

ZQ-VFD2300

Vacuum Fluorescent Display
Customer Display
User's manual

INTRODUCTION

The product is a Vacuum Fluorescent Display, supporting English language.

Features:

- Data can be displayed on 20 columns x2 lines.
- Green fluorescent color and large character are easy to read.
- The display panel is adjustable to provide the best view angle.
- Provide 2 poles for best position installation.
- Some methods of getting power are optional.
- The DIP switch setting emulates commands mode and baud rate.
- Pole display emulation command set, selected by DIP switch or control utility software.
- International character set is selectable.
- Provide an interface based on RS-232C, and RS-232C baud rate 2400, 4800, 9600, 19200 BPS selected by DIP switch, (or set by software from 2400 to 19200bps).

Notes

Please use the DC 12V power supply, otherwise it will damage customer display.

WARNING

Some semiconductor devices are easily damaged by static electricity. You should turn it "OFF", before you connect or remove the cables on the rear side, in order to guard it against the static electricity. If the printer is damaged by the static electricity, you should turn it "OFF".

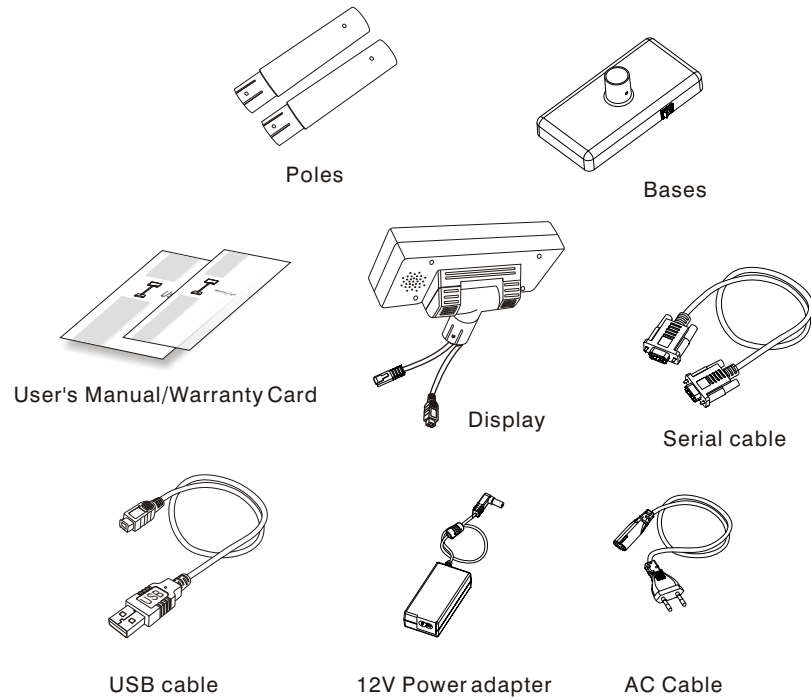
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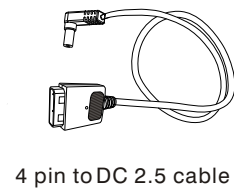
Chapter 1 Overview

1.1 Packing List

Below parts will be included in the package:



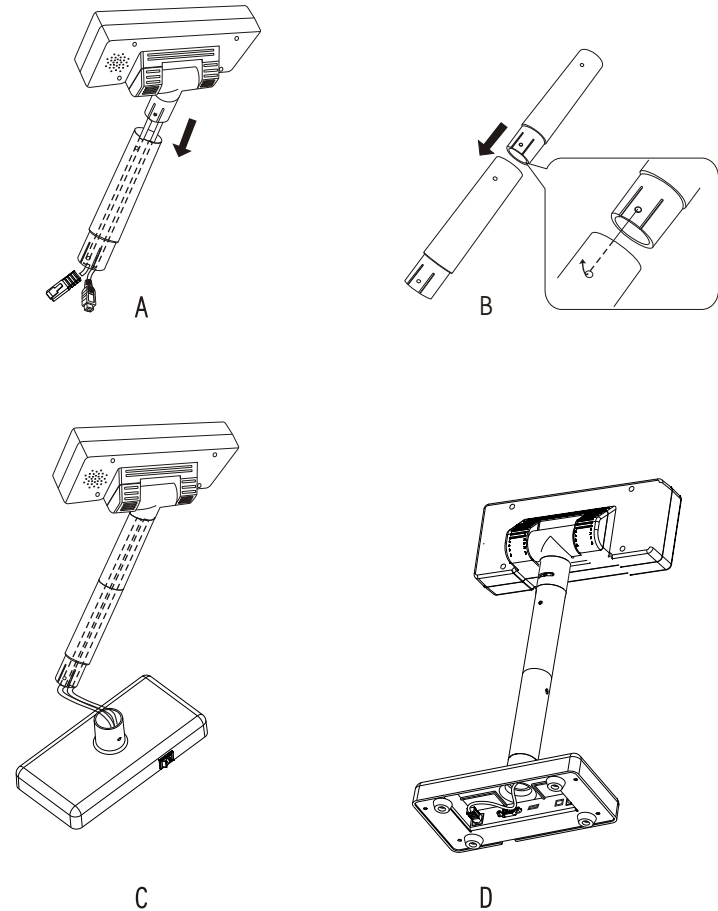
The following parts are optional



Actual product, picture for reference only.

1.2 Installing the customer display

Install the customer display as follows:

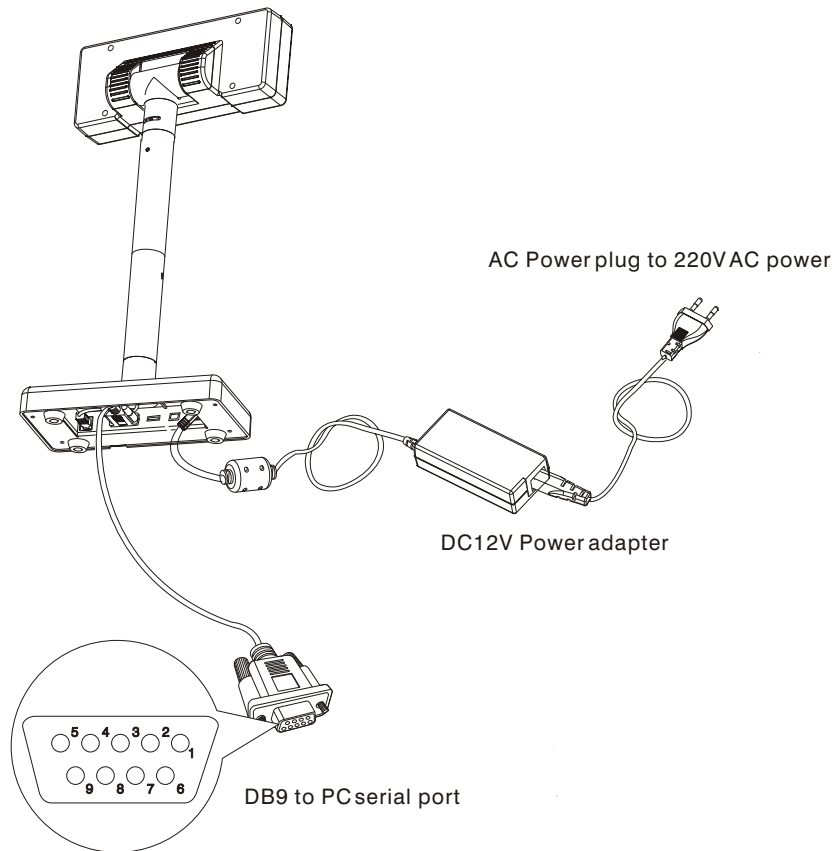


1.3 Connecting the Cable

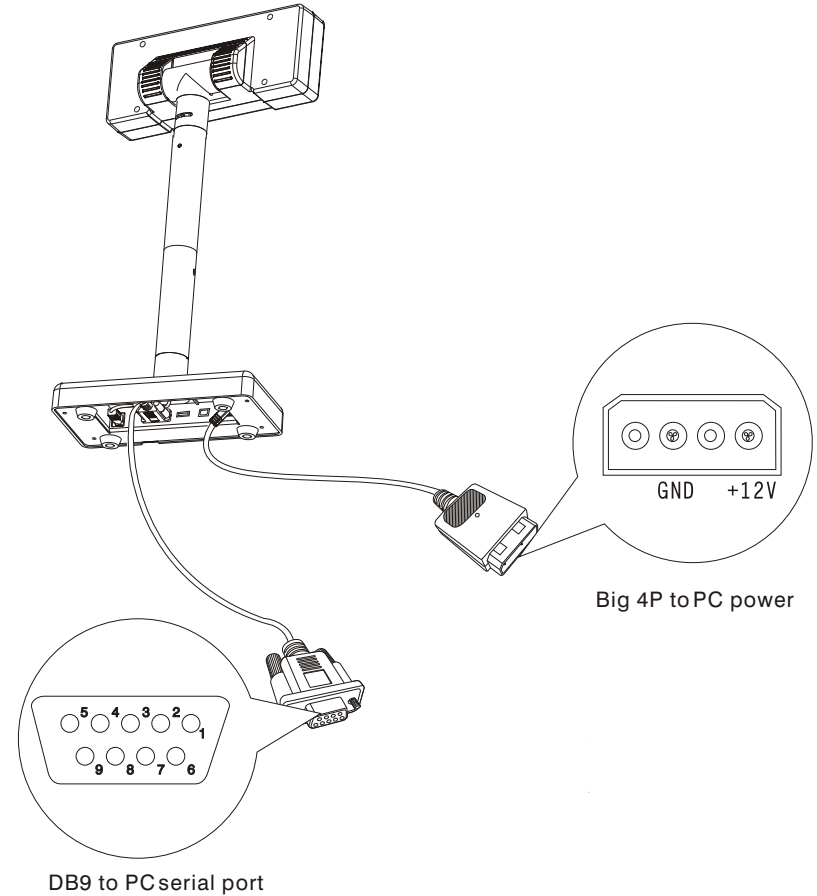
Please connect cable to PC like the following picture after installation

Connection of RS22

(1) Standard Installation

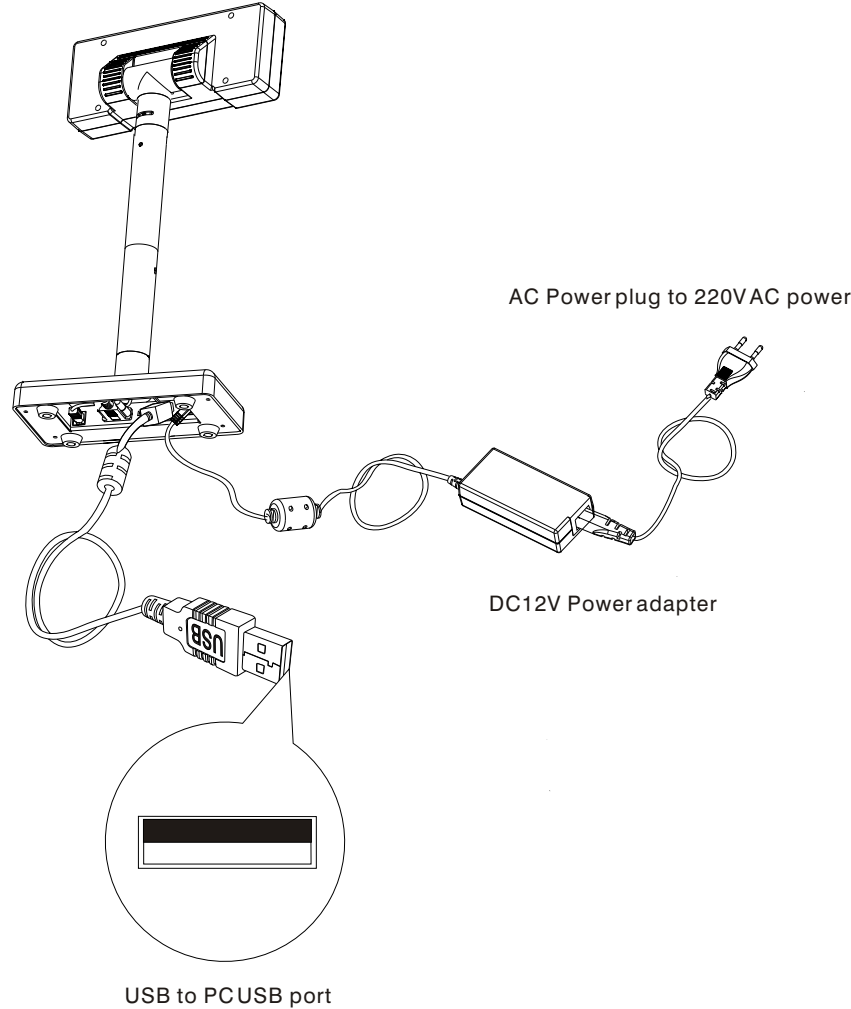


(2) The version without adapter

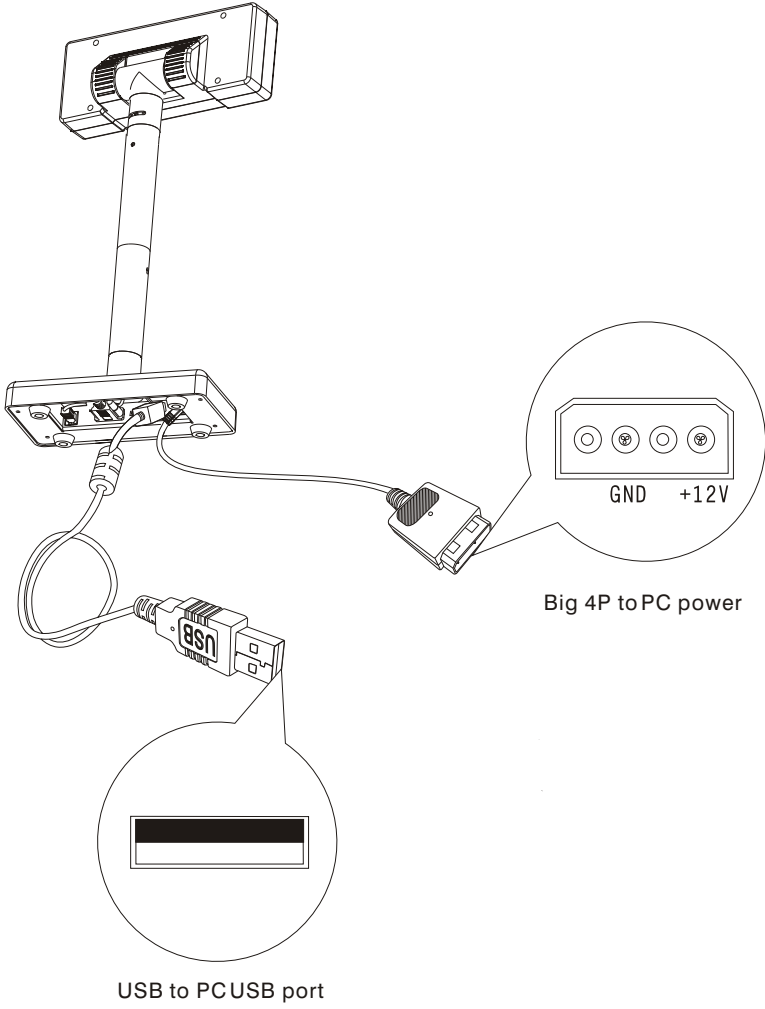


USB connection

(1)Standard method

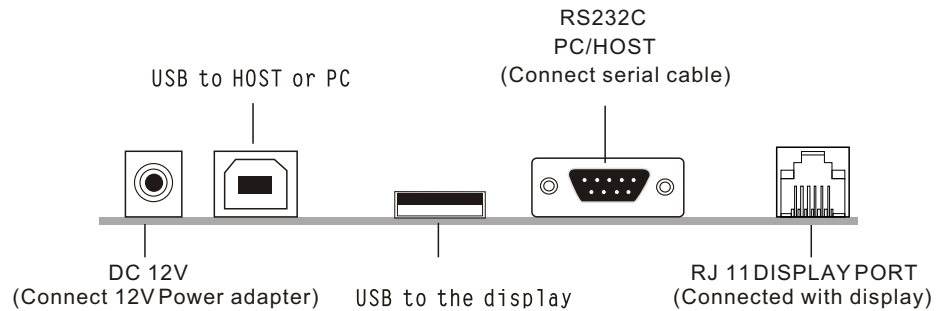


(2)The version without adapter



Chapter 2 Interfaces introduction

2.1 Appendix: Base Interface Description



2.2 Rs232 PORT

RS232 pin defination

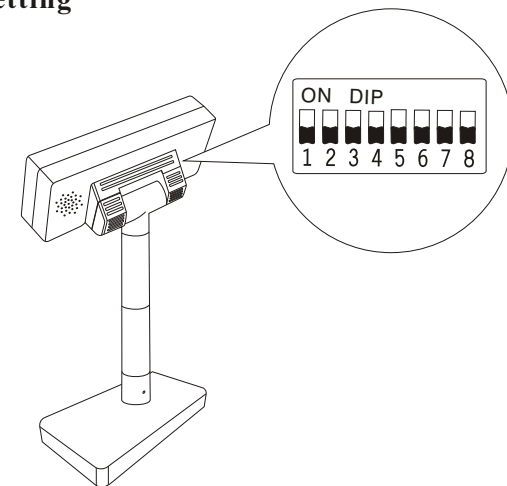
No.	Signal	Direction	Function description
1	-	-	-
2	TXD	From display to PC/Host	Send data
3	RXD	From PC/Host to display	Receive data
4	-	-	-
5	GND	-	Signal ground
6-9	-	-	-

2.3 USB

USB definition

No.	Signal	Cable colour	Function
1	5V	Red	Power input:DC5V /500mA
2	D-	White	Data cable
3	D+	Green	Data cable
4	GND	Black	Ground signal

2.4 Function setting



2.4.1 Baud rate setting

SW 3	SW 4	Baud rate(bit/s)
ON	ON	2400bps
ON	OFF	4800bps
OFF	ON	9600bps
OFF	OFF	19200bps

2.4.2 Command mode setting

SW 5	SW 6	SW 7	SW 8	Description
ON	ON	ON	ON	Epson(Default)
ON	ON	ON	OFF	Nortriake
ON	ON	OFF	ON	Futaba
ON	ON	OFF	OFF	PL-200
ON	OFF	ON	ON	PTC
ON	OFF	ON	OFF	UTC Standard
ON	OFF	OFF	ON	UTC Enhance
ON	OFF	OFF	OFF	AEDEX
OFF	ON	ON	ON	ADM787
OFF	ON	ON	OFF	DSP800
OFF	ON	OFF	ON	CD5220
OFF	ON	OFF	OFF	EMAX
OFF	OFF	ON	ON	LOGIC
OFF	OFF	ON	OFF	POS7300
OFF	OFF	OFF	ON	Reserved
OFF	OFF	OFF	OFF	Reserved

2.4.3 DIP and other setting

	ON	OFF
SW 1	Set Baud rate and command through DIP(Default)	Through the instruction set baud rate and instruction set
SW 2	Reserved	Reserved

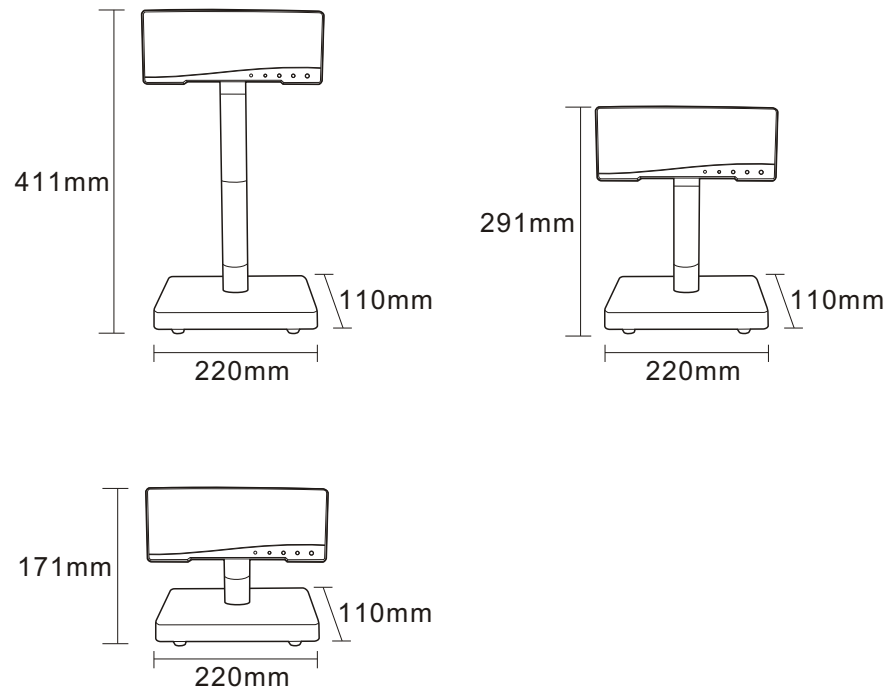
Chapter 3 Specifications introduction

3.1 Specifications

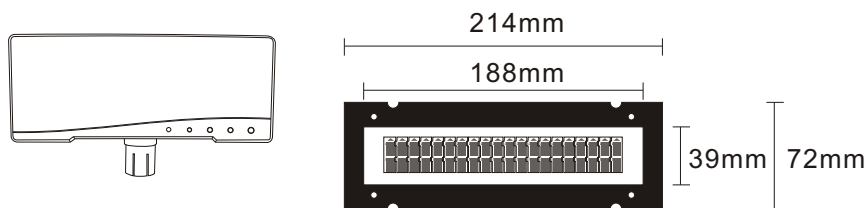
Model	Customer Display
Interfaces	USB Port, Rs232Port
Input	DC 12V
Power	≤6W
Display type	Vacuum fluorescent display
Character Number	40 characters (20 columns x 2 lines)
Page code	96 ASCII, Page 0 (PC437: USA, Standard Europe), Page 1 (Katakana), Page 2 (PC850: Multilingual), Page 3 (PC860: Portuguese), Page 4 (PC863: Canadian-French), Page 5 (PC865: Nordic), Page 6 (Slavonic), Page 7 (Russia), Page 19 (PC858 Euro), Page 16 (WPC1252), Page 12 (Greek).
International character	U.S.A, France, Germany, U.K, Denmark I, Sweden, Italy, Spain, Japan, Norway, Denmark II, Slawie, Russia.
Character size	5 x 7
Viewing angle	8~35°
Commands	EPSON, Nortriake, futaba, PL-200, UTC Standard, UTCENHANCE, AEDEX, ADM787, DSP800, CD5220(PTC), EMAX, LOGIC, POS7300
Working condition	Operating temperature : -10 - 55 C
	Storage temperature : -20 - 65 C
	Humidity : 30%-85%
Dimensions	Panel: 225(W) x 92(H) x 62(D) mm Support: 171 mm, 171+120mm, 171+120+120mm Base: 220(L) x 110(W) x 72(H) mm
Weight	Approx 1.0kg(net weight)

3.2 Product frame

The customer display standard pack includes 2 poles, to add or decrease the height, min is 171 mm, max is 411 mm.



VFD Panel Size:



Chapter 4 Command

4.1 EPSON Mode

Command	HEX	Description
HT	09	Move cursor right
BS	08	Move cursor left
US LF	1F 0A	Move cursor up
LF	0A	Move cursor down
US CR	1F 0D	Move cursor to right-most position
CR	0D	Move cursor to left-most position
HOM	0B	Move cursor to home position
US B	1F 42	Move cursor to bottom position
US \$ x y	1F 24 X Y	Move cursor to specified position 1≤x(column) ≤20 ; 1≤y(row) ≤2
US C n	1F 43 n	Select/cancel cursor display n=0, canceled ; n=1, selected
CLR	0C	Clear display screen
CAN	18	Clear cursor line
US X n	1F 58 n	Brightness adjustment 1≤n≤4
US E n	1F 45 n	Blink display screen 0≤n ≤255 (n*50msec) ON / (n*50msec) OFF n= 0, blinking is can celed n=255, display is turned off
ESC @	1B 40	Initialize display
ESC C	1B 43 n	Select/cancel cursor display n=0, canceled ; n=1, selected
ESC t n	1B 74 n	Select character code table 0 ≤n≤5 (Please refer “Chapter 5”)
ESC R n	1B 52 n	Select international character set (Please refer International Font Set Table)
US r n	1F 72 n	Select/cancel reverse character n=0, canceled ; n=1, selected
US MD1	1F 01	Specify overwrite mode
US MD2	1F 02	Specify vertical scroll mode
US MD3	1F 03	Specify horizontal scroll mode

Command	HEX	Description
ESC & s n M[a(pl..p5)] (m-n+1)	1B 26 s n m [a(pl..p5)] (m-n+1)	Define download characters s=1 ; 32≤n≤m≤126 ; a=5 (p1..p5 = pattern1..pattern5)
ESC ? n	1B 3F n	Cancel user-defined characters 32≤n≤126 (n=character code)
ESC % n	1B 25 n	Select/cancel download character set N=0, canceled ; n=1, selected
US :	1F 3A	Set starting/ending position of macro definition
US ^ n m	1F 5E n m	Execute and quit macro 0≤(n,m)≤255 N: specifies the time interval for display of characters in units of [n* 50msec] m: specifies the interval of macro execution every [m*50msec]
US @	1F 40	Execute self-test
US T h m	1F 54 h m	Display time : 0≤h≤23 ; 0≤m≤59
US U	1F 55	Display of time counter

* International Font Set Table

n (Hex)	International Font Set	n (Hex)	International Font Set
00h	U.S.A.	06h	ITALY
01h	FRANCE	07h	SPAIN
02h	GERMANY	08h	JAPAN
03h	U.K.	09h	NORWAY
04h	DENMARK I	0Ah	DENMARK II
05h	SWEDEN	—	SLAVONIC/RUSSIA

4.2 Noritake mode Command list

Coad description(hex)	Function description
<05>h	Moving Sign: Enable a scrolling message to be sent to the display in the first row. The string characters can be up to 45 characters long begun by <05>h and terminated by <0D>h. The message will scroll in the first row. It is disabled automatically when other information is sent.
<08>h	Move cursor left: This command moves the cursor to the left digit. If the current position is the left-most position of the 2nd row, the cursor will move to the right-most position of the first row. If the current position is the left-most position of the first row, the cursor will not move .
<0C>h	Cursor moves to the left-most position of the 1st row.
<0D>h	Cursor moves to the current row's left-most position.
<0E>h	Clear: All displayed characters are cleared. Cursor stays at the same position.
<11>h <09>h	Move cursor right: This command moves the cursor to the right digit. If the current position is the right-most position of the first row, the cursor will move to the left-most position of the 2nd row. If the current position is the right-most position of the 2nd row, the cursor will not move to the left-most position of the first row.
<11>h <0A>h	Cursor Up/Down: Cursor moves up or down to another row.
<12>h <09>h	Specify vertical scroll mode.

<12>h <0A>h	Newline: If the cursor is at the 2nd row, all characters in the 2nd row will be transferred to the 1st row, and leaving a blank in the 2nd row. The cursor position is unchanged. If the cursor is at the 1st row, it simply moves directly down to the 2nd row. Characters are not effected.
<15>h	Cursor On.
<16>h	Cursor off.
<1B>h <3D>h <n>h	Reset display mode n = 10: Epson 2x20 mode n = 20: Noritake 2x20 mode
<1B>h <48>h <n>h	Digit Select: Move cursor to position n, where n is the digit position in hex number. For example: n=00: 1st row the left-most position of the first row; n=01: 1st row 2nd digit; n=13: 1st row the right-most position; n=14: 2nd row the right-most position; n=27: 2nd row the left-most position.
<1B>h <49>h	Reset: Return to power-on conditions.

4.3 Futaba mode Command List

Coad description(hex)	Function description
<1F>h	Reset: Return to power-on conditions.
<05>h	Specify horizontal scroll mode.
<10>h <n>h	Digit Select: Move cursor to position n, where n is the digit position in hex number. For example: n=00: the left-most position of the first row; n=01: 1st row 2nd digit; n=13: 1st row the right-most position; n=14: 2nd row the right-most position; n=27: 2nd row the left-most position.
<08>h	Delete the current characters and move cursor left: This command moves the cursor to the left digit and deletes the left character. If the current position is the left-most position of the 2nd row, the cursor will move to the right-most position of the 1st row. If the current position is the left-most of the 1st row, the cursor will not move .
<13>h	Cursor On.
<14>h	Cursor off.
<11>h <n>h	n=09: Move cursor right; n=0a: Move cursor down.
<12>h <09>h	Specify vertical scroll mode.
<12>h <0A>h	Newline: If the cursor is at the 2nd row, all characters in the 2nd row will be transferred to the 1st row, and leave a blank 2nd row. The cursor position is unchanged. If the cursor is at the 1st row, it simply moves directly down to the 2nd row. Characters are not effected.
<0D>h	Move cursor to left-most position of current row.

4.4 PL-200 Command Mode

Command	HEX	Description
HT	09	Move cursor right
BS	08	Move cursor left
CR	0D	Move cursor to left-most position
ESC @	1B 40	Initialize customer display to initial state, clears display buffer, set display mode to shift and sets current display row to upper row
ESC D	1B 55	Select upper row as current row (Initial default)
ESC U	1B 44	Select lower row as current row
ESC A n	1B 41 n	Sets customer display disable or enable n=D, Disable; n=E, Enable
ESC C r c	1B 43 r c	Move cursor to specified position (Only valid in overwrite mode) r=U, upper row; r=D, lower row 1 ≤ c ≤ 20 (column number)
ESC E r n	1B 45 r n	Set special effect or display mode of specified row

(REMARK)*Using commands “ESC E r n”, the value (Hex) of parameter

r 58h=all rows n special function, the value is one of
55h=upper row 30h=shift mode (Default display mode)
44h=lower row 32h=blink mode
33h=clear this row and switch to shift mode
34h=overwrite mode
35h=vertical mode

4.5 PT Command Mode

Command	HEX	Description
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical scroll mode
ESC DC3	1B 13	Horizontal scroll mode
ESC Q A CR	1B 51 41 [N]20 0D	Set the string display mode, write string to upper line
ESC Q B CR	1B 51 42 [N]20 0D	Set the string display mode, write string to lower line
ESC Q D CR	1B 51 44 [N]m20 0D	Upper line message scroll continuously
ESC [D	1B 5B 44	Move cursor left
BS	08	Move cursor left
ESC [C	1B 5B 43	Move cursor right
HT	09 t	Move cursor right
ESC [A	1B 5B 41	Move cursor up
ESC [B	1B 5B 42	Move cursor down
LF	0A	Move cursor down
ESD [H	1B 5B 48	Move cursor to home position
HOM	0B	Move cursor to home position
ESC [L	1B 5B 4C	Move cursor to left-most position
CR	0D	Move cursor to left-most position
ESC [R	1B 5B 52	Move cursor to right-most position
ESC [K	1B 5B 4B	Move cursor to bottom position
ESC I x y	1B 6C x y	Move cursor to specified position
ESC @	1B 40	Initialize display
ESC W s x1x2 y	1B 57 s x1 x2 y	Set or cancel the window range at horizontal scroll mode
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC * n	1B 2A n	Brightness adjustment

Command	HEX	Description
ESC & s n m [a(pl..p5)] (m-n+1)	1B 26 s n m [a(pl..p5)] (m-n+1)	Define download characters s=1 ; 32≤n≤m≤126 ; a=5 (p1..p5 = pattern1..pattern5)
ESC ? n	1B 3F n	Cancel user-defined characters 32≤n≤126 (n=character code)
ESC % n	1B 25 n	Select/cancel download character set N=0, canceled ; n=1, selected
ESC _ n	1B 5F n	Set cursor ON/OFF n=0,1 (Off,On)
ESC f n	1B 66 n	Select international fonts set

* International Font Set Table

n(Decimal)	International Font Set
A	U.S.A
G	GERMANY
I	ITALY
J	JAPAN
U	U.K.
F	FRANCE
S	SPAIN
N	NORWAY
W	SWEDEN
D	DENMARK I
E	DENMARK II
L	SLAVONIC
R	RUSSIA
	Reserved

4.6 UTC Command Mode

4.6.1 UTC Standard Command Mode

Command	Hex	Function Description
BS	08	Back space
HT	09	Horizontal tab
LF	0A	Line feed
CR	0D	Carriage return
DC0 p	10p	Move cursor to specified position, 0 ≤ p ≤ 39 (Please refer Row Character Position Chart)
DC1	11	Over write display mode
DC2	12	Vertical scroll mode
DC3	13	Cursor on
DC4	14	Cursor off
ESC d	1B 64	Two line display
US	1F	Clear display

Row Character Position Chart (Decimal)

Row1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Row2	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

Row Character Position Chart (Hex)

Row1	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13
Row2	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	20	21	22	23	24	25	26	27

4.6.2 UTC Enhance Command Mode

Command	Hex	Function Description
ESC u A..CR	1B 75 41 [data x 20] 0D	Upper line display
ESC u B..CR	1B 75 42 [data x 20] 0D	Bottom line display
ESC u D..CR	1B 75 44 [data x 45] 0D	Upper line message scroll continuously
ESC u E..CR	1B 75 45 hh ‘:’ mm 0D	Set and display 24 hour time 0≤h , m≤9

Command	HEX	Description
ESC u F..CR	1B 75 46 [data x 45] 0D	Upper line message scroll once pass
ESC u 1..CR	1B 75 49 [data x 40] 0D	Two line display
ESC RS..CR	1B 0F 0D	Change to UTC standard mode

4.7 AEDEX Command Mode

Command	Hex	Function Description
! # 1..CR	21 23 31 [data x20] 0D	Upper line display
! # 2..CR	21 23 32 [data x 20] 0D	Bottom line display
! # 4..CR	21 23 34 [data x 45] 0D	Upper line message scroll continuously
! # 5..CR	21 23 35 hh ": " mm 0D	Set and display 24 hour time 0 ≤ h, m ≤ 9
! # 5 CR	21 23 35 0D	Display 24 hour time
! # 6..CR	21 23 36 [data x 45] 0D	Upper line message scroll once pass
! # 9..CR	21 23 39 [data x 40] 0D	Two line display

4.8 ADM787 Command Mode

Command	Hex	Function Description
CLR	0C	Clear display
CR	0D	Carriage return
SLE1	0E	Clear up line and move cursor to upper line leftmost end
SLE2	0F	Clear low line and move cursor to lower line leftmost end
DC1	11 n	Set line blinking n=1, upper line n=2, lower line
DC2	12 n	Clear line blinking n=1, upper line n=2, lower line

4.9 DSP800 Command Mode

Command	Hex	Function Description
EOT SOH I n ETB	04 01 49 n 17	Select international character set (Please refer International Font Set Table)
EOT SOH P n ETB	04 01 50 n 17	Move cursor to specified position 49 ≤ n ≤ 88
EOT SOH C n m ETB	04 01 43 n m 17	Clear display range from n position to m position and move cursor to n position 49 ≤ n ≤ m ≤ 88
EOT SOH S n ETB	04 01 53 n 17	Save the current displaying data (40 characters) to n'th layer for demo display 1 ≤ n ≤ 3 (n specify the layer 1, 2, or 3)
EOT SOH D n m ETB	04 01 44 n m 17	Display the saved data 1 ≤ n ≤ 3 (n specify the layer 1, 2, or 3) "m" can be ignored
EOT SOH A n ETB	04 01 41 n 17	Brightness adjustment 1 ≤ n ≤ 4
EOT SOH % ETB	04 01 25 17	Initialize display

* International Font Set Table

n(Hex)	International Font Set
30h	U.S.A.
31h	FRANCE
32h	GERMANY
33h	U.K.
34h	DENMARK I
35h	SWEDEN
36h	ITALY
37h	SPAIN
38h	JAPAN
39h	NORWAY
3Ah	DENMARK II
Xxh	SLAVONIC/RUSSIA

4.10 CD5220 Command Mode

Command	Hex	Function Description
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical scroll mode
ESC DC3	1B 13	Horizontal scroll mode
ESC Q A CR	1B 51 41 [N] 20 0D	Set string display mode, write string to upper line
ESC Q B CR	1B 51 42 [N] 20 0D	Set string display mode, write string to lower line
ESC Q D CR	1B 51 44 [N] m 20 0D	Upper line message scroll continuously m < 40
ESC [D	1B 5B 44	Move cursor left
BS	08	Move cursor left
ESC [C	1B 5B 43	Move cursor right
HT	09	Move cursor right
ESC [A	1B 5B 41	Move cursor up
ESC [B	1B 5B 42	Move cursor down
LF	0A	Move cursor down
ESD [H	1B 5B 48	Move cursor to home position
HOM	0B	Move cursor to home position
ESC [L	1B 5B 4C	Move cursor to left-most position
CR	0D	Move cursor to left-most position
ESC [R	1B 5B 52	Move cursor to right-most position
ESC [K	1B 5B 4B	Move cursor to bottom position
ESC I x y	1 B 6C x y	Move cursor to specified position 1 ≤ x ≤ 20 (column) ; y = 1, 2 (row)
ESC @	1B 40	Initialize display
ESC W s x1 x2 y	1B 57 s x1 x2 y	Enable or disable the window range at horizontal scroll mode s = 0, 1 (disable, enable) 1 ≤ x1 ≤ x2 ≤ 20 (column) ; y = 1, 2 (row)
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC * n	1B 2A n	Brightness mode

Command	Hex	Function Description
ESC & s n m [a(pl..p5)] (m-n+1)	1B 26 s n m [a(pl..p5)] (m-n+1)	Define download characters s = 1 ; 32 ≤ n ≤ m ≤ 126 ; a = 5 (p1..p5 = pattern1..pattern5)
ESC ? n	1 B 3F n	Delete download characters 32 ≤ n ≤ 126 (n = character code)
ESC % n	1B 25 n	Select / cancel download character set. n = 0, canceled ; n = 1, selected
ESC _ n	1B 5F n	Set cursor ON/OFF n = 0, 1 (Off, On)
ESC f n	1B 66 n	Select international fonts set

* International Font Set Table

n(Decimal)	International Font Set
A	U.S.A
G	GERMANY
I	ITALY
J	JAPAN
U	U.K.
F	FRANCE
S	SPAIN
N	NORWAY
W	SWEDEN
D	DENMARK I
E	DENMARK II
L	SLAVONIC
R	RUSSIA
	Reserved

4.11 EMAX Command Mode

Command	Hex	Function Description
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical mode
ESC DC3	1B 13	Horizontal scroll mode
ESC [D	1B 5B 44	Move cursor left
BS	08	Move cursor left
ESC [C	1B 5B 43	Move cursor right
HT	09 t	Move cursor right
ESC [A	1B 5B 41	Move cursor up
ESC [B	1B 5B 42	Move cursor down
ESD [H	1B 5B 48	Move cursor to home position
HOM	0B	Move cursor to home position
ESC [L	1B 5B 4C	Move cursor to left-most position
CR	0D	Move cursor to left-most position
ESC [R	1B 5B 52	Move cursor to right-most position
ESC [K	1B 5B 4B	Move cursor to bottom position
ESC I x y	1B 6C x y 1 ≤ x ≤ 20 y = 1, 2	Move cursor to specified position
ESC @	1B 40	Initialize display
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC * n	1B 2A n 1 ≤ n ≤ 4	Brightness mode
ESC _ n	1B 5F n n = 0, 1	Set cursor ON/OFF
ESC f n	1B 66 n	Select international fonts

4.12 LOGOC Command Mode

Command	Hex	Function Description
^Q	11	Overwrite mode
^R	12	Vertical mode
^I	09	Horizontal tab
^H	08	Back space
^J	0A	Line feed
^M	0D	Carriage return
^S	13	Cursor on
^T	14	Cursor off
^P	10	Digital select e.g. 10 00 MSD of top row 10 13 LSD of top row 10 14 MSD of bottom row 10 27 LSD of bottom row
^ _	1F	Reset
^D n	04 n	Brightness mode 04 FF-100% Brightness mode 04 60-60% Brightness mode 04 40-40% Brightness mode 04 20-20% Brightness mode

4.13 POS7300 Command Mode

Command	Hex	Function Description
ESC F A .. CR	1B 46 41 [DATA X 40] 0D	Write string to upper line
ESC F B .. CR	1B 46 42 [DATA X 40] 0D	Write string to lower line
ESC F D .. CR	1B 46 44 [DATA X 40] 0D	Upper line message scroll continuously
ESC F O .. CR	1B 46 4F [DATA X 40] 0D	Bottom line message scroll continuously
ESC P x y	1B 50 x y 1x20, y = 1, 2	Move cursor to specified position

Command	Hex	Function Description
ESC _ n	1B 5F n n=00,01	Set cursor on/off
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical scroll mode
ESC DC3	1B 13	Horizontal scroll mode
ESC @	1B 40	Initialize display
US MD2 n	1F 02 n n=01~0Ch	Message vertical downscroll continuously
US MD1 n	1F 01 n n=01~0Ch	Message vertical upscroll continuously
US DC1 n	1F 11 n n= "1" , "2"	Set line blinking N= "1" up line , n= "2" low line
US DC2 n	1F 12 n n= "1" , "2"	Clear line blinking N= "1" up line , n= "2" low line
US E n	1F 45 n n=0~FFh	Blink display screen
NULL H	0 48	Move cursor up
NULL K	0 4B	Move cursor left
NULL M	0 4D	Move cursor right
NULL P	0 50	Move cursor down
NULL G	0 47	Move cursor to left-most position
NULL O	0 4F	Move cursor to right-most position
BS	08	Back space
HT	09	Horizontal tab
LF	0A	Line feed
HOM	0B	Move cursor to home position
CLR	0C	Clear display screen
CR	0D	Carriage return
CAN	18	Clear cursor line, and clear string mode

4.14 Command type select

Command	Hex	Function Description
ESC = n	1B 3D n	Command type select

n (Hex)	International Font Set
10	EPSON (Default)
20	Noritake
30	futaba
40	PL-200
50	PTC
60	UTC/P
70	UTC/S
80	AEDEX
90	ADM787
A0	DSP800
B0	CD5220
C0	EMAX
D0	LOGIC
E0	POS7300

Note: all types are available