

User Manual for

Inkjet Industrial Inline Printer

Bentsai E61P Series

Please read the user manual carefully before use and keep it properly for future reference. The images in this manual are for reference only and the actual product shall prevail. All content has been thoroughly reviewed and proofread. We apologize for any printing errors or omissions

Version Number:2024081A



1. Important Notice

To get the best printing results, use original ink cartridges and accessories. If you use unauthorized ones and it causes problems or poor print quality, the warranty won't cover it.

2. Safety Instructions

Only trained and authorized personnel should maintain or disassemble the printer to avoid accidents.

Keep ink cartridge away from direct sunlight and high temperatures (above 35°C) to maintain print quality and shelf life.

If ink gets on your skin, rinse it off immediately with water. If it gets in your eyes, rinse thoroughly with water and seek medical attention if you experience any discomfort.

3. How to Use this User Manual

If you run into any issues while using the printer, check the relevant sections of the manual and take note of the problems. If you still can't resolve the issue, get in touch with us. We may update this manual from time to time without prior notice.

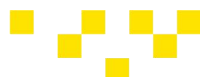


Contents

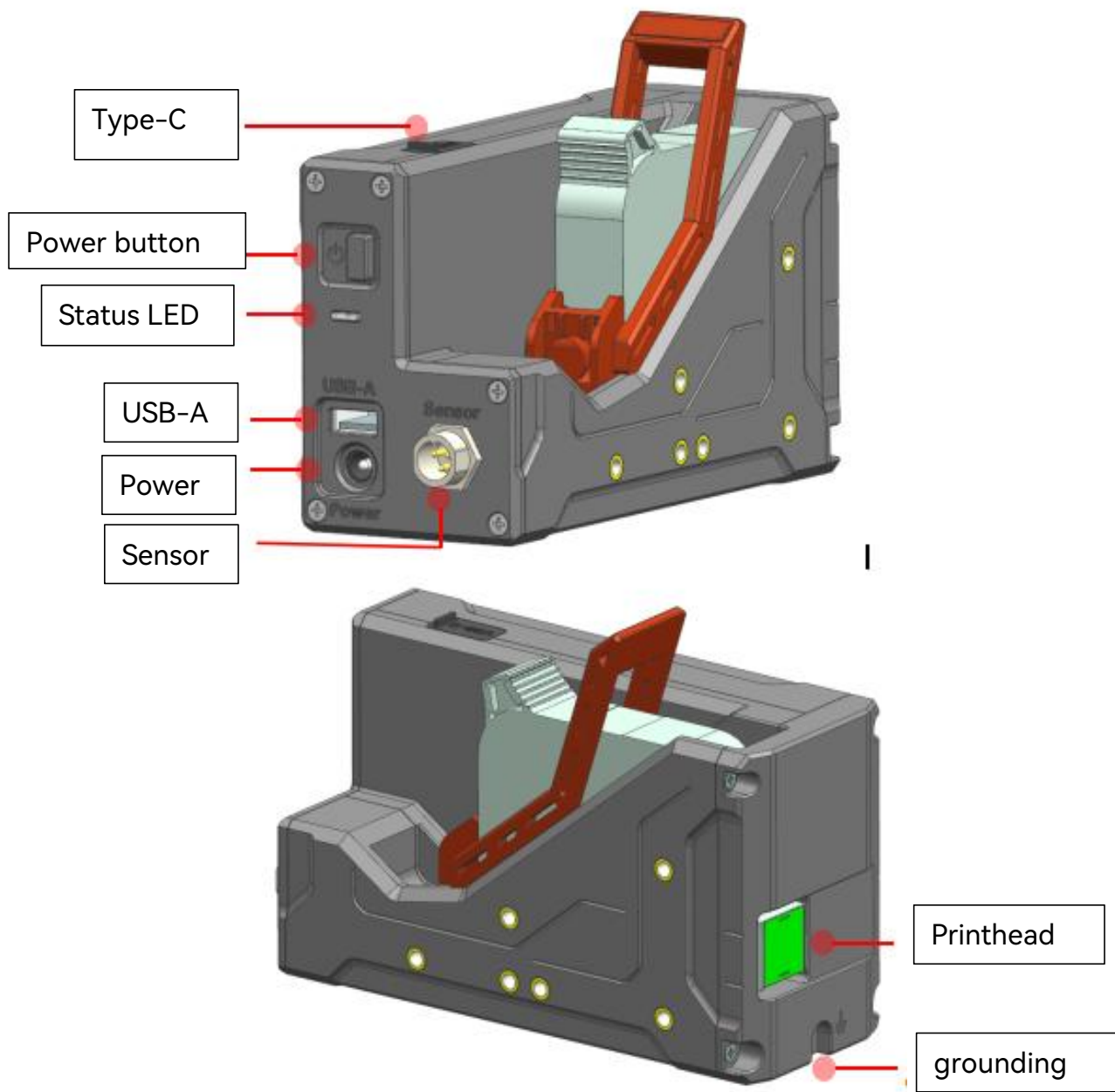
User Manual for	1
1. Important Notice	2
2. Safety Instructions	2
3. How to Use this User Manual	2
4. Product Diagram	5
5. Specifications	6
6. Main Interface	7
7. Print Editing	8
7.1 Add Text	9
7.1.1 Import External Fonts	11
7.2 Add QR-Code	12
7.3 Add Barcode	14
7.4 Import an Image	17
7.4.1 Preparation Before Importing Images	17
7.4.2 Add an image	18
7.5 Add the Date/Time	19
7.6 Add a Number	24
7.7 Add a Database	27
7.7.1 Database Preparation	27
7.7.2 Add the Database	28
7.7.3 Add Variable Text	28
7.7.4 Variable QR Code	30
7.7.5 Variable Barcode	30
8. Print Management	31
8.1 Job Management	32
8.2 Group Printing	33
9. System Settings	33
9.1 Print Settings	34
9.2 Sound Settings	35
9.3 Screen Settings	36
9.4 Power Settings	37



9.5 Ink Parameters Settings	38
9.6 Time Settings	38
9.7 Language Settings	39
9.8 Restore Factory Settings	40
10. Device Maintenance	41
10.1 Nozzle Cleaning	42
10.2 Nozzle Moisturizing	43
10.3 Click “Print Test Page”	43
10.4 Firmware Upgrade	43
11. External Storage	44
11.1 Image Import	45
11.2 Data Import	46
11.3 Data Export	46
12. Device Information	47
12.1 Machine	48
12.2 Consumable	49



4. Product Diagram



5. Specifications

Operating System	Linux
Screen	4.3 " LCD touch screen
Interfaces	Supports external Type-C, USB, Sensor and power interfaces
Languages	Chinese, English, German, Arabic, Spanish, Russian, Japanese, Korean, Italian, Portuguese, French, Hindi, Thai, Vietnamese, Persian, Turkish, Traditional Chinese, Indonesian, Slovenian, Serbian-Croatian, Czech, Bulgarian, Romanian, Polish, Greek, Hungarian, Ukrainian, Slovak, and Burmese.
Triggering Methods	Optical sensor trigger, continuous printing
Print Content	QR, DataMatrix
	Code128, Code39, EAN8, EAN13, UPCA, ITF (2of5) , UPCE
Fonts	Vector fonts, Dot matrix fonts
Resolution	300 DPI / 600 DPI
Print Lines	12.7mm: Up to 5 lines per print head. 25.4mm: Up to 10 lines per print head
Max Printer Size	12.7mm * 406mm/25.4mm * 406mm
Print Distance	2-5mm (distance between print head and object)
Print Speed	60m/min (fastest speed at 300 DPI)
Density	1-10 levels of densities
Ink Colors	Black, White, Red, Yellow, Blue, Green, Invisible Anti-counterfeiting
Cartridge Capacity	42ml
Operating Temperature & Humidity	Temperature: 5-35°C; Humidity: 10%-80%
Storage Temperature & Humidity	Temperature: 20-55°C; Humidity: 10%-80%
Power	Input: AC100-240V Output: DC 9V/2.0A
Weight	460g
Storage Capacity	128MB (Approximately 3000 printing messages)
Packaging Dimension	375*275*143mm



6. Main Interface



Main Interface after Powering On

Print Editing: Open, Save, Add, Delete, Print, Edit, Back.

Print Management: Job Management, Group Management.

System Settings: Print Settings, Sound Settings, Screen Settings, Power Settings, Ink Parameters Settings, Time Settings, Language Settings, Restore Factory Settings.

Device Maintenance: Nozzle Cleaning, Nozzle Moisturizing, Nozzle Testing, Print Test Page, Firmware Upgrade.

Mobile Storage: Image Printing, Data Import, Data Export.

Device Information: Device Information, Consumables Information.

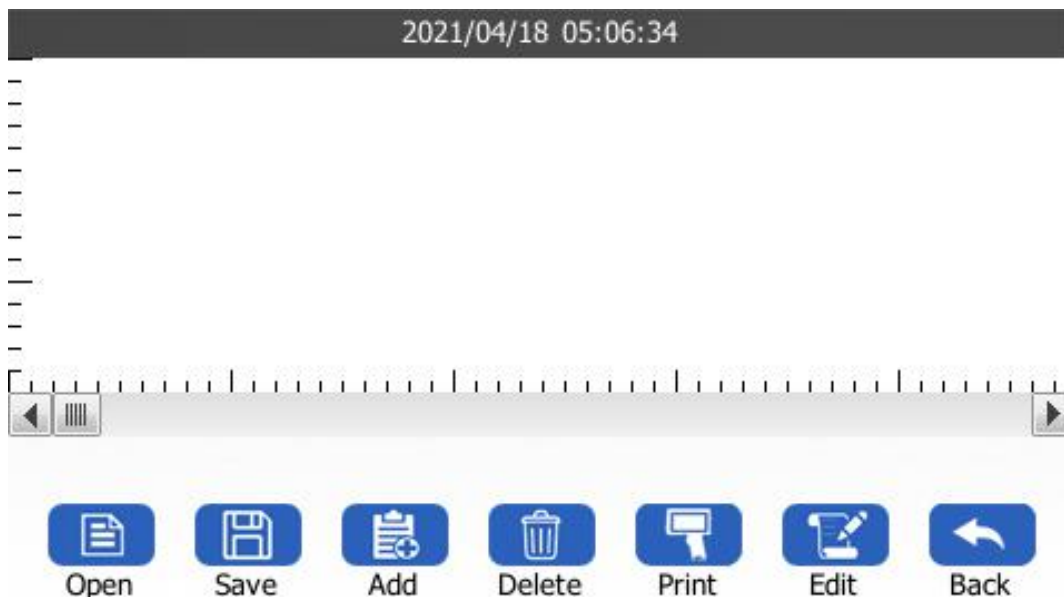


7. Print Editing

Power on your printer, go to Main menu, then click “Edit”  to enter the Print Editing interface.

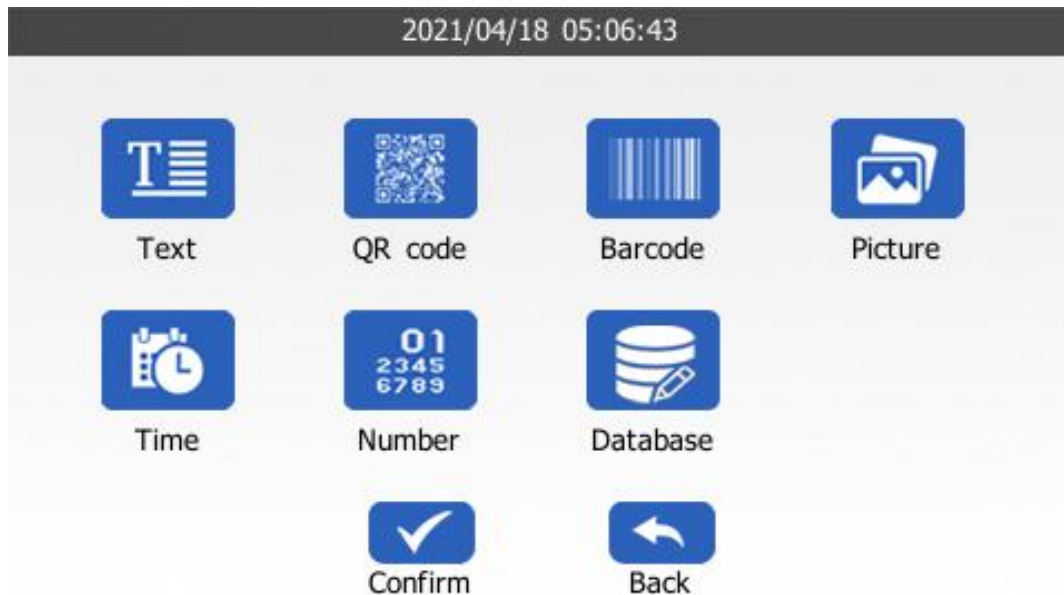


In Edit interface, click “Add”  to add Content, and select content want to add.



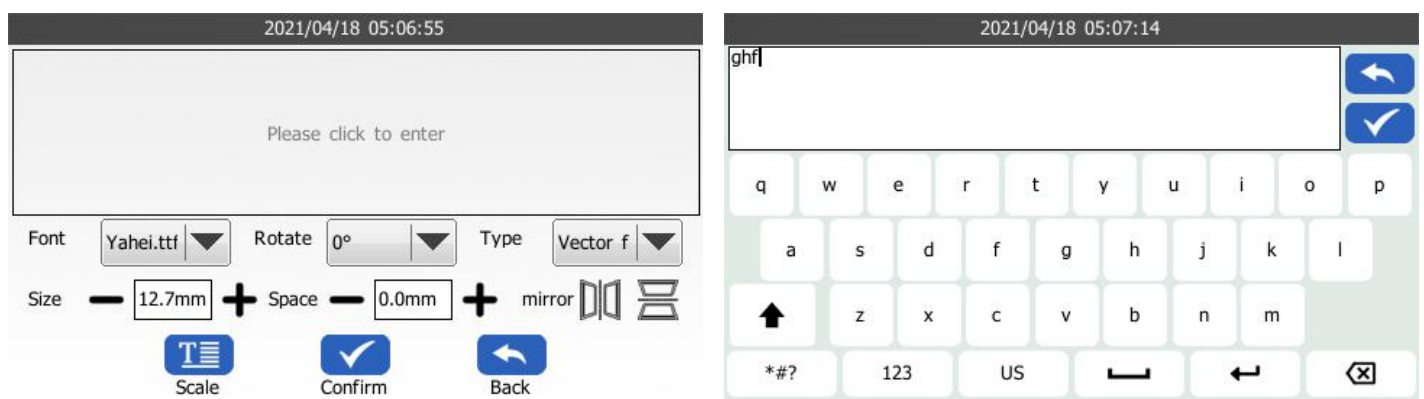
7.1 Add Text

Click “Text”  to enter the Text Editing interface.



Click on the blank area (within the black box) to input text.

Enter the content. Click “Confirm” to input the content. You can adjust the font type (third-party fonts can be imported), font size you can adjust the number of 5 lines for 0.5" cartridges and 10 lines for 1" cartridges.



Font:



Click the right arrow key to select the font. There are 2 built-in fonts: Default Yahei.ttf (Microsoft YaHei) and Song.ttf (SimSong). Additional fonts need to be imported in TTF format via USB.

Font Type: Select Vector font or Dot matrix font.

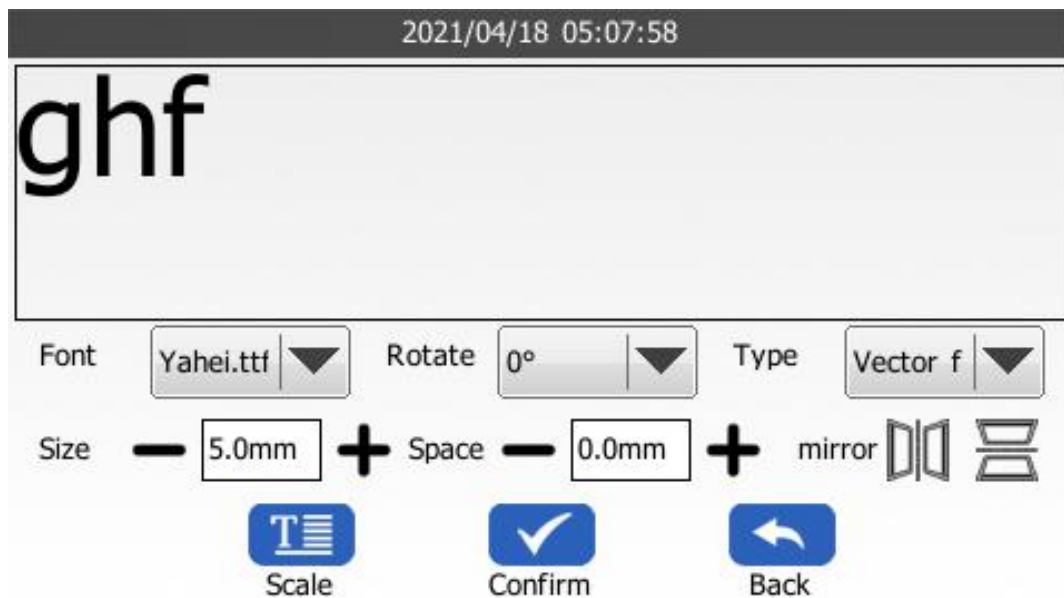
Font Size: You can directly click the input box or use the + and - buttons to adjust the size. The size range is from 2.5mm to 36.5mm.

Spacing: The minimum distance between characters is 0mm and the maximum is 5mm.

Scaling: The text can be scaled from a minimum of 50% to a maximum of 150%.

Rotation: Options available are 0°, 90°, 180°, and 270°.

Mirror: The printing content can be horizontally or vertically mirrored.



2021/04/18 05:07:58

ghf

Font Yahei.ttf Rotate 0° Type Vector f

Size 5.0mm Space 0.0mm mirror

Scale Confirm Back

Once completed, click “Print” to start printing.



ghf



7.1.1 Import External Fonts

Step One: Download the TTF format font file and copy the font file into the “fonts” folder on the USB drive.

 database	2021/8/3 13:27
 fonts	2024/8/3 13:23
 jobs	2021/8/3 13:27
 pictures	2021/8/3 13:27

Step Two: Insert the USB drive into the printer and wait for a few seconds. The font will be installed successfully. (External fonts can only be used when the USB drive is connected, and the USB drive should not be removed from the printer during use.)

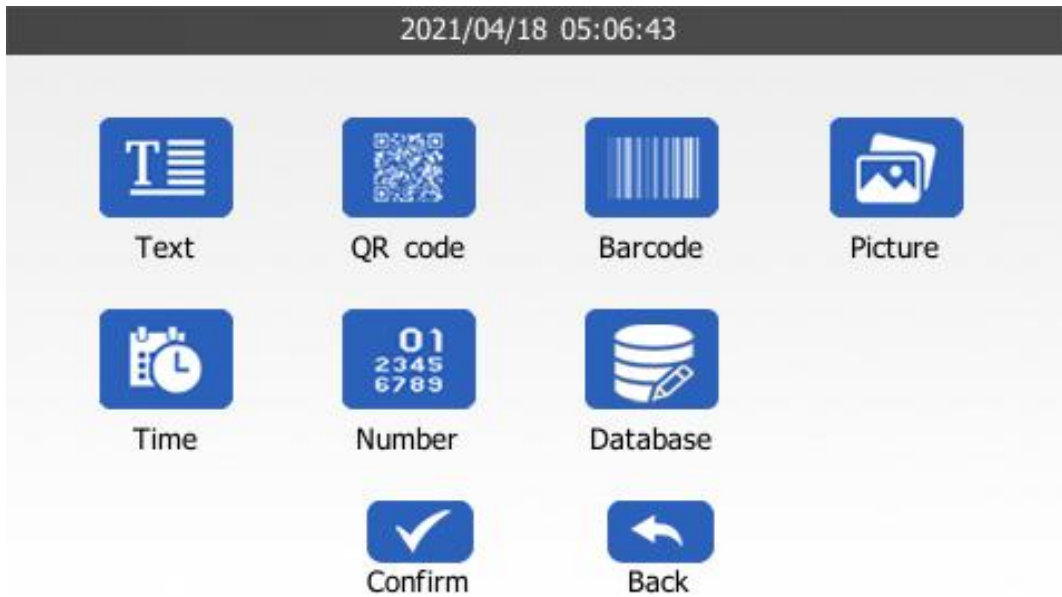




7.2 Add QR-Code

In the Print Editing section, click “Add” and select “QR Code.” 





Click on the String to Enter Content

Enter the content to generate a QR code. You can adjust the size and click “Confirm” to enter the print interface.

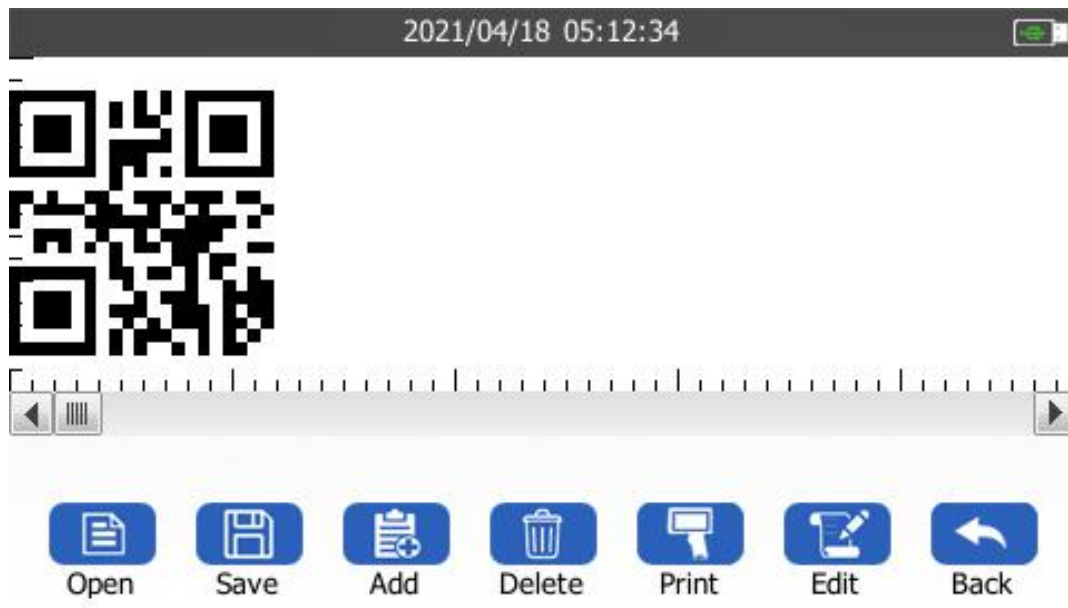
String Content: Click on the string to switch the keyboard. The default display is QR code. You can enter English letters, numbers, and symbols.

Size: Set the size of the QR code. The minimum size is 7.6mm and the maximum size is 36.5mm.

Encoding Type: QR, DM, GS1DM

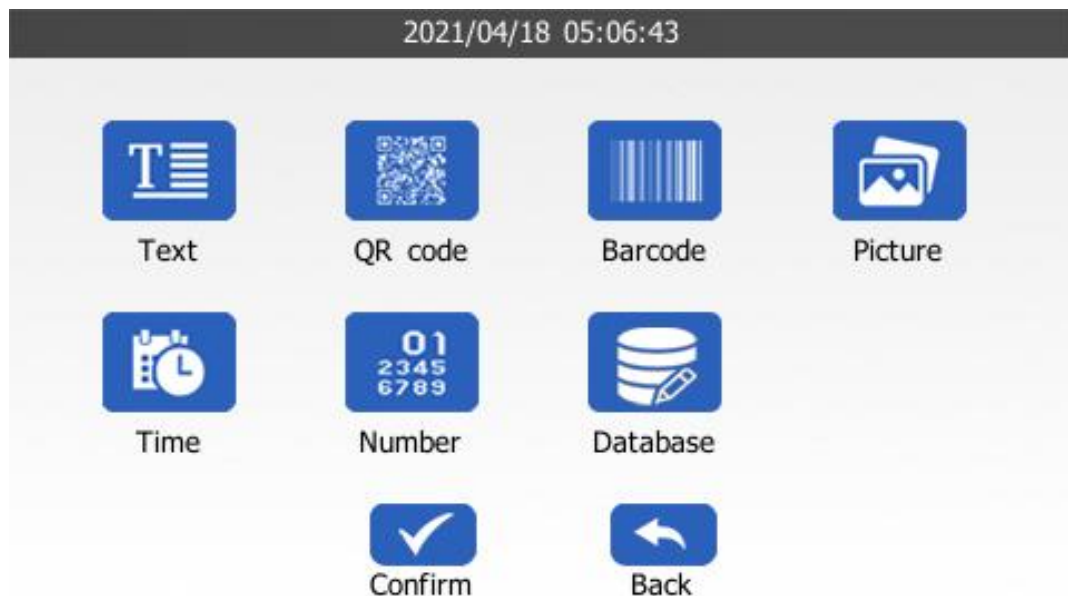


Once completed, click “Print” to start printing.

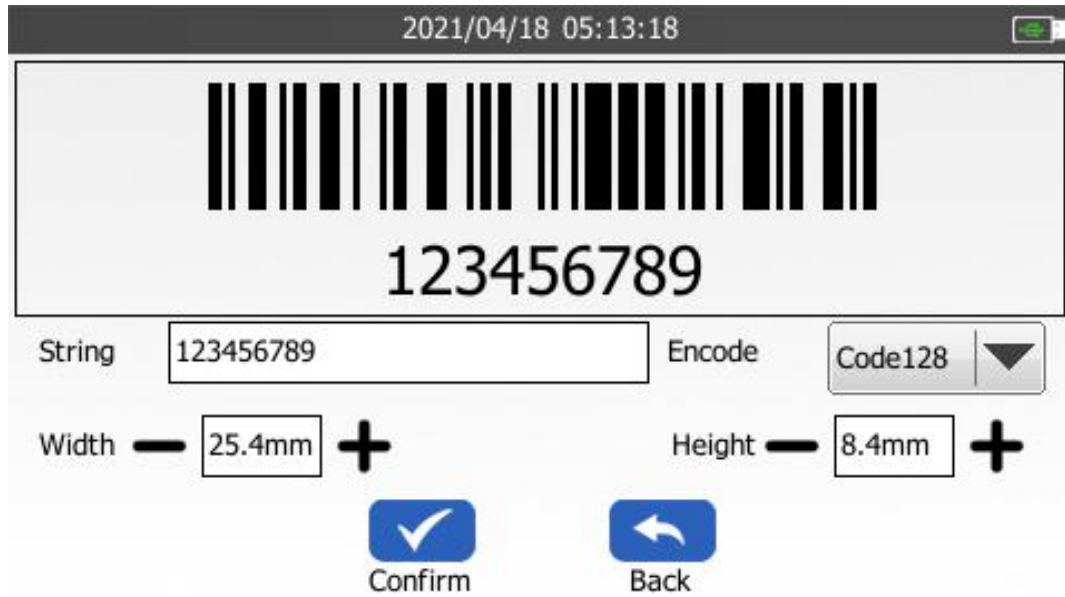


7.3 Add Barcode

In Editing section, click “Add” and select “Barcode”.



Click “String” to enter the content, which will generate a barcode based on the input. You can adjust the width, height, and encoding. Click “Confirm” to enter the print interface.



The screenshot shows a software interface for generating a barcode. At the top, a status bar displays the date and time '2021/04/18 05:13:18' and a battery icon. The main area features a large barcode with the number '123456789' printed below it. Below the barcode, there are input fields for 'String' (containing '123456789') and 'Encode' (set to 'Code128' with a dropdown arrow). At the bottom, there are controls for 'Width' (25.4mm) and 'Height' (8.4mm), each with minus and plus buttons for adjustment. Two blue buttons, 'Confirm' (with a checkmark) and 'Back' (with a left arrow), are positioned at the bottom center.

String Content: The default display is Code128. You can switch code type.

Encoding Type: Code39, Code128, EAN8/13, UPCA, INT(2of5)

Width: Set the width of the barcode. The minimum width is 25.4mm and the maximum width is 169.3mm.

Height: Set the height of the barcode. The minimum height is 8.4mm. The maximum height needs to be adjusted according to the actual situation of the print head.



2021/04/18 05:13:31 


123456789

String Encode

Code128 ▼

Width + Height

 Confirm  Back

Code39

Code128

EAN8/13

UPCA

ITF(2of5)

Once completed, click “Print” to start printing.

2021/04/18 05:13:42 


123456789



 Open

 Save

 Add

 Delete

 Print

 Edit

 Back

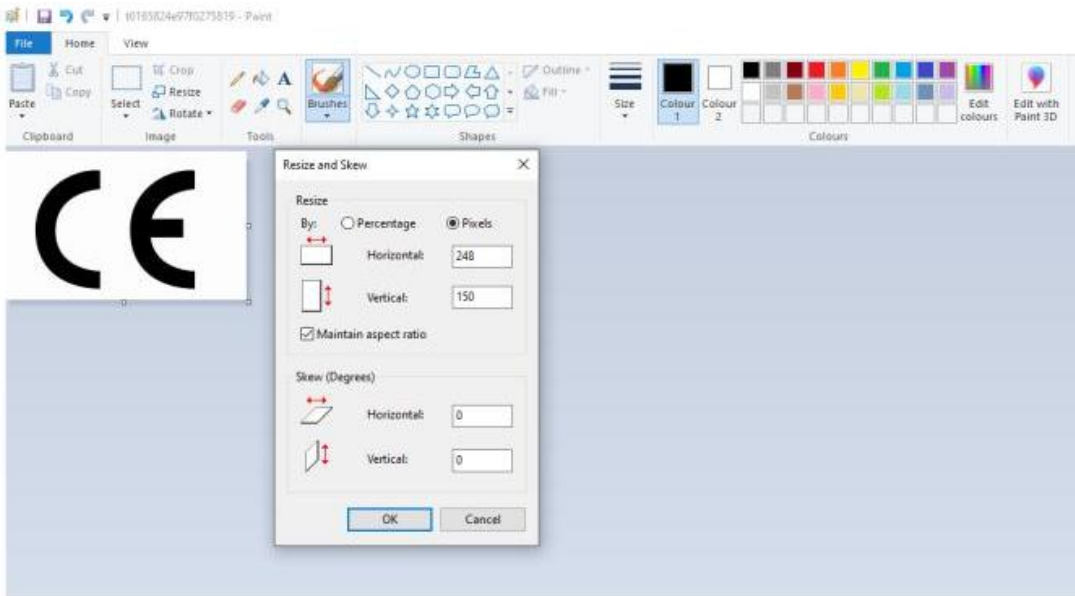


7.4 Import an Image

7.4.1 Preparation Before Importing Images

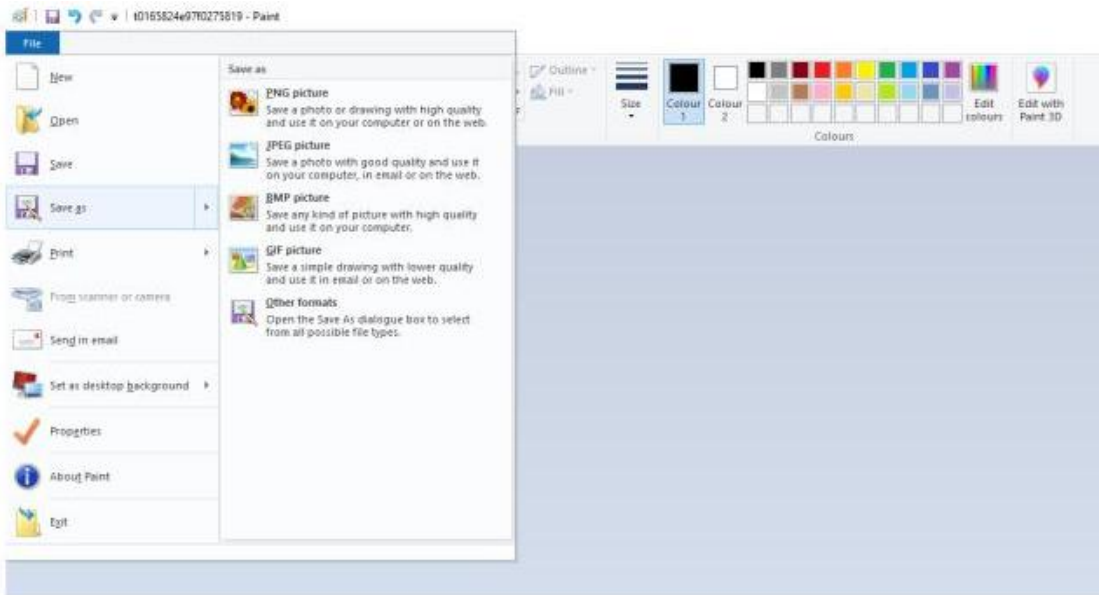
You can use the built-in Paint tool in Windows to drag and drop or add an image to the file, then click “Resize” to modify the image's pixel dimensions. The version of the tool and its usage may vary depending on whether you're using Windows 7, 8, 10, or 11.

Image pixel modification: maximum vertical pixel count 150.



Save the image as BMP, JPEG, or PNG format and name the file with letters or numbers.





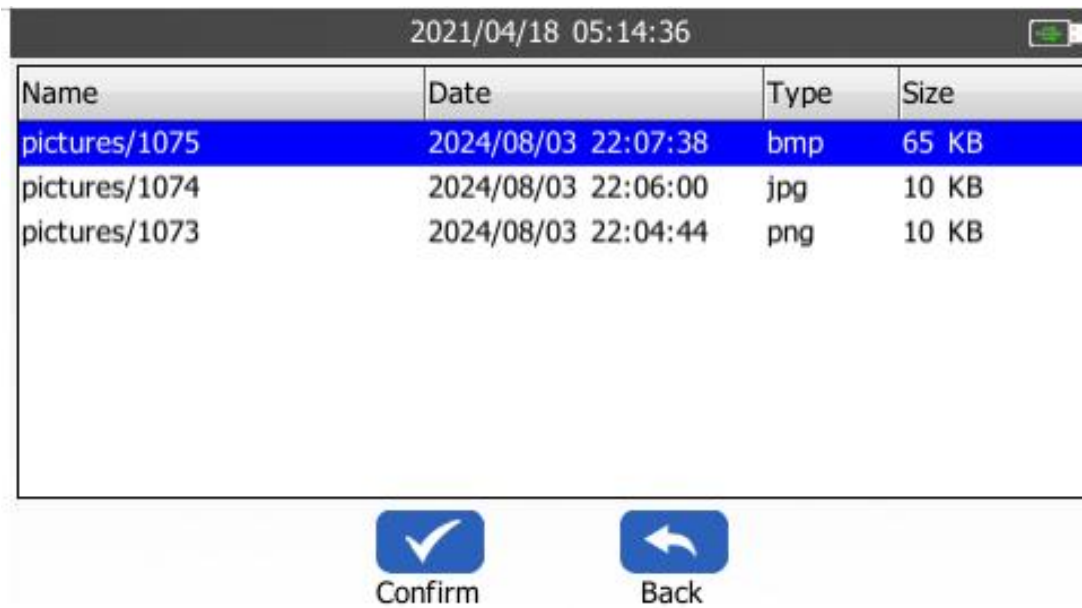
Copy the image file to the “Pictures” folder on the USB drive, then insert the USB drive into the printer to print the image

 database	2021/8/3 13:27
 fonts	2024/8/3 13:23
 jobs	2021/8/3 13:27
 pictures	2021/8/3 13:27

7.4.2 Add an image

In the print editing interface, add the image, then open and select the desired file name and click “Confirm”.





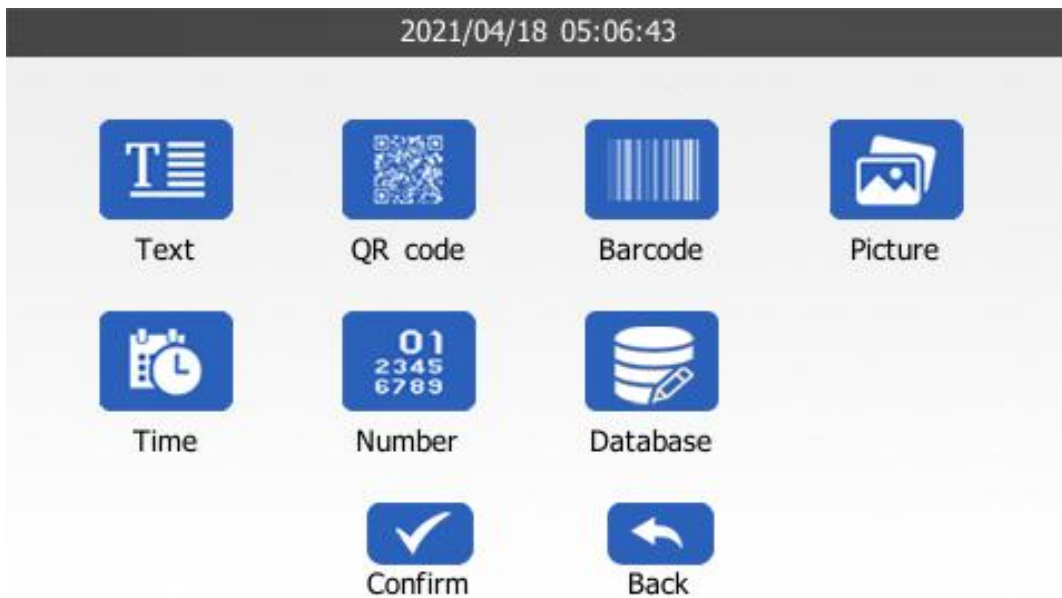
Select the image, set the printing height, then click “Print” to start the printing process.



7.5 Add the Date/Time

In the print editing section, click “Add” and select the option to choose the time. 





Date and Time Display Options: When adding, the interface can be set to display only the date or the time.

Date Formats:

There are 19 formats available: YYYY/MM/DD, YYYY-MM-DD, YYYY.MM.DD, YYYYMMDD, YYYY MM DD, MM/DD/YYYY, DDMMYYYY, MM/YY, MM-YY, YY/MM, YY-MM, DDMM, MM/DD, MM-DD, MMDD, YY, MM, DD, YYYY

Time Formats:

There are 12 formats available: HH:MM- 24H, HHMMSS - 24H, HH- 2H, HHMM - 24H, HH - 24H, HH:MM- 12H, HHMMSS - 12H, HH- 12H, HHMM - 12H, HH - 12H, MM, SS

Calendar Formats:

There are 2 formats available: Gregorian, Julian

Auto Update: When enabled, the time can be automatically updated. When disabled, the time will not automatically update and will remain fixed.



2021/04/18 05:14:59 🔋

2021/04/18 05:14:52

☒ Date Format YYYY/MM/DD ▼

☒ Time Format HH:MM:S-24H ▼

☒ Auto update

Gregorian ▼

T
Front

T
Font

⚠
Expiry

✓
Confirm

↩
Back

Prefix Formats:

The formats available are: 01/01,/1/1,1/ 1/,1 /1 , Click the drop-down button to select the format you need.

2021/04/18 05:15:18 🔋

Front

01/01 ▼

01/01

/1/1

_1/_1

1_/1_

✓
Confirm

↩
Back



Font Settings

Font: Click the right arrow key to select the font. There are 2 built-in fonts: Default Yahei.ttf (Microsoft YaHei) and Song.ttf (SimSong). Other fonts need to be imported in TTF format via USB.

Font Type: Select Vector font or Dot matrix font.

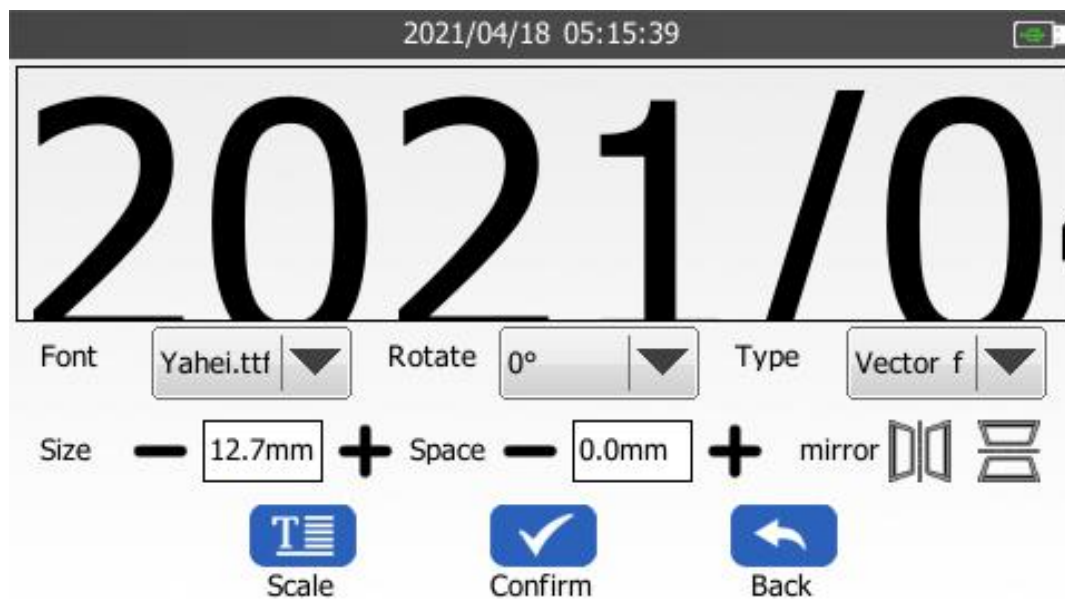
Font Size: You can directly click the input box or use the + and - buttons to adjust the size. The size range is from 2.5mm to 36.5mm.

Spacing: The minimum distance between characters is 0mm and the maximum is 5mm.

Scaling: The text can be scaled from a minimum of 50% to a maximum of 150%.

Rotation: Options available are 0°, 90°, 180°, and 270°.

Mirror: The printing content can be horizontally or vertically mirrored.



Effective Date:

The maximum setting is 20 years, 12 months, 31 days, and 1 hour.

The minimum setting is 1 hour.

Expiration Duration: The maximum setting is 7300 days. The minimum setting is 1 day.



2021/04/18 05:15:50

Year	Month	Day	Hour	
19	11	30	23	
20	12	31	24	
0	0	0	0	Expiry days
1	1	1	1	0
2	2	2	2	

Confirm

Back

Once finished, click “Print” to start the printing process.

2021/04/18 05:16:01

2021/04

Open

Save

Add

Delete

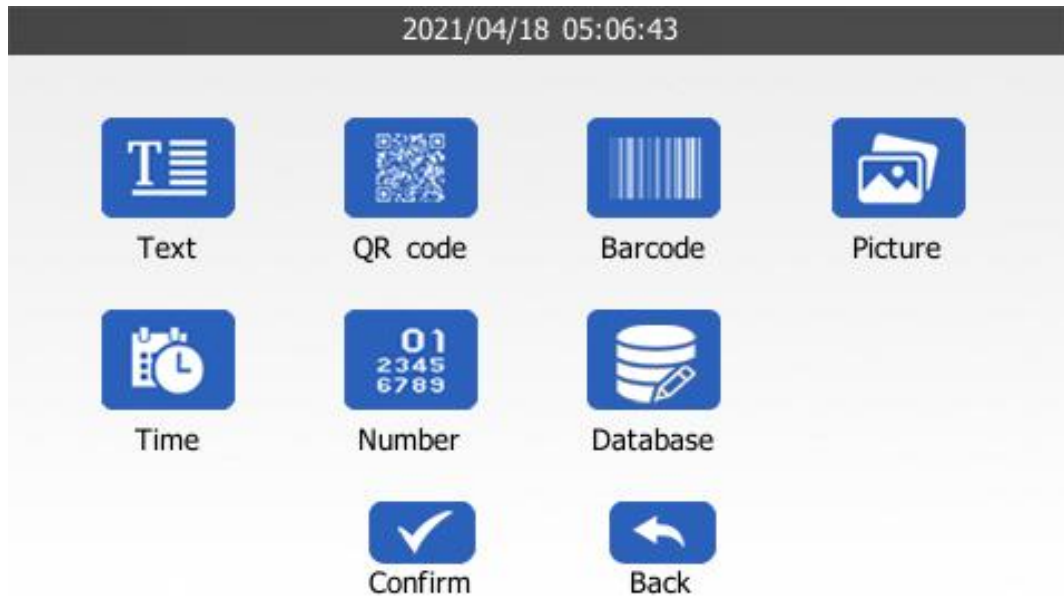
Print

Edit

Back



7.6 Add a Number



Automatic Increment

Initial Value: Set the minimum value for the counter.

Current Value: Set the current value being printed by the counter. The range is between the initial value and the end value.

End Value: Set the maximum value for the counter.

Automatic Decrement

- **Initial Value:** Set the maximum value for the counter.
- **Current Value:** Set the current value being printed by the counter. The range is between the initial value and the end value.
- **End Value:** Set the minimum value for the counter.
- **Change Value:** The minimum is 1 and it cannot exceed either the initial value or the end value.



2021/04/18 05:16:14

0000

☒ Increment
 Start Current

☐ Decrement
 Stop Step

1.2.3
mber sett

T
Font

✓
Confirm

←
Back

Numbering settings:

Formats: 0001, 1, 1, 1 (four options available. select from the dropdown menu as needed).Cycle count: Up to 100,000 times."

2021/04/18 05:16:26

Front ▼

Loop count

✓
Confirm

←
Back

Font settings:



Font: Click the dropdown to select from three built-in fonts (default: Yahei.ttf, Song.ttf). Other fonts must be imported in TTF format via USB.

Font Type: Select Vector font or Dot matrix font.

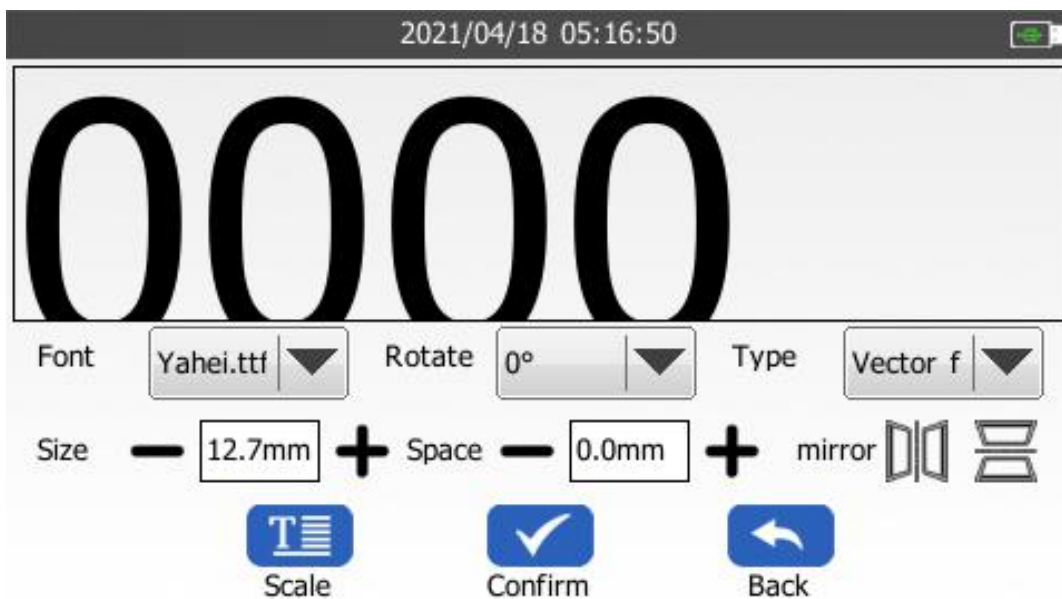
Font Size: Enter size directly or use +/- buttons (range: 2.5mm ≤ size ≤ 36.5mm).

Spacing: Distance between characters (min: 0mm, max: 5mm).

Rotation: Options include 0°, 90°, 180°, and 270°.

Mirror: Horizontal and vertical mirroring available.

Scaling: Overall text scaling from 50% to 150%."



Once complete, click “Print” to start the printing process.



0000



Open



Save



Add



Delete



Print



Edit



Back

7.7 Add a Database

7.7.1 Database Preparation

After entering the data in Microsoft Excel or WPS Spreadsheet, save the file as either a Unicode (.txt) or CSV file, named with letters or numbers. For CSV files, use UTF-8 format. For TXT files, save as Unicode (.txt).

Use Windows Notepad to reopen the TXT file and then save it with BOM encoding in UTF-8 format. if BOM is not available, use UTF-8 format.

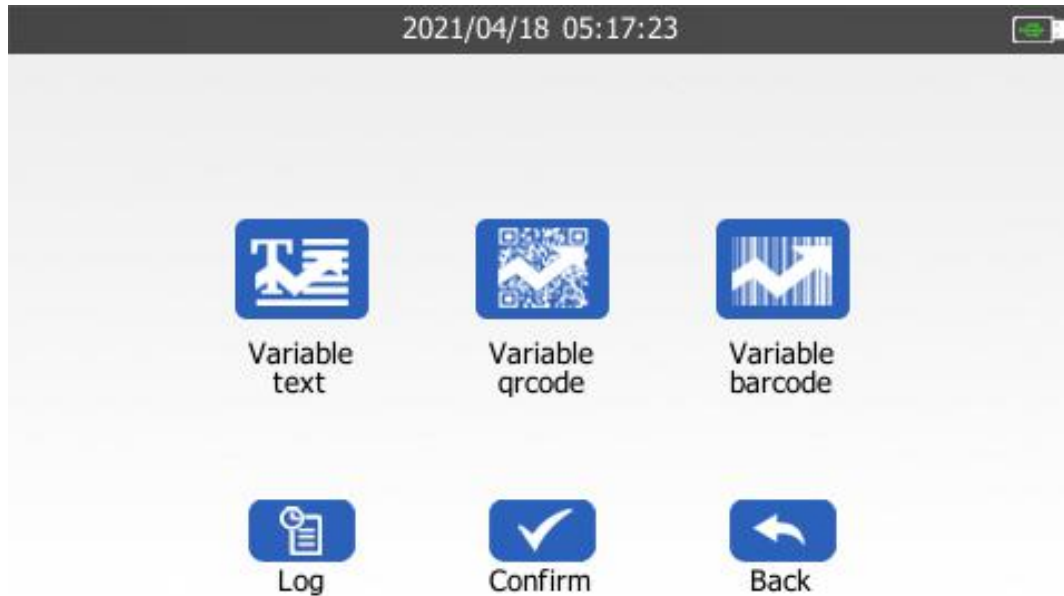
Copy the file to the “Database” folder on a USB drive, then insert the USB drive into the machine.

	database	2022/8/24	22:...
	fonts	2022/8/24	22:...
	jobs	2022/8/24	22:...
	pictures	2022/8/24	22:...



7.7.2 Add the Database

In the print editing section, click 'Add' and select “Database”. 

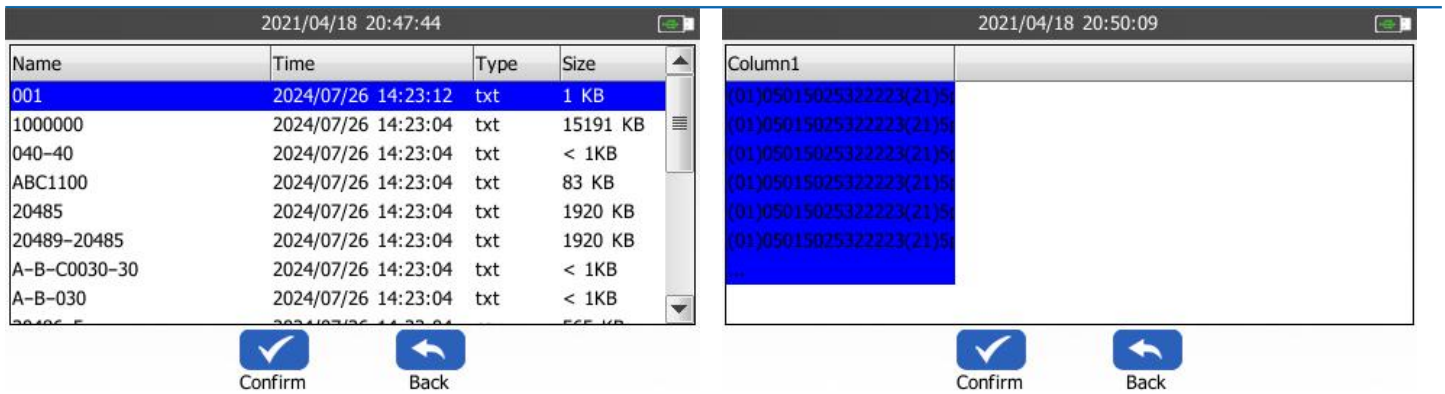


7.7.3 Add Variable Text

You can add variable text, QR codes, or variable barcodes. The steps to access each option are the same, but the settings differ once inside.

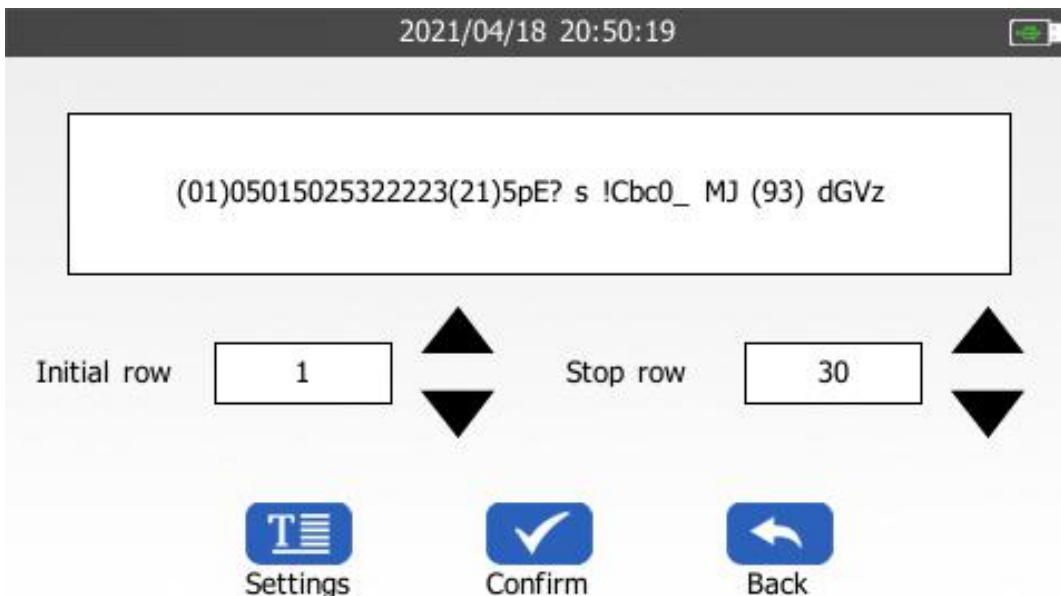
The database can recognize up to 5 columns at a time, but only one column can be used. Each column can handle up to 20,485 rows. the system cannot recognize more than 20,485 rows.





For variable text options: select “Variable Text” and click “Confirm” to enter.

You can set the starting and ending rows as needed.



Parameter settings:

Font: Click the dropdown to choose from three built-in fonts (default: Yahei.ttf, Song.ttf). Other fonts must be imported in TTF format via USB.

Font Type: Select Vector font or Dot matrix font.

Font Size: Enter size directly or use +/- buttons (range: 2.5mm ≤ size ≤ 36.5mm).

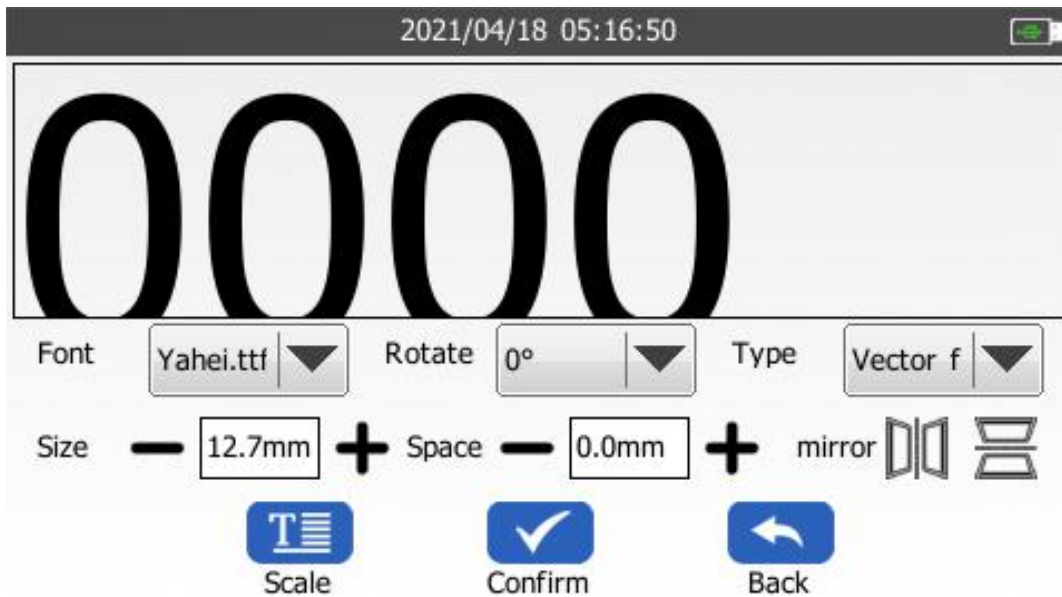
Spacing: Distance between characters (min: 0mm, max: 5mm, varies with content size).

Rotation: Options include 0°, 90°, 180°, and 270°.

Mirror: Horizontal and vertical mirroring available.



Scaling: Overall text scaling from 50% to 150%."



Once finished, click “Confirm” and then click “Print”.

7.7.4 Variable QR Code

Variable QR Code Settings:

Row Settings: Set the starting and ending rows as needed.

String: Cannot be changed. only the starting row can be selected.

Size: Adjust the QR code size, with a minimum of 7.6mm and a maximum of 36.5mm. default is 12.7mm.

Encoding Type: Options include QR, DM, and GS1DM.

7.7.5 Variable Barcode

Variable Barcode Settings:



Row Settings: Set the starting and ending rows as needed.

String: Cannot be changed. only the starting row can be selected.

Encoding: Choose from Code39, Code128B, EAN8/13, UPCA, or INT (2of5).

Width: Minimum width 25.4mm, maximum width 169.3mm.

Height: Minimum height 8.4mm, maximum height 36.5mm, with a default height of 12.7mm.

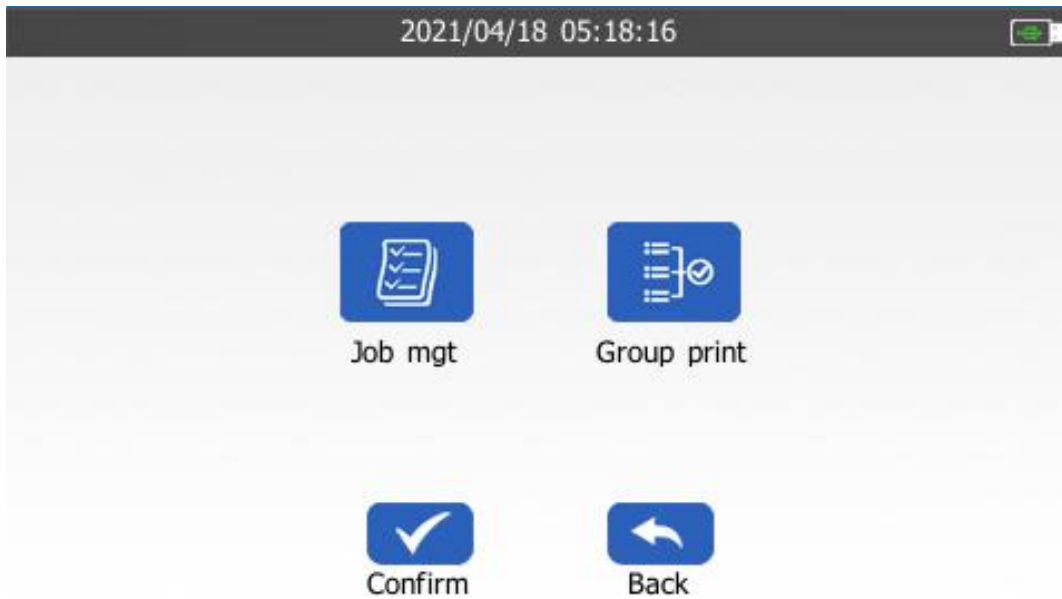
8. Print Management

From the main interface, click to select “Print Management”.



After entering Print Management, there are two options: “Job Management” and “Group Printing”.

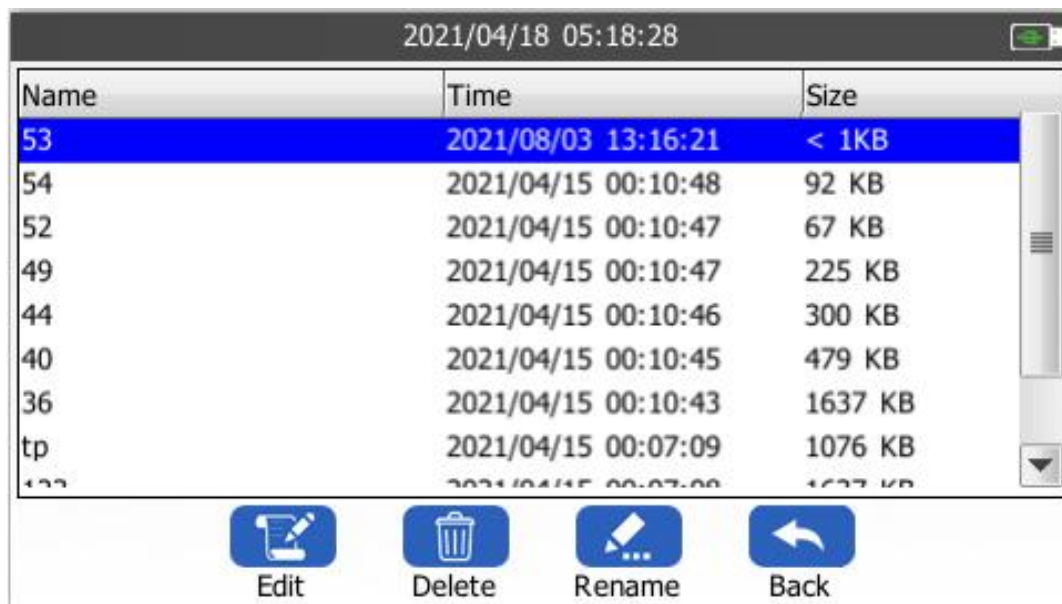




8.1 Job Management

Click “Print Management” and select “Job Management”.

- **Edit:** Allows you to re-edit and modify the current job.
- **Delete:** Enables you to delete the current job.
- **Rename:** Allows you to rename the current job.



2021/04/18 05:18:28

Name	Time	Size
53	2021/08/03 13:16:21	< 1KB
54	2021/04/15 00:10:48	92 KB
52	2021/04/15 00:10:47	67 KB
49	2021/04/15 00:10:47	225 KB
44	2021/04/15 00:10:46	300 KB
40	2021/04/15 00:10:45	479 KB
36	2021/04/15 00:10:43	1637 KB
tp	2021/04/15 00:07:09	1076 KB

Edit Delete Rename Back



8.2 Group Printing

Click “Print Management” and select “Group Printing”. 

Add: Allows you to add saved text jobs.

Delete: Enables you to delete the currently selected job.

Move Up: Moves the job up in the list.

Move Down: Moves the job down in the list.

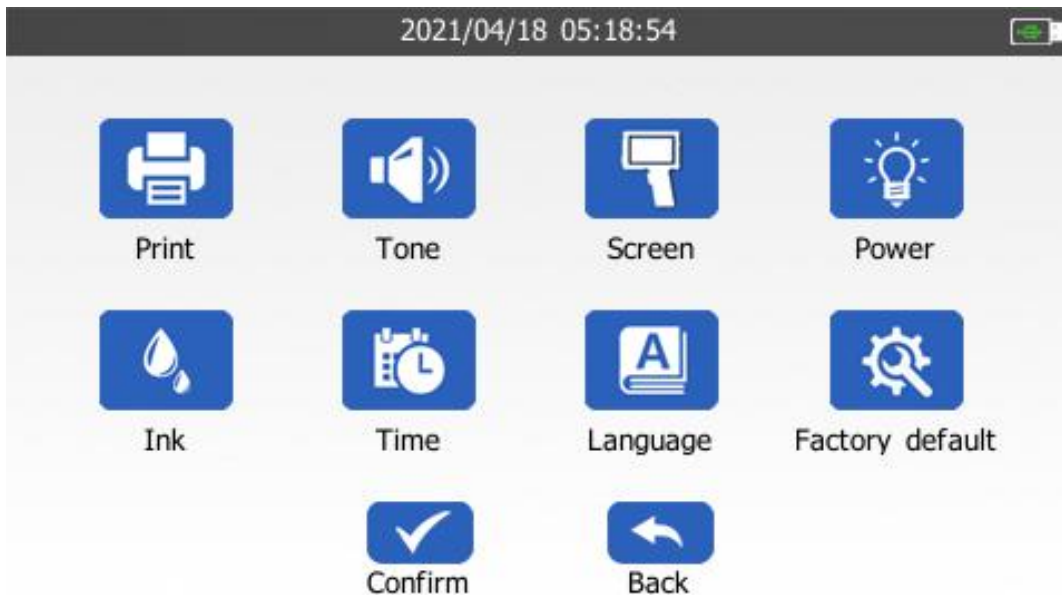
Print: Click 'Print' after editing to print the jobs in the specified order.

9. System Settings

System Settings: Print Settings, Sound Settings, Screen Settings, Power Settings, Ink Parameters, Time Settings, Language Settings and Restore Factory Settings,



Access the System Settings interface.



9.1 Print Settings

From the System Settings interface, select “Print Settings”.



2021/04/18 05:19:02 🔋

Resolution	300DPI ▼	Mode	Photoelectri ▼
Direction	Left to right ▼	Nozzle select	Left nozzle ▼
Gray level	7 ▼		
Delay	0 (0~500)mm	Speed	200 (20~500) mm/s
Repetition	1 (1~999999)	Interval	100 (0~2000) mm

✓
↶

Confirm
Back

Print Settings:

Resolution: Choose between 300 DPI and 600 DPI.

Print Direction: Default is left to right. Use the dropdown menu to select either left to right or right to left.

Gray Level: Adjustable from 1 to 10.

Print Mode: Options include Sensory Mode and Continuous Mode.

Nozzle Selection: Choose between right-side nozzles or left-side nozzles.

Print Delay: Adjustable from 0 to 500 mm.

Print Speed:

- At 300 DPI: Minimum speed is 20 mm/s.
- At 600 DPI: Minimum speed is 10 mm/s. maximum speed varies with gray level.

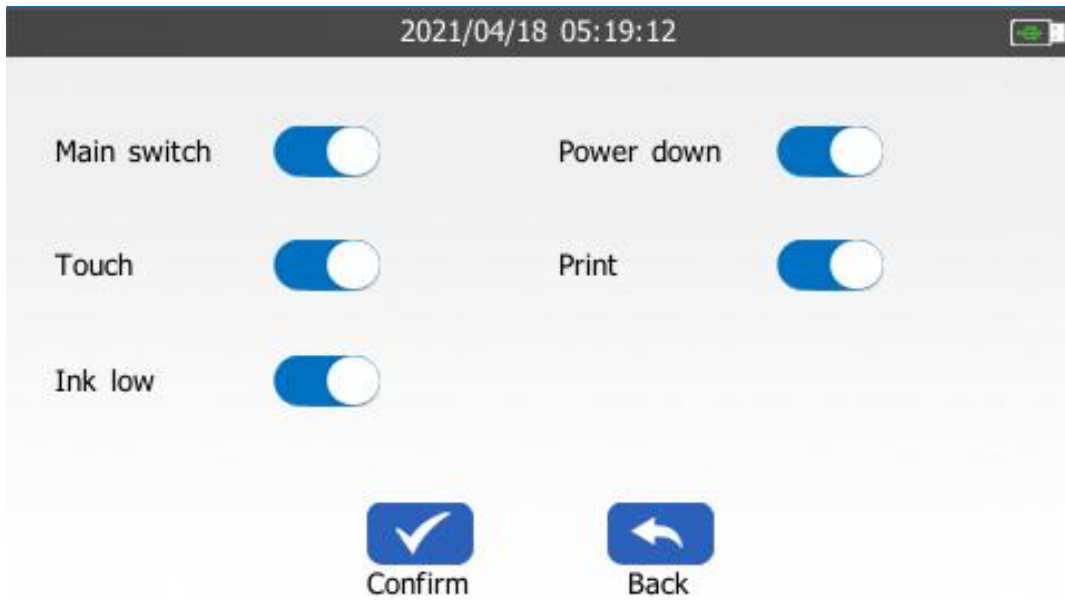
Print Count: Available only in Continuous Mode. Adjustable from 1 to 999,999 times.

Print Interval: Available only in Continuous Mode. Adjustable from 0 to 2,000 mm.

9.2 Sound Settings

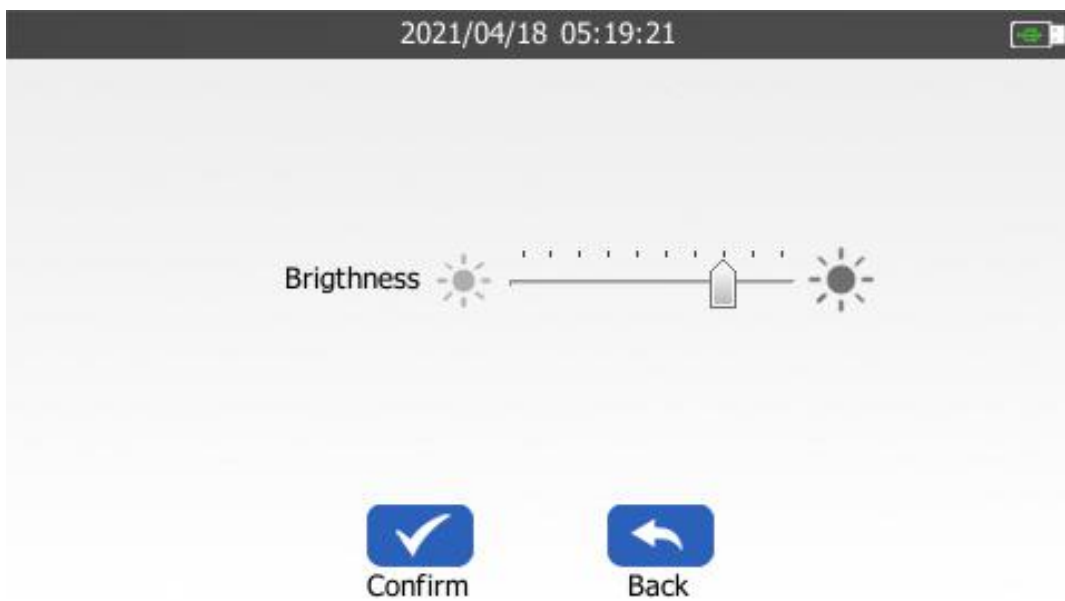
From the System Settings interface, select “Sound Settings”.





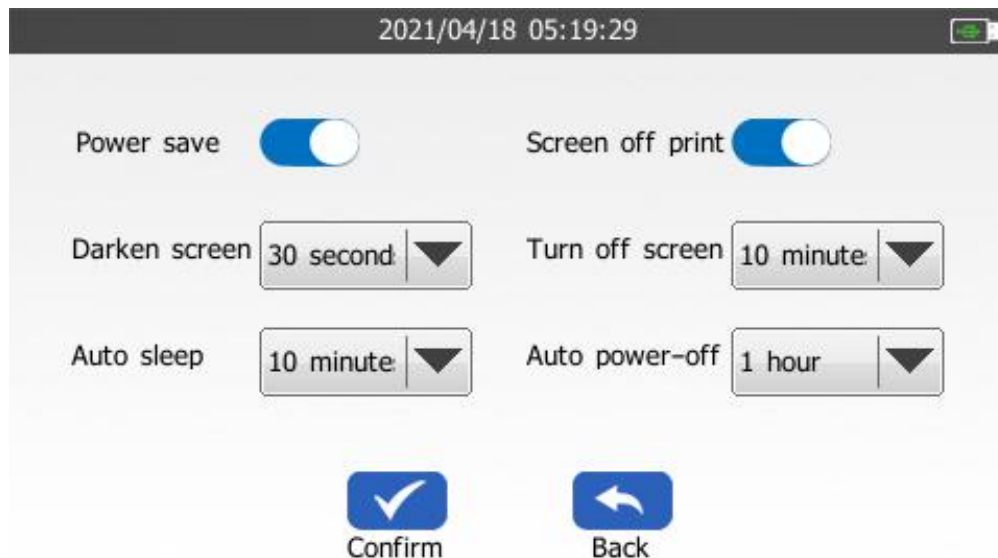
9.3 Screen Settings

From the System Settings interface, select “Screen Settings”. 



9.4 Power Settings

From the System Settings interface, select “Power Settings”.



Power Settings:

Print Screen Off: Screen will turn off (sleep) after clicking “Print” upon document completion.

Power Saving Mode: Toggle to enable or disable.

Standby Screen Dimming: Options for dimming after 30 seconds, 1 minute, 5 minutes, or never.

Standby Screen Off: Options to turn off the screen after 10 minutes, 30 minutes, 1 hour, or never.

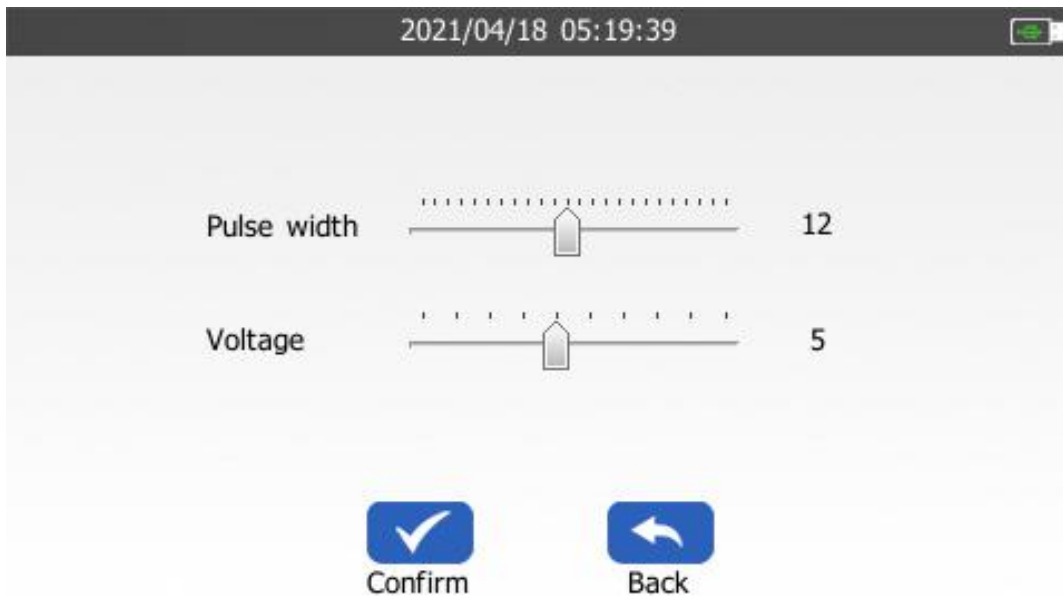
Auto Sleep: Options for sleep after 10 minutes, 30 minutes, 1 hour, or never.

Auto Shutdown: Options for shutdown after 1 hour, 4 hours, 8 hours, or never.



9.5 Ink Parameters Settings

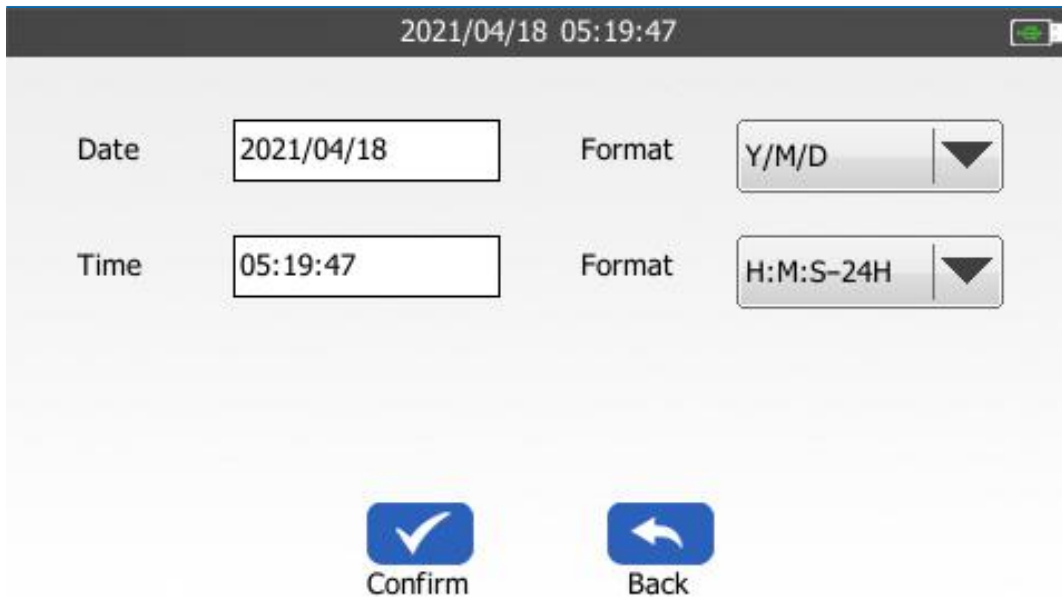
From the System Settings interface, select “Ink Parameters”. The pulse width and voltage are automatically recognized when installing the ink cartridges and do not require adjustment.



9.6 Time Settings

In the System Settings screen, select “Time Settings.” 





In the Date and Time Settings options, you can modify the date and time display format on the screen. Use the drop-down toolbar to make your selection.

Date Formats:Y/M/D,M/D/Y,D/M/Y,Y-M-D,M-D-Y,D-M-Y,YMD There are 7 formats to choose from.

Time Formats:H:M- 24H,H- 24H,H:M- 12H,H- 12H,There are 4 formats to choose from.

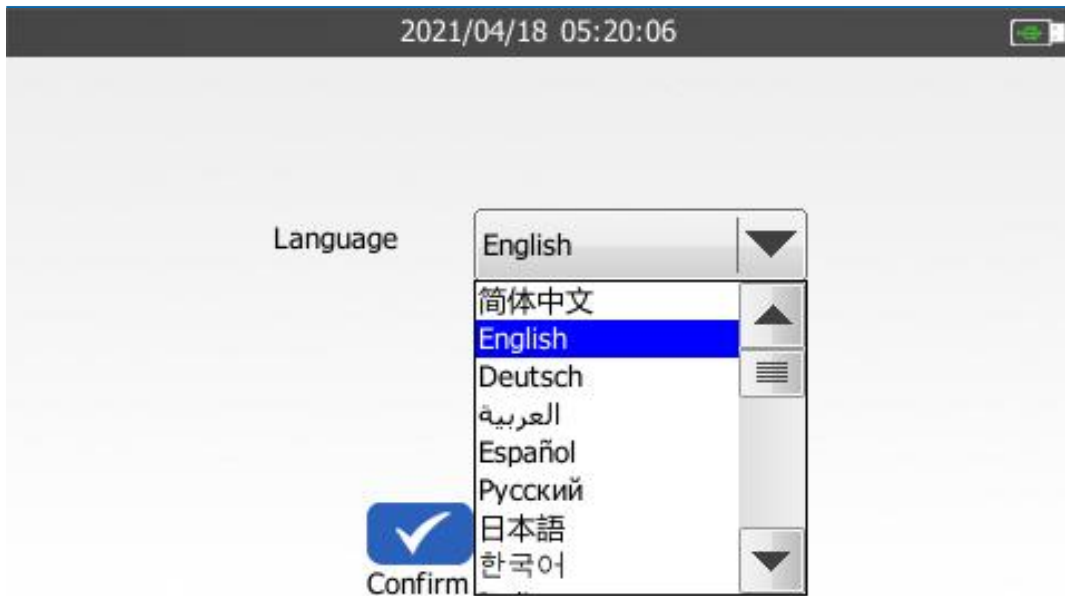
9.7 Language Settings

In the System Settings screen, select “Language Settings.” 

Supports 29 Languages: Simplified Chinese/Traditional Chinese/ English/ German /Arabic/ Spanish /Russian/ Japanese/ Korean/ Italian/ Portuguese/ French/ Hindi/ Thai/ Persian/ Turkish/ Indonesian/Slovenian/Serbian-Croatian/Czech/Bulgarian/Romanian/Polish/Greek/Hungarian/ Ukrainian/Slovak/Burmese.

To select a language, use the scroll bar on the screen. The supported languages may vary depending on the machine version.





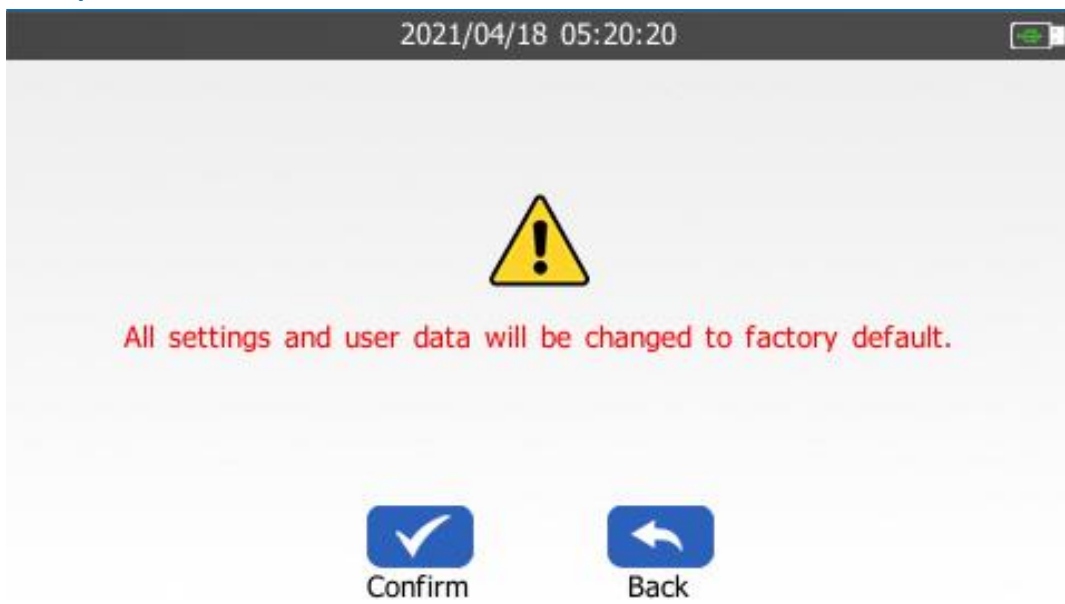
9.8 Restore Factory Settings

In the System Settings screen, select “Restore Factory Settings”.



After selecting “Restore Factory Settings,” the machine's internal settings and saved data will be reverted to the factory default state.



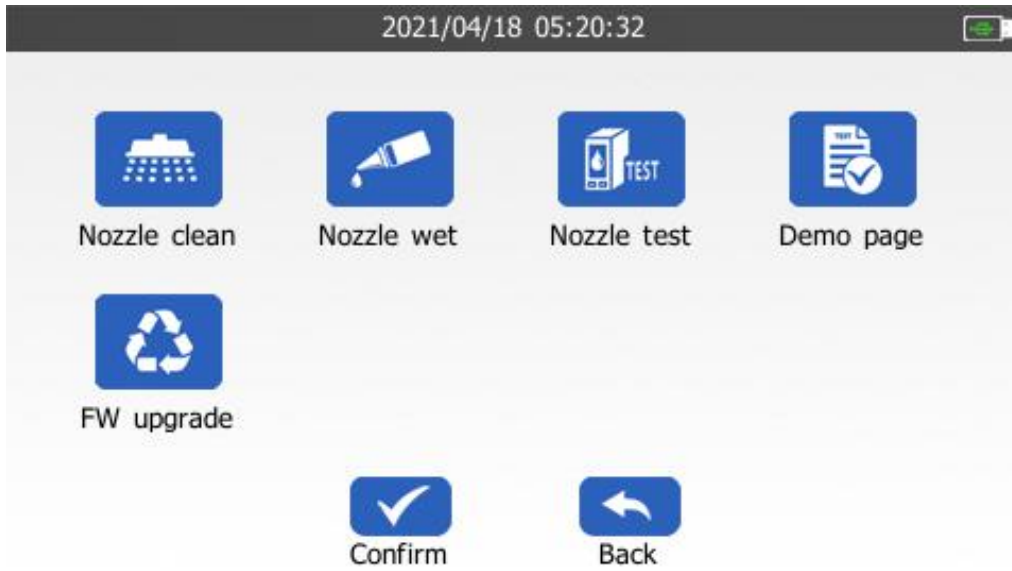


10. Device Maintenance



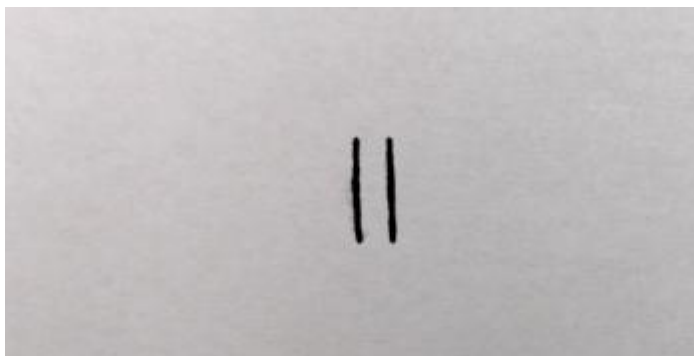
10.1 Nozzle Cleaning

Select “Nozzle Clean”. 



Place the print head in contact with the printing surface, then click “Nozzle Cleaning” to start the cleaning process.

The nozzle cleaning effect is shown below.



10.2 Nozzle Moisturizing

Place the print head in contact with the printing surface, then click “Nozzle Wet” to start the process.

10.3 Click “Print Test Page”

Click “Print Test Page” to begin printing the test page. Press the “Print” button to start the process.



10.4 Firmware Upgrade

From the main interface, click “Maintenance” and select “Firmware Upgrade”.

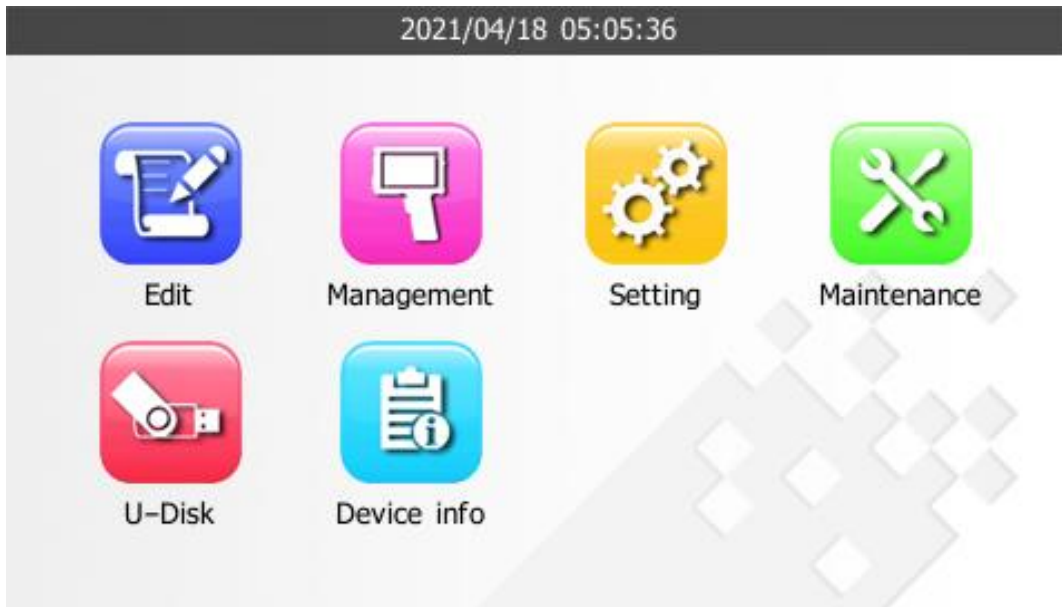


Click “Firmware Upgrade” to perform a firmware upgrade. You can download the firmware from the official website or contact after-sales support to obtain it. Extract the firmware, copy it to the USB drive, insert the USB drive into the machine, go to “Device Maintenance,” click “Firmware Upgrade”, and then confirm.



On the main screen, click “ U-Disk.”

11.1 Image Import



Insert the USB drive into the machine.

Database: Variable database storage folder

Fonts: Font storage folder

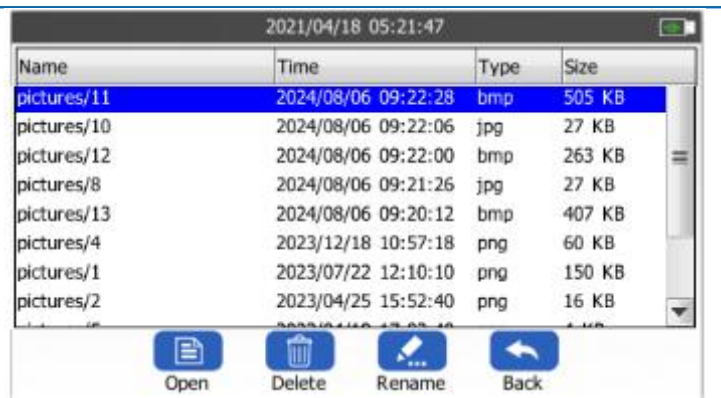
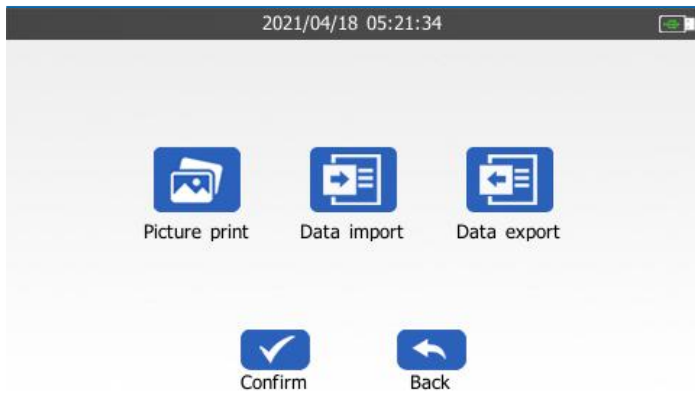
Pictures: Picture storage folder

Jobs: TXT and picture storage folder

database	2024/8/3 23:24	文件夹
fonts	2024/8/3 23:24	文件夹
jobs	2024/8/3 23:24	文件夹
pictures	2021/4/15 0:00	文件夹

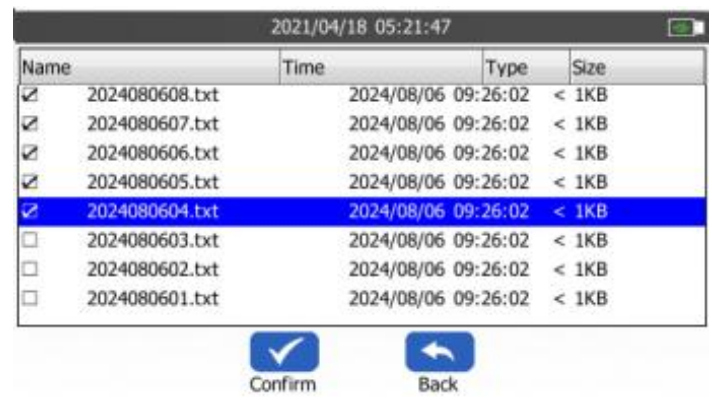
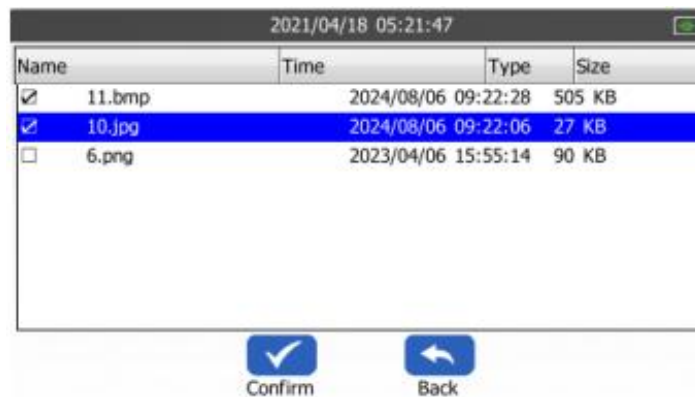
Open the images or jobs and select the image you want to print.





11.2 Data Import

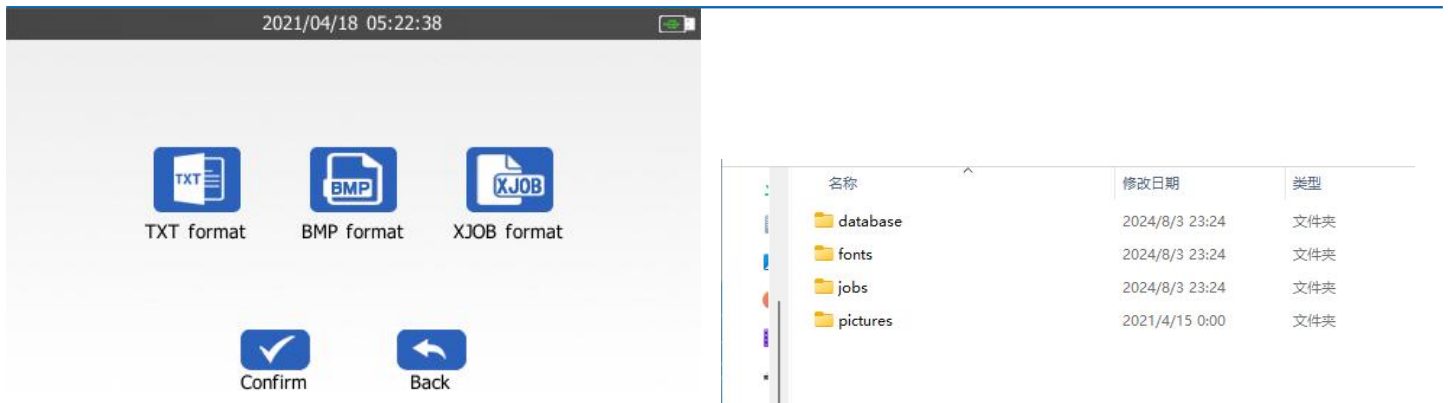
BMP,JPG,PNG,TXT



11.3 Data Export

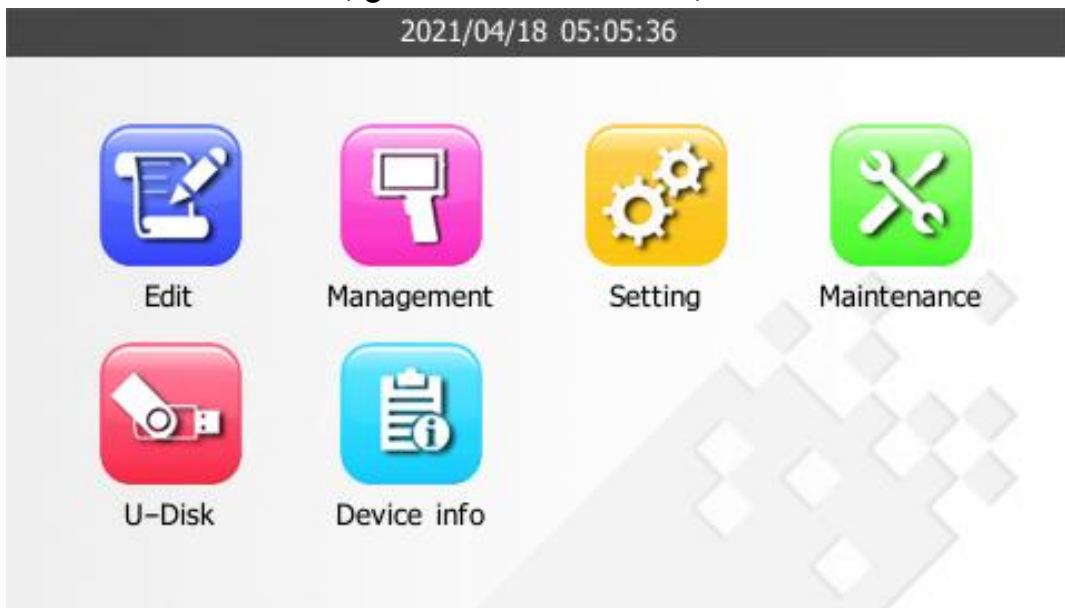
Exported data is stored in the “jobs” folder.





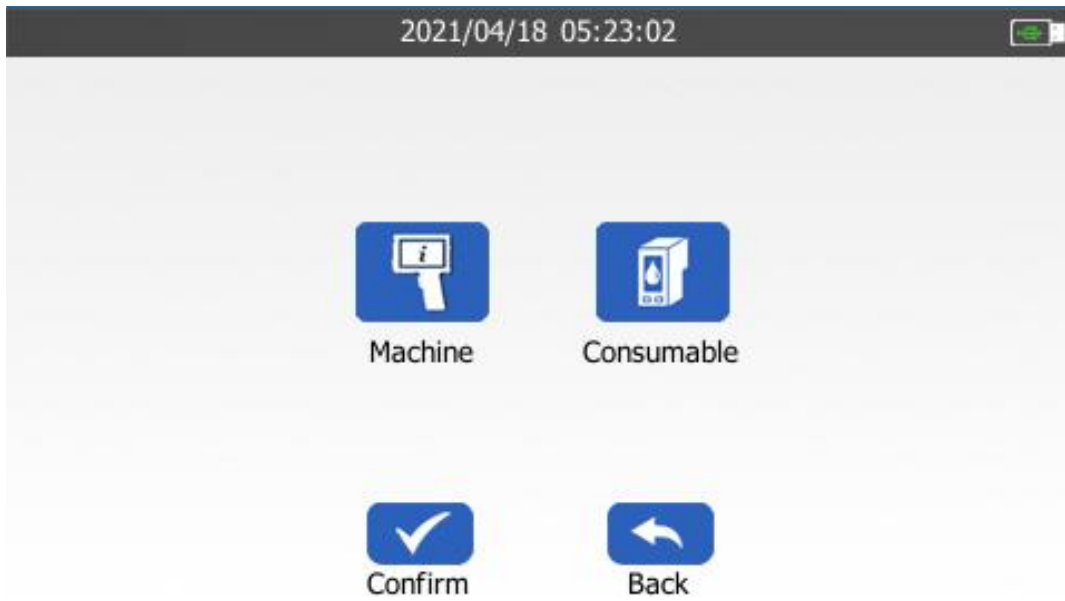
12. Device Information

Power on the machine, go to the main screen, and click on “Device Info.” 



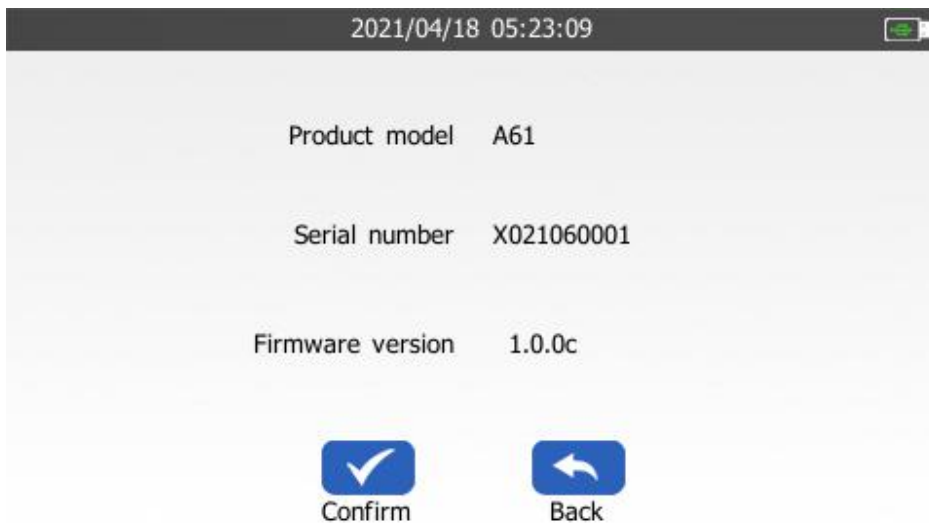
After entering “Device Information,” there are options for “Device Information” and “Consumables Information”.





12.1 Machine

Product Model, Serial Number, Firmware Version, and Other Information.



12.2 Consumable

Print counter: Number of times the printing function has been used.

Ink droplets: Current cumulative usage information of the ink cartridge.

