

Automatic Ink-jet Printer

User Manual



Please read the user manual carefully to use the printer in better way.

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WARNING AND NOTE

- 1) Do not remove ink cartridge while printing;
Do not set parameters while printing;
Make sure that all cable connections well before power on.
- 2) If machine finishes working, take out cartridges at once and cap it well.
- 3) Please turn off machine with correct steps: click Shut down—Press power button on right side.
- 4) Please don't put machine in wet conditions.
- 5) When cleaning machine, keep away from water, and do not use chemical solvent. Do not use hard objects to crash machine in case of damage.

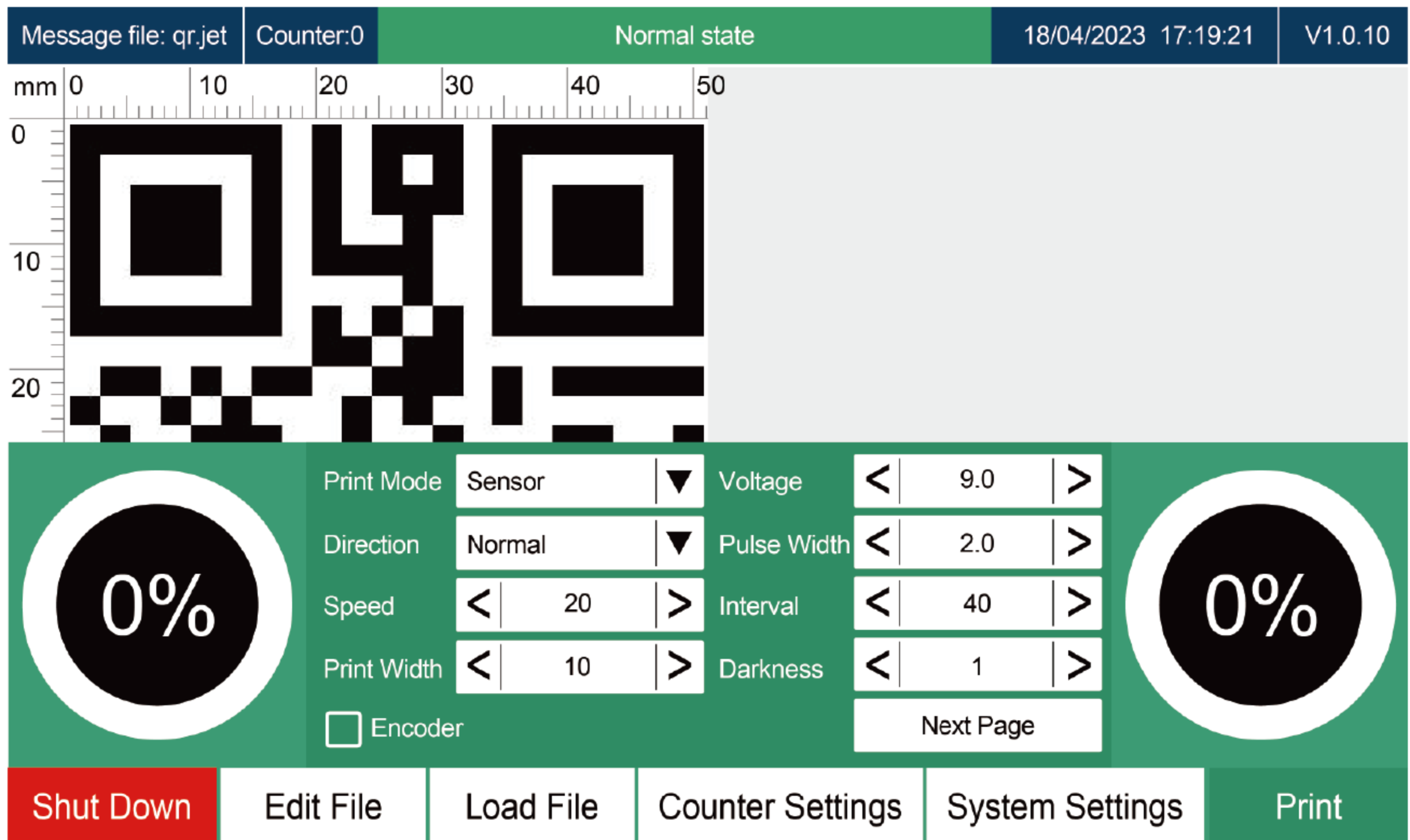
Common problems and ways of handling

- 1) Please check ink remaining;
- 2) Please check whether print setting and systems setting parameters are accurate or not;
- 3) Please check whether nozzle surface is dirty, and use dust-free tissue to clean it.

1. Parameters

| | |
|---------------------|--|
| Model | TD1, TD2 |
| Nozzle | Thermal ink jet technology (HP or IUT) |
| System | Linux |
| CPU | Quad 1.4GHz |
| Screen operation | 7 inches touch screen (800*480 px) |
| Equipment material | Aluminum alloy |
| Interface | USB, Sensor interface, Encode interface |
| Language | Currently there are Language for Arabic,Chinese, English, Italian, Korean, Portuguese, Russian, Spanish, Turkish, Thai, German, Greek, etc. customizable local language. |
| Printing height | 12.7mm / 25.4mm(TD1) , 50.8mm(TD2) |
| Resolution ratio | 300DPI |
| Printing distance | 2-5mm |
| Ink type | Water based, Solvent based |
| Ink color | Black, white, red, blue, green, yellow |
| Storage capacity | The system can store more than 1000 message (external USB make the information transfer in a free way) |
| Printing material | Carton, pipe, plastic, woven bag, cable, stone, board, wood, metal |
| Printing content | Text, counterdate/time, image,QRcode, Barcode, DMcoder, variable data, etc. |
| Printing length | 2000 characters for each message, no limitation on length |
| Adapter | AC100~240V input, DC16.8V/2A output |
| Power consumption | 35W |
| Dimension | Controller: 185 * 125 * 34mm, Print nozzle: 138*100 *136 mm |
| Weight | Controller: 0.58 KG, Print nozzle:0.5KG |
| Working environment | Temperature 0-45°C(20-30°C the best), Humidity40-60%Rh |

3.Main UI



Shut Down: Click to shut down machine, notice to press power button on the right side.

Edit File: Edit and delete files.

Load File: Load and delete files.

Counter Settings: Setting details of counter.

System Settings: System Settings, Maintenance, Administer.

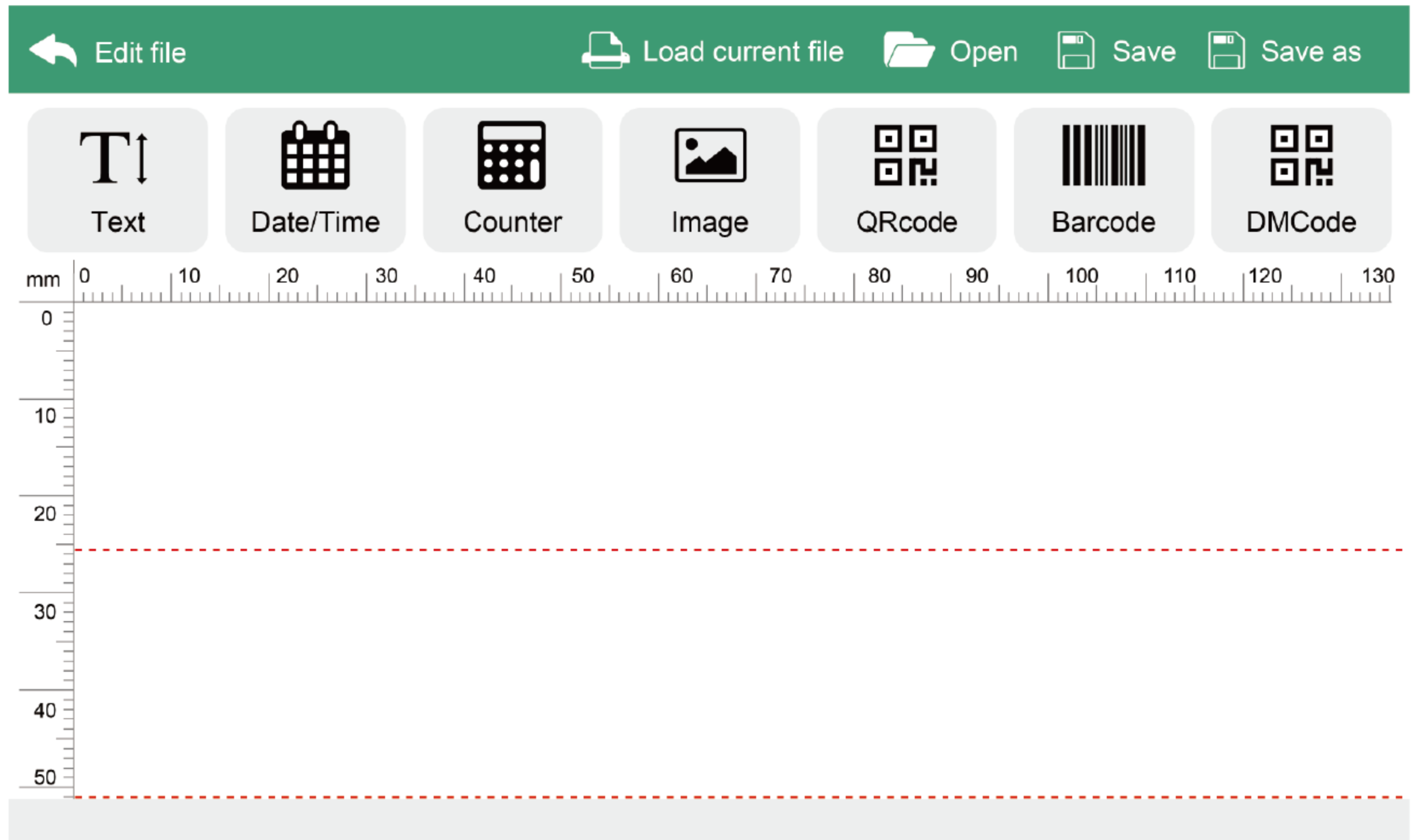
Print: Click Print, it will turn red to start printing, and click again it will turn to green to stop printing.

Note:

① Please follow the steps to shut down machine: click shut down (wait for screen off)—press power button on the right side;

② Please stop printing and Keep machine in a non-working state before revising any parameters.

3.Edit File



Open: open the saved file and edit it again.

Text: Refer to “3.1 Input Text”

Date/Time: Refer to “3.2 Input Date/Time”

Counter: Refer to “3.3 Input Counter/ serial number”

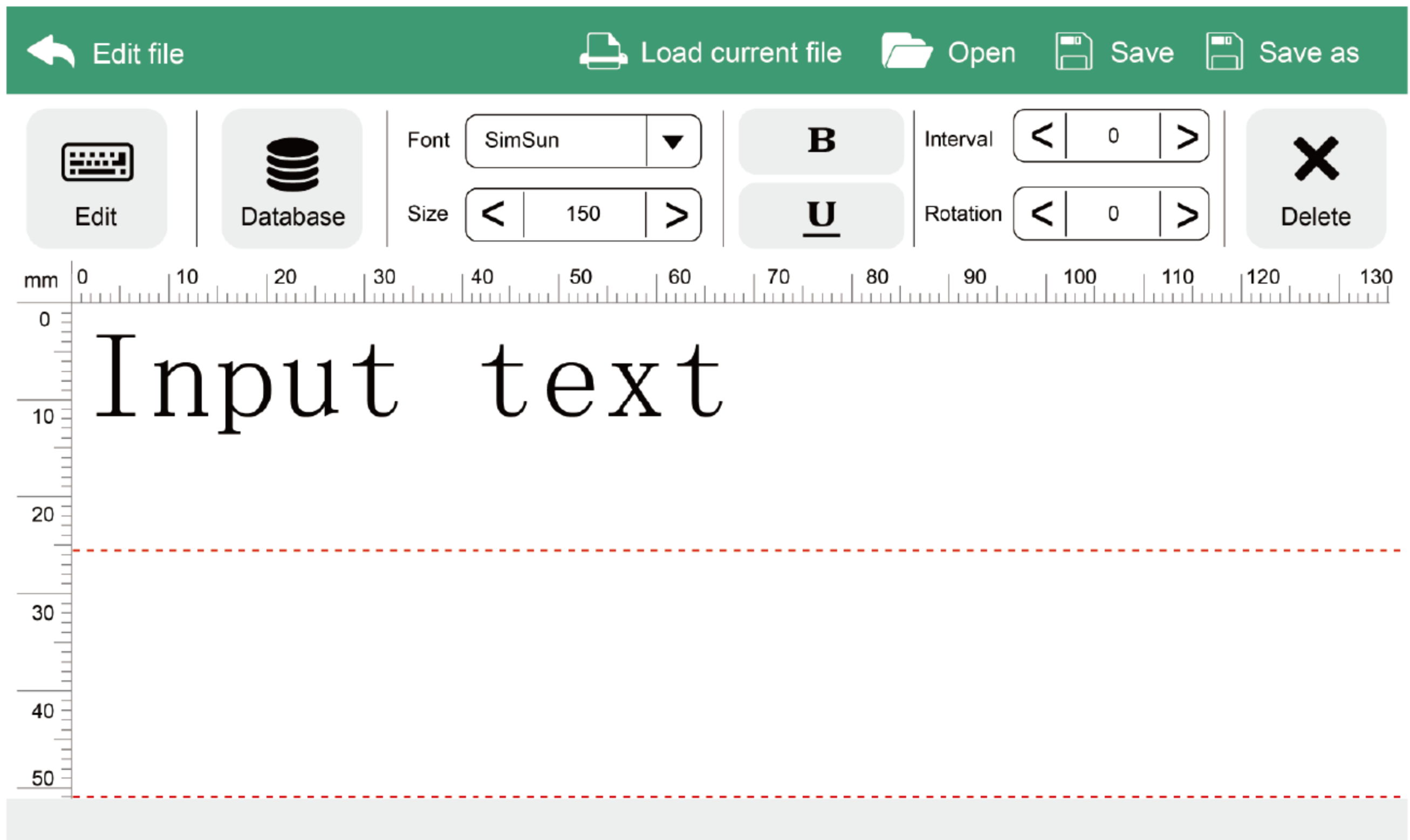
Image: Refer to “3.4 Input Logo/Image”

QRcode: Refer to “3.5 Input QRcode”

Barcode: Refer to “3.6 Input Barcode”

DMCode: Refer to “3.7 Input DataMatrix code”

3.1 Input Text



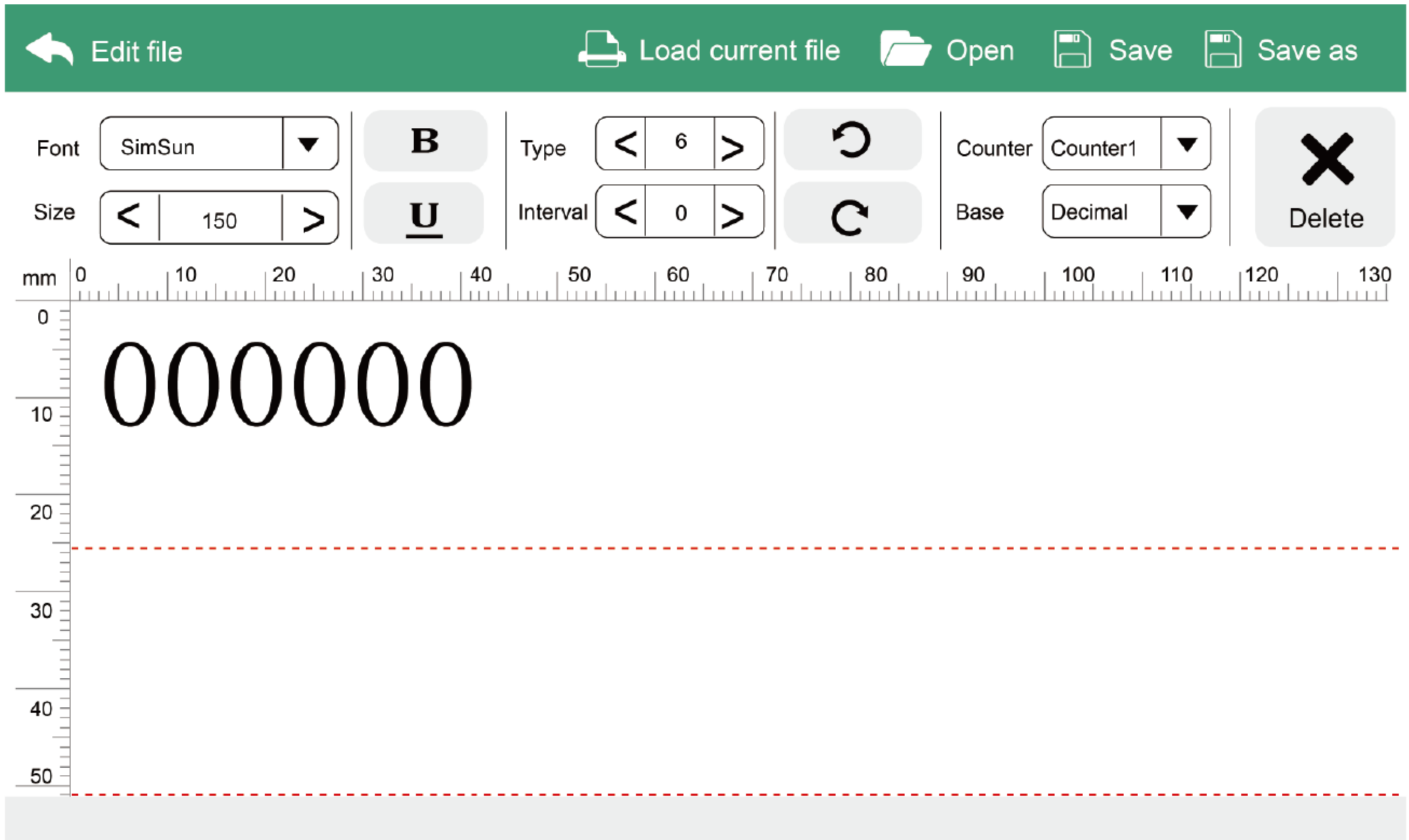
Click Text to input text, number or symbol Click content to input text →
Finish →adjust font and size as needed→adjust position →Load
current file or Save or Save as → input file name →OK.

3.2 Input Date/Time

The screenshot shows a software interface for inputting date/time. At the top, there is a green bar with buttons for 'Edit file', 'Load current file', 'Open', 'Save', and 'Save as'. Below this bar is a control panel with several options: a 'Defined' button with a calendar icon, font settings (Font: Arial, Size: 150), bold (B) and underline (U) buttons, a 'Type' dropdown menu set to 'yyyy/MM/dd', an 'Interval' spinner set to 0, and undo/redo and delete buttons. The main area of the interface shows a ruler with 'mm' on the left and a large display of the date '2023/04/18'.

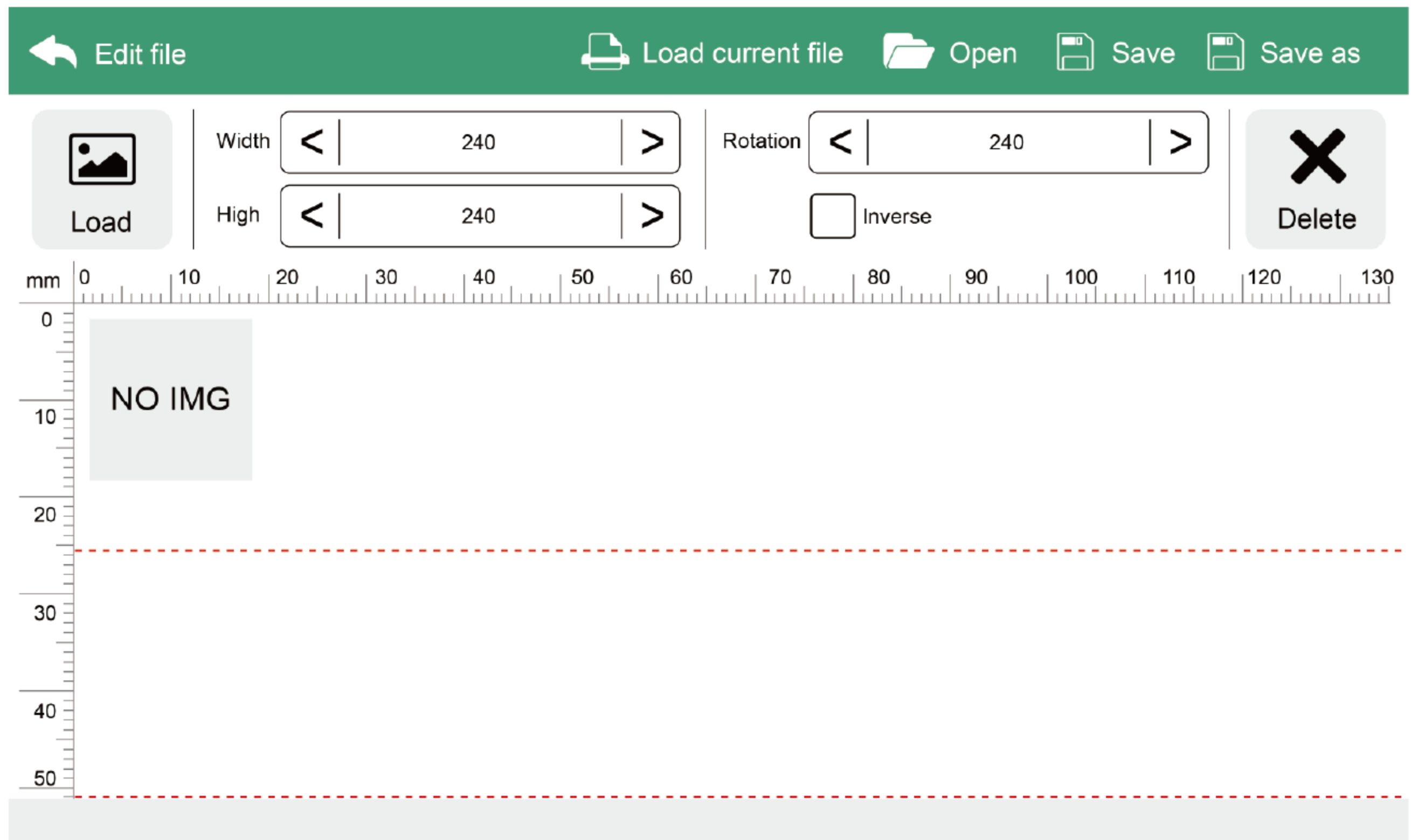
Click Time (windows will pop up system time)→click User-defined to set time format as need (click Type to choose quick set time format)→OK→Load current file or Save or Save as → input file name →OK.

3.3 Input Counter/ serial number



Click Counter, set type and size as need. One file could contain two different counters. Could set counter parameters in settings.

3.4 Input Logo/Image

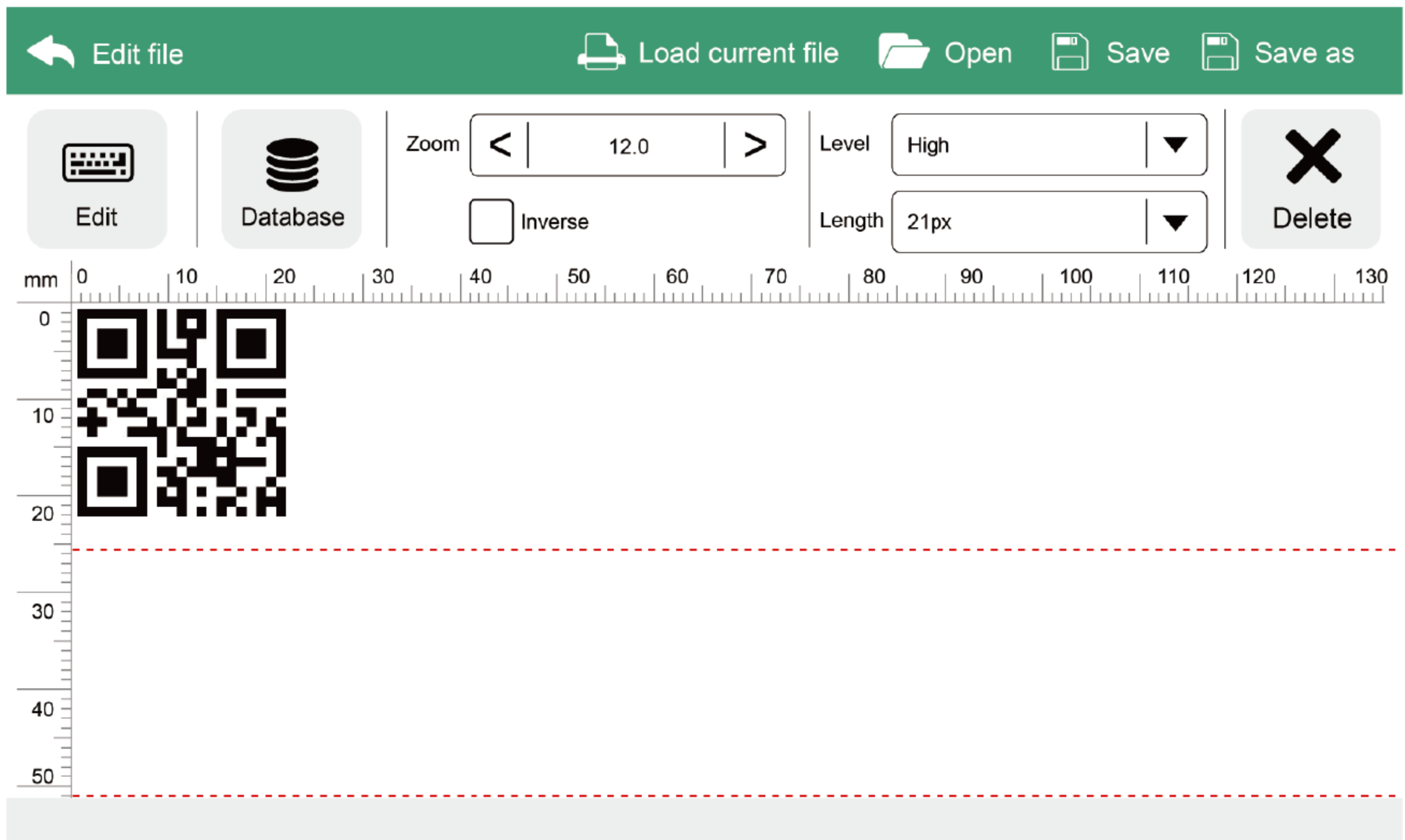


Insert USB disk with picture → File → Edit File → Image → Load → U Disk → choose the picture → To Load (copy the picture to local) → Local → choose the picture → OK → adjust size and position → Load current file or Save or Save as → input file name → OK.

Note:

- ① Please copy picture to machine storage first, then repeat loading from local storage.
- ② Any pictures should be saved as monochrome BMP in computer before save in file.
- ③ Edit file contains picture (machine can't print picture directly.)

3.5 Input QRcode

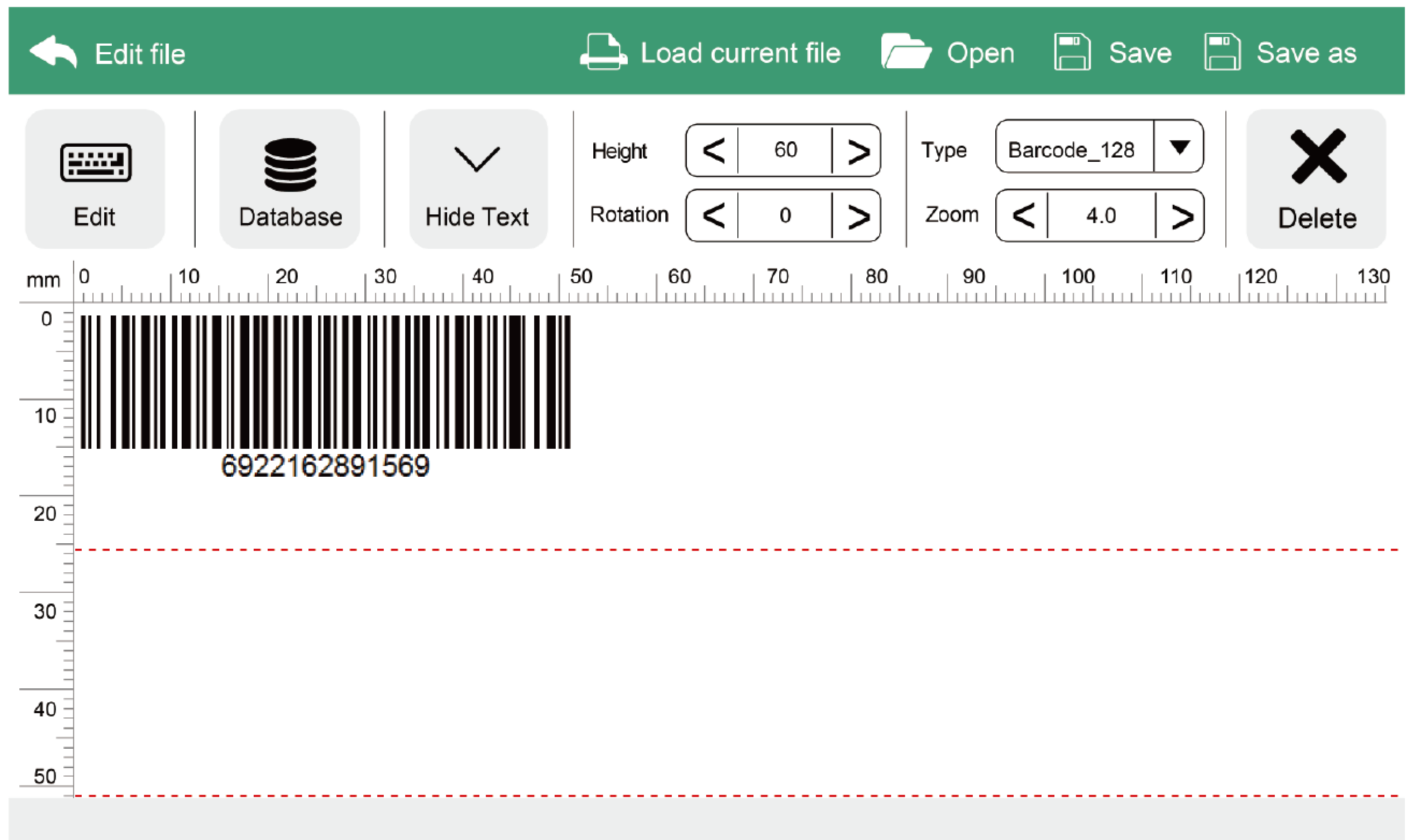


Click QR code → Edit (input code content) → Finish → Load current file or Save or Save as → input file name → OK.

Note:

- ① The size of could be adjusted through Scale.
- ② Resolution could be adjusted through Level.
- ③ QR code can be printed from data base by USB disk.

3.6 Input Barcode

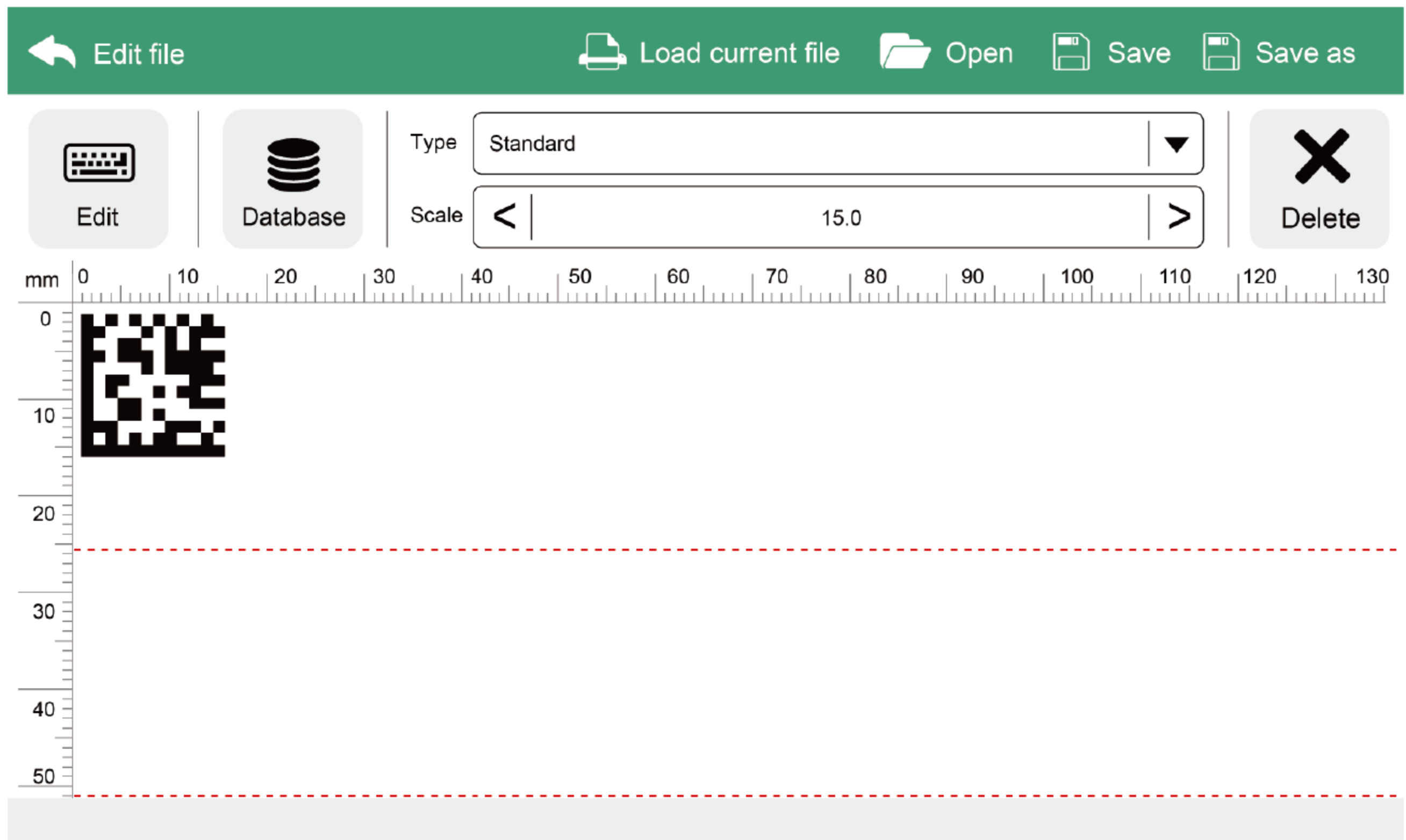


Click Barcode → Edit (choose bar code type and input code number) → Finish → Load current file or Save or Save as → input file name → OK.

Note:

- ① The size of could be adjusted through Zoom.
- ② Barcode support Barcode_128、Barcode_39、Barcode_93、EAN13、UPCA、UPCE、GS1_128、ITF14、PDF417 mode, click the drop-down menu to select the type of shape code in the Type.
- ③ Barcode can be printed from data base by USB disk.

3.7 Input DataMatrix code

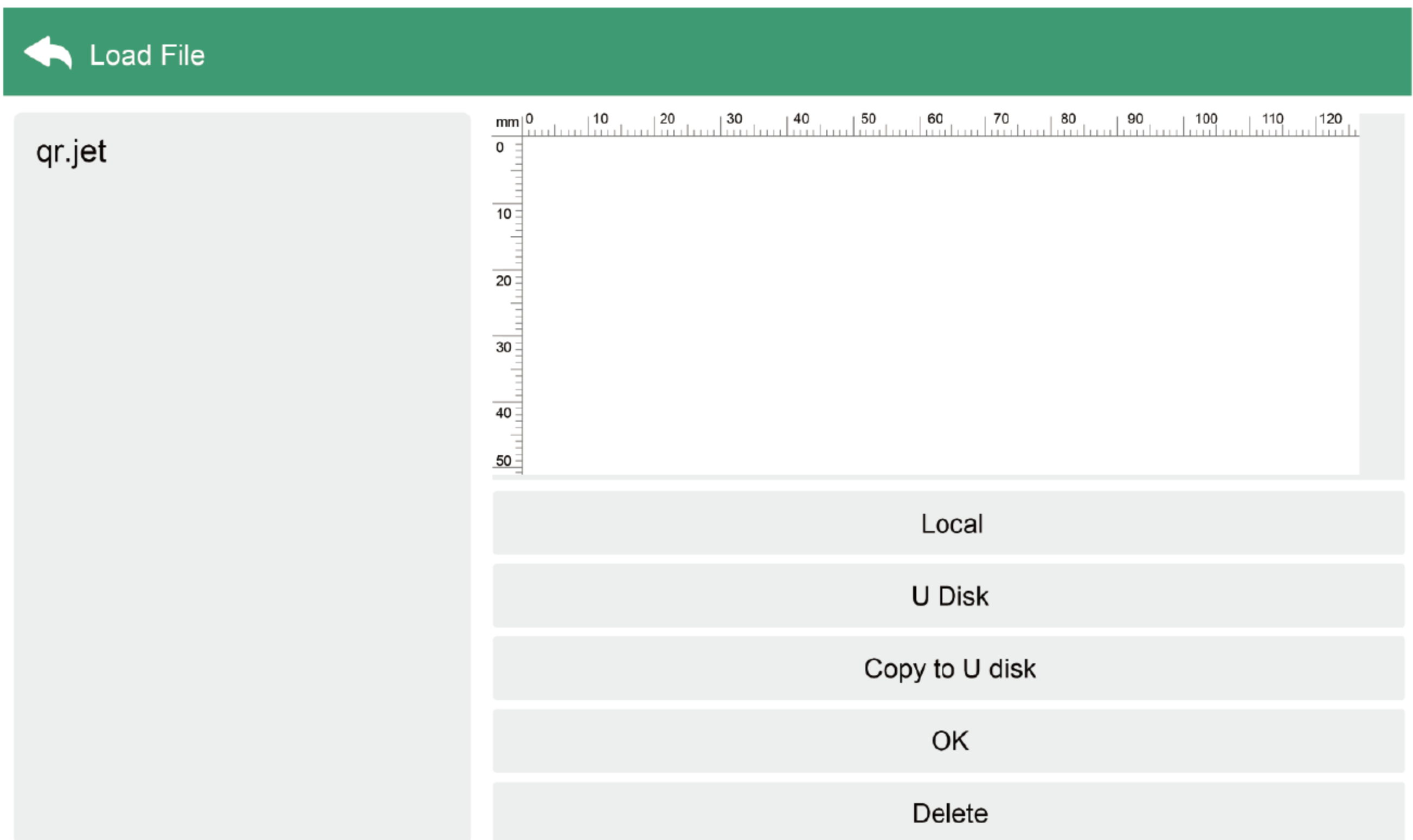


Click DM Code → Edit (input code content) → Finish → Load current file or Save or Save as → input file name → OK.

Note:

- ① The size of could be adjusted through Scale.
- ② Click Type to select the type of shape code, DM code support GS1 mode.
- ③ DM Code can be printed from data base by USB disk.

4. Load File



Local: The files which are saved in local storage.

U Disk: The files which are saved in USB storage.

Copy to U disk: When browsing local files, you can copy local files to U disk.

Delete: Delete the file.

5. Counter Settings

Counter 1

| | | | |
|------------|-----------|---------------|------------------|
| Cur Value | < 0 > | Initial Value | < 0 > |
| Step Value | < 1 > | End Value | < 99999999 > |

Counter 2

| | | | |
|------------|-----------|---------------|------------------|
| Cur Value | < 0 > | Initial Value | < 0 > |
| Step Value | < 1 > | End Value | < 99999999 > |

Counter

| | |
|-------------|-----------|
| Print Count | < 0 > |
|-------------|-----------|

It is the settings of counter number in file. One file could put two counters.

Cur Value: current value: current value of counter.

Initial Value: initial val: initial value of counter.

Step Value: step value: the value of every counter changes.

End Value: maximum value: maximum value of counter will turn to.

6. System Settings

← System Settings

| | |
|----------|-----------------------------|
| Language | English ▼ |
| Datetime | < 2023-04-18 14:00:00 > |
| | Screen Calibration |
| | Font Manage |
| | Advanced |
| | Authority Management |

Language: Currently there are Language for Arabic, Chinese, English, Italian, Korean, Portuguese, Russian, Spanish, Turkish, Thai, German, Greek, etc.

Datetime: Current the system time and to modify the system time.

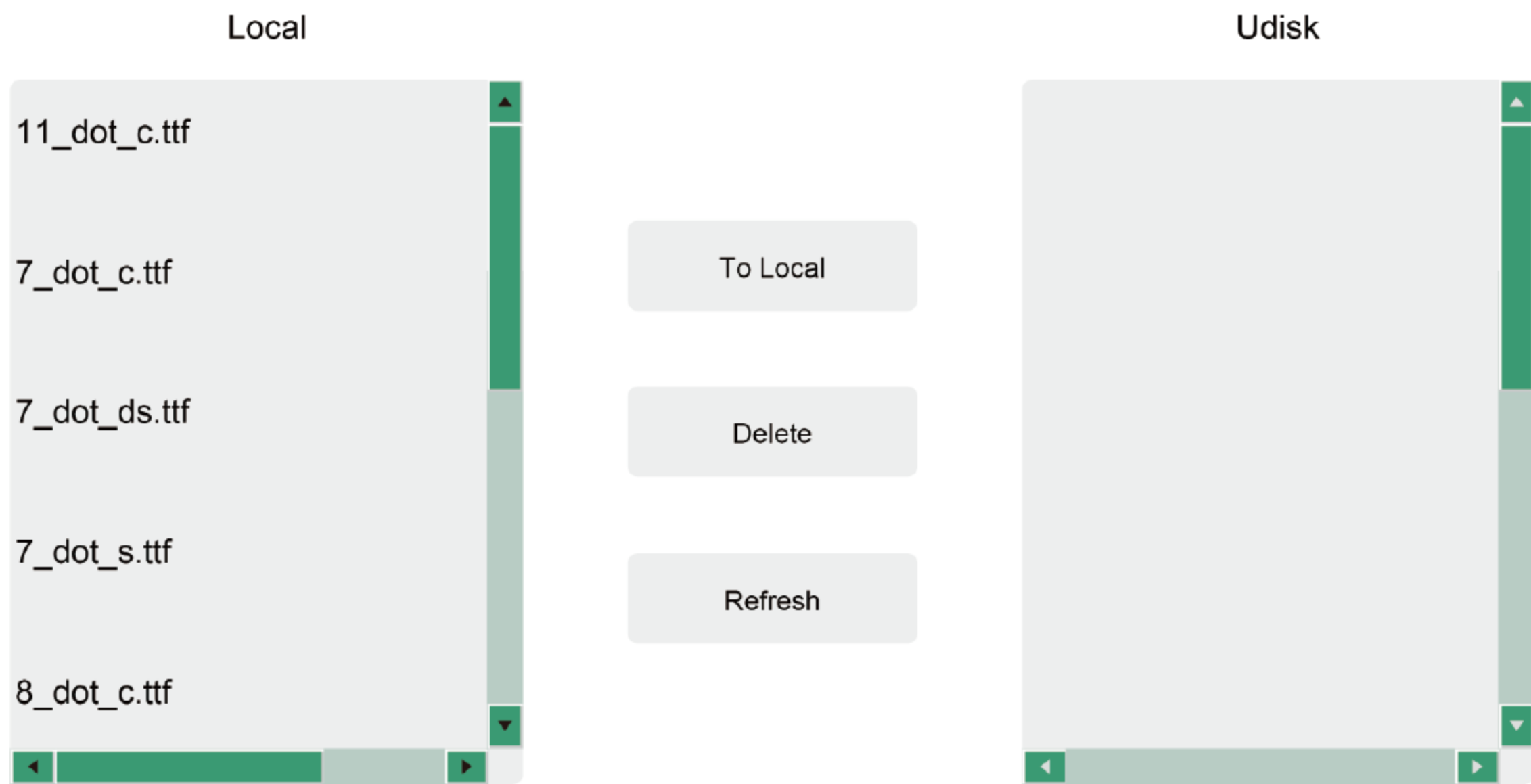
Screen Calibration: Screen calibration.

Font Manage: Refer to “6.1 Font Manage”.

Advanced: Obtain the password from the engineer.

Authority management: Refer to “6.2 Authority management”.

6.1 Font Manage



You can use the U disk to copy the required font to the device, and you can select the font when editing the information.

Note: Recognizable suffixes are the .ttf formats.

6.2 Authority Management

← Authorization Setting

| | | |
|--------------------------------------|---|---------|
| Level1 Password | Level2 Password | |
| <input type="password" value="●●●"/> | <input type="password" value="●●●●●●"/> | Confirm |

Authorization Setting

| | |
|----------|--|
| FileEdit | <input type="text" value="< 0 >"/> |
|----------|--|

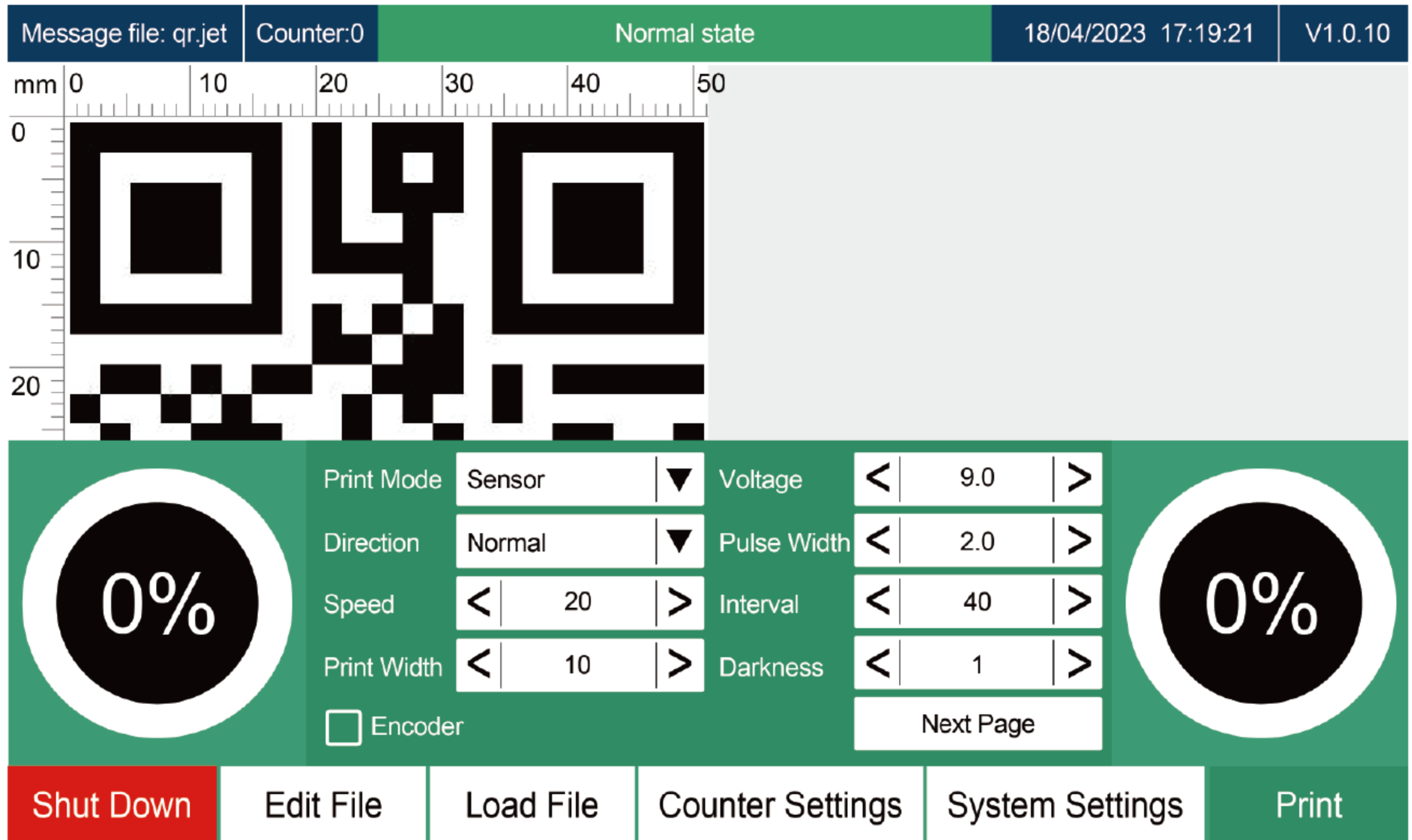
| | |
|----------|--|
| LoadFile | <input type="text" value="< 0 >"/> |
|----------|--|

| | |
|-----------|--|
| Parameter | <input type="text" value="< 0 >"/> |
|-----------|--|

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <input type="text" value="0"/> | <input type="text" value="1"/> | <input type="text" value="2"/> | <input type="text" value="3"/> | <input type="text" value="4"/> | <input type="text" value="5"/> | <input type="text" value="6"/> | <input type="text" value="7"/> | <input type="text" value="8"/> | <input type="text" value="9"/> | <input type="text" value="←"/> |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|

Which is a level 2 user interface. you can set the level 1 password and the level 2 password here, and can also set the permissions for each function.(It will effect immediately after password is modified. Be carefully operating it to avoid forgetting.) Level 0 is the default level, no password is required. Level 1 and Level 2 requires a password to log in, Level 2 is the highest level and can set the access rights of levels 0 and 1.(Default password Level 1: 123, Level 2: 123456). For example, when we set the print setting to level 1, then if the user level is level 0, the user will be prompted to have no access rights when using the print setting and cannot use this function. When the user level is logged in to level 1, then this function can be used normally.

7. Print Settings



Print Mode:

- ① Sensor: connect sensor through interface to trigger printing.
- ② Automatic: no need any trigger condition, it will print automatically if use this mode.

Direction: the direction of printing.

Speed: adjust speed to fit conveyor speed, (if connect encoder, then don, t need adjust this value). '0' means fastest. When machine print speed is too fast. Then need to make speed value bigger. When machine speed is too low. Then need to make speed value smaller.

Print Width: when connecting an encoder, Sync Freq means width of character. When number gets larger, character will be wider.

Voltage: Its used to set the working voltage of the cartridge nozzle (set according to the ink cartridge).

Pulse Width: its used to set the print pulse width of the ink cartridge nozzle (set according to the ink cartridge).

Interval: means the time from system receive print signal to start print. '0' is the minimum

Darkness: When number gets larger, character color will be darker.

Encoder: When machine connects a external encoder, need tick this.

Next page:

The screenshot displays a printer control interface. At the top, a status bar shows 'Message file: qr.jet', 'Counter:0', 'Normal state', '18/04/2023 17:19:21', and 'V1.0.10'. Below this is a ruler in millimeters (0 to 50) and a QR code. The main control area is green and contains two circular progress indicators showing '0%'. Settings include: DPI (300), Spary mode (Left), Print head (1), Offset (315), Splice (unchecked), Sound (checked), and Direction (Normal). A 'Previous Page' button is also present. At the bottom, a navigation bar includes buttons for 'Shut Down', 'Edit File', 'Load File', 'Counter Settings', 'System Settings', and 'Print'.

DPI: The larger the DPI, the clearer the printed information, and the slower the printing speed.

Print head: the number of print heads can be selected. max 2 print heads.

Splice: ① When splicing is not selected, the printing direction of a single print head can be set.

② When splicing is selected, the print heads print from the same direction.

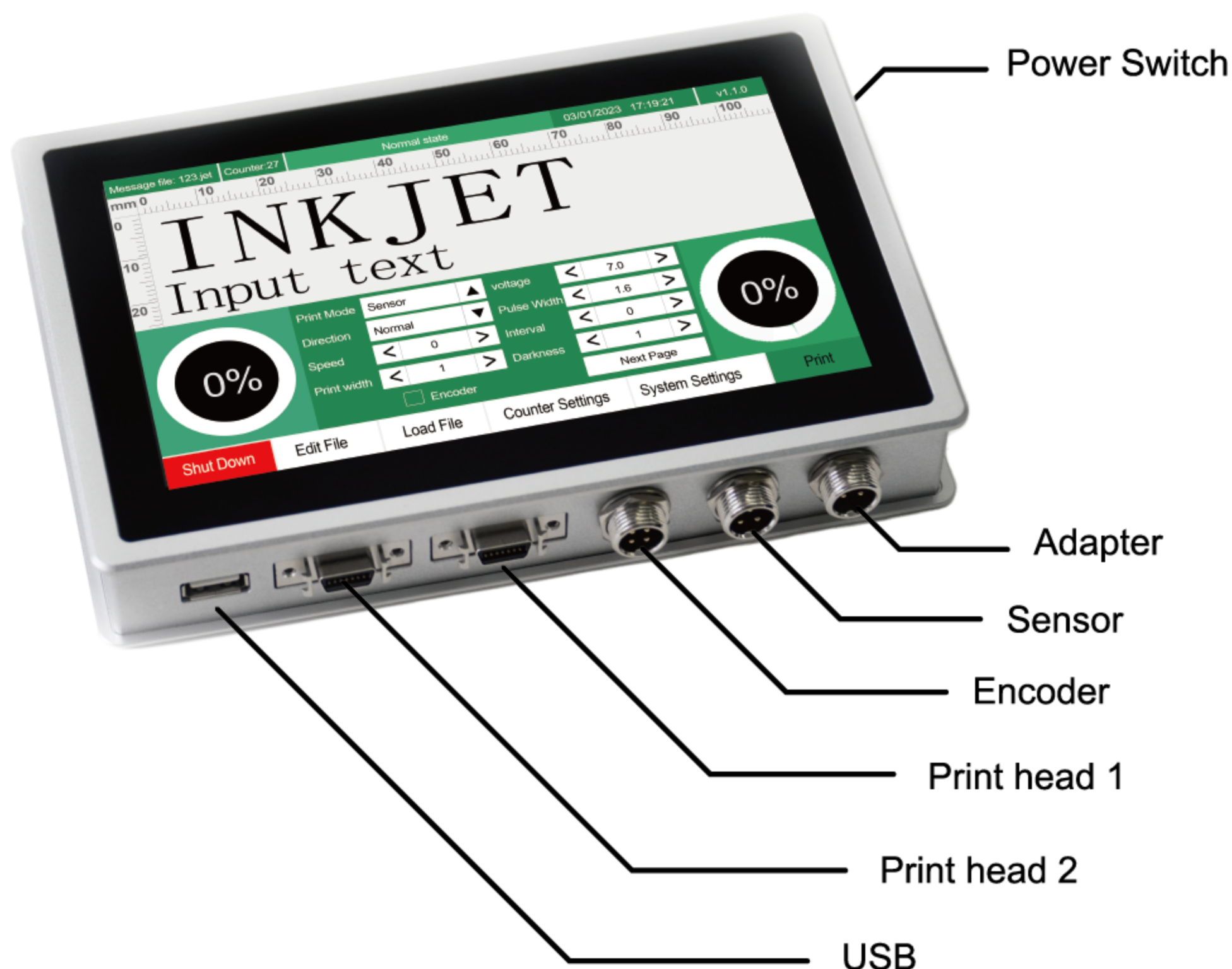
Sound: the buzzer will emit a "Didi" prompt tone every time the printing is completed.

Spray mode: left nozzle or right nozzle means two lines of pinhole on the cartridge ink nozzle. one inch cartridge ink only one lines of the nozzle

Offset: the distance of print head 2 from the receipt of the trigger signal to the starting of printing can be set.

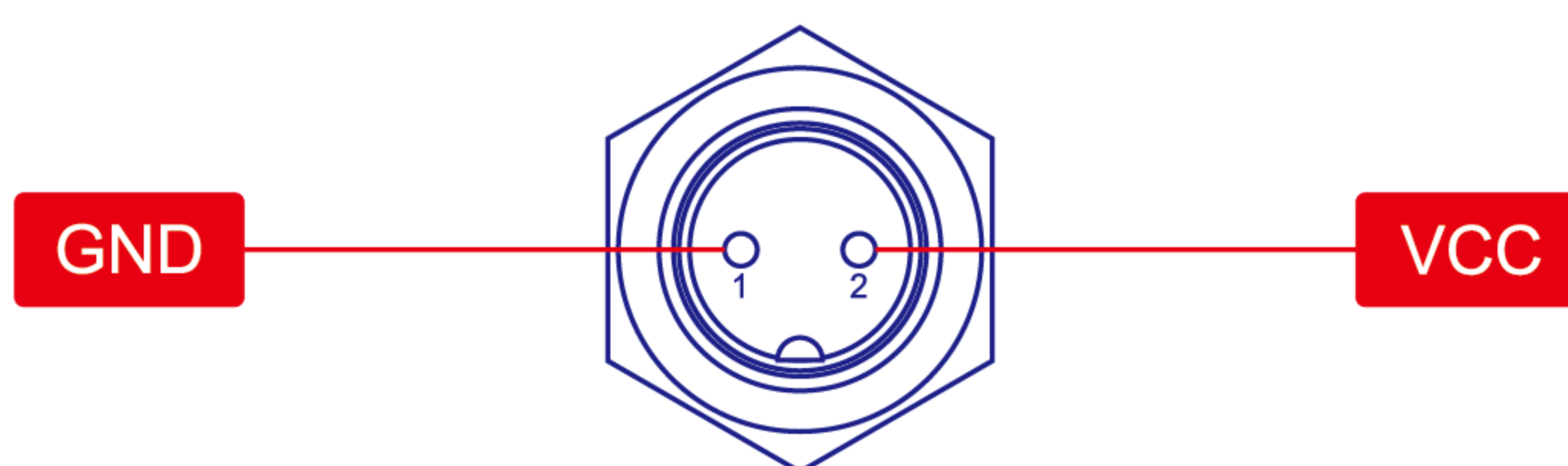
Direction: print head 2 the direction of printing.

8. Interface



8.1 Adapter Interface

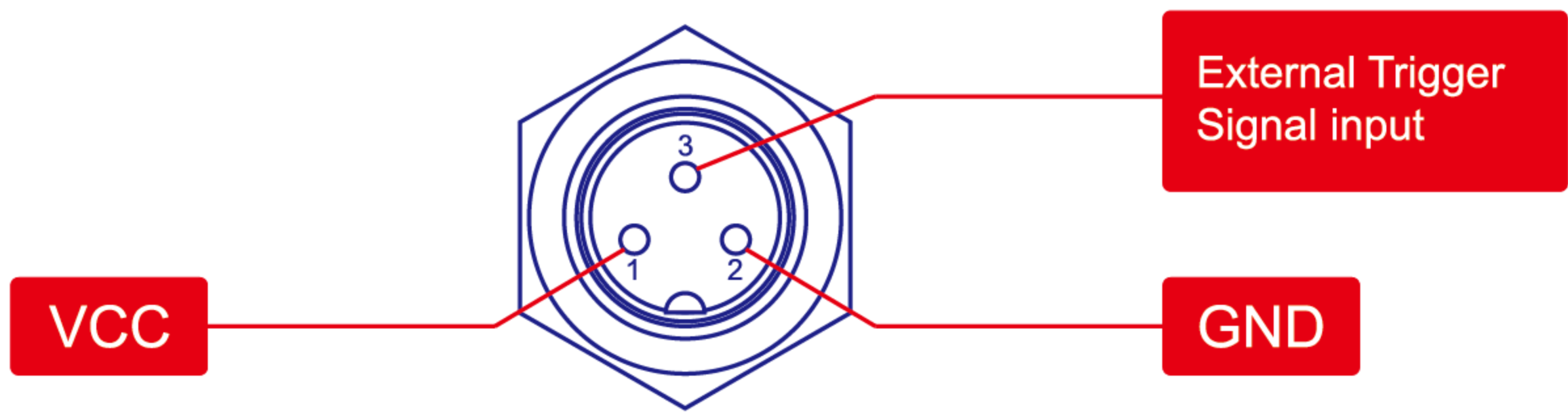
The adapter interface is used to connect with the power adapter to provide power for the printer to work. The specification of the power adapter used by this machine is 16.8V/2A, please do not use other adapters privately.



8.2 Sensor interface

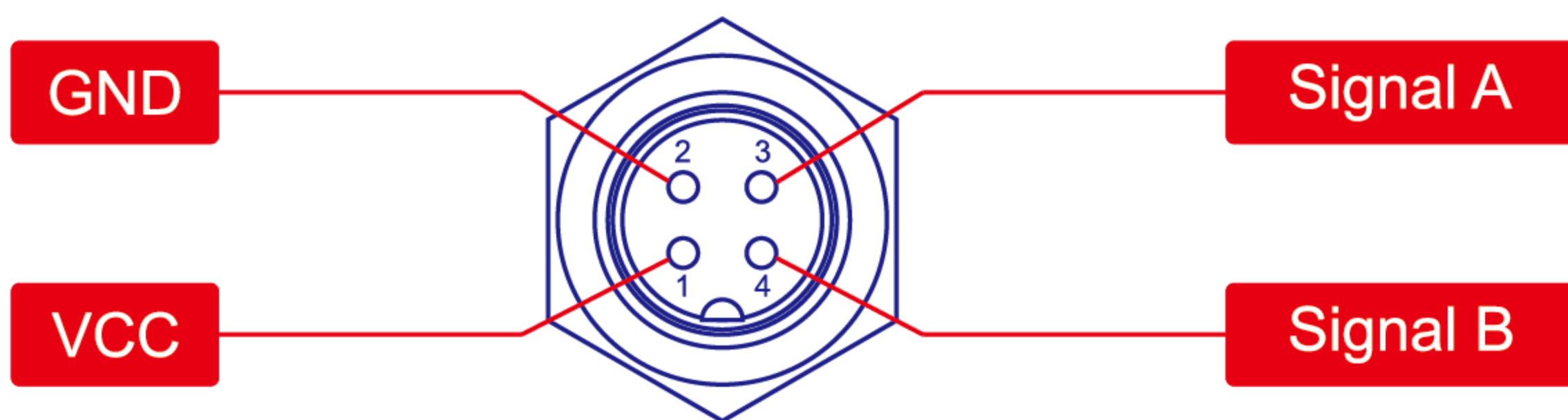
The sensor interface is used to connect external sensors to control the triggering of printing, such as photoelectric sensors, optical fiber sensors, label sensors, proximity switches, etc. You can also use the PLC signal of other equipment as the trigger signal. At this time, you only need to connect the signal wire and the ground wire.

Note: The inkjet printer detects the falling edge of the signal as the trigger signal. Customers should choose NPN normally open (NO) or PNP normally closed (NC) photoelectric sensors as the trigger signal.



8.3 Encoder interface

The encoder interface is used to connect the encoder for printing speed control. When you need to splice multiple nozzles for large format printing, it is strongly recommended that you use the encoder mode to print



9. Start printing

Combination printing examples

Make Nozzle 1 and Nozzle 2 combination print as example.

Ways of how to adjust it to normal effect:

1. Check print nozzle, keep print nozzle vertical with stand and keep parallel with conveyor belt.
2. Settings- Print Settings- Nozzle Offset.
3. Offset is the value of distance from start point to second line. If the first line comes out earlier than the second line. Need reduce offset value.

Correct procedures of operation:

- ① Install all parts on conveyor, connect power cable and connect cable between controller and nozzle, insert ink cartridge, and turn on machine at last.
- ② Edit file (File - Edit Single File) and save it (File - Save)
- ③ Choose file need to print (local File), message need print will show on main menu.
- ④ Click Print (Print will be red Printing) means to start printing
- ⑤ Test speed and sensor position first. Should fix two factors, conveyor speed and sensor position. If printing is too narrow, please add machine speed value. If printing words is too wide, please reduce

machine speed value. (If connect external encoder, then need to adjust print width.)

⑥ Click “Printing” button in the menu again (it becomes green again), printing work is over.

⑦ Turn off: Power - Shut down - OK - Press right side button.

⑧ Take out ink cartridge and cap it well.

Note:

If you want change any parameter, please must stop printing first.

When machine is in printing status, Do not remove ink cartridge while printing, Otherwise the system software and device hardware may be damaged.

10. Packing List

| NO. | Items | Quantity |
|-----|---|----------|
| 1 | Controller | 1 |
| 2 | Print head | 1 |
| 3 | Adapter + AC power cord | 1 |
| 4 | Connecting cable | 1 |
| 5 | Sensor | 1 |
| 6 | Parts bag(screw, spanner, sensor stand) | 1 |
| 7 | φ16 mm aluminum pipe (length 30cm) | 3 |
| 8 | 90 degree bracket | 3 |
| 9 | T fixture | 2 |