



PTE105-VFD
Customer Display

User Manual



1. Product specifications

- 1.1 Ultra high-brightness yellow green 20*2 VFD.
- 1.2 The internal chip adopts the electronic industry integrated patch technology, which is stable and reliable.
- 1.3 Compatible with the "ESC/POS" standard universal instruction set, without the need to install any driver, connect the power, and select the mode can work.
- 1.4 VFD Custom display service life of up to 30 thousand hours, in normal working hours, VFD does not change color, unchanged.

2. Parameter description

- Display color: Green
- Display type: VFD screen
- Character count : 20 x 2
- Character: Multinational text
- Brightness: 500cd/m

Supply voltage: 5V DC \pm 5% (Optional 12V DC \pm 5%)

- TDP: 2.5W max

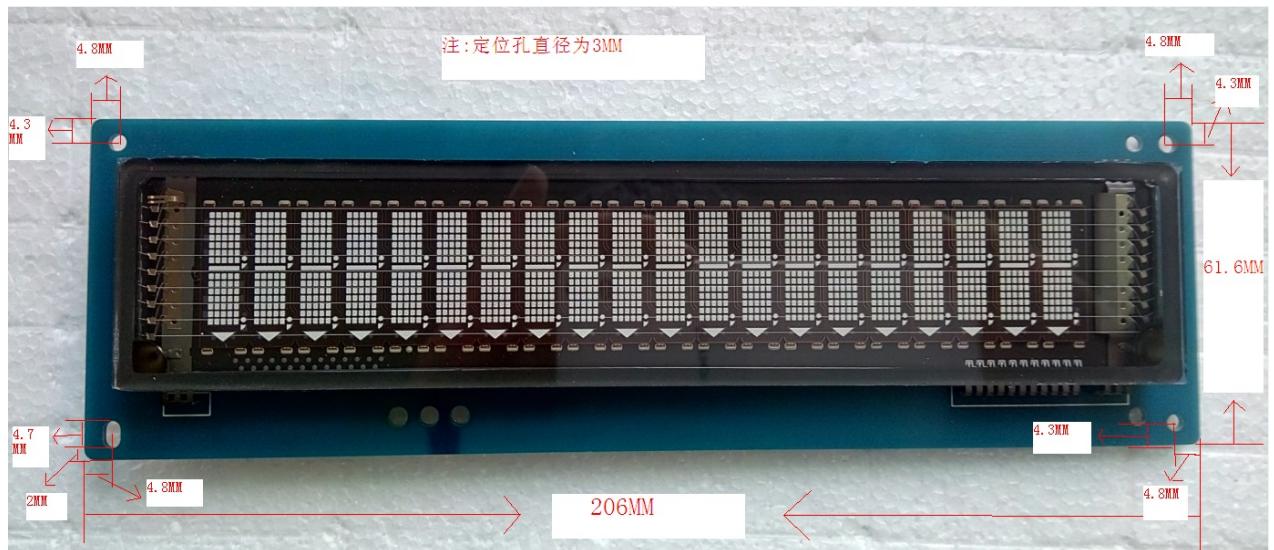
Service life: 30,000 hours

CI: RS-232, USB

Baud rate: 9,600

- Ambient temperature: -40° C ~ 70° C

- Storage temperature: -60° C ~ 80° C
- Humidity: 30%~85%RH
- Appearance:



3. Test specification

Under DOS, no need to start any program, just test the connection if entering data directly under the cursor prompt.

C:\>MODE COM19600,N,8,1

C:\>TYPE CON>COM1

Then, enter the number directly at the cursor, and press enter to display the numbers to the screen. When the test is successful, press Ctrl+C to exit edit status, and return to DOS status.

Universal instruction set list:

1. STX B n Baud rate setting command

ACII Code format: STX B n 0<=n<=5

Decimal system format: [002][066] n 48<=n<=53

Hexadecimal format: [02H][42H] n 30H<=n<=35H

Note: change the receive baud rate, and store it in internal EEPROM. The last setting will be restored next time when power on.

ASCII n	Decimal system n	Hexadecimal n	Baud rate
0	48	30H	9,600
1	49	31H	4,800
2	50	32H	2,400
3	51	33H	1,200
4	52	34H	600
5	53	35H	300

2. STX C n Command type selection

ACII Code format: STX C n 0<=n<=1

Decimal system format: [002][067]n 48<=n<=49

Hexadecimal format: [02H][43H] n 30H<=n<=31H

Note: change the type of the system instruction set, and initialize the display.

After changing the setting, it will be stored in internal EEPROM, and the last setting will be restored next time when power on.

ASCII n	Decimal system n	Hexadecimal n	Instruction set name
0	48	30H	CD5200/20
1	49	31H	ESC/POS

3. STX MD5 n The selected character code table

ACII Code format: STX MD5 n

Decimal system format: [002][005]n 48<=n<=60

Hexadecimal format: [02H][05H]n 30H<=n<=3CH

Note: select international character code table, and stored in the internal EEPROM; it will continue using the same setting next time when power on.

ASCII n	Decimal system n	Hexadecimal n	Instruction set name
0	48	30H	U.S.
1	49	31H	France
2	50	32H	Germany
3	51	33H	U.K.
4	52	34H	Denmark (I)
5	53	35H	Sweden
6	54	36H	Italy
7	55	37H	Spain
8	56	38H	Japan
9	57	39H	Norway
:	58	3AH	Denmark (II)

;	59	3BH	Slavonic
<	60	3CH	Russia

The difference between international character code table, please refer to the following:

	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
USA	█	█	█	█	█	█	█	█	█	█	█	█
FRANCE	█	█	█	█	█	█	█	█	█	█	█	█
GERMANY	█	█	█	█	█	█	█	█	█	█	█	█
U.K	█	█	█	█	█	█	█	█	█	█	█	█
DENMARKI	█	█	█	█	█	█	█	█	█	█	█	█
SWEDEN	█	█	█	█	█	█	█	█	█	█	█	█
ITALY	█	█	█	█	█	█	█	█	█	█	█	█
SPAIN	█	█	█	█	█	█	█	█	█	█	█	█
JAPAN	█	█	█	█	█	█	█	█	█	█	█	█
NORWAY	█	█	█	█	█	█	█	█	█	█	█	█
DENMARK II	█	█	█	█	█	█	█	█	█	█	█	█
SLAVONIC	█	█	█	█	█	█	█	█	█	█	█	█
RUSSIA	█	█	█	█	█	█	█	█	█	█	█	█

4. STX MD6 n Select extended character font table

ACSII Code format: STX MD6 n

Decimal system format: [002][006]n 48<=n<=56

Hexadecimal format: [02H][06H]n 30H<=n<=38H

Description: select the extended character font table, and store it in internal EEPROM. Use this setting next time when power up. The font used is stored in 80H... FFH.

Decimal system n	Hexadecimal n	Extended character font table (80H...FFH)
48	30H	U.S. and Standard Europe
49	31H	Katakana for Japan
50	32H	Multilingual
51	33H	Portuguese
52	34H	Canadian French
53	35H	Nordic
54	36H	Slavonic
55	37H	Russia
56	38H	Turkish

CD 5220-II Standard mode command list

1. ESC DC1 Set to overlay display mode

ACSII Code format: ESC DC1

Decimal system format: [027][017]

Hexadecimal format: [1BH][11H]

Note: change display mode to overlay mode. Pattern overlay display, cursor display characters from the top row of the left to the right, when the cursor to top of right side will automatically move the left position in the end, the left will automatically move to top of the line when the position of cursor on the right side. In this mode, previous displayed characters are covered.

2. ESC DC2 Set to vertical scroll display mode

ACSI Code format: ESC DC2

Decimal system format: [027][018]

Hexadecimal format :[1BH][12H]

Note: change display mode to vertical scrolling display mode. Vertical scrolling display mode, the cursor display characters from top row to the left to the right, to the right end of the cursor will automatically shift left most position in the end, the cursor in the end on the right, bottom line will be rolling on top line and replace the top line, then the cursor back the bottom row of the left to display the characters sent.

3. ESC DC3 Set to horizontal scroll display mode

ACSI Code format: ESC DC3

Decimal system format: [027][019]

Hexadecimal format: [1BH][13H]

Note: change display mode to horizontal scroll display mode. When scrolling horizontally, the characters which sent are always displayed at the rightmost end of the cursor's line, and then move the previously displayed characters from right to left.

1. ESC Q A d1d2d3.....dn CR Displays characters in the first line

ACSI Code format: ESC Q A d1d2d3.....dn CR

Decimal system format: [027][081][065]d1d2d3...dn[013]

Hexadecimal format: [1BH][51H][41H]d1d2d3...dn[0DH]

Note: the cursor will be ignored and displayed on the top line: d1 d2 d3....dn

(1<= n<=20).

2. ESC Q B d1d2d3.....dn CR Displays characters in the second line

ACSI Code format: ESC Q B d1d2d3...dn CR

Decimal system format: [027][081][066]d1d2d3...dn[013]

Hexadecimal format: [1BH][51H][42H]d1d2d3...dn[0DH]

Note: the cursor's action will be ignored and displayed on the bottom line: d1

d2 d3....dn (1<= n<=20).

3. ESC Q D d1d2d3...dn CR Displays persistent scroll characters at the top row

ACSI Code format: ESC Q D d1 d2 d3....dn CR

Decimal system format: [027][081][068] d1d2d3...dn [013]

Hexadecimal format: [1BH][51H][44H] d1d2d3...dn [0DH]

Note: the cursor's role will be ignored. The character continues scrolling

from right to left in the top row, displaying the D1 D2 d3... .dn (1<=, n<=70).

Not until the next command stops.

4. ESC [D Left cursor shift

ACSI Code format: ESC [D

Decimal system format: [027][091][068]

Hexadecimal format: [1BH][5BH][44H]

Note: move the cursor to the left. The cursor is not visible in the default state, but it does exist; use "ESC _ n" command to open/close the cursor.

When the cursor is in the leftmost position, operation of this command varies depending on the display mode.

A. Coverage model:

When the cursor is in the bottom row of the left position, the right position of the cursor will move the top line. When the cursor is in the leftmost position of the top row, the cursor moves to the rightmost position of the row.

B. Vertical scrolling display mode:

When the cursor is in the bottom row of the left position, the right position of the cursor will move the top line. When the cursor is in the top left position, top line will be rolling in the end, then the top row of characters is cleared, the right position of the cursor to the top of the line.

C. Horizontal scroll display mode:

Cursor fixed on the left.

5. The BS cursor moves left, equivalent to the ESC [D instruction]

ACSI Code format: BS

Decimal system format: [008]

Hexadecimal format: [08H]

Note: move the cursor to the left. The cursor is not visible in the default status, but it does exist; use "ESC _ n" command to open/close the cursor.

When the cursor is in the leftmost position, the operation of this command varies depending on the display mode.

A. Coverage model:

When the cursor is in the bottom row of the left position, the right position of the cursor will move the top line. When the cursor is in the leftmost position of the top row, the cursor moves to the rightmost position of the row.

B. Vertical scrolling display mode:

When the cursor is in the bottom row of the left position, the right position of the cursor will move the top line. When the cursor is in the top left position, top line will be rolling in the end, then, the top row of characters is cleared, the right position of the cursor to the top of the line.

C. Horizontal scroll display mode:

Cursor fixed on the left.

6. ESC [C Cursor right shift

ACII Code format: ESC [C

Decimal system format: [027][091][067]

Hexadecimal format: [1BH][5BH][43H]

Note: move the cursor to the right. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

When the cursor is in the rightmost position, operation of this command varies depending on the display mode.

A. Coverage mode:

When the cursor is in the right position the bottom line, the position of the cursor will move to top left of the line. When the cursor is in the rightmost position of the top row, the cursor moves to the leftmost position of the line.

B. Vertical scrolling display mode:

When the cursor is in the rightmost position of the top row, the cursor moves to the leftmost position of the line. When the cursor is in the right position the bottom line, the bottom row of the top line of characters will roll, then the bottom line of characters is cleared, the cursor left most position in the end of the line.

C. Horizontal scroll display mode:

Cursor fixed on the rightmost side.

7. HT The cursor moves right, equal to ESC [C instruction

ACSII Code format: HT

Decimal system format: [009]

Hexadecimal format: [09H]

Note: move the cursor to the right. The cursor is not visible in the default

state, but it does exist; use the "ESC _ n" command to open/close the cursor.

When the cursor is in the rightmost position, operation of this command varies depending on the display mode.

A. Coverage mode:

When the cursor is in the right position the bottom line, the position of the cursor will move to the top left of the line. When the cursor is in the rightmost position of top row, the cursor moves to the leftmost position of the line.

B. Vertical scrolling display mode:

When the cursor is in the rightmost position of the top row, the cursor moves to the leftmost position of the line. When the cursor is in the right position the bottom line, the bottom row of the top line of characters will roll, then the bottom line of characters is cleared, the cursor left most position in the end of the line.

C. Horizontal scroll display mode:

Cursor fixed on the rightmost side.

8. ESC [A Cursor up

ACSII Code format: ESC [A

Decimal system format: [027][091][065]

Hexadecimal format: [1BH][5BH][41H]

Note: move the cursor up one line. The cursor is not visible in the default

status, but it does exist; use the "ESC _ n" command to open/close the cursor.

When the cursor is in the top row position, operation of this command varies depending on the display mode.

A. Overlay mode:

Cursor moves exactly where the same column is placed.

B. Vertical scrolling display mode:

The top row characters scroll to the line, and then the top row characters are cleared and the cursor is in its original position.

C. Horizontal scroll display mode:

Cursor fixed.

9. ESC [B Cursor down

ACSII Code format: ESC [B

Decimal system format: [027][091][066]

Hexadecimal format: [1BH][5BH][42H]

Note: cursor moves down one line. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

When the cursor is in the bottom row position, the command is operated differently depending on the display mode.

A. Coverage mode:

The cursor will move to the top cover for the same column.

B. Vertical scrolling display mode:

The bottom row of top line character will roll, then the bottom row of characters is cleared, the cursor in the original position.

C. Horizontal scroll display mode:

Cursor fixed.

10. LF the cursor down is equal to the ESC [B instruction]

ACSII Code format: LF

Decimal system format: [010]

Hexadecimal format: [0AH]

Note: cursor moves down one line. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

When the cursor is in the bottom row position, the command is operated differently depending on the display mode.

A. Coverage mode:

The cursor will move to the top cover for the same column.

B. Vertical scrolling display mode:

The bottom row of the top line character will roll, then the bottom row of the character is cleared, the cursor in the original position.

C. Horizontal scroll display mode:

Cursor fixed.

11. ESC [H The top left position of the cursor

ACSCII Code format: ESC [H

Decimal system format: [027][091][072]

Hexadecimal format: [1BH][5BH][48H]

Note: the left position of the cursor to top row. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

12. HOM the cursor to the left position, equal to ESC [H instruction

ACSCII Code format: HOM

Decimal system format: [011]

Hexadecimal format: [0BH]

Note: the left position of the cursor to the top row. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

13. ESC [K Move the cursor to the right position of the line

ACSCII Code format: ESC [K

Decimal system format: [027][091][075]

Hexadecimal format: [1BH][5BH][4BH]

Note: cursor moves to the right position of the line. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

14. ESC [L The cursor moves to the leftmost position of the current row

ACSI Code format: ESC [L

Decimal system format: [027][091][076]

Hexadecimal format: [1BH][5BH][4CH]

Note: the cursor moves to the leftmost position of the current row. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

15. CR the cursor moves to the leftmost position of the current row, which is equal to the ESC [L instruction

ACSI Code format: CR

Decimal system format: [013]

Hexadecimal format: [0DH]

Note: the cursor moves to the leftmost position of the current row. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

16. ESC [R The cursor moves to the rightmost position of the current row

ACSI Code format: ESC [R

Decimal system format: [027][091][082]

Hexadecimal format: [1BH][5BH][52H]

Note: cursor moves to the rightmost position of the current row. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

17. ESC I x y The cursor moves to the specified location

ACSII Code format: ESC I x y

Decimal system format: [027][108] x y 1<=x<=20, 1<=y<=2

Hexadecimal format: [1BH][6CH]x y 01H<=x<=14H, 01H<=y<=02H

Note: cursor moves to the specified line y, column x position. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

18. ESC @ Display initialization status

ACSII Code format: ESC @

Decimal system format: [027][064]

Hexadecimal format: [1BH][40H]

Note: display initialization, display mode to display the cursor mode, covered with dark, bright brightness, clear screen characters, the cursor to the top line to the left.

19. CLR Clears all characters on the screen

ACSCII Code format: CLR

Decimal system format: [012]

Hexadecimal format: [0CH]

Note: clear all the characters of the screen, the cursor moves to the top of the left. Unlike initialization, however, it does not revert to the default setting.

20. CAN Clears all characters of the current cursor line

ACSCII Code format: CAN

Decimal system format: [024]

Hexadecimal format: [18H]

Note: clear all the characters in the current cursor, the cursor moves to the top of the left. The cursor is not visible in the default status, but it does exist; use the "ESC _ n" command to open/close the cursor.

21. ESC * n Brightness adjustment

ACSCII Code format: ESC * n

Decimal system format: [027][042]n $1 \leq n \leq 4$

Hexadecimal format: [1BH][2AH]n $01H \leq n \leq 04H$

Note: adjust the display brightness of the screen.

When n=1, brightness = 40%

When n=2, brightness = 60%

When n=3, brightness = 80%

When n=4, Brightness =100%

22. ESC _ n Set cursor status

ACSII Code format: ESC _ n 0<=n<=1

Decimal system format: [027][095] n 48<=n<=49

Hexadecimal format: [1BH][5FH] n 30H<=n<=31H

Instructions: set the cursor's bright / dark status.

When n=0, Cursor is in dark.

When n=1, Cursor is in light.

23. ESC f n The selected character code table

ACSII Code format: ESC f n

Decimal system format: [027][102]n

Hexadecimal format: [1BH][66H]n

Note: select international character code table。

ASCII n	Decimal system n	Hexadecimal n	The character code table
A	65	41H	U.S.
D	68	44H	Denmark (I)
E	69	45H	Denmark (II)
F	70	46H	France
G	71	47H	Germany
I	73	49H	Italy

J	74	4AH	Japan.
L	76	4CH	Slavonic
N	78	4EH	Norway
R	82	52H	Russia
S	83	53H	Spain
U	85	55H	U.K.
W	87	57H	Sweden

Difference between International Character Code table, please refer to the following:

	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
USA	█	█	█	█	█	█	█	█	█	█	█	█
FRANCE	█	█	█	█	█	█	█	█	█	█	█	█
GERMANY	█	█	█	█	█	█	█	█	█	█	█	█
U.K	█	█	█	█	█	█	█	█	█	█	█	█
DENMARK I	█	█	█	█	█	█	█	█	█	█	█	█
SWEDEN	█	█	█	█	█	█	█	█	█	█	█	█
ITALY	█	█	█	█	█	█	█	█	█	█	█	█
SPAIN	█	█	█	█	█	█	█	█	█	█	█	█
JAPAN	█	█	█	█	█	█	█	█	█	█	█	█
NORWAY	█	█	█	█	█	█	█	█	█	█	█	█
DENMARK II	█	█	█	█	█	█	█	█	█	█	█	█
SLAVONIC	█	█	█	█	█	█	█	█	█	█	█	█
RUSSIA	█	█	█	█	█	█	█	█	█	█	█	█

24. ESC c n Select extended character font table

ACII Code format: ESC c n 0<=n<=7

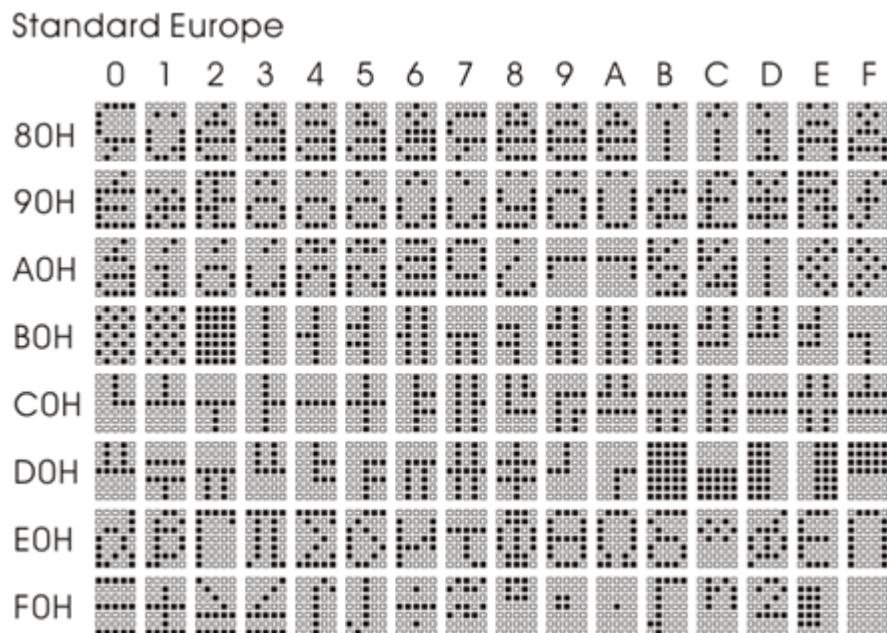
Decimal system format: [027][099] n 48<=n<=55

Hexadecimal format: [1BH][63H] n 30H<=n<=37H

Description: select extended character font table. The font used is stored in 80H...FFH

ASCII n	Decimal system n	Hexadecimal n	Extended character font table (80H...FFH)
A	64	41H	U.S.A. and Standard Europe
J	74	4AH	Katakana for Japan
L	76	4CH	Slavonic
R	82	52H	Russia

The extended character font tables is shown in figure:



Katakana

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H																
90H																
A0H																
BOH																
C0H																
D0H																
EOH																
FOH																

SLAVONIC

RUSSIA

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
BOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
DOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

EPSON ESC/POS Standard mode command list

1. US: MD1 Set to overlay display mode

ACSI Code format: US MD1

Decimal system format: [031][001]

Hexadecimal format: [1FH][01H]

Note: change display mode to overlay mode. Pattern overlay display, cursor display characters from the top row of the left to the right, when the cursor to the top of the right side will automatically move the left position in the end, the left will automatically move to the top of the line when the position of the cursor on the right side. In this mode, the previously displayed characters are covered.

2. US MD2 Set to vertical scroll display mode

ACSI Code format: US MD2

Decimal system format: [031][002]

Hexadecimal format: [1FH][02H]

Note: change display mode to vertical scrolling display mode. Vertical scrolling display mode, the cursor display characters from the top row to the left to the right, to the right end of the cursor will automatically shift left most position in the end, the cursor in the end on the right, bottom line will be rolling on top line and replace the top line, then the cursor back the bottom row of the left to display the characters sent.

3. US MD3 Set to horizontal scroll display mode

ACSI Code format: US MD3

Decimal system format: [031][003]

Hexadecimal format: [1FH][03H]

Note: change display mode to horizontal scroll display mode. When scrolling horizontally, the characters that are sent are always displayed at the rightmost end of the cursor's line, and then move the previously displayed characters from right to left.

4. BS Left cursor shift

ACSI Code format: BS

Decimal system format: [008]

Hexadecimal format: [08H]

Note: move the cursor to the left. The cursor is not visible by default, but does exist. Please turn on/off the cursor by using the US C n command.

When the cursor is in the leftmost position, operation of this command varies depending on the display mode.

A. Coverage mode:

When the cursor is in the bottom row of the left most position, the right position of the cursor will move to the top of the line. When the cursor is in the leftmost position of the top row, the cursor moves to the rightmost position of the row.

B. Vertical scrolling display mode:

When the cursor is in the bottom row of the left position, the right position of the cursor will move the top line. When the cursor is in the top left position, top line will be rolling in the end, then, the top row of characters is cleared, the right position of the cursor to the top of the line.

C. Horizontal scroll display mode:

Cursor fixed on the left.

5. HT Cursor right shift

ACSII CODE FORMAT: HT

Decimal system format: [009]

Hexadecimal format: [09H]

Note: move the cursor to the right. The cursor is not visible by default, but

does exist. You can turn on / off the cursor by using the US C n command.

When the cursor is in the rightmost position, the operation of this command varies depending on the display mode.

A. Coverage mode:

When the cursor is in the right position the bottom line, the position of the cursor will move to the top left of the line. When the cursor is in the rightmost position of the top row, the cursor moves to the leftmost position of the line.

B. Vertical scrolling display mode:

When the cursor is in the rightmost position of the top row, the cursor moves to the leftmost position of the line. When the cursor is in the right position the bottom line, the bottom row of the top line of characters will roll, then the bottom line of characters is cleared, the cursor left most position in the end of the.

C. Horizontal scroll display mode:

Cursor fixed on the rightmost side.

6. US LF Cursor up

ACSCII CODE FORMAT: US LF

Decimal system format: [031][010]

Hexadecimal format: [1FH][0AH]

Note: move the cursor up one line. The cursor is not visible by default, but does exist; please turn on/off the cursor by using the US C n command.

When the cursor is in the top row position, operation of this command varies depending on the display mode.

A. Overlay mode:

Cursor moves exactly where the same column is placed.

B. Vertical scrolling display mode:

The top row characters scroll to the line, and then the top row characters are cleared and the cursor is in its original position.

C. Horizontal scroll display mode:

Cursor fixed.

7. LFCursor down

ACSI CODE FORMAT: LF

Decimal system format: [010]

Hexadecimal format: [0AH]

Note: cursor moves down one line. The cursor is not visible by default, but does exist; please turn on/off the cursor by using the US C n command.

When the cursor is in the bottom row position, the command is operated differently depending on the display mode.

A. Coverage mode: the cursor will move to the top cover for the same column.

B. vertical scrolling display mode: the bottom row of the top line character will roll, then the bottom row of the character is cleared, the cursor

in the original position.

C. horizontal scroll display mode: cursor fixed.

8. CR The cursor moves to the leftmost position of the current row

ACSCII CODE FORMAT: CR

Decimal system format: [013]

Hexadecimal format: [0DH]

Note: the cursor moves to the leftmost position of the current row. The cursor is not visible by default, but does exist. You can turn on / off the cursor by using the US C n command..

9. US CR The cursor moves to the rightmost position of the current row

ACSCII CODE FORMAT: US CR

Decimal system format: [031][013]

Hexadecimal format: [1FH][0DH]

Note: cursor moves to the rightmost position of the current row. The cursor is not visible by default, but does exist. You can turn on / off the cursor by using the US C n command..

10. HOM The top left position of the cursor

ACSCII CODE FORMAT: HOM

Decimal system format: [011]

Hexadecimal format: [0BH]

Note: the left position of the cursor to the top row. The cursor is not visible by default, but does exist. You can turn on / off the cursor by using the US C n command..

11. US B Move the cursor to the right position of the line

ACSCII CODE FORMAT: US B

Decimal system format: [031][066]

Hexadecimal format: [1FH][42H]

Note: cursor moves to the right position of the line. The cursor is not visible by default, but does exist. You can turn on / off the cursor by using the US C n command.

12. US \$ x y 光 The cursor moves to the specified location

ACSCII CODE FORMAT: US \$ x y

Decimal system format: [031][036] x y $1 \leq x \leq 20, 1 \leq y \leq 2$

Hexadecimal format: [1FH][24H]x y $1H \leq x \leq 14H$,

$01H \leq y \leq 02H$

Note: cursor moves to the specified line y, column x position. The cursor is not visible by default, and the cursor can be turned on / off by using the US C n command.

13. ESC @ Display initialization status

ACSCII CODE FORMAT: ESC @

Decimal system format: [027][064]

Hexadecimal format: [1BH][40H]

Note: display initialization, display mode to display the cursor mode, covered with dark, bright brightness, clear screen characters, the cursor to the top line to the left.

14. CLR Clears all characters on the screen

ACSCII CODE FORMAT: CLR

Decimal system format: [012]

Hexadecimal format: [0CH]

Description: clear all the characters of the screen, the cursor moves to the top of the left. Unlike initialization, however, it does not revert to the default setting.

15. CAN Clears all characters of the current cursor line

ACSCII CODE FORMAT: CAN

Decimal system format: [024]

Hexadecimal format: [18H]

Notice: clear all the characters in the current cursor, the cursor moves to the top of the left. The cursor is not visible by default, but does exist. You can

turn on / off the cursor by using the US C n command.

16. US C n Set cursor status

ACSCII CODE FORMAT: US C n 0<=n<=1

Decimal system format: [031][067] n 48<=n<=49

Hexadecimal format: [1FH][43H] n 30H<=n<=31H

Instructions: set the cursor's bright / dark state..

When n=0, Cursor dark

When n=1, Cursor light

17. US. n N display character, and character on the lower right corner of the

dot

ACSCII CODE FORMAT: US . n

Decimal system format: [031][046]n 32<=n<=255

Hexadecimal format: [1FH][2EH]n 20H<=n<=FF

Show the character n, and on the lower right corner of the dot character.

18. US, n Displays the character n and lights the lower right corner of the

comma

ACSCII CODE FORMAT: US , n

Decimal system format: [031][044]n 32<=n<=255

Hexadecimal format: [1FH][2CH]n 20H<=n<=FF

Explanation: shows the character n and lights the lower right corner of the comma.

19. US ; n Display character n and light the semicolon in the lower right corner of the character

ACSCII CODE FORMAT: US ; n

Decimal system format: [031][059]n 32<=n<=255

Hexadecimal format: [1FH][3BH]n 20H<=n<=FF

Description: display characters n, and lit the lower right corner of the semicolon.

20. US # n m Bottom line triangle light on / off

ACSCII CODE FORMAT: US # n m

Decimal system format: [031][035]n m n=0,1; 1<=m<=20

Hexadecimal format: [1FH][23H]n m n=00H,01H; 01H<=m<=14H

Explanation: bottom line triangle mark light on / off.

21. US X n Brightness adjustment

ACSCII CODE FORMAT: US X n

Decimal system format: [031][042]n 1<=n<=4

Hexadecimal format: [1FH][2AH]n 01H<=n<=04H

Description: adjust the display brightness of the screen.

When n=1, Brightness =40%
When n=2, Brightness =60%
When n=3, Brightness =80%
When n=4, Brightness =100%

22. US E n Screen character blinking frequency setting

ACSCII CODE FORMAT: US E n

Decimal system format: [031][069]n 0<=n<=255

Hexadecimal format: [1FH][45H]n 00H<=n<=FFH

Note: screen character blinking frequency setting. After setting this command, contents of the screen will start flashing at the value of n. The greater the value of N, the greater the interval between the duration of the lights and the extinction. Stop blinking when n=0.

23. ESC R n The selected character code table

ACSCII CODE FORMAT: ESC R n

Decimal system format: [027][082]n 00<=n<=12

Hexadecimal format: [1BH][52H]n 00H<=n<=0CH

Note: select international character code table.

Decimal system n	Hexadecimal n	The character code table
0	00H	U.S.
1	01H	France

2	02H	Germany
3	03H	U.K.
4	04H	Denmark (I)
5	05H	Sweden
6	06H	Italy
7	07H	Spain
8	08H	Japan.
9	09H	Norway
10	0AH	Denmark (II)
11	0BH	Slavonic
12	0CH	Russia

The difference between international character code table, please refer to the following:

	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
USA	█	█	█	█	█	█	█	█	█	█	█	█
FRANCE	█	█	█	█	█	█	█	█	█	█	█	█
GERMANY	█	█	█	█	█	█	█	█	█	█	█	█
U.K	█	█	█	█	█	█	█	█	█	█	█	█
DENMARKI	█	█	█	█	█	█	█	█	█	█	█	█
SWEDEN	█	█	█	█	█	█	█	█	█	█	█	█
ITALY	█	█	█	█	█	█	█	█	█	█	█	█
SPAIN	█	█	█	█	█	█	█	█	█	█	█	█
JAPAN	█	█	█	█	█	█	█	█	█	█	█	█
NORWAY	█	█	█	█	█	█	█	█	█	█	█	█
DENMARK II	█	█	█	█	█	█	█	█	█	█	█	█
SLAVONIC	█	█	█	█	█	█	█	█	█	█	█	█
RUSSIA	█	█	█	█	█	█	█	█	█	█	█	█

24. ESC t n Select extended character font table

ACSII CODE FORMAT: ESC t n

Decimal system format: [027][116] n 0<=n<=7

Hexadecimal format: [1BH][74H] n 00H<=n<=07H

Description: select extended character font table. The font used is stored in 80H... FFH

Decimal system n	Hexadecimal n	Extended character font table (80H...FFH)
0	00H	U.S. and Standard Europe
1	01H	Katakana for Japan
2	02H	Multilingual
3	03H	Portuguese

4	04H	Canadian French
5	05H	Nordic
6	06H	Slavonic
7	07H	Russia

The extended character font tables are shown in figure:

Standard Europe

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H																
90H																
A0H																
BOH																
C0H																
D0H																
EOH																
FOH																

Katakana

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H																
90H																
A0H																
BOH																
C0H																
D0H																
EOH																
FOH																

Multilingual

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H																
90H																
A0H																
B0H																
C0H																
D0H																
EOH																
FOH																

Portuguese

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
BOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
D0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Canadian French

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
BOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
D0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Nordic

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
BOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
D0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

SLAVONIC

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
BOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
D0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

RUSSIA

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
90H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
A0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
B0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
C0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
D0H	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
EOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
FOH	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

C