

Line Thermal Printer

STAR Line Mode
Command
Specifications

Rev 0.01

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This specifications document describes the command specifications for the STAR LINE MODE on line thermal printers. Information contained herein applies to models with the following conditions.

- Line thermal printers
- Interfaces:
 - Parallel
 - RS-232C
 - USB
 - Ethernet

< Applicable Models:>

TSP700

TSP600

TSP800

TUP900

1. INTERFACE CONFIGURATION

1-1) RS-232C Serial Interface

1-1-1) Specifications (Conforming to RS-232)

Rating: RS-232C
 Synch method: Start-Stop synchronization method
 Handshake: DTR mode
 Baud rates: 4800, 9600, 19200, 38400 bps (Set by DIP switches)
 Bit length: 7, 8 bits (Set by DIP switches)
 Parity: Yes/No (Set by DIP switches)
 Parity bit: Odd/even (Set by DIP switches)
 Stop bit: 1 bit (Fixed)
 Signal polarity: Mark = logic 1 (-3 to -15 V)
 Space = logic 0 (+3 to +15 V)

1-1-2) Signal array and explanations according to interface connector pin

<Signal Array and Functions>

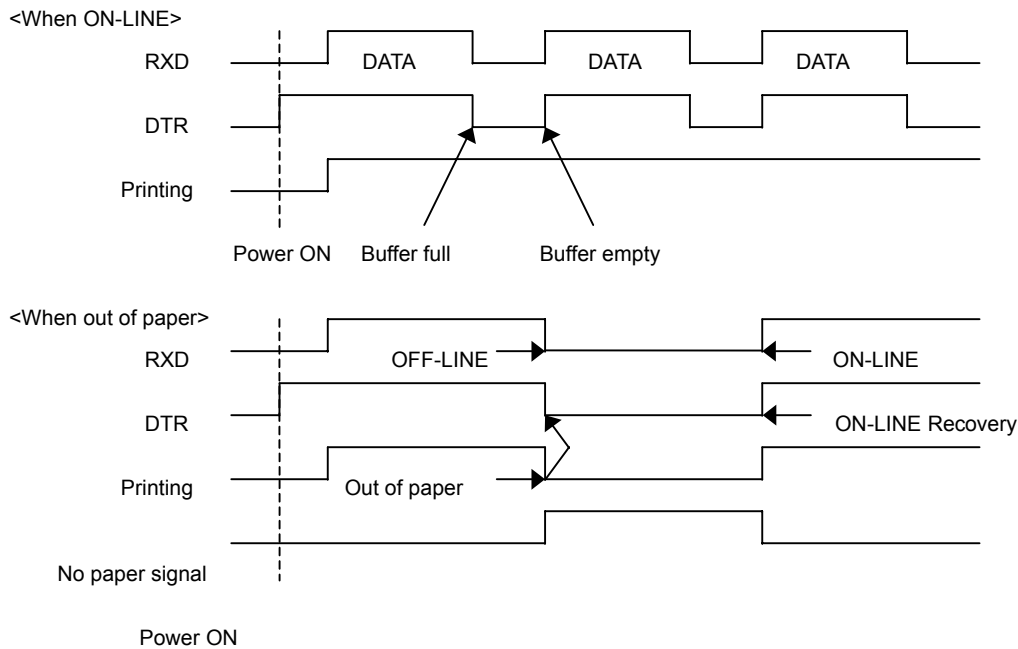
Pin No.	Signal Name	Signal Direction	Remarks
1	FG	-	Frame ground
2	TXD	OUT	Transmission data
3	RXD	IN	Reception data
4	RTS	OUT	Same as DTR
5	N.C	-	Not used
6	DSR	IN	Not used
7	SG	-	Signal ground
8-19	N.C	-	Not used
20	DTR	OUT	Data terminal ready signal (SPACE: printer is ready to receive.) 1) When in DTR mode: When printer is ready to receive data: SPACE 2) When in XON/XOFF mode: Always SPACE except in the following conditions. 1 □ Until communication is possible after a reset. 2 □ When test printing
21-24	N.C		Signal ground
25	/INIT	IN	Signal ground

1-1-3) Communication protocol

1) General description of operations in the DTR mode

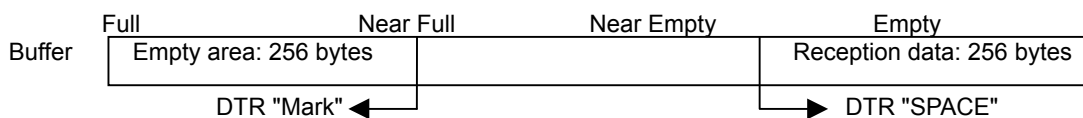
This mode abides by the DIP switch settings. (Ex-factory settings)

This mode performs communication while handshaking with the DTR signals. In the operations to receive printer data, this mode controls the DTR signals by confirming the BUSY signal. A SPACE indicates that the printer is ready to receive data; conversely, a "mark" indicates that the printer cannot receive data.



If there is no printer error after turning ON the power, the DTR signal line is set to a SPACE. When the host computer confirms that the DTR signal line is a SPACE, it sends the data text to the RXD signal line. The printer sets the DTR signal line to a "Mark" after the empty area of the data buffer reaches a maximum of 256 bytes. When the host computer confirms that the DTR signal line is a Mark, it stops the transmission of data text to the printer buffer, but at this point as well, the printer is still capable of receiving data, up to the amount of empty space in the data buffer. If the host computer ignores the DTR signal and transmits data, all data exceeding the amount of space in the data buffer is simply discarded. The printer sets the DTR signal line to SPACE again when the amount of empty space in the data buffer increased because of the printing and the data in the buffer is a maximum of 256 bytes.

2) Buffer full/Buffer full cancel in the DTR mode

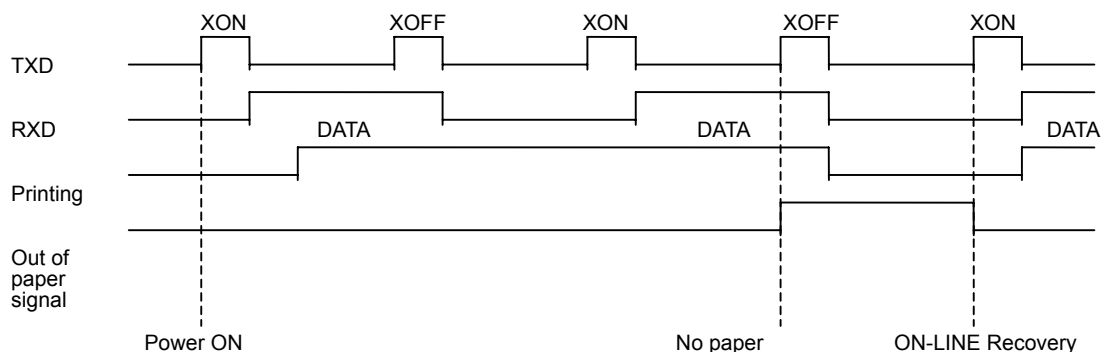


DTR is set to mark at the point the empty area is a maximum of 256 bytes.

DTR is set to SPACE when the data in the buffer is a minimum of 256 bytes.

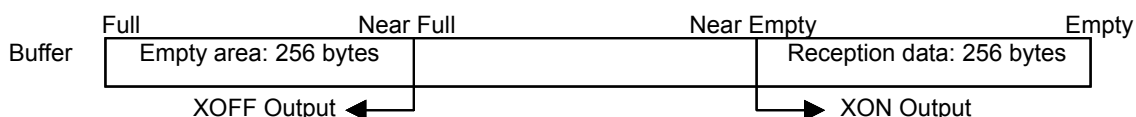
3) General description of operations in the XON/XOFF mode

This mode is set when DIPSW #1 to #3 are turned OFF. This mode notifies the host of the XON (DC1) data when the printer can receive data and the XOFF (DC3) data when the printer cannot receive data, using the TXD signals. This functions so that XON outputs only 1 byte when the printer shifts from OFFLINE (printer busy) to ONLINE (printer ready) and; XOFF outputs 1 byte when the printer shifts from ONLINE (printer ready) to OFFLINE (printer busy) .



If there is no error after turning the power ON, XON (control code name: DC1; Hexadecimal name: 11H) is output by the TXD signal line. After the host computer receives the XON, it sends the data text to the RXD signal line. XOFF (DC3; 13H) is output when the empty space in the data buffer is a maximum of 256 bytes. The host computer stops sending data text when it receives the XOFF, however, the printer is capable of receiving data at that time for the amount of empty space in the data buffer. Data exceeding the amount of empty space is discarded. As the empty space in the data buffer increases through printing, XON is output when the data in the buffer is a maximum of 256 bytes.

4) Buffer full/Buffer full cancel in the XON/XOFF mode



Printer Setting Conditions	Explanation of Operations
Memory switch B-4 = 0	XOFF outputs only 1 byte when the empty area is a maximum of 256 bytes. XON outputs 1 byte when the data in the buffer is a maximum of 256 bytes.
Memory switch B-4 = 1	XOFF output for every 1 byte of data received, when the empty area is a maximum of 256 bytes. XON output when the data in the buffer is a maximum of 256 bytes.

1-2) Parallel Interfaces (Amphenol 36 pins)

1-2-1) Specifications (Conforming to IEEE1284)

Rating: Conforms to IEEE 1284
 Mode: Compatibility Mode/Nibble Mode/Byte Mode
 Data transfer speed: 1000 to 6000 CPS
 Synch method: According to externally supplied strobe pulse
 Handshake: According to ACK and BUSY signals
 Logic level: Compatible to TTL

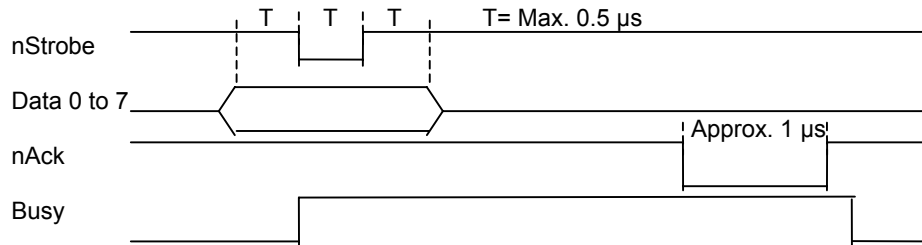
1-2-2) Signal array and explanations according to interface connector pin

<Signal Array and Functions>

Pin No.	Compatibility Mode Signal Name	Nibble Mode Signal Name	Byte Mode Signal Name
1	nStrobe	HostClk	HostClk
2 to 9	Data0 to 7	Data0 to 7	Data0 to 7
10	nAck	PtrClk	PtrClk
11	Busy	PtrBusy/Data3,7	PtrBusy
12	PErrror	AckDataReq/Data2,6	AckDataReq
13	Select	Xflag/Data1,5	Xflag
14	N/C	HostBusy	HostBusy
15	N/C	-	-
16	Signal GND	Signal GND	Signal GND
17	Frame GND	Frame GND	Frame GND
18	+5V	+5V	+5V
19 to 30	Twisted Pair Return	Twisted Pair Return	Twisted Pair Return
31	nInit	nInit	nInit
32	nFault	nDataAvail/Data0,4	nDataAvail
33	External GND	-	-
34	N/C	-	-
35	N/C	-	-
36	nSelectIn	1284Active	1284Active

1-2-3) Signal output timing

1) Compatibility mode



2) Nibble Mode/Byte Mode

Conforms to IEEE 1284 standard

1-2-4) Status specification

See Appendix 2 for details.

1-3) USB interface

Refer to the “USB Interface Specifications” documentation for details.

1-4) Ethernet interface

Refer to the “Ethernet Interface Specifications” documentation for details.

2. COMMAND FUNCTION LIST

• Standard Commands

Class	Commands	Name
Font style and character set	ESC GS t	Specify code page
	ESC GS =	Write blank code page data
	ESC R	Specify international character set
	ESC /	Specify/cancel slash zero
	ESC SP	Set ANK right space
	ESC M	Specify ANK 12 dot pitch
	ESC P	Specify ANK 5 dot pitch
	ESC :	Specify ANK 16 dot pitch
	ESC g	Specify ANK 14 dot pitch
Character expansion settings	ESC □	Set/cancel the double wide/high printing
	ESC W	Set/cancel the double wide printing
	ESC h	Set/cancel the double high printing
	SO	Set double wide printing
	DC4	Cancel double wide printing
	ESC SO	Set printing magnified double character height
	ESC DC4	Cancel printing magnified character height
Print modes	ESC E	Select emphasized printing
	ESC F	Cancel emphasized printing
	ESC -	Select/cancels underling mode
	ESC _	Select/cancels upperline mode
	ESC 4	Select white/black inverted printing
	ESC 5	Cancel white/black inverted printing
	S□	Select upside-down printing
	DC2	Cancel upside-down printing
Line spacing	LF	Line feed
	CR	Carriage return (same as line feed)
	ESC a	Feed paper n lines
	ESC z	Select line feed amount
	ESC 0	Specify line spacing to 3 mm
	ESC J	n/4 mm line feed
	ESC I	n/8 mm line feed

Class	Commands	Name
Page control commands	FF	Form feed
	ESC C	Set page length to n lines
	ESC C 0	Set page length in 24 mm units
	VT	Feed paper to vertical tab position
	ESC B	Set vertical tab position
	ESC N	Set bottom margin to n lines
	ESC O	Cancel bottom margin
Horizontal direction position	ESC I	Set left margin
	ESC Q	Set right margin
	HT	Move print position to horizontal tab position
	ESC D	Set/cancel horizontal tab position
	ESC GS A	Move absolute position
	ESC GS R	Move relative position
	ESC GS a	Specify position alignment
Download	ESC &	Register/delete 12 x 24 dot font download characters
	ESC %	Set/cancel download characters
Bit image graphics	ESC K	Standard density bit image
	ESC L	High density bit image
	ESC k	Fine bit image
	ESC X	Fine bit image
Logos	ESC FS q	Register logo data
	ESC FS p	Print logo data
Bar code	ESC b	Print bar code
Cutter control	ESC d	Paper cutter instruction
External device Drive	ESC BEL	Set pulse width for external device drive
	BEL	External device 1 drive instruction
	FS	External device 1 drive instruction
	SUB	External device 2 drive instruction
	EM	External device 2 drive instruction
Print settings	ESC RS d	Set print density
	ESC RS r	Set printing speed
Status	ESC RS a	Set status transmission conditions
	ESC ACK SOH	Real-time printer status (ASB Status)
	ENQ	Real-time printer status (1)
	EOT	Real-time printer status (2)

Class	Commands	Name
Chinese characters	ESC p	Set to JIS Chinese character mode
	ESC q	Cancel JIS Chinese character mode
	ESC \$	Set/cancel JIS Chinese character mode
	ESC s	Set two byte Chinese characters left/right spaces
	ESC t	Set 1 byte Chinese characters left/right spaces
	ESC r	Register Chinese download characters
Others	CAN	Cancel print data and initialize commands
	ESC @	Command initialization
	ESC GS #	Set memory switch
	ESC ?	Reset printer

(*) Chinese character commands

- Chinese character control commands are ignored on printers not installed with Chinese character fonts (those intended for overseas).
- All Chinese character control commands are ignored if the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

• Raster related commands

Class	Commands	Name
Raster commands	ESC * r R	Initialize raster mode
	ESC * r A	Enter raster mode
	ESC * r B	Quit raster mode
	ESC * r C	Clear raster data
	ESC * r D	Drive drawer
	ESC * r E	Set EOT mode
	ESC * r F	Set FF mode
	ESC * r P	Set page length
	ESC * r Q	Set print quality
	ESC * r m l	Set left margin
	ESC * r m r	Set right margin
	ESC * r T	Set top margin
	ESC * r K	Set print color
	b n1 n2 d1...dk	Transfer raster data (auto line feed)
	k n1 n2 d1...dk	Transfer raster data
	ESC FF NUL	Execute form feed mode
	ESC EOT NULL	Execute EOT mode

• Black mark related commands

Class	Commands	Name
Black mark Related Commands	ESC d	Paper cut instruction
	FF	Form feed
	ESC C	Set page length to n lines
	ESC C 0	Set page length in 24 mm units
	VT	Feed paper to vertical tab position
	ESC B	Set vertical tab position

• USB I/F related commands

Class	Commands	Name
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There are no commands for TSP600/700/800 and TUP900.

• 2 color printing related commands

Class	Commands	Name
2 color printing Related Commands	ESC RS c	Specify printing color in 2 color printing mode
	ESC RS C	Select/cancel 2 color printing mode
	ESC 4	Specify white/black inversion and printing color red
	ESC 5	Cancel white/black inversion and specify printing color black
	ESC RS d	Set print density
	ESC RS r	Set printing speed
	ESC FS q	Register logo
	ESC FS p	Print logo

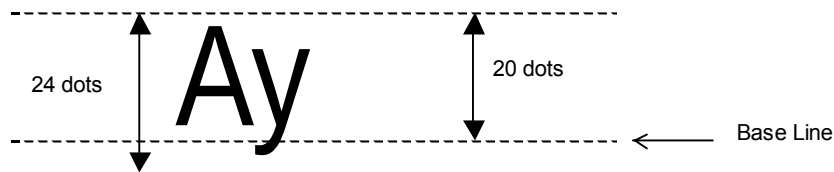
• Presenter related commands

Class	Commands	Name
Presenter related commands	ESC SYN 0	Execute presenter paper recovery
	ESC SYN 1	Set presenter automatic recovery function and recovery time
	ESC SYN 3	Acquire presenter paper counter
	ESC SYN 4	Initialize presenter paper counter

3. COMMAND DETAILS

3-1) Explanation of Terms

- Reception buffer
The buffer for storing data (reception data) received from the host, as it is called the reception buffer. Reception data is temporarily stored in the reception buffer, then processed sequentially.
- Line buffer
The buffer for storing image data for printing is called the line buffer.
- Line buffer full
The state in which the buffer has no more space available is called line buffer full. When the buffer is full in standard mode, data in the line buffer is printed and a line feed is performed when new print data is processed. This is the same as a Line Feed. When the line buffer is full in the page mode, the printer move the print position to the head of the next line then starts with the new print data.
- Top of line
The top of line is a state that satisfies the following conditions.
 - There is currently no print data in the line buffer.
 - The position is not specified with the horizontal direction position command.
- Printable region
This is the maximum printable area with the printer's specifications.
- Print region
This is the printing area specified by a command. (Print region $\leq$ printable region)
- ANK character base line



3-2) Exception processing

1) Undefined codes

Codes from <00>H to <1F>H are targeted. When codes not defined as commands in this region are received, they are discarded.

(Ex.) If processing the data string of <30>H<31>H<03>H<32>H<0A>H<33>H, the printer will discard <03>H as an undefined code.

2) Undefined commands

When data continuing the codes of ESC, FS, GS, DLE are codes not defined as commands, ESC, FS, GS and subsequent codes are discarded.

(Ex.) If processing the data string of <30>H<1B>H<22>H<31>H<32>H, the printer will read and discard <1B>H<22>H as an undefined command.

3) Settings outside of the defined area

Processing values outside of the defined area in commands accompanying arguments, those commands are ignored and the preset values are unchanged. The processing of commands is terminated at the point values outside of the defined region are processed in arguments having a plurality of commands. Data after that is processed as normal data.

(Ex.) If processing the data string of <1B>H<52>H<15>H, the printer will discard the data string of <1B>H<52>H<15>H because although <1B>H<52>H is defined as a commands (ESC R), the argument <15>H is outside of the definition. Therefore, the international character set that is already set experiences no change.

3-3) Standard Command Details

3-3-1) Font style and character set

ESC GS t n

[Name] Select code page

[Code] ASCII ESC GS t n
Hex. 1B 1D 74 n
Decimal 27 29 116 n

[Defined Region] $0 \leq n \leq 21$
 $32 \leq n \leq 34$
 $64 \leq n \leq 79$

[Initial Value] Memory switch setting
When installed with Japanese language characters and DBCS setting: Fixed at n=2

[Function] Specifies code page
When installed with Japanese and Chinese language characters and DBCS setting, this command is ignored.

n	Code Page
0	Normal*
1	CodePage437 (USA,Std. Europe)
2	Katakana
3	CodePage437 (USA,Std. Europe)
4	Codepage 858 (Multilingual)
5	Codepage 852 (Latin-2)
6	Codepage 860 (Portuguese)
7	Codepage 861 (Icelandic)
8	Codepage 863 (Canadian French)
9	Codepage 865 (Nordic)
10	Codepage 866 (Cyrillic Russian)
11	Codepage 855 (Cyrillic Bulgarian)
12	Codepage 857 (Turkey)
13	Codepage 862 (Israel (Hebrew))
14	Codepage 864 (Arabic)
15	Codepage 737 (Greek)
16	Codepage 851 (Greek)
17	Codepage 869 (Greek)
18	Codepage 928 (Greek)
19	Codepage 772 (Lithuanian)
20	Codepage 774 (Lithuanian)
21	Codepage 874 (Thai)

n	Code Page
32	Codepage 1252 (Windows Latin-1)
33	Codepage 1250 (Windows Latin-2)
34	Codepage 1251 (Windows Cyrillic)
64	Codepage 3840 (IBM-Russian)
65	Codepage 3841 (Gost)
66	Codepage 3843 (Polish)
67	Codepage 3844 (CS2)
68	Codepage 3845 (Hungarian)
69	Codepage 3846 (Turkish)
70	Codepage 3847 (Brazil-ABNT)
71	Codepage 3848 (Brazil-ABICOMP)
72	Codepage 1001 (Arabic)
73	Codepage 2001 (Lithuanian-KBL)
74	Codepage 3001 (Estonian-1)
75	Codepage 3002 (Estonian-2)
76	Codepage 3011 (Latvian-1)
77	Codepage 3012 (Latvian-2)
78	Codepage 3021 (Bulgarian)
79	Codepage 3041 (Maltese)
255	User Setting Blank Code Page

ESC GS = n1 n2 da1 da2...dak db1 db2...dbk

[Name]	Write blank code page data													
[Code]	ASCII	ESC	GS	=	n1	n2	da1	da2	...	dak	db1	db2	...	dbk
Hex.		1B	1D	3D	n1	n2	da1	da2	...	dak	db1	db2	...	dbk
Decimal		27	29	61	n1	n2	da1	da2	...	dak	db1	db2	...	dbk

[Defined Area] n1= 0
n2 = 48

$$1 \leq (n_1 + n_2 \times 256)$$

0≤da≤255 (Font-A data)

db = 0 (STAR mode is not installed with Font-B.)

$$k = (n1 + n2 \times 256)$$

[Initial Value] - - -

[Function] A blank code page indicates a character code table where character codes from 80h to FFh are all blank.

A blank code page can be selected using the ESC GS t n command n = 255.

The printer is reset when writing with this command is completed.

Font-A Data Format Vertical 24 dots x Horizontal 12 dots]

[illegible]

• = Data region/○=Zero data

ESC R n

[Name] Specify international character set

[Code] ASCII ESC R n
 Hex. 1B 52 n
 Decimal 27 82 n

[Defined Area] $0 \leq n \leq 14$

n = 64

$48 \leq n \leq 57$ ("0" $\leq n \leq$ "9")

$65 \leq n \leq 69$ ("A" $\leq n \leq$ "E")

[Initial Value] Memory switch setting

When installed with Japanese language characters and DBCS setting: Fixed at n=8

[Function] Specifies international characters

n	International Characters
0, 48	USA
1, 49	France
2, 50	Germany
3, 51	UK
4, 52	Denmark
5, 53	Sweden
6, 54	Italy
7, 55	Spain
8, 56	Japan
9, 57	Norway
10, 65	Denmark II
11, 66	Spain II
12, 67	Latin America
13, 68	Korea
14, 69	Ireland
64	Legal

ESC / n

[Name] Specify/cancel slash zero

[Code] ASCII ESC / n
 Hex. 1B 2F n
 Decimal 27 47 n

[Defined Area] n = 0, 1, 48, 49

[Initial Value] Memory switch setting

[Function] Specifies and cancels slash zeros.

n	International Characters
0, 48	Cancels slash zero
1, 49	Specifies slash zero

ESC SP n

[Name] Set ANK right space

[Code]	ASCII	ESC	SP	n
	Hex.	1B	20	n
	Decimal	27	32	n

[Defined Area] $0 \leq n \leq 15$

$48 \leq n \leq 57$ ("0" ≤ n ≤ "9")

$65 \leq n \leq 70$ ("A" ≤ n ≤ "F")

[Initial Value] Memory switch setting

[Function] Specifies the right space for ANK 12 x 24 dot fonts in n dots.
Character spacing can be specified also with the following commands.

- Specify 12 dot pitch (ESC M)
- Specify 14 dot pitch (ESC g)
- Specify 15 dot pitch (ESC P)
- Specify 16 dot pitch (ESC :)

ESC M

[Name] Specify 12 dot pitch
 [Code] ASCII ESC M
 Hex. 1B 4D
 Decimal 27 77

[Defined Area] - - -
 [Initial Value] Memory switch setting
 [Function] Specifies rights space for the ANK 12 x 24 dot fonts to 0 dots.

ESC P

[Name] Specify 15 dot pitch
 [Code] ASCII ESC P
 Hex. 1B 50
 Decimal 27 80

[Defined Area] - - -
 [Initial Value] Memory switch setting
 [Function] Specifies rights space for the ANK 12 x 24 dot fonts to 3 dots.

ESC :

[Name] Specify 16 dot pitch
 [Code] ASCII ESC :
 Hex. 1B 3A
 Decimal 27 58

[Defined Area] - - -
 [Initial Value] Memory switch setting
 [Function] Specifies rights space for the ANK 12 x 24 dot fonts to 4 dots.

ESC g

[Name]	Specify 14 dot pitch		
[Code]	ASCII	ESC	g
	Hex.	1B	67
	Decimal	27	103

[Defined Area] - - -

[Initial Value] Memory switch setting

[Function] Specifies rights space for the ANK 12 x 24 dot fonts to 2 dots.

Specification A

This command is enabled only when the memory switch setting is set for DBCS (2 byte countries). It is ignored when the memory switch setting is set for SBCS (1 byte countries).

Specification B

This command is enabled for both when the memory switch setting is set for either DBCS (2 byte countries) or SBCS (1 byte countries).

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

3-3-2) Character Expansion Settings

ESC i n1 n2

[Name] Set/cancel the double wide/high
 [Code] ASCII ESC i n1 n2
 Hex. 1B 69 n1 n2
 Decimal 27 105 n1 n2

[Defined Area] $0 \leq n1 \leq 5$
 $48 \leq n1 \leq 53$ ("0" ≤ n1 ≤ "5")
 $0 \leq n2 \leq 5$
 $48 \leq n2 \leq 53$ ("0" ≤ n2 ≤ "5")
 [Initial Value] n1 = 0 (Double high cancelled)
 n2 = 0 (Double wide cancelled)
 [Function] Specifies/cancels double high/wide for ANK characters and Chinese characters.
 This command is ignored if either N1 or N2 is outside of the defined area.

n1	Expanded high
0, 48	Cancels expanded high
1, 49	Specifies 2x high expansion
2, 50	Specifies 3x high expansion
3, 51	Specifies 4x high expansion
4, 52	Specifies 5x high expansion
5, 53	Specifies 6x high expansion

n2	Expanded wide
0, 48	Cancels expanded wide
1, 49	Specifies 2x wide expansion
2, 50	Specifies 3x wide expansion
3, 51	Specifies 4x wide expansion
4, 52	Specifies 5x wide expansion
5, 53	Specifies 6x wide expansion

ESC W n

[Name] Specify/cancel expanded wide

[Code]	ASCII	ESC	W	n
	Hex.	1B	57	n
	Decimal	27	87	n

[Defined Area] $0 \leq n \leq 5$
 $48 \leq n \leq 53$ ("0" ≤ n ≤ "5")

[Initial Value] n = 0 (Double wide cancelled)

[Function] Specifies/cancels double wide for ANK characters and Chinese characters.

n	Expanded wide
0, 48	Cancels expanded wide
1, 49	Specifies 2x wide expansion
2, 50	Specifies 3x wide expansion
3, 51	Specifies 4x wide expansion
4, 52	Specifies 5x wide expansion
5, 53	Specifies 6x wide expansion

ESC h n

[Name] Specify/cancel expanded high

[Code]	ASCII	ESC	h	n
	Hex.	1B	68	n
	Decimal	27	104	n

[Defined Area] $0 \leq n \leq 5$
 $48 \leq n \leq 53$ ("0" ≤ n ≤ "5")

[Initial Value] n = 0 (Double high cancelled)

[Function] Specifies/cancels double high for ANK characters and Chinese characters.

n	Expanded high
0, 48	Cancels expanded high
1, 49	Specifies 2x expansion
2, 50	Specifies 3x expansion
3, 51	Specifies 4x expansion
4, 52	Specifies 5x expansion
5, 53	Specifies 6x expansion

SO

[Name] Set double wide
 [Code] ASCII SO
 Hex. 0E
 Decimal 14

[Defined Area] - - -
 [Initial Value] Cancels 2x wide expansion
 [Function] Specifies double wide for ANK characters and Chinese characters.
 This command is equivalent to ESC W n (n = 1).

DC4

[Name] Cancel expanded wide
 [Code] ASCII DC4
 Hex. 14
 Decimal 20

[Defined Area] - - -
 [Initial Value] - - -
 [Function] Cancels expanded wide if the following commands specify expanded wide.
 • Double wide specifying command (SO)
 • Set/cancel double wide (ESC W)
 • Set/cancel double wide/high (ESC i)
 This command is equivalent to ESC W n (n = 0).

ESC SO

[Name]	Set double high		
[Code]	ASCII	ESC	SO
	Hex.	1B	0E
	Decimal	27	14

[Defined Area] - - -

[Initial Value] Double high expansion cancelled.

[Function] Specifies double high for ANK characters and Chinese characters.
This command is equivalent to ESC h n (n = 1).

ESC DC4

[Name]	Cancel expanded high		
[Code]	ASCII	ESC	DC4
	Hex.	1B	14
	Decimal	27	20

[Defined Area] - - -

[Initial Value] - - -

[Function] Cancels expanded high if the following commands specify expanded high.

- Double high specifying command (ESC SO)
- Set/cancel the double high (ESC h)
- Set/cancel double wide/high (ESC i)

This command is equivalent to ESC h n (n = 0).

3-3-3) Print mode

ESC E

[Name] Select emphasized printing
 [Code] ASCII ESC E
 Hex. 1B 45
 Decimal 27 69

[Defined Area] - - -
 [Initial Value] Emphasized printing selected
 [Function] Specifies emphasized printing for ANK characters.
 IBM block ignores emphasized printing.

ESC F

[Name] Cancel emphasized printing
 [Code] ASCII ESC F
 Hex. 1B 46
 Decimal 27 70

[Defined Area] - - -
 [Initial Value] Emphasized printing cancelled.
 [Function] Cancels emphasized printing for ANK characters.

ESC – n

[Name]	Select/cancels underling mode			
[Code]	ASCII	ESC	-	n
	Hex.	1B	2D	n
	Decimal	27	45	n

[Defined Area] n = 0, 1, 48, 49

[Initial Value] n = 0 (Underline cancelled)

[Function] Specifies underlining (2 dots).
 Underlines are composed of 2 dot lines.
 Underlines are not applied to horizontal tabs and to specified horizontal direction positions.
 Underlines are expanded if the character expansion is specified. (When double high expansion is used, underlines are composed of 4 dots.)
 Underlines are enabled for white/black inversion.
 This command is enabled for ANK characters and Chinese characters.
 IBM block ignores underlines.

n	Underline
0, 48	Cancels underline
1, 49	Specifies underline

ESC _ n

[Name] Specify/cancel upperline

[Code]	ASCII	ESC		n
	Hex.	1B	5F	n
	Decimal	27	95	n

[Defined Area] n = 0, 1, 48, 49

[Initial Value] n = 0 (Upperline cancelled)

[Function] Specifies upperlining (2 dots).
 Upperlines are composed of 2 dot lines.
 Upperlines are not applied to horizontal tabs and to specified horizontal direction positions.
 Upperlines are expanded if the character expansion is specified. (When double high expansion is used, upperlines are composed of 4 dots.)
 Upperlines are enabled for white/black inversion.
 This command is enabled for ANK characters and Chinese characters.
 IBM block ignores upperlines.

n	Upperline
0, 48	Cancels upperline
1, 49	Specifies upperline

ESC 4

[Name] Select white/black inverted printing

[Code] ASCII ESC 4

Hex. 1B 34

Decimal 27 52

[Defined Area] - - -

[Initial Value] White/black inversion cancelled

[Function] Specifies white/black inversion for ANK characters and Chinese characters.
IBM block ignores white/black inversion.

ESC 5

[Name] Cancel white/black inversion

[Code] ASCII ESC 5

Hex. 1B 35

Decimal 27 53

[Defined Area] - - -

[Initial Value] White/black inversion cancelled

[Function] Cancels white/black inversion for ANK characters and Chinese characters.

SI

[Name] Select upside-down printing
 [Code] ASCII SI
 Hex. 0F
 Decimal 15

[Defined Area] - - -
 [Initial Value] Upside-down cancelled
 [Function] Specifies upside-down printing
 This command is enabled only when at the top of the line.
 Upside down and right-side up characters cannot both exist in the same line.
 This command is enabled for following.
 • ANK characters
 • Chinese characters
 • Bit images
 • Logos
 • Bar codes

DC2

[Name] Cancel upside-down printing
 [Code] ASCII DC2
 Hex. 12
 Decimal 18

[Defined Area] - - -
 [Initial Value] Upside-down printing cancelled
 [Function] Cancels upside-down printing
 This command is enabled only when at the top of the line.

3-3-4) Line spacing

LF

[Name]	Line feed		
[Code]	ASCII	LF	
	Hex.	0A	
	Decimal	10	

[Defined Area] ---

[Initial Value] ---

[Function] Feeds the currently specified amount of paper.
If print data exists in the line buffer, it prints that data.
The initial value for the amount of paper is set according to the memory switch settings.

CR

[Name]	Carriage return (line feed)		
[Code]	ASCII	CR	
	Hex.	0D	
	Decimal	13	

[Defined Area] ---

[Initial Value] ---

[Function] When the CR code is enabled, the CR code functions in the same way as the LF code.
If the CR code is disabled, it ignores 1 byte.
Enabling and disabling the CR code is done using the memory switch settings.

ESC a n

[Name]	Feed paper n lines			
[Code]	ASCII	ESC	a	n
	Hex.	1B	61	n
	Decimal	27	97	n

[Defined Area] $1 \leq n \leq 127$

[Initial Value] ---

[Function] Executes a paper feed for (the currently specified line feed amount x n). If print data exists in the line buffer, it prints that data.
The initial value for the amount of paper is set according to the memory switch settings.

ESC z n

[Name] Select line feed amount

[Code] ASCII ESC z n
 Hex. 1B 7A n
 Decimal 27 122 n

[Defined Area] n = 1, 49

[Initial Value] Memory switch setting

[Function] Specifies the line feed amount.

n	Line feed amount
1, 49	Specifies 4 mm line feed amount

ESC 0

[Name] Specify line spacing to 3 mm

[Code] ASCII ESC 0
 Hex. 1B 30
 Decimal 27 48

[Defined Area] - - -

[Initial Value] Memory switch setting

[Function] Specifies the line feed amount to 3 mm.

ESC J n

[Name]	n/4 mm line feed			
[Code]	ASCII	ESC	J	n
	Hex.	1B	4A	n
	Decimal	27	74	n

[Defined Area] $1 \leq n \leq 255$

[Initial Value] ---

[Function] Executes a n/4mm paper feed.
 If print data exists in the line buffer, it prints that data.
 Using this command will intermittently feed paper, therefore, it is normally recommended that this command not be used.

ESC I n

[Name]	n/8mm line feed			
[Code]	ASCII	ESC	I	n
	Hex.	1B	49	n
	Decimal	27	73	n

[Defined Area] $1 \leq n \leq 255$

[Initial Value] ---

[Function] Executes a n/8mm paper feed.
 If print data exists in the line buffer, it prints that data.
 Using this command will intermittently feed paper, therefore, it is normally recommended that this command not be used.

3-3-5) Page control commands

FF

[Name]	Form feed		
[Code]	ASCII	FF	
	Hex.	0C	
	Decimal	12	

[Defined Area] ---

[Initial Value] ---

[Function] Executes a form feed.

If the current position is at the top of the page, it form feeds to the top of the next page.

If there is data existing in the line buffer when executing a form feed, it prints that data, then executes the form feed.

However, by printing data remaining in the buffer, and moving to the top of the next page, a form feed is considered to have been executed, so form feed is not performed.

ESC C n

[Name]	Set page length to n lines			
[Code]	ASCII	ESC	C	n
	Hex.	1B	43	n
	Decimal	27	67	n

[Defined Area] $1 \leq n \leq 127$

[Initial Value] (Form feed amount initial value x 42)

[Function] The position whereat this command is processed is considered the top of the page and sets the page length to (current form feed amount x n).

This command cancels the bottom margin setting when setting page length.

The page length set using this command is unaffected by changing the form feed amount later.

Moving to the top of the page is performed using the following commands.

- Form feed command (FF): Executes a form feed.
- Cutter command (ESC d n): Sets cutter position at top of page.
- Raster command (ESC * r B): Sets top of page when quitting raster mode.
- Error cancel operations: Sets position when quitting error cancellation operations at top of page.

ESC C 0 n

[Name]	Set page length to n x 24 mm units				
[Code]	ASCII	ESC	C	0	n
	Hex.	1B	43	00	n
	Decimal	27	67	0	n

[Defined Area] $1 \leq n \leq 22$

[Initial Value] (Form feed amount initial value x 42)

[Function] The position whereat this command is processed is considered the top of the page and sets the page length to (n x 24 mm).

This command cancels the bottom margin setting when setting page length.

The page length set using this command is unaffected by changing the form feed amount later.

Moving to the top of the page is performed using the following commands.

- Form feed command (FF): Executes a form feed.
- Cutter command (ESC d n): Sets cutter position at top of page.
- Raster command (ESC * r B): Sets top of page when quitting raster mode.
- Error cancel operations: Sets position when quitting error cancellation operations at top of page.

VT

[Name] Feed paper to vertical tab position

[Code]	ASCII	VT
	Hex.	0B
	Decimal	11

[Defined Area] ---

[Initial Value] ---

[Function] Feeds paper to the next vertical tab position.
 This command is ignored if there are no tabs set.
 If a vertical tab is set, and the current position is the same as the vertical tab position, or if it is below that position, it feeds paper to the top of the next page.
 If data exists in the line buffer when feeding paper to the vertical tab position, it executes the paper feed to the vertical tab position after printing that data. However, if moved to the vertical tab position by printing data remaining in the buffer, the move to the vertical tab position is considered to have been executed, so a move to the next vertical tab position is not performed.
 There is no initial value for the vertical tab.

ESC B n1 n2...nk NUL

[Name]	Set vertical tab position							
[Code]	ASCII	ESC	B	n1	n2	...	nk	NUL
	Hex.	1B	42	n1	n2	...	nk	00
	Decimal	27	66	n1	n2	...	nk	0

[Defined Area] $1 \leq n \leq 255$
 $0 \leq k \leq 16$

[Initial Value] ---

[Function] Sets the vertical tab to the (current form feed amount x n) position.
 All other vertical tabs set before setting the vertical tab using this command are cancelled
 A maximum of 16 vertical tabs can be set. However, the tab position must satisfy the condition of $1 \leq n_1 \leq n_2 \leq \dots \leq n_k$. When receiving such illegal codes, tabs up to the illegal code are set, but those after the illegal code are discarded up to the NUL code so illegal code tab are not set.
 The vertical tab set using this command is unaffected by changing the form feed amount later.
 Vertical tabs set using the ESC B NUL command are cleared.
 There is no initial value for the vertical tab.

ESC B NUL

[Name]	Clear vertical tab position			
[Code]	ASCII	ESC	B	NUL
	Hex.	1B	42	00
	Decimal	27	66	0

[Defined Area] ---

[Initial Value] ---

[Function] Clears the currently set vertical tab.

3-3-6) Horizontal direction printing position

ESC I n

[Name]	Set left margin			
[Code]	ASCII	ESC	I	n
	Hex.	1B	6C	n
	Decimal	27	108	n

[Defined Area] $0 \leq n \leq 255$

[Initial Value] $n = 0$

[Function] Uses the left edge as a standard to set the left margin as (current ANK character pitch x n).
Character pitch includes the space between characters and expansion settings are enabled.
The left margin set using this command is unaffected by changing the character pitch.
This command is ignored if settings are for a printing region less than 36 mm.

Specification A

Setting this command partway will take affect from the next line.

Specification B

This command is enabled only when at the top of the line.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

ESC Q n

[Name]	Set right margin			
[Code]	ASCII	ESC	Q	n
	Hex.	1B	51	n
	Decimal	27	81	n

[Defined Area] $0 \leq n \leq 255$

[Initial Value] ---

[Function] Uses the left edge as a standard to set the print region as (current ANK character pitch x n). Character pitch includes the space between characters and expansion settings are enabled. The right margin set using this command is unaffected by changing the character pitch. This command is ignored if settings are for a printing region less than 36 mm.

Specification A

Setting this command partway will take affect from the next line.

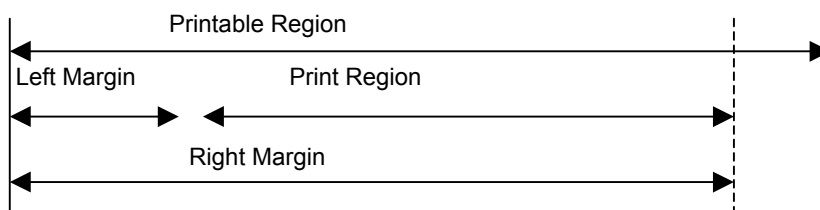
Specification B

This command is enabled only when at the top of the line.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.



HT

[Name]	Move horizontal tab	
[Code]	ASCII	HT
	Hex.	09
	Decimal	9

[Defined Area] ---

[Initial Value] ---

[Function] Move print position to next horizontal tab position. This command is ignored with under the following conditions.

- When there is no horizontal tab set.
- When the current position is the same as the furthest right horizontal tab position or to the right of it.

There is no initial value for the horizontal tab.

ESC D n1 n2...nk NUL

[Name]	Set horizontal tab						
[Code]	ASCII	ESC	D	n1	n2	...	nk NUL
	Hex.	1B	44	n1	n2	...	nk 00
	Decimal	27	68	n1	n2	...	nk 0

[Defined Area] $1 \leq n \leq 255$
 $0 \leq k \leq 16$

[Initial Value] ---

[Function] Uses the left edge as a standard to set the horizontal tab to the position of (current ANK character pitch x n).
The horizontal tab reference point is the right edge of the paper, regardless of the left margin.
ANK character pitch includes the right space and expansion settings are enabled.
All other horizontal tabs set before setting the horizontal tab using this command are cancelled.
A maximum of 16 horizontal tabs can be set.
However, the tab position must satisfy the following conditions.
If the following conditions are not met, data up to the NUL code is discarded.
Normal tabs that meet the conditions below are set and tabs after errors occur are not set.

- $1 \leq n1 \leq n2 \leq \dots \leq nk$
- $nk \leq \text{Printable region}$

The horizontal tab set using this command is unaffected by changing the character pitch.
Horizontal tabs set using the ESC D NUL command are cleared.
There is no initial value for the horizontal tab.

ESC D NUL

[Name]	Clear horizontal tab			
[Code]	ASCII	ESC	D	NUL
	Hex.	1B	44	00
	Decimal	27	68	0

[Defined Area] ---

[Initial Value] ---

[Function] Clears the currently set horizontal tab.

ESC GS A n1 n2

[Name] Move absolute position

[Code]	ASCII	ESC	GS	A	n1	n2
	Hex.	1B	1D	41	n1	n2
	Decimal	27	29	65	n1	n2

[Defined Area] $0 \leq n1 \leq 255$

$0 \leq n2 \leq 255$

[Initial Value] ---

[Function] Moves the printing position from the left margin to the $(n1 + n2 \times 256)$ position.
This command is ignored if the print region is exceeded.

ESC GS R n1 n2

[Name] Move relative position

[Code]	ASCII	ESC	GS	R	n1	n2
	Hex.	1B	1D	52	n1	n2
	Decimal	27	29	82	n1	n2

[Defined Area] $0 \leq n1 \leq 255$

$0 \leq n2 \leq 255$

[Initial Value] ---

[Function] Moves the printing position from the current position to the $(n1 + n2 \times 256)$ position.
This command is ignored if the print region is exceeded.
When $(n1 + n2 \times 256) \geq 32768$, it moves $\{65536 - (n1 + n2 \times 256)\}$ dots in the left direction.
When $(n1 + n2 \times 256) < 32768$, it moves $(n1 + n2 \times 256)$ dots in the right direction.

ESC GS a n

[Name] Specify position alignment

[Code] ASCII ESC GS a n
 Hex. 1B 1D 61 n
 Decimal 27 29 97 n

[Defined Area] $0 \leq n \leq 2$
 $48 \leq n \leq 50$ ("0" $\leq n \leq$ "2")

[Initial Value] n = 0

[Function] Specifies the alignment position in the printing region that has been set.

n	Position alignment
0, 48	Left alignment
1, 49	Center alignment
2, 50	Right alignment

3-3-7) Download

ESC & c1 c2 n d1...d48

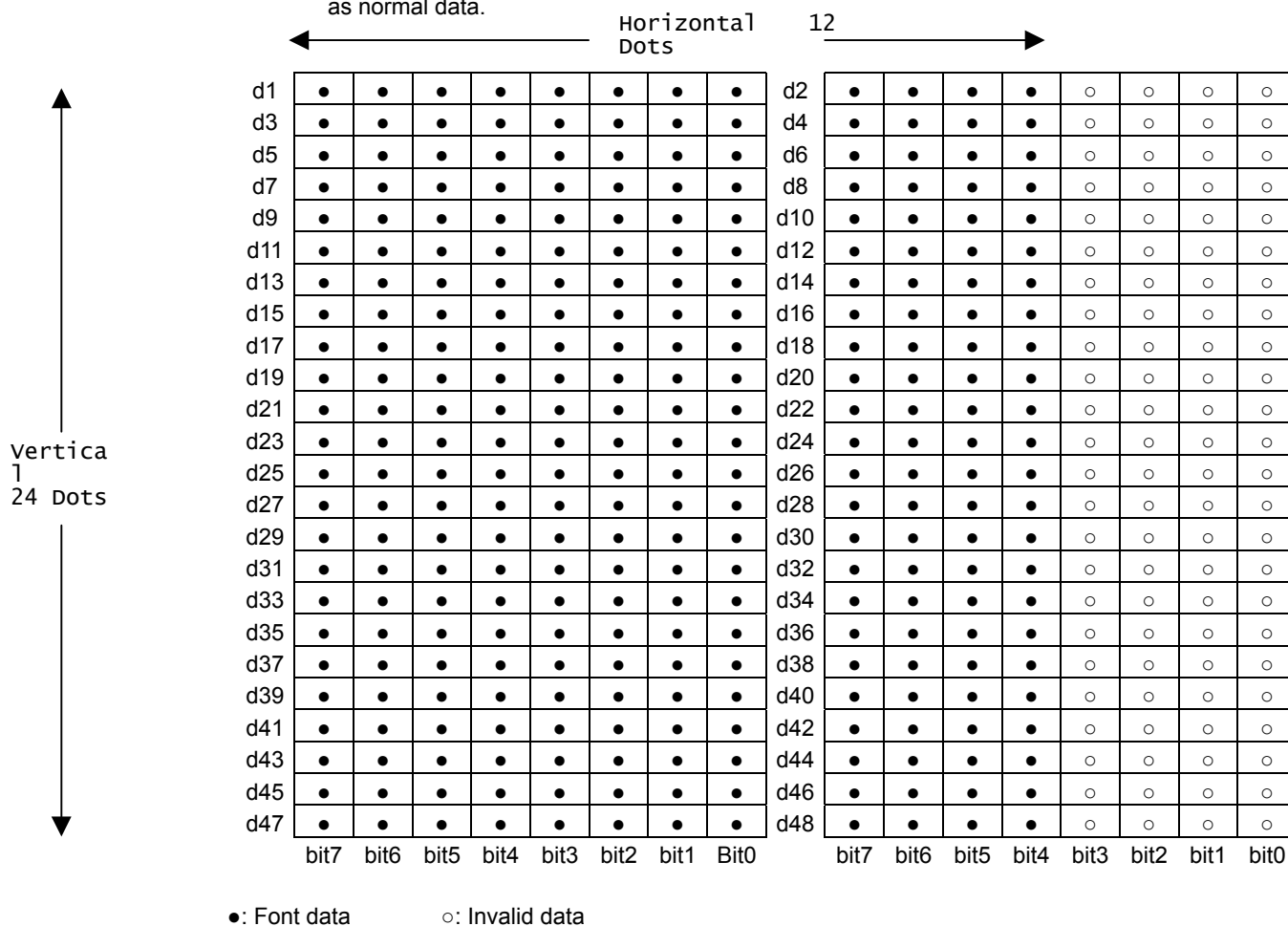
[Name] Register 12 x 24 dot font download characters

[Code]	ASCII	ESC	&	c1	c2	n	d1	...	d48
	Hex.	1B	26	c1	c2	n	d1	...	d48
	Decimal	27	38	c1	c2	n	d1	...	d48

[Defined Area] c1 = 1, 49
c2 = 1, 49
32 ≤ n ≤ 127
0 ≤ d ≤ 255

[Initial Value] ---

[Function] Registers 12 x 24 dot font download characters to the nth address.
Download characters can be registered to <20>H to <7F>H.
If one has been already registered to an address, it is overwritten.
When parameters c1 and c2 and n are outside of the defined area, subsequent data is handled as normal data.



ESC & c1 c2 n

[Name] Delete 12 x 24 dot font download characters
 [Code] ASCII ESC & c1 c2 n
 Hex. 1B 26 c1 c2 n
 Decimal 27 38 c1 c2 n

[Defined Area] c1 = 1, 49
 c2 = 0, 48
 32 ≤ n ≤ 127

[Initial Value] ---

[Function] Deletes 12 x 24 dot font download characters registered to the nth address.

ESC % n

[Name] Specifies/cancels ANK download characters
 [Code] ASCII ESC % n
 Hex. 1B 25 n
 Decimal 27 37 n

[Defined Area] n=0, 1, 48, 49

[Initial Value] ANK download characters cancelled

[Function] Specifies/cancels ANK download characters

n	Download characters
0, 48	Cancels ANK download characters
1, 49	Specifies ANK download characters

<Print example of ANK download characters>

1. ANK download character register (ESC & c1 c2 n d1...d48)
2. Specify ANK download characters (ESC % n (n = 1))
3. Prints ANK download characters

3-3-8) Bit image graphics

ESC K n1 n2 d1...dk

[Name]	Standard density bit image						
[Code]	ASCII	ESC	K	n1	n2	d1	... dk
	Hex.	1B	4B	n1	n2	d1	... dk
	Decimal	27	75	n1	n2	d1	... dk

[Defined Area] $1 \leq \{(n1 + n2 \times 256) \times 3\} \leq \text{printable region}$
 $k = (n1 + n2 \times 256)$
 $0 \leq d \leq 255$

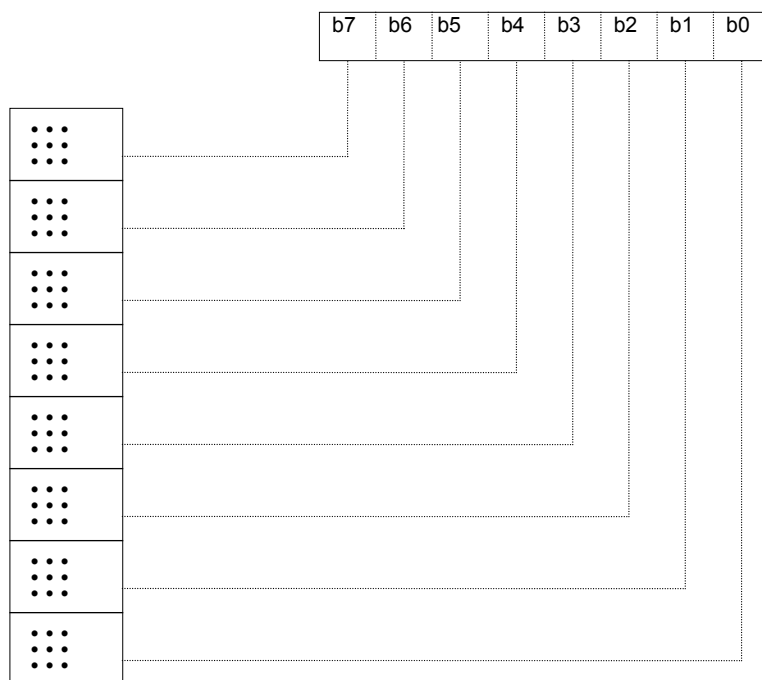
[Initial Value] - - -

[Function] Prints bit images using 3 dots wide and 3 dots high per 1 dot of input data.
The following shows the data processing in this command.

- When $\{(n1 + n2 \times 256) \times 3\}$ exceeds the printable region, data after d1 is handled as normal data.
- When $\{(n1 + n2 \times 256) \times 3\}$ exceeds the printable region that is currently set, only the data in the printing region is printed.

At this time, all data for the print region is discarded.

- If the current position already exceeds the print region, this command discards all data.



ESC L n1 n2 d1...dk

[Name]	Standard density bit image							
[Code]	ASCII	ESC	L	n1	n2	d1	...	dk
	Hex.	1B	4C	n1	n2	d1	...	dk
	Decimal	27	76	n1	n2	d1	...	dk

[Defined Area] $1 \leq (n1 + n2 \times 256) \leq \text{printable region}$
 $k = (n1 + n2 \times 256)$
 $0 \leq d \leq 255$

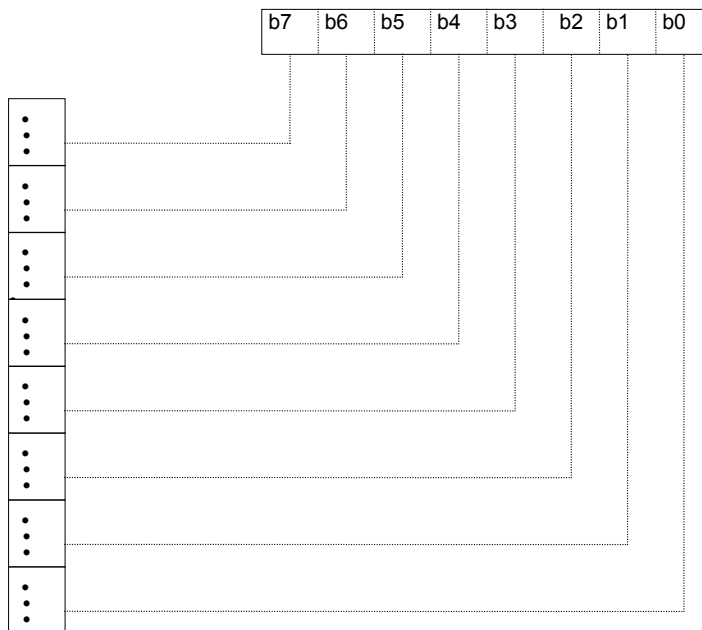
[Initial Value] - - -

[Function] Prints bit images using 1 dots wide and 3 dots high per 1 dot of input data.
The following shows the data processing in this command.

- When $(n1 + n2 \times 256)$ exceeds the printable region, data after d1 is handled as normal data.
- When $(n1 + n2 \times 256)$ exceeds the printable region that is currently set, only the data in the printing region is printed.

At this time, all data for the print region is discarded.

- If the current position already exceeds the print region, this command discards all data.



ESC k n1 n2 d1...dk

[Name] Fine density bit image

[Code] ASCII ESC k n1 n2 d1 ... dk
 Hex. 1B 6B n1 n2 d1 ... dk
 Decimal 27 107 n1 n2 d1 ... dk

[Defined Area] n2 = 0
 $1 \leq \{(n1 + n2 \times 256) \times 8\} \leq \text{printable region}$
 $k = \{(n1 + n2 \times 256) \times 24\}$
 $0 \leq d \leq 255$

[Initial Value] ---

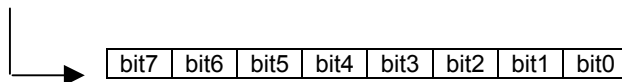
[Function] Prints bit images using 1 dots wide and 1 dots high per 1 dot of input data.
 The following shows the data processing in this command.

- When $\{(n1 + n2 \times 256) \times 8\}$ exceeds the printable region, data after d1 is handled as normal data.
- When $\{(n1 + n2 \times 256) \times 8\}$ exceeds the printable region that is currently set, only the data in the printing region is printed.

At this time, all data for the print region is discarded.

- If the current position already exceeds the print region, this command discards all data.

d1	d2	.....	dn
dn+1	dn+2	.....	d2n
d2n+1	d2n+2	.....	d3n
d3n+1	d3n+2	.....	d4n
d4n+1	d4n+2	.....	d5n
d5n+1	d5n+2	.....	d6n
d6n+1	d6n+2	.....	d7n
d7n+1	d7n+2	.....	d8n
d8n+1	d8n+2	.....	d9n
d9n+1	d9n+2	.....	d10n
d10n+1	d10n+2	.....	d11n
d11n+1	d11n+2	.....	d12n
d12n+1	d12n+2	.....	d13n
d13n+1	d13n+2	.....	d14n
d14n+1	d14n+2	.....	d15n
d15n+1	d15n+2	.....	d16n
d16n+1	d16n+2	.....	d17n
d17n+1	d17n+2	.....	d18n
d18n+1	d18n+2	.....	d19n
d19n+1	d19n+2	.....	d20n
d20n+1	d20n+2	.....	d21n
d21n+1	d21n+2	.....	d22n
d22n+1	d22n+2	.....	d23n
d23n+1	d23n+2	.....	d24n



ESC X n1 n2 d1...dk

[Name]	Fine density bit image (Compatible with 24 bit wire dots)							
[Code]	ASCII	ESC	X	n1	n2	d1	...	dk
	Hex.	1B	58	n1	n2	d1	...	dk
	Decimal	27	88	n1	n2	d1	...	dk

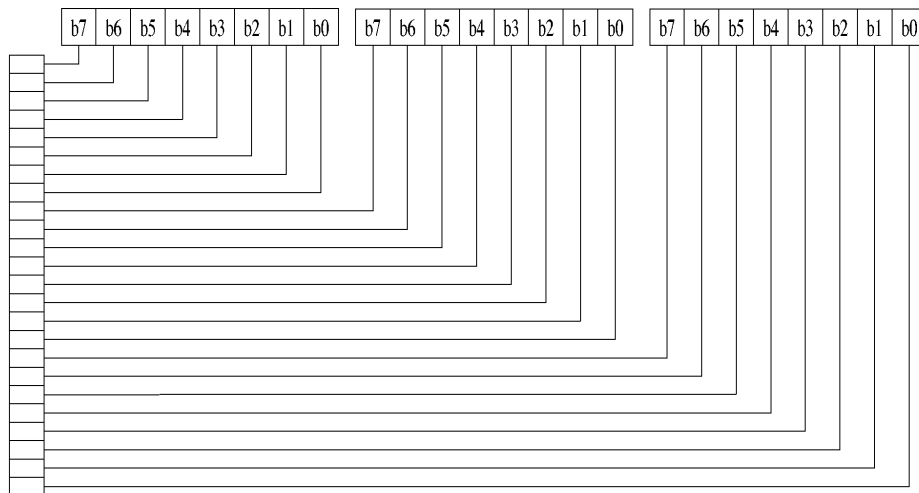
[Defined Area] $1 \leq (n1 + n2 \times 256) \leq \text{printable region}$
 $k = \{(n1 + n2 \times 256) \times 3\}$
 $0 \leq d \leq 255$

[Initial Value] ---

[Function] Prints input bit images with 8 dots/mm resolution for both horizontal and vertical.

The following shows the data processing in this command.

- When $\{(n1 + n2 \times 256) \times 3\}$ exceeds the printable region, data after d1 is handled as normal data.
- When $\{(n1 + n2 \times 256) \times 3\}$ exceeds the printable region that is currently set, only the data in the printing region is printed.
 At this time, all data for the print region is discarded.
- If the current position already exceeds the print region, this command discards all data.



3-3-9) Logo

ESC FS q n [x11 x12 y11 y12 d1...dk]1...[xn1 xn2 yn1 yn2 d1...dk]n

[Name]	Register logo																			
[Code]	ASCII	ESC	FS	q	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n
	Hex.	1B	1C	71	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n
	Decimal	27	28	113	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n

[Defined Area] $1 \leq n \leq 255$
 $0 \leq x_{n1} \leq 255, 0 \leq x_{n2} \leq 3$
 $1 \leq (x_{n1} + x_{n2} \times 256) \leq 1023$
 $0 \leq y_{n1} \leq 255, 0 \leq y_{n2} \leq 1$
 $1 \leq (y_{n1} + y_{n2} \times 256) \leq 288$
 $0 \leq d \leq 255$
 $k = \{(x_{n1} + x_{n2} \times 256) \times (y_{n1} + y_{n2} \times 256) \times 8\}$

[Initial Value] - - -

[Function] Parameter details
• n: Specifies registered logo count
• xn1, xn2: Horizontal size of registered logo $\{(x_{n1} + x_{n2} \times 256) \times 8\}$ dots
• yn1, yn2: Vertical size of registered logo $\{(y_{n1} + y_{n2} \times 256) \times 8\}$ dots
• d: Registered logo data
• k: Logo data count

This command should be specified at the top of the line.

When the first parameter is determined to be free of error, the printer starts processing this command.

When logo register processing starts, all previously defined data is deleted.

(It is not possible to reregister a portion of a plurality of defined logo data.)

Logo registration numbers are defined in rising order from 1.

The logo definition region is approximately 256 bytes.

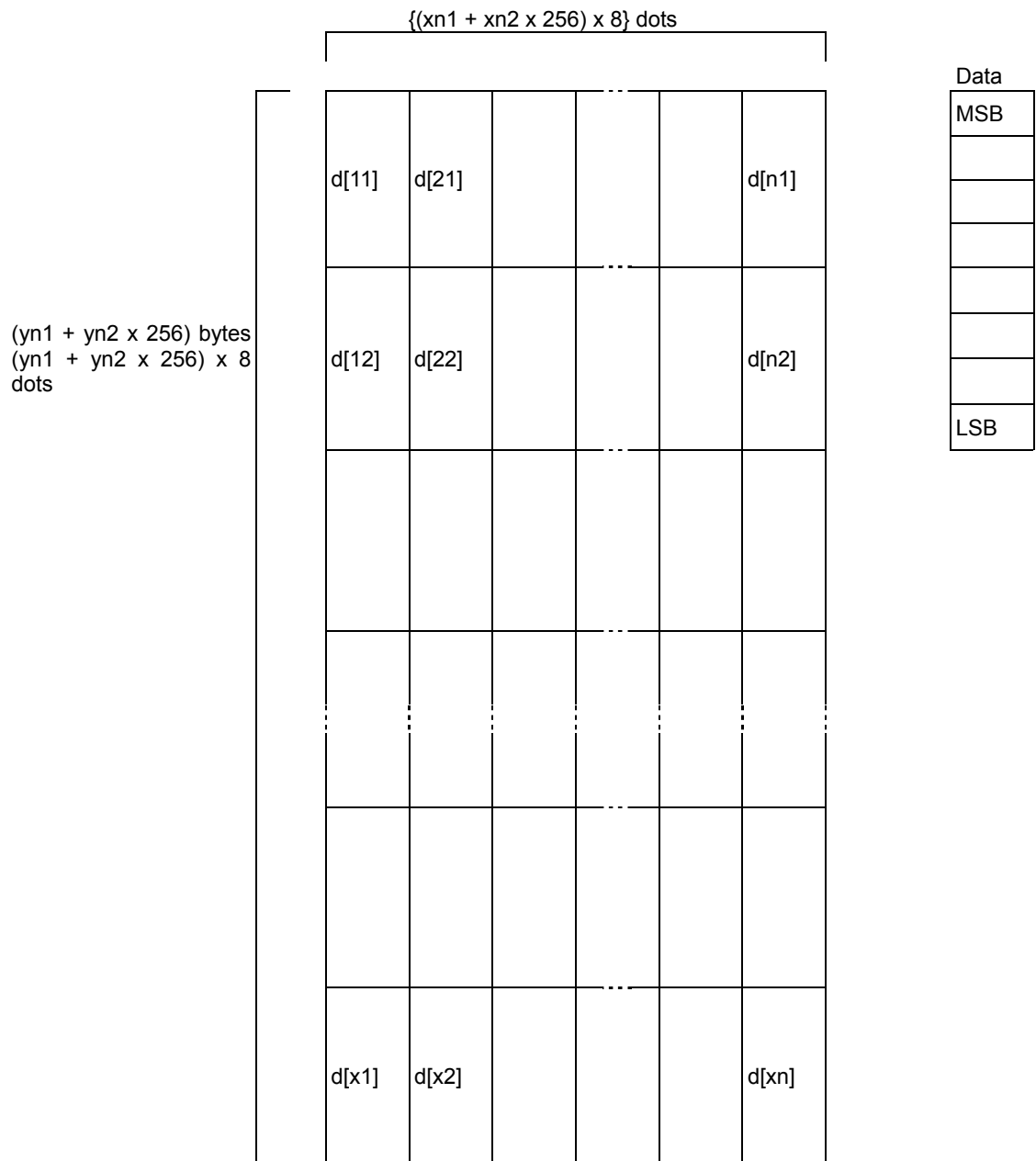
If the defined area specified by the parameter is not empty, or if there is an error in the parameter specification, register processing is aborted. (The pre-registered and complete data is effective.)

The printer should be initialized if logo registration is completed or register processing is aborted.

If an error occurs while performing register processing (the time from when the first parameter is OK until the printer initialization is completed after registering a logo), error processing, mechanical operation and status processing cannot be performed.

The relationships between input data and the actual print are shown on the next page.

Relationships of log₁₀ and registered data
 $x_n = x_{n1} + x_{n2} \times 256$, $y_n = y_{n1} + y_{n2} \times 256$



ESC FS p n m

[Name]	Print logo					
[Code]	ASCII	ESC	FS	p	n	m
	Hex.	1B	1C	70	n	m
	Decimal	27	28	112	n	m

[Defined Area]	$1 \leq n \leq 255$
	$0 \leq m \leq 3$
	$48 \leq m \leq 51$ ("0" $\leq m \leq$ "3")

[Initial Value] - - -

[Function] Prints the logo of registration number n registered using the logo registration command (ESC FS q) according to the print mode m.

m	Logo print mode
0, 48	Normal mode
1, 49	Double wide mode
2, 50	Double high mode
3, 51	Double high/wide mode

If there is unprinted data in the line buffer, this command is executed after printing that data. Therefore, it is not possible to print with other data in the same line (characters, bit images, bar codes).

Form feed obeys the vertical print size of the logo.

If the logo horizontal print size exceeds the horizontal print region, the portion exceeding the area is not printed.

Logos are printed according to the following command settings.

- Left margin (ESC I n)
- Right margin (ESC Q n)
- Position alignment (ESC GS a n)
- Absolut position movement (ESC GS R n1 n2)
- Upside-down printing (SI)

3-3-10) Bar code

ESC b n1 n2 n3 n4 d1...dk RS

[Name]

[Code]	ASCII	ESC	b	n1	n2	n3	n4	d1	...	dk	RS
	Hex.	1B	62	n1	n2	n3	n4	d1	...	dk	1E
	Decimal	27	98	n1	n2	n3	n4	d1	...	dk	30

[Defined Area]	0≤n1≤8, 48≤n1≤56 ("0≤n1≤"8")
	1≤n2≤4, 49≤n2≤52 ("1≤n2≤"4")
	1≤n4≤255
	n3 (bar code mode), d (bar code data), k (bar code data count) definitions differ according to the type of bar code.
[Initial Value]	---
[Function]	Bar code printing is executed according to the following parameters. If n1, n2, n3 and n4 are acquired and detected to be out of the defined area, data up to RS is discarded.

• n1 bar code type selection

n1	Bar code type
0, 48	UPC-E
1, 49	UPC-A
2, 50	JAN/EAN8
3, 51	JAN/EAN13
4, 52	Code39
5, 53	ITF
6, 54	Code128
7, 55	Code93
8, 56	NW-7

• n2 Under-bar character selection and added line feed selection

n2	Under-bar character selection and added line feed selection
1, 49	No added under-bar charactersExecutes line feed after printing a bar code
2, 50	Adds under-bar characters Executes line feed after printing a bar code
3, 51	No added under-bar charactersDoes not execute line feed after printing a bar code
4, 52	Adds under-bar characters Does not execute line feed after printing a bar code

• n3 bar code mode selection

n3	Bar code type		
	UPC-E, UPC-A, JAN/EAN8 JAN/EAN13, Code128, Code93	Code39, NW-7	ITF
1, 49	Minimum module 2 dots	Narrow : Wide = 2:6 dots	Narrow : Wide = 2:5 dots
2, 50	Minimum module 3 dots	Narrow : Wide = 3:9 dots	Narrow : Wide = 4:10 dots
3, 51	Minimum module 4 dots	Narrow : Wide = 4:12 dots	Narrow : Wide = 6:15 dots
4, 52	---	Narrow : Wide = 2:5 dots	Narrow : Wide = 2:4 dots
5, 53	---	Narrow : Wide = 3:8 dots	Narrow : Wide = 4:8 dots
6, 54	---	Narrow : Wide = 4:10 dots	Narrow : Wide = 6:12 dots
7, 55	---	Narrow : Wide = 2:4 dots	Narrow : Wide = 2:6 dots
8, 56	---	Narrow : Wide = 3:6 dots	Narrow : Wide = 3:9 dots
9, 57	---	Narrow : Wide = 4:8 dots	Narrow : Wide = 4:12 dots

- n4 bar code height (dot count)

Specification A

When the height of the bar code is more than the form feed amount, the form feed amount is automatically doubled.

Specification B

Form feed at (Bar code height + underbar characters)

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

- k (Bar code data count), d (Bar code data)

Bar code type	Defined area of k	Defined area of d
UPC-E	$11 \leq k \leq 12$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9")
UPC-A	$11 \leq k \leq 12$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9")
JAN/EAN8	$7 \leq k \leq 8$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9")
JAN/EAN13	$12 \leq k \leq 13$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9")
Code39	$1 \leq k$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9") $65 \leq d \leq 90$ ("A" ≤ d ≤ "Z") 32, 36, 37, 43, 45, 46, 47 (SP, "\$", "%", "+", "-", ".", "/")
ITF	$1 \leq k$ When an odd number: 0 is automatically applied to the top.	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9")
Code128	$1 \leq k$	$0 \leq d \leq 127$
Code93	$1 \leq k$	$0 \leq d \leq 127$
NW-7	$1 \leq k$	$48 \leq d \leq 57$ ("0" ≤ d ≤ "9") $65 \leq d \leq 68$ ("A" ≤ d ≤ "D") 36, 43, 45, 46, 47, 58 ("\$", "+", "-", ".", "/", ".") 97, 98, 99, 100 ("a", "b", "c", "d")

- UPC – E: k = 11 (or 12)

The 12th check digit is automatically applied, so it is specified and ignored.

The command is ignored for data that cannot be shortened. Automatically converts data to shortened form.

- UPC – A: k = 11 (or 12)

The 12th check digit is automatically applied, so it is specified and ignored.

- JAN/EAN – 8: k = 7 (or 8)

The 8th check digit is automatically applied, so it is specified and ignored.

- JAN/EAN -13: k = 12 (or 13)

The 13th check digit cannot be automatically applied, so it is specified and ignored.

- CODE 39: k is freely set, and maximum value differs according to the mode.

Start/stop code (*) is automatically applied.

- ITF: k is freely set, and maximum value differs according to the mode. If data is oddly numbered, a 0 is applied to the top.

- CODE 128: k is freely set, and maximum value differs according to the mode and the print character type.

The check character is automatically applied.

- CODE 93: k is freely set, and maximum value differs according to the mode and the print character type.

The check character (?) is automatically applied.

- NW7: k is freely set, and maximum value differs according to the mode and the print character type.

Start/stop codes included in the data (not automatically applied).

3-3-11) Cutter control

ESC d n

[Name] Auto-cutter

[Code] ASCII ESC d n
Hex. 1B 64 n
Decimal 27 100 n

[Defined Area] $0 \leq d \leq 3$
 $48 \leq d \leq 51$ ("0" $\leq d \leq$ "3")

[Initial Value] - - -

[Function] Executes the auto-cutter.
After auto-cutter is executed, the printer considers that to be the top of the page.

n	Auto cutter
0, 48	Full cut at the current position. Print data in line buffer is printed before a full cut. This command is ignored if the printer is not equipped with an auto-cutter.
1, 49	Partial cut at the current position. Print data in line buffer is printed before a partial cut. This command is ignored if the printer is not equipped with an auto-cutter.
2, 50	Paper is fed to cutting position, then a full cut. Print data in line buffer is printed before the operation described above. This command is ignored if the printer is not equipped with an auto-cutter.
3, 51	Paper is fed to cutting position, then a partial cut. Print data in line buffer is printed before the operation described above. This command is ignored if the printer is not equipped with an auto-cutter.

(*) The auto-cutter function operates in the following ways on models that only have a full cut or a partial cut.

- Models that perform only a full cut. Executes a full cut when there are instructions calling for a partial cut.
- Models that perform only a partial cut. Executes a partial cut when there are for instructions calling for a full cut.

(*) When connected with a presenter, executes a full cut when instructed for a partial cut.

3-3-12 External device drive

ESC BEL n1 n2

[Name]	Set external drive device 1 pulse width				
[Code]	ASCII	ESC BEL	n1	n2	
	Hex.	1B 07	n1	n2	
	Decimal	27 7	n1	n2	

[Defined Area] $1 \leq n1 \leq 127$

$1 \leq n2 \leq 127$

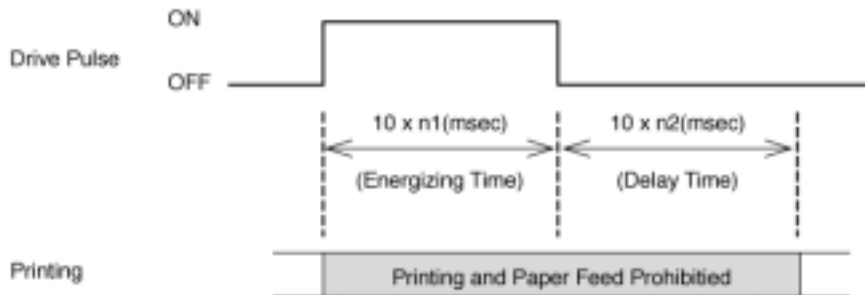
[Initial Value] n1 = 20 (Energizing time: 200 msec)

n2 = 20 (Delay time: 200 msec)

[Function] Sets the energizing and delay times for drive of the external device.

• Energizing time = $10 \times n1$ (ms)

• Delay time = $10 \times n2$ (ms)



BEL

[Name] External device 1 drive instruction
 [Code] ASCII BEL
 Hex. 07
 Decimal 7

[Defined Area] ---

[Initial Value] ---

[Function] Executes the external device drive conditions set according to the command to set the external drive device pulse width (ESC BEL n1 n2).
 As with other commands, it temporarily stores data in the data buffer, then executes in the order received.
 External device 1 and external device 2 cannot be executed simultaneously.

FS

[Name] External device 1 drive instruction
 [Code] ASCII FS
 Hex. 1C
 Decimal 28

[Defined Area] ---

[Initial Value] ---

[Function] Executes the external device drive conditions set according to the command to set the external drive device pulse width (ESC BEL n1 n2).
 As with other commands, it temporarily stores data in the data buffer, then executes in the order received.
 External device 1 and external device 2 cannot be executed simultaneously.

SUB

[Name] External device 2 drive instruction
 [Code] ASCII SUB
 Hex. 1A
 Decimal 26

[Defined Area] ---
 [Initial Value] ---

[Function] Drives external device 2.
 The energizing time and delay time for the external device 2 are fixed at 200 ms each.
 As with other commands, it temporarily stores data in the data buffer, then executes in the order received.
 External device 1 and external device 2 cannot be executed simultaneously.

EM

[Name] External device 2 drive instruction
 [Code] ASCII EM
 Hex. 19
 Decimal 25

[Defined Area] ---
 [Initial Value] ---

[Function] Drives external device 2.
 The energizing time and delay time for the external device 2 are fixed at 200 ms each.
 As with other commands, it temporarily stores data in the data buffer, then executes in the order received.
 External device 1 and external device 2 cannot be executed simultaneously.

3-3-13) Print settings

ESC RS d n

[Name] Set print density

[Code] ASCII ESC RS d n
 Hex. 1B 1E 64 n
 Decimal 27 30 100 n

[Defined Area] $0 \leq n \leq 15$
 $48 \leq n \leq 57$ ("0" ≤ n ≤ "9")
 $65 \leq n \leq 70$ ("0" ≤ n ≤ "F")

[Initial Value] Memory switch setting

[Function] Sets print density.
 This command stops printing to be executed.

n	Print density
0, 48	Print density 1.3
1, 49	Print density 1.2
2, 50	Print density 1.1
3, 51	Print density 1.0
4, 52	Print density 0.9
5, 53	Print density 0.8
6, 54	Print density 0.7
7, 55	(Reserved)
8, 56	(Reserved)
9, 57	(Reserved)
10, 65	(Reserved)
11, 66	(Reserved)
12, 67	(Reserved)
13, 68	(Reserved)
14, 69	(Reserved)
15, 70	(Reserved)

ESC RS r n

[Name] Set print speed

[Code] ASCII ESC RS r n
 Hex. 1B 1E 72 n
 Decimal 27 30 114 n

[Defined Area] $0 \leq n \leq 3$
 $48 \leq n \leq 51$ ("0" $\leq n \leq$ "3")

[Initial Value] Memory switch setting

[Function] Sets print speed.
 This command stops printing to be executed.

n	Print speed
0, 48	High speed
1, 49	Mid-speed
2, 50	Slow speed

3-3-14) Status

ESC RS a n

[Name] Set status transmission conditions

[Code]	ASCII	ESC	RS	a	n
	Hex.	1B	1E	61	n
	Decimal	27	30	97	n

[Defined Area] $0 \leq n \leq 3$

$48 \leq n \leq 51$ ("0" $\leq n \leq$ "51")

[Initial Value] Set by DIP switches and memory switches.

[Function] Sets the status transmission conditions.

See Appendix 2 for details regarding ASB status.

Settings of this command are unaffected by the ESC @ command.

Specification A

n	Status transmission conditions
0, 48	ASB invalid
1, 49	ASB valid

Specification B

n	Status transmission condition settings
0, 48	ASB invalid
1, 49	ASB valid

ESC ACK SOH

[Name] Real-time printer status (ASB status)
 [Code] ASCII ESC ACK SOH
 Hex. 1B 06 01
 Decimal 27 6 1

[Defined Area] ---

[Initial Value] ---

[Function] Sends ASB status information to the host.
 This command is not used when ASB is valid.
 See Appendix 2, Automatic Status for details regarding ASB status.

ENQ

[Name] Real-time printer status (1)
 [Code] ASCII ENQ
 Hex. 05
 Decimal 5

[Defined Area] ---

[Initial Value] ---

[Function] Sends 1 byte of the following the printer status
 This command is not used when ASB is valid.
 See Appendix 2, ENQ Command Status for details regarding status.

EOT

[Name] Real-time printer status (2)
 [Code] ASCII EOT
 Hex. 04
 Decimal 4

[Defined Area] ---

[Initial Value] ---

[Function] Sends 1 byte of the following the printer status
 This command is not used when ASB is valid.
 See Appendix 2, EOT Command Status for details regarding status.

3-3-15) Chinese characters

ESC p

[Name] Specify JIS Chinese character mode

[Code]	ASCII	ESC	p
	Hex.	1B	70
	Decimal	27	112

[Defined Area] - - -

[Initial Value] JIS Chinese character mode cancelled

[Function] Specifies JIS Chinese character mode

When in JIS Chinese character mode, character codes are all handled as 2 byte Chinese characters (First byte: upper code; second byte: lower code).

This command is ignored for models not equipped with Japanese and Chinese characters and when the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

ESC q

[Name] Cancel JIS Chinese character mode

[Code]	ASCII	ESC	q
	Hex.	1B	71
	Decimal	27	113

[Defined Area] - - -

[Initial Value] JIS Chinese character mode cancelled

[Function] Cancel JIS Chinese character mode

ESC \$ n

[Name] Specify/cancel Shift JIS Chinese character mode

[Code] ASCII ESC \$ N
 Hex. 1B 24 N
 Decimal 27 36 N

[Defined Area] - - -

[Initial Value] Memory switch setting

[Function] Specifies and cancels the shift JIS Chinese character mode.

When in shift JIS Chinese character mode, character codes are all handled as 2 byte Chinese characters (First byte: upper code; second byte: lower code).

This command is ignored for models not equipped with Japanese and Chinese characters and when the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

n	Shift JIS Chinese character mode
0, 48	Cancels shift JIS Chinese character mode
1, 49	Specifies shift JIS Chinese character mode

ESC s n1 n2

[Name]	Set 2 byte Chinese character left/right spaces				
[Code]	ASCII	ESC	s	n1	n2
	Hex.	1B	73	n1	n2
	Decimal	27	115	n1	n2

[Defined Area] $0 \leq n1 \leq 7$
 $48 \leq n1 \leq 55$ ("0" ≤ n1 ≤ "7")
 $0 \leq n2 \leq 15$
 $48 \leq n2 \leq 57$ ("0" ≤ n2 ≤ "9")
 $65 \leq n2 \leq 70$ ("A" ≤ n2 ≤ "F")

[Initial Value] Memory switch setting

[Function] Adds n1 dot left space and n2 dot right space to Chinese characters.
 This command is ignored for models not equipped with Chinese fonts (for overseas) and when the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

ESC t n1 n2

[Name]	Set 1 byte Chinese character left/right spaces				
[Code]	ASCII	ESC	t	n1	n2
	Hex.	1B	74	n1	n2
	Decimal	27	116	n1	n2

[Defined Area] $0 \leq n1 \leq 7$
 $48 \leq n1 \leq 55$ ("0" ≤ n1 ≤ "7")
 $0 \leq n2 \leq 15$
 $48 \leq n2 \leq 57$ ("0" ≤ n2 ≤ "9")
 $65 \leq n2 \leq 70$ ("A" ≤ n2 ≤ "F")

[Initial Value] Memory switch setting

[Function] Adds n1 dot left space and n2 dot right space to 1 byte characters.
 This command is ignored for models not equipped with Chinese fonts (for overseas) and when the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

ESC r c1 c2 d1...dk

[Name] Register Chinese download characters

[Code] ASCII ESC r c1 c2 d1 ... dk
Hex. 1B 72 c1 c2 d1 ... dk
Decimal 27 114 c1 c2 d1 ... dk

[Defined Area] 0≤d≤255

k=72

c1 and c2 differ according to specifications and code type (see table below).

[Initial Value] All spaces

[Function] Registers Chinese download characters to c1 and c2 addresses.

Those already registered to these addresses are overwritten. If c1 and c2 are outside of the defined are or the printer is model not equipped with Chinese fonts (for overseas) and when the specification for the location of use is specified as SBCS (single byte countries) by the memory switch, the printer discards up to d1 and dk.

This command exists in models that have the specifications of A and B below. (See the "Special Appendix, Command Table per Model" for details.)

Specification A

Specification	c1	c2	Registration count
Japanese char./JIS type	c1=77h	30h≤c2≤4Fh	32 characters

Specification B

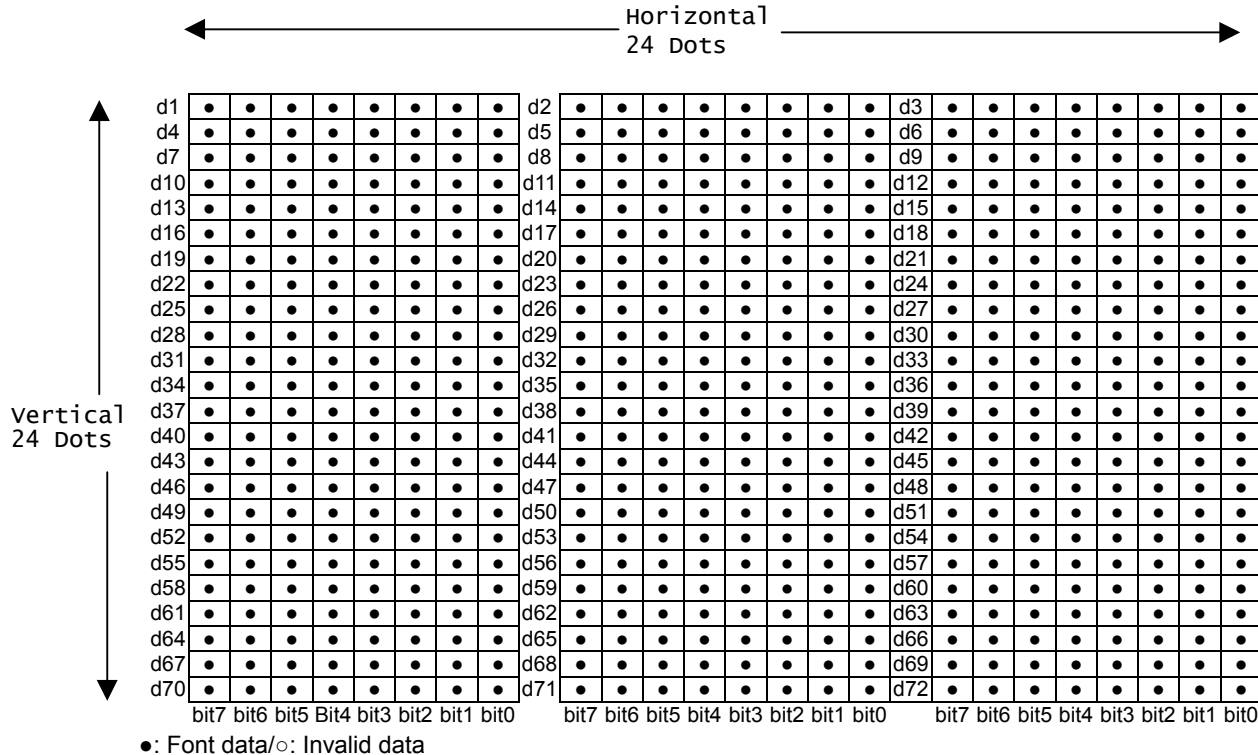
Specification	c1	c2	Registration count
Japanese char./JIS type	c1=77h	21h≤c2≤7Eh	94 characters
Japanese char./Shift JIS type	c1=ECh	40h≤c2≤7Eh 80h≤c2≤9Eh	94 characters
Chinese characters	c1=FEh	A1h≤c2≤FEh	94 characters

(*) The registration region is the same for Japanese characters in JIS or shift JIS.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.



3-3-16) Others

CAN

[Name]	Cancel print data and initialize commands	
[Code]	ASCII	CAN
	Hex.	18
	Decimal	24

[Defined Area] - - -

[Initial Value] - - -

[Function] When the reception buffer and line buffer are cleared, the set commands are initialized.
 Immediately executed not when taking out from the reception buffer, but when received from the host.
 DIPSW re-readin is not performed.
 The following shows the specifications that are not initialized by this command.

- Set print density
- Set print speed
- Set 2 color print mode
- Print color in 2 color print mode
- External device drive condition

ESC @

[Name]	Command initialization		
[Code]	ASCII	ESC	@
	Hex.	1B	40
	Decimal	27	64

[Defined Area]

[Initial Value]

[Function]

Initializes each command after printing data in the line buffer.

However, printers with memory switch settings are initialized to the memory switch settings.

DIPSW re-readin is not performed.

- ANK characters, Chinese character adornment, expansion
- Chinese character mode
- ANK right space
- Chinese character left/right spaces
- Character pitch
- International characters
- Code page
- Set slash zero
- Set specify/cancel external character (external register character data is retained)
- Page length
- Current position (move to top of page, top of line)
- Horizontal tab/Vertical tab
- Line feed amount
- Set upside-down, position alignment
- Left/right margins

The following shows the specifications that are not initialized by this command.

- Set print density
- Set print speed
- Set 2 color print mode
- Print color in 2 color print mode
- External device drive condition

ESC GS # m N n1 n2 n3 n4 LF NUL

[Name]	Set memory switch										
[Code]	ASCII	ESC	GS	#	m	N	n1	n2	n3	n4	LF NUL
	Hex.	1B	1D	23	m	N	n1	n2	n3	n4	0A 00
	Decimal	27	29	35	m	N	n1	n2	n3	n4	10 0

[Defined Area] m = 87, 84, 44, 43, 45, 64 (m = "W", "T", ",", "+", "-", "@")
 48≤n1≤57 ("0"≤n1≤"9"), 65≤n1≤70 ("A"≤n1≤"F"), 97≤n1≤102 ("a"≤n1≤"f")
 48≤n2≤57 ("0"≤n2≤"9"), 65≤n2≤70 ("A"≤n2≤"F"), 97≤n2≤102 ("a"≤n2≤"f")
 48≤n3≤57 ("0"≤n3≤"9"), 65≤n3≤70 ("A"≤n3≤"F"), 97≤n3≤102 ("a"≤n3≤"f")
 48≤n4≤57 ("0"≤n4≤"9"), 65≤n4≤70 ("A"≤n4≤"F"), 97≤n4≤102 ("a"≤n4≤"f")

Specification A

48≤N≤57 ("0"≤N≤"9"), 65≤N≤70 ("A"≤N≤"F"), 97≤N≤102 ("a"≤N≤"f")

Specification B

48≤N≤57 ("0"≤N≤"9"), 65≤N≤70 ("A"≤N≤"F"), 97≤N≤102 ("a"≤N≤"f")

N = 85 (U) User defined area

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

[Initial Value] - - -

[Function] Sends command to write after defining memory switch using the definition command specified by the following classes.

Memory switch information defined by the command to write is written to the volatile memory.

When writing to the volatile memory by the command to write, the printer executes a reset.

This command exists in models that have the specifications of A and B indicated in the above defined areas.

Models having specifications B can register any 16 bit data by specifying N = 85 (U). (See the "Special Appendix, Command Table per Model" for details per model.)

Functions	Class	m	N	n1 n2 n3 n4
Definition data write and reset	Write	W	Fixed at 0	Fixed at 0000
Definition data write and reset and self print	Write	T	Fixed at 0	Fixed at 0000
Data definition (data specification)	Definition	","	N	n1 n2 n3 n4
Data definition (specify bit and set)	Definition	"+"	N	n1 n2 n3 n4
Data definition (specy bit and clear)	Definition	"-"	N	n1 n2 n3 n4
Definition data (all data initialized)	Definition	"@"	Fixed at 0	Fixed at 0000

• m : Mode selection

• N : Memory switch number to specify

• n1 n2 n3 n4 : Specify data m = (,) Specify data
 m = (+) Bit number to set
 m = (-) Bit number to clear

ESC ? LF NUL

[Name] Reset printer (execute self print)
 [Code] ASCII ESC ? LF NUL
 Hex. 1B 3F 0A 00
 Decimal 27 63 10 0

[Defined Area] ---

[Initial Value] ---

[Function] Hardware resets the printer and executes on self print.
 After sending this command, the next data is not sent until the printer is online (in a state wherein it can receive data).
 When resetting the printer, the following processes are performed.

I/F	Mode	Process
Parallel	---	BUSY output
RS-232C	DTR mode	DTR mark output
	Xon/Xoff mode	Xoff output

3-4) Raster Graphics Command Details

Raster graphics are command types and incidental specifications that enable high speed and high quality printing of graphics.

The following shows the characteristics and specifications for raster graphics.

- Defines the raster mode command as the STAR line mode extension set.
 - Basically no restrictions set in use of conventional STAR line mode.
 - STAR Page Mode cannot be used.
- Handles high speed data transmission
 - When using IEEE 1284, data transmission rate of 80 to 100 kbytes ensured.
- Handles IEEE 1284, USB and Ethernet I/F (RS-232C not applicable)
- Handles both fixed length/variable length mode
- Print speed selectable
- Post printing cut operation selectable
- All settings possible by Raster commands.
 - Most settings are possible without DIPSW/memory switch settings.
- Supports printer driver handling raster mode

The following shows the raster command details.

Note that if not specifically noted, the following commands are effective only in rastr mode and the commands are ignored (4 bytes ignored) when other than the raster mode. The raster image buffer in the command details described below indicate the raster dedicated image buffer, the length thereof (vertical direction dot count) differing between models.

ESC * r R

[Name]	Initialize raster mode				
[Code]	ASCII	ESC	*	r	R
	Hex.	1B	2A	72	52
	Decimal	27	42	114	82

[Defined Area] ---

[Initial Value] ---

[Function] Initializes raster mode.

This command is also effective when not in the raster mode.

However, initialization of the raster mode with this command is executed when entering the raster mode.

The following settings are initialized using this command.

- Raster page length setting (ESC * r P n NUL)
- Raster print quality setting (ESC * Q n NUL)
- Raster print quality setting (ESC * r K n NUL)
- Raster top margin setting (ESC * r T n NUL)
- Raster left margin setting (ESC * r m l n NUL)
- Raster right margin setting (ESC * r m r n NUL)
- Raster EOT mode setting (ESC FF EOT)
- Raster FF mode setting (ESC FF NUT)
- Raster image buffer clear

Note that when entering the raster mode, it executes the same process as initialization of the raster mode using this command.

However, because initialization is not performed when entering the raster mode only for the following settings, when initializing the following it sends this initialization command.

- Raster data print color setting (ESC * r K n NUL)

ESC * r A

[Name]	Enter raster mode				
[Code]	ASCII	ESC	*	r	A
	Hex.	1B	2A	72	41
	Decimal	27	42	114	65

[Defined Area] ---

[Initial Value] ---

[Function] Enters raster mode.

This command is ignored when in the raster mode.

The following shows the details regard processing of this command.

- (1) Reception of this command.
- (2) When using parallel I/F, IEEE 1284 reverse mode is prohibited.
- (3) All data remaining in the reception buffer and image buffer is printed equivalent to the FF command.
- (4) Initialize raster mode
- (5) Enter raster mode

When in the raster mode, the raster mode is initialized.

The following shows the contents of the initialization.

- Raster page length setting (ESC * r P n NUL)
- Raster print quality setting (ESC * Q n NUL)
- Raster top margin setting (ESC * r T n NUL)
- Raster left margin setting (ESC * r m l n NUL)
- Raster right margin setting (ESC * r m r n NUL)
- Raster EOT mode setting (ESC FF EOT)
- Raster FF mode setting (ESC FF NUT)
- Raster image buffer clear

(*) Only raster data print color setting is not initialized when entering the raster mode.

ESC * r B

[Name]	Quit raster mode				
[Code]	ASCII	ESC	*	r	B
	Hex.	1B	2A	72	42
	Decimal	27	42	114	66

[Defined Area] ---

[Initial Value] ---

[Function] Quits raster mode.

When quitting the raster mode, if there is raster data remaining in the image buffer of the raster mode, it quits the raster mode after executing the raster EOT mode.

Note that with this command, IEEE 1284 reverse mode is allowed in parallel I/F and it sets the top of page with the line mode.

ESC * r C

[Name]	Clear raster data				
[Code]	ASCII	ESC	*	r	C
	Hex.	1B	2A	72	43
	Decimal	27	42	114	67

[Defined Area] ---

[Initial Value] ---

[Function] Clears image buffer data in the raster mode.

ESC * r D n NUL

[Name]	Drawer drive						
[Code]	ASCII	ESC	*	r	D	n	NUL
	Hex.	1B	2A	72	44	n	00
	Decimal	27	42	114	68	n	0

[Defined Area] $0 \leq n \leq 3$

[Initial Value] $n = 0$

[Function] Drives the drawer in the raster mode.
 Drawer drive conditions conform to conditions set by the line mode.
 n is a decimal description (max. 255 digits) using ASCII characters.

n	Drive circuits
0	None
1	External device drive 1 drive
2	External device drive 2 drive
3	External device drive 1 drive and external device drive 2 drive

ESC * E n NUL

[Name] Set raster EOT mode

[Code] ASCII ESC * r E n NUL
Hex. 1B 2A 72 45 n 00
Decimal 27 42 114 69 n 0

[Defined Area] n = 0, 1, 2, 3, 8, 9, 12, 13, 36, 37

[Initial Value] Models handling full cut: n = 9
Models connected with a presenter: n = 37

[Function] Sets the raster EOT mode.
The EOT mode operates to execute using the raster document quit command (ESC EOT NUL).
n is a decimal description (max. 255 digits) using ASCII characters.

Specification A <EOT mode setting format>

n	FormFeed	Cut Feed	Cutter	Presenter
0	Set To Default	Set To Default	Set To Default	Set To Default
1	○	--	--	--
2	○	○	--	--
3	○	TearBar	--	--
8	○	--	Full Cut	--
9	○	○	Full Cut	--
12	○	--	Partial Cut	--
13	○	○	Partial Cut	--
36	○	--	Full Cut	Eject
37	○	○	Full Cut	Eject

Specification B <EOT mode setting format>

n	FormFeed	Cut Feed	Cutter	Presenter
0	Set To Default	Set To Default	Set To Default	Set To Default
1	○ (*1)	--	--	--
2	○ (*1)	○	--	--
3	○ (*1)	TearBar	--	--
8	○ (*1)	--	Full Cut	--
9	○ (*1)	○	Full Cut	--
12	○ (*1)	--	Partial Cut	--
13	○ (*1)	○	Partial Cut	--
36	○ (*1)	--	Full Cut	Eject
37	○ (*1)	○	Full Cut	Eject

*1) Form Feed

When the printer is a model handling BM and is set for BM to be effective, the set raster mode page length is ignored and BM detecting is performed.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

ESC * r F n NUL

[Name] Set raster FF mode

[Code] ASCII ESC * r F n NUL
 Hex. 1B 2A 72 46 n 00
 Decimal 27 42 114 70 n 0

[Defined Area] n = 0, 1, 2, 3, 8, 9, 12, 13, 36, 37

[Initial Value] Models handling full cut: n = 9

Models connected with a presenter: n = 37

[Function] Sets raster FF mode.

The FF mode operates to execute using the raster document quit command (ESC FF NUL).

n is a decimal description (max. 255 digits) using ASCII characters.

Specification A <FF mode setting format>

n	FormFeed	Cut Feed	Cutter	Presenter
0	Set To Default	Set To Default	Set To Default	Set To Default
1	○	--	--	--
2	○	○	--	--
3	○	TearBar	--	--
8	○	--	Full Cut	--
9	○	○	Full Cut	--
12	○	--	Partial Cut	--
13	○	○	Partial Cut	--
36	○	--	Full Cut	Eject
37	○	○	Full Cut	Eject

Specification B <FF mode setting format>

n	FormFeed	Cut Feed	Cutter	Presenter
0	Set To Default	Set To Default	Set To Default	Set To Default
1	○ (*1)	--	--	--
2	○ (*1)	○	--	--
3	○ (*1)	TearBar	--	--
8	○ (*1)	--	Full Cut	--
9	○ (*1)	○	Full Cut	--
12	○ (*1)	--	Partial Cut	--
13	○ (*1)	○	Partial Cut	--
36	○ (*1)	--	Full Cut	Eject
37	○ (*1)	○	Full Cut	Eject

*1) Form Feed

When the printer is a model handling BM and is set for BM to be effective, the set raster mode page length is ignored and BM detecting is performed.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

ESC * r P n NUL

[Name]	Set raster page length						
[Code]	ASCII	ESC	*	r	P	n	NUL
	Hex.	1B	2A	72	50	n	00
	Decimal	27	42	114	80	n	0

[Defined Area] ---
 [Initial Value] Raster image buffer length
 [Function] Sets raster page length.
 n is a decimal description (max. 255 digits) using ASCII characters.

n	
0	Continuous print mode (no page length setting)
1≤n	Specify page length

ESC * r Q n NUL

[Name]	Set raster print quality						
[Code]	ASCII	ESC	*	r	Q	n	NUL
	Hex.	1B	2A	72	51	n	00
	Decimal	27	42	114	81	n	0

[Defined Area] $0 \leq n \leq 2$
 [Initial Value] n = 0
 [Function] Sets raster print quality.
 n is a decimal description (max. 255 digits) using ASCII characters.

n	Print quality
0	Specify high speed printing
1	Normal print quality
2	High print quality

ESC * r m l n NUL

[Name]	Set raster left margin							
[Code]	ASCII	ESC	*	r	m	l	n	NUL
	Hex.	1B	2A	72	6D	6C	n	00
	Decimal	27	42	114	109	108	n	0

[Defined Area] ---

[Initial Value] n = 0

[Function] Sets raster left margin.

This command sets the left margin to (n x 8).

When the left margin exceeds the printable area, or if the left margin specification eliminates the print area (printable region to right margin) to the left margin specified value, this command is ignored.

n is a decimal description (max. 255 digits) using ASCII characters.

ESC * r m r n NUL

[Name]	Set raster right margin							
[Code]	ASCII	ESC	*	r	m	r	n	NUL
	Hex.	1B	2A	72	6D	72	n	00
	Decimal	27	42	114	109	114	n	0

[Defined Area] ---

[Initial Value] n = 0

[Function] Sets raster right margin.

This command sets the right margin to (n x 8).

When the right margin exceeds the printable area, or if the right margin specification eliminates the print area (printable region to left margin) to the right margin specified value, this command is ignored.

n is a decimal description (max. 255 digits) using ASCII characters.

ESC * r T n NUL

[Name]	Set raster top margin						
[Code]	ASCII	ESC	*	r	T	n	NUL
	Hex.	1B	2A	72	54	n	00
	Decimal	27	42	114	84	n	0

[Defined Area] $0 \leq n \leq 2$

[Initial Value] $n = 2$

[Function] Sets the raster top margin.
n is a decimal description (max. 255 digits) using ASCII characters.

n	Top margin
0	Set To Default
1	Set top margin using reverse paper feed.
2	Set standard top margin.

(*) This differs according to the model handling this command.

ESC * r K n NUL

[Name]	Set raster print color						
[Code]	ASCII	ESC	*	r	K	n	NUL
	Hex.	1B	2A	72	4B	n	00
	Decimal	27	42	114	75	n	0

[Defined Area] $0 \leq n \leq 3$

[Initial Value] $n = 0$

[Function] Sets raster print color.
This command is effective only when specifying the 2 color mode using the line mode.
This command is ignored when not in the 2 color print mode.
n is a decimal description (max. 255 digits) using ASCII characters.

n	Print color
0	Black
1	Cyan
2	Magenta
3	Yellow

(*) This command is effective only when using a model handling 2 color printing. This command is ignored on non-compatible models.

b n1 n2 data

[Name]	Send raster data (auto line feed)							
[Code]	ASCII	b	n1	n2	d1	d2	...	dk
	Hex.	62	n1	n2	d1	d2	...	dk
	Decimal	98	n1	n2	d1	d2	...	dk

[Defined Area] $0 \leq n1 \leq 255$
 $0 \leq n2 \leq 255$
 $0 \leq d \leq 255$
 $k = n1 + n2 \times 255$
 $1 \leq k$

[Initial Value] - - -

[Function] Sends raster data (auto line feed).
 Raster data is sent in $(n1 + n2 \times 256)$ byte counts as binary data.
 Raster data exceeding the print area currently set is discarded.
 The image buffer expanded position is automatically line fed one dot row and moved to the left margin on the next line after expanded the image buffer data 1 dot row using this command.
 Also, data expansion is duplicated on the data in the current image buffer (OR process).
 The following shows expanded image buffer for the set raster print color.
 n is a decimal description (max. 255 digits) using ASCII characters.

Print color	Expanded image buffer
Black	Image buffer for black
Cyan	Image buffer for color
Magenta	Image buffer for color
Yellow	Image buffer for color

k n1 n2 data

[Name] Transfer raster data

[Code]	ASCII	k	n1	n2	d1	d2	...	dk
	Hex.	6B	n1	n2	d1	d2	...	dk
	Decimal	107	n1	n2	d1	d2	...	dk

[Defined Area] $0 \leq n1 \leq 255$
 $0 \leq n2 \leq 255$
 $0 \leq d \leq 255$
 $k \leq n1 + n2 \times 255$
 $1 \leq k$

[Initial Value] - - -

[Function] Sends raster data.

Raster data is sent in $(n1 + n2 \times 256)$ byte counts as binary data.

Raster data exceeding the print area currently set is discarded.

The image buffer expanded position returns to the head of the current dot row without an automatic line fed after expanding the image buffer data 1 dot row using this command.

Also, data expansion is duplicated on the data in the current image buffer (OR process).

The following shows expanded image buffer for the set raster print color.

n is a decimal description (max. 255 digits) using ASCII characters.

Print color	Expanded image buffer
Black	Image buffer for black
Cyan	Image buffer for black
Magenta	Image buffer for black
Yellow	Image buffer for black

ESC * r Y n NUL

[Name]	Move vertical direction position (Line feed for specified dots)						
[Code]	ASCII	ESC	*	r	Y	n	NUL
	Hex.	1B	2A	72	59	n	00
	Decimal	27	42	114	89	n	0

[Defined Area]

[Initial Value]

[Function]

Moves vertical direction position.

Moves position n dots with this command.

When the current page length setting is in continuous print mode, and the n dots exceed the remaining dot count of the raster image buffer length, this moves up to the remaining dot count and ignores the overflow.

If the page length is set, it moves to the current page length and ignores the overflow.

Note that when there is overflow, this expands the next raster data after printing the raster image buffer data with the next raster data transfer and move vertical direction position command.

n is a decimal description (max. 255 digits) using ASCII characters.

ESC FF NUL

[Name]	Execute FF mode			
[Code]	ASCII	ESC	FF	NUL
	Hex.	1B	0C	00
	Decimal	27	12	0

[Defined Area] ---

[Initial Value] ---

[Function] Executes FF mode.
Executes operation specified by the FF mode setting command (ESC * r F n NUL).

ESC FF EOT

[Name]	Execute EOT mode			
[Code]	ASCII	ESC	FF	EOT
	Hex.	1B	0C	04
	Decimal	27	12	4

[Defined Area] ---

[Initial Value] ---

[Function] Executes EOT mode.
Executes operation specified by the EOT mode setting command (ESC * r E n NUL).

3-5) Black Mark Related Command Details

The following commands control top of form functions using black mark paper.
The following commands are effective only when black mark is set to be effective.

ESC d n

[Name] Auto cutter
[Code] ASCII ESC d n
Hex. 1B 64 n
Decimal 27 100 n

[Defined Area] $0 \leq d \leq 3$
 $48 \leq d \leq 51$ ("0" $\leq d \leq$ "3")

[Initial Value] - - -

[Function] Executes the auto-cutter.
After auto-cutter is executed, the printer considers that to be the top of the page.

n	Auto cutter
0, 48	Full cut at the current position. Print data in line buffer is printed before a full cut. This command is ignored if the printer is not equipped with an auto-cutter.
1, 49	Partial cut at the current position. Print data in line buffer is printed before a partial cut. This command is ignored if the printer is not equipped with an auto-cutter.
2, 50	After executing top of form, paper is fed to cutting position, then a full cut. Print data in line buffer is printed before the operation described above. This command is ignored if the printer is not equipped with an auto-cutter.
3, 51	After executing top of form, paper is fed to cutting position, then a partial cut. Print data in line buffer is printed before the operation described above. This command is ignored if the printer is not equipped with an auto-cutter.

(*) The auto-cutter function operates in the following ways on models that only have a full cut or a partial cut.

- Models that perform only a full cut: Executes a full cut when for instructions calling for a partial cut.
- Models that perform only a partial cut: Executes a partial cut when there are for instructions calling for a full cut.

(*) When connected with a presenter, executes a full cut when instructed for a partial cut.

FF

[Name] Execute top of form
 [Code] ASCII FF
 Hex. 0C
 Decimal 12

[Defined Area] ---
 [Initial Value] ---
 [Function] Executes top of form.

ESC C n

[Name] Set page length to n lines
 [Code] ASCII ESC C N
 Hex. 1B 43 N
 Decimal 27 67 N

[Defined Area] $1 \leq n \leq 127$
 [Initial Value] (Form feed amount initial value x 42)
 [Function] When black mark is effective, this command is ignored.

ESC C 0 n

[Name] Set page length to n x 24 mm units

[Code]	ASCII	ESC	C	0	n
	Hex.	1B	43	0	n
	Decimal	27	67	0	n

[Defined Area] $1 \leq n \leq 22$

[Initial Value] (Form feed amount initial value x 42)

[Function] When black mark is effective, this command is ignored.

ESC c n

[Name] Set page length to n x 1mm units

[Code]	ASCII	ESC	c	n
	Hex.	1B	63	n
	Decimal	27	99	n

[Defined Area] $10 \leq n \leq 255$

[Initial Value] (Form feed amount initial value x 42)

[Function] When black mark is effective, this command is ignored.

VT

[Name] Feed paper to vertical table position
 [Code] ASCII VT
 Hex. 0B
 Decimal 11

[Defined Area] ---
 [Initial Value] ---
 [Function] When black mark is effective, this command is ignored.

ESC B n1 n2...nk NUL

[Name] Set vertical tab position
 [Code] ASCII ESC B n1 n2 ... nk NUL
 Hex. 1B 42 n1 n2 ... nk 00
 Decimal 27 66 n1 n2 ... nk 0

[Defined Area] $1 \leq n \leq 255$
 $0 \leq k \leq 16$
 [Initial Value] ---
 [Function] When black mark is effective, this command is ignored.

ESC B NUL

[Name] Clear vertical tab position
 [Code] ASCII ESC B NUL
 Hex. 1B 42 00
 Decimal 27 66 0

[Defined Area] ---
 [Initial Value] ---
 [Function] When black mark is effective, this command is ignored.

3-6) USB Related Command Details

The following commands control USB I/F functions.

The following commands are effective only when using a USB I/F.

There are no commands for TSP600/700/800 and TUP900.

3-7) 2 Color Printing Command Details

The following commands control 2 color printing functions.

The following commands are effective only when using a model handling 2 color printing.

ESC RS c n

[Name] Set print color in 2 color print mode

[Code]	ASCII	ESC	RS	c	n
	Hex.	1B	1E	63	n
	Decimal	27	30	99	n

[Defined Area] $0 \leq n \leq 1$

$48 \leq n \leq 49$ ("0" $\leq n \leq$ "1")

[Initial Value] $n = 0, 48$ (When in 2 color print mode)

[Function] Specifies print color in 2 color print mode.

This command is ignored when not in the 2 color print mode.

Specifies black for the print color when in 2 color print mode.

The specification of this command is cleared only when the printer is reset. (Not cleared by ESC @)

The specification of this command is not cleared by ESC @ CAN.

However, print color is initialized to black by the ESC @ and CAN only when in the compatible 2 color print mode.

n	Specifies 2 color print mode color
0, 48	Black
1, 49	Red

ESC RS C n

[Name]	Select/cancel 2 color print mode				
[Code]	ASCII	ESC	RS	C	n
	Hex.	1B	1E	43	n
	Decimal	27	30	67	n

[Defined Area]	Specification A
	$0 \leq n \leq 2$
	$48 \leq n \leq 50$ ("0" $\leq n \leq$ "2")
	Specification B
	$0 \leq n \leq 1$
	$48 \leq n \leq 49$ ("0" $\leq n \leq$ "1")

[Initial Value] n = 0, 48

[Function] Specification A

n	Select/cancel 2 color print mode
0, 48	Cancels 2 color print mode This command cancels 2 color print mode, when in 2 color print mode. This command is ignored when the 2 color print mode is already cancelled. The specification of this command is not cleared by ESC @ CAN. The following processes are executed by canceling the 2 color print mode using this command. • Prints data in line buffer in 2 color print mode, if unprinted data exists in the line buffer. • Waits to stop printing when printing in 2 color print mode. • Recovers print density setting to single color mode setting. • Recovers print speed to single color mode setting. • Recovers logo print setting to single color mode setting.
1, 49	Selects 2 color print mode This command selects 2 color print mode, when in single color print mode. This command is ignored already in the 2 color print mode. The specification of this command is not cleared by ESC @ CAN. The following processes are executed by selecting the 2 color print mode using this command. • Prints data in line buffer in single color print mode, if unprinted data exists in the line buffer. • Waits to stop printing when printing in single color print mode. • Initializes print color setting (2 color print mode setting) • Initializes print density setting (memory switch setting) • Sets logo print setting to 2 color mode setting.

Specification B

n	Select/cancel 2 color print mode
0, 48	Cancels 2 color print mode This command cancels 2 color print mode, when in 2 color print mode. This command is ignored when the 2 color print mode is already cancelled. The specification of this command is not cleared by ESC @ CAN. The following processes are executed by canceling the 2 color print mode using this command. • Prints data in line buffer in 2 color print mode, if unprinted data exists in the line buffer. • Waits to stop printing when printing in 2 color print mode. • Recovers print density setting to single color mode setting. • Recovers print speed to single color mode setting. • Recovers logo print setting to single color mode setting.
1, 49	Selects 2 color print mode This command selects 2 color print mode, when in single color print mode. This command is ignored already in the 2 color print mode. The specification of this command is not cleared by ESC @ CAN. The following processes are executed by selecting the 2 color print mode using this command. • Prints data in line buffer in single color print mode, if unprinted data exists in the line buffer. • Waits to stop printing when printing in single color print mode. • Initializes print color setting (2 color print mode setting) • Initializes print density setting (memory switch setting) • Sets logo print setting to 2 color mode setting.

Supplement:

Specification Type A and Specification Type B differ per model.

See the COMMAND LIST BY MODEL in Chapter 6. SPECIAL APPENDIX for your model.

ESC 4

[Name] Select white/black inverted printing

[Code] ASCII ESC 4

Hex. 1B 34

Decimal 27 52

[Defined Area] - - -

[Initial Value] White/black inversion cancelled

[Function] Specifies white/black inversion for ANK characters and Chinese characters.
IBM block ignores white/black inversion.

ESC 5

[Name] Cancel white/black inversion

[Code] ASCII ESC 5

Hex. 1B 35

Decimal 27 53

[Defined Area] - - -

[Initial Value] White/black inversion cancelled

[Function] Cancels white/black inversion for ANK characters and Chinese characters.

ESC RS d n

[Name]	Set print density				
[Code]	ASCII	ESC	RS	d	n
	Hex.	1B	1E	64	n
	Decimal	27	30	100	n

[Defined Area]	0≤n≤15
	48≤n≤57 ("0"≤n≤"9")
	65≤n≤70 ("0"≤n≤"F")

[Initial Value] Memory switch setting

[Function] Sets print density.

This command stops printing to be executed.

When in two-color print mode, this can set the print density of red print.

n	Print Density	
	Single Color Printing Mode	Two Color Printing Mode Red Print Density
0, 48	Print density 1.3	Print density 1.2
1, 49	Print density 1.2	Print density 1.2
2, 50	Print density 1.1	Print density 1.0
3, 51	Print density 1.0	Print density 1.0
4, 52	Print density 0.9	Print density 1.0
5, 53	Print density 0.8	Print density 0.8
6, 54	Print density 0.7	Print density 0.8
7, 55	(Reserved)	(Reserved)
8, 56	(Reserved)	(Reserved)
9, 57	(Reserved)	(Reserved)
10, 65	(Reserved)	(Reserved)
11, 66	(Reserved)	(Reserved)
12, 67	(Reserved)	(Reserved)
13, 68	(Reserved)	(Reserved)
14, 69	(Reserved)	(Reserved)
15, 70	(Reserved)	(Reserved)

ESC RS r n

[Name]	Set printing speed				
[Code]	ASCII	ESC	RS	r	n
	Hex.	1B	1E	72	n
	Decimal	27	30	114	n

[Defined Area] $0 \leq n \leq 3$
 $48 \leq n \leq 51$ ("0" $\leq n \leq$ "3")

[Initial Value] Memory switch setting

[Function] Sets print speed.

This command stops printing to be executed.

Because two-color print mode prints in one speed, the speed settings with this command are invalid. This command setting becomes valid when returned from the two-color print mode to the single color print mode.

N	Print Speed	
	Single Color Printing Mode	Two Color Printing Mode
0, 48	High speed	Two Color Printing Mode Speed
1, 49	Mid-speed	Two Color Printing Mode Speed
2, 50	Slow speed	Two Color Printing Mode Speed
3, 51	Option speed (differs according to the model)	Two Color Printing Mode Speed

ESC FS q n [x11 x12 y11 y12 d1...dk]1...[xn1 xn2 yn1 yn2 d1...dk]n

[Name]	Register logo																			
[Code]	ASCII	ESC	FS	q	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n
	Hex.	1B	1C	71	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n
	Decimal	27	28	113	n	[x11	x12	y11	y12	d1	...	dk]1	...	[xn1	xn2	yn1	yn2	d1	...	dk]n

[Defined Area] $1 \leq n \leq 255$
 $0 \leq x_{n1} \leq 255, 0 \leq x_{n2} \leq 3$
 $1 \leq (x_{n1} + x_{n2} \times 256) \leq 1023$
 $0 \leq y_{n1} \leq 255, 0 \leq y_{n2} \leq 1$
 $1 \leq (y_{n1} + y_{n2} \times 256) \leq 288$
 $0 \leq d \leq 255$
 $k = \{(x_{n1} + x_{n2} \times 256) \times (y_{n1} + y_{n2} \times 256) \times 8\}$

[Initial Value] ---

[Function]

Parameter details

- n: Specifies registered logo count
- xn1, xn2: Horizontal size of registered logo $\{(x_{n1} + x_{n2} \times 256) \times 8\}$ dots
- yn1, yn2: Vertical size of registered logo $\{(y_{n1} + y_{n2} \times 256) \times 8\}$ dots
- d: Registered logo data
- k: Logo data count

This command should be specified at the top of the line.

When the first parameter is determined to be free of error, the printer starts processing this command.

When logo register processing starts, all previously defined data is deleted.

(It is not possible to reregister a portion of a plurality of defined logo data.)

Logo registration numbers are defined in rising order from 1.

If the defined area specified by the parameter is not empty, or if there is an error in the parameter specification, register processing is aborted. (The pre-registered and complete data is effective.)

The printer should be initialized if logo registration is completed or register processing is aborted.

If an error occurs while performing register processing (the time from when the first parameter is OK until the printer initialization is completed after registering a logo), error processing, mechanical operation and status processing cannot be performed.

The relationships between input data and the actual print are shown on the next page.

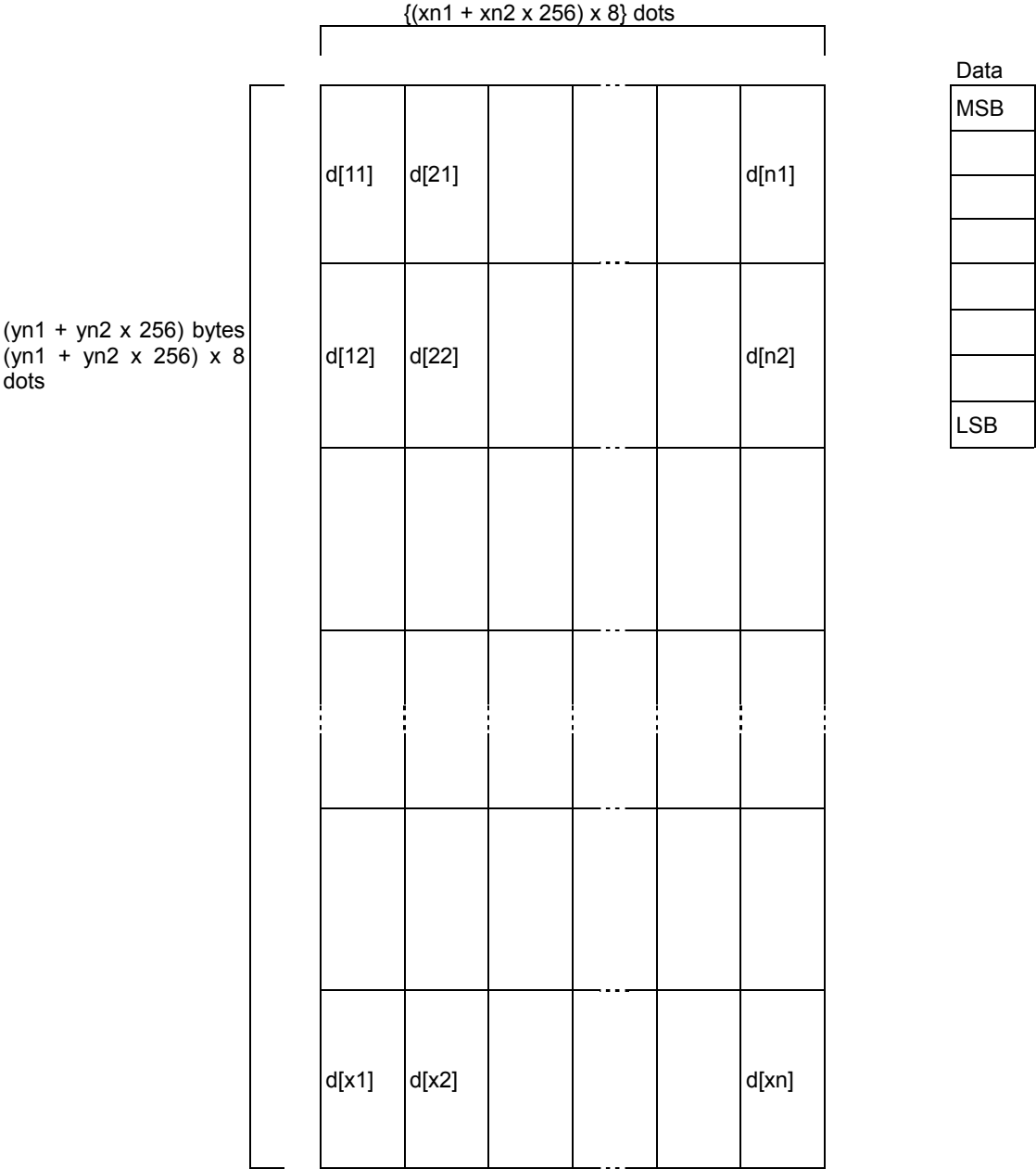
<When registering logos for 2 color printing>

Registration is possible regardless of the 2 color printing mode being specified or cancelled.

Register logos with the same capacity as the logo register number k (odd number) and k + 1 (even number).

If the capacity differs or the logo register number is 255, this command is ignored by the logo print command in the 2 color print mode.

Relationships of $x_n = x_{n1} + x_{n2} \times 256$ and registered data
 $y_n = y_{n1} + y_{n2} \times 256$



ESC FS p n m

[Name]	Print logo					
[Code]	ASCII	ESC	FS	p	n	m
	Hex.	1B	1C	70	n	m
	Decimal	27	28	112	n	m

[Defined Area] $1 \leq n \leq 255$
 $0 \leq m \leq 3$
 $48 \leq m \leq 51$ ("0" $\leq m \leq$ "3")

[Initial Value] - - -

[Function] Prints the logo of registration number n registered using the logo registration command (ESC FS q) according to the print mode m.

m	Logo print mode
0, 48	Normal mode
1, 49	Double wide mode
2, 50	Double high mode
3, 51	Double high/wide mode

If there is unprinted data in the line buffer, this command is executed after printing that data. Therefore, it is not possible to print with other data in the same line (characters, bit images, bar codes).

Form feed obeys the vertical print size of the logo.

Adornments other than upside-down printing and expansion settings are unaffected.

The horizontal printing start position conforms to the left margin position and the horizontal print area conforms to the left and right margin settings.

If the logo horizontal print size exceeds the horizontal print region, the portion exceeding the area is not printed.

<When using the 2 color print mode>

When the logo register number n is odd:

Register number n is printed in black; register number n + 1 is printed in red and overlapped.

The command is ignored when the capacity of the register number n and the capacity of the register number n + 1 are different.

The command is ignored when the register number n = 255 is specified.

When the logo register number n is even:

Register number n is printed in black; register number n - 1 is printed in red and overlapped.

The command is ignored when the capacity of the register number n and the capacity of the register number n - 1 are different.

The command is ignored when the register number n = 255 is specified.

3-8) Presenter Related Command Details

The following commands control the presenter functions.

The following commands are effective only on models equipped with a presenter.

ESC SYN 0 n

[Name] Execute presenter paper recovery
 [Code] ASCII ESC SYN 0 n
 Hex. 1B 16 30 n
 Decimal 27 22 48 n

[Defined Area] n = 0

[Initial Value] - - -

[Function] Executes presenter paper recovery.

This command is ignored when a presenter is not connected.

Also, this command is executed when paper is supplied by the presenter, exists in the presenter and the paper has been cut. This command is ignored with under all other conditions. (Ignored when paper is being recovered.)

ESC SYN 1 n

[Name] Set presenter paper automatic recovery function and automatic recovery time
 [Code] ASCII ESC SYN 1 n
 Hex. 1B 16 31 n
 Decimal 27 22 49 n

[Defined Area] $0 \leq n \leq 255$

[Initial Value] Memory switch setting

[Function] Sets presenter paper automatic recovery function and automatic recovery time.

This command is ignored when a presenter is not connected.

Settings using this command are effective from the next sheet when the printer processes this command and paper has already been supplied to the presenter.

N	Functions
n = 0	Paper automatic recovery function invalid.
$1 \leq n \leq 255$	Paper automatic recovery function valid. Automatic recovery time: n x 0.5 sec (0.5 sec to 127.5 sec)

ESC SYN 3 n

[Name]	Acquire presenter paper counter				
[Code]	ASCII	ESC	SYN	3	n
	Hex.	1B	16	33	n
	Decimal	27	22	51	n

[Defined Area] n = 0, 1
n = 48, 49 ("0", "1")

[Initial Value] - - -

[Function] Acquires presenter paper counter.
This command is ignored when a presenter is not connected.
Counter can count to 0xFFFFFFFF sheets.
Counter is cleared to zero when the following conditions are met.

- At a printer reset
- At the <CAN> command
- At the <ESC> <SYN> 4 n command

The paper counter using this command sends the counter value at the time this command is processed.
The counter is counted up when paper is completely recovered or when pulled out.
The counter counts from when the power is turned ON, excluding the following.

- When paper is discharged because of an error
- When printing using self-print
- When paper in the presenter is discharged when the power is turned ON

N	Counter
n = 0, 48	Acquires paper reel counter
n = 1, 49	Acquires paper recovery counter

<Counter transmission format from printer: When using the paper reel counter>

Printer transmission: ESC SYN 3 n c1 c2 c3 c4

Reel counter: $c4 + (c3 \times 256) + (c2 \times 256 \times 256) + (c1 \times 256 \times 256 \times 256)$

ESC SYN 4 n

[Name]	Initialize presenter paper counter				
[Code]	ASCII	ESC	SYN	4	n
	Hex.	1B	16	34	n
	Decimal	27	22	52	n

[Defined Area] n = 0

[Initial Value] - - -

[Function] Initializes the presenter paper counter (paper reel counter/paper recovery counter).
Initialization of the paper counter using this command is executed when this command is processed.

PAGE6: #860 (Portuguese)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE10: #866 (Cyrillic Russian)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE7: #861 (Icelandic)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE11: #855 (Cyrillic Bulgarian)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE8: #863 (Canadian French)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE12: #857 (Turkey)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE9: #865 (Nordic)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	-	=	>
1	?	/	@	A	B	C	D	E	F	G	H	I	J	K	L
2	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
3	]	^	_	`	a	b	c	d	e	f	g	h	i	j	k
4	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
5	{	}	~	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	»
6	¼	½	¾	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë
7	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú
8	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ	ç	è	é
9	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	ø
A	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å	æ	ç
B	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
C	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã	ä	å
D	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô
E	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ß	à	á	â	ã
F	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò

PAGE13: #862 (Israel)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	-	.	/	
1															
2															
3															
4															
5															
6															
7															
8															
9															
A															
B															
C															
D															
E															
F															

PAGE14: #864 (Arabic)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE18: #928 (Greek)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE15: #737 (Greek)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE19: #772 (Lithuanian)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE16: #851 (Greek)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE20: #774 (Lithuanian)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE17: #869 (Greek)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE21: #874 (Thai)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
1	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6	q	r	s	t	u	v	w	x	y	z	{	|	}	~		
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

PAGE77 : #3012 (Latvian-2)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
2	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
3	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
4	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
5	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
6	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
7	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
8	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
9	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
A	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
C	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
E	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/

PAGE78 : #3021 (Bulgarian)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
2	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
3	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
4	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
5	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
6	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
7	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
8	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
9	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
A	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
C	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
E	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/

PAGE79 : #3041 (Maltese)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
2	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
3	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
4	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
5	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
6	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
7	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
8	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
9	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
A	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
C	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/
E	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F	!	"	#	\$	%	&	'	(	)	*	+	,	.	>	?	/

4-2) Japanese Character Codes

4-2-1) JIS Code Type (Conforming to JIS x0208-1983)

	0123456789ABCDEF
2120	` ` . . : : ? / ^ ° ~ \ "
2130	^ _ \ ` > \$ % 全 天 々 ○ - - - /
2140	\ ~ || | .... " " ( ) [ ]
2150	{ } < > <> 「 」 『 』 【 】 + - ± ×
2160	÷ = ≠ < > ≤ ≥ ∞ ∴ ♂ ♀ ° ' " °C ¥
2170	\$ ¢ £ % & * @ ☆ ★ ● ◆ ◇

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2720											А	Б	В	Г	Д	Е
2730											Ж	З	И	Й	К	Л
2740											М	Н				
2750																
2760											а	б	в	г	д	е
2770											ж	з	и	й	к	л
											м	н				
											о	п	р	с	т	у
											ф	х	ц	ч	ш	щ
											ъ	ы	ь	э		
											ю	я				

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2220	◆	□	■	△	▲	▽	▼	※	→	←	↑	↓	=			
2230									≡	≈	≥	≤	c	d		
2240	U	n							Λ	V	-	⇒	⇔	∇		
2250	Ξ												z	⊥	θ	
2260	▽	≡	≈	<>	√	∞	α	:	.	s	ss					
2270	À	%	#	b	j	t	±	¶							○	

[illegible]

	0123456789ABCDEF
2320	
2330	0123456789
2340	ABCDEFGHIJKLMNO
2350	PQRSTUVWXYZ
2360	abcdefghijklmno
2370	pqrstuvwxyz

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2920	/	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
2930	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
2940	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2950	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^	_
2960	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
2970	p	q	r	s	t	u	v	w	x	y	z	{	|	}	-	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2420	あ あ い う え お か が き ぐ															
2430	く げ こ ご さ し す せ そ た															
2440	だ ち っ つ て で と ど な に ん の は															
2450	ば ひ び ぶ ふ へ ベ ほ ぼ ま み															
2460	む も や ゆ ゅ よ ら り る れ ろ わ															
2470	の を む															

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2A20		。	「	」	、	・	ヲ	アイ	ウ	エ	オ	ヤ	ユ	ツ		
2A30	-	ア	イ	ウ	エ	オ	カ	キ	ク	コ	サ	シ	ス	セ	ソ	
2A40	タ	チ	ツ	テ	ト	ナ	ニ	ヌ	ノ	ハ	ヒ	フ	ヘ	ホ	マ	
2A50	ミ	ム	メ	モ	ヤ	ユ	ヨ	ラ	リ	ル	レ	ロ	ワ	ヰ	・	・
2A60	ヱ	ヲ	ン	カ	ケ	ウ	ガ	ギ	グ	ゲ	ゴ	ザ	ジ	ズ	・	・
2A70	ダ	ヂ	ヅ	デ	ド	バ	ビ	ブ	ピ	プ	ベ	ペ	ホ	ヘ	ホ	希

[illegible][illegible][illegible]

Figure 1 displays a grid of glyphs for the 2C font family. The columns are labeled 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F. The rows are labeled 2C20, 2C30, 2C40, 2C50, 2C60, and 2C70. The glyphs are arranged in a grid, showing various combinations of vertical and horizontal strokes, some with dots, representing different character sets.

3820 校權牽大猷研硯精泉肩見謙賢軒
 3830 鍵陵顛駭駭元原敵幻弦減源玄現駭駭
 3840 言謬限乎固古呼固姑孤己庫孤戶故枯
 3850 湖狐糊袴蝓胡葫虎誇誇橋樞顧該互
 3860 伍午吳呂嬖後倮梧梧橋樞語誤譌
 3870 之鯨爻倮倮倮倮光公功効勾屋口向

0123456789ABCDEF
 3920 后喉坑垢好孔孝宏工巧巷幸庑庚康
 3930 弘桓慌抗拘控攻昂晃更杭校梗構江洪
 3940 浩港灣甲皇硬稿糠紅絛絞綱耕考肯肱
 3950 腔青航荒行衡講貢購郊酵鉞砒鋼閣降
 3960 頂香高鴻剛劫号合壕拷濠豪轟翹克刻
 3970 告国穀醅鵠黑獄澆腰飢忽惚骨珀迄

0123456789ABCDEF
 3A20 此頃今困坤壘嬌恨懇昏昆根棍混痕
 3A30 紺艮魂些佐叉唆嗟左差查沙磋砂詐鎖
 3A40 裝坐座挫債催再戢戡塞妻宰彩才採裁
 3A50 歲濟災采屎碎砦祭齋細菜裁載際劑在
 3A60 材罪財呀坂阪堺柙肴咲崎琦驚作削
 3A70 咋搾昨朔柵窄策索錯梭絳筴匙冊刷

0123456789ABCDEF
 3B20 察撈撮擗札殺薩維阜鯖捌鑄鉸皿晒
 3B30 三傘參山慘撒散棧燥珊產算蕞蚤讚贊
 3B40 酸餐斬暫戕仕仔伺使刺司史嗣四士始
 3B50 姉姿子屍市師志思指支攷斯施旨枝止
 3B60 死氏獅社私糸紙紫肢脂至視詞詩試誌
 3B70 詔賁賜雌飼齒事似侍兒字寺慈持時

0123456789ABCDEF
 3C20 次滋治爾置痔噤示而耳自蒔薛汐鹿
 3C30 式讎囑竺軸穴零七叱執失嫉室悉濕漆
 3C40 疾質夷郁篠僂柴芝屢蕊縞舍写射捨赦
 3C50 斜素社紗者謝車遮蛇邪借勺尺杓灼爵
 3C60 酌釈錫若寂弱惹主取守手朱殊狩珠種
 3C70 腫趣酒首儒受呪寿授樹綬需囚収周

0123456789ABCDEF
 3D20 宗就州修愁拾洲秀秋終繡習臬舟莧
 3D30 衆襲讐蹴輯遇酋訓集醜什住充十從戎
 3D40 桑汁汝獸穢重銃叔夙宿淑祝緒肅塾熟
 3D50 出術述俊駿春瞬竣舜駿准循旬楯殉淳
 3D60 準潤盾純巡遵醇順刎初所嚳嚅渚席緒
 3D70 嚳嚅嚳嚅諸助叙女序徐叙鋤除傷償

0123456789ABCDEF
 3E20 勝匠升召哨商唱嘗獎妾嬉宵將小少
 3E30 尚庄床廠彰承抄招攀捷昇昌昭晶松梢
 3E40 樺樵沼消涉湘燒焦照症省硝礁祥称章
 3E50 笑粧紹肖葛蔣蕉衡裝訟証詔詔象賞番
 3E60 鉦鍾鐘障鞘上丈丞乘冗剩城塲塲孃常
 3E70 情擾条杖淨狀豐稷蒸酸酸鉅囑塲節

0123456789ABCDEF
 3F20 拭植殖燭織職色蝕食蝕辱尻伸信侵
 3F30 唇娠寢審心慎振新晉森榛浸深申疹真
 3F40 神秦紳臣芯薪親診身辛進針震人仁刃
 3F50 麤壬尋崑尽腎訊迅陣鞫詢諏須酢囑厨
 3F60 逗吹垂帥推水炊睡粹翠衰遂醉錐鍾隨
 3F70 瑞隄崇嵩數枢趨難据杉梠菩頗省裾

0123456789ABCDEF
 4020 澄摺寸世瀨畝是凜制勢姓征性成政
 4030 整星晴樓栖正清牲生盛精聖声製西誠
 4040 誓請逝醒青靜齊稅脆實席楷咸斥昔析
 4050 石積籍績背實赤跡蹟碩切拙接撰折設
 4060 窃節說雪絕舌蟬仙先千占宣專尖川戰
 4070 屬撰栓柗泉淺洗染潛煎爛旋穿箭線

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 4120 織焚腺舛船薦駘賤選選錢銑閃鮮
 4130 前善漸然全禪繕磨繕嚙望咀措曾曾楚
 4140 狙疏疎礎祖粗粗素組蘇訴阻選鼠僧創
 4150 双叢倉喪壯喪喪宋屠厝惣想搜擇擇搔
 4160 操早嘗巢槍槽漕燥爭瘡相惡繕繕綜綜
 4170 草莊葬蒼蒼裝走送遭鎗霜騷像增增

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 4220 臧藏贈造促側則則戢捉束測逮速俗
 4230 屬賊族統卒袖其擗存孫尊損村遜他多
 4240 太沐訖唾鹽妥情打舵舵構陀駢體堆
 4250 对耐岱蒂待怠態戴替泰滯胎謁苔袋貸
 4260 退逮隊黛鯛代台大第醍題鷹淹瀟卓啄
 4270 宅托托拓沃濯琢託鐸濁諾茸胤銷只

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 4320 叩但達辰奪脫異巽迺棚勾狸鱉樽誰
 4330 丹單嘆坦坦探旦歎淡湛炭短端華綻耽
 4340 胆蛋誕鍛团壇彈斷暖檀段男談值知地
 4350 弛恥智池痴稚置致蚰遲馳築蓄竹筑著
 4360 逐秩窒茶摘着中仲宙忠拙昼柱注虫衷
 4370 註酌鑄駐樛瀟猪孖著貯丁兆凋喋窳

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 4420 帖帳疔弔張彫徵懲挑幅朝潮牒町眺
 4430 聽脹腸蝶調蝶超眺眺長頂鳥劫步直朕
 4440 沈珍質鎮陳津墜椎樵追銚痛通塚柙捆
 4450 槻佃漬柘辻薦綴鏹樺潰坪壺嬌袖爪吊
 4460 釣鷁亭低停偵剋貞呈堤定帝底庭廷弟
 4470 悅抵挺提槌汀碇禎程締艇訂諦諦遞

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4520 邸鄧釘鼎泥摘權敵滴的笛適鐫溺沓
4530 徹徹轍迭鉄典填天展店添纏甜貼転頼
4540 点伝殿澱田電兎吐堵塗妬屠徒斗杜渡
4550 登莛賭途都鍍砥砥努度土奴怒倒党冬
4560 凍刀唐塔塘套宕島嶋悼投搭東桃拷棟
4570 盜淘湯燙灯燈当痘拷等答筒糖統到

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4620 薑蕩藤討膳豆踏逃透鐙陶頭騰鬪働
4630 動同堂導撞撞洞瞳童萄道銅峠犒匿
4640 得德沬特督禿篤審独詭詭椽凸突檄届
4650 篤苦貢酉潏順屯惇敦沌豚遁頓吞曇鈍
4660 奈那内乍叵薙謎灘捺鍋楷馴繩暖南楠
4670 軟難汝二尼式迓勻脈肉虹廿日乳入

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4720 如尿菲任妊忍認潏穢祢寧惹猫熱年
4730 念捻撚撚粘乃迺之莖囊惱濃納能腦膿
4740 震硯蚤巴把播霸杷波派琶破婆罵芭馬
4750 排庖排排敗杯盃牌背肺輩配倍培煤梅
4760 煤煤猥賈賈賂陪遺蛄稗剋剋伯剝博柏
4770 柏泊白箔泊舶薄迫曝爆縛縛莫駁麦

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4820 函箱谿箸馨苦植幡肌畑皇八鉢浣晃
4830 醜髮伐罰拔伐閥囑囑囑蛤隼伴判半反
4840 叛帆搬斑斑汜汎版犯班畔繁般藩販範
4850 采煩煩飯飯晚番盤盤馨璽匪阜否妃庇
4860 彼悲靡批披斐比渺疲皮碑秘緋罷肥被
4870 排費避非飛樋簸備尾微批毘琵琶美

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4920 鼻柁稗匹疋髭彦膝菱肘弼必畢筆逼
4930 桧姪媛紐百膠倭彪標冰漂輒素表評豹
4940 廟描病秒苗苗銍赫蛭鱒品彬斌浜瀕貪
4950 寶頻敏敏不付埠夫婦富富布府祐扶敷
4960 斧普浮父符腐膚芙裼負賦赴阜附佈撫
4970 武舞葡蕪郇封楓風葦落伏副復幅服

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4A20 福腹複覆淵弗弘沸仏物鮒分吻噴填
4A30 憤份焚奮粉羹紛零文聞丙併兵塤幣平
4A40 弊柄並蔽閉陸米頁僻壁癖碧別醬葦筵
4A50 偏變片薦編邇返邇便勉婉弁緩保鋪鋪
4A60 團捕步甫補輔穗募墓慕戛募母簿菩倣
4A70 俸包呆報奉宝峰峯崩庖抱捧放方朋

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4B20 法泡烹砲繃胞芳萌蓬蜂褻訪豐邦鋒
4B30 飽鳳鵬乏亡傍剖坊妨帽忘忙房暴望某
4B40 棒冒紡肪膨蹊蹊蹊蹊防吠類北僕丿墨
4B50 撲朴牧睦穆鈞勃沒殆堀幌奔本翻凡盆
4B60 摩磨魔麻埋昧昧枚缶哩襪幕膜枕銷怔
4B70 鱗櫛亦俟又抹末沫迄忒藕磨万慢邁

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4C20 濃蔓味末魅已箕岬密蜜湊羨稔脈妙
4C30 耗民眠務夢無牟矛霧鷗棕嫵娘冥名命
4C40 明盟迷銘鳴姪牝滅免棉綿緬面麵摸模
4C50 茂妄孟毛猛盲網耗蒙儲木默目空勿餅
4C60 尤戾矸竇問問問問門又也冶夜爺耶野弥
4C70 矢厄役約藥詛躍躑柳數鍾榆愈油癒

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4D20 諭輸唯佑優勇友有幽悠憂損有柚湫
4D30 涌猶猷由祐裕誘遊邑郵雄融夕予余与
4D40 譽輿預備幼妖容庸搖搖擺擺楊樣洋溶
4D50 熔用窠羊耀耀蓉要謠躍遙陽養慾抑欲
4D60 沃浴翌翼淀羅螺螺來萊賴雷洛絡落酪
4D70 乱卵嵐嵐瀟瀟藍蘭覽利吏履李梨理璃

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4E20 痢裏裡里離陸律率立蔣掠略劉流溜
4E30 琉留硫粒隆竜龍呂慮旅慮了亮儼兩凌
4E40 寮料梁涼涼療療療療糧良諒遠量陵領力
4E50 綠倫厘林淋淋淋臨輪隣隣隣璽淚累
4E60 類令伶例冷勵嶺伶玲玲苓鈴聲零靈麗
4E70 齡曆歷列劣烈裂廉慙慙慙煉煉煉聯

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4F20 蓮蓮鍊呂魯櫓炉路露勞囊廊弄朗
4F30 樓榔浪漏牢狼耄老蠶蠶郎六麓祿肋錄
4F40 論倭和話歪脍脇惑粹驚互巨鏹託蕞蕞
4F50 桷灣碗腕
4F60
4F70

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5020 式巧丕个丩丿井丿乂乖乘亂丿豫爭
5030 舒式于亞丕一亢京毫毫从仍仄仆仍仗
5040 仍仍仟仟伉伉伉佛何佗佗佗佗佗佗
5050 佩佰侑佻佻佻佻佻佻佻佻佻佻佻佻
5060 倖倖倖倖倖倖倖倖倖倖倖倖倖倖倖
5070 偃偃偃偃偃偃偃偃偃偃偃偃偃偃偃

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5120 余僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂
5130 僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂
5140 兩余余余余余余余余余余余余余余余
5150 寫寫寫寫寫寫寫寫寫寫寫寫寫寫寫寫
5160 鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳鳳
5170 剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗

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5220 辦劬劬劬劬劬劬劬劬劬劬劬劬劬劬劬
5230 勸勸勸勸勸勸勸勸勸勸勸勸勸勸勸勸勸
5240 卒卒卒卒卒卒卒卒卒卒卒卒卒卒卒卒
5250 厥厥厥厥厥厥厥厥厥厥厥厥厥厥厥厥
5260 呀呀呀呀呀呀呀呀呀呀呀呀呀呀呀呀
5270 咒咒咒咒咒咒咒咒咒咒咒咒咒咒咒咒

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5320 咫咫咫咫咫咫咫咫咫咫咫咫咫咫咫咫
5330 嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽嗽
5340 嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴嘴
5350 嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟嗟
5360 噫噫噫噫噫噫噫噫噫噫噫噫噫噫噫噫
5370 噯噯噯噯噯噯噯噯噯噯噯噯噯噯噯噯

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5420 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉
5430 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉
5440 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉
5450 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉
5460 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉
5470 圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉圉

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5520 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
5530 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
5540 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
5550 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
5560 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
5570 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁

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5620 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨
5630 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨
5640 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨
5650 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨
5660 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨
5670 屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨屨

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5720 廖廖廖廖廖廖廖廖廖廖廖廖廖廖廖廖
5730 升升升升升升升升升升升升升升升升
5740 与与与与与与与与与与与与与与与与
5750 徙徙徙徙徙徙徙徙徙徙徙徙徙徙徙徙
5760 枯枯枯枯枯枯枯枯枯枯枯枯枯枯枯枯
5770 協協協協協協協協協協協協協協協協

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5820 梢梢梢梢梢梢梢梢梢梢梢梢梢梢梢梢
5830 帳帳帳帳帳帳帳帳帳帳帳帳帳帳帳帳帳帳
5840 愁愁愁愁愁愁愁愁愁愁愁愁愁愁愁愁
5850 慚慚慚慚慚慚慚慚慚慚慚慚慚慚慚
5860 慚慚慚慚慚慚慚慚慚慚慚慚慚慚慚
5870 慚慚慚慚慚慚慚慚慚慚慚慚慚慚慚

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5920 戛戛戛戛戛戛戛戛戛戛戛戛戛戛戛戛
5930 扛扛扛扛扛扛扛扛扛扛扛扛扛扛扛扛扛扛
5940 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈
5950 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈
5960 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈
5970 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈

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5A20 據據據據據據據據據據據據據據據據
5A30 攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬
5A40 攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬
5A50 攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬
5A60 攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬
5A70 攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬攬

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5B20 睥睥睥睥睥睥睥睥睥睥睥睥睥睥睥睥睥
5B30 臙臙臙臙臙臙臙臙臙臙臙臙臙臙臙臙
5B40 忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝
5B50 忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝
5B60 忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝
5B70 忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝忝

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5C20 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁
5C30 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁
5C40 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁
5C50 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁
5C60 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁
5C70 樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁樁

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5D20 槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩
5D30 槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩
5D40 欵欵欵欵欵欵欵欵欵欵欵欵欵欵欵欵欵
5D50 殭殭殭殭殭殭殭殭殭殭殭殭殭殭殭殭殭
5D60 虤虤虤虤虤虤虤虤虤虤虤虤虤虤虤虤虤
5D70 汾汾汾汾汾汾汾汾汾汾汾汾汾汾汾汾汾

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5E20 汙汙汙汙汙汙汙汙汙汙汙汙汙汙汙汙汙
5E30 洌洌洌洌洌洌洌洌洌洌洌洌洌洌洌洌洌
5E40 沕沕沕沕沕沕沕沕沕沕沕沕沕沕沕沕沕
5E50 湮湮湮湮湮湮湮湮湮湮湮湮湮湮湮湮湮
5E60 滿滿滿滿滿滿滿滿滿滿滿滿滿滿滿滿滿
5E70 溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥

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5F20 漾漾漾漾漾漾漾漾漾漾漾漾漾漾漾漾漾
5F30 澎澎澎澎澎澎澎澎澎澎澎澎澎澎澎澎澎
5F40 濱濱濱濱濱濱濱濱濱濱濱濱濱濱濱濱濱
5F50 瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾瀾
5F60 烙烙烙烙烙烙烙烙烙烙烙烙烙烙烙烙烙
5F70 煩煩煩煩煩煩煩煩煩煩煩煩煩煩煩煩煩

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6020 熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨
6030 熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨熨
6040 狎狎狎狎狎狎狎狎狎狎狎狎狎狎狎狎狎
6050 猥猥猥猥猥猥猥猥猥猥猥猥猥猥猥猥猥
6060 玢玢玢玢玢玢玢玢玢玢玢玢玢玢玢玢玢
6070 璫璫璫璫璫璫璫璫璫璫璫璫璫璫璫璫璫

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6120 瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠瓠
6130 憂憂憂憂憂憂憂憂憂憂憂憂憂憂憂憂憂
6140 畧畧畧畧畧畧畧畧畧畧畧畧畧畧畧畧畧
6150 痂痂痂痂痂痂痂痂痂痂痂痂痂痂痂痂痂
6160 瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡瘡
6170 瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰

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6220 瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰瘰
6230 駁駁駁駁駁駁駁駁駁駁駁駁駁駁駁駁
6240 昞昞昞昞昞昞昞昞昞昞昞昞昞昞昞昞昞
6250 瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽
6260 瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽
6270 硃硃硃硃硃硃硃硃硃硃硃硃硃硃硃硃硃

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6320 磧磧磧磧磧磧磧磧磧磧磧磧磧磧磧磧磧
6330 祕祕祕祕祕祕祕祕祕祕祕祕祕祕祕祕祕
6340 柅柅柅柅柅柅柅柅柅柅柅柅柅柅柅柅柅
6350 穉穉穉穉穉穉穉穉穉穉穉穉穉穉穉穉穉
6360 窶窶窶窶窶窶窶窶窶窶窶窶窶窶窶窶窶
6370 嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫嫫

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6420 簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞
6430 簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞
6440 簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞
6450 簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞
6460 簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞簞
6470 粽粽粽粽粽粽粽粽粽粽粽粽粽粽粽粽粽

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6520 紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉
6530 紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉
6540 紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉
6550 紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉
6560 紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉紉
6570 辦辦辦辦辦辦辦辦辦辦辦辦辦辦辦辦辦

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6620 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅
6630 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅
6640 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅
6650 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅
6660 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅
6670 罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅罅

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6720 隋隋隋隋隋隋隋隋隋隋隋隋隋隋隋隋隋
6730 齊齊齊齊齊齊齊齊齊齊齊齊齊齊齊齊齊
6740 臉臉臉臉臉臉臉臉臉臉臉臉臉臉臉臉臉
6750 與與與與與與與與與與與與與與與與與
6760 臙臙臙臙臙臙臙臙臙臙臙臙臙臙臙臙臙
6770 苕苕苕苕苕苕苕苕苕苕苕苕苕苕苕苕苕

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6820 茵茵茵茵茵茵茵茵茵茵茵茵茵茵茵茵茵
6830 莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪
6840 莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪
6850 莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪
6860 莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪
6870 莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪莪

7420	堯橫遙瑤
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4-2-2) SHIFT-JIS Code Type

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8140	、	。	。	。	。	。	。	。	。	。	。	。	。	。	。	。
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8160	～		...	”	“	”	“	(	)	[	]	{	}	<	>	《
8170	》	「	」	『	』	【	】	+	-	±	×					
8180	÷	=	≠	<	>	≤	≥	∞	∴	♂	♀	°	′	″	℃	¥
8190	\$	¢	£	%	#	&	*	@	§	☆	★	○	●	◇	◆	
81A0	□	■	△	▲	▽	▼	※	〒	→	←	↑	↓	=			
81B0									ε	≡	≤	≥	∞	∴	∩	
81C0									∧	∨	→	⇒	⇔	∇	∃	
81D0									∠	⊥	⊃	∂	∇	≡		
81E0	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡	≡
81F0	Α	Β	Γ	Δ	Ε	Ζ	Η	Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8240																0
8250	1	2	3	4	5	6	7	8	9							
8260	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8270	Q	R	S	T	U	V	W	X	Y	Z						
8280	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
8290	p	q	r	s	t	u	v	w	x	y	z					あ
82A0	あ	い	う	え	お	か	き	く	け	こ						け
82B0	け	こ	さ	し	じ	す	ず	せ	そ	た	だ					ち
82C0	ち	つ	づ	て	と	ど	な	に	ぬ	ね	の	は	ば			ば
82D0	ひ	び	ふ	ぶ	へ	べ	ほ	ぼ	ま	み	む	め				め
82E0	ち	や	ゆ	よ	ら	り	る	ろ	わ	わ	ぬ	ぬ				ぬ
82F0	を	ん														

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8340	ア	イ	ウ	エ	オ	カ	キ	ク	ケ	コ						
8350	ケ	コ	ゴ	サ	シ	ス	セ	ソ	タ	チ						
8360	チ	ツ	ッ	ツ	テ	ト	ナ	ニ	ヌ	ネ	ノ	ハ				
8370	ハ	ビ	ビ	ビ	フ	ブ	ヘ	ベ	ホ	ボ	ポ	マ				
8380	ム	メ	モ	ヤ	ユ	ヨ	ラ	リ	ル	ロ	ワ					
8390	ワ	ヰ	ヱ	ヰ	ヱ	ヰ	ヱ	ヰ	ヱ	ヰ	ヱ	ヰ				A
83A0	Β	Γ	Δ	Ε	Ζ	Η	Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ρ
83B0	Σ	Τ	Υ	Φ	Χ	Ψ	Ω									α
83C0	β	γ	δ	ε	ζ	η	θ	ι	κ	λ	μ	ν	ξ	ο	π	ρ
83D0	σ	τ	υ	φ	χ	ψ	ω									
83E0																
83F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8440	А	Б	В	Г	Д	Е	Ё	Ж	З	И	Й	К	Л	М	Н	О
8450	П	Р	С	Т	У	Ф	Х	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э	Ю
8460	Я															
8470	а	б	в	г	д	е	ё	ж	з	и	й	к	л	м	н	о
8480	п	р	с	т	у	ф	х	ц	ч	ш	щ	ъ	ы	ь	э	ю
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8560	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8570	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^		
8580	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
8590	p	q	r	s	t	u	v	w	x	y	z	{		}	~	.
85A0	「	」	、	・	ヲ	アイ	ウ	エ	オ	ヤ	ユ	ヨ	ツ	ー	ア	
85B0	イ	ウ	エ	オ	カ	キ	ク	ケ	コ	サ	シ	ス	セ	ソ	タ	チ
85C0	ツ	テ	ト	ナ	ニ	ヌ	ネ	ノ	ハ	ヒ	フ	ヘ	ホ	マ	ミ	ム
85D0	メ	モ	ヤ	ユ	ヨ	ラ	リ	ル	レ	ロ	ワ	ヰ	ヱ	ヰ	ヱ	ヰ
85E0	ワ	カ	ケ	ウ	ガ	キ	ク	ゲ	コ	ザ	ジ	ズ	ゼ	ゾ	ダ	チ
85F0	ツ	テ	ド	ハ	バ	ビ	ブ	ラ	バ	ベ	ベ	ベ	ベ	ベ	ベ	ベ

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8640	"	”	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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8740	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
8750	⑰	⑱	⑲	⑳	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜
8760	㉝	㉞	㉟	㊱	㊲	㊳	㊴	㊵	㊶	㊷	㊸	㊹	㊺	㊻	㊼	㊽
8770	㊾	㊿	㎞	㎠	㎡	㎢	㎣	㎤	㎥	㎦	㎧	㎨	㎩	㎪	㎫	㎬
8780	㎭	㎮	㎯	㎰	㎱	㎲	㎳	㎴	㎵	㎶	㎷	㎸	㎹	㎺	㎻	㎼
8790	㎽	㎾	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87A0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87B0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87C0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87D0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87E0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿
87F0	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿	㎿

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啞娃阿哀愛挨始逢葵茜穉惡握濕旭葦
芦繡梓庄幹扱宛姐忙飴綯綾結或粟裕
安庵按暗案闇鞍杏以伊位依偉困夷委
威尉惟意慰易椅為畏異移維緯胃萎衣
請遣遠医井亥域育郁磯一考溢逸稻茨
芋繡允印咽員因姻引飲淫胤蔭

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院陰隱額吋右宇烏羽迂兩卯鸛竊丑確
白渦噓唄鬱蔚縷姥厥浦瓜閭囀云運雲
荏餽穀堂嬰影映曳朱永洩瑛盈穎穎
英衛詠銳液疫益駢悅謁越閭檻厭凹
園壘奄雲延惡掩援沿演炎焰煙燕猿緣
艷苑園遠鉛鴛塩於汚鵠凹央奧往應押
旺橫欧毆王翁襖鶯鷗黃岡冲荻億屋憶
臆桶壯乙俺卸恩溫穉音下化佻何伽伽
佳加可嘉夏嫁家寡科暇果架歌河火珂
禍禾稼箇花苟茄荷華菓蝦課嘩貨迦過
霞蚊俄峨我牙面臥芽蛾贅雅餓駕介会
解回塊壘迴快怪悔恢懷戎拐改

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魁啼械海灰界皆給芥蠶開階貝凱劾外
咳害崖慨慨涯得蓋街該鎚骸淫馨娃垣
柿蛎鈎劃嚇各廓括攪格核般獲確穫
角赫較郭闊隔革學岳榮額額掛笠裡
樞樞緘漏割喝恰括活渴滑葛褐轄旦經
叶柁樺鮑株兜窺蒲釜鐵嘴鴨朽茅萱粥
刈刈瓦乾侃冠寒刊勘勸卷喚惹姦完官
寬干幹患惑憤憾換敢柑棺款款汗漢
澗灌環甘監看竿管簡緩缶翰肝艦莞觀
諫賈還鑑間閑閑陷鑄館館丸含岸廠玩
癌眠岩斲廣雁頑顛顛企伎危喜器基奇
嫵寄岐希幾忌揮机旗既期棋棄

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8BC0
8BD0
8BE0
8BF0

機滯殺氣汽畿祈季稀紀徽規記貴起軌
輝飢騎鬼龜偽儀妓宜戲技擬欺機疑祇
轉鑣誼攬掬鞠吉吃喫桔橘詰砧杵委
却客脚虐逆丘久仇休及吸宮弓急救
朽求汲泣灸球究窮茲級糾糾旧牛去居
巨拒拋拳渠虛許鉅鋸漁禦魚亨享京供
俠僑兇競共凶協匡卿叫喬境峽強怯
恐恭挾教橋況狂狹矯胸胸興薈鄉饗
饗驚仰凝堯曉業局曲樞玉桐杆僅勤均
巾錦斤欣欽琴禁禽筋緊芹菌衿襟謹近
金吟銀九俱句区狗玖矩苦軀駁駁駒具
愚虞嶮空偶寓遇隅申櫛釧屑屈

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8CC0
8CD0
8CE0
8CF0

掘窟沓靴鬱窳顛隈桑栗繰桑鐵勲君薰
訓群羣郡卦袂祁係傾刑兄啓圭珪型契
形徑憲慶憲翹揭携敬景桂溪畦稽系經
繼繫鄧荃荊蚩計詣警輕頸驕芸迎鯨
劇戟擊激隙桁傑欠決潔穴結血歆月件
俟僣健兼勞劓喧圖堅嫌建憲懸拳捲檢
樞牽犬猷研硯綱梟肩見賢賢軒遣鍵陝
顛驗餞元原嚴幻弦減源玄現絃絃言諺
限乎個古呼固姑孤己庫弧戶故枯湖狐
糊袴股胡葫蕪虎誇跨鈎履顧肢五互伍午
吳吾娛後御梧梧檣瑚暮語誤護醜乞鯉
交佼侯候倅倅光公功効勾厚口向

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后喉坑垢好孔孝宏工巧巷幸庠庚康弘
恒慌抗拘控攻昂晃更杭校梗構江洪浩
港溝甲皇硬構縶紅絃絞綱耕考肯肱腔
青航荒行衡貢貢購郊酹鉞鉞鋼閭降
頂香高鴻剛劫号台壕拷濠豪轟蠲克刻
告国穀酷鳩黑獄漣腰鵠忽惚骨拍迫此
頃今困坤墮婚恨懸昏昆根梱混痕紺良
魂些佐叉唆嵯左差查沙礎砂詐鎖坐坐
座挫債催再最哉塞妻宰彩才採裁歲濟
災采犀碎砦祭素細菜裁載際劑在材罪
財牙坂阪堺神肴咲崎崎磚鸞作削昨搾
昨朔柵窄策索錯梭銑銑匙匙冊刷

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察抄撮擦札殺薩維韋簪剔鑄斂皿晒三
傘參山慘撒散棧燥珊產算纂至讚贊酸
餐斬暫殘仕仔伺使刺司史嗣四士始姉
姿子屍市師志思指支攷斯施旨枝止
死氏獅祉私糸紙紫肢脂至視詞詩試誌
諮資錫雌飼齒事似侍兒字寺慈持時次
滋治爾靈痔礫示而耳目蔣薛汐鹿麋
鳴竺軸穴罈七叱執失嫉室悉濕漆瘳質
夷郁葆僂柴芝屢蕊綺含写射捨叙糾煮
社紗者謝卑遽蛇邪借勺尺杓灼酌酌
錫若寂弱惹主取守手殊狩殊腫腫趣
酒首儒受呪寿授樹綬需囚収周

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宗就州慘愁抬洲秀秋終繡習臬舟菴衆
襲譽蹠蹠遇酋酬集醜什住充十從戎柔
汁茨獸載重銃叔夙宿淑祝縮肅塾熟出
術述俊駿春瞬竣舜駿准循旬樞殉淳
準潤盾純巡選醇順頤初所暑曙渚席緒
書書書籍諸助叙女序徐恕鋤除傷償勝
匠升召哨商唱嘗嬰妾娼宵宵將小少尚庄
床廠彰承抄招掌捷昇昌昭晶松梢樵樵
沼消涉湘燒焦照症省硝礪祥彰章笑粧
紹肖薑蔣蕘蕘裝訟証詔詳象賞嘗鉦鍾
鐘障鞘上丈丞乘冗剩城場壤壤壤情擾
条杖淨狀疊穰燕醴醴銳囑囑飾

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9040 拭植殖燭蠟職色蝕食蝕辱斥伸信優唇
9050 娠瘞瘳心慎振新晉森榛浸深申珍真神
9060 秦紳臣苾薪親診身辛進針震人仁刃塵
9070 王尋甚尽腎訊迅陣鞫筍譴須酢囟厨
9080 逗吹垂帥推水炊睡粹翠衰遂醉錐鍾隨
9090 瑞璫崇嵩數極趨難据杉梃菩頗雀裾澄
90A0 摺寸世瀨畝是濩制勢姓征性成政整星
90B0 晴棲栖正清性生盛精聖声製西誠誓請
90C0 逝醒青靜齊稅脆隻席惜戚斥昔析石積
90D0 籍績脊賁赤跡蹟碩切拙接掇折設劓劓
90E0 說雪絕舌蟬仙先千占宜專尖川戰驤驤
90F0 桤柅泉淺洗染潛煎燭旋穿筋線

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9140 纖焚腺舛船薦詮踐選邏錢銑閃鮮前
9150 善漸然全禪繕磨嚙望咀措曾管楚狙
9160 疎疎礎祖粗組素組蘇訴阻遯鼠愴創双
9170 叢倉喪壯奏爽宋屠匠惣想搜搗搗搗
9180 操早曹巢槍槽槽燥爭瘡相窓糴綜綜蹤
9190 草莊葬蒼藻藻走送邏鎗鎗懸像增憎臟
91A0 臧贈造促側則則息捉束測足速俗厲賊
91B0 族統卒袖其掬存孫尊損村遜他多汰汰
91C0 訖唾墮妥情打舵舵樞陀駮驂体堆对耐
91D0 岱帝待怠態戴替泰滯胎腿苔袋貸逮逮
91E0 隊黛鯛代台大第醍題鷹鴻瀟卓啄宅托
91F0 拓拓沢濯琢託鐸濁諾萑鳳銷只

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9240 叩但達辰奪脫巽堅迥棚谷狸鱉樛誰丹
9250 單嘆坦担探旦歎淡澹炭短端箴統耽胆
9260 蛋誕鍛囤墮彈斷暖檀段男談偵知地弛
9270 恥智池痴稚置致蚰遲馳馳築畜竹筑蓄
9280 逐秩窒茶摘着中仲宙拙拙昼柱注虫衷
9290 註酎鑄駐樗樗猪苧著貯丁兆凋喋龍帖
92A0 帳庁巾張彫徵懲挑幅朝潮牒町眺聽脹
92B0 腸蝶調蝶超跳眺長頂鳥勅步直朕沈珍
92C0 質鎮陳津瑩椎樵追銳痛透塚柁樞樞佃
92D0 漬柁辻薦綴鏗樗樗坪壺嬌袖爪吊鈞鑄
92E0 亭低停偵剋貞呈提定帝底庭廷弟悌抵
92F0 挺提梃汀碇禎禎綈綈訂諦諦諦

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9340 邸鄧釘鼎泥滴權敵滴的笛適鐫溺哲徹
9350 撒轍迭鉄典填天展店添纏甜貼貼顛点
9360 伝殿灘田電兎吐堵塗妬屠徒斗杜渡登
9370 莧賭途都鍍砥砥笮度土奴怒倒党冬
9380 凍刀唐塔塘套宅島嶋棹投搭東桃棟棟
9390 盜淘湯濤灯燈当痘禱等咎筒糖統到薑
93A0 蕩蕩菸膳豆踏透透鎗陶頭騰騰動動同
93B0 堂導撞撞洞瞳童胴萄道銅咭鑄匿得德
93C0 澆特耆禿薦毒独誦術榑榑凸突楸屈薦苦
93D0 寅酉潯順屯惇敦沌豚遁頓吞曇鈍奈那
93E0 內乍阻薤薤澁捺鍋櫛馴繩暖南楠軟難
93F0 汝二尼貳迓勾賑肉虹甘日乳入

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9440 如尿韭任妊忍認濡襦柳寧惹貓熟年念
9450 捻撚燃粘乃迺之莖藝惱濃納能腦膿膿
9460 硯蛋巴把播霸杷波派琶破婆罵芭馬俳
9470 靡排排敗杯盃牌背肺輩配倍培煤梅
9480 煤煤猥賈壳賸陪這蟬秤矧敕伯剝博拍
9490 柏泊白箔粕舶薄迫曝漠爆縛莫駁麥函
94A0 箱砢著擎著檣幡肌烟龔八鉢浼浼曉髮
94B0 伐罰拔拔閱鳩嘶鳩鳩隄隄判半反叛帆
94C0 撇斑板汜汎版犯班畔繁般簪販範采煩
94D0 頒飯挽晚番盤盤蕃筌匪否妃庇彼悲
94E0 扉批披斐比泌疲皮碑秘緋罷肥被腓費
94F0 避非飛穢穢穢尾微批毳眉美

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9540 鼻柁稗匹疋毳彦膝莖肘弼必畢筆逼恰
9550 姬媛紐百膠儀彪標水漂飄票表評豹廟
9560 描病秒苗鎚鉅鉅蛙鱉品彬斌浜瀕資贊
9570 頻敏瓶不付埠夫婦辜辜布府祐扶敷
9580 斧普浮父符腐腐芙譜負賦赴阜附侮撫
9590 武舞葡葡蔞蔞封楓風葦落伏副復幅服福
95A0 腹複覆淵弗弗沸仙物緇分吻噴噴憤扮
95B0 焚奮粉糝粉雲文聞丙併兵摒幣平弊柄
95C0 並蔽閉陞米頁僻壁癖碧別譬薺箇偏妥
95D0 片篇繻刃返還便勉婉并緋保餉鋪圃埔
95E0 步甫補輔穉穉墓墓慕戊畀畀壽若俸俸包
95F0 呆報奉宝峯峯崩崩庖庖抱捧放方朋

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9640 法泡烹砲繃胞芳萌蓬鋒鋒訪豐邦鋒飽
9650 鳳鵬之亡傍剖妨妨帽忘忙房暴望某棒
9660 冒紡防膨驟驟寶鋒防吠類北僕卜墨撲
9670 朴牧睦穆釗釗沒殆姬幌奔本翻凡盆
9680 廖廖魔麻埋妹味枚每哩模幕膜枕銷枉
9690 鱗樹亦俟又抹末沫沓沓但麟磨万慢滿漫
96A0 蔓味未魅已箕岬密蜜羨羨稔脈妙耗民
96B0 眠務夢無牟牟霧鷗鷗嬌娘冥名命明盟
96C0 迷銘鳴姪北滅免棉綿緬面麵摸模茂妄
96D0 孟毛猛盲網耗蒙備木默目李勿餅尤戾
96E0 粉質問悶紋門勾也冶夜爺耶野弥矢厄
96F0 役約藥訖躍躍柳柳數鍾愈油癒

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9740 諭輸唯佑優勇友有幽悠憂摺有柚湧涌
9750 猶猷由祐裕誘遊邑郵雄融夕予余与譽
9760 興預僞幼妖容庸揚搖擁囈楊樣洋溶溶
9770 用瘞羊耀葉翥要譟蹕遙陽養慾抑欲
9780 沃浴翌翼淀羅羅裸來萊賴雷洛絡落詔
9790 乱卵嵐欄濫藍蘭覽利吏履李梨理璃璃
97A0 裏裡里離陸率率立葦掠掠劉流溜琉留
97B0 疏粒隆竜龍侶慮旅慮了亮僚而凌素料
97C0 梁涼獮獮獮穉穉良諒量量陵領力綠倫
97D0 厘林淋淋琳琳輪隣麟麟璣璣璣璣璣
97E0 伶例冷勵嶺伶玲礼苓鈴隸隸隸隸隸
97F0 歷列劣烈裂裂恐恐憐憐漣煉煉練聯

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9840 蓮連鍊呂魯櫓路路露勞雲廊弄朗樓
 9850 榔浪漏牢狼耄老聾蠅郎六麓祿肋錄論
 9860 倭和話歪賄脇惑粹驚互巨鰓託藁蔴柳
 9870 灣碗腕
 9880
 9890 式
 98A0 巧丕个卩丿井丿乂乖乘亂丿豫爭舒式
 98B0 于亞亞丄亢京毫璽从仍仄仆仆仗仍仍
 98C0 仟价伉佚估佛佻佻佻佻佻佻佻佻佻
 98D0 佯佯來侖僇俟俟俟俟俟俟俟俟俟
 98E0 偃偃倪倥倥倥倥倥倥倥倥倥倥倥倥倥
 98F0 會偃偃倥倥倥倥倥倥倥倥倥倥倥倥倥

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9940 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 9950 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 9960 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 9970 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 9980 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 9990 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99A0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99B0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99C0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99D0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99E0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉
 99F0 僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉僉

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9A40 戾晒咤咤咤咤咤咤咤咤咤咤咤咤
 9A50 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9A60 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9A70 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9A80 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9A90 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AA0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AB0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AC0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AD0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AE0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤
 9AF0 咤咤咤咤咤咤咤咤咤咤咤咤咤咤

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9B40 奸姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9B50 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9B60 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9B70 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9B80 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9B90 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BA0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BB0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BC0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BD0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BE0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁
 9BF0 姁姁姁姁姁姁姁姁姁姁姁姁姁姁姁

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9C40 廖廣廐廐廐廐廐廐廐廐廐廐廐廐廐廐
 9C50 弃弃弃弃弃弃弃弃弃弃弃弃弃弃弃
 9C60 象替彙彙彙彙彙彙彙彙彙彙彙彙彙
 9C70 排徠徠徠徠徠徠徠徠徠徠徠徠徠徠徠
 9C80 怙怙怙怙怙怙怙怙怙怙怙怙怙怙怙怙
 9C90 怙怙怙怙怙怙怙怙怙怙怙怙怙怙怙怙
 9CA0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻
 9CB0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻
 9CC0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻
 9CD0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻
 9CE0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻
 9CF0 悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻悻

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9D40 戛戛戛戛戛戛戛戛戛戛戛戛戛戛戛
 9D50 抉抉抉抉抉抉抉抉抉抉抉抉抉抉抉抉
 9D60 拜拌拊拊拊拊拊拊拊拊拊拊拊拊拊
 9D70 挾挾挾挾挾挾挾挾挾挾挾挾挾挾挾
 9D80 振振振振振振振振振振振振振振振振
 9D90 攝攝攝攝攝攝攝攝攝攝攝攝攝攝攝攝
 9DA0 擒擒擒擒擒擒擒擒擒擒擒擒擒擒擒擒
 9DB0 擯擯擯擯擯擯擯擯擯擯擯擯擯擯擯
 9DC0 攷攷攷攷攷攷攷攷攷攷攷攷攷攷攷
 9DD0 斷斷斷斷斷斷斷斷斷斷斷斷斷斷斷斷
 9DE0 杏昵昶昶昶昶昶昶昶昶昶昶昶昶昶
 9DF0 晰罪羣暎暎暎暎暎暎暎暎暎暎暎暎暎

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9E40 瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽
 9E50 瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽瞽
 9E60 杼杪杪杪杪杪杪杪杪杪杪杪杪杪杪杪
 9E70 柝柝柝柝柝柝柝柝柝柝柝柝柝柝
 9E80 柝柝柝柝柝柝柝柝柝柝柝柝柝柝
 9E90 梵梵梵梵梵梵梵梵梵梵梵梵梵梵梵梵
 9EA0 棧棧棧棧棧棧棧棧棧棧棧棧棧棧棧
 9EB0 檣檣檣檣檣檣檣檣檣檣檣檣檣檣
 9EC0 棟棟棟棟棟棟棟棟棟棟棟棟棟棟棟棟
 9ED0 榷榷榷榷榷榷榷榷榷榷榷榷榷榷榷
 9EE0 檣檣檣檣檣檣檣檣檣檣檣檣檣檣
 9EF0 檣檣檣檣檣檣檣檣檣檣檣檣檣檣

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9F40 槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩
 9F50 槩槩槩槩槩槩槩槩槩槩槩槩槩槩槩
 9F60 欵欵欵欵欵欵欵欵欵欵欵欵欵欵欵
 9F70 殫殫殫殫殫殫殫殫殫殫殫殫殫殫殫
 9F80 殫殫殫殫殫殫殫殫殫殫殫殫殫殫
 9F90 汾汾汾汾汾汾汾汾汾汾汾汾汾汾汾
 9FA0 汎汎汎汎汎汎汎汎汎汎汎汎汎汎汎
 9FB0 涸涸涸涸涸涸涸涸涸涸涸涸涸涸涸
 9FC0 涸涸涸涸涸涸涸涸涸涸涸涸涸涸涸
 9FD0 涸涸涸涸涸涸涸涸涸涸涸涸涸涸涸
 9FE0 涸涸涸涸涸涸涸涸涸涸涸涸涸涸涸
 9FF0 涸涸涸涸涸涸涸涸涸涸涸涸涸涸涸

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	0123456789ABCDEF
E240	磳磳磳磳磳磳磳磳磳祀祠祗崇祔祔
E250	祔祔祔祔祔祔祔祔祔祔禹禹秉秧秧秧
E260	秧秧秧秧秧秧秧秧秧秧稟稟稟稟稟稟
E270	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E280	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E290	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2A0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2B0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2C0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2D0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2E0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟
E2F0	稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟稟

[illegible][illegible][illegible][illegible][illegible]

4-3) Chinese Character Codes (Conforming to GB2312)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A1 2 0																
A1 3 0																
A1 4 0																
A1 5 0																
A1 6 0																
A1 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A7 2 0																
A7 3 0																
A7 4 0																
A7 5 0																
A7 6 0																
A7 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A2 2 0																
A2 3 0																
A2 4 0																
A2 5 0																
A2 6 0																
A2 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A8 2 0																
A8 3 0																
A8 4 0																
A8 5 0																
A8 6 0																
A8 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A3 2 0																
A3 3 0																
A3 4 0																
A3 5 0																
A3 6 0																
A3 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A9 2 0																
A9 3 0																
A9 4 0																
A9 5 0																
A9 6 0																
A9 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A4 2 0																
A4 3 0																
A4 4 0																
A4 5 0																
A4 6 0																
A4 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
AA 2 0																
AA 3 0																
AA 4 0																
AA 5 0																
AA 6 0																
AA 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A5 2 0																
A5 3 0																
A5 4 0																
A5 5 0																
A5 6 0																
A5 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
AB 2 0																
AB 3 0																
AB 4 0																
AB 5 0																
AB 6 0																
AB 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A6 2 0																
A6 3 0																
A6 4 0																
A6 5 0																
A6 6 0																
A6 7 0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
AC 2 0																
AC 3 0																
AC 4 0																
AC 5 0																
AC 6 0																
AC 7 0																

0 1 2 3 4 5 6 7 8 9 A B C D E F
 A D 2 0
 A D 3 0
 A D 4 0
 A D 5 0
 A D 6 0
 A D 7 0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 A E 2 0
 A E 3 0
 A E 4 0
 A E 5 0
 A E 6 0
 A E 7 0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 A F 2 0
 A F 3 0
 A F 4 0
 A F 5 0
 A F 6 0
 A F 7 0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 0 2 0 啊阿埃挨哎哀皑癌藹矮艾碍爱隘
 B 0 3 0 鞍氨安俺按暗岸胺案肮昂盎凹熬熬
 B 0 4 0 袄傲奥懊澳芭捌扒叭吧芭巴拔跋
 B 0 5 0 靶把把坝霸罢爸白柏百摆佰败拜裨班
 B 0 6 0 班搬扳般颁板版扮拌伴瓣半办絆邦帮
 B 0 7 0 梆榜膀绑棒磅蚌傍傍苞胞包裹剥

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 1 2 0 薄雹保堡饱宝抱报暴豹鲍爆杯碑悲
 B 1 3 0 卑北辈背贝钡倍狈备惫焙被奔笨本笨
 B 1 4 0 崩绷甬泵蹦迸逼鼻比鄙笔彼碧蓖蔽毕
 B 1 5 0 毙毙币庇痹闭敝弊必辟臂臂避陛鞭边
 B 1 6 0 编贬扁便变卞辨辨辨遍标彪膘表鳖憋
 B 1 7 0 别癍彬斌濒滨宾宾兵冰柄丙秉饼炳

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 2 2 0 病并玻菠播拨钵波博勃搏铂箔伯帛
 B 2 3 0 舶脖膊泊泊驳捕卜哺补埠不布步簿部
 B 2 4 0 怖擦猜裁材才财睬睬睬彩菜蔡餐参蚕
 B 2 5 0 残惨惨灿苍仓仓沧藏操糙曹草厕策
 B 2 6 0 侧册测层蹭插又荏茶查碴搽察岔差迄
 B 2 7 0 拆柴豺搀掺掺掺掺缠铲产阐颤昌猖

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 3 2 0 场尝常长偿肠厂敞畅唱倡超抄钞朝
 B 3 3 0 嘲潮巢吵炒车扯撤掣彻澈郴臣辰尘晨
 B 3 4 0 忱沉陈趁衬撑称城橙成呈乘程惩澄诚
 B 3 5 0 承逞聘秤吃痴持匙池迟驰耻齿侈尺
 B 3 6 0 赤翅斥炽充冲虫崇宠抽酬畴踌愁筹
 B 3 7 0 仇绸猷丑臭初出橱厨踟锄雏滁除瘵

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 4 2 0 础储矗搯触处揣川穿椽传船喘串疮
 B 4 3 0 窗幢床闯创吹炊捶锤垂春椿醇唇淳纯
 B 4 4 0 蠢戳绰疵茨磁雌辞慈瓷词此刺赐次聪
 B 4 5 0 葱囱匆丛丛凑粗醋簇促蹙篡窜摧崔催
 B 4 6 0 脆粹粹淬翠村存寸磁撮搓措措措搭达
 B 4 7 0 答瘩打大呆歹傣戴带殆代贷袋待逮

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 5 2 0 怠耽担丹单郸掸胆旦氮但悼淡诞诞
 B 5 3 0 蛋当挡党荡档刀捣蹈岛岛祷导到稻棹
 B 5 4 0 道盗德得的蹬灯登等瞪凳邓堤低滴滴
 B 5 5 0 敌笛狄漆翟嫡抵底地蒂第帝弟递递颠
 B 5 6 0 掂滇碘点典靛垫电佃甸店惦奠淀殿殒
 B 5 7 0 刁雕凋刁掉吊吊吊调跌爹碟蝶迭谍叠

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 6 2 0 丁叮叮钉顶鼎锭定订丢丢冬董懂动
 B 6 3 0 栋侗冻洞兜抖斗陡豆逗痘都督毒核
 B 6 4 0 独读堵睹睹杜镀肚度渡妒端短锻段断
 B 6 5 0 缎堆兑队对墩吨蹲敦顿钝盾遁掇哆
 B 6 6 0 多夺垛躲朵躲舵剝情堕峨峨俄额讹
 B 6 7 0 娥恶厄扼遏鄂饿恩而儿耳尔洱洱二

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 7 2 0 貳发罚筏伐乏阉法珐藩帆番翻樊矾
 B 7 3 0 钒繁凡烦反返范贩犯饭泛坊芳方防房
 B 7 4 0 防妨仿访纺放非啡飞肥匪诽吠肺废
 B 7 5 0 沸费芬酚吩氛纷纷坟焚粉份份份份
 B 7 6 0 龚丰封枫峰峰峰风疯烽逢冯缝讽奉凤
 B 7 7 0 佛否夫敷肤扶拂辐幅氟符伏俘俘

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B 8 2 0 浮涪福袱弗甫抚辅俯釜斧脯腑腐腐
 B 8 3 0 赴副覆赋复傅付阜父腹负富讷附妇缚
 B 8 4 0 咐噏噏该改概钙盖溉干甘杆柑竿肝赶
 B 8 5 0 感杆敢赣冈冈钢缸缸纲岗港杠篙皋高
 B 8 6 0 膏羔糕搞搞稿告哥歌戈戈鹄路疙割革
 B 8 7 0 葛格蛤阁隔个各给根跟耕更羹羹

0 1 2 3 4 5 6 7 8 9 A B C D E F
B 9 2 0 埂耿梗工攻功恭龚供躬公宫弓巩汞
B 9 3 0 拱贡共钩勾苟狗垢构够辜菇咕箍
B 9 4 0 估沽孤姑鼓古蛊骨谷股故顾固雇刮瓜
B 9 5 0 刷寡挂褂乖拐怪棺关官冠观管馆罐惯
B 9 6 0 灌贯光广逛瑰规圭硅归龟闺轨鬼诡癸
B 9 7 0 桂柜跪贵刽棍滚棍锅郭国果裹过哈

0 1 2 3 4 5 6 7 8 9 A B C D E F
B A 2 0 骸孩海氦亥害骇酣憨邯韩含涵寒函
B A 3 0 喊罕翰撼捍旱憾悍焊汗汗夯杭航壕壕
B A 4 0 豪毫郝好耗号浩呵喝荷荷核禾和何合
B A 5 0 盒貉阂河涸赫褐鹤贺嘿黑痕很很恨哼
B A 6 0 亨横衡恒轰哄烘虹鸿洪宏弘红喉侯猴
B A 7 0 吼厚候后呼乎忽瑚壶葫胡瑚狐糊湖

0 1 2 3 4 5 6 7 8 9 A B C D E F
B B 2 0 弧虎唬护互沪户花哗华猾滑画划化
B B 3 0 话槐徊怀淮坏坏环桓还缓焕患唤痪痪
B B 4 0 焕涣宦幻荒慌黄磺蝗簧皇惶煌晃晃
B B 5 0 恍恍灰挥辉恢恢回毁悔慧卉惠晦晦
B B 6 0 秽会烺汇讳诲绘荤昏婚混浑混豁活伙
B B 7 0 伙火获惑霍货祸击圾基机畸稽稽箕

0 1 2 3 4 5 6 7 8 9 A B C D E F
B C 2 0 肌饥迹激讥鸡姬绩缉吉极棘辑籍集
B C 3 0 及急疾汲即嫉级挤几脊己莠技冀季伎
B C 4 0 祭剂悸济寄寂计记既忌际妓继纪嘉枷
B C 5 0 夹佳家加荚颊贾甲钾假稼价架驾嫁歼
B C 6 0 监坚尖箋间煎兼肩艰奸絨茧检束碱硷
B C 7 0 拣捡简俭剪减荐槛鉴践贱见键箭件

0 1 2 3 4 5 6 7 8 9 A B C D E F
B D 2 0 健舰剑饯渐濺涧建僵姜将浆江疆蒋
B D 3 0 桨奖讲匠酱降蕉椒礁焦胶郊浇骄娇
B D 4 0 嚼搅较轿侥脚狡角皎缴绞剿教酵轿较
B D 5 0 叫窖揭接皆秸街阶截劫节桔杰捷睫竭
B D 6 0 洁结解姐戒藉芥界介疥诫届巾筋斤
B D 7 0 金今津襟紧锦仅谨进靳晋禁近烬浸

0 1 2 3 4 5 6 7 8 9 A B C D E F
B E 2 0 尽劲荆兢茎睛晶鲸京惊精梗经井警
B E 3 0 景颈静境敬镜径痉靖竟竞净炯窘揪究
B E 4 0 纠玖韭久灸九酒厥救旧臼舅咎就疚鞠
B E 5 0 拘狙居居驹菊局狙矩举沮聚拒据巨具
B E 6 0 距踞锯俱句惧炬剧捐鹃娟倦眷卷绢掀
B E 7 0 攫抉掘倔爵觉决决绝均菌钧军君峻

0 1 2 3 4 5 6 7 8 9 A B C D E F
B F 2 0 俊竣浚郡骏喀咖卡咯开揩楷凯慨刊
B F 3 0 堪勘坎砍看康慷糠扛抗亢炕考拷烤靠
B F 4 0 坷苛柯棵磕颗壳咳可渴克刻客课肯
B F 5 0 啃垦恳坑吭空恐孔控扣寇枯哭窟
B F 6 0 苦酷库裤夸垮垮跨跨跨块块快宽款匡
B F 7 0 筐狂框矿眶况亏盔窟窥葵奎魁愧

0 1 2 3 4 5 6 7 8 9 A B C D E F
C 0 2 0 债愧溃坤昆捆困括扩廓阔垃拉喇喇
C 0 3 0 腊辣啦莱来赖蓝婪栏拦篮阑兰澜调调
C 0 4 0 览懒纛烂滥琅榔狼廊郎朗浪捞劳牢老
C 0 5 0 佬姥酪烙涝勒乐雷雷雷磊累儡垒擂肋
C 0 6 0 类泪棱楞冷厘梨犁黎篱狸离漓理李里
C 0 7 0 鲤礼莉荔吏栗丽厉励砾历利例例例

0 1 2 3 4 5 6 7 8 9 A B C D E F
C 1 2 0 痢立粒沥隶力璃哩俩联莲连镰廉怜
C 1 3 0 涟帘敛脸链恋炼练粮梁梁良两辆辆
C 1 4 0 晾亮凉掠聊僚僚僚寥辽辽了撂僚僚料
C 1 5 0 列裂烈劣猎琳林磷霖临邻鳞淋霖吝吝
C 1 6 0 拎玲菱零龄龄龄龄龄龄龄龄龄龄另另溜
C 1 7 0 琉榴硫溜溜溜溜溜溜溜溜溜溜溜溜溜

0 1 2 3 4 5 6 7 8 9 A B C D E F
C 2 2 0 隆垄拢陇楼娄楼娄漏陋芦卢颅庐卢
C 2 3 0 掳卤虏鲁麓碌露路路路路路路路路路
C 2 4 0 吕铝侣旅履屡虑虑虑虑虑虑虑虑虑
C 2 5 0 滦卵乱掠略抡轮轮仑论论论论论论论
C 2 6 0 锣锣锣锣锣锣锣锣锣锣锣锣锣锣锣锣
C 2 7 0 吗埋买麦卖迈脉脉脉脉脉脉脉脉脉脉

0 1 2 3 4 5 6 7 8 9 A B C D E F
C 3 2 0 谩芒茫盲氓忙莽猫茅锚毛矛铆卯茂
C 3 3 0 冒帽貌贸么玫枚梅霉霉煤没眉媒镁每
C 3 4 0 美味寐妹媚门闷们萌蒙檬盟猛猛梦孟
C 3 5 0 眯醅靡靡迷迷弥米秘觅泌蜜密棉眠
C 3 6 0 绵冕免勉婉媵面苗描瞄藐秒渺庙妙蔑
C 3 7 0 灭民抿皿敏悯闵明螟鸣铭名命谬摸

0 1 2 3 4 5 6 7 8 9 A B C D E F
C 4 2 0 摹磨模膜磨摩魔抹末莫墨默沫漠寞
C 4 3 0 陌谋牟某拇牡牡姆母墓暮暮募募募募
C 4 4 0 睦牧穆拿哪呐那那那那那那那那那
C 4 5 0 男难囊挠脑恼闹闹呢馁内嫩能妮霓倪
C 4 6 0 泥尼拟你匿腻逆溺溺拈年碾撵捻念捻
C 4 7 0 酿鸟尿捏聂孽嚼嚼镍涅涅您您您您

0 1 2 3 4 5 6 7 8 9 A B C D E F
 C5 2 0 拧泞牛扭纽组浓农弄奴努怒女暖
 C5 3 0 虐疟挪糯糯诺哦欧鸥殴藕呕偶沤哧
 C5 4 0 爬怕怕琶拍排牌徘徊派攀潘盘磐盼畔
 C5 5 0 判叛乓庞旁磅胖抛咆刨袍袍跑泡坯胚
 C5 6 0 培裴陪陪配佩沛喷盆砰烹澎彭蓬棚
 C5 7 0 硼篷膨朋鹏捧碰坯砒霹批披劈琶毗

0 1 2 3 4 5 6 7 8 9 A B C D E F
 C6 2 0 啤脾疲皮匹痞僻屁譬篇偏片骗飘漂
 C6 3 0 瓢票撇瞥拼频贫品聘乒坪苹萍平凭瓶
 C6 4 0 评屏坡泼颇婆魄迫粕剖扑铺仆莆葡
 C6 5 0 菩蒲埔朴圃浦谱曝瀑期欺栖戚妻七
 C6 6 0 凄漆柒洵其棋奇歧畦崎脐齐旗祈祁骑
 C6 7 0 起岂乞企启契砌器气迄弃汽泣迄迄

0 1 2 3 4 5 6 7 8 9 A B C D E F
 C7 2 0 恰洽率杆秆铅千迁签杆谦乾黔钱钳
 C7 3 0 前潜遣浅谴甄嵌欠歉枪呛腔羌墙蔷强
 C7 4 0 抢橇鞅敲悄桥瞧乔巧巧撬翘峭俏穹
 C7 5 0 切茄且怯窃钦侵亲秦琴勤芹擒禽寝沁
 C7 6 0 青轻氢倾卿清擎晴擎情顷请庆琼穷秋
 C7 7 0 丘邱球求囚酋迥迥区蛆曲驱屈渠渠

0 1 2 3 4 5 6 7 8 9 A B C D E F
 C8 2 0 娶娶龋趣去圈颧权醛泉全痊拳大券
 C8 3 0 劝缺快瘸却鹁榷确雀裙群然燃冉染瓢
 C8 4 0 壤壤壤让饶扰绕惹热壬仁人忍韧任认
 C8 5 0 刃妊纫扔仍日戎茸蓉荣融溶溶容冗
 C8 6 0 揉柔肉茹蠕儒濡如辱乳汝入褥阮蕊
 C8 7 0 瑞锐闰润若弱撒洒萨腮腮塞赛三叁

0 1 2 3 4 5 6 7 8 9 A B C D E F
 C9 2 0 伞散桑嗓丧搔骚扫嫂瑟色涩森僧莎
 C9 3 0 砂杀刹沙纱傻啥煞筛晒珊苦杉山删煽
 C9 4 0 衫闪陕擅膳膳善汕扇缮缮伤商赏晌上
 C9 5 0 尚裳梢稍稍烧芍勺韶少哨邵绍奢除蛇
 C9 6 0 舌舍赦摄射慑涉社设呻伸伸身深娠
 C9 7 0 绅伸沈审婢甚肾慎渗声生甥牲升绳

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CA 2 0 省盛剩胜圣师失狮施湿诗尸虱十石
 CA 3 0 拾时什食蚀识史矢使屎驶始式示士
 CA 4 0 世柿事拭誓逝势是嗜噬适仕侍释饰氏
 CA 5 0 市恃室视试收手首守寿授售受瘦兽蔬
 CA 6 0 枢梳殊抒输叔舒淑疏书赎孰熟暑曙
 CA 7 0 署蜀黍鼠属术述树束戌豎豎庶数漱

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CB 2 0 恕刷耍摔衰甩帅栓拴霜双爽谁水睡
 CB 3 0 税吮瞬顺舜说硕朔烁斯嘶嘶思私司丝
 CB 4 0 死肆寺嗣四伺似饲已松耸怱怱送宋讼
 CB 5 0 诵搜艘嗽嗽苏酥俗素速粟僂塑溯宿诉
 CB 6 0 肃酸蒜算虽隋随绥髓碎岁穗遂隧祟孙
 CB 7 0 损笋蓑梭唆缩琐索锁所塌他它她塔

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CC 2 0 獭挞蹶踏胎苔抬台泰猷太态汰坍塌
 CC 3 0 贪瘫滩坛檀痰潭谭谈坦毯袒碳探叹炭
 CC 4 0 汤塘塘堂堂唐糖倘淌淌趟烫淘涛滔
 CC 5 0 缘萄桃逃淘陶讨套特滕疼誊梯剔踢
 CC 6 0 梯提题蹄啼体替嚏惕惕惕天添填田
 CC 7 0 甜恬舔腆挑条迢眺眺贴铁帖厅听炆

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CD 2 0 汀廷停亭庭挺艇通桐酮瞳同铜形童
 CD 3 0 桶桶筒统痛偷投头透凸秃突图徒途涂
 CD 4 0 屠土吐兔湍团推颓腿腿褪退吞屯臀拖
 CD 5 0 托脱陀陀驮驼橐妥拓唾挖哇蛙娃瓦
 CD 6 0 袜歪外腕湾湾玩顽丸阮阮碗挽晚晚惋
 CD 7 0 宛婉万腕汪王亡枉网网旺望忘妄威

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CE 2 0 巍微危危违桅围唯惟为潍维苇萎委
 CE 3 0 伟伪尾纬纬蔚味畏胃喂喂位渭谓慰
 CE 4 0 卫瘟温蚊文闻纹吻稳稔问噙翁瓮挝蜗
 CE 5 0 涡窝我斡卧握沃巫鸣鸪乌污诬屋无芜
 CE 6 0 梧吾吴毋武武梧午舞伍侮坞戊雾晤物
 CE 7 0 勿务悟误昔熙析西晒矽晰嘻吸锡牺

0 1 2 3 4 5 6 7 8 9 A B C D E F
 CF 2 0 稀息希悉膝夕惜熄焅溪汐犀檄袭席
 CF 3 0 习媳喜铣洗系隙戏细瞎吓匣霞辖暇峡
 CF 4 0 侠狭下厦夏吓掀敏先仙鲜纤咸贤衔舷
 CF 5 0 闲涎弦嫌显险现献县腺馅羨宪陷限线
 CF 6 0 相厢镶香箱襄湘乡翔祥详想响享项巷
 CF 7 0 橡像向象薰硝霄削哮喘销消宵淆晓

0 1 2 3 4 5 6 7 8 9 A B C D E F
 D0 2 0 小孝校肖啸笑效楔些歌蝎鞋协挟携
 D0 3 0 邪斜胁谐写械卸蟹懈泄泻谢屑薪芯铤
 D0 4 0 欣辛新忻心信衅星腥猩猩兴刑型形邢
 D0 5 0 行醒幸杏性姓兄凶匈匈凶雄熊休修羞
 D0 6 0 朽嗅锈秀锈锈墟戌需墟墟徐许蓄酗
 D0 7 0 叙旭序畜恤絮婿绪绪纤喧宣悬旋玄

0 1 2 3 4 5 6 7 8 9 A B C D E F
D1 2 0 选癯眩绚靴薛学穴雪血勋熏循旬询
D1 3 0 寻驯巡殉讯训迅迅压押鸦鸭呀丫芽
D1 4 0 牙蚜崖衙涯雅亚亚讶焉咽阍烟淹盐严
D1 5 0 研蜒岩延言颜阎炎沿奄掩眼衍演艳堰
D1 6 0 燕厌砚雁唁彦焰宴谚验殃央鸯秧杨扬
D1 7 0 佯痒羊洋阳氧仰痒痒样漾邀腰妖瑶

0 1 2 3 4 5 6 7 8 9 A B C D E F
D2 2 0 摇尧遥窑谣姚咬召药要耀椰噎耶爷
D2 3 0 野冶也页掖业叶曳腋夜液一壹医揖狄
D2 4 0 依依颐夷遗移仪胰疑沂宜姨彝椅蚁
D2 5 0 倚已乙矣以艺抑易邑屹亿役臆逸肄疫
D2 6 0 亦裔意毅忆义益溢诣议谊译异翼翌绎
D2 7 0 茵荫因殷音阴姻吟银淫寅饮尹引隐

0 1 2 3 4 5 6 7 8 9 A B C D E F
D3 2 0 印英樱婴鹰应纛莹莹莹莹萤迎赢盈
D3 3 0 影颖硬映哟拥佣臃痈雍雍踊蛹咏泳涌
D3 4 0 永愿勇用幽优悠忧尤由邮犹油游酉
D3 5 0 有友右佑釉诱又幼迂淤于孟榆虞愚与
D3 6 0 余俞逾鱼愉渝渔隅予娱雨与屿禹宇语
D3 7 0 羽玉域芋郁吁遇喻峪御愈欲狱育誉

0 1 2 3 4 5 6 7 8 9 A B C D E F
D4 2 0 浴寓裕预豫驭骛渊冤元垣袁原援辕
D4 3 0 园员圆猿源缘远苑愿怨院曰约越跃钥
D4 4 0 岳粤月悦阅耘云郎匀陨允运蕴酝晕韵
D4 5 0 孕匝砸杂栽哉灾宰载再在咱攒暂赞脏
D4 6 0 脏葬遭糟凿藻枣早澡蚤躁噪造皂灶燥
D4 7 0 责择则泽贼怎增憎曾赠扎渣渣札轧

0 1 2 3 4 5 6 7 8 9 A B C D E F
D5 2 0 铡闸眨栅榨咋乍炸诈摘斋宅窄债寨
D5 3 0 瞻毡詹粘沾盏斩辗崭展蘸栈占战站湛
D5 4 0 绽樟章彰漳张掌涨杖丈帐账仗胀瘴障
D5 5 0 招招找沼赵照罩兆肇召遮折哲蛰辙者
D5 6 0 褚蔗这浙珍斟真甄砧臻贞针侦枕疹疹
D5 7 0 震振镇阵蒸挣铮征狰争征整拯正政

0 1 2 3 4 5 6 7 8 9 A B C D E F
D6 2 0 帧症郑证芝枝支吱蚰知肢脂汁之织
D6 3 0 职直植殖执值侄址指止趾只旨纸志摺
D6 4 0 掷至致置帜峙制智秩稚质炙痔滞治窒
D6 5 0 中盅忠钟衷终种肿重仲众舟周洲洲
D6 6 0 粥轴肘帚咒皱宙昼骤珠株朱猪诸诸
D6 7 0 逐烛烛煮拄瞩嘱主著拄助蛀贮铸筑

0 1 2 3 4 5 6 7 8 9 A B C D E F
D7 2 0 住注祝驻抓爪拽专砖转撰赚篆桩庄
D7 3 0 装妆撞壮状椎锥追赘坠赘谆准捉拙卓
D7 4 0 桌琢茁酌啄着灼浊兹咨咨姿滋淄孜紫
D7 5 0 仔籽滓子自渍字鬃棕踪宗综总纵邹走
D7 6 0 奏揍租足卒族祖诅阻组钻纂嘴醉最罪
D7 7 0 尊遵昨左佐作做作坐座

0 1 2 3 4 5 6 7 8 9 A B C D E F
D8 2 0 于丌兀丐卅卅丕亘丞禹舛噩丨禺丿
D8 3 0 乚乇夭爻厄厄凶胤胤毓毓毓毓毓毓
D8 4 0 乩丕半李耑猥仄厓厓厓厓厓厓厓厓
D8 5 0 匚匚匚匚匚匚匚匚匚匚匚匚匚匚匚匚匚
D8 6 0 剌剌剌剌剌剌剌剌剌剌剌剌剌剌剌
D8 7 0 仞仞仞仞仞仞仞仞仞仞仞仞仞仞仞仞

0 1 2 3 4 5 6 7 8 9 A B C D E F
D9 2 0 佟仝佻佻佻佻佻佻佻佻佻佻佻佻佻
D9 3 0 倅倅倅倅倅倅倅倅倅倅倅倅倅倅倅
D9 4 0 倅倅倅倅倅倅倅倅倅倅倅倅倅倅倅
D9 5 0 倅倅倅倅倅倅倅倅倅倅倅倅倅倅倅
D9 6 0 佻佻佻佻佻佻佻佻佻佻佻佻佻佻佻
D9 7 0 充毫袤袤袤袤袤袤袤袤袤袤袤袤袤

0 1 2 3 4 5 6 7 8 9 A B C D E F
DA 2 0 崧一冢冥讠讠讠讠讠讠讠讠讠讠讠讠
DA 3 0 诌诌诌诌诌诌诌诌诌诌诌诌诌诌诌诌
DA 4 0 诌诌诌诌诌诌诌诌诌诌诌诌诌诌诌诌
DA 5 0 谄谄谄谄谄谄谄谄谄谄谄谄谄谄谄谄
DA 6 0 谄谄谄谄谄谄谄谄谄谄谄谄谄谄谄谄
DA 7 0 阼阼阼阼阼阼阼阼阼阼阼阼阼阼阼阼

0 1 2 3 4 5 6 7 8 9 A B C D E F
DB 2 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸
DB 3 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸
DB 4 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸
DB 5 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸
DB 6 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸
DB 7 0 邸邸邸邸邸邸邸邸邸邸邸邸邸邸邸

0 1 2 3 4 5 6 7 8 9 A B C D E F
DC 2 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀
DC 3 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀
DC 4 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀
DC 5 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀
DC 6 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀
DC 7 0 堀堀堀堀堀堀堀堀堀堀堀堀堀堀堀

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0 1 2 3 4 5 6 7 8 9 A B C D E F

E 9 2 0	楞 桢 椋 樟 榷 榦 榧 榫 榭 榭 榭 榭 榭 榭 榭 榭
E 9 3 0	桡 楸 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧
E 9 4 0	榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧
E 9 5 0	榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧
E 9 6 0	榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧
E 9 7 0	榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧 榧

[illegible]

0 1 2 3 4 5 6 7 8 9 A B C D E F

EB 2 0	癍攀叁叁叁叁叁叁叁叁叁叁叁叁叁叁
EB 3 0	氖氖氖氖氖氖氖氖氖氖氖氖氖氖氖氖
EB 4 0	彤育肸肸肸肸肸肸肸肸肸肸肸肸肸肸肸
EB 5 0	青肸肸肸肸肸肸肸肸肸肸肸肸肸肸肸肸
EB 6 0	豚豚豚豚豚豚豚豚豚豚豚豚豚豚豚
EB 7 0	膈膈膈膈膈膈膈膈膈膈膈膈膈膈膈

[illegible][illegible][illegible]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E F 2 0	铼	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊
E F 3 0	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈
E F 4 0	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋
E F 5 0	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌
E F 6 0	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍
E F 7 0	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈	铉	铊	铋	铌	铍	铈

[illegible][illegible]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F 2 2 0		𩚑	𩚒	𩚓	𩚔	𩚕	𩚖	𩚗	𩚘	𩚙	𩚚	𩚛	𩚜	𩚝	𩚞	𩚟
F 2 3 0		𩚠	𩚡	𩚢	𩚣	𩚤	𩚥	𩚦	𩚧	𩚨	𩚩	𩚪	𩚫	𩚬	𩚭	𩚮
F 2 4 0		𩚯	𩚰	𩚱	𩚲	𩚳	𩚴	𩚵	𩚶	𩚷	𩚸	𩚹	𩚺	𩚻	𩚼	𩚽
F 2 5 0		𩚾	𩚿	𩛀	𩛁	𩛂	𩛃	𩛄	𩛅	𩛆	𩛇	𩛈	𩛉	𩛊	𩛋	𩛌
F 2 6 0		𩛍	𩛎	𩛏	𩛐	𩛑	𩛒	𩛓	𩛔	𩛕	𩛖	𩛗	𩛘	𩛙	𩛚	𩛛
F 2 7 0		𩛜	𩛝	𩛞	𩛟	𩛠	𩛡	𩛢	𩛣	𩛤	𩛥	𩛦	𩛧	𩛨	𩛩	𩛪

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F 3 2 0	𧈧	𧈨	𧈩	𧈪	𧈫	𧈬	𧈭	𧈮	𧈯	𧈰	𧈱	𧈲	𧈳	𧈴	𧈵	𧈶
F 3 3 0	𧈷	𧈸	𧈹	𧈺	𧈻	𧈼	𧈽	𧈾	𧈿	𧉀	𧉁	𧉂	𧉃	𧉄	𧉅	𧉆
F 3 4 0	𧉇	𧉈	𧉉	𧊀	𧊁	𧊂	𧊃	𧊄	𧊅	𧊆	𧊇	𧊈	𧊉	𧊐	𧊑	𧊒
F 3 5 0	𧊓	𧊔	𧊕	𧊖	𧊗	𧊘	𧊙	𧊚	𧊛	𧊜	𧊝	𧊞	𧊟	𧊠	𧊡	𧊢
F 3 6 0	𧊣	𧊤	𧊥	𧊦	𧊧	𧊨	𧊩	𧊪	𧊫	𧊬	𧊭	𧊮	𧊯	𧊰	𧊱	𧊲
F 3 7 0	𧊳	𧊴	𧊵	𧊶	𧊷	𧊸	𧊹	𧊺	𧊻	𧊼	𧊽	𧊾	𧊿	𧋀	𧋁	𧋂

[illegible]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F 5 2 0	酢	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩	酩
F 5 3 0	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢	醢
F 5 4 0	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂
F 5 5 0	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂
F 5 6 0	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂
F 5 7 0	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂	跂

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F 6 2 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 6 3 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 6 4 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 6 5 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 6 6 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 6 7 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F 7 2 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 7 3 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 7 4 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 7 5 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 7 6 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥
F 7 7 0	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥	觥

4-4) Taiwanese Character Codes

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A140	,	\	.	.	.	.	:	:	:	:	?	!	:	:	:	:
A150	.	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
A160	~	}	}	}	}	}	}	}	}	}	}	}	}	}	}	}
A170	<	>	<	>	<	>	<	>	<	>	<	>	<	>	<	>
A180																
A190																
A1A0	{	}	{	}	{	}	{	}	{	}	{	}	{	}	{	}
A1B0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
A1C0	@	%	@	%	@	%	@	%	@	%	@	%	@	%	@	%
A1D0	-	x	÷	±	√	<	>	=	≤	≥	≠	∞	≡	=	+	-
A1E0	<	>	=	~	∪	∩	∪	∩	∪	∩	∪	∩	∪	∩	∪	∩
A1F0	♀	♂	⊕	⊗	↑	↓	←	→	↖	↗	↘	↙	↘	↙	↘	↙
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A240	\	/	\	\$	¥	千	¢	£	%	@	°	℃	°	°	°	°
A250	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
A260	肝	糖														
A270	■	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A280																
A290																
A2A0	\	/	=	≠	≠	≠	≠	≠	≠	≠	≠	≠	≠	≠	≠	≠
A2B0	1	2	3	4	5	6	7	8	9	I	II	III	IV	V	VI	VII
A2C0	VIII	IX	X	I	II	III	IV	V	VI	VII	VIII	IX	X	I	II	III
A2D0	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
A2E0	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g
A2F0	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A340	w	x	y	z	A	B	Γ	Δ	E	Z	H	Θ	I	K	Λ	M
A350	N	Ξ	O	Π	P	Σ	T	Τ	Φ	X	Ψ	Ω	α	β	γ	δ
A360	ε	ζ	η	θ	ι	κ	λ	μ	ν	ξ	ο	π	ρ	σ	τ	υ
A370	φ	χ	ψ	ω	ς	ς	ς	ς	ς	ς	ς	ς	ς	ς	ς	ς
A380																
A390																
A3A0	レ	ク	ト	出	夕	尸	冂	冂	ち	ム	丫	己	己	己	己	己
A3B0	レ	ク	ト	出	夕	尸	冂	冂	ち	ム	丫	己	己	己	己	己
A3C0																
A3D0																
A3E0																
A3F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A440	一	乙	丁	七	乃	九	了	二	人	儿	入	八	几	刀	刁	力
A450	匕	十	卜	又	三	下	丈	上	丫	丸	凡	久	么	也	乞	于
A460	亡	兀	刀	勺	千	叉	口	土	士	夕	大	女	子	子	子	子
A470	小	尤	尸	山	川	工	己	己	己	己	己	己	己	己	己	己
A480																
A490																
A4A0	丑	丐	不	中	丰	丹	之	尹	予	云	井	互	五	亢	仁	
A4B0	什	什	什	仇	仍	今	介	仄	元	允	内	六	兮	公	公	凶
A4C0	分	切	刈	勾	勾	勾	化	匹	午	升	卅	卅	卅	卅	卅	卅
A4D0	反	王	夫	太	夭	孔	少	尤	尺	屯	巴	幻	甘	弔	引	心
A4E0	戈	户	手	扎	支	文	斗	斤	方	日	月	木	欠	止	歹	
A4F0	毋	比	毛	氏	水	火	爪	父	爻	片	牙	牛	犬	王	丙	
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A540	世	丕	且	丘	主	乍	乏	乎	以	付	仔	仕	他	仗	代	令
A550	仙	仃	充	兄	冉	冉	冉	冉	冉	冉	冉	冉	冉	冉	冉	冉
A560	匪	仃	半	卉	卡	占	卯	扈	去	可	古	右	召	叩	叩	叩
A570	叨	司	叵	叫	另	只	史	叱	台	句	叭	叻	四	因	外	
A580																
A590																
A5A0	央	失	奴	奶	孕	它	尼	巨	巧	左	市	布	平	幼	弁	
A5B0	弘	弗	必	戎	打	扔	扒	扑	斥	旦	朙	本	未	未	札	正
A5C0	母	民	氏	永	汁	汀	汜	汜	汜	汜	汜	汜	汜	汜	汜	汜
A5D0	田	由	甲	申	疋	白	皮	皿	目	矛	矢	石	示	禾	穴	立
A5E0	丞	丢	兵	兵	乱	互	交	亦	亥	仿	伙	伙	伙	伙	伙	伙
A5F0	休	伏	仲	件	任	仰	低	份	企	伋	光	晃	兆	先	全	
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A640	共	再	冰	列	刑	划	划	划	划	划	划	划	划	划	划	划
A650	同	吊	吐	吁	吁	吁	吁	吁	吁	吁	吁	吁	吁	吁	吁	吁
A660	圳	地	在	圭	圪	圪	圪	圪	圪	圪	圪	圪	圪	圪	圪	圪
A670	如	灼	字	存	宇	宇	宅	安	寺	尖	吃	州	帆	并	年	
A680																
A690																
A6A0	式	弛	忙	付	戎	戎	戎	戎	戎	戎	戎	戎	戎	戎	戎	戎
A6B0	旭	曲	曳	有	朽	朴	朱	朵	次	此	死	氛	汝	汗	江	
A6C0	池	汐	汕	污	汎	汎	汎	汎	汎	汎	汎	汎	汎	汎	汎	汎
A6D0	羽	老	考	而	来	耳	聿	肉	肋	肌	臣	自	至	白	舌	舛
A6E0	舟	艮	色	艾	虫	血	行	衣	西	阡	串	亨	位	住	伫	佗
A6F0	佞	伴	佛	何	估	佐	佑	伽	伺	伸	佃	估	似	但	佃	
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A740	作	你	伯	低	伶	余	佻	佻	佻	佻	佻	佻	佻	佻	佻	佻
A750	判	判	判	判	判	判	判	判	判	判	判	判	判	判	判	判
A760	吠	吧	呆	呃	吴	呈	吕	君	盼	告	吹	吻	吸	吮	吮	吮
A770	吠	吼	呀	吱	含	吟	听	囡	困	困	困	困	困	困	困	困
A780																
A790																
A7A0	均	坎	圾	坐	坏	圻	壯	夾	妝	妒	妨	姐	姘	妙	妖	
A7B0	妍	妍	妓	姘	姘	姘	姘	姘	姘	姘	姘	姘	姘	姘	姘	姘
A7C0	尾	岐	岑	岔	岷	巫	希	序	底	床	廷	弄	弟	躬	形	仿
A7D0	役	忘	忌	志	忍	忧	快	忤	忤	忤	忤	忤	忤	忤	忤	忤
A7E0	抉	扭	把	扭	把	扭	把	扭	把	扭	把	扭	把	扭	把	扭
A7F0	攻	攸	早	更	束	李	杏	材	村	杜	杖	杞	杉	杆	杆	

0123456789ABCDEF

AS40 杓采步每求承沙沁沈沉沉沛汪决沐汰
AS50 沌汨冲没汽沃汲汾汴汧汨汩汨汨汨
AS60 灼炎灸牢牡牝狄狂玖甬甫男甸皂叮矣
AS70 私秀秃究系罕岗育肝肘肛肚育良芒
AS80
AS90
ASAA 芋芍見角言谷豆豕貝赤走足身車辛
ASAB 辰迂迤迅迄巡邑邢邪邦那酉采里防阮
ASAC 阱阨阮並乖乳事些亞享京佯依侍佳使
ASAD 佬供例來侃佰併侈佩侑侑侑侑侑侑
ASE0 兒兒兩具其典函刻券刷刺剌刮制剝
ASFF 劬劬卒協卓卑卦卷卸卹取叔受味呵

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A940 咖吓咕咀咄咄咄咄咄咄咄咄咄咄咄
A950 周咋命咎固垠垠垠垠垠垠垠垠夜奉奇
A960 奈奄奔妾妻委妹妮姑姆姐姍始姓姊姊
A970 姍姍姍姍姍姍姍姍姍姍姍姍姍姍姍
A980
A990
A9AA 屈岷岡岸岩岫岱岳帝帝帖帕帛帛幸
A9AB 庚店府底庖延弦弧弩往征佛彼忝忽忽
A9AC 念忿快怔怯怖怪怕怡性昵佛但或戕
A9AD 房戾所承拉拌拄抵拂拂拒招披拓拔拋
A9AE 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈
A9AF 拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈拈

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AA10 昇服朋杭枋枕東果杏杷枇枝林怀杰板
AA50 枉松析杵杵杵杵杵杵杵杵杵杵杵杵
AA60 注泳沱泌泥河沽沽沼波沫法泓沸泄油
AA70 況沮泗泗洑沿治泡泛泊沫泯泯泯泯
AA80
AA90
AAAA 炕炎炒炊炙爬爭爸版牧物狀狎狙狗
AAAB 狐玩玗玗玗玗玗玗玗玗玗玗玗玗玗玗
AAAC 社祀祁秉利空穹竺糾罔羌半者肺肥肢
AAD0 肱股肱肱肱肱肱肱肱肱肱肱肱肱肱
AAE0 芹花芬芥苾苾苾苾苾苾苾苾苾苾苾
AAFF 返近邵邸邱邸邱采金長門阜陀阿阻附

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AB10 陂佳兩青非亟亭亮信侵侯便俠倘倘保
AB50 促侶俘俟倭俗侮徇俄徇徇徇徇徇徇
AB60 冑冠剎剎剎剎剎剎剎剎剎剎剎剎剎剎
AB70 厚叛咬哀咨哎哉咸噉咳哇晒咽咪品
AB80
AB90
ABAA 哄哈咯思咱咻咻咻咻咻咻咻咻咻咻
ABAB 城垮垮突契奏奎奘姜姘姿姘姘姘姘
ABAC 姚姦威姻孩宜宦室客有封屎屏屍屋峙
ABAD 峒巷帝帥帶幽庠度建穿彗彗彗彗彗
ABAE 徇徇徇徇徇徇徇徇徇徇徇徇徇徇徇
ABFF 恫恫恫恫恫恫恫恫恫恫恫恫恫恫恫

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AC40 拯括拾拴挑挂政故斫施既春昭映昧是
AC50 星昨昱矜曷柿染柱柔某東架枯柵柵柵
AC60 柄柑枏柚查枸柏柞柳枰枰柢柢柢柢
AC70 殆段毒毗氣泉洋洲洪流津洌洌洌洌
AC80
AC90
ACAA 活洽派洵洛泵洵洵洵洵洵洵洵洵洵
ACAB 為炳烜烜烜烜烜烜烜烜烜烜烜烜烜
ACAC 珊玻玲珍珀玢基甬畏界畎改疫瘡疥
ACAD 疣癰皆皇飯盆盆盆盆盆盆相眉看盾盼
ACE0 眇矜砂研砌砍祚祉祈祗禹禹科秒秋穿
ACFF 突竿竿籽紂紂紅紂紂紂紂紂紂紂紂

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AD10 耐耍崙耶胙胙胙胙胙胙胙胙胙胙胙胙
AD50 致舢孖范茅苜苜苜苜苜苜苜苜苜苜
AD60 苜苜苜苜苜苜苜苜苜苜苜苜苜苜苜
AD70 計訂訃貞負赴赴赴赴赴赴赴赴赴赴
AD80
AD90
ADAA 迭迫迨迨迨迨迨迨迨迨迨迨迨迨迨
ADAB 降面革韋非音貢風飛食首香乘毫倍倍
ADAC 倣倣倣倣倣倣倣倣倣倣倣倣倣倣倣
ADAD 倣倣倣倣倣倣倣倣倣倣倣倣倣倣倣
ADE0 豕凍凌淮涸割割割割割割割割割割
ADFF 唐喧喧喧喧喧喧喧喧喧喧喧喧喧喧

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AE10 哦唧唇哽唏團團團團團團團團團團
AE50 娑娘娜娑娑娑娑娑娑娑娑娑娑娑娑娑
AE60 害家宴宮宵容宸射屨屨屨屨屨屨屨
AE70 峰島坎峴差席師庫庭座弱徒徑徐恙
AES0
AE90
AEAA 恣恥恐怨恭恩恩恩恩恩恩恩恩恩
AEAB 扇拳擊拿揜揜揜揜揜揜揜揜揜揜揜
AEAC 挫揜揜揜揜揜揜揜揜揜揜揜揜揜揜
AED0 晁晁晁晁晁晁晁晁晁晁晁晁晁晁晁
AEFF 桌桑栽柴桐桤桤桤桤桤桤桤桤桤桤

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AF10 湮涉浮淩浴浩涌潏潏潏潏潏潏潏潏
AF50 烈烏爹特狼狽狽狽狽狽狽狽狽狽狽
AF60 畔畝畜畜畜畜畜畜畜畜畜畜畜畜畜畜
AF70 咆益盍盍盍盍盍盍盍盍盍盍盍盍盍
AF80
AF90
AFA0 砥砥砥砥砥砥砥砥砥砥砥砥砥砥砥
AFAB 秣秣秣秣秣秣秣秣秣秣秣秣秣秣
AFAC 素素純紐紐紐紐紐紐紐紐紐紐紐
AFAD 耘耕耙耗耽耽耽耽耽耽耽耽耽耽
AFAE 能脊胛胛胛胛胛胛胛胛胛胛胛胛胛胛
AFF0 荊荊荊荊荊荊荊荊荊荊荊荊荊荊荊

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 B040 虔蚊蚪蚪蚤蚩蚌蚣蛭蛭蛭蛭袂袂袂袂祇祇記
 B050 訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃訃
 B060 躬軒軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀軀
 B070 郡郝郢酒配酌釘針釧釜針閃院陣陸
 B080
 B090
 B0A0 陞陞除陞陞陞飢馬骨高門隔鬼乾僭
 B0B0 偽停假僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂僂
 B0C0 儗儗兜冕凰剪副勒務勒勒勒勒勒勒勒勒勒勒勒勒
 B0D0 匾參曼商啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲啲
 B0E0 啤唸售噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉
 B0F0 埠埠基堂堵執堵執堵執堵執堵執堵執堵執堵執堵執

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 B140 娼婢娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼娼
 B150 屨屨崇崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕崕
 B160 常帶帳帷康康康康康康康康康康康康康康康康康康
 B170 徒從俳御徠徠徠徠徠徠徠徠徠徠徠徠徠徠徠徠徠徠
 B180
 B190
 B1A0 情悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵悵
 B1B0 掠控捲掖揆揆揆揆揆揆揆揆揆揆揆揆揆揆揆揆揆揆
 B1C0 推掄授掙採掬排掬揆揆揆揆揆揆揆揆揆揆揆揆揆
 B1D0 教敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗敗
 B1E0 晤晨晦晞曹翕望梁梯梯梯梯梯梯梯梯梯梯梯梯梯
 B1F0 梗械挺棄梭梭梭梭梭梭梭梭梭梭梭梭梭梭梭梭梭梭梭

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 B240 毫毳氤氤涼涼涼涼涼涼涼涼涼涼涼涼涼涼涼涼涼涼
 B250 涯淑澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗澗
 B260 深淮淨潯潯潯潯潯潯潯潯潯潯潯潯潯潯潯潯潯潯
 B270 犁猜猛獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮
 B280
 B290
 B2A0 瓷甜產略哇畢異疏痔痕疵痊痼痼痼痼痼痼痼痼痼
 B2B0 盒盛眷眾眼睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭睭
 B2C0 窳笠笨筭第筭筭筭筭筭筭筭筭筭筭筭筭筭筭筭筭筭
 B2D0 紹緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋緋
 B2E0 粗聊聆脯脰脰脰脰脰脰脰脰脰脰脰脰脰脰脰脰脰脰
 B2F0 莞莘莘莢莢莢莢莢莢莢莢莢莢莢莢莢莢莢莢莢莢

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 B340 莆莧處處蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇蛇
 B350 袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈袈
 B360 訖訖豚販賣賣賣賣賣賣賣賣賣賣賣賣賣賣賣賣賣賣
 B370 道逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋逋
 B380
 B390
 B3A0 部郭都鄙野釵釵釵釵釵釵釵釵釵釵釵釵釵釵釵釵釵釵
 B3B0 陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸陸
 B3C0 鹿麥麻傢傍傳傳傳傳傳傳傳傳傳傳傳傳傳傳傳傳傳
 B3D0 創刺勞勝助博勝勝勝勝勝勝勝勝勝勝勝勝勝勝勝勝
 B3E0 喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪喪
 B3F0 喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫喫

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 B440 婷媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚媚
 B450 嵐嵐嵒巽巽巽巽巽巽巽巽巽巽巽巽巽巽巽巽巽巽巽
 B460 循徨惑惡悲悶惠慳慳慳慳慳慳慳慳慳慳慳慳慳慳
 B470 悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞悞
 B480
 B490
 B4A0 插揣提握提握提握提握提握提握提握提握提握提握
 B4B0 敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦敦
 B4C0 替期朝棺棕棠棘棗椅棗椅棗椅棗椅棗椅棗椅棗椅棗
 B4D0 棗棋棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍棍
 B4E0 毯氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣氣
 B4F0 湘渤湖溼溼溼溼溼溼溼溼溼溼溼溼溼溼溼溼溼溼溼

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 B540 溉渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙渙
 B550 牌椅犀猶猴猴猴猴猴猴猴猴猴猴猴猴猴猴猴猴猴
 B560 琛琦琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨琨
 B570 皖皓皴盜陋陋陋陋陋陋陋陋陋陋陋陋陋陋陋陋陋
 B580
 B590
 B5A0 窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗窗
 B5B0 粥絞結絨絕紫紫紫紫紫紫紫紫紫紫紫紫紫紫紫紫紫
 B5C0 臺肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱肱
 B5D0 菩萃菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸菸
 B5E0 菽菲菊葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵葵
 B5F0 蛤蚬蚬街裁裂袂罩視註詠評詞詠詠詠詠詠詠詠詠詠

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 B640 詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔
 B650 賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀賀
 B660 跽軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻軻
 B670 酥量鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔鈔
 B680
 B690
 B6A0 間間間間間間間間間間間間間間間間間間間間間
 B6B0 集雇雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲雲
 B6C0 黃黍黑亂備備備備備備備備備備備備備備備備備備
 B6D0 剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗剗
 B6E0 嗣噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉噉
 B6F0 塔填塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌塌

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 B740 媳嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂嫂
 B750 感想愛惹惹惹惹惹惹惹惹惹惹惹惹惹惹惹惹惹惹
 B760 戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡戡
 B770 搆敬斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟斟
 B780
 B790
 B7A0 楚楷楠楔極極極極極極極極極極極極極極極極極極
 B7B0 楣楷歐歐歐歐歐歐歐歐歐歐歐歐歐歐歐歐歐歐歐
 B7C0 滅溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥溥
 B7D0 煩煤煉照煬煬煬煬煬煬煬煬煬煬煬煬煬煬煬煬煬
 B7E0 獅猿猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓
 B7F0 痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰痰

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BS40 睹睪睪睪睪睪矮碎碰碗硯碌硯硯硯
BS50 確硯祺祿禁萬禽稜稚稠稔稔稔窠窠窠
BS60 節筠筵筵梁梗粵經綢綢綢綢綢置置罪
BS70 署義羨群聖聘肆肆腿腰腸腥腥腳腫
BS80
BS90
BSA0 腹腺腦舅艇蒂葦落萱葵葦葫葉莽葛
BSB0 萼萼萼萼萼萼萼虞虞號蛹螟螟蛭蜀蛾
BSC0 蛻蜂蜃蜃蛻蛻蛻蛻蛻蛻蛻蛻蛻蛻蛻
BSD0 親解詫該詳詩詰誇詠詠詠詠詠詠詠
BSE0 詮詬詹詬詹詬詹詬詬詬詬詬詬詬詬
BSF0 賂賂跟跨路跳路跳路跳路跳路跳路跳

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B940 辟農運遊道遂達遘遘遘遘遘遘遘遘遘
B950 遁鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒鄒
B960 鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞鉞
B970 雷電電零靖軌軌預預預預預預預預預
B980
B990
B9A0 飽飾馳駛駟駟駟駟駟駟駟駟駟駟駟
B9B0 僭僭僭僭僭僭僭僭僭僭僭僭僭僭僭僭
B9C0 嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛嘛
B9D0 塵墊境基墊墊墊墊墊墊墊墊墊墊墊墊
B9E0 嫩嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵
B9F0 屢屢屢屢屢屢屢屢屢屢屢屢屢屢屢屢

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BA40 愿態慷慢憊憊憊憊憊憊憊憊憊憊憊
BA50 摺摺摺摺摺摺摺摺摺摺摺摺摺摺摺摺
BA60 槁槁槁槁槁槁槁槁槁槁槁槁槁槁槁槁
BA70 歉歌氤漳演演演演演演演演演演演
BA80
BA90
BAA0 滿滯漆漱漸漲漣漣漣漣漣漣漣漣漣
BAB0 滌滌滌滌滌滌滌滌滌滌滌滌滌滌滌滌
BAC0 瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰瑰
BAD0 磔磔磔磔磔磔磔磔磔磔磔磔磔磔磔磔
BAE0 箋箋箋箋箋箋箋箋箋箋箋箋箋箋箋
BAF0 綾綾綾綾綾綾綾綾綾綾綾綾綾綾綾

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BB40 罰翠翳翳聞聚肇腐勝膏膈膈膈膈膈
BB50 與與與與與與與與與與與與與與與
BB60 莧莧莧莧莧莧莧莧莧莧莧莧莧莧莧莧
BB70 裴裴裴裴裴裴裴裴裴裴裴裴裴裴裴
BB80
BB90
BBA0 說詬詬詬詬詬詬詬詬詬詬詬詬詬詬詬
BBB0 趕踴輔輒輒輒輒輒輒輒輒輒輒輒輒輒輒輒
BBC0 鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧鄧
BBD0 鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗
BBE0 詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔詔
BBF0 鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶鳶

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BC40 劇劈劉劍劍劍劍劍劍劍劍劍劍劍劍
BC50 嘆噴嘶嘶嘶嘶嘶嘶嘶嘶嘶嘶嘶嘶嘶
BC60 嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋嬋
BC70 廚廟廟廟廟廟廟廟廟廟廟廟廟廟廟
BC80
BC90
BCA0 感慰愆愆愆愆愆愆愆愆愆愆愆愆愆愆
BCB0 摯摯摯摯摯摯摯摯摯摯摯摯摯摯摯摯
BCC0 標標標標標標標標標標標標標標標
BCD0 潼潼潼潼潼潼潼潼潼潼潼潼潼潼潼
BCE0 膝膝膝膝膝膝膝膝膝膝膝膝膝膝膝
BCF0 膝膝膝膝膝膝膝膝膝膝膝膝膝膝膝

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BD40 瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾瑾
BD50 瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋瞋
BD60 窠窠窠窠窠窠窠窠窠窠窠窠窠窠窠窠
BD70 絨絨絨絨絨絨絨絨絨絨絨絨絨絨絨
BD80
BD90
BDA0 廟廟廟廟廟廟廟廟廟廟廟廟廟廟廟
BDB0 蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗蝗
BDC0 請請請請請請請請請請請請請請請
BDD0 賞賞賞賞賞賞賞賞賞賞賞賞賞賞賞
BDE0 踴踴踴踴踴踴踴踴踴踴踴踴踴踴踴踴
BDF0 踴踴踴踴踴踴踴踴踴踴踴踴踴踴踴踴

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BE40 輓適適適適適適適適適適適適適適
BE50 銷銷銷銷銷銷銷銷銷銷銷銷銷銷銷
BE60 霰霰霰霰霰霰霰霰霰霰霰霰霰霰霰霰
BE70 駛駛駛駛駛駛駛駛駛駛駛駛駛駛駛
BE80
BE90
BEA0 駛駛駛駛駛駛駛駛駛駛駛駛駛駛駛
BEB0 剽剽剽剽剽剽剽剽剽剽剽剽剽剽剽剽
BEC0 壁壁壁壁壁壁壁壁壁壁壁壁壁壁壁
BED0 憶憶憶憶憶憶憶憶憶憶憶憶憶憶憶
BEE0 擒擒擒擒擒擒擒擒擒擒擒擒擒擒擒
BEF0 樹樹樹樹樹樹樹樹樹樹樹樹樹樹樹

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BF40 濃澤濁濁濁濁濁濁濁濁濁濁濁濁濁
BF50 燕燕燕燕燕燕燕燕燕燕燕燕燕燕燕
BF60 瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴瘴
BF70 穆穆穆穆穆穆穆穆穆穆穆穆穆穆穆
BF80
BF90
BFA0 縑縑縑縑縑縑縑縑縑縑縑縑縑縑縑
BFB0 膩膩膩膩膩膩膩膩膩膩膩膩膩膩膩
BFC0 甥甥甥甥甥甥甥甥甥甥甥甥甥甥甥
BFD0 諱諱諱諱諱諱諱諱諱諱諱諱諱諱諱
BFE0 賴賴賴賴賴賴賴賴賴賴賴賴賴賴賴
BFF0 逦逦逦逦逦逦逦逦逦逦逦逦逦逦逦逦

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 7 1 0 エ オ オ カ ガ キ ギ グ ケ ケ コ ゴ サ ザ シ
0 7 5 0 ジ ス ズ セ ゼ ソ ゾ タ ダ チヂ ッ ツ ツ テ デ
0 7 6 0 ト ド ナ ニ ヌ ネ ノ ハ バ ビ ヒ ビ ピ フ プ フ
0 7 7 0 ヘ ベ ペ ホ ボ ボ マ ミ ム メ モ ヤ ユ ユ
0 7 8 0
0 7 9 0
0 7 A 0
0 7 B 0 ヱ ヨ ラ リ ル レ ロ ヲ ヱ エ ャ ャ ャ ャ
0 7 C 0 ケ デ ェ Ж З И Й К Л М У Ф Х Ц Ч
0 7 D 0 Ш Щ Ъ Ы Ь Э Ю Я а б в г д е ё ж
0 7 E 0 з и й к л м н о п р с т у ф х ц
0 7 F 0 ч щ ъ ѣ ю я ① ② ③ ④ ⑤ ⑥ ⑦
⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

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CS40
CS50
CS60
CS70
CS80
CS90
CSA0
CSB0
CSC0
CSD0
CSE0
CSF0

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C940
C950
C960
C970
C980
C990
C9A0
C9B0
C9C0
C9D0
C9E0
C9F0

承汎汎汎汎汎王内肪防伎优促件伉
伶份价仙佻佻佻佻佻佻佻佻佻佻佻
荔匿匿匿匿匿匿匿匿匿匿匿匿匿匿
妯妯妯妯妯妯妯妯妯妯妯妯妯妯妯
伙伙伙伙伙伙伙伙伙伙伙伙伙伙伙
机机机机机机机机机机机机机机机

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CA40
CA50
CA60
CA70
CA80
CA90
CAA0
CAB0
CAC0
CAD0
CAE0
CAF0

洲初初初初初初初初初初初初初初
而而而而而而而而而而而而而而而
任任任任任任任任任任任任任任任
勉勉勉勉勉勉勉勉勉勉勉勉勉勉勉
畔畔畔畔畔畔畔畔畔畔畔畔畔畔畔
峯峯峯峯峯峯峯峯峯峯峯峯峯峯峯
岼岼岼岼岼岼岼岼岼岼岼岼岼岼岼
庠庠庠庠庠庠庠庠庠庠庠庠庠庠庠
伙伙伙伙伙伙伙伙伙伙伙伙伙伙伙
扰扰扰扰扰扰扰扰扰扰扰扰扰扰扰

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CB40
CB50
CB60
CB70
CB80
CB90
CBA0
CBB0
CBC0
CBD0
CBE0
CBF0

棧林机机机机机机机机机机机机机机
沏沏沏沏沏沏沏沏沏沏沏沏沏沏沏沏
初初初初初初初初初初初初初初初
疙疙疙疙疙疙疙疙疙疙疙疙疙疙疙
芊芊芊芊芊芊芊芊芊芊芊芊芊芊芊
院院院院院院院院院院院院院院院
佻佻佻佻佻佻佻佻佻佻佻佻佻佻佻佻
佻佻佻佻佻佻佻佻佻佻佻佻佻佻佻佻
刳刳刳刳刳刳刳刳刳刳刳刳刳刳刳
啡啡啡啡啡啡啡啡啡啡啡啡啡啡啡
困困困困困困困困困困困困困困困

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CC40
CC50
CC60
CC70
CC80
CC90
CCA0
CCB0
CCC0
CCD0
CCE0
CCF0

坨坨坨坨坨坨坨坨坨坨坨坨坨坨坨
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泫泫泫泫泫泫泫泫泫泫泫泫泫泫泫泫

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CD50
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CD80
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CDA0
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CDC0
CDD0
CDE0
CDF0

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脑脑脑脑脑脑脑脑脑脑脑脑脑脑脑
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偃偃偃偃偃偃偃偃偃偃偃偃偃偃偃偃
剡剡剡剡剡剡剡剡剡剡剡剡剡剡剡

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CE40
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CEA0
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啊啊啊啊啊啊啊啊啊啊啊啊啊啊啊
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岼岼岼岼岼岼岼岼岼岼岼岼岼岼岼
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晃晃晃晃晃晃晃晃晃晃晃晃晃晃晃

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CFA0
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CFC0
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柜柜柜柜柜柜柜柜柜柜柜柜柜柜柜
秩秩秩秩秩秩秩秩秩秩秩秩秩秩秩
柎柎柎柎柎柎柎柎柎柎柎柎柎柎柎柎
洩洩洩洩洩洩洩洩洩洩洩洩洩洩洩洩
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猓猓猓猓猓猓猓猓猓猓猓猓猓猓猓
珞珞珞珞珞珞珞珞珞珞珞珞珞珞珞
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	0 1 2 3 4 5 6 7 8 9 A B C D E F
D810	鈇鈇鈇鈇鈇閏閏陟陟陟陶陶陟鈇鈇煩鈇
D850	廋俗倅倅倅倅倅倅倅倅倅倅倅倅倅倅倅
D860	𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐
D870	𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐
D880	
D890	
D8A0	埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤
D8B0	埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤埤
D8C0	𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐
D8D0	𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐
D8E0	𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐𪔐
D8F0	

0123456789A B C D E F
 D940 憚憖憣憤憥憦憧憨憩憪憫憬憭憮憯憰憱憲憳憴憵憶憷憸憹憺憻憼
 D950 憾憿憽憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿
 D960 憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿
 D970 憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿憿
 D980
 D990
 D9A0
 D9B0
 D9C0
 D9D0
 D9E0
 D9F0

[illegible][illegible][illegible][illegible][illegible]

O I 2 3 4 5 6 7 8 9 A B C D E F

D F 4 O 捆綸窳寇冢凵筭笄篴筌簞筇筈筊筱柞
D F 5 O 茶箐箬荻檉檕親錦緋練絛綠縷綿絕繞
D F 6 O 綃繡絡紱統紹鋤纓戩野駮電覈玗瑁璫
D F 7 O 甅勑脂腊脰肭腠膾膂膣膶膺腹豚暇腍膪
D F 8 O
D F 9 O
D F A O 腫膧壘臏觥舂解酲萍洁莖萆蒔菡蓂
D F B O 箭封落葵藝劫策葛蔓葦相咸威勃馘莨藟前
D F C O 管煎葦昨蕙菱植萩堯蒹蒎苒蒯萬望倭篇
D F D O 律蕊紅約流派菅菁薜蒼蘭衰趙昨香侵僂
D F E O 蔎蓋娘蟻蛛跼蛭蚘蜚螳螂蜻蝀蜈蚣蛇蜂餘
D F F O 蚯裋袪裡袿祝褰裴袂襖勒觀跽航能

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	Q123456789ABCDEF
E110	澌劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓劓
E150	詔喏喏喏喏喏喏喏喏喏喏喏喏喏喏喏喏喏喏喏
E160	璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋璋
E170	嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵嫵
E180	
E190	
E1A0	寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤寤
E1B0	強強強強強強強強強強強強強強強強強強強強強強
E1C0	彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰彰
E1D0	惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟惟
E1E0	掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘掘
E1F0	

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0123456789ABCDEF
 ES10 踔踔踔踔踔踔踔踔踔踔踔踔踔踔踔踔
 ES50 遶遶遶遶遶遶遶遶遶遶遶遶遶遶遶遶
 ES60 醣醣鎡銀鎡銀鎡銀鎡銀鎡銀鎡銀鎡銀鎡銀
 ES70 鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤
 ES80
 ES90
 ESA0 鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄鑄
 ES30 靚靚靚靚靚靚靚靚靚靚靚靚靚靚靚靚
 ESC0 裝裝裝裝裝裝裝裝裝裝裝裝裝裝裝裝
 ESD0 駢駢駢駢駢駢駢駢駢駢駢駢駢駢駢駢
 ESE0 魃魃魃魃魃魃魃魃魃魃魃魃魃魃魃魃
 ESF0 庶庶庶庶庶庶庶庶庶庶庶庶庶庶庶庶

0123456789ABCDEF
 E910 嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖嘖
 E950 壘壘壘壘壘壘壘壘壘壘壘壘壘壘壘壘
 E960 嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠嶠
 E970 廡廡廡廡廡廡廡廡廡廡廡廡廡廡廡廡廡
 E980
 E990
 E9A0 傲傲傲傲傲傲傲傲傲傲傲傲傲傲傲傲
 E9B0 敵敵敵敵敵敵敵敵敵敵敵敵敵敵敵敵
 E9C0 檣檣檣檣檣檣檣檣檣檣檣檣檣檣檣檣
 E9D0 嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽嶽
 E9E0 歎歎歎歎歎歎歎歎歎歎歎歎歎歎歎歎歎
 E9F0 潞潞潞潞潞潞潞潞潞潞潞潞潞潞潞潞

0123456789ABCDEF
 EA10 漚漚漚漚漚漚漚漚漚漚漚漚漚漚漚漚
 EA50 榮榮榮榮榮榮榮榮榮榮榮榮榮榮榮榮
 EA60 獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮獮
 EA70 瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕瘕
 EA80
 EA90
 EAA0 鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴鳴
 EAB0 糜糜糜糜糜糜糜糜糜糜糜糜糜糜糜糜
 EAC0 質質質質質質質質質質質質質質質質
 EAD0 緝緝緝緝緝緝緝緝緝緝緝緝緝緝緝緝
 EAE0 尉尉尉尉尉尉尉尉尉尉尉尉尉尉尉尉
 EAF0 膾膾膾膾膾膾膾膾膾膾膾膾膾膾膾膾

0123456789ABCDEF
 EB10 棘棘棘棘棘棘棘棘棘棘棘棘棘棘棘棘
 EB50 復復復復復復復復復復復復復復復復
 EB60 蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭蛭
 EB70 褊褊褊褊褊褊褊褊褊褊褊褊褊褊褊褊
 EB80
 EB90
 EBA0 譚譚譚譚譚譚譚譚譚譚譚譚譚譚譚譚
 EBB0 諠諠諠諠諠諠諠諠諠諠諠諠諠諠諠諠
 EBC0 蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠蹠
 EBD0 遶遶遶遶遶遶遶遶遶遶遶遶遶遶遶遶
 EBE0 銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕
 EBF0 鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞鈞

0123456789ABCDEF
 EC10 鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤鋤
 EC50 鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗
 EC60 醇醇醇醇醇醇醇醇醇醇醇醇醇醇醇醇
 EC70 髹髹髹髹髹髹髹髹髹髹髹髹髹髹髹髹
 ECS0
 EC90
 ECA0 鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗鉗
 ECB0 宣宣宣宣宣宣宣宣宣宣宣宣宣宣宣宣
 ECC0 噤噤噤噤噤噤噤噤噤噤噤噤噤噤噤噤
 ECD0 駢駢駢駢駢駢駢駢駢駢駢駢駢駢駢駢
 ECE0 愍愍愍愍愍愍愍愍愍愍愍愍愍愍愍愍
 ECF0 觸觸觸觸觸觸觸觸觸觸觸觸觸觸觸觸

0123456789ABCDEF
 ED10 聚聚聚聚聚聚聚聚聚聚聚聚聚聚聚聚
 ED50 濛濛濛濛濛濛濛濛濛濛濛濛濛濛濛濛
 ED60 煇煇煇煇煇煇煇煇煇煇煇煇煇煇煇煇
 ED70 甌甌甌甌甌甌甌甌甌甌甌甌甌甌甌甌
 EDS0
 ED90
 EDA0 臨臨臨臨臨臨臨臨臨臨臨臨臨臨臨臨
 EDB0 襪襪襪襪襪襪襪襪襪襪襪襪襪襪襪襪
 EDC0 箝箝箝箝箝箝箝箝箝箝箝箝箝箝箝箝
 EDD0 縞縞縞縞縞縞縞縞縞縞縞縞縞縞縞縞
 EDE0 縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵
 EDF0 縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵縵

0123456789ABCDEF
 EE10 積積積積積積積積積積積積積積積積
 EE50 奮奮奮奮奮奮奮奮奮奮奮奮奮奮奮奮
 EE60 蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪蟪
 EE70 螳螳螳螳螳螳螳螳螳螳螳螳螳螳螳螳
 EE80
 EE90
 EEA0 譚譚譚譚譚譚譚譚譚譚譚譚譚譚譚譚
 EEB0 謚謚謚謚謚謚謚謚謚謚謚謚謚謚謚謚
 EEC0 輶輶輶輶輶輶輶輶輶輶輶輶輶輶輶輶
 EED0 銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕
 EEE0 銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕銕
 EFF0 闔闔闔闔闔闔闔闔闔闔闔闔闔闔闔闔

0123456789ABCDEF
 EF10 鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞鞞
 EF50 餽餽餽餽餽餽餽餽餽餽餽餽餽餽餽餽
 EF60 弱弱弱弱弱弱弱弱弱弱弱弱弱弱弱弱
 EF70 銘銘銘銘銘銘銘銘銘銘銘銘銘銘銘銘
 EFS0
 EF90
 EFA0 鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝鴝
 EFB0 駸駸駸駸駸駸駸駸駸駸駸駸駸駸駸駸駸
 EFC0 吳吳吳吳吳吳吳吳吳吳吳吳吳吳吳吳
 EFD0 儀儀儀儀儀儀儀儀儀儀儀儀儀儀儀儀
 EFE0 檣檣檣檣檣檣檣檣檣檣檣檣檣檣檣檣
 EFF0 潞潞潞潞潞潞潞潞潞潞潞潞潞潞潞潞

0 1 2 3 4 5 6 7 8 9 A B C D E F

F 140 曉譽聯熾熾熾熾廊徕徕徕徕擦撻撻撻撻撻
F 150 隴曉囉櫬櫬櫬櫬櫬櫬櫬櫬櫬櫬櫬櫬櫬
F 160 瀾潏潏潏潏潏潏潏潏潏潏潏潏潏潏潏潏
F 170 瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵瞵
F 180
F 190
F 1A0
F 1B0
F 1C0
F 1D0
F 1E0
F 1F0

禡禡禡禡禡禡禡禡禡禡禡禡禡禡禡禡禡
禡翻睜睜睜睜睜睜睜睜睜睜睜睜睜睜睜睜
禡衡藥藥藥藥藥藥藥藥藥藥藥藥藥藥藥
禡詠詠詠詠詠詠詠詠詠詠詠詠詠詠詠詠
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[illegible][illegible]

O I 2 3 4 5 6 7 8 9 A B C D E F

F 7 4 O 鎢榮鑪罈穽腥腫莖韋絳蕤堇璫瓏璹
F 7 5 O 螢蜚窻觀靨諠詡譟讐謔護躑踴躍蹕
F 7 6 O 蹤踉跄暱輶軛鄮鑽鏊鐙鑿鋅鋒鏘錞
F 7 7 O 銼犵獨頰顒庭甾隊駭騁驍騙駸駢
F 7 8 O
F 7 9 O
F 7 A O 駣驛馱腩髻鬲薺越魃鯀鱗鰓經鉦
F 7 B O 𧯂餬餘儼繁錯餘鶻鷃鸷鴝鵒鸜鴛
F 7 C O 驚鶯驚羆署黨畢翹頸毖謁覬齎龔鈌
F 7 D O 橫剝塋墉靜嫵嶽虞憂僥慢撫操鑑管
F 7 E O 倮樂櫛諧濶澆烝漸癉瀝滉暗遂簋饒
F 7 F O 蘇萊腐蔞藎稊稊瑛礪濁螺漚襍綈

4-5) Korean Character Codes

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A1A0																
A1B0																
A1C0																
A1D0																
A1E0																
A1F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A2A0																
A2B0																
A2C0																
A2D0																
A2E0																
A2F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A3A0																
A3B0																
A3C0																
A3D0																
A3E0																
A3F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A4A0																
A4B0																
A4C0																
A4D0																
A4E0																
A4F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A5A0																
A5B0																
A5C0																
A5D0																
A5E0																
A5F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A6A0																
A6B0																
A6C0																
A6D0																
A6E0																
A6F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A7A0																
A7B0																
A7C0																
A7D0																
A7E0																
A7F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A8A0																
A8B0																
A8C0																
A8D0																
A8E0																
A8F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A9A0																
A9B0																
A9C0																
A9D0																
A9E0																
A9F0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
AAA0																
AAB0																
AAC0																
AAD0																
AAE0																
AAF0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
ABA0																
ABB0																
ABC0																
ABD0																
ABE0																
ABF0																

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
ACA0																
ACB0																
ACC0																
ACD0																
ACE0																
ACF0																

0 1 2 3 4 5 6 7 8 9 A B C D E F
 ADA0
 ADB0
 ADC0
 ADD0
 ADE0
 ADF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 AFA0
 AFB0
 AFC0
 AFD0
 AFE0
 AFF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 AFA0
 AFB0
 AFC0
 AFD0
 AFE0
 AFF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 BOA0
 BOB0
 BOC0
 BOD0
 BOE0
 BOF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B1A0
 B1B0
 B1C0
 B1D0
 B1E0
 B1F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B2A0
 B2B0
 B2C0
 B2D0
 B2E0
 B2F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B3A0
 B3B0
 B3C0
 B3D0
 B3E0
 B3F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B4A0
 B4B0
 B4C0
 B4D0
 B4E0
 B4F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B5A0
 B5B0
 B5C0
 B5D0
 B5E0
 B5F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B6A0
 B6B0
 B6C0
 B6D0
 B6E0
 B6F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B7A0
 B7B0
 B7C0
 B7D0
 B7E0
 B7F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
 B8A0
 B8B0
 B8C0
 B8D0
 B8E0
 B8F0

[illegible]

0 1 2 3 4 5 6 7 8 9 A B C D E F
C5A0 킴킴킴킴큐큐쿨쿨크크큰큰클클클클
C5B0 키킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C5C0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C5D0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C5E0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C5F0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴

CBA0
CBB0
CBC0
CBD0
CBE0
CBF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
C6A0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C6B0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C6C0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C6D0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C6E0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C6F0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴

0 1 2 3 4 5 6 7 8 9 A B C D E F
CCA0
CCB0
CCC0
CCD0
CCE0
CCF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
C7A0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C7B0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C7C0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C7D0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C7E0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C7F0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴

0 1 2 3 4 5 6 7 8 9 A B C D E F
CDA0
CDB0
CDC0
 added CDD0
CDE0
CDF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
C8A0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C8B0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C8C0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C8D0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C8E0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴
C8F0 킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴킴

0 1 2 3 4 5 6 7 8 9 A B C D E F
CEA0
CEB0
CEC0
 added CED0
CED0
CFF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
C9A0
C9B0
C9C0
C9D0
C9E0
C9F0

0 1 2 3 4 5 6 7 8 9 A B C D E F
CFA0
CFB0
 added CFC0
CFC0
 added CFD0
CFD0
 added CFE0
CFE0
 added CFF0
CFF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
CAA0
CAB0
CAC0
CAD0
CAE0
CAF0

0 1 2 3 4 5 6 7 8 9 A B C D E F
DDA0
 added DDB0
DDB0
 added DDC0
DDC0
 added DDD0
DDD0
 added DDE0
DDE0
 added DDF0
DDF0

	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D1A0		D7A0	
D1B0		D7B0	
D1C0		D7C0	
D1D0		D7D0	
D1E0		D7E0	
D1F0		D7F0	
	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D2A0		D8A0	
D2B0		D8B0	
D2C0		D8C0	
D2D0		D8D0	
D2E0		D8E0	
D2F0		D8F0	
	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D3A0		D9A0	
D3B0		D9B0	
D3C0		D9C0	
D3D0		D9D0	
D3E0		D9E0	
D3F0		D9F0	
	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D4A0		DA A0	
D4B0		DAB0	
D4C0		DAC0	
D4D0		DAD0	
D4E0		DAE0	
D4F0		DAF0	
	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D5A0		DBA0	
D5B0		DBB0	
D5C0		DBC0	
D5D0		DBD0	
D5E0		DBE0	
D5F0		DBF0	
	0 1 2 3 4 5 6 7 8 9 A B C D E F		0 1 2 3 4 5 6 7 8 9 A B C D E F
D6A0		DCA0	
D6B0		DCB0	
D6C0		DCC0	
D6D0		DCD0	
D6E0		DCE0	
D6F0		DCF0	

0 1 2 3 4 5 6 7 8 9 A B C D E F

DDA0
DDB0
DDC0
DDD0
DDE0
DDF0

E3A0
E3B0
E3C0
E3D0
E3E0
E3F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

DEA0
DEB0
DEC0
DED0
DEE0
DEF0

E4A0
E4B0
E4C0
E4D0
E4E0
E4F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

DFA0
DFB0
DFC0
DFD0
DFE0
DFF0

E5A0
E5B0
E5C0
E5D0
E5E0
E5F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

EOA0
EOB0
EOC0
EOD0
EOE0
EOF0

E6A0
E6B0
E6C0
E6D0
E6E0
E6F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

E1A0
E1B0
E1C0
E1D0
E1E0
E1F0

E7A0
E7B0
E7C0
E7D0
E7E0
E7F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

E2A0
E2B0
E2C0
E2D0
E2E0
E2F0

E8A0
E8B0
E8C0
E8D0
E8E0
E8F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

E9A0
E9B0
E9C0
E9D0
E9E0
E9F0

EFA0
EFB0
EFC0
EFD0
EFE0
EFF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

EAA0
EAB0
EAC0
EAD0
EAE0
EAF0

FOA0
FOB0
FOC0
FOD0
FOE0
FOF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

EBA0
EBB0
EBC0
EBD0
EBE0
EBF0

F1A0
F1B0
F1C0
F1D0
F1E0
F1F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

ECA0
ECB0
ECC0
ECD0
ECE0
ECF0

F2A0
F2B0
F2C0
F2D0
F2E0
F2F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

EDA0
EDB0
EDC0
EDD0
EDE0
EDF0

F3A0
F3B0
F3C0
F3D0
F3E0
F3F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

EEA0
EEB0
EEC0
EED0
EEF0
EFF0

F4A0
F4B0
F4C0
F4D0
F4E0
F4F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

F5A0
F5B0
F5C0
F5D0
F5E0
F5F0

FBA0
FBB0
FBC0
FBD0
FBE0
FBF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

FGA0
FGB0
FGC0
FGD0
FGE0
FGF0

FCA0
FCB0
FCC0
FCD0
FCE0
FCF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

F7A0
F7B0
F7C0
F7D0
F7E0
F7F0

FDA0
FDB0
FDC0
FDD0
FDE0
FDF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

F8A0
F8B0
F8C0
F8D0
F8E0
F8F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

F9A0
F9B0
F9C0
F9D0
F9E0
F9F0

0 1 2 3 4 5 6 7 8 9 A B C D E F

FAA0
FAB0
FAC0
FAD0
FAE0
FAF0

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

0 1 2 3 4 5 6 7 8 9 A B C D E F

5. APPENDIX

5-1) Appendix 1: Bar code specification details

Refer to the dedicated manuals for characteristics and methods of use for each bar code symbol. This section describes precautions and methods for setting when printing with the printer.

Bar code widths are set for each bar code according to the mode. The following describes each mode and the dot counts.

The user must ensure the specified printing position and quiet zone at the position where the bar code begins.

5-1-1) Code 39

Code 39 represents numbers 0 to 9 and the letters of the alphabet from A to Z. These are the symbols most frequently used today in industry.

1. Length of characters in each mode

Items	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7	Mode 8	Mode 9
Narrow Element Width	2 dots	3 dots	4 dots	2 dots	3 dots	4 dots	2 dots	3 dots	4 dots
Wide Element Width	6 dots	9 dots	12 dots	5 dots	8 dots	10 dots	4 dots	6 dots	8 dots
Ratio	1:3	1:3	1:3	1:2.5	1:2.7	1:2.5	1:2	1:2	1:2
Character Spacing	2 dots	3 dots	4 dots	2 dots	3 dots	4 dots	2 dots	3 dots	4 dots
Length of 1 Character	4 mm	6 mm	8 mm	3.625 mm	5.625 mm	7.25 mm	3.25 mm	4.875 mm	6.5 mm

(*) The length of 1 character includes the character spacing.

2. Regulations

The start and stop bar code (*) in Code 39 are automatically inserted.

5-1-2) Interleaved 2 of 5

Interleaved 2 of 5 represents numbers 0 to 9. Higher density of characters is possible and with JIS and EAN, and printing to cardboard for distribution has been standardized.

1) Narrow element width and length of symbols per 2 characters

Items	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7	Mode 8	Mode 9
Narrow Element Width	2 dots	4 dots	6 dots	2 dots	4 dots	6 dots	2 dots	3 dots	4 dots
Wide Element Width	5 dots	10 dots	15 dots	4 dots	8 dots	12 dots	6 dots	9 dots	12 dots
Ratio	1:2.5	1:2.5	1:2.5	1:2	1:2	1:2	1:3	1:3	1:3
Length of 1 Character	4mm	8mm	12mm	3.5mm	7mm	10.5mm	4.5mm	6.75mm	9mm

2. Regulations

- By selecting interleaved 2 of 5 bar code symbols, start and stop patterns are automatically inserted.
- When the bar code data digit count is odd, a zero is added to the highest value digit.
- Details conform to standards for AIM, USS-12/5, ANSI and JIS x 0502.

5-1-3) JAN/EAN/UPC

Used numbers, not only the bar code symbols, are controlled using JAN, EAN and UPC as shared common commercial codes. Mainly, they are used for supermarkets such as shops and grocery stores.

1. Each mode and bar code width

Items		Mode 1	Mode 2	Mode 3
Module Width		2 dots	3 dots	4 dots
Bar code width (*)	JAN/EAN-8	16.75 mm	25.125 mm	33.5 mm
	JAN/EAN-13	23.75 mm	35.625 mm	47.5 mm
	UPC-A	23.75 mm	35.625 mm	47.5 mm
	UPC-E	12.75 mm	19.125 mm	25.5 mm

(*) Includes the guard bar (left/right/center) but not the white space.

2. Regulations

- JAN/EAN -8:
 - Data is in 7 or 8 digits. The command is ignored for others.
 - The check digit uses a modulus weight of 10/3 and is automatically applied.
 - When the calculated value and the numerical value of the 8th digit differ, the calculated value has priority.
- JAN/EAN -13:
 - Data is in 12 or 13 digits. The command is ignored for others.
 - The check digit uses a modulus weight of 10/3 and is automatically applied.
 - When the calculated value and the numerical value of the 13th digit differ, the calculated value has priority.
- UPC – A:
 - Data is in 11 or 12 digits. The command is ignored for others.
 - The check digit uses a modulus weight of 10/3 and is automatically applied.
 - When the calculated value and the numerical value of the 12th digit differ, the calculated value has priority.
- UPC – E:
 - Data is in 11 or 12 digits. The command is ignored for others.
 - The check digit uses a modulus weight of 10/3 and is automatically applied.
 - When the calculated value and the numerical value of the 12th digit differ, the calculated value has priority.
 - Data conversion to rectangles is automatic.
 - Data that cannot be shortened is processed as invalid data.

5-1-4) Code 128

These are bar code symbols that can print ASCII 128 characters. For that reason, use thereof is increasing.

1. Each module and module width

Items	Mode 1	Mode 2	Mode 3
Module Width	2 dots	3 dots	4 dots
Length of 1 Character (*)	2.75 mm	4.125 mm	5.5 mm

(*) Start and stop bars not included.

2. Regulations

When using <LF> with the command, control codes are not sent by the host PC, so the control codes are sent as data, as shown below.

- When sending the following data, it represents a 2 character set.
% (25H) represents %0 (25H 30H).
Control codes (00H to 1FH) represent 40H to 5FH applied behind %.
- Control code (7FH) represents %5 (25H 35H).
- Function codes represent 1 to 4 (31H to 34H) applied behind %.
- Start codes represent 6 to 8 (36H to 38H) applied behind %.
- Stop code (SC)/Check character (CK) are automatically applied.
- When start code is omitted:
Uses START C when more than 4 digits continue after header.
Uses START A when initial data other than numbers are the control code.
Uses START B for other cases.

• 2 Character set code table

<Control Codes>

<Control Codes>	
Code	Format
NUL 00H	%@ 25H 40H
SHO 01H	%A 25H 41H
STX 02H	%B 25H 42H
ETX 03H	%C 25H 43H
EOT 04H	%D 25H 44H
ENQ 05H	%E 25H 45H
ACK 06H	%F 25H 46H
BEL 07H	%G 25H 47H
BS 08H	%H 25H 48H
HT 09H	%I 25H 49H
LF 0AH	%J 25H 4AH
VT 0BH	%K 25H 4BH
FF 0CH	%L 25H 4CH
CR 0DH	%M 25H 4DH
SO 0EH	%N 25H 4EH
SI 0FH	%O 25H 4FH
DLE 10H	%P 25H 50H
DC1 11H	%Q 25H 51H
DC2 12H	%R 25H 52H
DC3 13H	%S 25H 53H
DC4 14H	%T 25H 54H
NAK 15H	%U 25H 55H
SYN 16H	%V 25H 56H
ETB 17H	%W 25H 57H
CAN 18H	%X 25H 58H
EM 19H	%Y 25H 59H
SUB 1AH	%Z 25H 5AH
ESC 1BH	%[25H 5BH
FC 1CH	%\ 25H 5CH
GS 1DH	%] 25H 5DH
RS 1EH	%^ 25H 5EH
US 1FH	%_ 25H 5FH
DEL 7FH	%5 25H 35H

<Control Codes>	
Code	Format
% 25H	%0 25H 30H

<Function Codes>	
Code	Format
FNC1	%1 25H 31H ☆
FNC2	%2 25H 32H ☆
FNC3	%3 25H 33H ☆
FNC4	%4 25H 34H ☆

<Start Codes>	
Code	Format
START A	%6 25H 36H ☆
START B	%7 25H 37H ☆
START C	%8 25H 38H ☆

5-1-5) Code 93

1. Each mode and module width

Items	Mode 1	Mode 2	Mode 3
Module Width	2 dots	3 dots	4 dots
Length of 1 Character (*)	2.25 mm	3.375 mm	4.5 mm

(*) Start and stop bars not included.

2. Regulations

- Start/stop codes are automatically applied.
 - Check character (C, K) is automatically applied.
 - 2 character set expression conforms to Code 128.
- However, items marked with a star are codes that can only be used with Code 128, and not with Code 93.

5-1-6) NW7 (CODERBAR)

NW7 normally uses either A through D as the start/stop codes and represents special symbols (- (minus sign)/\$ (dollar sign)/: (colon)// (slash)/. (period)/+ (plus sign) between 0 to 9.

These are used as carrier package marking bar codes, DPE (photo prints) and for medical related industries (USA).

1. Length of 1 character in each mode

Items	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7	Mode 8	Mode 9
Narrow Element Width	2	3	4	2	3	4	2	3	4
Wide Element Width	6	9	12	5	8	10	4	6	8
Ratio	1:3	1:3	1:3	1:2.5	1:2.7	1:2.5	1:2	1:2	1:2
Character Spacing (Dots)	2	3	4	2	3	4	2	3	4
Length of 1 Character (Normally mm) (Width mm)	3 3.5	4.5 5.25	6 7	2.75 3.125	4.25 5.125	5.5 6.25	2.5 2.75	3.75 4.125	5 5.5

- With NW7, lengths differ because narrow elements and wide elements are included according to the characters.
- Normal characters (narrow: 5, wide: 2) and numbers (0 to 9), - and \$
- Wide characters (narrow: 4, wide: 3) □, /, ., +, A to D
- Character spaces are included in 1 character length.

5-2) Appendix 2: Status Specifications

5-2-1) ENQ Command Status

This status is the one the printer transmits using the ENQ command.

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Conversion SW	OPEN	CLOSE	OK	OK	OK	No		
6	Overrun Error	No	Yes	OK	OK	OK	OK		
5	Reception Buffer Empty	Has Data	Empty	OK	OK	OK	OK		
4	Fixed at 0		-	-	-	-	-		
3	Paper end	Paper	No Paper	OK	OK	OK	OK		
2	Other Errors	No	Yes	OK	OK	OK	OK		
1	Framing Error	No	Yes	OK	OK	OK	OK		
0	Parity Error	No	Yes	OK	OK	OK	OK		

- Overrun errors/Framing errors/Parity errors

These errors occur when using a serial I/F.

These errors are after holding the error and using this command to inquire the status and the error status is sent.

- Other Errors

Indicates non-recoverable errors and cover open errors.

5-2-2) EOT Command Status

This status is the one the printer transmits using the EOT command.

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Fixed at 0		-	-	-	-	-		
6	Presenter Paper Jam Error	No	Yes	No	No	No	OK		
5	Paper Near-end (Outer Side)	Paper	No Paper	No	No	No	No		
4	Fixed at 1		-	-	-	-	-		
3	Paper end	Paper	No Paper	OK	OK	OK	OK		
2	Paper Near-end (Inner Side)	Paper	No Paper	OK	OK	OK	OK		
1	BINDING MEDIA Error	No	Yes	No	No	No	OK		
0	Fixed at 0		-	-	-	-	-		

- BM Error

On models that use a common PE and BM sensor, if a continuous error is detected beyond a determined amount, it indicates not a black mark error, but a paper out error.

5-2-3) Automatic Status

Automatic status is a group of states that are automatically returned from the printer to the host when the printer's status has changed. Automatic status is composed of "Header – 1," "Header – 2" and "plurality of bytes of the printer status and is continuously returned to the host. The host always uses an identifying method to identify the data for every byte received.

(It is possible that Xon/Xoff codes are exceptionally mixed in the automatic status in the Xon/Xoff mode (when using a serial I/F), so it is necessary to consider that on the receiving side.)

The valid/invalid conditions of the automatic status abide by the DIPSW settings for the initial values.

It is possible to change the conditions using the ESC RS a n command after turning ON the power.

Also, it is possible to get the automatic status using the ESC ACK SOH command, regardless of the valid/invalid conditions.

1. Header – 1

Header – 1 is the 1 byte length information transmitted at the head of the automatic status.

The table below shows the composition of the Header – 1. Header – 1 represents the entire status transmission byte count, including Header – 1, using bit 1 to bit 3 and bit 5. The host gets the transmission byte information and always receives the status data for that amount transmission bytes. For reference, the table below shows the relationship of actual transmission bytes and the Header – 1. Because the bit 0 that indicates that this is the Header – 1 is normally 1 (the second byte and beyond is 0), to detect the Header – 1, it is acceptable to verify that bit 0 is 1 and bit 4 = 0 for this data. Note that bit 6 is for future expansion and is ignored in host-side processes.

<Header – 1 (First Byte)>

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Fixed at 0		-	-	-	-	-		
6	Reserved (Fixed at 0)		-	-	-	-	-		
5	Printer Status Byte Count			OK	OK	OK	OK		
4	Fixed at 0		-	-	-	-	-		
3	Printer Status Byte Count			OK	OK	OK	OK		
2	Printer Status Byte Count			OK	OK	OK	OK		
1	Printer Status Byte Count			OK	OK	OK	OK		
0	Fixed at 1	-		-	-	-	-		

Actual transmission byte count and header – 1 table

Transmission Byte Count n (7 ≤ n ≤ 15)	Header – 1
7	00001111B (0F Hex)
8	00100001B (21 Hex)
9	00100011B (23 Hex)
10	00100101B (25 Hex)
11	00100111B (27 Hex)
12	00101001B (29 Hex)
13	00101011B (2B Hex)
14	00101101B (2D Hex)
15	00101111B (2F Hex)

2. Header -2

Header -2 is the 1 byte length information transmitted from the second byte of the automatic status. The table below shows the composition of the Header -2.

Header -2 represents the automatic status version (called automatic status version below) using bit 1 to bit 3 and bit 5.

For reference, the table below shows the relationship of actual version bytes and the Header -2. The automatic status version will be used as new information is added to the printer status bit positions that were empty, by adding new functions in the future.

When the host does not control the automatic status version, it is acceptable to ignore Header -2 received.

<Header -2 (Second Byte)>

Bit	Contents	Status		Model Compatability							
		"0"	"1"	TSP800	TSP700	TSP600	TUP900				
7	Fixed at 0		-	-	-	-	-				
6	Not Used (Fixed at 0)		-	-	-	-	-				
5	Version No.			OK	OK	OK	OK				
4	Fixed at 0		-	-	-	-	-				
3	Version No.			OK	OK	OK	OK				
2	Version No.			OK	OK	OK	OK				
1	Version No.			OK	OK	OK	OK				
0	Fixed at 0	-		-	-	-	-				

Actual automatic status version and header -2 table

Version No. n	Header -2
1	00000010B (02 Hex)
2	00000100B (04 Hex)
3	00000110B (06 Hex)
4	00001000B (08 Hex)
5	00001010B (0A Hex)
6	00001100B (0C Hex)
7	00001110B (0E Hex)
8	00100000B (20 Hex)
9	00100010B (22 Hex)
•	•
•	•
•	•
30	01101100B (6C Hex)
31	01101110B (6E Hex)

Printer Status Version

Model Name	Version No.	Status
TSP800	1 (02 Hex)	Up to printer status 5 (7 th byte) loaded
	1 (02 Hex)	Up to printer status 6 (8 th byte) loaded, Ver 4.0 and later
	3 (06 Hex)	Up to printer status 7 (9 th byte) loaded, Ver 4.3 and later
TSP700	1 (02 Hex)	Up to printer status 5 (7 th byte) loaded
	1 (02 Hex)	Up to printer status 6 (8 th byte) loaded, Ver 3.0 and later
	3 (06 Hex)	Up to printer status 7 (9 th byte) loaded, Ver 3.2 and later
TSP600	1 (02 Hex)	Up to printer status 5 (7 th byte) loaded
	1 (02 Hex)	Up to printer status 6 (8 th byte) loaded, Ver 3.0 and later
	3 (06 Hex)	Up to printer status 7 (9 th byte) loaded, Ver 3.2 and later
TUP900	2 (04 Hex)	Up to printer status 6 (8 th byte) loaded
	3 (06 Hex)	Up to printer status 7 (9 th byte) loaded, Ver 1.2 and later

• Printer Status

Printer status is the status of the printer sent from the third byte of the automatic status.

Printer status is returned for (transmitted byte count – 2 in Header – 1).

Printer status is always updated for new information. (No log exists.) The following shows the composition of the status.

<Printer status 1 Printer status (Third Byte)>

Bit	Contents	Status		Model Compatability							
		"0"	"1"	TSP800	TSP700	TSP600	TUP900				
7	Fixed at 0		-	-	-	-	-				
6	OFFLINE By Switch Input	No	Yes	No	No	No	No				
5	Cover Status	Closed	Open	OK	OK	OK	OK				
4	Fixed at 0		-	-	-	-	-				
3	ONLINE/OFFLINE Status	ONLINE	OFFLINE	OK	OK	OK	OK				
2	Conversion SW	Open	Closed	OK	OK	OK	No				
1	<ETB> Command	Not Executed	Executed	OK	OK	OK	OK				
0	Fixed at 0		-	-	-	-	-				

• <ETB> Command

Cleared when received at the host (by clearing bit 1 to 0, automatic status is not targeted to occur).

<Printer status 2 Error Information (Fourth Byte)>

Bit	Contents	Status		Model Compatability							
		"0"	"1"	TSP800	TSP700	TSP600	TUP900				
7	Fixed at 0		-	-	-	-	-				
6	Stopped by high head temperature	Not stopped	Stopped	OK	OK	OK	OK				
5	Non-recoverable Error	No	Yes	OK	OK	OK	OK				
4	Fixed at 0		-	-	-	-	-				
3	Auto-cutter Error	No	Yes	OK	OK	OK	OK				
2	Mechanical Error	No	Yes	No	No	No	No				
1	Not Used (Fixed at 0)			-	-	-	-				
0	Fixed at 0		-	-	-	-	-				

<Printer status 3 Error Information (Fifth Byte)>

Bit	Contents	Status		Model Compatability							
		"0"	"1"	TSP800	TSP700	TSP600	TUP900				
7	Fixed at 0		-	-	-	-	-				
6	Receive Buffer Overflow	No	Yes	OK	OK	OK	OK				
5	Command Error (in Page Mode)	No	Yes	OK	No	No	No				
4	Fixed at 0		-	-	-	-	-				
3	BM Error	No	Yes	No	No	No	OK				
2	Presenter Paper Jam Error	No	Yes	No	No	No	OK				
1	Head Up Error	No	Yes	No	No	No	No				
0	Fixed at 0		-	-	-	-	-				

• Receive Buffer Overflow

Overflow errors cleared to 0 when returned to host.

• Command Error (in Page Mode)

Command errors cleared to 0 when returned to host.

• BM Error

On models that use a common PE and BM sensor, if a continuous error is detected beyond a determined amount, it indicates not a black mark error, but a paper out error.

<Printer status 4 Sensor Information (Sixth Byte)>

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Fixed at 0		-	-	-	-	-		
6	Not Used (Fixed at 0)		-	-	-	-	-		
5	Not Used (Fixed at 0)		-	-	-	-	-		
4	Fixed at 0		-	-	-	-	-		
3	Paper end	Paper	No Paper	OK	OK	OK	OK		
2	Paper Near-end (Inner Side)	Paper	No Paper	OK	OK	OK	OK		
1	Paper Near-end (Outer Side)	Paper	No Paper	No	No	No	No		
0	Fixed at 0		-	-	-	-	-		

<Printer status 5 Sensor Information (Seventh Byte)>

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Fixed at 0		-	-	-	-	-		
6	Not Used (Fixed at 0)		-	-	-	-	-		
5	Not Used (Fixed at 0)		-	-	-	-	-		
4	Fixed at 0		-	-	-	-	-		
3	Slip BOF Detector	Paper	No Paper	No	No	No	No		
2	Slip TOF Detector	Paper	No Paper	No	No	No	No		
1	Presenter Paper Detector	No Paper	Paper	No	No	No	No		
0	Fixed at 0		-	-	-	-	-		

<Printer status 6 ETB Counter (Eighth Byte)>

Bit	Contents	Status		Model Compatability					
		"0"	"1"	TSP800	TSP700	TSP600	TUP900		
7	Fixed at 0		-	-	-	-	-		
6	ETB Counter Bit-4			OK	OK	OK	OK		
5	ETB Counter Bit-3			OK	OK	OK	OK		
4	Fixed at 0		-	-	-	-	-		
3	ETB Counter Bit-2			OK	OK	OK	OK		
2	ETB Counter Bit-1			OK	OK	OK	OK		
1	ETB Counter Bit-0			OK	OK	OK	OK		
0	Fixed at 0		-	-	-	-	-		

(*) ETB Counter

This counter is the 5 bit ETB counter.

(It counts from 0 to 31. When the counter overflows, it counts up from 31 to 0.)

This counter is incremented by 1 using the <ETB> command.

The ETB counter is initialized by the following commands. When doing so, ASB ETB status is cleared.

However, when initializing the ETB counter, ASB is not transmitted.

<ETB Counter Initialization Commands>

- <ESC> <RS> e n : ETB Counter Initialization
- <CAN> : Cancel print data and initialize commands

<Printer status 7 Position for Presenter Paper (Ninth Byte)>

Bit	Contents	Status		By model						
		“0”	“1”	TSP800	TSP700	TSP600	TUP900 Ver. 1.2 or later			
7	Fixed at 0		-	-	-	-	-			
6	Not Used (Fixed at 0)		-	O	O	O	O			
5	Not Used (Fixed at 0)		-	O	O	O	O			
4	Fixed at 0		-	-	-	-	-			
3	Presenter Paper Position	(See table below)		O	O	O	O			
2	Presenter Paper Position	(See table below)		O	O	O	O			
1	Presenter Paper Position	(See table below)		O	O	O	O			
0	Fixed at 0		-	-	-	-	-			

- This status is valid only on models provided with a presenter. Models not provided with a presenter should send this status fixed at 0.
- This status is made valid and invalid using the memory switch only on models provided with a presenter.
When valid, the presenter paper position status is updated, but when invalide, the presenter paper position status is fixed at 0 and there is no change in status.

• Details of the Presenter Paper Position

bit 3	bit 2	bit 1	Presenter Paper Position
0	0	0	Paper position 0 State where there is no paper in presenter
0	0	1	Paper position 1 State where paper is supplied (loop state)
0	1	0	Paper position 2 (Reserved)
0	1	1	Paper position 3 State where paper is discharged (Can be pulled out)
1	0	0	Paper position 4 (Reserved)
1	0	1	Paper position 5 (Reserved)
1	1	0	Paper position 6 State where paper is recovered
1	1	1	Paper position 7 State where paper is pulled out.

• Presenter operation mode: Paper position status transition

Operating Mode	Paper	Presenter paper position state transition
Loop Take-up Internal recovery	Recovery	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper recovery) to Position 6 to Position 0
	Pull out	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 7 to Position 0
Loop Take-up Front Discharge	Recovery	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 6 to Position 0
	Pull out	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 7 to Position 0
No Loop Internal recovery	Recovery	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 6 to Position 0
	Pull out	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 7 to Position 0
No Loop Front Discharge	Recovery	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 6 to Position 0
	Pull out	Position 0 to Position 1 to (Paper cut) to Position 3 to (Paper pull out) to Position 7 to Position 0
Recovery Invalid	Recovery	Position 0 to Position 1 to (Paper cut) to Position 6 to Position 0
	Pull out	Position 0 to Position 1 to (Paper cut) to Position 6 to Position 0

<Note>

Do not use ENQ, EOT, ESC, ACK and SOH when automatic status is valid. Invalidate the automatic status in advance using the DIPSW (memory switch) or the ESC RS a n command to query these.

Status identification method

Command/Functions	Status							
	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
XON	0	0	0	1	0	0	0	1
XOFF	0	0	0	1	0	0	1	1
ENQ	*	*	*	0	*	*	*	*
EOT	*	*	*	1	*	*	*	0
ASB (Header – 1)	0	*	*	0	*	*	*	1
ASB (Other than Header – 1)	0	*	*	0	*	*	*	0

Indicates 0 bit is fixed at 0/Indicates 1 is fixed at 1/Indicates * variable bit.

5-3) Appendix 3: Blank Code Page Configuration

Blank code pages are character code tables that are empty from character code 80H to FFH. They can be specified using the command below.

- ESC GS t n (n=255)

Also, it is possible to write data to the blank code page area using the command below.

- ESC GS =

1. Example configuration of Font A data. (12 x 24 font)

	MSB				LSB			
d1								
d3								
d5								
d7								
d9								
d11								
d13								
d15								
d17								
d19								
d21								
d23								
d25								
d27								
d29								
d31								
d33								
d35								
d37								
d39								
d41								
d43								
d45								
d47								

	MSB				LSB			
d2					0	0	0	0
d4					0	0	0	0
d6					0	0	0	0
d8					0	0	0	0
d10					0	0	0	0
d12					0	0	0	0
d14					0	0	0	0
d16					0	0	0	0
d18					0	0	0	0
d20					0	0	0	0
d22					0	0	0	0
d24					0	0	0	0
d26					0	0	0	0
d28					0	0	0	0
d30					0	0	0	0
d32					0	0	0	0
d34					0	0	0	0
d36					0	0	0	0
d38					0	0	0	0
d40					0	0	0	0
d42					0	0	0	0
d44					0	0	0	0
d46					0	0	0	0
d48					0	0	0	0

Fig. A-1 12 x 24 Font

6. SPECIAL APPENDIX COMMAND LIST BY MODEL

Standard Commands

Class	Commands	Model Name					
		TSP800	TSP700	TSP600	TUP900		
Font style And Character set	ESC GS t	OK	OK	OK	OK		
	ESC GS =	V 3.0 or later	OK	OK	OK		
	ESC R	OK	OK	OK	OK		
	ESC /	OK	OK	OK	OK		
	ESC SP	OK	OK	OK	OK		
	ESC M	OK	OK	OK	OK		
	ESC P	OK	OK	OK	OK		
	ESC :	OK	OK	OK	OK		
	ESC p (not recommended)	OK	OK	OK	OK		
Character expansion setting	ESC g	Spec. A	Spec. A	Spec. A	Spec. B		
	ESC □	OK	OK	OK	OK		
	ESC W	OK	OK	OK	OK		
	ESC h	OK	OK	OK	OK		
	SO	OK	OK	OK	OK		
	DC4	OK	OK	OK	OK		
	ESC SO	OK	OK	OK	OK		
	ESC DC4	OK	OK	OK	OK		
Print mode	ESC E	OK	OK	OK	OK		
	ESC F	OK	OK	OK	OK		
	ESC -	OK	OK	OK	OK		
	ESC _	OK	OK	OK	OK		
	ESC 4	OK	OK	OK	OK		
	ESC 5	OK	OK	OK	OK		
	S□	OK	OK	OK	OK		
	DC2	OK	OK	OK	OK		
Line spacing	LF	OK	OK	OK	OK		
	CR	OK	OK	OK	OK		
	ESC a	OK	OK	OK	OK		
	ESC z	OK	OK	OK	OK		
	ESC 0	OK	OK	OK	OK		
	ESC J	OK	OK	OK	OK		
	ESC I	OK	OK	OK	OK		

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
Page control	FF	OK	OK	OK	OK			
	ESC C	OK	OK	OK	OK			
	ESC C 0	OK	OK	OK	OK			
	VT	OK	OK	OK	OK			
	ESC B	OK	OK	OK	OK			
Horizontal direction position	ESC 1	Spec. A	Spec. A	Spec. A	Spec. B			
	ESC Q	Spec. A	Spec. A	Spec. A	Spec. B			
	HT	OK	OK	OK	OK			
	ESC D	OK	OK	OK	OK			
	ESC GS A	OK	OK	OK	OK			
	ESC GS R	OK	OK	OK	OK			
	ESC GS a	OK	OK	OK	OK			
Download	ESC &	OK	OK	OK	OK			
	ESC %	OK	OK	OK	OK			
Bit image Graphics	ESC K	OK	OK	OK	OK			
	ESC L	OK	OK	OK	OK			
	ESC k	OK	OK	OK	OK			
	ESC X	OK	OK	OK	OK			
Logo	ESC FS q	OK	OK	OK	OK			
	ESC FS p	OK	OK	OK	OK			
Bar codes	ESC b	Spec. A	Spec. A	Spec. A	Spec. B			
Cutter control	ESC d	OK	OK	OK	OK			
External device Drive	ESC BEL	OK	OK	OK	No			
	BEL	OK	OK	OK	No			
	FS	OK	OK	OK	No			
	SUB	OK	OK	OK	No			
	EM	OK	OK	OK	No			
Print settings	ESC RS d	OK	OK	OK	OK			
	ESC RS r	OK	OK	OK	OK			
Status	ESC RS a	OK	OK	OK	OK			
	ESC ACK SOH	OK	OK	OK	OK			
	ENQ	OK	OK	OK	OK			
	EOT	OK	OK	OK	OK			

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
Chinese characters	ESC p	OK	OK	OK	OK			
	ESC q	OK	OK	OK	OK			
	ESC \$	OK	OK	OK	OK			
	ESC s	OK	OK	OK	OK			
	ESC t	OK	OK	OK	OK			
	ESC r	Spec. A	Spec. A	Spec. A	Spec. B			
Others	CAN	OK	OK	OK	OK			
	ESC @	OK	OK	OK	OK			
	ESC GS #	Spec. A V 3.0 or later	Spec. A	Spec. A	Spec. B			
	EOT	OK	OK	OK	OK			

(*) Chinese character commands

- Chinese character control commands are ignored on printers not installed with Chinese character fonts (those intended for overseas).
- All Chinese character control commands are ignored if the specification for the location of use is specified as SBCS (single byte countries) by the memory switch.

• Raster related commands

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
Raster	ESC * r R	Ver. 2.0 or later	OK	OK	OK			
	ESC * r A	Ver. 2.0 or later	OK	OK	OK			
	ESC * r B	Ver. 2.0 or later	OK	OK	OK			
	ESC * r C	Ver. 2.0 or later	OK	OK	OK			
	ESC * r D	Ver. 2.0 or later	OK	OK	No			
	ESC * r E	Spec. A Ver. 2.0 or later	Spec. A	Spec. A	Spec. B			
	ESC * r F	Spec. A Ver. 2.0 or later	Spec. A	Spec. A	Spec. B			
	ESC * r P	Ver. 2.0 or later	OK	OK	OK			
	ESC * r Q	Ver. 2.0 or later	OK	OK	OK			
	ESC * r m l	Ver. 2.0 or later	OK	OK	OK			
	ESC * r m r	Ver. 2.0 or later	OK	OK	OK			
	ESC * r T	Ver. 2.0 or later	OK	OK	OK			
	ESC * r K	Ver. 2.0 or later	OK	OK	OK			
	b n1 n2 d1...dk	Ver. 2.0 or later	OK	OK	OK			
	k n1 n2 d1...dk	Ver. 2.0 or later	OK	OK	OK			
	ESC FF NUL	Ver. 2.0 or later	OK	OK	OK			
	ESC EOT NUL	Ver. 2.0 or later	OK	OK	OK			

• Black mark related commands

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
Black mark related commands	ESC d	OK	OK	OK	OK			
	FF	OK	OK	OK	OK			
	ESC C	OK	OK	OK	OK			
	ESC C 0	OK	OK	OK	OK			
	VT	OK	OK	OK	OK			
	ESC B	OK	OK	OK	OK			
	ESC N	OK	OK	OK	No			
	ESC O	OK	OK	OK	No			

• 2 color printing related commands

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
2 color printing related commands	ESC RS c	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	OK			
	ESC RS C	Spec. A Ver. 4.0 or later	Spec. A Ver. 2.0 or later	Spec. A Ver. 2.0 or later	Spec. B			
	ESC 4	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	No			
	ESC 5	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	No			
	ESC RS d	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	OK			
	ESC RS r	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	OK			
	ESC FS q	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	OK			
	ESC FS p	Ver. 4.0 or later	Ver. 2.0 or later	Ver. 2.0 or later	OK			

• Presenter related commands

Class	Commands	Model Name						
		TSP800	TSP700	TSP600	TUP900			
Presenter related commands	ESC SYN 0	No	No	No	OK			
	ESC SYN 1	No	No	No	OK			
	ESC SYN 3	No	No	No	OK			
	ESC SYN 4	No	No	No	OK			



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