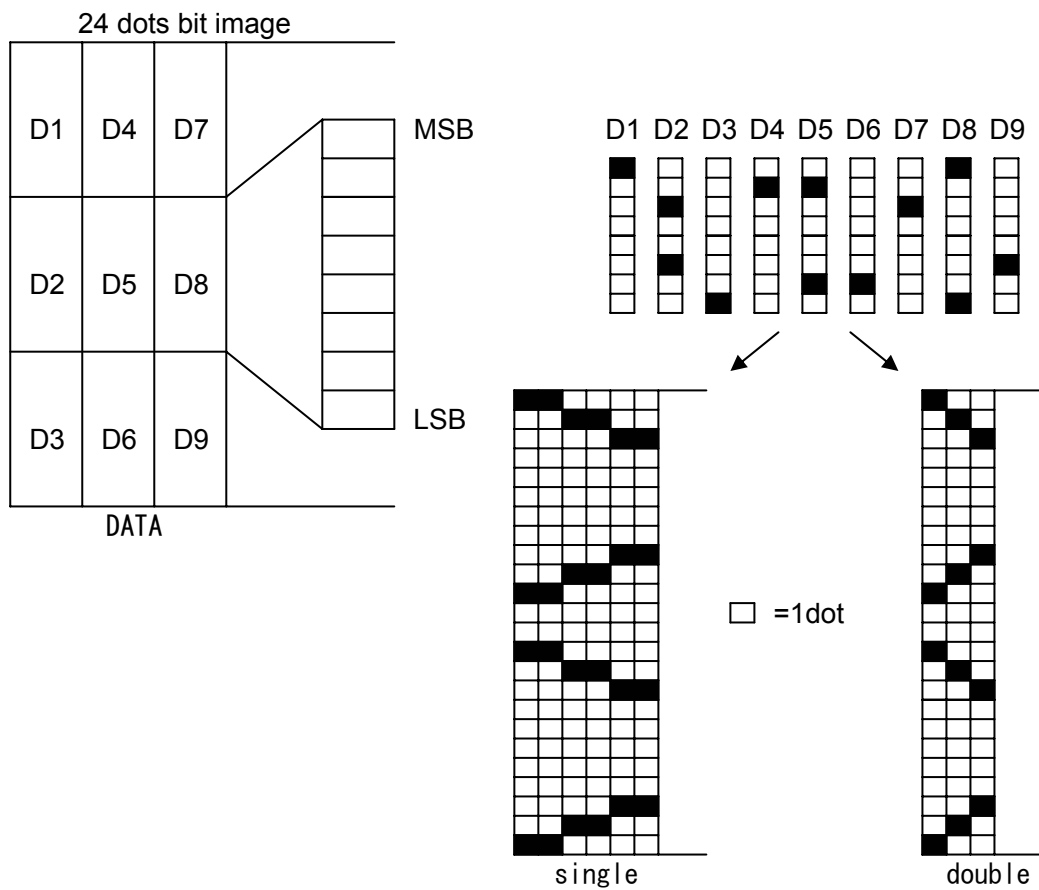
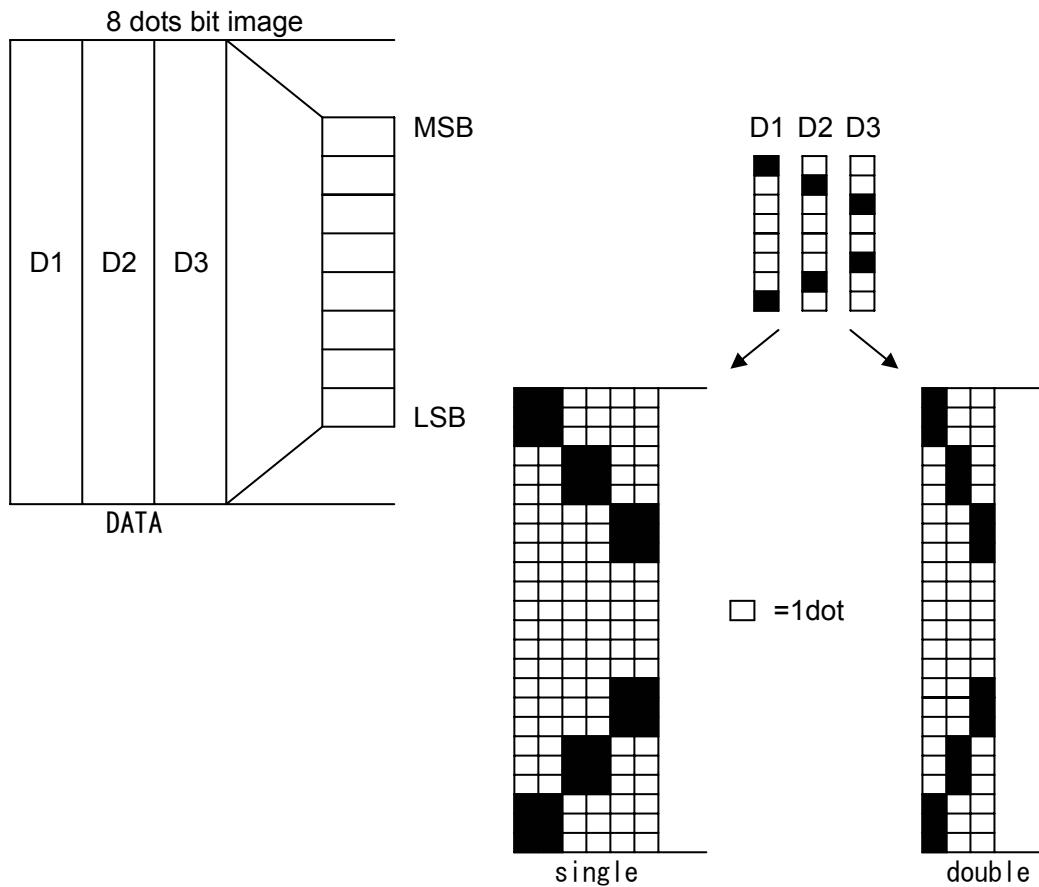
* If the bit image input data exceeds specified position, the exceeded data will be disregarded.

* Bit image data (Dn) interprets bit 1 as print and bit 0 as not print.

* Bit image mode is indicated below.

m (hex)	Bit image mode	Vertical direction		Horizontal direction		
		Dot quantity	Dot density	Dot density	Maximum dot number	
					NP-226	NP-326
00	8 dots single density	8	67DPI	101DPI	216	288
01	8 dots double density	8	67DPI	203DPI	432	576
20	24 dots single density	24	203DPI	101DPI	216	288
21,23	24 dots double density	24	203DPI	203DPI	432	576

< Relationship between bit image data and printed dots >



11) Underline set/reset : << ESC - n >>

Code : [1B] h + [2D] h + n * [00 ≤ n ≤ 02] h

Sets and resets the underline

* Underline is valid for all characters except for the area skipped by horizontal tab.

* Also Underline is not valid for 90° rotated character.

* Underline is verified with n value as shown below.

n(hex)	Type of underlines
00	Reset underline
01	Set one dot underline
02	Set two dot underline

* Default value is "n" = [00]h

12) 1/6th of an inch line feed pitch : << ESC 2 >>

Code : [1B] h + [32] h

Sets one line feed to 1/6th of an inch.

13) Sets smallest pitch line feed : << ESC 3 n >>

Code : [1B] h + [33] h + n * [00 ≤ n ≤ FF] h

Sets a line feed pitch to n/203rd of an inch.

* Despite of height set by value, the same space with character height is sent by line feed.

* The default value of n is [22]h

* If n=[00]h is set, printer will not feed by pressing FEED button.

14) Printer initialization : << ESC @ >>

Code : [1B] h + [40] h

Clears the data stored in the print buffer and resets each setting to default values.

* It does not clear the data stored in the internal receive buffer.

* Rewrites the DIP switch.

* It is stored in the internal receive buffer and activated in sequential.

15) Horizontal tab position set : << ESC D n1 n2 --- NUL >>

Code : [1B] h + [44] h + n1+ n2+ --- + [00] h * [00 ≤ n ≤ FF] h

Sets the horizontal tab position

1. "n" indicates the digits number from the left. In this case, n = tab position - 1.

2. Tab position is set at the location of character width x n from the beginning of a line. The character width in this case includes character right space. When double width function is set, then the width becomes double of ordinary character.

3. Maximum number of tab positions is 32. If setting exceeds 32, then the exceeded values are neglected.

4. < ESC D NUL > clears all tab positions being set. After the tab is cleared, horizontal tab will be ignored.

5. Default value is set at every 8 characters of font A (at 9th, 17th, 25th, 33rd and 41st digit). (NP-226: till 33rd digit)

16) Bold print set/reset :<< ESC E n >>

Code : [1B] h + [45] h + n

* [00≤ n ≤FF] h

Sets and resets the bold print

* "n" is only valid for LSB(b0)

* LSB (b0) is defined as following.

b0	Values
0	Resets bold print
1	Sets the bold print

* Valid for all characters

* Bold print and double strike results in the same on this printer.

* The default value of "n" is [00]h.

17) Double strike set/reset :<< ESC G n >>

Code : [1B] h + [47] h + n

* [00≤n≤FF] h

Sets and resets the double strike function

* "n" is only valid for LSB(b0)

* Control by "n" is explained as following.

b0	Description
0	Resets double strike
1	Sets double strike

* Double strike and bold print result in the same on this printer.

* The default value of "n" is [00]h.

18) Print and smallest pitch line feed: << ESC J n >>

Code : [1B] h + [4A] h + n

* [00≤n≤FF] h

Prints the data in the print line buffer and feeds the paper by n/203rd of an inch.

* The height of character for a line is always sent by line feed. If the value of height is set by "n" below the height of character, the same space with character height is sent by line feed.

* Beginning of a line is a print start position.

19) International character select :<< ESC R n >>

Effective when select Japanese mode AND select overseas code, domestic code or code 858 with character code table select command.

Code : [1B] h + [52] h + n

* [00≤n≤0A] h

Selects the international characters.

* The values of "n" have following meanings

n(Hex)	Character sets
00	U.S.A.
01	France
02	Germany
03	England
04	Denmark 1
05	Sweden
06	Italy
07	Spain
08	Japan
09	Norway
0A	Denmark 2

* Default value of "n" is [08]h.

20) Panel switch enable/disable:<< ESC c 5 n >>

Code : [1B] h + [63] h + [35] h + n * [00≤n≤FF] h

Changes the FEED switch valid or invalid.

* "n" is only valid for LSB(b0)

* "n" bit has a following meanings

b0	Description
0	enable FEED switch
1	disable FEED switch

* Default value of "n" is [00]h.

21) Print and "n" line feed:<< ESC d n >>

Code : [1B] h + [64] h + n * [00≤n≤FF] h

Prints the data in the print buffer and feeds paper by "n" lines.

* Beginning of a line is a print start position.

* If there is print data remained, line feed is activated for the same height of character.

22) Character code table select:<< ESC t n >>

Code : [1B] h + [74] h + n * [00≤n≤06]h

Selects either Japan code table or non-Japan code table.

Explanation : "n" value has following meaning.

n(Hex)	character code table
00	Non-Japan character code table
01	Japan character code table
02	Code Page 858
03	Code Page 1250
04	Code Page 1251
05	Code Page 1252
06	Code Page 1254

* The default value of "n" is [01]h.

23) Printer status transmission :<< ESC v >>

Code : [1B] h + [76] h

Sends current printer status

* Status to be transmitted consist of 1 byte and the content is explained in the chart below.

bit	Functions	Value	
		0	1
0	paper near empty	paper present	near empty
1	platen open	normal	head open
2	paper end	paper present	no paper
3	head temp. abnormal	normal	Temp. high
4	cutter problem	normal	cutter problem
5	Undefined		
6	paper remove sensor information	no paper	paper present
7	not defined		

* Make sure that command is issued before transmission of print data.

(commands are stored in the input buffer and executed sequentially)

* Reception is available except in the buffer full status.

* The commands above are valid only for serial interface.

* Regarding DTR/DSR control, only one byte is transmitted after confirmation that the host is able to receive data, that is DSR signal is in SPACE status. For XON/OFF control, one byte is transmitted without confirmation of DSR signal status.

* For DTR/DSR control, if host is not in a receivable status, it waits until host can receive data.

24) Inverted character set and reset :<< ESC { n >>

Code : [1B] h + [7B] h + n * [00≤n≤FF] h

Sets or resets the inverted character function

* "n2 is only valid for the LSB(b0)

* LSB (b0) has the following meaning

b0	Description
0	resets inverted character
1	sets inverted character

* The command is only valid when it is assigned at the beginning of a line.

* The default value of n is [00] h.

25) 90° clockwise rotated character set and reset :<< ESC V n >>

Code : [1B] h + [56] h + n * [00≤n≤01] h

Sets and resets 90° clockwise rotated character.

* Underline cannot be assigned to the 90° clockwise rotated character.

* "n" has the following meaning.

n(hex)	description
00	reset 90° rotated character
01	set 90° rotated character

* Default value for "n" is [00] h.

26) Absolute position set :<< ESC \$ n1 n2>>

Code : [1B] h + [24] h + n1 + n2 * [00≤n1≤FF] h
* [00≤n2≤03] h

Print start position is assigned by dots in 1/203rd of inch from the beginning of line.

* Divide the value of dot by 256, place quotient to n2, and remainder to n1.

* The print start position is n1 + n2 x 256 from top of the line.

* Setting which exceeds end of line is ignored.

* If the command is received in the middle of line, the current position is also valid.

27) Relative position set :<< ESC ¥ n1 n2>>

Code : [1B] h + [5C] h + n1 + n2 * [00≤n1≤FF] h
* [00≤n2≤FF] h

Print start position is assigned by dots from current position in unit of 1/203rd of inch.

* Right direction is treated as plus and left as minus.

* For assigning N dots in minus direction (left), it will be: N dots = 65536 - N

* Divide dots by 256, quotient is n2 and remainder is n1.

* Assigning beyond the end of a line is neglected

28) Barcode print :<< GS k n Dn NUL >>

Code : [1D] h + [6B] h + n + Dn + [00] h * [00≤n≤07] h

Description : Selects barcode symbology and prints barcode.

* The next print start position is on the line head

* Select following barcode symbology with “n” value.

* Dn indicates the character code to be printed.

n (Hex)	Barcode symbology
00	UPC-A
01	UPC-E
02	EAN-13 (JAN-13)
03	EAN-8 (JAN-8)
04	CODE 39
05	ITF
06	CODABAR
07	CODE128

* When there is data in the buffer this command is neglected.

* If character code Dn is not a printable character, following data after Dn will be treated as normal data.

* If the print character numbers are fixed in the barcode symbology the input character numbers should match to the print character numbers.

* If horizontal data exceed one line, the exceeded data cannot be printed.

29) Barcode width size select :<< GS w n >>

Code : [1D] h + [77] h + n * [02≤n≤04] h

Description : Selects width of barcode

* Default value of “n” is [03]h.

30) Barcode height select :<< GS h n >>

Code : [1D] h + [68] h + n * [01≤n≤FF] h

Description : Selects barcode height

* “n” shows the vertical dot number

* Default value of “n” is 162([A2] h).

31) Select of HRI character print position :<< GS H n >>

Code : [1D] h + [48] h + n * [00≤n≤03] h

Description : Selects the print position of HRI characters in printing barcode.

* "n" has the following meaning.

n (Hex)	Print position
00	No printing
01	Above barcode
02	Below barcode
03	Above and below barcode

* HRI characters are the characters selected by "HRI character style select".

* Default value of "n" is [00] h.

32) Select of HRI character style :<< GS f n>>

Code : [1D] h + [66] h + n * [00≤n≤01] h

Description : Selects HRI character style in printing barcode

* "n" has the following meanings:

n (hex)	Style
00	Font A
01	Font B

* Default value of "n" is [00] h.

33) Download bit image definition :<< GS * n1 n2 Dn >>

Code : [1D] h + [2A] h + n1 + n2 + Dn

* [00≤n1≤FF] h

* [00≤n2≤30] h

* [n1 x n2≤51F] h

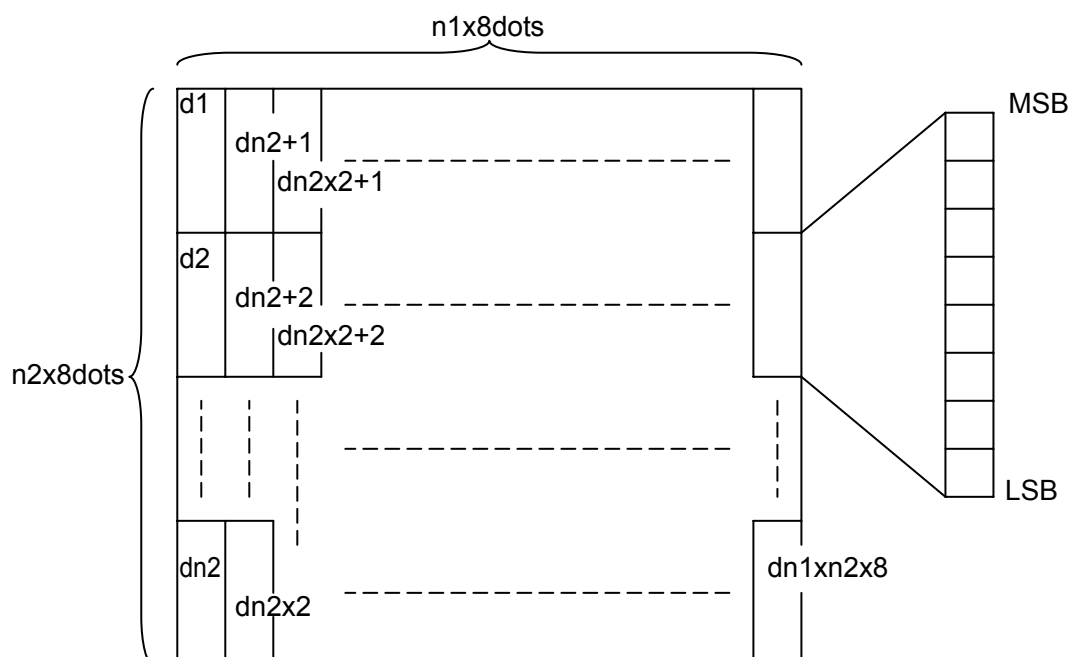
Description : Defines "download bit image" of number of dots specified by n1 and n2.

* Horizontal dot numbers are obtained by n1 x 8 and vertical dot numbers by n2 x 8.

* Dn is bit image data.

* Once "download bit image" is defined, it is valid until it's redefined, download character is defined, external characters are specified, software is reset, power is set off .

* The relationship between bit image data & defined dots is shown below.



34) Download bit image print :<< GS / m >>

Code : [1D] h + [2F] h + m * [00≤m≤03] h

Description : Prints "download bit image" in a mode assigned by "m".

* Modes to be assigned by m are as follows.

m	Modes	Dot density	
		Vertical	Horizontal
00	Normal mode	203 dpi	203 dpi
01	Double width	203 dpi	101 dpi
02	Vertical double	101 dpi	203 dpi
03	Quadruple	101 dpi	101 dpi

* If there are some data left in the print buffer, this command is neglected.

* If "download bit image" is not defined yet, this command is neglected.

* "Download bit image" data exceeding 1 line cannot be printed.

35) Data input control :<< ESC = n >>

Code : [1B] h + [3D] h + n * [00≤n≤FF] h

Description: Selects valid device where data input is possible through host computer.

* Each bit of "n" has the following meaning.

Bit	Function	Values	
		0	1
0	Printer	Invalid	Valid
1	Not defined		
2	Not defined		
3	Not defined		
4	Not defined		
5	Not defined		
6	Not defined		
7	Not defined		

* If printer is not in "no selection" status, printer will discard all received data until it is in the selection status by this command.

* Even if printer is in no selection status, the status may become BUSY by printer operation.

* The default value of "n" is [01] h.

36) Print position alignment :<< ESC a n >>

Code : [1B] h + [61] h + n * [00≤n≤02] h

Description : Aligns all data to be printed on the assigned position in a line.

* "n" values are assigned to:

n (Hex)	Position
00	Left
01	Center
02	Right

* This command is valid only when it is input at the head of a line.

* The default value of "n" is [00] h.

37) Cut :<< ESC i >>

Code : [1B] h + [69] h

* Cut the paper.

* Effective at the head of a line

* Feeds paper by 3mm after paper cut to prevent from paper jam.

38) Select character code table :<<ESC T n>>

Code: [1B] h + [54] h + n

* [00≤n≤03] h

* Select the character code table.

* n means as follows.

n(Hex)	Font table
00	Japanese
01	Chinese
02	Korean
03	Greek

Default of n value is as per DIP switch setting (S2-2, S2-3).

By executing printer initialization, this setting will be returned to value set by DIP switch (S2-2, S2-3).

39) QR code print :<< ESC q S E M >>

ESC + "q" + S + E + M + DATA [+ "," + M + DATA +.....] + NUL

CODE : [1B] h + [71] h + S + E + M + DATA [+ [2C] h + M + DATA +....] + [00] h

About parameter

1. S: module size

* Assign 1 module size of QR code by printer's dot numbers.

* There are 5 sizes which can be assigned, 1, 2, 3, 4, 8 dots

* If invalid size is assigned, the printer assigns it as 4 dots

2. E: Correction level

* Selects error correction level to be used for restoring QR symbol.

* Following values can be assigned.

* If invalid value is assigned, the printer determines it to be L.

E	Correction level	Restore. capability
0	L	7%
1	M	15%
2	Q	25%
3	M	30%

3. M: Input data mode

* Assign input data mode

* Following modes can be assigned

* If invalid mode is assigned, data is ignored until valid

Mode is assigned.

M	Input data mode
"N"	Numeric mode
"A"	Alpha numeric mode
"B"	8 bit byte mode
"K"	Kanji mode

* If multiple modes should be input, each mode data (M + data) needs to be separated by
" , " .

* If you want to input " , " and NULL in the data of 8 bit byte mode, input " ! " [21] h + " , " and
" ! " [21] h + NULL.

* " ! " itself is input as " ! " + " ! " .

* Kanji data should be input by Shift JIS code.

Restrictions

Available QR codes are from version 1 to version 14 of model 1 symbols.

If input data exceeds the area to be printed, QR code is not printed.

Following table shows the number of characters and input data capacity for the model 1 in version 1 to 14.

Version	Correction level	Data code Word	Data bit	Numeric	Alpha numeric	Byte	Kanji
1	L	19	148	40	24	17	10
	M	16	124	33	20	14	8
	Q	13	100	25	15	11	6
	H	9	68	16	10	7	4
2	L	36	284	81	49	34	20
	M	30	236	66	40	28	17
	Q	24	188	52	31	22	13
	H	16	122	33	20	14	8
3	L	57	452	131	79	55	33
	M	44	348	100	60	42	25
	Q	36	284	81	49	34	20
	H	24	188	52	31	22	13
4	L	80	636	186	113	78	48
	M	60	476	138	84	58	35
	Q	50	396	114	69	48	29
	H	34	268	76	46	32	19
5	L	108	860	253	154	106	65
	M	82	652	191	116	80	49
	Q	68	540	157	95	66	40
	H	46	364	105	63	44	27
6	L	136	1084	321	194	134	82
	M	106	844	249	151	104	64
	Q	86	684	201	122	84	51
	H	58	460	133	81	56	34
7	L	170	1356	402	244	168	103
	M	132	1052	311	188	130	80
	Q	108	860	253	154	106	65
	H	72	572	167	101	70	43
8	L	208	1660	493	299	206	126
	M	160	1276	378	229	158	97
	Q	128	1020	301	183	126	77
	H	87	692	203	123	85	52
9	L	246	1964	585	354	244	150
	M	186	1484	441	267	184	113
	Q	156	1244	369	223	154	94
	H	102	812	239	145	100	61
10	L	290	2316	690	418	287	177
	M	222	1772	526	319	219	135
	Q	183	1460	433	262	180	111
	H	124	988	291	176	121	74
11	L	336	2684	800	485	333	205
	M	256	2044	608	368	253	156
	Q	208	1660	493	299	205	126
	H	145	1156	342	207	142	87
12	L	384	3068	915	555	381	234
	M	292	2332	694	421	289	178
	Q	244	1948	576	351	241	148
	H	165	1316	390	236	162	100
13	L	432	3452	1030	624	429	264
	M	332	2652	790	479	329	202
	Q	276	2204	656	398	273	168
	H	192	1532	454	275	189	116

14	L	489	3908	1167	707	486	299
	M	368	2940	877	531	365	225
	Q	310	2476	738	447	307	189
	H	210	1676	498	302	207	127

1. The first code word is 4 bit length, and following all code words consist of 8 bit length.
2. Data bit numbers include “mode indicator” and “character number indicators”.

40) Fixed bit image registration :<< GS T n>>

Code : [1D] h + [54] h + n

Description : Register the predetermined bit image print data.

* It is possible to register from 0 to 2 different kinds of patterns (3 patterns).

* In each pattern, up to the maximum of 11cm (15 cm for NP-226) length of bit image print data can be registered; up to the maximum of 11cm for 3” model and up to 7cm for 4” model can also be registered. The bit image print data exceeding the maximum length is neglected.

* The registered data is not erased when the power is set on or off or the printer is initialized.

* “n” has a following meanings.

n (hex)	Function
00	Start of pattern 0 registration
01	Start of pattern 1 registration
02	Start of pattern 2 registration
FF	End of registration

* When registrations started in the middle of a line, whole line is registered.

* When registration ended in the middle of a line, whole line is not registered.

* Following is a command sequence of pattern 0 registration.

GS T 00h + (bit image data assigned by ESC *) x n lines + GS T FFh

41) Fixed bit image print :<< GS P n >>

Code : [1D] h + [50] h + n * [00≤n≤02] h

Description : Prints the bit image print data registered.

* Selects one of the print pattern among three registered patterns by assigning 0 to 2 value to “n”.

42) Firmware download :<< GS d Dn >>

Code : [1D] h + [64] h + Dn

Description : Download printer firmware in hexadecimal code and rewrite firmware according to the outcome.

* Dn is firmware’s hex code which complies with INTELLEX Hex format.

43) Software reset :<< DC1 >>

Code : [11] h

Description : Restart the firmware as the same procedure as power on.

* This command is stored in the receive input buffer and activated in sequence.

Above means timing is different between command receive and execution

* When the cutter is in a movement, soft reset is executed after finishing cutting.

44) Partition drive select : << GS % n >>

Code : [1D] h + [25] h + n * [01≤n≤03] h

Description : Selects partition drive.

* "n" indicates the following:

n(HEX)	Divide
01	1 fixed partition
02	2 fixed partitions
03	automatic partition

* Default value is selected by the DIP switch.

* If assigned beyond the specified area, the data is neglected and the select will not change.

* Automatic partition is as follows:

	1 partition	2 partitions
NP-226	Less than 248 dots	More than 249 dots
NP-326	Less than 352 dots	More than 353 dots

45) Print density set : << GS ~ n >>

Code : [1D] h + [7E] h + n * [41≤n≤87] h

Description : Sets print density in the range between 65% ~ 135% of the standard value, S2-8 Off.

* "n" ranges from [41] h (65%) to [87] h (135%). However, set it for actual use in the range [41] h (65%) ≤ n ≤ [82] h (130%).

* At the initial status, 100% or 125% can be selected by the DIP switch, S2-8.

* This command has priority over the setting by DIP switch.

46) Japanese Kanji overall print mode setting: << FS ! n >>

Code : [1C] h + [21] h + n * [00≤n≤FF] h

Description : Set Japanese Kanji overall print mode

"n" has following meanings

Bit	Function	Values	
		0	1
0	Undefined	-	-
1	Undefined	-	-
2	Double width	Reset	Set
3	Double height	Reset	Set
4	Undefined	-	-
5	Undefined	-	-
6	Undefined	-	-
7	Underline	Reset	Set

* If double height and double width are set at the same time quadruple character will be formed.

* All of the printed characters will be underlined except for the 90° rotated characters and spaces created by horizontal tab.

* Underline width is determined by the value set in [Underline set/reset] section.

The default value is "1".

* Different sizes of character mixed such as double width and normal size can be printed.

* The default value of "n" is [00] h.

47) Japanese Kanji mode setting: <<FS &>>

* Selects either Japan code table or non-Japan code table.

Code : [1C] h + [26] h

Description : Set Japanese Kanji print mode

* It is not effective when selected Shift JIS of Japanese Kanji.

* Default is the reset of Japanese Kanji mode.

48) Japanese Kanji underline set/reset: << FS - n >>

Code : [1C] h + [2D] h + n * [00≤n≤02] h

Description : Set / Rest underline of Japanese Kanji

"n" has following meanings

n(hex)	Function
00	Reset underline of Japanese Kanji
01	Set 1 dot underline of Japanese Kanji
02	Set 2 dots underline of Japanese Kanji

* All of the printed characters will be underlined except for the 90° rotated characters and spaces created by horizontal tab.

* This command is effective only when select Japanese Kanji mode.

* The default value of "n" is [00]h.

49) Japanese Kanji mode reset: << FS . >>

* Selects either Japan code table or non-Japan code table.

Code : [1C] h + [2E] h

Description : Reset Japanese Kanji print mode

* It is not effective when selected Shift JIS of Japanese Kanji.

* Default is the reset of Japanese Kanji mode.

50) Japanese Kanji code select: << FS C n >>

* Effective only when select Japanese mode

Code : [1C] h + [43] h + n * [00≤n≤01] h

Description : Select Japanese Kanji code

* "n" has following meanings

n(hex)	Code
00	JIS code
01	Shift JIS code

* Default is the set S-2-4 in the Dip switch

51) Japanese Kanji space setting: << FS S n1 n2 >>

Code : [1C] h + [53] h + n1 + n2 * [00≤n1≤20] h

* [00≤n2≤20] h

Description : Set side space of Japanese Kanji by dot unit

* n1 sets the left space. Default value is [00] h.

* n2 sets the right space. Default value is [00] h.

* Width of space will be double when selected double width.

52) Japanese Kanji Double height and width set / reset: << FS W n >>

Code : [1C] h + [57] h + n * [00≤n≤FF] h

Description : Set / reset double height and width of Japanese Kanji character

Last bit (b0) of “n” is effective.

Default value of “n” is [00] h.

Last bit “b0” has following meanings

b0	Function
0	Rest double height and width
1	Reset double height and width

53) Sending the printer information: << ESC s n >>

Code : [1B] h + [73] h + n * [n=02] h

Sending the printer information

n has following meanings

n(hex)	Function
02	Printer model information

Format sending back from the printer:

FFh + n (※1) + ASCII string (※2)

※1 n value defined by the command (= [02] h)

※2 Ended with Null (= [00] h)

54) Macro definition, start and end :<< GS : >>

Code : [1D] h + [3A] h

Description : Assigns Macro definition start and end. The size of data defined by Macro is up to 1,024 bytes. Exceeding to 1,024 byte cannot be defined.

* Defined Macros cannot be cleared by “Printer initialization”. Therefore “printer initialization” can be included in the Macro definition.

* During the Macro definition, printing can proceed.

* Once Macro is defined, the contents become effective until software is reset, power is set off.

55) Macro execution :<< GS ^ n1 n2 n3 >>

Code : [1D] h + [5E] h + n1 + n2 + n3

* [00≤n1≤FF] h

* [00≤n2≤FF] h

* [00≤n3≤01] h

Description : Executes Macros being defined

* The definitions of n1, n2 and n3 are:

n1 : times of Macro execution

n2 : wait time of Macro execution

At every execution, there is a wait time of n2 x 100msec.

n3 : Macro execution mode

n3(hex)	Mode
00	Consecutive execution
01	Execution by FEED switch

* Consecutive execution: Executes “n1” times with a wait time specified at n2.

* FEED switch execute: After a time specified at n2, waits for PE LED blinks and the FEED switch depressed. After FEED switch is pressed, it executes Macro once. This action is repeated by n1 times.

* If the printer receives this command during Macro definition, it stops Macro definition. If it occurs, defined Macros are cleared.

* Nothing occurs if Macro is not defined or n1 = [00] h.

* During Macro execution with n3 = [01] h, line feed by FEED switch is disabled.

56) Black and white reverse print set and reset :<< GS B n >>

Code : [1D] h + [42] h + n

* [00≤n≤FF] h

Function : Sets and resets black and white reverse print.

* “n” is available only for the least significant bit.

* The least significant bit controls as follows:

b0	Function
0	Resets black-white reverse printing
1	Sets black-white reverse printing

* The characters incorporated and downloaded can be reverse printed.

* The right side space of character set by [Set right space of a character] is also included for reverse print. However, it does not cover the skipped space made by bit image, download bit image, NV bit image, barcode, HRI characters, horizontal tab, specify absolute position, specify relative position.

* It does not include the space between the lines.

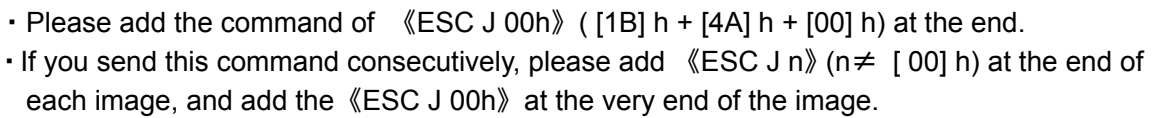
* Reverse print has a priority over “underline specified”. If a character is reversed, the character is not underlined. However, the underline setting remains effective.

* If “highlight” or “double strike” is set on the reverse print, the print may result in damages.

* The default value of “n” is [00] h.

- * $[00 \leq n1 \leq 36]$ h : NP-226
- * $[00 \leq n1 \leq 36]$ h : NP-326
- * $[00 \leq n2 \leq FF]$ h
- * $[00 \leq n3 \leq FF]$ h

- Dn is a raster bit image data.
- The printer prints raster bit image of width n1 byte by height $n2 + (256 * n3)$ dot lines.
- The total byte of the requested raster bit image data (Dn) is $n1 * (n2 + (256 * n3))$.
- Raster bit image data (Dn) exceeding the printing field will be disregarded.
- Raster bit image data (Dn) interprets bit " 1 " as print and bit " 0 " as not print.
- Relation between raster bit image data (Dn) and printed dots are as follows.



58) Definition of additional characters :<< FS 2 a1 a2 Dn >>

* Effective only when the Japanese font is selected

Code : [1C] h + [32] h + a1 + a2 + Dn

JIS Code * [a1=77] h

* [21≤a2≤7E] h

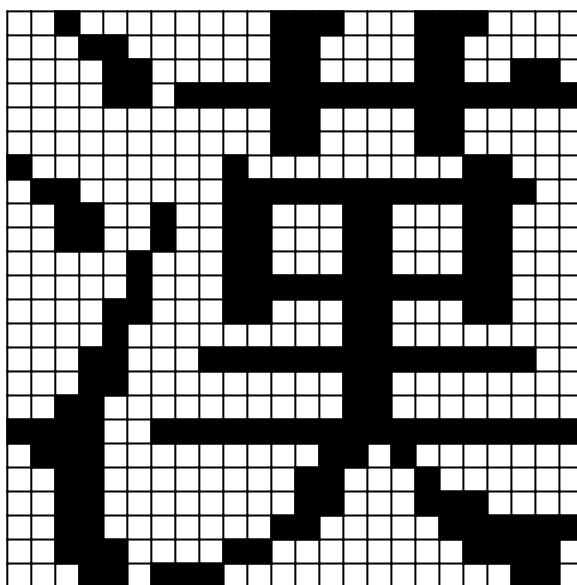
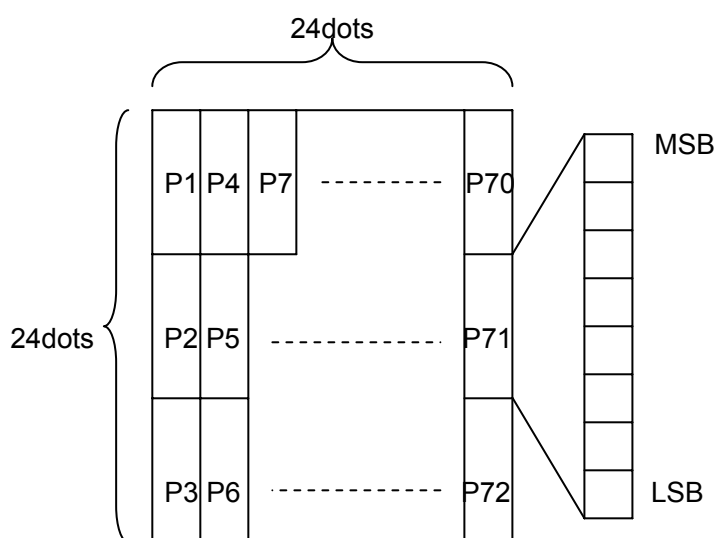
Shift JIS Code * [a1=EC] h

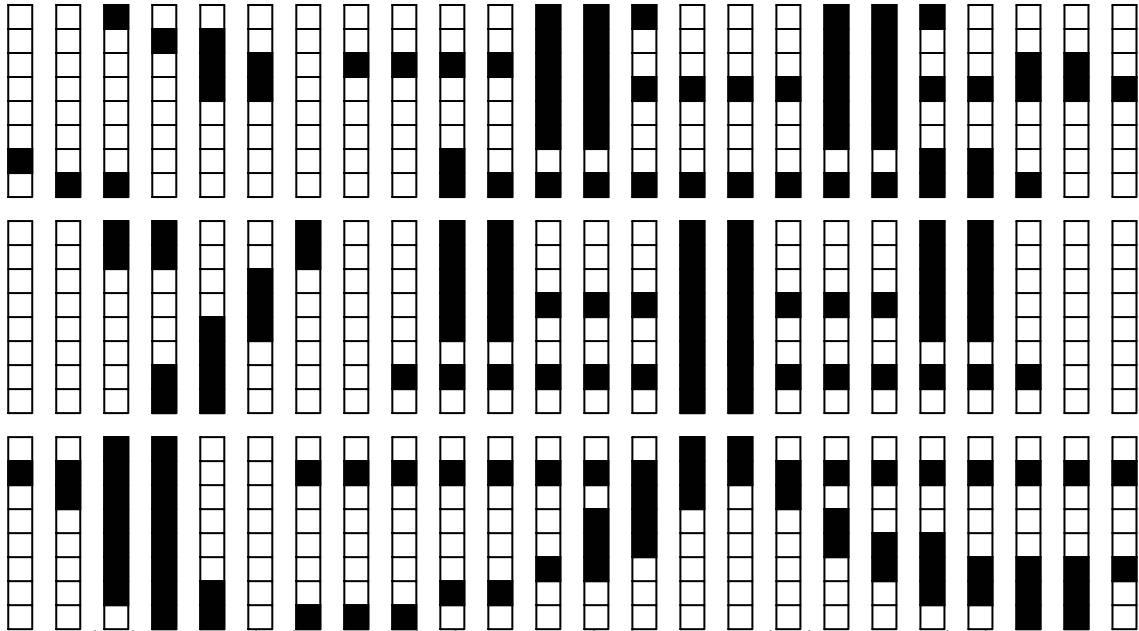
* [40≤a2≤7E , 80≤a2≤9E] h

Definition of additional Kanji characters

- Definition of up to 94 characters available.
- Dn is the data to be defined. Data will be 3 byte(vertical) x 24 dot(horizontal) =72 byte.
- The default status is “space”
- Once defined by command, it will be effective until execution of 【Soft reset】 , power off.
- Only specified area will be redefined.

<Example>





P1= [02] h,P4= [01] h,P7= [81] h,P10= [40] h,P13= [70] h,P16= [30] h,...
 P2= [00] h,P5= [00] h,P8= [C0] h,P11= [C3] h,P14= [0F] h,P17= [38] h,...
 P3= [40] h,P6= [60] h,P9= [FE] h,P12= [FF] h,P15= [03] h,P18= [00] h,...

6. Character code table

6.1 Domestic character code table (International character set: Japan)

	HEX	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
HEX	BIN	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	NUL		SP	0	@	P	`	p	—	⊥	SP	—	タ	ミ	=	×
1	0001		DC1	!	1	A	Q	a	q	—	⊥	。	ア	チ	ム	ト	円
2	0010			”	2	B	R	b	r	—	⊥	「	イ	ツ	メ	≡	年
3	0011		DC3	#	3	C	S	c	s	—	⊥	」	ウ	テ	モ	≡	月
4	0100			\$	4	D	T	d	t	—	⊥	、	エ	ト	ヤ	▲	日
5	0101			%	5	E	U	e	u	—	⊥	・	オ	ナ	ユ	▲	時
6	0110			&	6	F	V	f	v	—	⊥	ヲ	カ	ニ	ヨ	▲	分
7	0111			'	7	G	W	g	w	—	⊥	ア	キ	ヌ	ラ	▲	秒
8	1000			(	8	H	X	h	x	—	⊥	「	イ	ク	ネ	リ	♠
9	1001	HT		)	9	I	Y	i	y	—	⊥	「	ウ	ケ	ノ	ル	♥
A	1010	LF		*	:	J	Z	j	z	—	⊥	「	エ	コ	ハ	レ	♦
B	1011		ESC	+	;	K	[	k	{	—	⊥	「	オ	サ	ヒ	ロ	♣
C	1100	FF	FS	,	<	L	¥	l		—	⊥	「	ヤ	シ	フ	ワ	●
D	1101	CR	GS	—	=	M	]	m	}	—	⊥	「	ユ	ス	ヘ	ン	○
E	1110			.	>	N	^	n	~	—	⊥	「	ヨ	セ	ホ	ゝ	／
F	1111			／	?	O	—	o	SP	+	ゝ	「	ツ	ソ	マ	°	＼

* [SP] indicates "space".

* [CR] is ignored.

* Printer operation cannot be guaranteed if the blank control code (codes below [1F]h) is transmitted to printer.

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result.

6.2 Overseas character code table (International character set: U.S.A)

	HEX	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
HEX	BIN	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	NUL		SP	0	@	P	`	p	€	É	á	☐	⌒	⌒	α	≡
1	0001		DC1	!	1	A	Q	a	q	ü	æ	í	☐	⌒	⌒	β	±
2	0010			”	2	B	R	b	r	é	Æ	ó	☐	⌒	⌒	Γ	≤
3	0011		DC3	#	3	C	S	c	s	â	ô	ú	⌒	⌒	⌒	π	≥
4	0100			\$	4	D	T	d	t	ä	ö	ñ	⌒	⌒	⌒	Σ	∩
5	0101			%	5	E	U	e	u	à	ò	Ñ	⌒	⌒	⌒	σ	J
6	0110			&	6	F	V	f	v	â	û	ä	⌒	⌒	⌒	μ	÷
7	0111			'	7	G	W	g	w	ç	ù	ø	⌒	⌒	⌒	τ	≈
8	1000			(	8	H	X	h	x	ê	ÿ	ÿ	⌒	⌒	⌒	φ	°
9	1001	HT		)	9	I	Y	i	y	ë	Ö	⌒	⌒	⌒	⌒	θ	•
A	1010	LF		*	:	J	Z	j	z	è	Ü	⌒	⌒	⌒	⌒	Ω	•
B	1011		ESC	+	;	K	[	k	{	ï	Ø	½	⌒	⌒	⌒	δ	√
C	1100	FF	FS	,	<	L	\	l		î	£	¼	⌒	⌒	⌒	∞	ⁿ
D	1101	CR	GS	—	=	M	]	m	}	ì	¥	ì	⌒	⌒	⌒	φ	²
E	1110			.	>	N	^	n	~	Ä	£	«	⌒	⌒	⌒	€	■
F	1111			/	?	O	_	o	SP	À	f	»	⌒	⌒	⌒	∩	SP

* [SP] indicates "space".

* [CR] is ignored.

* Printer operation cannot be guaranteed if the blank control code (codes below [1F]h) is transmitted to printer.

* This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

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	HEX	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
HEX	BIN	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	NUL		SP	O	@	P	`	p	Ç	É	á	☐	└	ø	Ó	-
1	0001		DC1	!	1	A	Q	a	q	ü	æ	í	☐	┘	Ð	β	±
2	0010			"	2	B	R	b	r	é	Æ	ó	☐	┐	Ê	Ô	=
3	0011		DC3	#	3	C	S	c	s	â	ô	ú		└	Ë	Ò	¾
4	0100			\$	4	D	T	d	t	ä	ö	ñ	└	—	È	õ	¶
5	0101			%	5	E	U	e	u	à	ò	Ñ	À	+	€	Õ	§
6	0110			&	6	F	V	f	v	â	û	ª	Â	ã	Î	μ	÷
7	0111			'	7	G	W	g	w	ç	ù	º	Ã	Ä	Ï	þ	¸
8	1000			(	8	H	X	h	x	ê	ÿ	¿	©	ℓ	İ	þ	°
9	1001	HT		)	9	I	Y	i	y	ë	Ö	®	≡	ℓ	┘	Ú	”
A	1010	LF		*	:	J	Z	j	z	è	Ü	¬		≡	┘	Û	•
B	1011		ESC	+	;	K	[	k	{	ï	ø	½	≡	≡	■	Ü	¹
C	1100	FF	FS	,	<	L	\	l		î	£	¼	≡	≡	■	Ý	³
D	1101	CR	GS	—	=	M	]	m	}	ì	Ø	ì	¢	=		Ý	²
E	1110			.	>	N	^	n	~	Ä	x	«	¥	≡	İ	—	■
F	1111			/	?	O	_	o	SP	À	f	»	└	α	■	˘	SP

* [SP] indicates "space".

* [CR] is ignored.

* Printer operation cannot be guaranteed if the blank control code (codes below [1F]h) is transmitted to printer.

* This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

6.4 International character code table

n	Character set	23h	24h	40h	5Bh	5Ch	5Dh	5Eh	60h	7Bh	7Ch	7Dh	7Eh
00h	U.S.A	#	\$	@	[	\	]	^	`	{		}	~
01h	France	#	\$	à	°	ç	§	^	`	é	ù	è	”
02h	Germany	#	\$	§	Ä	Ö	Ü	^	`	ä	ö	ü	β
03h	U.K.	£	\$	@	[	\	]	^	`	{		}	~
04h	Denmark1	#	\$	@	Æ	Ø	À	^	`	æ	ø	à	~
05h	Sweden	#	☒	É	Ä	Ö	À	Ü	é	ä	ö	à	ü
06h	Italy	#	\$	@	°	\	é	^	ù	à	Ò	è	ì
07h	Spain	₧	\$	@	í	Ñ	¿	^	”	ñ	}	}	~
08h	Japan	#	\$	@	[	¥	]	^	`	{		}	~
09h	Norway	#	☒	É	Æ	Ø	À	Ü	é	æ	ø	à	ü
0Ah	Denmark2	#	\$	É	Æ	Ø	À	Ü	é	æ	ø	à	ü

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	<u>NUL</u> 0000	<u>STX</u> 0001	<u>SOT</u> 0002	<u>ETX</u> 0003	<u>EOT</u> 0004	<u>ENQ</u> 0005	<u>ACK</u> 0006	<u>BEL</u> 0007	<u>BS</u> 0008	<u>HT</u> 0009	<u>LF</u> 000A	<u>VT</u> 000B	<u>FF</u> 000C	<u>CR</u> 000D	<u>SO</u> 000E	<u>SI</u> 000F
10	<u>DLE</u> 0010	<u>DC1</u> 0011	<u>DC2</u> 0012	<u>DC3</u> 0013	<u>DC4</u> 0014	<u>NAK</u> 0015	<u>SYN</u> 0016	<u>ETB</u> 0017	<u>CAN</u> 0018	<u>EM</u> 0019	<u>SUB</u> 001A	<u>ESC</u> 001B	<u>FS</u> 001C	<u>GS</u> 001D	<u>RS</u> 001E	<u>US</u> 001F
20	<u>SP</u> 0020	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0 0030	1 0031	2 0032	3 0033	4 0034	5 0035	6 0036	7 0037	8 0038	9 0039	:	;	<	=	>	?
40	@ 0040	A 0041	B 0042	C 0043	D 0044	E 0045	F 0046	G 0047	H 0048	I 0049	J 004A	K 004B	L 004C	M 004D	N 004E	O 004F
50	P 0050	Q 0051	R 0052	S 0053	T 0054	U 0055	V 0056	W 0057	X 0058	Y 0059	Z 005A	[005B	\ 005C	] 005D	^ 005E	_ 005F
60	` 0060	a 0061	b 0062	c 0063	d 0064	e 0065	f 0066	g 0067	h 0068	i 0069	j 006A	k 006B	l 006C	m 006D	n 006E	o 006F
70	p 0070	q 0071	r 0072	s 0073	t 0074	u 0075	v 0076	w 0077	x 0078	y 0079	z 007A	{ 007B	 007C	} 007D	~ 007E	DEL 007F
80	€ 20AC		ƒ 201A		„ 201E	… 2026	† 2020	‡ 2021		‰ 2030	Š 0160	< 2039	Ś 015A	Ť 0164	Ž 017D	Ž 0179
90		ˆ 2018	˜ 2019	˘ 201C	˙ 201D	• 2022	— 2013	— 2014		™ 2122	Š 0161	> 203A	Ś 015B	Ť 0165	Ž 017E	Ž 017A
A0	<u>NBSP</u> 00A0	ˆ 02C7	˜ 02D8	Ł 0141	* 00A4	Ą 0104	ı 00A6	Ś 00A7	ˆ 00A8	© 00A9	§ 015E	« 00AB	¬ 00AC	— 00AD	@ 00AE	Ž 017B
B0	° 00B0	± 00B1	ˆ 02DB	ł 0142	ˆ 00B4	μ 00B5	¶ 00B6	• 00B7	ˆ 00B8	ą 0105	§ 015F	» 00BB	Ł 013D	ˆ 02DD	ı 013E	ž 017C
C0	Ř 0154	Á 00C1	Ě 00C2	Ǽ 0102	Ǽ 00C4	Í 0139	Ć 0106	Ç 00C7	Č 010C	É 00C9	Ě 0118	Ě 00CB	Ě 011A	Í 00CD	İ 00CE	Ď 010E
D0	Đ 0110	Ň 0143	Ň 0147	Ó 00D3	Ō 00D4	Ō 0150	Ö 00D6	× 00D7	Ř 0158	Ů 016E	Ú 00DA	Ú 0170	Ů 00DC	Ý 00DD	Ť 0162	ß 00DF
E0	ř 0155	á 00E1	ě 00E2	Ǽ 0103	Ǽ 00E4	í 013A	ć 0107	ç 00E7	č 010D	é 00E9	ę 0119	ě 00EB	ě 011B	í 00ED	î 00EE	ď 010F
F0	đ 0111	ń 0144	ň 0148	ó 00F3	ō 00F4	ō 0151	ö 00F6	÷ 00F7	ř 0159	ů 016F	ú 00FA	ú 0171	ů 00FC	ý 00FD	ţ 0163	• 02D9

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	<u>NUL</u> 0000	<u>STX</u> 0001	<u>SOT</u> 0002	<u>ETX</u> 0003	<u>EOT</u> 0004	<u>ENQ</u> 0005	<u>ACK</u> 0006	<u>BEL</u> 0007	<u>BS</u> 0008	<u>HT</u> 0009	<u>LF</u> 000A	<u>VT</u> 000B	<u>FF</u> 000C	<u>CR</u> 000D	<u>SO</u> 000E	<u>SI</u> 000F
10	<u>DLE</u> 0010	<u>DC1</u> 0011	<u>DC2</u> 0012	<u>DC3</u> 0013	<u>DC4</u> 0014	<u>NAK</u> 0015	<u>SYN</u> 0016	<u>ETB</u> 0017	<u>CAN</u> 0018	<u>EM</u> 0019	<u>SUB</u> 001A	<u>ESC</u> 001B	<u>FS</u> 001C	<u>GS</u> 001D	<u>RS</u> 001E	<u>US</u> 001F
20	<u>SP</u> 0020	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0 0030	1 0031	2 0032	3 0033	4 0034	5 0035	6 0036	7 0037	8 0038	9 0039	:	;	<	=	>	?
40	@ 0040	A 0041	B 0042	C 0043	D 0044	E 0045	F 0046	G 0047	H 0048	I 0049	J 004A	K 004B	L 004C	M 004D	N 004E	O 004F
50	P 0050	Q 0051	R 0052	S 0053	T 0054	U 0055	V 0056	W 0057	X 0058	Y 0059	Z 005A	[005B	\ 005C	] 005D	^ 005E	_ 005F
60	` 0060	a 0061	b 0062	c 0063	d 0064	e 0065	f 0066	g 0067	h 0068	i 0069	j 006A	k 006B	l 006C	m 006D	n 006E	o 006F
70	p 0070	q 0071	r 0072	s 0073	t 0074	u 0075	v 0076	w 0077	x 0078	y 0079	z 007A	{ 007B	 007C	} 007D	~ 007E	DEL 007F
80	Ђ 0402	Ѓ 0403	Ѕ 201A	Ї 0453	Љ 201E	Њ 2026	Ћ 2020	Ќ 2021	Є 20AC	Ў 2030	Љ 0409	Њ 2039	Ѓ 040A	Ѕ 040C	Ї 040B	Љ 040F
90	ђ 0452	ѓ 2018	ѕ 2019	ї 201C	љ 201D	њ 2022	ќ 2013	џ 2014	џ 2122	љ 0459	њ 203A	ѓ 045A	ѕ 045C	ї 045B	љ 045E	џ 045F
A0	<u>MBSP</u> 00A0	ѳ 040E	ѳ 045E	Ј 0408	* 00A4	Ѓ 0490	Ѓ 00A6	Ѓ 00A7	Ѓ 0401	Ѓ 00A9	Ѓ 0404	« 00AB	» 00AC	— 00AD	@ 00AE	Ѓ 0407
B0	° 00B0	± 00B1	І 0406	і 0456	҃ 0491	µ 00B5	¶ 00B6	· 00B7	ё 0451	№ 2116	е 0454	» 00BB	ј 0458	ѕ 0405	ѕ 0455	ї 0457
C0	А 0410	В 0411	В 0412	Г 0413	Д 0414	Е 0415	Ж 0416	З 0417	И 0418	Й 0419	К 041A	Л 041B	М 041C	Н 041D	О 041E	П 041F
D0	Р 0420	С 0421	Т 0422	У 0423	Ф 0424	Х 0425	Ц 0426	Ч 0427	Ш 0428	Щ 0429	Ъ 042A	Ы 042B	Ь 042C	Э 042D	Ю 042E	Я 042F
E0	а 0430	б 0431	в 0432	г 0433	д 0434	е 0435	ж 0436	з 0437	и 0438	й 0439	к 043A	л 043B	м 043C	н 043D	о 043E	п 043F
F0	р 0440	с 0441	т 0442	у 0443	ф 0444	х 0445	ц 0446	ч 0447	ш 0448	щ 0449	ъ 044A	ы 044B	ь 044C	э 044D	ю 044E	я 044F

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

6.7 CODE PAGE1252

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	NUL 0000	STX 0001	SOT 0002	ETX 0003	EOT 0004	ENQ 0005	ACK 0006	BEL 0007	BS 0008	HT 0009	LF 000A	VT 000B	FF 000C	CR 000D	SO 000E	SI 000F
10	DLE 0010	DC1 0011	DC2 0012	DC3 0013	DC4 0014	NAK 0015	SYN 0016	ETB 0017	CAN 0018	EM 0019	SUB 001A	ESC 001B	FS 001C	GS 001D	RS 001E	US 001F
20	SP 0020	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0 0030	1 0031	2 0032	3 0033	4 0034	5 0035	6 0036	7 0037	8 0038	9 0039	:	;	<	=	>	?
40	@ 0040	A 0041	B 0042	C 0043	D 0044	E 0045	F 0046	G 0047	H 0048	I 0049	J 004A	K 004B	L 004C	M 004D	N 004E	O 004F
50	P 0050	Q 0051	R 0052	S 0053	T 0054	U 0055	V 0056	W 0057	X 0058	Y 0059	Z 005A	[005B	\ 005C	] 005D	^ 005E	_ 005F
60	` 0060	a 0061	b 0062	c 0063	d 0064	e 0065	f 0066	g 0067	h 0068	i 0069	j 006A	k 006B	l 006C	m 006D	n 006E	o 006F
70	p 0070	q 0071	r 0072	s 0073	t 0074	u 0075	v 0076	w 0077	x 0078	y 0079	z 007A	{ 007B	 007C	} 007D	~ 007E	DEL 007F
80	€ 20AC		ƒ 201A	" 0192	… 2026	† 2020	‡ 2021	ˆ 02C6	% 2030	Š 0160	< 2039	Œ 0152		Ž 017D		
90		˘ 2018	˙ 2019	˚ 201C	• 2022	— 2013	— 2014	˜ 02DC	™ 2122	Š 0161	> 203A	œ 0153		ž 017E	ÿ 0178	
A0	NBSP 00A0	¡ 00A1	¢ 00A2	£ 00A3	¤ 00A4	¥ 00A5	¦ 00A6	§ 00A7	¨ 00A8	© 00A9	ª 00AA	« 00AB	¬ 00AC	­ 00AD	® 00AE	¯ 00AF
B0	° 00B0	± 00B1	² 00B2	³ 00B3	´ 00B4	µ 00B5	¶ 00B6	· 00B7	¸ 00B8	¹ 00B9	º 00BA	» 00BB	¼ 00BC	½ 00BD	¾ 00BE	¿ 00BF
C0	À 00C0	Á 00C1	Â 00C2	Ã 00C3	Ä 00C4	Å 00C5	Æ 00C6	Ç 00C7	È 00C8	É 00C9	Ê 00CA	Ë 00CB	Ì 00CC	Í 00CD	Î 00CE	Ï 00CF
D0	Ð 00D0	Ñ 00D1	Ò 00D2	Ó 00D3	Ô 00D4	Õ 00D5	Ö 00D6	× 00D7	Ø 00D8	Ù 00D9	Ú 00DA	Û 00DB	Ü 00DC	Ý 00DD	Þ 00DE	ß 00DF
E0	à 00E0	á 00E1	â 00E2	ã 00E3	ä 00E4	å 00E5	æ 00E6	ç 00E7	è 00E8	é 00E9	ê 00EA	ë 00EB	ì 00EC	í 00ED	î 00EE	ï 00EF
F0	ð 00F0	ñ 00F1	ò 00F2	ó 00F3	ô 00F4	õ 00F5	ö 00F6	÷ 00F7	ø 00F8	ù 00F9	ú 00FA	û 00FB	ü 00FC	ý 00FD	þ 00FE	ÿ 00FF

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	<u>NUL</u> 0000	<u>STX</u> 0001	<u>SOT</u> 0002	<u>ETX</u> 0003	<u>EOT</u> 0004	<u>ENQ</u> 0005	<u>ACK</u> 0006	<u>BEL</u> 0007	<u>BS</u> 0008	<u>HT</u> 0009	<u>LF</u> 000A	<u>VT</u> 000B	<u>FF</u> 000C	<u>CR</u> 000D	<u>SO</u> 000E	<u>SI</u> 000F
10	<u>DLE</u> 0010	<u>DC1</u> 0011	<u>DC2</u> 0012	<u>DC3</u> 0013	<u>DC4</u> 0014	<u>NAK</u> 0015	<u>SYN</u> 0016	<u>ETB</u> 0017	<u>CAN</u> 0018	<u>EM</u> 0019	<u>SUB</u> 001A	<u>ESC</u> 001B	<u>FS</u> 001C	<u>GS</u> 001D	<u>RS</u> 001E	<u>US</u> 001F
20	<u>SP</u> 0020	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{		}	~	DEL 007F
80	€ 20AC		ƒ 201A	„ 0192	… 2026	† 2020	‡ 2021		‰ 2030		< 2039					
90		ˆ 2018	˜ 2019	˝ 201C	˝ 201D	• 2022	— 2013	— 2014		™ 2122		> 203A				
A0	<u>MBSP</u> 00A0	ˆ 0385	ˆ 0386	£ 00A3	* 00A4	¥ 00A5	ı 00A6	§ 00A7	ˆ 00A8	© 00A9		« 00AB	¬ 00AC	— 00AD	@ 00AE	— 2015
B0	° 00B0	± 00B1	² 00B2	³ 00B3	´ 0384	µ 00B5	¶ 00B6	· 00B7	ˆ 0388	ˆ 0389	ˆ 038A	» 00BB	ˆ 038C	ˆ 00BD	ˆ 038E	ˆ 038F
C0	ı 0390	ˆ 0391	ˆ 0392	ˆ 0393	ˆ 0394	ˆ 0395	ˆ 0396	ˆ 0397	ˆ 0398	ˆ 0399	ˆ 039A	ˆ 039B	ˆ 039C	ˆ 039D	ˆ 039E	ˆ 039F
D0	Π 03A0	P 03A1		Σ 03A3	T 03A4	Y 03A5	Φ 03A6	X 03A7	Ψ 03A8	Ω 03A9	İ 03AA	ÿ 03AB	ά 03AC	έ 03AD	ή 03AE	ί 03AF
E0	Ů 03B0	α 03B1	β 03B2	γ 03B3	δ 03B4	ε 03B5	ζ 03B6	η 03B7	θ 03B8	ι 03B9	κ 03BA	λ 03BB	μ 03BC	ν 03BD	ξ 03BE	ο 03BF
F0	π 03C0	ρ 03C1	ς 03C2	σ 03C3	τ 03C4	υ 03C5	φ 03C6	χ 03C7	ψ 03C8	ω 03C9	ι 03CA	ÿ 03CB	ό 03CC	ύ 03CD	ώ 03CE	

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

6.9 CODE PAGE1254

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	NUL 0000	STX 0001	SOT 0002	ETX 0003	EOT 0004	ENQ 0005	ACK 0006	BEL 0007	BS 0008	HT 0009	LF 000A	VT 000B	FF 000C	CR 000D	SO 000E	SI 000F
10	DLE 0010	DC1 0011	DC2 0012	DC3 0013	DC4 0014	NAK 0015	SYN 0016	ETB 0017	CAN 0018	EM 0019	SUB 001A	ESC 001B	FS 001C	GS 001D	RS 001E	US 001F
20	SP 0020	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0 0030	1 0031	2 0032	3 0033	4 0034	5 0035	6 0036	7 0037	8 0038	9 0039	:	;	<	=	>	?
40	@ 0040	A 0041	B 0042	C 0043	D 0044	E 0045	F 0046	G 0047	H 0048	I 0049	J 004A	K 004B	L 004C	M 004D	N 004E	O 004F
50	P 0050	Q 0051	R 0052	S 0053	T 0054	U 0055	V 0056	W 0057	X 0058	Y 0059	Z 005A	[005B	\ 005C	] 005D	^ 005E	_ 005F
60	` 0060	a 0061	b 0062	c 0063	d 0064	e 0065	f 0066	g 0067	h 0068	i 0069	j 006A	k 006B	l 006C	m 006D	n 006E	o 006F
70	p 0070	q 0071	r 0072	s 0073	t 0074	u 0075	v 0076	w 0077	x 0078	y 0079	z 007A	{ 007B	 007C	} 007D	~ 007E	DEL 007F
80	€ 20AC		ƒ 201A	„ 0192	… 2026	† 2020	‡ 2021	ˆ 02C6	% 2030	Š 0160	< 2039	Œ 0152				
90		˘ 2018	˙ 2019	˚ 201C	˛ 201D	• 2022	— 2013	— 2014	˜ 02DC	™ 2122	Š 0161	> 203A	œ 0153			Ÿ 0178
A0	NBSP 00A0	ı 00A1	ı 00A2	£ 00A3	* 00A4	¥ 00A5	ı 00A6	§ 00A7	ı 00A8	© 00A9	ª 00AA	« 00AB	¬ 00AC	— 00AD	@ 00AE	— 00AF
B0	° 00B0	± 00B1	² 00B2	³ 00B3	´ 00B4	µ 00B5	¶ 00B6	· 00B7	¸ 00B8	¹ 00B9	º 00BA	» 00BB	¼ 00BC	½ 00BD	¾ 00BE	¿ 00BF
C0	À 00C0	Á 00C1	Â 00C2	Ã 00C3	Ä 00C4	Å 00C5	Æ 00C6	Ç 00C7	È 00C8	É 00C9	Ê 00CA	Ë 00CB	Ì 00CC	Í 00CD	Î 00CE	Ï 00CF
D0	Ğ 011E	Ñ 00D1	Ò 00D2	Ó 00D3	Ô 00D4	Õ 00D5	Ö 00D6	× 00D7	Ø 00D8	Ù 00D9	Ú 00DA	Û 00DB	Ü 00DC	Ý 0130	Ş 015E	ß 00DF
E0	à 00E0	á 00E1	â 00E2	ã 00E3	ä 00E4	å 00E5	æ 00E6	ç 00E7	è 00E8	é 00E9	ê 00EA	ë 00EB	ì 00EC	í 00ED	î 00EE	ï 00EF
F0	ğ 011F	ñ 00F1	ò 00F2	ó 00F3	ô 00F4	õ 00F5	ö 00F6	÷ 00F7	ø 00F8	ù 00F9	ú 00FA	û 00FB	ü 00FC	1 0131	ş 015F	ÿ 00FF

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

6.10 KS X 1001:1992

1区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	2区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
A1A0	✖		,	。	·	…	”	”	.	.	.	\	~	‘	’		A2A0	✖	⇒	⇔	▽	▽	’	.	˘	˘	°	°	.	˘	˘	˘	˘		
A1B0	“	”	[	]	<	>	《	》	「	」	『	』	【	】	±	×	A2B0	.	ℳ	Σ	Π	α	°F	‰	◁	◀	▷	▶	♠	♠	♥	♥	♣		
A1C0	÷	≠	≤	≥	∞	∴	°	′	″	℃	Å	¢	£	¥	♂	♀	A2C0	♣	⊙	◆	■	◐	◑	▨	▩	▫	▬	▭	▮	▯	▰	☼	☎	☎	
A1D0	∠	⊥	^	∂	▽	≡	≐	§	※	☆	★	○	●	◎	◇	◆	A2D0	☞	☜	☛	†	‡	↑	↗	↘	↙	↘	↘	↘	↘	↘	↘	↘	↘	
A1E0	□	■	△	▲	▽	▼	→	←	↑	↓	↔	=	≪	≫	√	∞	A2E0	No	Co.	™	am	pm	Tel												
A1F0	∞	∴	∫	∫	∈	∋	⊆	⊇	⊂	⊃	⊄	⊅	⊆	⊇	⊈	⊉	A2F0																		✖

3 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	4 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A3A0	×	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	A4A0	×	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ
A3B0	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?	A4B0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ	ㅕ
A3C0	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	A4C0	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ	ㅗ	ㅛ
A3D0	P	Q	R	S	T	U	V	W	X	Y	Z	[	₩	]	^	_	A4D0	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ	ㅗ	ㅛ
A3E0	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	A4E0	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ	ㅗ	ㅛ
A3F0	p	q	r	s	t	u	v	w	x	y	z	{		}	—	×	A4F0	ㅈ	ㅊ	ㅋ	ㅌ	ㅍ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ	ㅗ	ㅛ

5区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	6区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A5A0	×	i	ii	iii	iv	v	vi	vii	viii	ix	x						A6A0	×	—		┐	┑	┒	┓	└	┕	┖	┗	┘	┙	┚	┛	├
A5B0	I	II	III	IV	V	VI	VII	VIII	IX	X							A6B0	┐	┑	┒	┓	└	┕	┖	┗	┘	┙	┚	┛	├	┝	┞	┟
A5C0		A	B	Γ	Δ	E	Z	H	Θ	I	K	Λ	M	N	Ξ	O	A6C0	┐	┑	┒	┓	└	┕	┖	┗	┘	┙	┚	┛	├	┝	┞	┟
A5D0	Π	P	Σ	T	Υ	Φ	X	Ψ	Ω								A6D0	┐	┑	┒	┓	└	┕	┖	┗	┘	┙	┚	┛	├	┝	┞	┟
A5E0		α	β	γ	δ	ε	ζ	η	θ	ι	κ	λ	μ	ν	ξ	ο	A6E0	┐	┑	┒	┓	└	┕	┖	┗	┘	┙	┚	┛	├	┝	┞	┟
A5F0	π	ρ	σ	τ	υ	φ	χ	ψ	ω								A6F0																×

7 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	8 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A7A0	×	μℓ	mℓ	dℓ	ℓ	kl	cc	mm³	cm³	m³	km³	fm	nm	μm	mm	cm	A8A0	×	Æ	Ð	ⱥ	ⱦ		IJ		L	Ł	Ø	Œ	◌˚	Ɔ	Ɔ	Ɔ
A7B0	km	mm²	cm²	m²	km²	ha	μg	mg	kg	kt	cal	kcal	dB	m/s	m/s²	ps	A8B0		㉠	㉡	㉢	㉣	㉤	㉥	㉦	㉧	㉨	㉩	㉪	㉫	㉬	㉭	㉮
A7C0	ns	μs	ms	pV	nV	μV	mV	kV	MV	pA	nA	μA	mA	kA	pW	nW	A8C0	㉠	㉡	㉢	㉣	㉤	㉥	㉦	㉧	㉨	㉩	㉪	㉫	㉬	㉭	㉮	㉯
A7D0	μW	mW	kW	MW	Hz	kHz	MHz	GHz	THz	Ω	kΩ	MΩ	pF	nF	μF	mol	A8D0	㉠	㉡	㉢	㉣	㉤	㉥	㉦	㉧	㉨	㉩	㉪	㉫	㉬	㉭	㉮	㉯
A7E0	cd	rad	rad/s	rad/s²	sr	Pa	kPa	MPa	GPa	Wb	lm	lx	Bq	Gy	Sv	C/kg	A8E0	㉠	㉡	㉢	㉣	㉤	㉥	㉦	㉧	㉨	㉩	㉪	㉫	㉬	㉭	㉮	㉯
A7F0																	A8F0	㉠	㉡	㉢	㉣	㉤	㉥	½	⅓	⅔	¼	¾	⅛	⅜	⅝	⅞	×

*This code table indicates simplified symbol and is not print result. There may be a different result between the code table and print result

9区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	10区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A9A0	✕	æ	đ	ð	ħ	ı	ij	κ	ł	ł	ø	œ	ß	þ	ţ	ŋ	AAA0	✕	あ	あ	い	い	う	う	え	え	お	お	か	が	き	ぎ	く
A9B0	ñ	(ㄱ)	(ㄴ)	(ㄷ)	(ㄹ)	(ㅁ)	(ㅂ)	(ㅅ)	(ㅇ)	(ㅈ)	(ㅊ)	(ㅋ)	(ㆁ)	(ㆁ)	(ㆁ)	(ㆁ)	AAB0	ぐ	け	げ	こ	ご	さ	ざ	し	じ	す	ず	せ	ぜ	そ	ぞ	た
A9C0	(ㄴ)	(ㄷ)	(ㄹ)	(ㅁ)	(ㅂ)	(ㅅ)	(ㅇ)	(ㅈ)	(ㅊ)	(ㅋ)	(ㆁ)	(ㆁ)	(ㆁ)	(ㆁ)	(ㆁ)	(ㆁ)	AAC0	だ	ち	ぢ	っ	っ	づ	て	で	と	ど	な	に	ぬ	ね	の	は
A9D0	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	AAD0	ば	ば	ひ	び	び	ふ	ぶ	ふ	へ	べ	ぺ	ほ	ぼ	ま	み	
A9E0	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	AAE0	む	め	も	ゃ	ゃ	ゅ	ゅ	よ	よ	ら	り	る	れ	ろ	わ	わ
A9F0	(10)	(11)	(12)	(13)	(14)	(15)	1	2	3	4	n	1	2	3	4	✕	AAF0	ゐ	ゑ	を	ん												✕

11区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	12区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
ABA0	×	ア	ア	イ	イ	ウ	ウ	エ	エ	オ	オ	カ	ガ	キ	ギ	ク	ACA0	×	А	Б	В	Г	Д	Е	Ё	Ж	З	И	Й	К	Л	М	Н
ABB0	グ	ケ	ゲ	コ	ゴ	サ	ザ	シ	ジ	ス	ズ	セ	ゼ	ソ	ゾ	タ	ACB0	О	П	Р	С	Т	У	Ф	Х	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э
ABC0	ダ	チ	ヂ	ッ	ツ	ツ	テ	デ	ト	ド	ナ	ニ	ヌ	ネ	ノ	ハ	ACC0	Ю	Я														
ABD0	バ	パ	ヒ	ビ	ピ	フ	ブ	プ	ヘ	ベ	ペ	ホ	ボ	ポ	マ	ミ	ACD0		а	б	в	г	д	е	ё	ж	з	и	й	к	л	м	н
ABE0	ム	メ	モ	ヤ	ヤ	ユ	ユ	ヨ	ヨ	ラ	リ	ル	レ	ロ	ワ	ワ	ACE0	о	п	р	с	т	у	ф	х	ц	ч	ш	щ	ъ	ы	ь	э
ABF0	キ	エ	ヲ	ン	ヴ	カ	ケ									×	ACF0	ю	я														×

13 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	14 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
ADA0	✕																AEA0	✕															
ADB0																	AEB0																
ADC0																	AEC0																
ADD0																	AED0																
ADE0																	AEE0																
ADF0																✕	AEF0																✕

15 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	16 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
AFA0	✕																B0A0	✕	가	각	간	간	갈	갈	갈	갈	갈	갈	갇	갇	강	갇	갇
AFB0																	B0B0	갈	갈	갈	개	객	객	객	객	객	갇	갇	갇	가	각	간	갈
AFC0																	B0C0	갇	강	개	객	객	거	객	객	객	객	갈	검	검	것	갇	경
AFD0																	B0D0	것	걸	걸	경	게	겐	겐	겐	겐	갇	갇	겐	거	격	겨	견
AFE0																	B0E0	결	결	검	겹	것	겼	경	결	계	겐	겔	겹	갇	고	곡	곤
AFF0																✕	B0F0	곧	곧	곧	곧	곧	곧	곧	곧	곧	과	과	관	팔	팔	✕	

[illegible]

19 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	20 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B3A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	B4A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ
B3B0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	B4B0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ
B3C0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	B4C0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ
B3D0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	B4D0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ
B3E0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	B4E0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ
B3F0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ	B4F0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅅ	ㅇ	ㅈ

21 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	22 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
B5A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	B6A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	
B5B0	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	B6B0	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	
B5C0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	B6C0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	
B5D0	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	B6D0	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ		
B5E0	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	B6E0	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ
B5F0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	B6F0	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	

23 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	24 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B7A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8A0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ
B7B0	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8B0	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ
B7C0	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8C0	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ
B7D0	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8D0	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ
B7E0	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8E0	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ
B7F0	ㄷ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㄷ	ㄴ	B8F0	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ	ㅈ	ㅊ	ㅋ	ㆁ	ㅁ	ㅂ	ㅃ	ㅄ	ㅅ	ㅇ

25 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	26 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B9A0	×	핀	필	핍	핏	핑	묘	몬	몰	몹	못	무	목	묵	문	문	BAA0	×	병	벗	베	백	벤	벤	벨	벵	벵	벵	벵	며	벽	변	
B9B0	물	물	품	품	품	못	몽	물	몽	뒤	뮐	뮐	뮐	뮐	웨	뮐	BAB0	별	뵵	뵵	뵵	뵵	뵵	뵵	보	복	복	본	볼	봄	봄	붓	
B9C0	뮐	뮐	뮐	뮐	뮐	몹	므	믄	믄	믄	믄	믄	믄	믄	믄	믄	BAC0	봉	봐	반	봣	배	봣	뵵	뵵	뵵	뵵	뵵	보	부	부	부	
B9D0	뮐	뮐	뮐	뮐	뮐	밋	밋	밍	밋	밀	바	박	박	밖	반	반	BAD0	분	분	불	불	불	불	불	붓	붕	불	분	뮐	뮐	뮐	뮐	
B9E0	밖	밖	밖	밖	밖	밋	방	발	배	백	뵵	뵵	뵵	뵵	뵵	뵵	BAE0	뵵	뮐	뮐	뮐	뮐	뮐	뮐	붓	붕	브	브	븐	블	븀	븀	
B9F0	뵵	뵵	바	박	반	밖	버	벽	번	번	벌	븀	븀	븀	븀	×	BAF0	붓	비	빅	빈	빌	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	×	

27 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	28 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
BBA0	×	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	BCA0	×	삭	산	살	삼	삽	삿	상	새	쌔	쌔	쌔	쌔	쌔	쌔	쌔		
BBB0	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	BCB0	섯	선	선	설	섭	섭	섭	섭	섯	섯	섯	섯	섯	섯	섯	섯		
BBC0	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	BCC0	셈	셈	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	셋	
BBD0	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	BCD0	셀	셀	소	속	속	손	솔	솔	솔	솔	솔	솔	솔	솔	솔	솔	솔	
BBE0	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	뮐	BCE0	살	상	쇄	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	쌔	
BBF0	삽	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	삿	BCF0	손	솔	습	습	습	습	습	습	습	습	습	습	습	습	습	습	습	×

29 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	30 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
BDA0	×	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	숯	BEA0	×	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰
BDB0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	BEB0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰
BDC0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	BEC0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰
BDD0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	BED0	압	앗	앗	앙	알	앞	애	액	앤	엘	앰	앎	앏	앑	앵	야
BDE0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	BEE0	약	얀	얏	얏	얏	얏	얏	얏	얏	얏	얏	얏	얏	얏	얏	얏
BDF0	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	썰	BEF0	언	엇	엇	얼	엇	엇	엇	엇	엇	엇	엇	엇	엇	엇	엇	×

31 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	32 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
BFA0	✕	에	엑	엔	엘	엠	엵	엵	엵	여	역	여	연	열	엵	엵	C0A0	✕	웁	웁	웁	웁	웁	웁	위	웁	웁	웁	웁	웁	웁	웁	유
BFB0	엵	엵	엵	엵	엵	엵	엵	엵	엵	예	엔	엘	엵	엵	엵	엵	C0B0	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁
BFC0	오	웁	온	올	웁	웁	웁	웁	웁	옳	웁	옳	와	웁	웁	웁	C0C0	응	웁	웁	웁	웁	웁	응	의	웁	웁	웁	이	익	인	일	
BFD0	왓	왓	왓	왓	왓	왓	왓	왓	왓	왓	왓	왓	외	외	웁	웁	C0D0	웁	웁	웁	웁	웁	웁	웁	잉	잇	잇	자	작	잔	장	잔	잘
BFE0	웁	웁	웁	웁	요	웁	온	올	웁	웁	웁	웁	우	웁	웁	웁	C0E0	잠	잠	잠	잠	잠	잠	잠	재	재	재	재	재	재	재	재	재
BFF0	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	웁	C0F0	자	작	잔	장	장	장	장	재	재	재	재	재	재	재	재	재

33 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	34 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C1A0	×	점	접	젓	정	젓	제	젝	젠	젤	젼	젼	젼	젼	저	전	C2A0	×	징	짓	길	짚	짜	작	잔	짱	짤	째	짹	째	째	째	째
C1B0	절	점	접	젓	정	제	조	죽	존	줄	죤	죤	죤	죤	중	죤	C2B0	째	젝	젠	젤	젼	젼	젼	짱	짜	째	째	째	째	째	째	
C1C0	죤	죤	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	C2C0	째	째	째	째	째	째	째	좌	좌	좌	좌	좌	좌	좌	좌	
C1D0	죤	죤	조	조	조	조	조	조	조	조	조	조	조	조	조	조	C2D0	죤	죤	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	
C1E0	죤	죤	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	C2E0	죤	죤	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	좌	
C1F0	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	죤	C2F0	죤	죤	죤	죤	죤	죤	죤	차	차	차	차	차	차	차	차	×

35 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	36 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C3A0	ㄱ	찰	창	찰	채	채	채	채	채	채	채	채	채	채	채	채	C4A0	ㄷ	치	칙	친	친	칠	침	침	침	침	칭	카	각	칸	칼	감
C3B0	찰	참	창	처	척	천	철	침	첩	চিত	쳤	칭	체	책	첸	첼	C4B0	갑	갓	강	개	객	갸	갸	갸	갸	갸	갸	갸	갸	갸	갸	
C3C0	첼	첼	첼	첼	처	천	쳤	체	첸	첼	초	촉	촌	출	춤	춤	C4C0	갸	컨	컨	컬	کم	کم	컷	켰	경	케	cek	첸	켈	کم	کم	кет
C3D0	춧	충	화	환	활	황	최	최	첼	침	칩	চিত	칭	쇼	춤	추	C4D0	깁	커	컨	결	کم	کم	컷	켰	경	케	코	코	콘	콜	콤	콥
C3E0	축	춘	출	춤	출	춧	충	취	চিত	첼	취	친	칠	침	칩	칩	C4E0	콧	콩	과	곽	관	활	깜	광	괘	행	괴	켈	교	쿠	국	kun
C3F0	চিত	칭	츄	춘	출	춤	충	츠	츄	츄	츄	츄	츄	츄	츄	츄	C4F0	쿨	쿰	콥	콧	쿱	퀴	퀸	퀸	퀸	퀸	퀴	퀸	퀸	퀸	퀸	퀸

37 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	38 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C5A0	×	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	C6A0	×	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀	튀
C5B0	키	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	킴	C6B0	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼	튼
C5C0	타	타	타	타	타	타	타	타	타	타	타	타	타	타	타	타	C6C0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼
C5D0	털	털	털	털	털	털	털	털	털	털	털	털	털	털	털	털	C6D0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼
C5E0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	C6E0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼
C5F0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	C6F0	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼	툼

39 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	40 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C7A0	×	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8A0	×	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍
C7B0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8B0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍
C7C0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8C0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍
C7D0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8D0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍
C7E0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8E0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍
C7F0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	C8F0	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍	핍

41 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	42 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C9A0	×																CAA0	×	伽	佳	假	價	加	可	呵	哥	嘉	嫁	家	暇	架	枷	柯
C9B0																	CAB0	歌	珂	痂	稼	苛	茄	街	袈	訶	賈	跏	軻	迦	駕	刻	却
C9C0																	CAC0	各	恪	慤	穀	珏	脚	覺	角	閣	侃	刊	壘	奸	姦	干	幹
C9D0																	CAD0	懇	揀	杆	束	桿	潤	癩	看	礪	稈	竿	簡	肝	艮	艱	諫
C9E0																	CAE0	間	芻	喝	曷	渴	碣	竭	葛	褐	蝎	鞣	勘	坎	堪	嵌	感
C9F0															×		CAF0	憾	戡	敢	柑	橄	減	甘	疳	監	瞰	紺	邯	鑑	鑒	龕	×

43 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	44 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
CBA0	×	匣	岬	甲	胛	鉀	閘	剛	垇	姜	岡	崗	康	强	彊	慷	CCA0	×	臉	鈴	黔	劫	怯	迭	偈	憩	揭	擊	格	橄	激	膈	覲
CBB0	江	薑	疆	糠	絳	綱	羌	腔	缸	薑	講	鋼	降	鯁	介		CCB0	隔	堅	牽	犬	甄	絹	繭	肩	見	譴	遣	鵲	抉	決	潔	結
CBC0	价	個	凱	塏	愷	慨	改	概	漑	疥	皆	盖	箇	芥	蓋		CCC0	缺	訣	兼	慊	箝	謙	鉗	鎌	京	徑	倥	傾	倣	勁	勑	卿
CBD0	豈	鎧	開	喀	客	坑	更	梗	羹	龔	倨	去	居	巨	拒	据	CCD0	垆	境	庚	徑	慶	憬	擎	敬	景	憬	更	梗	涇	炅	炯	璟
CBE0	據	舉	渠	炬	祛	距	踞	車	遽	鉅	鋸	乾	件	健	巾	建	CCE0	墩	瓊	瘞	硬	磬	竟	競	綱	經	耕	耿	脛	莖	警	輕	逕
CBF0	愆	隄	隄	虔	蹇	鍵	騫	乞	傑	杰	桀	儉	劍	劒	檢	×	CCF0	鏡	頃	顚	驚	鯨	係	啓	界	契	季	屆	悸	戒	桂	械	×

45 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	46 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
CDA0	×	榮	溪	界	癸	穉	稽	系	繫	繼	計	誠	谿	階	鷄	古	CEA0	×	科	菓	誇	課	跨	過	鍋	顆	廓	櫛	藿	郭	串	冠	官
CDB0	叩	告	呱	固	姑	孤	尻	庫	拷	攷	故	敲	曷	枯	槁	沽	CEB0	寬	慣	棺	款	灌	琯	確	管	罐	菅	觀	貫	關	館	刮	愒
CDC0	痼	阜	辜	稿	羔	考	股	膏	苦	苽	菰	藁	蠱	袴	誥	賈	CEC0	括	适	佻	光	匡	壙	廣	曠	洸	吹	狂	珙	筐	肫	鑛	卦
CDD0	辜	錮	雇	顧	高	鼓	哭	斛	曲	梏	穀	谷	鵠	困	坤	崑	CED0	掛	罨	乖	傀	塊	壞	怪	愧	拐	槐	魁	宏	紘	肱	轟	交
CDE0	昆	梱	棍	滾	琨	袞	汨	滑	骨	供	公	共	功	孔	工		CEE0	僑	咬	喬	嬌	嶠	巧	攪	教	校	橋	狡	皎	矯	絞	翹	膠
CDF0	恐	恭	拱	控	攻	珙	空	蚣	貢	鞏	串	寡	戈	果	瓜	×	CEF0	蕎	蛟	較	驕	郊	餃	驕	蛟	丘	久	九	仇	俱	具	勾	×

47 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	48 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
CFA0	×	區	口	句	咎	嘔	坵	垢	寇	嘔	廐	懼	拘	救	枸	柁	D0A0	×	鬼	龜	叫	圭	奎	揆	槻	珪	硅	窺	竅	糾	葵	規	赴
CFB0	構	歐	毆	毬	求	溝	灸	狗	玖	球	瞿	矩	究	絀	耇	臼	D0B0	達	閨	勻	均	畝	筠	菌	鈞	龜	橘	克	剋	劇	戟	棘	極
CFC0	舅	舊	苟	衢	謳	購	軀	逯	邱	鈎	鈺	駒	驅	鳩	鷗	龜	D0C0	隙	僅	仞	勤	懃	斤	根	槿	瑾	筋	芹	董	覲	謹	近	謹
CFD0	國	局	菊	鞠	鞠	麴	君	窘	群	裙	軍	郡	堀	屈	掘	窟	D0D0	契	今	矜	擒	吟	檣	琴	禁	禽	芩	衾	衿	襟	金	錦	偁
CFE0	宮	弓	穹	窮	芎	躬	倦	券	勸	卷	圈	拳	捲	權	港	眷	D0E0	及	急	扱	汲	級	給	亘	兢	矜	肯	企	伎	其	冀	嗜	器
CFF0	厥	獮	蕨	蹶	闕	机	櫃	潰	詭	軌	饋	句	晷	歸	貴	×	D0F0	圻	基	埼	夔	奇	妓	寄	岐	崎	己	幾	忌	技	旗	旣	×

49 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	50 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D1A0	×	碁	期	杞	棋	棄	機	欺	氣	汽	沂	淇	玘	琦	琪	璦	D2A0	×	納	臘	蠟	衲	囊	娘	廊	朗	浪	狼	郎	乃	來	內	奈
D1B0	璣	畸	畿	碁	磯	祁	祇	祈	祺	箕	紀	綺	羈	耆	機	肌	D2B0	柰	耐	冷	女	年	撚	季	念	恬	拈	捻	寧	寧	努	勞	奴
D1C0	記	譏	豈	起	錡	鎡	飢	饑	騎	騏	驥	騏	緊	佶	吉	拮	D2C0	弩	怒	擄	櫓	爐	璫	盧	老	蘆	虜	露	鴛	魯	鶯	碌	
D1D0	桔	金	喫	雛	喇	奈	娜	懦	懶	拏	拿	癩	羅	蘿	螺	裸	D2D0	祿	綠	萊	錄	鹿	論	壘	弄	濃	籠	聾	農	惱	牢	磊	
D1E0	邏	那	樂	洛	烙	珞	落	諾	酪	駱	亂	卵	暖	欄	煖	爛	D2E0	腦	賂	雷	尿	壘	屢	樓	淚	漏	累	縷	陋	嫩	訥	杻	紐
D1F0	蘭	難	鸞	捏	捺	南	嵐	柑	楠	浦	濫	男	藍	檻	拉	×	D2F0	勒	肋	凜	凌	稜	綾	能	菱	陵	尼	泥	匿	溺	多	荼	×

51 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	52 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D3A0	×	丹	亶	但	單	團	壇	彖	斷	旦	檀	段	湍	短	端	簞	D4A0	×	棹	櫂	洶	渡	滔	濤	燾	盜	睹	禱	稻	苟	覩	賭	跳
D3B0	緞	蛋	袒	鄲	鍛	撻	達	獮	疸	達	啖	坍	檐	擔	曇	淡	D4B0	蹈	逃	途	道	都	鍍	陶	韜	毒	瀆	牘	犢	獨	督	禿	篤
D3C0	湛	潭	澹	痰	聃	膽	蕓	覃	談	譚	鎔	沓	沓	答	踏	逖	D4C0	轟	讀	墩	惇	敦	吨	噉	沌	焮	豚	頓	玆	突	仝	冬	
D3D0	唐	堂	塘	幢	戇	撞	棠	當	糖	螳	黨	代	垚	垚	大	對	D4D0	凍	動	同	憧	東	桐	棟	洞	潼	疼	瞳	童	胴	董	銅	兜
D3E0	岱	帶	待	戴	擡	玳	臺	袋	貸	隊	黛	宅	德	惠	倒	刀	D4E0	斗	杜	抖	痘	寶	荳	讀	豆	逗	頭	屯	臀	茈	遁	鈍	
D3F0	到	圖	堵	塗	導	屠	烏	嶋	度	徒	悼	挑	掉	搗	桃	×	D4F0	得	磴	橙	燈	登	等	藤	騰	鄧	騰	喇	懶	拏	賴	羅	×

53 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	54 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D5A0	×	蘿	螺	裸	邏	樂	洛	烙	珞	絡	落	諾	酪	駱	丹	亂	D6A0	×	煉	璉	練	聯	蓮	輦	連	鍊	冽	列	劣	洌	烈	裂	廉
D5B0	卵	欄	爨	瀾	爛	蘭	鸞	刺	辣	嵐	孽	攬	欖	濫	籃	纜	D6B0	斂	殮	濂	簾	獵	令	伶	囹	寧	岑	嶺	伶	玲	苓	翎	
D5C0	藍	檻	覽	拉	臘	蠟	廊	朗	浪	琅	瑯	瑯	螂	郎	來	峽	D6C0	聆	逞	鈴	零	靈	領	齡	例	禮	體	隸	勞	怒	撈	擄	
D5D0	徠	萊	冷	掠	略	亮	兩	涼	梁	樑	糧	糧	良	諒		D6D0	櫓	潞	瀘	爐	盧	老	蘆	虜	路	輅	露	魯	鶯	鹵	碌	祿	
D5E0	輻	量	侶	儷	勵	呂	廬	慮	戾	旅	櫚	瀘	礪	藜	蠣	閭	D6E0	綠	萊	錄	鹿	麓	論	壘	弄	隴	瀧	籠	聾	鹵	瀨	牢	
D5F0	驢	驪	麗	黎	力	曆	歷	瀝	磔	轢	震	憐	戀	攣	漣	×	D6F0	磊	賂	賚	賴	雷	了	僚	寮	廖	料	燎	療	瞭	聊	蓼	×

55 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	56 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D7A0	×	遼	鬧	龍	壘	婁	屢	樓	淚	漏	瘰	累	縷	蔓	樓	鏤	D8A0	×	立	笠	粒	摩	瑪	痲	碼	磨	馬	魔	麻	寔	幕	漠	膜
D7B0	陋	劉	旒	柳	榴	流	溜	瀏	琉	瑠	留	瘤	硫	謬	類	六	D8B0	莫	邈	万	𠂇	婉	蠻	彎	慢	挽	晚	曼	滿	漫	灣	瞞	萬
D7C0	戮	陸	侖	倫	崙	淪	綸	輪	律	慄	栗	率	隆	勒	肋	凜	D8C0	蔓	蠻	輓	饅	鰻	忒	抹	末	沫	茉	襪	韎	亡	妄	忘	忙
D7D0	凌	楞	稜	綾	菱	陵	俚	利	厘	吏	喇	履	俐	李	梨	涖	D8D0	望	網	罔	芒	茫	莽	輞	邛	埋	妹	媒	寐	味	枚	梅	每
D7E0	犁	狸	理	璃	異	痢	籬	罹	羸	莉	裏	裡	里	釐	離	鯉	D8E0	煤	罵	買	賣	邁	魅	脈	貊	陌	驀	麥	孟	氓	猛	盲	盟
D7F0	吝	潏	潏	璘	藺	躡	隣	鱗	麟	林	淋	琳	臨	霖	莅	×	D8F0	萌	冪	覓	免	晃	勉	棉	沔	眈	眠	綿	緬	面	麵	滅	×

57 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	58 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D9A0	×	蔑	冥	名	命	明	暝	楡	溟	皿	瞢	茗	冀	螟	酪	銘	DAA0	×	汶	紊	紋	聞	蚊	門	雯	勿	沕	物	味	媚	尾	媚	彌
D9B0	鳴	袂	侮	冒	募	姆	帽	慕	摸	摹	暮	某	模	母	毛	牟	DAB0	微	未	梏	楣	渼	眉	米	美	薇	謎	迷	靡	微	岷	悶	
D9C0	牡	瑁	眸	矛	耗	茅	謀	謨	貌	木	沐	牧	目	睦	穆		DAC0	愍	憫	敏	旻	旻	泯	玫	珉	縉	閔	密	蜜	謐	剝	博	
D9D0	鶯	歿	沒	夢	朦	蒙	卯	墓	妙	廟	描	昂	杳	渺	貓	妙	DAD0	拍	搏	撲	朴	樸	泊	珀	璞	箔	粕	縛	膊	舶	薄	迫	雹
D9E0	苗	錨	務	巫	撫	懋	戊	拇	撫	无	楸	武	母	無	弑	畝	DAE0	駁	伴	半	反	叛	拌	搬	攀	斑	槃	泮	潘	班	畔	瘢	盤
D9F0	繆	舞	茂	蕪	誣	貿	霧	鷓	墨	默	們	勿	吻	問	文	×	DAF0	盼	磐	礮	礬	絆	般	蟠	返	頒	飯	勃	拔	撥	渤	潑	×

59 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	60 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
DBA0	𠄎	發	跋	馱	鉢	髮	魃	倣	傍	坊	妨	尨	幫	彷彿	房	放	DCA0	𠄎	碧	藥	闕	霹	便	卞	弁	變	辨	辯	邊	別	瞥	鯢	鼈
DBB0	方	旁	昉	枋	榜	滂	磅	紡	肪	膀	舫	芳	勞	蚌	訪	謗	DCB0	丙	併	兵	屏	并	哂	曷	柄	棟	炳	瓶	病	秉	竝	餅	
DBC0	邦	防	龐	倍	俳	北	培	徘	拜	排	杯	湃	焙	盃	背	胚	DCC0	駢	保	堡	報	寶	普	步	沕	溲	潛	珣	甫	菩	補	襦	譜
DBD0	裴	裴	綽	賠	輩	配	陪	伯	佰	帛	柏	栢	白	百	魄	幡	DCD0	輔	伏	僕	匍	卜	宓	復	服	福	腹	茯	蔔	複	覆	輶	幅
DBE0	樊	煩	燔	番	礪	繁	蕃	藩	飜	伐	筏	罰	閥	凡	帆	梵	DCE0	馥	馥	本	叟	俸	奉	封	峯	峰	捧	棒	烽	瑋	縫	蓬	
DBF0	汜	汎	泛	犯	範	范	法	珉	僻	劈	壁	擘	槩	壁	癖	𠄎	DCF0	蜂	逢	鋒	鳳	不	付	俯	俯	剖	副	否	咐	埠	夫	婦	𠄎

61 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	62 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
DDA0	×	孚	孵	富	府	復	扶	敷	斧	浮	溥	父	符	簿	缶	腐	DEA0	×	脾	臂	非	蜚	裨	誹	譬	費	鄙	非	飛	鼻	噸	嬪	彬
ddb0	腑	膚	孵	芙	苻	訃	負	賦	賄	赴	趺	部	釜	阜	附	駙	DEB0	斌	檣	殯	浜	濱	瀕	牝	玼	貧	賓	頻	憑	氷	聘	騁	乍
DDC0	鳧	北	分	吩	噴	墳	奔	奮	忿	憤	扮	盼	汾	焚	盆	粉	DEC0	事	些	仕	伺	似	使	俟	傴	史	司	唆	嗣	四	士	奢	娑
DDD0	糞	紛	芬	賁	雰	不	佛	弗	佛	拂	崩	朋	棚	礪	繡	鵬	DED0	寫	寺	射	巳	師	徙	思	捨	斜	斯	栖	查	梭	死	沙	泗
DDE0	丕	備	匕	匪	卑	妃	婢	庇	悲	憊	扉	批	斐	枇	榧	比	DEE0	渣	瀉	獅	砂	社	祀	祠	私	篩	紗	絲	肆	舍	莎	蓑	蛇
DDF0	恣	毗	毘	沸	泌	毳	痺	砒	碑	砒	秘	枇	緋	翡	肥	×	DEF0	娑	詐	詞	謝	賜	赦	辭	邪	飼	駟	麝	削	數	朔	索	×

63 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	64 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
DFA0	×	傘	刪	山	散	汕	珊	產	疝	算	蒜	酸	霰	沱	撒	殺	E0A0	×	胥	舒	薯	西	誓	逝	鋤	黍	鼠	夕	爽	席	惜	昔	皙
DFB0	煞	薩	三	參	杉	森	滲	苳	蓼	衫	插	澁	鉞	颯	上	傷	E0B0	析	汐	浙	渴	石	碩	蕭	釋	錫	仙	僊	先	善	嬋	宣	扇
DFC0	像	償	商	喪	嘗	孀	尙	岈	常	床	庠	廂	想	桑	橡	湘	E0C0	散	旋	渲	煽	琺	瑄	璇	璿	癩	禪	線	繕	羨	腺	膳	船
DFD0	爽	牀	狀	相	祥	箱	翔	裳	觴	詳	象	賞	霜	塞	璽	賽	E0D0	薛	蟬	詵	跣	選	銑	鐸	饕	鮮	尙	屑	楔	泄	洩	濞	舌
DFE0	嗇	塞	穉	索	色	牲	生	甥	省	笙	墅	壻	嶼	序	庶	徐	E0E0	薛	褻	設	說	雪	齧	刻	遲	殲	纖	蟾	贍	閃	陝	攝	涉
DFF0	恕	抒	捷	敍	暑	曙	書	栖	棲	犀	瑞	筵	絮	緒	署	×	E0F0	變	葉	城	姓	成	性	惺	成	星	晟	猩	城	盛	省	箴	×

65 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	66 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E1A0	×	聖	聲	腥	誠	醒	世	勢	歲	洗	稅	笹	細	說	貰	召	E2A0	×	戊	手	授	搜	收	數	樹	殊	水	洙	漱	燧	狩	獸	琇
E1B0	嘯	塑	宵	小	少	巢	所	掃	搔	昭	梳	沼	消	溯	瀟	炤	E2B0	璩	瘦	睡	秀	穗	堅	粹	綏	綬	繡	羞	脩	茱	蒐	修	藪
E1C0	燒	甦	疏	疎	瘡	笑	篠	簫	素	紹	蔬	蕭	蘇	訴	逍	遡	E2C0	袖	誰	讐	輸	遂	遂	酬	銖	鏽	隋	隧	隨	雖	需	須	首
E1D0	邵	銷	韶	騷	俗	屬	束	涑	栗	績	謬	贖	速	孫	巽	損	E2D0	髓	鬚	叔	塾	夙	孰	宿	淑	瀟	熟	瑒	穉	肅	菽	巡	徇
E1E0	蓀	遜	漚	率	宋	悚	松	淞	訟	誦	送	頌	刷	殺	灑	碎	E2E0	循	恂	旬	枸	楯	櫛	殉	洵	淳	珣	盾	瞬	筍	純	脣	舜
E1F0	鎖	衰	釗	修	受	嗽	囚	垂	壽	嫂	守	岫	岵	帥	愁	×	E2F0	荀	蕁	薺	詢	諄	醇	鎔	順	馴	戍	術	述	鉅	崇	崧	×

67 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	68 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E3A0	×	嵩	瑟	膝	蝨	濕	拾	習	褶	襲	丞	乘	僧	勝	升	承	E4A0	×	沈	深	藩	甚	芯	諶	什	十	拾	雙	氏	亞	俄	兒	啞
E3B0	昇	繩	蠅	陞	侍	匙	嘶	始	媼	尸	屎	屍	市	弑	恃	施	E4B0	娥	峨	我	牙	芽	莪	蛾	衙	訝	阿	雅	餓	鴉	鵝	聖	岳
E3C0	是	時	柿	柴	猜	矢	示	翅	蒔	著	視	試	詩	諡	豕	豺	E4C0	嶽	幄	惡	愕	握	樂	渥	鄂	鍰	鰐	齷	安	岸	按	晏	
E3D0	埴	寔	式	息	拭	植	殖	湜	熄	簋	蝕	識	軾	食	飾	伸	E4D0	案	眼	雁	鞍	顏	鮫	幹	謁	軋	闕	吨	岩	巖	庵	暗	癌
E3E0	僉	信	呻	娠	宸	愼	新	晨	燼	申	神	紳	腎	臣	莘	薪	E4E0	菴	閭	壓	押	狎	鴨	仰	央	快	昂	殃	殃	鴛	厓	哀	埃
E3F0	蠹	蜃	訊	身	辛	辰	迅	失	室	實	悉	審	尋	心	沁	×	E4F0	崖	愛	曖	涯	碍	艾	隘	霽	厄	扼	掖	液	縊	腋	額	×

69 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	70 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E5A0	×	櫻	罌	鶯	鸚	也	郇	冶	夜	惹	擲	椰	爺	耶	若	野	E6A0	×	旅	歟	汝	濾	璵	礪	礪	與	鯨	茹	輿	輿	閭	餘	驪
E5B0	弱	掠	略	約	若	葯	蕘	藥	躍	亮	佯	兩	涼	壤	孃	恙	E6B0	麗	黎	亦	力	域	役	易	曆	歷	疫	繹	譯	轢	逆	驛	燕
E5C0	揚	攘	駁	賜	梁	楊	樣	洋	漾	煬	痒	瘍	禳	穰	糧	羊	E6C0	埂	妍	娟	宴	年	延	憐	戀	捐	挺	撚	椽	沅	沿	涎	涓
E5D0	良	襄	諒	讓	釀	陽	量	養	罔	御	於	漁	痧	禦	語	馭	E6D0	淵	演	漣	烟	然	煙	煉	燃	燕	璉	研	硯	季	筵	緣	練
E5E0	魚	鰐	億	憶	抑	憶	臆	偃	堰	彥	焉	言	諺	孽	孽	俺	E6E0	續	聯	衍	軟	輦	蓮	連	鉛	鍊	薦	列	劣	咽	悅	涅	烈
E5F0	儼	嚴	奄	掩	淹	業	業	円	予	余	勵	呂	女	如	廬	×	E6F0	熱	裂	說	閤	厭	廉	念	捻	染	殮	炎	焰	琰	艷	苒	×

71 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	72 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E7A0	×	廉	閭	髻	鹽	嘩	獵	燁	葉	令	囹	瑩	寧	嶺	嶸	影	E8A0	×	烏	熬	樊	箕	蜈	誤	鰲	鼈	屋	沃	獄	玉	鈺	溫	璦
E7B0	伶	映	映	楹	榮	永	泳	洪	穎	潑	瀛	潯	煥	營	癯	玲	E8B0	瘟	穩	縕	蘊	兀	壅	擁	瓮	癰	翁	邕	雍	饗	渦	瓦	
E7C0	瑛	瑩	嬰	盈	穎	纓	矜	聆	英	詠	迎	鈴	鏤	零	霏	靈	E8C0	窩	窪	臥	蛙	蝸	訛	婉	完	宛	椁	惋	沅	琬	琬	碗	
E7D0	領	乂	倪	例	刈	叡	曳	汭	濊	猊	睿	穢	芮	藝	藥	禮	E8D0	緩	翫	腕	腕	莞	豌	阮	頑	曰	往	旺	枉	汪	倭	娃	
E7E0	裔	詣	譽	豫	體	銳	隸	霓	預	五	伍	倍	傲	午	吾	吳	E8E0	歪	矮	外	嵬	巍	猥	畏	了	僚	僂	凹	堯	夭	妖	姚	寥
E7F0	鳴	塢	塢	奧	娛	寤	悟	惡	懊	敖	昨	晤	梧	汚	澳	×	E8F0	寮	尿	嶢	拗	搖	撓	擾	料	曜	樂	撓	燎	耀	瑤	療	×

73 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	74 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E9A0	×	窈	窈	繇	繞	耀	腰	蓼	蟯	要	謠	遙	遼	邀	饒	慾	EAA0	×	運	隕	雲	韻	蔚	鬱	丐	熊	雄	元	原	員	圓	園	垣
E9B0	欲	浴	縛	褥	辱	俑	傭	冗	勇	埇	墉	容	庸	通	榕	涌	EAB0	媛	嫵	冤	怨	愿	援	沅	洄	媛	源	爰	猿	瑗	苑	袁	轅
E9C0	湧	溶	熔	塔	用	甬	聳	茸	蓉	踊	鎔	鏞	龍	于	佑	偶	EAC0	遠	阮	院	願	鴛	月	越	鉞	位	偉	僞	危	圍	委	威	尉
E9D0	優	又	友	右	宇	寓	尤	愚	憂	吁	牛	玗	瑀	孟	祐	禍	EAD0	慰	暉	渭	爲	瑋	緯	胃	萎	葦	蔦	蝟	衛	裨	謂	違	韋
E9E0	禹	紆	羽	芋	藕	虞	迂	遇	郵	鈺	隅	雨	雩	勖	彘	旭	EAE0	魏	乳	侑	儒	兪	劉	唯	喻	孺	有	幼	幽	庾	悠	惟	愈
E9F0	昱	栒	煜	穢	郁	頊	云	暈	櫟	殞	漚	煩	耘	芸	藝	×	EAF0	愉	揄	攸	有	杻	柔	柚	柳	榆	櫛	油	洧	流	游	溜	×

75 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	76 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
EBA0	×	濡	猶	猷	琉	瑜	由	留	癒	硫	紐	維	臾	莧	裕	誘	ECA0	×	議	醫	二	以	伊	利	吏	夷	姨	履	已	弛	彝	怡	易
EBB0	諛	諭	踰	蹂	遊	逾	遺	酉	釉	鋤	類	六	垆	戮	毓	肉	ECB0	李	梨	泥	爾	珥	理	異	庾	痢	移	罹	而	耳	肄	苡	莠
EBC0	育	陸	倫	允	瀕	尹	崙	淪	潤	琬	胤	贊	輪	銳	閏	律	ECC0	裏	裡	貽	貳	邇	里	離	飴	餌	匿	溺	澤	益	翊	翌	翼
EBD0	慄	栗	率	聿	戎	融	絨	融	隆	垠	恩	慇	殷	閏	銀	隱	ECD0	諡	人	仁	刃	印	吝	咽	因	姻	寅	引	忍	湮	磷	璘	網
EBE0	乙	吟	淫	蔭	陰	音	飲	揖	泣	邑	凝	應	膺	鷹	依	倚	ECE0	茵	藺	蚓	認	隣	勒	勒	鱗	麟	一	佚	佾	壹	日	溢	逸
EBF0	儀	宜	意	懿	擬	椅	毅	疑	矣	義	艤	薏	蟻	衣	誼	×	ECF0	鎰	駟	任	壬	妊	妊	恁	林	淋	稔	臨	莅	賃	入	什	×

77 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	78 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
EDA0	×	立	笠	粒	仍	剩	孕	苐	仔	刺	咨	姉	姿	子	字	孜	EEA0	×	障	再	哉	在	宰	才	材	栽	梓	澣	滓	災	絳	裁	財
EDB0	恣	慈	滋	炙	煮	玆	瓷	疵	磁	紫	者	自	苾	蔗	藉	諮	EEB0	載	齋	齋	爭	箏	諍	錚	佇	低	儲	咀	姐	底	抵	杵	楮
EDC0	資	雌	作	勻	嚼	斫	昨	灼	炸	爵	綽	芍	酌	雀	鵲	孱	EEC0	樗	沮	渚	狙	猪	疽	箸	紆	苧	菹	著	諸	詛	貯	蹠	這
EDD0	棧	殘	潺	盞	岑	暫	潛	箴	簪	蠶	雜	丈	仗	匠	場	墻	EED0	邸	睢	齟	勛	吊	嫡	寂	摘	敵	滴	狄	炙	的	積	笛	籍
EDE0	壯	獎	將	帳	庄	張	掌	璋	杖	樟	檣	櫟	漿	牆	狀	獐	EEE0	績	翟	荻	謫	賊	赤	跡	蹟	迪	迹	適	鎬	佃	仝	傳	全
EDF0	璋	章	粧	腸	臧	臧	莊	葬	蔣	薈	藏	裝	贓	醬	長	×	EEF0	典	前	剪	墳	塹	奠	專	展	廛	悛	戰	栓	殿	氈	澱	×

79 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	80 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
EFA0	×	煎	𦵏	𦵑	甸	畑	癩	筌	箋	箭	篆	纏	詮	輓	轉	鈿	F0A0	×	靜	頂	鼎	制	劑	啼	堤	帝	弟	悌	提	梯	濟	祭	第
EFB0	銓	錢	鐫	電	顛	顛	餞	切	截	折	浙	癰	竊	節	絕	占	F0B0	臍	薺	製	諸	蹄	醍	除	際	霽	題	齊	俎	兆	凋	助	嘲
EFC0	岾	店	漸	点	粘	霑	鮎	點	接	摺	蝶	丁	井	亨	停	偵	F0C0	弔	彫	措	操	早	晁	曹	朝	條	棗	槽	漕	潮	照	燥	
EFD0	呈	妊	定	幀	庭	廷	征	情	挺	政	整	旌	晶	最	枉	楨	F0D0	爪	瓌	眺	祖	祚	租	稠	窳	粗	槽	組	綵	塋	藻	蚤	詔
EFE0	櫻	正	汀	淀	淨	淳	漬	靜	炆	玎	珽	町	晴	碇	禎	程	F0E0	調	趙	躁	造	遭	釣	阻	雕	烏	族	簇	足	鏃	存	尊	卒
EFF0	穽	精	紕	艇	訂	諄	貞	鄭	酇	釘	鉦	鉦	錠	霆	靖	×	F0F0	拙	猝	倥	宗	從	惊	慫	棕	淙	琮	種	終	綜	縱	腫	×

81 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	82 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F1A0	×	踪	踵	鍾	鐘	佐	坐	左	座	挫	罪	主	住	侏	倣	姝	F2A0	×	咫	地	址	志	持	指	摯	支	旨	智	枝	枳	止	池	沚
F1B0	胄	呪	周	喉	奏	宙	州	廚	晝	朱	柱	株	注	洲	湊	澍	F2B0	漬	知	砥	祉	祇	紙	肢	脂	至	芝	芷	蚰	誌	識	贅	趾
F1C0	炷	珠	疇	籌	紂	紬	綢	舟	蛛	註	誅	走	躊	輳	週	酎	F2C0	遲	直	植	稷	織	職	唇	噴	塵	振	摺	晉	晉	振	榛	殄
F1D0	酒	鑄	駐	竹	粥	俊	僞	准	竣	窩	峻	峻	樽	浚	準	潛	F2D0	津	湊	珍	瑄	璉	疹	疹	盡	眞	瞋	秦	縉	縝	臻	蓀	衫
F1E0	煖	峻	竣	蠱	逡	雋	駿	茁	中	仲	衆	重	卽	櫛	楫		F2E0	診	賑	軫	辰	進	鎮	陣	陳	震	侄	叱	姪	嫉	帙	桎	瓊
F1F0	汁	葺	增	憎	曾	拯	丞	甌	症	繒	蒸	證	贈	之	只	×	F2F0	疾	秩	窒	腔	蛭	質	跌	迭	斟	朕	什	執	漵	緝	輯	×

83 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	84 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F3A0	×	鏢	集	徵	懲	澄	且	佗	借	叉	嗟	嵯	差	次	此	磋	F4A0	×	責	淒	妻	悽	處	倜	刺	剔	尺	憾	戚	拓	擲	斥	滌
F3B0	筍	茶	蹉	車	遮	捉	搾	着	窄	錯	鑿	齷	撰	凜	燦	璨	F4B0	瘡	脊	蹠	陟	隻	仟	千	喘	天	川	擅	泉	淺	玗	穿	舛
F3C0	瓚	竄	纂	纂	粲	纘	讚	贊	鑽	餐	饌	剎	察	擦	札	紮	F4C0	薦	賤	踐	遷	釧	闡	阡	韃	凸	哲	詰	徹	撤	澈	綴	輟
F3D0	僭	參	塹	慘	慙	懺	斬	站	讒	識	倉	倡	創	唱	娼	廠	F4D0	輟	鐵	僉	尖	沾	添	恬	瞻	簽	籤	詹	諂	堞	妾	帖	捷
F3E0	彰	愴	敞	昌	昶	暢	槍	滄	漲	猖	瘡	窓	脹	艙	莖	蒼	F4E0	牒	疊	睫	課	貼	輒	廳	晴	清	聽	菁	請	青	鯖	切	剗
F3F0	債	塚	桀	寨	彩	採	砦	綵	菜	蔡	采	釵	冊	柵	策	×	F4F0	替	涕	滯	締	諦	逮	遞	體	初	剿	哨	樵	抄	招	梢	×

85 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	86 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F5A0	×	椒	楚	樵	炒	焦	硝	礁	礎	秒	稍	肖	艸	苕	草	蕉	F6A0	×	贅	取	吹	嘴	娶	就	炊	翠	聚	脆	臭	趣	醉	驟	薦
F5B0	貂	超	酢	醋	醺	促	囑	燭	矗	蜀	觸	寸	村	邨	叢		F6B0	側	仄	厠	側	測	層	侈	值	嗤	峙	幟	恥	梹	治	溜	熾
F5C0	塚	寵	怱	慙	摠	總	聰	蔥	銃	撮	催	崔	最	墜	抽	推	F6C0	痔	痴	癡	稚	穉	縑	緻	置	致	蚩	輻	雉	馳	齒	則	勅
F5D0	椎	楸	樞	湫	皺	秋	芻	萩	諏	趨	追	鄒	酋	醜	錐	錘	F6D0	飭	親	七	柒	漆	侵	寢	枕	沈	浸	琛	砧	針	鍼	蟄	秤
F5E0	鎚	雛	騶	鰠	丑	畜	祝	竺	筑	築	縮	蓄	蹙	蹴	軸	逐	F6E0	稱	快	他	咤	唾	墮	妥	惰	打	拖	朶	梢	舵	陀	馱	駝
F5F0	春	椿	椿	出	朮	黜	充	忠	沖	蟲	衝	衷	悴	臍	萃	×	F6F0	倬	卓	啄	坼	度	托	拓	擢	倬	析	濁	濯	琢	琫	託	×

87 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	88 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F7A0	×	鐸	吞	嘆	坦	彈	憚	歎	灘	炭	綻	誕	奪	脫	探	眈	F8A0	×	阪	八	叭	捌	佩	唄	悖	敗	沛	洎	牌	狽	稗	霸	貝
F7B0	耽	貪	塔	搭	榻	宕	帑	湯	糖	蕩	兌	台	太	怠	態	殆	F8B0	彭	澎	烹	膨	悞	便	偏	扁	片	篇	編	翩	遍	鞭	騙	貶
F7C0	汰	泰	答	胎	苔	跽	郤	颶	宅	擇	澤	撐	攄	兎	吐	土	F8C0	坪	平	枰	萍	評	吠	嬖	幣	廢	弊	斃	肺	蔽	閉	陞	佈
F7D0	討	慟	桶	洞	痛	筒	統	通	堆	槌	腿	褪	退	頰	偷	套	F8D0	包	匍	匏	咆	哺	圃	布	怖	拋	抱	捕	暴	泡	浦	庖	砲
F7E0	妬	投	透	鬪	慝	特	闖	坡	婆	巴	把	播	擺	杷	波	派	F8E0	胞	脯	苞	葡	蒲	袍	褒	逋	鋪	飽	鮑	幅	暴	曝	瀑	爆
F7F0	爬	琶	破	罷	芭	跛	頗	判	坂	板	版	瓣	販	辦	鉞	×	F8F0	輻	倭	剽	彪	慄	杓	標	漂	瓢	票	表	豹	颶	飄	驃	×

89 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	90 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F9A0	×	品	稟	楓	諷	豐	風	馮	彼	披	疲	皮	被	避	陂	匹	FAA0	×	行	降	項	亥	偕	咳	垓	奚	孩	害	懈	楷	海	濯	蟹
F9B0	弼	必	泌	秘	畢	丕	筆	苾	秘	乏	逼	下	何	厦	夏	廈	FAB0	解	該	諧	邈	駭	骸	効	核	倖	幸	杏	荇	行	享	向	嚮
F9C0	晁	河	瑕	荷	蝦	賀	遐	霞	鰕	壑	學	虐	誑	鶴	寒	恨	FAC0	珣	鄉	響	餉	饗	香	噓	墟	虛	許	憲	櫨	獻	軒	歛	險
F9D0	悍	旱	汗	漢	澣	瀚	罕	翰	閑	閒	限	韓	割	轄	函	含	FAD0	驗	突	嚇	赫	革	倪	峴	弦	懸	覲	洊	炫	玄	玆	現	眩
F9E0	咸	啣	喊	檻	涵	緘	艦	銜	陷	鹹	合	哈	盒	蛤	閤	闔	FAE0	覲	絃	絢	縣	舫	銜	見	賢	鉉	顯	孑	穴	血	頁	嫌	俠
F9F0	陝	亢	伉	姁	娣	巷	恒	抗	杭	桁	沆	港	缸	肛	航	×	FAF0	協	夾	峽	挾	浹	狹	脅	脇	莢	鉞	頰	亨	兄	刑	型	×

91 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	92 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
FBA0	×	形	洄	榮	澄	澄	炯	熒	珩	瑩	荊	螢	衡	迥	邢	瑩	FCA0	×	禍	禾	花	華	話	譁	貨	靴	廓	擴	攪	確	碯	穫	丸
FBB0	馨	兮	彗	惠	慧	畦	蕙	蹊	醯	鞋	乎	互	呼	壕	壺	好	FCB0	喚	奂	宦	幻	患	換	歡	皖	桓	渙	煥	環	紉	還	驩	鰓
FBC0	岵	弧	戶	扈	昊	皓	毫	浩	溟	湖	滸	滌	濠	濩	灝	狐	FCC0	活	滑	猾	豁	闊	凰	幌	徨	恍	惶	慌	晃	晃	晃	晃	況
FBD0	琥	瑚	瓠	皓	祐	糊	縞	胡	芦	葫	蒿	虎	號	蚶	護	豪	FCD0	湟	滉	潢	煌	璜	皇	篁	簧	荒	蝗	遑	隍	黃	匯	回	廻
FBE0	鎬	護	顥	惑	或	酷	婚	昏	混	渾	琿	魂	忽	惚	笏	哄	FCE0	徊	恢	悔	懷	晦	會	檜	淮	澮	灰	獾	繪	膾	茴	蛔	誨
FBF0	弘	汞	泓	洪	烘	紅	虹	訶	鴻	化	和	嬋	樺	火	畫	×	FCF0	賄	劃	獲	弘	橫	鑛	哮	噓	孝	效	敷	曉	梟	淳	淆	×

93 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	94 区	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
FDA0	×	爻	肴	酵	驍	侯	候	厚	后	吼	喉	嗅	幬	後	朽	煦	FEA0	×															
FDB0	珣	逅	助	勳	塤	堦	焄	熏	燠	薰	訓	暈	薨	喧	暄	煊	FEB0																
FDC0	萱	卉	喙	毀	彙	徽	揮	暉	輝	諱	輝	麾	休	携	佻	哇	FEC0																
FDD0	虧	恤	譎	鵠	兕	凶	匈	洵	胸	黑	昕	欣	炘	痕	吃	屹	FED0																
FDE0	紇	訖	欠	欽	歆	吸	恰	洽	翁	興	僖	熙	喜	噫	囁	姬	FEE0																
FDF0	嬉	希	憇	悌	戲	晞	曦	熙	熹	燿	犧	禧	稀	羲	詰	×	FEF0																×