

OSCAR

POS90

Professional Kitchen Printer

User's Manual



(Ver 1.00)

Content

Introduction	14
Chapter 1 Feature and Performance	14
1.1 Print Performance	14
1.2 Print Paper	15
1.3 Print Font.....	15
1.4 Interface	15
1.5 Print Control Commands	15
1.6 Power Supply	16
1.7 Operation Environment	16
Chapter 2 Operation Specification	17
2.1 Printer Appearance	17
2.2 Paper Installation	17
2.2.1 Paper Loading.....	17
2.2.2 Solution to Paper Jam.....	19
2.3 Interface.....	20
2.3.1 Serial Interface.....	20
2.3.2 Ethernet Interface	20
2.3.3 USB Interface.....	21
2.3.4 Cash Drawer Interface	21
2.4 Buttons and Indicators	21
2.5 Self-test.....	23
2.6 Other working mode of printer.....	23
2.6.1 Hexadecimal Printing	24
2.6.2 Printer parameters setting.....	24
2.6.3 Entering Software Upgrading Mode	24
2.6.4 Recovering Default IP Address	25
2.7 Wall-mounted Installation.....	25
Appendix A. Parameters Setting	27

Introduction

POS90 printer is one new type – professional for kitchen, which has the dust, water and insect proof function. It features in fast printing-speed, low printing-noise, high reliability and ribbon needless, which avoid the vexation of regular maintenance.

POS90 printer: small in outline dimension, simple operation and flexible installing method. User can choose the installing method according to their own requests.

Warning

This is a class A product. In the domestic environment, this product may cause radio interference, in which case the user may be required to take adaptable measures.

Chapter 1 Feature and Performance

1.1 Print Performance

- Print method: direct line thermal
- Print paper width: 79.5±0.5mm
- Print density: 8 dots/mm, 576 dots/line
- Print speed: approx.180mm / sec.
- Reliability

(1)Printing head life: 100km

Using condition:

* When printing 12 × 24 ANK characters, print 50 lines each time, intermittent print repeatedly

* Each dot-line printing at the same time should not exceed 25%; In each character line, on one same dot vertical, printing repeatedly should not exceed 11 times

* Use specified thermal paper

(2) Cutter life: 500,000 cuts

Using condition: less than 30 cuts/minute

- Valid print width: 72mm
- Paper feeding speed: approx 170mm/s

1.2 Print Paper

- Thermal paper roll model: TF50KS—E (Japan paper co.ltd)
AF50KS-E (JUJO THERMAL)
- Thermal paper roll: Width——— 79.5±0.5mm
Outer Diameter —— 80mm (max.)
Inner Diameter——— 13mm (min.)
Thickness —— 0.06mm~0.08mm

1.3 Print Font

- ANK Character Set
12×24 dots, 1.5 (W) ×3.00 (H) mm
- Chinese:
24×24 dots, 3.00 (W) ×3.00 (H) mm.

1.4 Interface

- RS—232C Serial Interface:
DB-9 socket (female), supports XON/XOFF and TR/DSR protocols.
Baudrate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200bps adjustable.
Data structure: 1initial bit + (7 or 8) data bits + 1 stop bit.
Parity checking: no parity or odd, even parity optional.
- Ethernet Interface:
Standard Ethernet RJ45 interface.
- USB Interface:
Standard USB interface
- Cash Drawer Control
DC24V, 1A, 6-pin RJ-11 socket.

1.5 Print Control Commands

- Character print commands: support double-width and double-height printing of many ANK codepages, user-defined character and Chinese characters. The

character line spacing is adjustable.

- Graphics print commands: support printing different density bit-map graphics and downloaded bit-map graphics.
- 1-dimension barcode print commands: support UPC-A, UPC-E, EAN-13, EAN-8, CODE39, ITF25, CODEBAR, CODE93, CODE128 barcode printing.
- 2-dimension barcode print commands: support PF417, QRCODE, DARAMATRIX two-dimension barcode printing.

1.6 Power Supply

- Voltage: AC100V~240V
- Current: 2A
- Frequency: 47~63HZ

1.7 Operation Environment

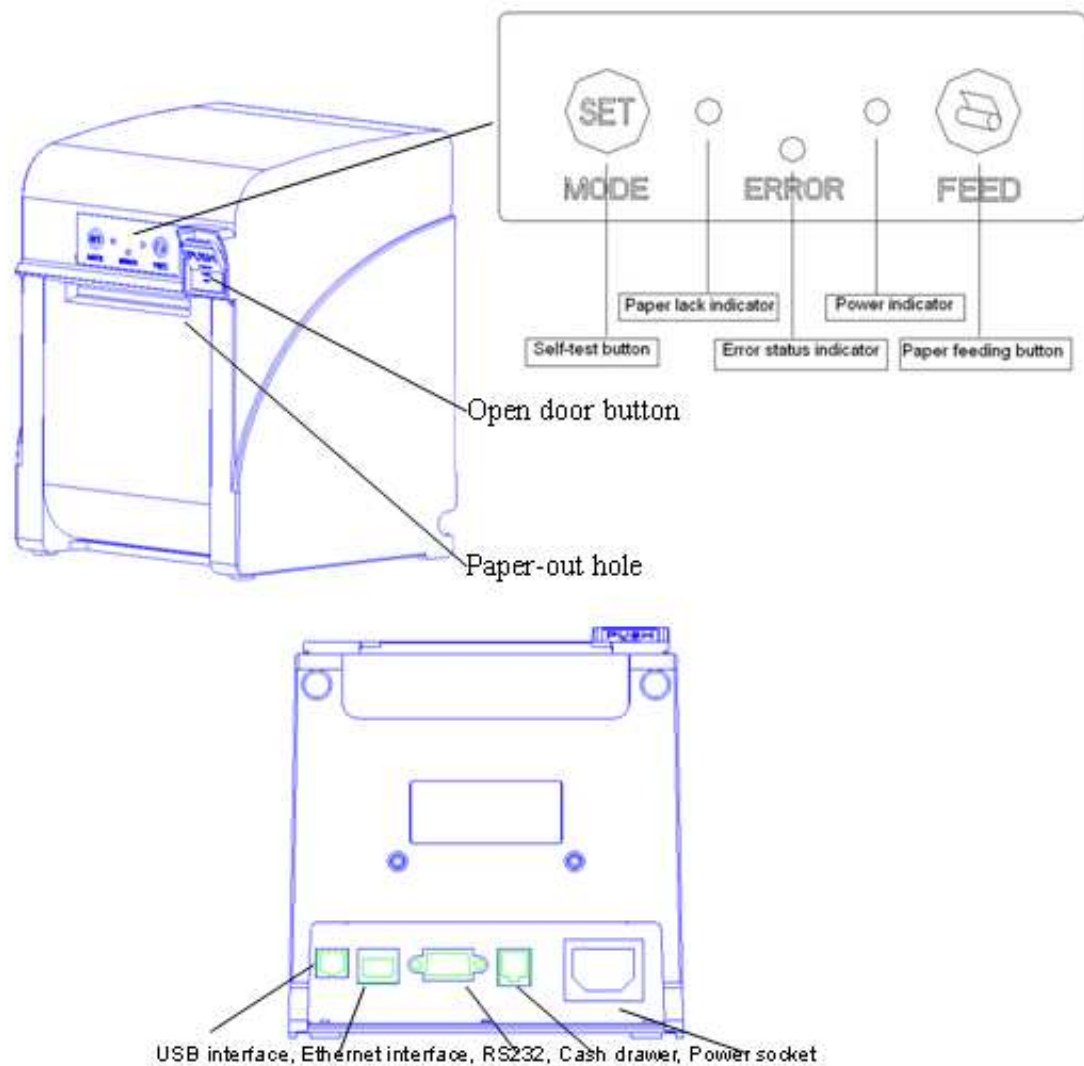
- Operation temperature: 0~50℃;
Relative operation humidity: 10~80%
- Storage temperature: -20~60℃;
Relative storage humidity: 10~90%

1.8 Outline Dimension

- 156 (L) mm×163 (W) mm×211 (H) mm

Chapter 2 Operation Specification

2.1 Printer Appearance



Picture 2.1 Outer appearance of printer

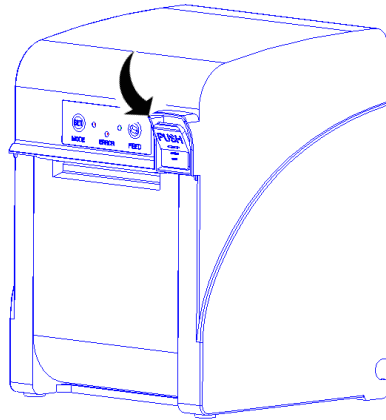
2.2 Paper Installation

2.2.1 Paper Loading

POS90 printer use 80mm width thermal paper roll. Thermal paper loading

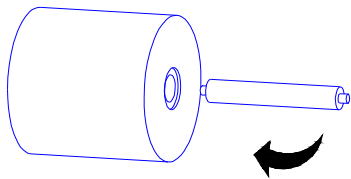
steps are as below:

1. Press the Open door button and open the paper case cover. As the below picture,

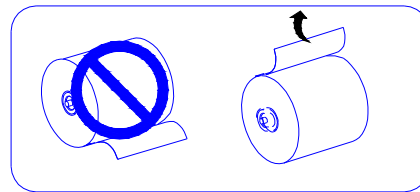


Picture 2.2

2. Take out the used paper roll, put the paper axle into the new paper roll. As showed in the below picture (Picture 2.3). Pls pay attention to the direction of paper, as showed in the below picture (Picture 2.4)

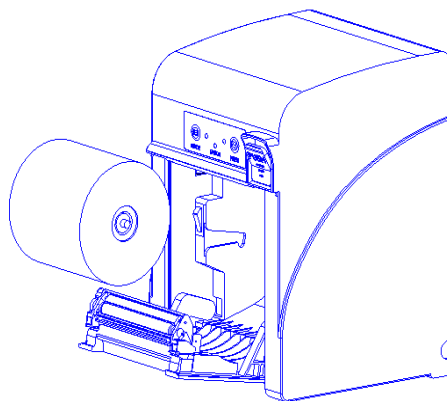


Picture 2.3

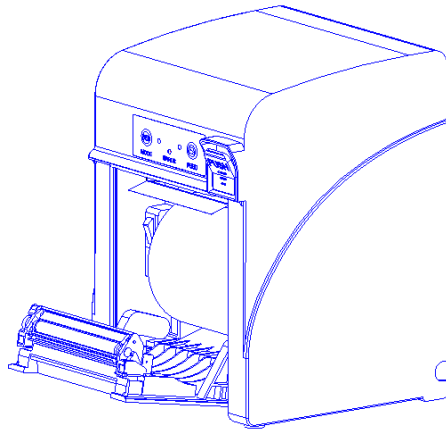


Picture 2.4

3. Pull out some inch paper from the paper roll and put the paper roll and the paper axle together into the slideway of paper case, as showed in Picture2.5. Then close the paper case cover, as showed in the Picture2.6.

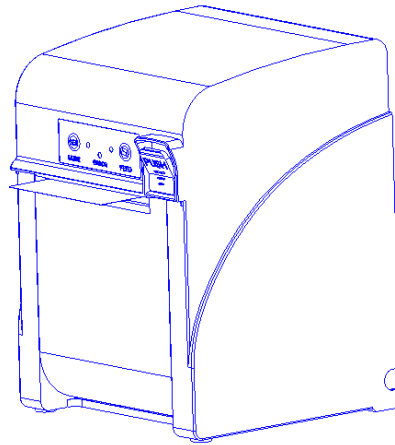


Picture2.5



Picture2.6

4. Tear off the extra paper, as showed in Picture2.7.



Picture2.7



Caution!

1. Pay attention to the direction of loading paper, make the printing surface face to the printing head.
2. Please don't feed or draw the paper forwards or backwards with hands.
3. Keep clean of the printing head, avoid to influence the printing quality.

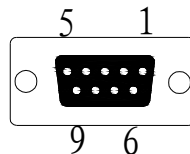
2.2.2 Solution to Paper Jam

If cutter jam, press the open door button and open the paper case cover, take out the jammed paper. After loading the paper again, close the paper case cover. Then the cutter will return to the normal position automatically.

2.3 Interface

2.3.1 Serial Interface

The serial interface of POS90 printer is compatible with RS-232C, supporting DTR/DSR and XON/XOFF handshaking protocols. The socket is DB-9 female socket, as showed in Picture 2.8,



Picture2.8

Pin No.	Signal Name	Signal Source	Description
2	TXD	Printer	Printer transmits control code X-ON/X-OFF and data to host
3	RXD	Host	Printer receives data from host
4	DSR	Host	This signal means whether the host can receive data or not. "SPACE" means the host can receive data; "MARK" means the host can not receive data.
5	GND	—	Signal Ground
6	DTR	Printer	This signal means whether the printer is busy or not. "SPACE" means the printer is ready to receive data; "MARK" means the printer is too busy to receive data.
8	RTS	Printer	The same with DTR signal (Pin6).

2.3.2 Ethernet Interface

The Ethernet interface socket for POS90 is standard JR45 socket, which adapts with 10M/100M and Full-duplex or Half-duplex mode.

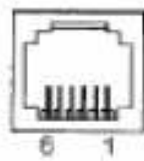
Protocol supports: Ethernet 802.3 protocol; Upper layer protocols including TCP, ICMP, IP, ARP, HTTP.

2.3.3 USB Interface

The USB interface socket for POS90 is standard USB-B socket, which abides by printer type protocol or virtual serial interface type protocol. The kind of protocol which is used during the printer working – printer type or virtual serial interface type, can be set up by setting software.

2.3.4 Cash Drawer Interface

The cash drawer interface of POS90 adopts RJ-11 6-pin socket, as Picture2.9 shows:



Picture2.9 Cash Drawer Interface

The pin assignment is as below:

Pin No.	Signal	Direction
1	Chassis Ground	—
2	Cash drawer driver signal 1	Out
3	Cash drawer on/off status signal	In
4	+24V DC	—
5	Cash drawer driver signal 2	Out
6	Signal ground	—

2.4 Buttons and Indicators

There are two buttons, one inner buzzer and three indicators on POS90 printer.

【MODE】 Self-test button. Press the button over two seconds to print the self-test of printer.

【FEED】 Paper-feeding button. The function status on/off of this button can be set by print command. During the function of this button is on, paper feeds into the printer when the **【FEED】** button is pressed; while paper stops feeding into the printer when the button is loosen.

BUZZER is used to indicate the error status and paper cutting. The function of buzzer can be set to error alarm, paper cutting indicating or both available

through the setting of print command. Error status type is same with ERROR indicator.

Green POWER indicator is power indicator. When POWER indicator is light, it means the printer is on.

Red PAPER OUT indicator is paper status indicator. Indicator light means the printer is out of paper.

Red ERROR indicator is error status indicator. When the printer is in normal working status, red ERROR indicator is off. If the indicator flickers, it is abnormal status alarm; while the indicator is persistent lighting, it means the paper case cover is open when the printer is not printing.

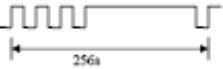
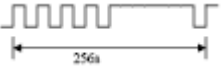
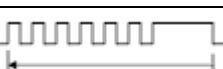
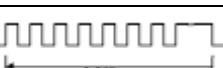
If the ERROR indicator flickers and the buzzer sound, it means there is error in printer.

According to the different flicker type, the different error types are as below,

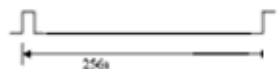
1. Non-recoverable error, the times of indicator flickering and buzzer sounding mean the error type, then persistent lighting.
2. Recoverable error, the times of indicator flickering and buzzer sounding mean the error type, then persistent indicator-off.
3. Auto-recoverable error, the indicator flickers and the buzzer sounds persistently.
4. Paper out, PAPER OUT indicator lights and the buzzer sounds persistently. When the paper case cover is open, whether the paper is out or not will not be tested, but just testing whether there is paper in printer.

The details are as below,

- a. Non-recoverable error, the indicator flickers several times, then persistent lighting. The times of flickering means the error type,

ERROR Type	ERROR Description	ERROR Indicator Flickering Type
Non-recoverable error	LED Flickers once: Internal memory reading and writing error	
	LED Flickers twice: over-voltage	
	LED Flickers three times: under-voltage	
	LED Flickers four times: CPU execution error (wrong address)	
	LED Flickers five times: UIB error	
	LED Flickers six times: FLASH writing error	
	LED Flickers seven times: parameter writing error	
	LED Flickers eight times: Temperature testing circuit error	

b. Recoverable error, indicator flickers constantly, then persistent off for one period.

ERROR Type	ERROR Description	ERROR Indicator Flickering Type
Recoverable error	LED Flickers once: Cutter position error	

c. Auto-recoverable error, indicator flickers constantly, including printing head over-heat error and upper case cover opening error during printing.

ERROR Type	ERROR Description	ERROR Indicator Flickering Type
Auto-recoverable error	LED Flickers constantly: printing head over-heat; upper case cover opening error during printing	

2.5 Self-test

The self-test will test whether the printer is working normally. If the printer can print the self-test receipt correctly, it means the printer is in normal condition except the interface with the host; otherwise, the printer will need to be repaired.

The self-test will print out: Software version, Manufacturer name, Printer model, Interface type and parameter, Default value of each parameter, 96 characters in ASCII code, Default codepage content (Language is set to English) or Chinese character library name (Language is set to Chinese), Barcode type.

The self-test method: After the printer is power on and in standby status, hold down **【MODE】** button over 2seconds. At this time, the printer will print self-test receipt.

2.6 Other working mode of printer

Besides the normal printing mode, there are also other working modes of printer – hexadecimal printing, parameters setting, software upgrading, default IP address recovering, etc. The method of entering other working modes is as below:

When the printer is off, open paper case cover firstly, hold down **【FEED】** button and turn on the printer power. Then press **【FEED】** button. The times of pressing **【FEED】** button will decide the working mode the printer will enter into. The flickering times of red PAPER OUT indicator will show the times of pressing **【FEED】** button. Close the paper case cover and the printer enters into the related working mode.

2.6.1 Hexadecimal Printing

Turn on the printer according to the steps below, it will enter into the model of Hexadecimal Printing.

1. Open the paper case cover
2. Hold down 【FEED】 button, turn on the power
3. Close the paper case cover

Hexadecimal Dump

To terminate hexadecimal dump,

Press FEED button three times.

The above means that the printer entered into hexadecimal printing mode. Under this mode, all the received data will be printed out in hexadecimal numbers. Pressing 【FEED】 button once, the paper feeding one line. When 3times are finished, the printer will print “*** Completed ***”. The printer quit hexadecimal printing mode.

2.6.2 Printer parameters setting

This function is used to set some simple parameters of printer.

The method of entering into the parameters setting is as below,

When the printer is off, open paper case cover firstly, hold down 【FEED】 button and turn on the printer power. After the status indicator and PAPER OUT indicator flicker alternately, loosen 【FEED】 button. Then press 【FEED】 button twice and close the paper case cover. The printer enters into parameters setting mode , prints out the first setting available item and its current value. Befor closing paper case cover, the flickering times of PAPER out indicator means the times of pressing 【FEED】 button. About the detailed setting method, pls check Appendix A.

The method of quit the parameters setting: Open the paper case cover firstly and hold down 【FEED】 button. Then close the paper case cover and loosen 【FEED】 button. Save the setted parameters and quit Parameters Setting Mode. Entering into normal working mode.

If the printer is powered off directly, the setted parameters can not be saved.

2.6.3 Entering Software Upgrading Mode

The software of this printer can be upgraded online. By Ethernet interface, the printer can be upgraded through website software when the printer is in normal working mode or upgrading mode. If by USB interface, the printer must be upgraded through special upgrading software when the printer is in upgrading mode. The special upgrading software can be downloaded from our company website.

The method of upgrading through website software and web page: Input IP address in the address bar of browser and operate according to the indications on web page. If entering upgrading mode through quick method, pls use the

default IP address of printer (192.168.1.114); otherwise, pls use the normal working IP address (Printed IP address on self-test receipt).

The method of entering upgrading mode:

When the printer is off, open paper case cover firstly, hold down 【FEED】 button and turn on the printer power. After the status indicator and PAPER OUT indicator flicker alternately, loosen 【FEED】 button. Then press 【FEED】 button five times and close the paper case cover. The printer enters into Software Upgrading Mode. In this case, the indicator flickers once a second.

The method of quick entering: When the printer is off, open paper case cover firstly, hold down 【FEED】 button and turn on the printer power. Then loosen 【FEED】 button quickly. The printer enters into Software Upgrading Mode. In this case, the indicator flickers once a second.

Caution: the software can be upgraded online only through Ethernet or USB interface.

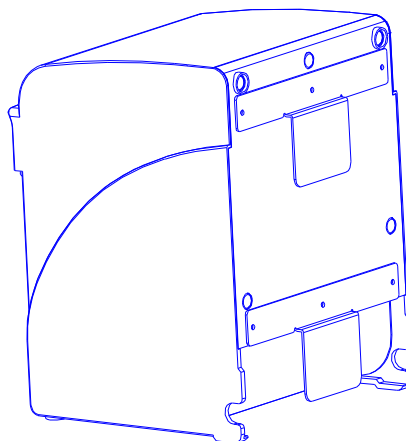
2.6.4 Recovering Default IP Address

If the IP address of printer is set to be invalid IP address, the printer will be not able to normally working through Ethernet interface. In this case, it will need to recover default IP address.

The method of recovering default IP address: When the printer is off, open paper case cover firstly, hold down 【FEED】 button and turn on the printer power. After the status indicator and PAPER OUT indicator flicker alternately, loosen 【FEED】 button. Then press 【FEED】 button four times and close the paper case cover. The printer will print out the default IP address parameters.

2.7 Wall-mounted Installation

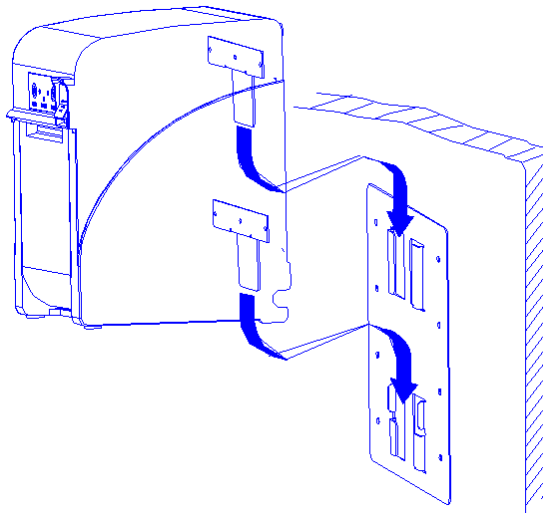
1. Install two wall-mounted buckles to the back side of printer by screws, as showed in Picture2.10,



Picture2.10

2. Install the wall-mounted board to the wall by screws. And hang the printer

with buckles to the wall-mounted board. As showed in Picture2.11,



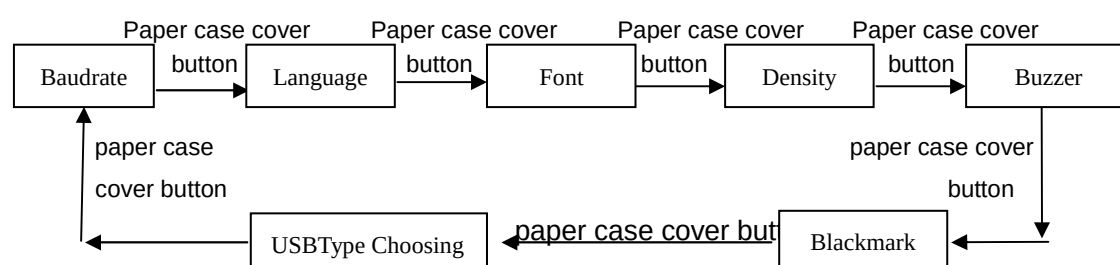
Picture2.11

Appendix A. Parameters Setting

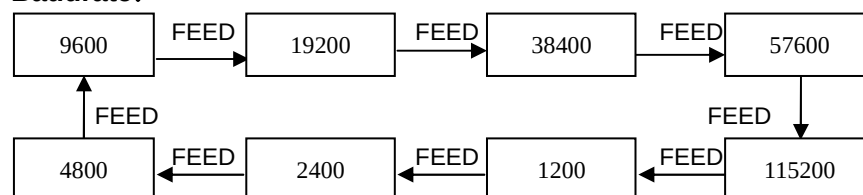
This appendix is the method to set printer default parameters through buttons:

Setting instruction: Choose setting item through “Paper case cover” button. When press “Paper case cover” button once, the setting items goes to the next and the printer prints out the current value of this time. Choose the value of setting item through 【FEED】 button. When press【FEED】button once, the setting value goes to the next.

Primary settings:



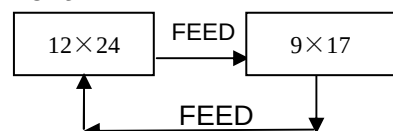
Baudrate:



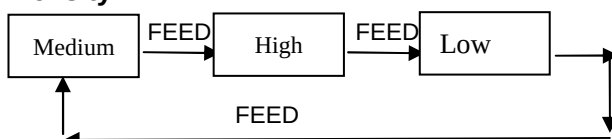
Language:



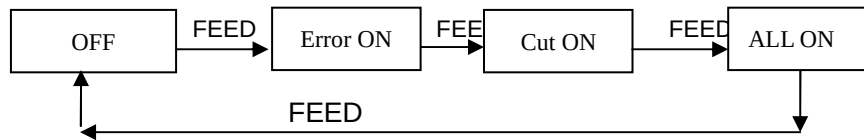
Font:



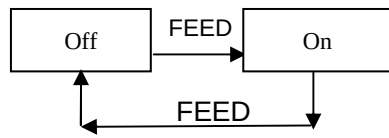
Density:



Buzzer:



Black Mark:



USB Type Choosing:

