

# *SurePrint*

## Cassette Printer

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### User manual



Product name: Cassette Printer

Product model: C100/C10

Date of manufacture: See the label

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# Revised Record

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V1.6	2022/08/31	<ul style="list-style-type: none"> <li>Added the description of the button to switch on the ambient light</li> <li>Updated the description of network port connection picture</li> <li>Updated manual software picture</li> </ul>
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Version	Release Time	Detailed Information
		- Appendix 1: Technical Parameters <ul style="list-style-type: none"> <li>Combined the description of C100/C10 technical data - Appendix 1: Technical Parameters</li> </ul>
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# Introduction

Dear users,

Thank you for choosing our products!

To make you have a general understanding of this product of our company and facilitate your use, the instructions for use (IFU) is specially developed by our company for the device and covers the structural features, technical characteristics, operation instructions, simple troubleshooting, and maintenance and servicing of the device. It is an indispensable guide when you operate the device.

The IFU is a document provided with the device and should be placed near the device for easy access by users or maintenance personnel.

Before use, please **be sure to** read this IFU carefully and follow the IFU to operate the device correctly. We believe that it will be of great help to you in the effective use of the device. In addition, if you have any questions during the use, please call to inquire or inform the technical service engineer, and we will serve you wholeheartedly.

## Important Disclaimer

The information, data, instructions, and value judgments contained in this IFU represent the current state of scientific knowledge and advanced technologies mastered by our company via an investigation into this field.

Dakewe (Shenzhen) Medical Equipment Co., Ltd. reserves the right to make modifications to the manufacturing processes subject to compliance with regulatory requirements without prior notice. Only in this way can we continuously improve the technologies and manufacturing processes adopted by our products.

Organizations or personnel are encouraged to give feedback on the wrong descriptions, charts, and technical illustrations contained in the IFU for updating. What should be particularly pointed out is that we shall take no responsibilities for any direct or indirect economic losses or damages caused by non-compliance with the statements or other information in the IFU.

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For the serial number and year of manufacture of the device, please refer to the nameplate on the back of the device.







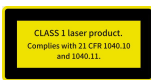







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## I. Information

### (I) Symbols and Meanings

Symbol	Meaning
	Please follow the IFU.
	This symbol indicates that electrical and electronic devices should be collected separately.
	USB port: It means that the USB can be inserted.
	USB 3.0 port: It means that the USB can be inserted.
	Laser safety sign: It reminds you of watching out for laser radiation. See Appendix 3 for details.
	Caution sign: It reminds you of looking out for hand injuries by moving parts.
	CLASS 1 laser product. Complies with 21 CFR 1040.10 and 1040.11.
	Power on
	Power off
	Ground marking, must be grounded.
	Environmental protection mark of the RoHS directive. The number in the symbol indicates the Environmentally Friendly Use Period value in years of products. This symbol is used if the use of a restricted substance exceeds the maximum allowable limit. (Actual print is black)
	This symbol represents the item numbers in illustrations.
	Caution: It indicates the presence of a hazard that may result in minor injuries or impaired performance if such hazard is neglected.
	Watch out for electric shock.

## I.Information

Symbol	Meaning
	Serial number
	Date of manufacture
	Manufacturer
	IVD medical device
	Unique Device Identifier
	Importer
	Filter
	This way up
	Fragile; handle with care
	Keep away from rain: The package must be stored in a dry environment.
	Do not roll: Do not roll the transport package.
	Keep away from sunlight: The transport package cannot be directly exposed to the sun.
	Stacking limit by number: The maximum quantity of stacking layers of the same packages is 1 layer.
	Recycle in accordance with local laws and regulations.
	General mandatory action sign To signify a mandatory action.

Symbol	Meaning
	Follow instructions for use To signify that the instruction manual/booklet must be read.
	Tilt indicator: Keep upright.
	Shock indicator: Handle with care.

### (II) Device Purposes

The SurePrint Cassette Printer is a professional printer specially designed for the pathological tissue cassettes. It is used to print the following information on the tissue cassettes: Numbers, characters in multiple languages, 1D & 2D barcodes, graphics (bitmap formats supported by the current system: .DXF, .PLT, .SVG), various fonts and font sizes and special symbols that come with the Windows system.

This manual is based on printer software version V02. Please read carefully before installation and use.

Always operate the device according to the instructions in this IFU. Any other use is considered inappropriate!



- Always follow the safety instructions and be fully aware of the warnings in this section.
- Be sure to read these instructions even if you are already familiar with the operation and use of the product.

### (III) Qualification of Personnel

The device must be installed, used and serviced by qualified personnel with appropriate technical competence and familiarity with the safety issues and risks associated with the use of the device.

We recommend operators and users to receive half-day training so that they can operate the installed device independently.

The device must be operated by trained laboratory personnel only.

Always operate the device according to the instructions in this IFU.

## II. Safety

### (I) Safety Instructions

This IFU contains important information on operational safety and device maintenance. The IFU is an important part of the product and must be read carefully before installation and use, and always kept close to the device. This device has been manufactured and tested in accordance with the safety requirements for electrical devices for measurement, control and laboratory use and complies with the following safety and EMC test standards:

(1) IEC61010-1:2010+AMD1: 2016 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements.

(2) IEC61010-2-101: 2018 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-101: Particular requirements for in vitro diagnostic (IVD) medical equipment.

(3) IEC61326-1: 2020 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements.

(4) IEC61326-2-6: 2020 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6: Particular requirements - In vitro diagnostic (IVD) medical equipment.

To ensure safe operation, the user must observe all safety instructions and be fully aware of the warnings in the IFU.



- The instructions described in this section must be followed at all times.
- Do not disassemble or modify the protections on the device and accessories, and only authorized service personnel can repair the device and dispose of the components inside the device.
- Always use original spare parts and approved original accessories.
- Improper operation or handling of the device may cause injuries to the user or other persons, or damages to the device, other property damages.
- The device must be used for its intended purposes and only when all safety functions are in proper working order. Malfunctions that impair safety must be fixed immediately.

### (II) Warnings

The safety devices installed on the printer by the manufacturer only form the basis for accident prevention. The organization in possession of the printer should take primary responsibilities for safety while the personnel assigned by the organization to operate, maintain, or repair the device shall take secondary responsibilities. To ensure successful operation of the device, always observe the following instructions and be aware of the warnings.

#### (1) Warning - Signs on the device



A warning triangle is displayed on the device to indicate that the correct operating instructions defined in this IFU must be followed during operation or replacement. Failure to follow these instructions may result in accidents, personal injuries, device or accessory damages.

#### (2) Warning - Transport and installation



- The device may be shaken, tilted or lifted during transport, so before each transport, the movable parts must be fixed or removed, including the transfer push block, the output push block, the magazine and the tray - otherwise the device could be damaged .
- The device should be removed from the packaging by two people.
- The device must remain upright during handling after unpacking.
- Strictly follow the instructions for opening the package to avoid damages to the device!
- The device must be placed on a level surface and has good ventilation conditions to ensure sufficient cooling space.
- Do not place the device in environments with flammable fire sources and explosion hazard.
- Do not expose the device to direct sunlight.
- The device must be connected to a grounded mains socket-outlet rather than a power strip without a protective earth conductor.
- The device may be seriously damaged if it is connected to a mains power with a voltage different from that indicated on the nameplate. The power supply voltage fluctuation does not exceed  $\pm 10\%$  of the rated voltage.

**(3) Warning - Cleaning and maintenance**

- Before each maintenance or cleaning, the device should be turned off and disconnected from the mains.
- Please clean the device with a soft cloth and mild detergent. Avoid corrosive liquid and keep the enclosure away from high temperature, otherwise the enclosure may be damaged!
- Don't clean the device with paint thinners, any solvents containing acetone or xylene. Avoid spilling liquids on the components inside the device.
- When using cleaning agents, please follow all safety requirements and laboratory management policies of the device manufacturer.
- Under no circumstances should the turnplate be flushed with water, otherwise it may cause abnormalities to the turnplate!

**(4) Warning - Operating the device**

- The SurePrint Cassette Printer shall only be operated by trained laboratory personnel for the designated purposes and in accordance with this IFU.
- In case of emergency, turn off the main power and unplug the power cord.
- During operation, never block the motor drive assembly for the magazine or the tray with objects or by means of manual interference because such action may cause personal injuries.
- Load the cassettes according to the device identification or instructions in the correct loading direction.
- Dispose of used cassettes in accordance with regulations and your organization's waste management policies.
- Load the tray according to the device identification or instructions in the correct loading direction.
- The tray reset action cannot be performed when there are cassettes in the tray.
- Since the tray is made of metal, please handle the tray with care for safety concern.
- Only DAKWE-supplied power or -certified power cords are allowed to be used.

**(5) Warning - Laser safety**

- Never attempt to operate the laser to print without a protective cover.
- Never remove or repair the laser head. In case of malfunction, please contact service personnel.
- Any of the actions above may result in permanent eye or skin damages.

### (III) Safety Functions

The SurePrint Cassette Printer is equipped with safety functions and complete software controls.

#### 1. Emergency stop button

The SurePrint Cassette Printer is equipped with an emergency stop button located above the tray (Figure 2-1). If the device malfunctions or printing needs to be stopped, the device can be stopped by pressing the emergency stop button.



Figure 2-1 Emergency stop button

#### 2. Alarm

The SurePrint Cassette Printer features an alarm function, and the alarm is made by the internal alarm system of the device.



When the operating temperature range exceeds +10 °C to +35 °C, the internal alarm system of the device will emit a continuous short sound of "beep...beep...".

**Solution:**

Turn off the device and wait for 5 to 10 minutes before restarting the device; if the alarm persists after the said steps, please contact the service personnel.

## III. Installation

### (I) Key Features

#### **Multiple application scenarios**

- Stand-alone mode: The product is equipped with an 8-inch LED touch screen, supports stand-alone printing, features an in-built software system and CPU main frequency of 1.6G, and allows independent and smooth operation of the printing system software;
- Online mode: The product can be connected to an external computer controlling the printing and supports software customization according to the production rules for different pathology IDs;
- Connection to the LIS: The product is compatible with multiple LIS/HIS/PIS/PACS, supports multiple formats of printing and can flexibly switch between batch printing mode and on-demand printing mode;
- The device comes with the template editing software which allows to edit and print templates according to user requirements.

#### **Fast speed, large capacity**

- The product adopts the non-contact laser printing technology and doesn't require preheating, curing, ribbons or ink or any other labeling consumables. It can be put into service immediately after startup;
- The product comes with the printing system which supports prioritized printing and unprinted cassette list editing;
- Fast printing speed! Depending on the content, the fastest printing speed is up to 2.5 seconds per piece;
- High throughput! The product features 6 magazines with a standard total loading capacity of 450 cassettes, which can be expanded to 600 cassettes, reducing time for loading cassettes during operation. The output tray can hold up to 100 cassettes (C100), effectively improving the work efficiency;
- The product is compatible with cassettes of different angles ranging from 35° to 45° for printing;
- The product is compatible with the majority of cassettes with or without lid, no need to change to laser-specific cassettes.

#### **Intelligent**

- The product features the voice interaction function and can timely generate relevant action prompt

### III. Installation

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voice;

- The product has the voice wake-up function and can perform relevant actions via voice recognition (C100);

- The product comes with a built-in code scanner and supports automatic sensing (C100);

- The product supports intelligent color recognition. It has a dedicate sensor to detect the color of cassettes and automatically print on the cassette of the required color (C100);

- The products is fully controlled by a computer, allows the cassettes to enter to and exit from the magazine automatically before going into the tray, and arranges the cassettes neatly in the printing order.

#### **User friendly**

- The product has a streamlined, beautiful, high-end and ergonomic appearance and is surfaced with smooth and dirt-resistant material;

- The product adopts modular design, which enables easy inspection and maintenance;

- The product features a smooth printing process with low noise (< 60 db(A));

- The product is equipped with a built-in air purification system that can effectively filter the dust generated from printing to protect human health and environmental safety;

- The magazine is made of metal, which can effectively reduce the friction between the magazine and the cassettes, enabling smooth cassette delivery;

- The product features a high printing resolution, fine and clear fonts and maximum printing resolution of 2500 dpi, can print various texts, including Numbers, characters in multiple languages, 1D & 2D barcodes, graphics (bitmap formats supported by the current system: .DXF, .PLT, .SVG), various fonts and font sizes and special symbols that come with the Windows system;

- The printed characters are resistant to acid, alkali, xylene, formalin and alcohol corrosion, and are suitable for long-term storage.

## (II) Device Overview

The SurePrint Cassette Printer is a printer specially designed for tissue cassettes. It can print Numbers, characters in multiple languages, 1D & 2D barcodes, graphics (bitmap formats supported by the current system: .DXF, .PLT, .SVG) and other information on the 35 ° to 45 ° marking surface of the cassettes, the printed information can withstand alcohol, xylene, acid/alkaline chemical reagents under high temperature conditions, and is suitable for long-term preservation.

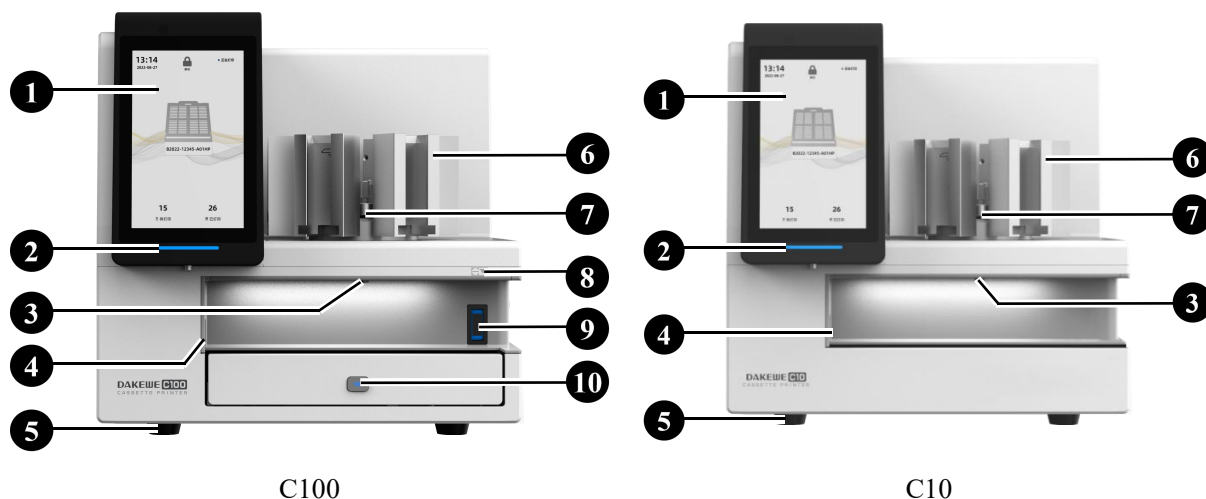


Figure 3-1 SurePrint Cassette Printer - Front

- |                                |                                     |                         |                  |
|--------------------------------|-------------------------------------|-------------------------|------------------|
| 1 Touch screen                 | 2 Indicator                         | 3 Emergency stop button | 4 Outlet         |
| 5 Foot pads (4 in total)       | 6 Magazines (6 in total)            | 7 Turnplate             | 8 Scanner (C100) |
| 9 Tray line feed sensor (C100) | 10 Tray removal/reset button (C100) |                         |                  |



Figure 3-2 SurePrint Cassette Printer - Left Rear

- |                         |                     |                           |                    |
|-------------------------|---------------------|---------------------------|--------------------|
| 11 Cooling port #1      | 12 Dust purifier    | 13 Cooling port #2        | 14 Laser air inlet |
| 15 Dust purifier outlet | 16 Laser air outlet | 17 USB port/Ethernet port | 18 Cooling port #3 |
| 19 Daily power switch   | 20 Power switch     | 21 Speaker                |                    |

#### (III) Requirements for Installation

- The device requires an installation area of about (L × W × H) 600 × 650 × 800 mm.
- The device power supply range is 100 – 240VAC and the power cord should be a dedicate cable that conforms to the local power supply.
- The device should be installed at a place where the main power switch can be easily accessible at any time. Never connect the device to a power strip. Instead, it must be connected to a grounded mains socket-outlet.
- The operator should ensure that electrostatic discharge (ESD) safety precautions are in place.
- The device is for indoor use only. Do not use the device indoors where there is a risk of explosion. Avoid collisions, direct sunlight, and frequent electricity fluctuation.
- Considering the weight of the device, the workbench should have the capacity and stiffness to carry the weight of the device.
- The room temperature should be always maintained between +10 °C and +35 °C; the installation site must be well ventilated and free from any sources of ignition.



- If there is a large temperature difference between the warehouse and the installation site and the air humidity is high, condensation may form inside the device. In this case, you must wait for at least two hours before turning on the device, otherwise the device would be damaged.
- Before unpacking, please check that the packaging box is intact, and no damages or deformities in appearance. In case of any of the conditions above, please mark on the shipping documents accordingly.
- To ensure the device will operate properly, the device should be installed with at least 200 mm space around the device for ventilation.

## (IV) Unpacking and Installation

### 1. Unpacking requirements

- The device needs to have enough space when being unpacked. The sides and the rear of the device should be at least 1 m away from the wall.
- To take the device out of the pallet, always reserve at least 1.5 m space in front of the device, and move the device packaging box as close to the final installation site as possible.
- At least two people are required to unpack and carry down the device.

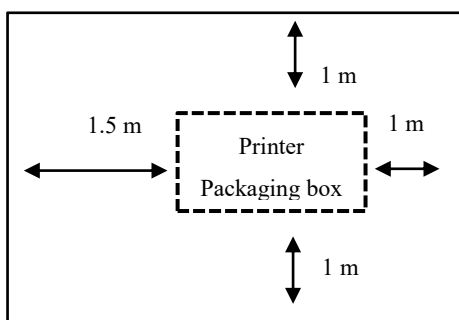


Figure 3-3 Diagram of Unpacking Area



Figure 3-4 Removal Tool

### 2. Remove the wooden crate

Steps to remove the outer wooden packaging crate:

- (1) Remove the fasteners with a removal tool (Figure 3-4) or a flat-blade screwdriver (Figure 3-5);
- (2) Align the removal tool (or flat-blade screwdriver) with the round hole at the hook of the fastener and press it in the direction of the force application point (Figure 3-6);
- (3) Remove the device protection foam from the packaging box to take out the device.

To install the outer wooden packaging crate, press it fit by aligning the fasteners with the grooves of the wooden carton in the length direction.

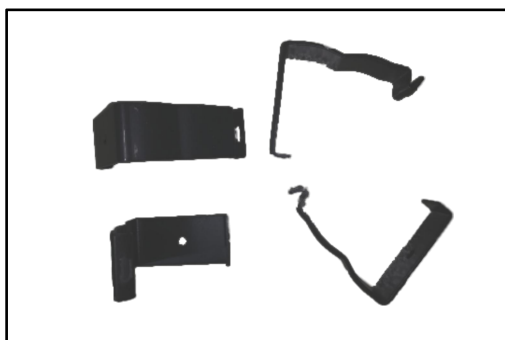


Figure 3-5 Fasteners

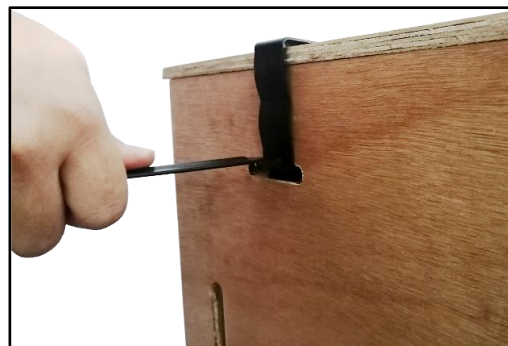


Figure 3-6 Fastener Press-fit Point

### III. Installation

#### 3. Checking components

Check the components to be installed according to the packing list.



Figure 3-7 Power Cord



Figure 3-8 Embedding Cassettes

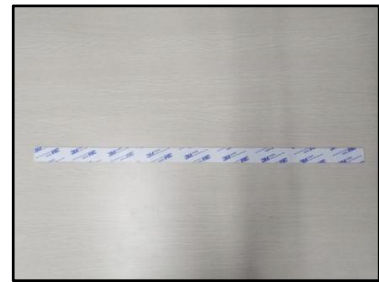


Figure 3-9 Groove Spacer



Figure 3-10 Output Tray (C100)



Figure 3-11 Standard Magazine



Figure 3-12 Compatible Magazine

#### 4. Loading cassettes

The SurePrint Cassette Printer is equipped with six magazines. When the magazine at the feed inlet is empty, the software system will automatically switch to the next magazine. If all six magazines are empty, the device will stop printing and give voice and pop-up prompts (Figure 3-13).

Cassettes should be loaded in the magazine prior to use. In order to prevent improper or reversely-oriented loading of the cassettes in the magazine, the shape and orientation of the cassettes are marked on each magazine. When loading cassettes, load the cassettes from top to bottom according to the indication on the magazine (Figure 3-14).



Figure 3-13 "Add Cassettes" Prompt

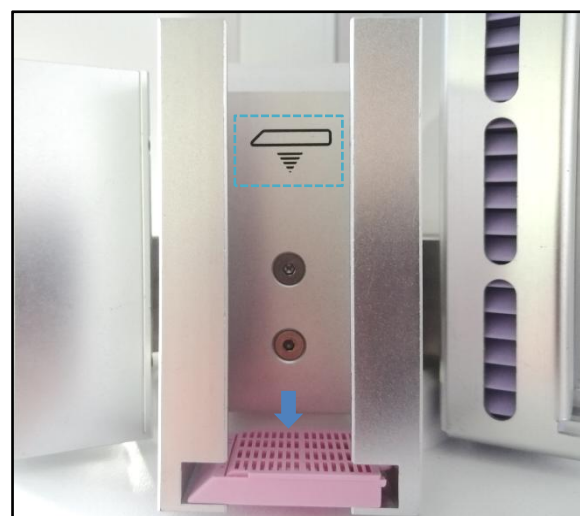


Figure 3-14 Shape and Orientation of the Cassettes

### Compatible Cassettes

The material of the cassettes is one of the most important factor in determining the print quality of the cassette. Cassettes with weak light transmission printing surface have better marking quality compared with the cassettes with rough printing surface or strong light transmission surface.



Every batches of cassettes from every cassette manufacturers would vary to some degree. This difference may affect the print quality. If there are any problems with the cassettes, please refer them to the appropriate cassette manufacturer.

### 5. Installing the Magazine

The SurePrint Cassette Printer has two types of magazines: standard magazines and compatible magazines. There are six magazines in total. The corresponding digital channel identification is marked on the device turnplate, which is suitable for printing operations according to the channel number process.

#### Loading cassettes

According to the indicator of placement orientation on the magazine, align the groove on the magazine with the dowel pin on the turnplate.

The magazine is loaded properly when there is no obvious gap between the magazine and the dowel pin (Figure 3-15).



Figure 3-15 Loading the Cassettes

### 6. Installing the tray (C100)

The SurePrint Cassette Printer is equipped with a tray with a total of 10 grooves, Each groove has a maximum loading capacity of 10 cassettes, and the tray has a total loading capacity of up to 100 cassettes. There is a tray button on the device (Figure 3-16).

**Briefly press the button:** Reset the tray.

**Press and hold the button for three seconds:** Eject the tray (Figure 3-17).

### III. Installation

The system will automatically detect whether a groove is full and advance to the next row. When all 10 rows on the tray are full, that is, the tray is full, the device will stop printing and give voice and pop-up prompts.



- Before turning on the device, the cassettes in the tray should be removed. Make sure that there are no cassettes or other foreign objects in the tray.
- When the width of the cassette exceeds 28.50 mm, please activate the tray program count.
- To activate the program count function, go to the "Print Settings" - "Process Settings", select "Counting" in the "advance tray using" and set the Cassettes per line to 9.



Figure 3-16 Tray Button (C100)



Figure 3-17 Tray Ejected (C100)

## (V) Turning on the Device

### 1. Power connection

Connect the power cord provided for the device to the external power cord connector. Before connecting the power supply, ensure that the power switch is at the "O" position (Figure 3-18).

- ① External power cable connector    ② Power switch

### 2. Starting the device

Steps to start the device:

- (1) Connect the power cord to a grounded mains socket-outlet;
- (2) Turn on the mains switch on the rear side of the device and keep the switch at the " | " end (Figure 3-18);
- (3) Briefly press the ON/OFF button on the side of the device (Figure 3-19), after the power supply is connected and the mains switch is turned on for the first time, the device will automatically run the startup

program;

(4) The system is initializing, that is, the device is self-checking. Wait for the initialization to complete (Figure 3-20). The device self-check and whole device reset will take about 1 minute. Please wait with patient..

(5) After the initialization, the system goes to the Main interface, and the device state is ready.



- For initial connection to the mains, always keep the mains switch at the "O" position.
- Daily startup of the device: Select the ON/OFF button on the right side of the device (Figure 4-17), and briefly press the ON/OFF button.

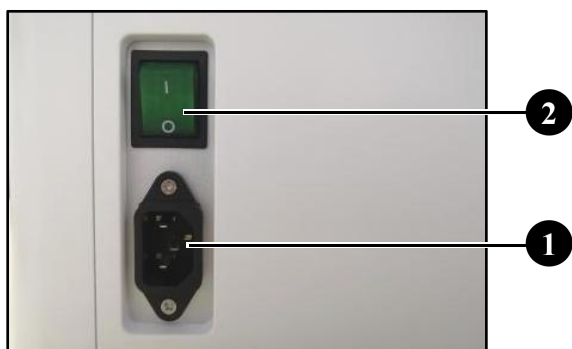


Figure 3- 18 Power Supply



Figure 3-19 Device ON/OFF Button (C100)

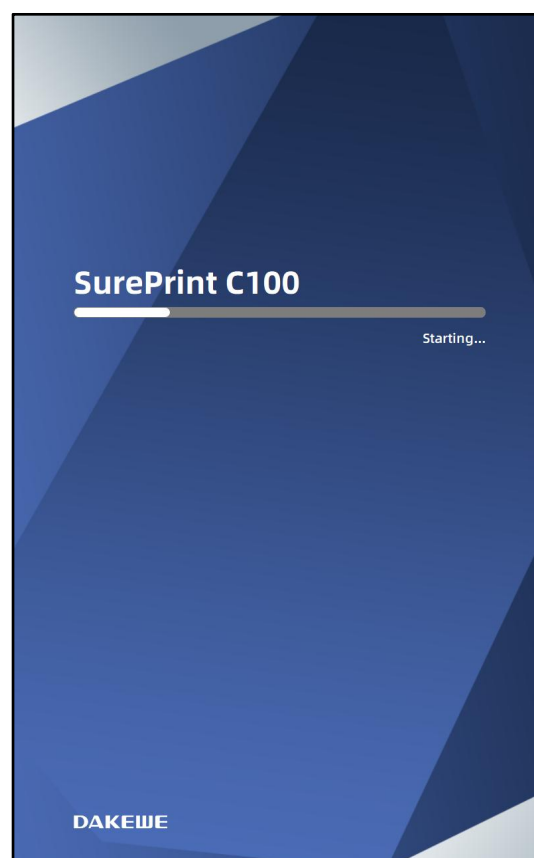



Figure 3-20 Initialization Interface (C100)

## (VI) Main Unit and Hardware

### 1. Touch screen

The SurePrint Cassette Printer is equipped with an 8.0-inch LED touch screen. Printing as a standalone printer can be performed from the touch screen. Alternatively, printing can be performed by connecting the device with the DAKWE computer printing software or external LIS.

The touch screen can exhibit a screen saver. When the power is turned on and idle for a period of time, the software system will start the screen saver (Figure 3-21). Screen timeout can be set in the "Software Settings" ([see 4.65 Setting for Screen Timeout](#)). The contents displayed on the Lock Screen interface include: system time and date, unlock button, device status, cassette animation, the quantity of unprinted cassettes in the list, and the quantity of printed cassettes in the list.

Unlock button: It is displayed as a  lock pattern and located in the top middle of the Lock Screen interface; click the "Unlock" button to unlock and operate on the screen.

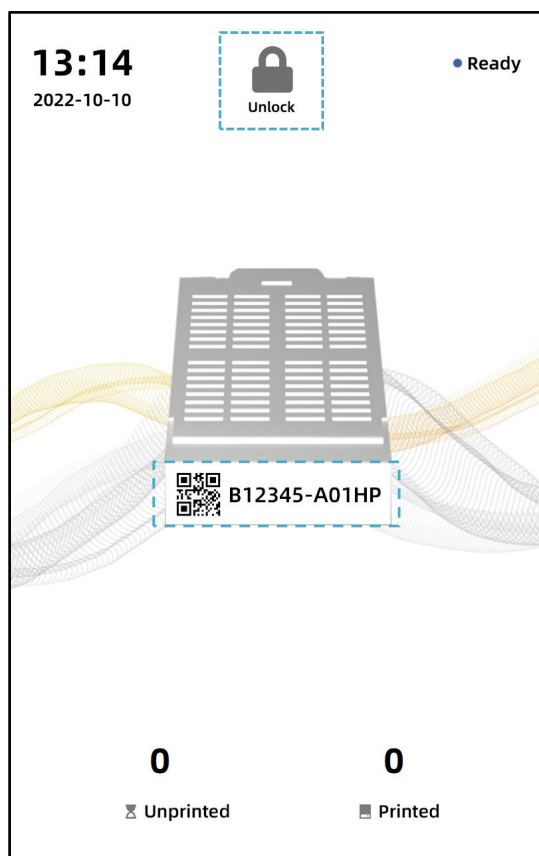


Figure 3-21 Lock Screen Interface



Figure 3-22 Indicator Light (C100)

### 2. Indicator light

The SurePrint Cassette Printer is equipped with a status indicator located below the touch screen (Figure 3-22). Users can know the status of the device in real time.

Table 3-1 Status and Indicator

Status	Indicator	Status Description
Ready or resetting	Blue	Normal, functioning properly
Printing	Green	Printing
Stopped	Red	device stops functioning

### 3. Tray light

The SurePrint Cassette Printer is provided with a tray light above the tray (Figure 3-23). The tray light allows users to intuitively observe the information printed on the cassette. For the tray light switch, see [4.9 Debug](#).



Figure 3-23 Tray Light (C100)



The surface of the touch screen is covered with a silicone rubber film, which can withstand most common reagents; however, during use, avoid any reagent splashing on the touch screen, if any, please wipe it immediately!

## (VII) Turning off the Device

To completely turn off the SurePrint Cassette Printer, please observe the following three steps:

- (1). Long press the ON/OFF button on the right side of the device for three seconds (Figure 3-19). The system will prompt a shutdown confirmation message. Please click the "Confirm shutdown" button and then the system enters shutdown process.
- (2). The device is shutdown when the touch screen turns off.
- (3). To power off the device, select the mains switch on the back of the device (Figure 3-18), and keep the switch at the "O" end (this step is not required while the device is in service).



Do not turn off the device while the system is printing. Please follow the steps provided above to completely shut down the device, turning off the device otherwise may cause serious damages to the device hardware and result in data loss.

## IV. Instructions before Use

### (I) Main Interface

The Main interface displays the device status and the print list, and can be used to create IDs, and control printing (Figure 4-1).

#### 1. Status bar

The status bar is located at the top bar of the touch screen and displays the status of the device, such as time, status and user name.



The software system is connected successfully



Software system connection fails

- Ready: After the device is started up, it will enter the ready state, and all buttons on the Main interface are clickable.
- Printing: After entering the printing process, the status of the device will change from "Ready" to "Printing". At this time, all buttons on the Main interface other than the Stop button are non-clickable.
- Stop: Click the Stop button or Emergency stop button under working status to enter the Stop state, in which case, the Reset button on the Main interface becomes clickable.
- Sleep: When powered on, the device enters the sleep state when idled for a period of the screen timeout.
- Resetting: During the device resetting process, the status is displayed as "Resetting".
- Message Prompt: The information that reminds the user of performing actions is displayed in the central area of the top of the screen by the system as a pop-up.

#### 2. Print settings

Make print data settings according to available functions, such as selecting print template, channel/color, prefix, suffix, sub ID, section and custom content.

#### 3. Print content

The print contents are the data entries to be printed on the cassettes, which mainly include: ID, section, sub ID, and sub ID quantity; user can enter a single ID in the input box below the "ID" text to add a single ID; they can also enter the starting ID in the first input box below the "ID" text and then enter the ending ID in the second input box to add the IDs in batch.

#### 4. Rename

The user can enter the renaming setting interface by double-clicking the field name in the main interface (Figure 4-2) to modify the names of the fields Custom1, Custom2, Prefix, Suffix, Id, Section, Sub Id and Sub Id Count in the main interface.

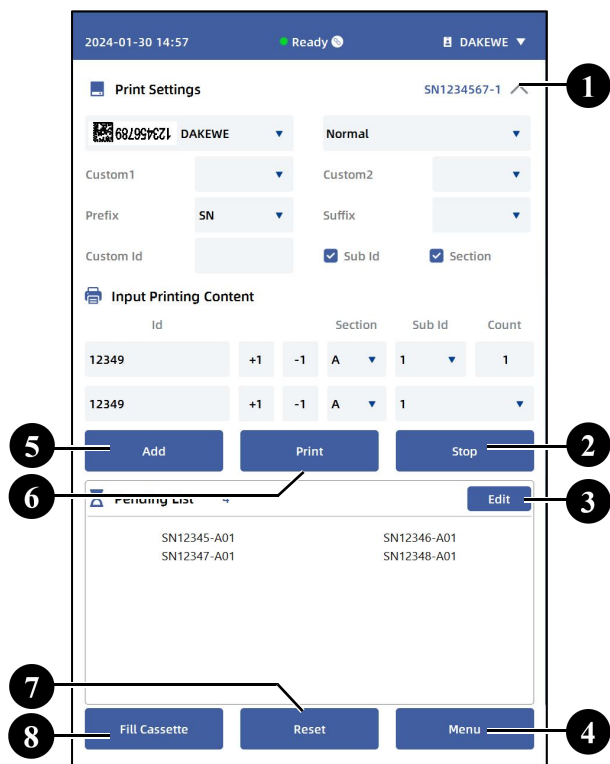


Figure 4-1 Main Interface

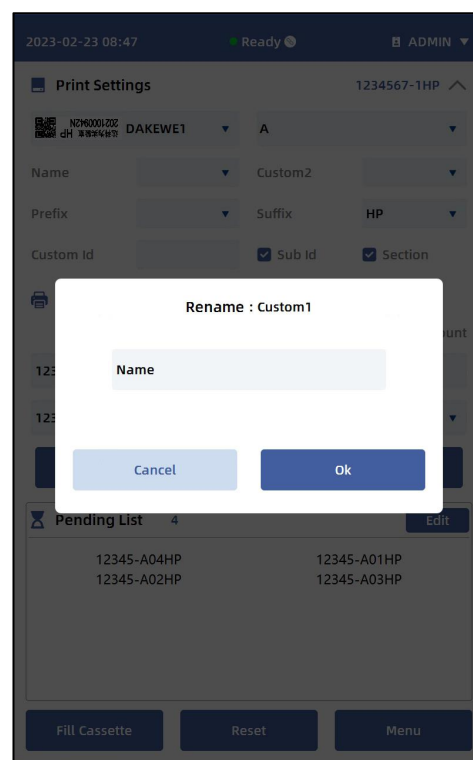


Figure 4-2 Rename interface

NO.	Description	Function Description
1	Hide button	Press the "^" icon to hide the print settings module.
2	Stop button	Press the "Stop" button to stop the device immediately
3	Edit button	The user can press the "Edit" button when the device is in ready or stopped status to delete or prioritize the print jobs in the print jobs list (Figure 4-3).
4	Menu button	Press the "Menu" button to enter the Menu interface (Figure 4-4), and users can perform user management, help, software settings, print settings, debug and data management settings.
5	Add button	Press the "Add" button to add the print content to the print list.
6	Print button	Press the "Print" button to print the entries in the print jobs list.
7	Reset button	Press the "Reset" button to reset the device.
8	Fill cassettes button	Press the "Add Cassettes" button to replace the storage box and add the embedded box operation to ensure that the equipment is reset after replacing the storage box.

## IV. Instructions before Use

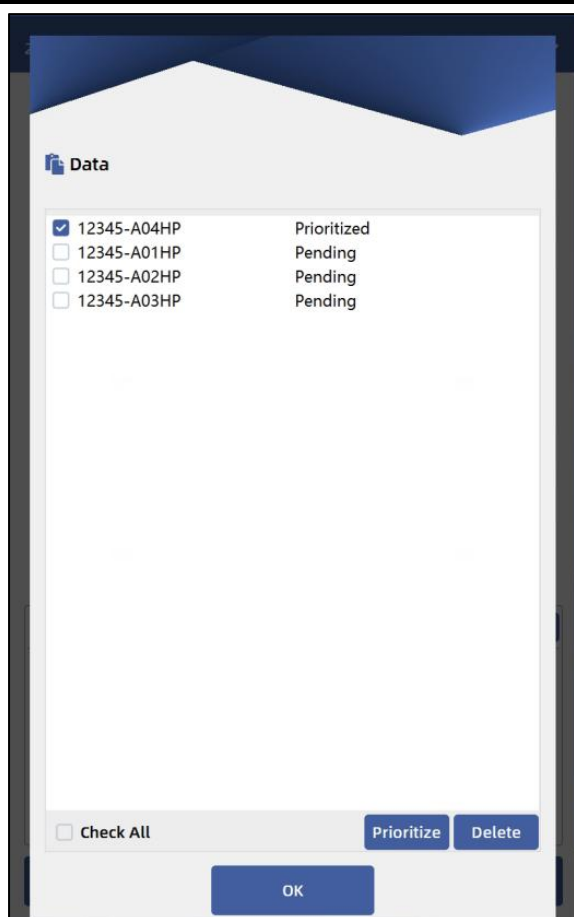


Figure 4-3 Edit Interface

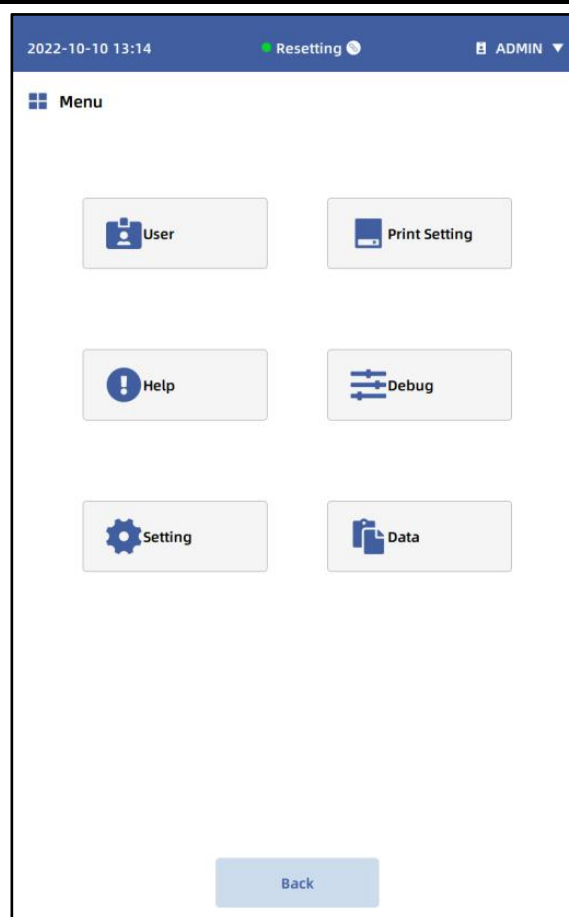


Figure 4-4 Menu Interface

## 5. Virtual keyboard

The SurePrint Cassette Printer allows the user to enter data via virtual keyboard that comes with the system, or using a mouse and a keyboard. Chinese, English, numbers, special characters and various characters can be entered through the soft keyboard. Click the input box and the virtual keyboard will pop out automatically. The system has multiple language versions and so is the virtual keyboard. The keyboard spacebar indicates the keyboard language: English (Figure 4-5), Simplified Chinese (Figure 4-6), and numeric (Figure 4-7). This IFU will describe the buttons in detail. Here are the commonly used buttons:

Button	Function Description
	Confirm button: Press this button to save changes or confirm.
	Switch button: Press this button to switch between letters, numbers and special characters.
	Hide button: Press this button to hide the virtual keyboard.
	Language button: Press this button to switch keyboard language.



Button	Function Description
	Delete button: Press this button to delete the previous character.
	Caps lock button: Press this button to switch between uppercase and lowercase.



Figure 4-5 English Keyboard



Figure 4-6 Chinese Keyboard

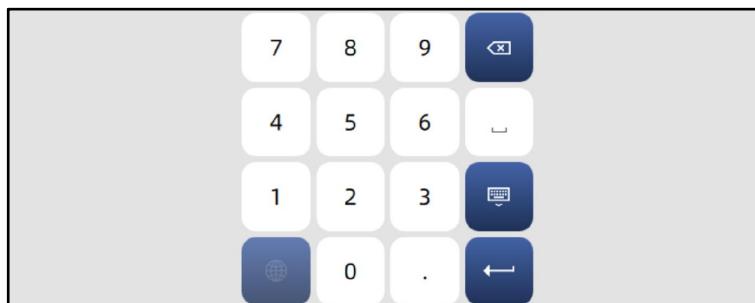


Figure 4-7 Numeric Keyboard

## (II) Printing Cassettes

The SurePrint Cassette Printer prints the contents to be printed on the cassettes. For user's convenience, the User interface has been designed to minimize the quantity of buttons required for printing. Deactivated buttons are shown in grey background. The software system can realize the information input operation in the following two ways. This section applies to the printing of the cassettes regardless of whether or not there are cassettes in the magazine.

### 1. Add one single entry and print

Firstly, go to the Main interface, select the necessary prefix and suffix and enter the corresponding

## IV. Instructions before Use

data in the input box.

Then, enter content in "Enter Content" and click the "Add" button. The entered content will be displayed in the print jobs list (Figure 4-8).

Finally, confirm the data is correct and click the "Print" button. The device dispenses a cassette from the magazine for marking.

The screenshot shows the DAKWE interface at 2024-01-31 10:47. The status is 'Stop'. The device ID is SN1234567-1. Under 'Print Settings', the barcode is 104050321NS, the brand is DAKWE, and the model is Kol. Custom1 and Custom2 are empty. Prefix is SN and Suffix is empty. Custom Id is empty, and both Sub Id and Section are checked. The 'Input Printing Content' table has two rows, both with Id 12351, Section A, Sub Id 1, and Count 1. The 'Pending List' shows 1 entry: SN12345-A01. At the bottom are buttons for 'Fill Cassette', 'Reset', and 'Menu'.

Id	Section	Sub Id	Count
12351	A	1	1
12351	A	1	1

Id	Section	Sub Id	Count
12351	A	1	1

Figure 4-8 Add one single entry and print

The screenshot shows the DAKWE interface at 2024-01-30 14:57. The status is 'Ready'. The device ID is SN1234567-1. Under 'Print Settings', the barcode is 682997621, the brand is DAKWE, and the model is Normal. Custom1 and Custom2 are empty. Prefix is SN and Suffix is empty. Custom Id is empty, and both Sub Id and Section are checked. The 'Input Printing Content' table has two rows, both with Id 12349, Section A, Sub Id 1, and Count 1. The 'Pending List' shows 4 entries: SN12345-A01, SN12346-A01, SN12347-A01, and SN12348-A01. At the bottom are buttons for 'Fill Cassette', 'Reset', and 'Menu'.

Id	Section	Sub Id	Count
12349	A	1	1
12349	A	1	1

Id	Section	Sub Id	Count
12349	A	1	1

Figure 4-9 Add entries in batch and print

### 2. Add entries in batch and print

Firstly, go to the Main interface, select the necessary prefix and suffix to be printed and enter the corresponding data in the input box.

Then, enter contents in "Enter Content", such as main ID 12345 with the quantity of Sub IDs is 4. Click the "Add" button to add entries in batch. The added content will be displayed in the print jobs list (Figure 4-9).

Finally, confirm that the data is correct, click the "Print" button. The device dispenses cassettes from the magazine for marking.



When the pathology number contains Chinese characters, letters or special characters, you can enter the content in the "Custom Id" input box for individual batch.

### (III) User Administration

Click the "User" button on the Menu interface to enter the User management interface (Figure 4-10), where users can be added, removed, and edited.

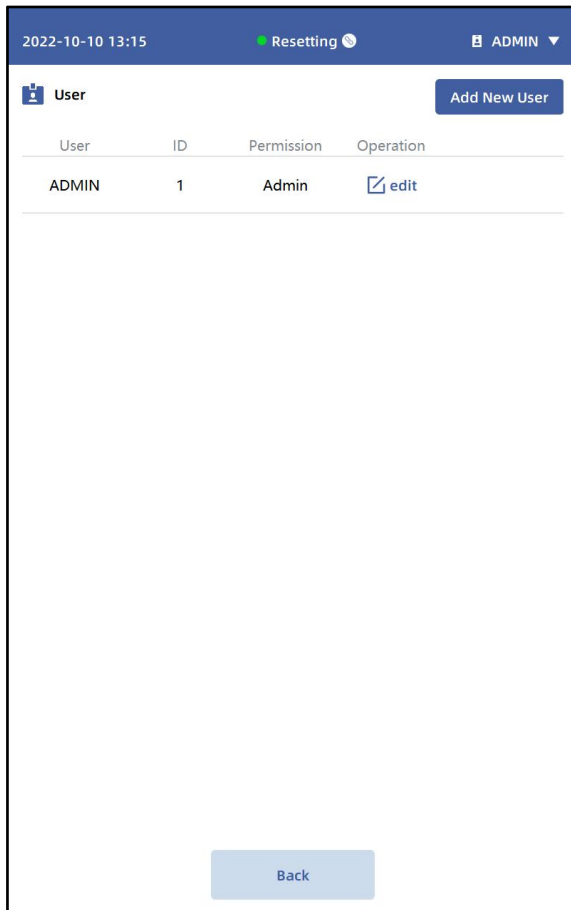


Figure 4-10 User Management Interface

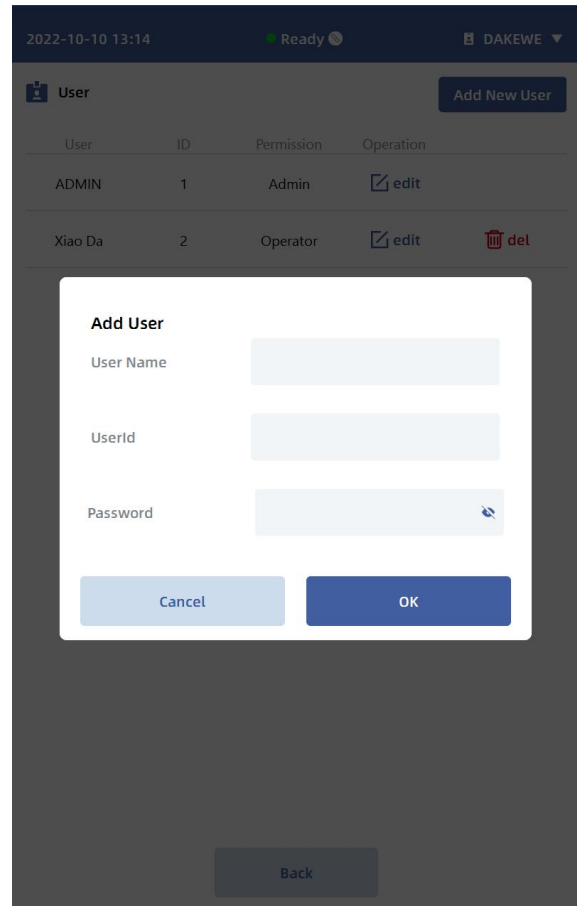


Figure 4-11 New User Interface

#### 1. User permissions

**Standard users:** standard users can change routine printing settings, such as ID, prefix, suffix, printing process, and sub ID settings. Standard users can only edit their own password. The functions that standard users cannot use will not be displayed on the function menu.

**Administrator:** Administrators can perform all functions of standard users; in addition, they can add, remove, and edit ordinary users.

#### 2. Adding a new user

Click the "Add New User" button on the User Management interface. A prompt will pop up (Figure

## IV. Instructions before Use

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4-11).

Touch the user name, ID, password to enter with virtual keyboard (user name numbers and letters), and click the "OK" button to add a new user who will be shown in the user list in the order of the ID.

### 3. Changing the Password

An operator can modify their own password in the user management interface. Click "Edit" to enter the user editing interface. Click the "Edit" button in this interface and modify the password. Users can enter a new password and confirm modification, or click "Cancel" to discard the modification.

### 4. Resetting a Password

If a user enters an wrong password during login or user switching, the software will prompt for abnormal login. An administrator can click "Reset" on the user editing interface to reset or modify the password of the chosen account (Figure 4-12). Click "OK" to save the new password or click "Cancel" to discard the modification.



Administrator permissions can add, edit, and remove standard users, while standard users can only reset their own passwords.

### 5. Deleting a user

Select the user name to be deleted in the User Management interface, click "Del" and a confirmation message will pop up. Click the "OK" button to confirm the deletion (Figure 4-14), or click the "Cancel" button to cancel the deletion.

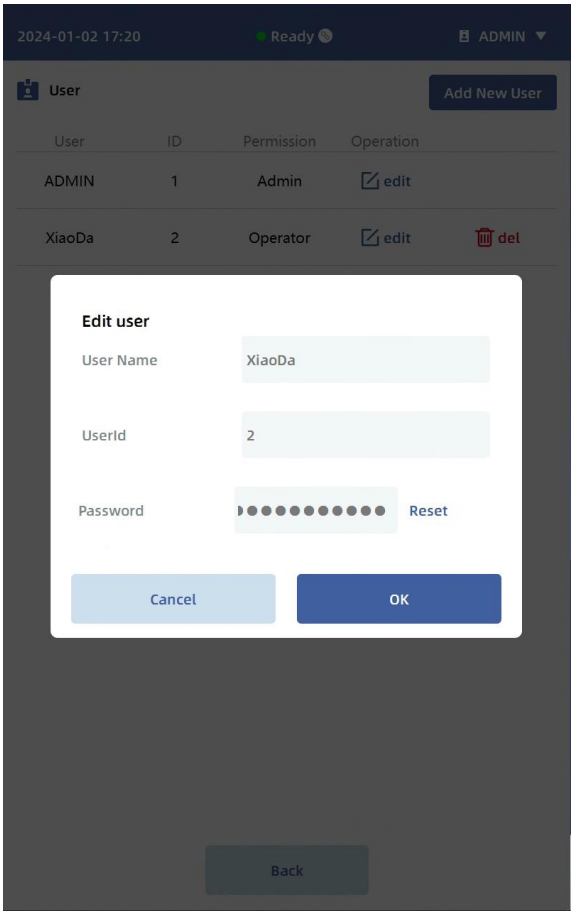


Figure 4-12 Reset Password Interface

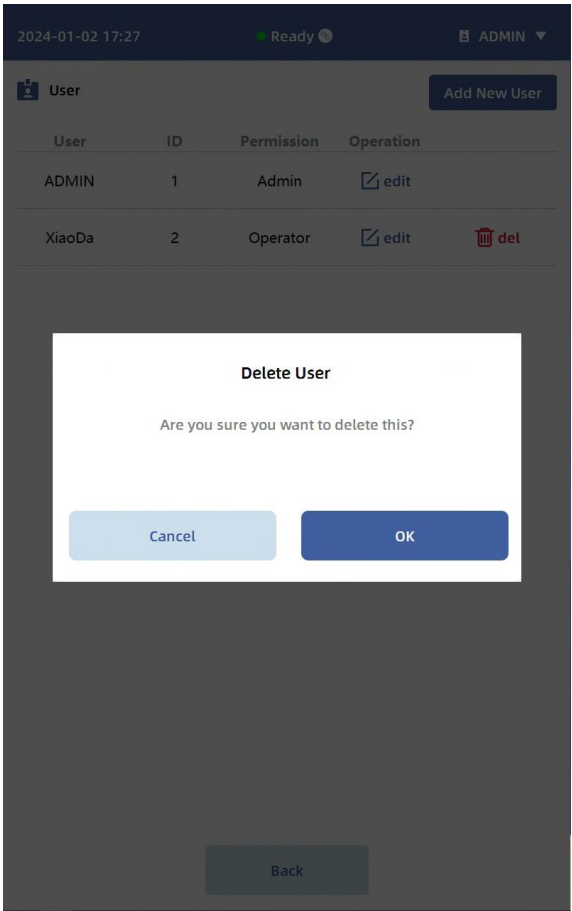


Figure 4-13 Delete Interface

(IV) Print setting

Click the "Print Settings" button on the Menu to enter the Print Settings interface (Figure 4-15) where you can conduct process settings, ID settings, template settings, color recognition configuration and channel configuration.

- "☒ " Being checked means this function is enabled;
- "☐ " Being unchecked means this function is disabled.

1. Process settings

**ID:** The object name in the print template is number, which mainly includes prefix, year, separator1, mainId, subId, section, subIdnum, suffix, date, custom1, custom2, custom3, custom4, custom5. The ID contents support numbers, English letters, Chinese characters, characters, and special characters.

**Year:** Year can be added after the prefix or before the sub ID. The year can be either two or four digits, and be entered manually.

**Separator:** To easily distinguish the data in the ID, you can set a symbol such as space, "-", between the year and the main ID or between the main ID and the sub ID.

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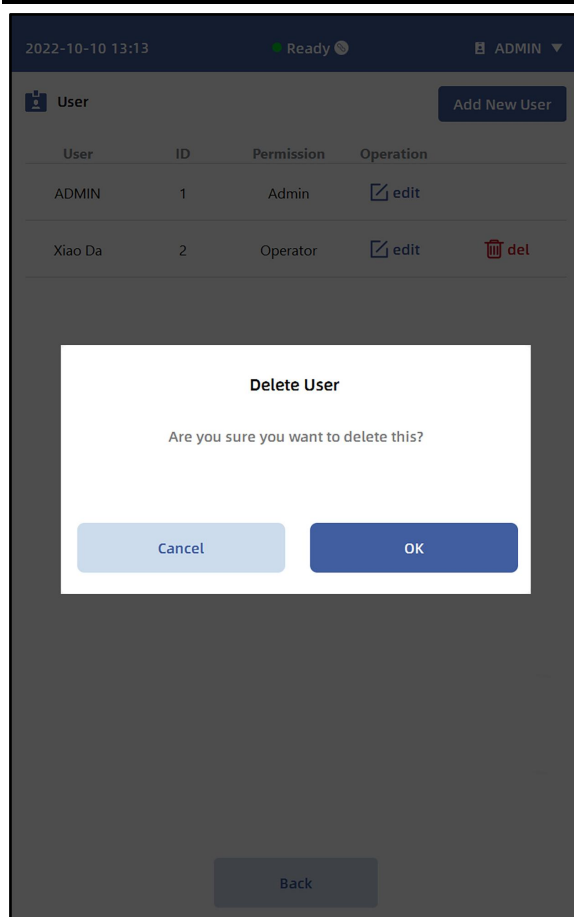


Figure 4-14 Delete User Confirmation

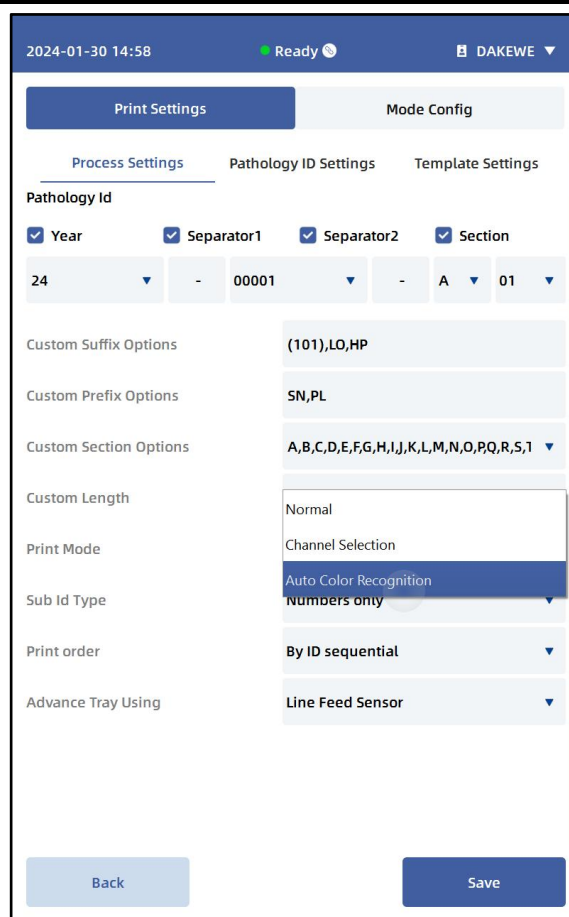


Figure 4-15 Process Setting Interface

**Main ID:** the ID number of the tissue. The main ID displayed in 1-7 digits can be preset in the drop-down . When the entered ID is less than the preset value, the system automatically add leading zeros before the main ID. For example, if the main ID set to have 5 digits, and the entered main ID is 123, the printed ID will be 00123; if the entered main ID is 123456, the printed ID will be 123456.

**Custom suffix:** This option allows you to preset suffix contents (Figure 4-17). The required suffixes can be entered in the option list in advance, separated by a half-width comma. After completing the presetting, the user can select the preset suffix content in the "Suffix" drop-down menu on the Main interface, without having to enter it again every time.

**Custom prefix:** This option allows you to preset prefix contents (Figure 4-17). The required prefixes can be entered in the option list in advance, separated with a half-width comma. After completing the presetting, the user can select the preset prefix content in the "Prefix" drop-down box on the Main interface, without having to enter it again every time.

**Custom section:** This option allows you to preset section (Figure 4-17). Two presets are provided: alphabet sequences (A-Z); number sequences (1-100). The required section name can be entered in the

option list in advance, separated with a half-width comma. After completing the presetting, the user can select the preset section content in the "Section" drop-down box on the Main interface, without having to enter it again every time.

**Custom length:** It defines string lengths of custom fields (Figure 4-17). When the data length of custom fields exceeds the custom length, the excess will not be printed.



C2022-12345-A01 Fr

No.	Items
1	Prefix=C
2	Year = 2022
3	Separator1=-
4	Main ID = 12345
5	Separator2=-
6	Section = A
7	Subidnum = 01
8	Suffix = Frozen

Figure 4-16 ID

Figure 4-17 Custom Preset

### Printing mode

The device features three printing modes, namely normal process, channel process, and auto color recognition (Figure 4-18).

**Normal mode:** It means that the turnplate runs clockwise during the printing process.

**Channel process:** It means that the turnplate runs according to the channel configuration during the printing process (see [4.5.2 Channel Process](#)).

**Auto color recognition:** It means that the turnplate runs according to the color configuration during the printing process (see [4.5.1 Color Recognition](#)).

## IV. Instructions before Use

2024-01-30 14:58 Ready DAKWE

Print Settings Mode Config

Process Settings Pathology ID Settings Template Settings

Pathology Id

☒ Year ☒ Separator1 ☒ Separator2 ☒ Section

24 - 00001 - A 01

Custom Suffix Options (101),LO,HP

Custom Prefix Options SN,PL

Custom Section Options A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,1

Custom Length Normal

Print Mode Channel Selection

Sub Id Type Numbers only

Print order By ID sequential

Advance Tray Using Line Feed Sensor

Back Save

Figure 4-18 Types of Printing Process

2024-01-31 10:49 Stop DAKWE

Print Settings Mode Config

Process Settings Pathology ID Settings Template Settings

Pathology Id

☐ Year ☐ Separator1 ☒ Separator2 ☒ Section

00001 - A 01

Custom Suffix Options (101),LO,HP

Custom Prefix Options SN,PL

Custom Section Options A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,1

Custom Length Numbers only

Print Mode Channel Selection

Sub Id Type Custom list

Sub Id Custom List A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,1

Print order By ID sequential

Advance Tray Using Line Feed Sensor

Back Save

Figure 4-19 Sub ID Type

### Sub ID type

The software system has four built-in subidnum generation types (Figure 4-19), which are number, character-number, character-character and custom list.

**Number:** It means that the subidnum is displayed in numbers, and the default value is 01, 02, 03.... In order to adapt to different input habits, the system features three subidnum styles: 1, 01, 001 (Figure 4-19).

"1" represents that the minimum digit of the subidnum is displayed with 1 digit.

"01" means that the minimum digit of the subidnum is displayed with 2 digits. When the subidnum has less than 2 digits, the system will automatically add a zero before the subidnum, such as 01, 02, 03....

"001" means that the minimum digit of the subidnum is displayed with 3 digits. When the subidnum has less than 3 digits, the system will automatically add zeros before the subidnum, such as 001, 002, 003....

**Character-Character:** It means that the subidnum is generated by character and character which are selected from 26 lowercase English letters. The first 26 subidnums are displayed with a~z, the 27th subidnum is aa, the 28th subidnum is ab... the 52nd subidnum is az, the 53rd subidnum is aaa, the 54th subidnum is aab...and so on.

**Character-Number:** It means that the subidnum is displayed with character and number, and the characters are those selected from 26 lowercase English letters. The first 26 subidnums are displayed with a~z, the 27th subidnum is a1, the 28th subidnum is b1...the 52nd subidnum is z1, the 53rd subidnum is a2, the 54th subidnum is b2...and so on.

**Custom list:** It means that Sub ID num can be generated according to preset rules.

**Sub Id custom list:** preset Sub ID content (Figure 4-19). Two presets are provided: alphabet sequences (A-Z); number sequences (1-100). The contents can be edited in the input box. separated by a comma. Once the preset is modified, it can be selected "Sub Id" drop-down box in the main interface and save time from entering manually.

### Print order

It affects the order of the print jobs. Two options are available: by ID sequential and by ID reverse (Figure 4-20).

**By ID sequential:** The print jobs will be sorted in the order of the time added to the list. The print jobs added first will be printed first. It is possible to insert print jobs in the list.

**By ID reverse:** The print jobs will be sorted in the order of the main ID. It is not possible to insert print jobs in the list when this option is selected.

The screenshot shows the 'Print Settings' interface for a device. The top bar displays the date '2024-01-30 14:58', a 'Ready' status, and the brand 'DAKEWE'. The interface is divided into 'Print Settings' and 'Mode Config' tabs. Under 'Print Settings', there are sub-tabs for 'Process Settings', 'Pathology ID Settings', and 'Template Settings'. The 'Pathology ID' section is active, showing options for 'Year' (checked), 'Separator1' (checked), 'Separator2' (checked), and 'Section' (checked). The 'Year' dropdown is set to '24', 'Separator1' to '-', 'Separator2' to '00001', and 'Section' to 'A'. Below this, 'Custom Suffix Options' is '(101),LO,HP', 'Custom Prefix Options' is 'SN,PL', 'Custom Section Options' is 'A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T', and 'Custom Length' is '5'. The 'Print Mode' is 'Channel Selection'. The 'Sub Id Type' is 'Numbers only'. The 'Print order' dropdown is open, showing 'By ID sequential' (selected) and 'By ID reverse'. The 'Advance Tray Using' dropdown is 'Line Feed Sensor'. At the bottom are 'Back' and 'Save' buttons.

Figure 4-20 Print order

The screenshot shows the 'Print Settings' interface for a device. The top bar displays the date '2024-01-31 10:48', a 'Stop' status, and the brand 'DAKEWE'. The interface is divided into 'Print Settings' and 'Mode Config' tabs. Under 'Print Settings', there are sub-tabs for 'Process Settings', 'Pathology ID Settings', and 'Template Settings'. The 'Pathology ID' section is active, showing options for 'Year' (unchecked), 'Separator1' (unchecked), 'Separator2' (checked), and 'Section' (checked). The 'Year' dropdown is set to '00001', 'Separator1' to '-', 'Separator2' to 'A', and 'Section' to '01'. Below this, 'Custom Suffix Options' is '(101),LO,HP', 'Custom Prefix Options' is 'SN,PL', 'Custom Section Options' is 'A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T', and 'Custom Length' is '5'. The 'Print Mode' is 'Channel Selection'. The 'Sub Id Type' is 'Numbers only'. The 'Print order' dropdown is 'Line Feed Sensor'. The 'Advance Tray Using' dropdown is 'Machine Counting'. The 'Cassettes Per Row' dropdown is '10'. At the bottom are 'Back' and 'Save' buttons.

Figure 4-21 Advance Tray Using (C100)

### Advance Tray Using (C100)

The device is provided with two line feed methods, namely, by activating the line feed sensor and by counting (Figure 4-21).

**Line Feed Sensor:** Line feed is automatically performed after being sensed by the sensor. When the sensor detection is valid, the tray will perform the line feed action; otherwise, it will not do so.

**Counting:** Counting by software program. The program count is based on the quantity of cassettes in the print jobs list and when the quantity of printed cassettes reaches the "Cassettes per Line", the tray will perform the line feed action.

**Cassettes per line:** It refers to the quantity of cassettes in one line of the tray, and the system defaults to 10. That is, after printing 10 cassettes, the tray will perform the line feed action. The user can set the value in the drop-down box according to the width of the cassette or the usage habits.



- Cassettes per line: It is only valid when the [Counting] function is activated. The default value of the system is 10, that is, the line feed starts when there are 10 cassettes in one line of the tray.
- When the width of the cassette is greater than 28.5 mm, it is recommended to set the Cassettes per line to 9.

### 2. ID setting

Configure the sub ID, which is displayed as numbers by default. When the ID only contains letters, they are displayed as lowercase by default.

- Reverse by sub ID: Data is printed in reverse order of Sub IDs.
- Add year after ID: The year is displayed after the main ID (Figure 4-22).
- Sub ID uppercase: For sub ID type ("Letters + Letters" or "Letters + Numbers"), sub ID is displayed in the system as lowercase English letters by default. When this function is enabled, the sub IDs are displayed as uppercase English letters.

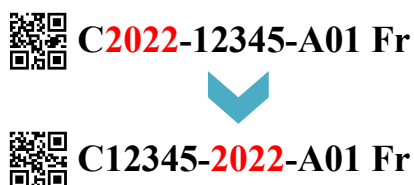


Figure 4- 22 Add Year after ID

- Hide the 1st Sub ID No.: The 1st Sub ID No. will be hidden while printing (Figure 4-23).

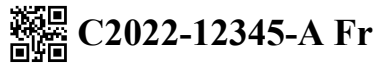


Figure 4-23 Hide the 1st Sub ID No.

- Show Separator 2 When Sub ID is Hidden: The data of separator 2 is also printed when the 1st Sub ID No. is hidden while printing. (Figure 4-24)..

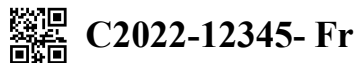
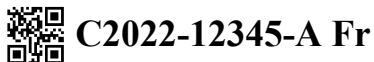
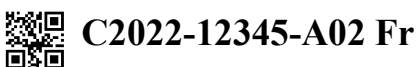
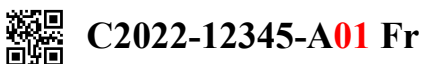


Figure 4- 24 Show Separator 2 When Sub ID is Hidden

- Hide the 1st Sub ID When Printing Single Cassette: The 1st Sub ID No. will be hidden when printing a single cassette. When the number of cassettes to be printed is more than 2, the 1st Sub ID No. will appear (Figure 4-25).



Printing single cassette



Printing multiple cassettes

Figure 4- 25 Hide Sub ID When Printing Single Cassette

- ID Increments After Adding: To improve work efficiency, the main ID will be automatically increased by one after adding an ID.
- Reset Sub ID After Adding: The Sub ID will be recovered to the default value of "1" after adding.
- Auto Print After Reset: After the device is reset, it will continue to print the data according to the print jobs list.
- Enable Custom List Cache: After the device is shut down or restarted, the software still retains the cached content in the Custom1 and Custom2 lists.
- Generate data files when printing: A file containing the print data will be generated under the preset path when the information is printed.
- Sub ID start from 0: Set "Sub Id type:" to "Numbers only" and enable this, the Sub ID added will start from 0.
- Use external collection (C100): When enabled, the "Add" button on the home page will switch to "Collect". Click the "Collect" button, and the output tray will be pushed out to a specified number of rows.

## IV. Instructions before Use

- Restrict ID Input: The limit of the digit of main ID entered on the main page.
- Use custom scan rules: When enabled, custom rules for scanning will be adapted.
- Use Custom 2 for Date: Custom 2 is preset with 5 date options containing the current time.

The screenshot shows a user interface for a DAKEWE device. At the top, there is a status bar with the date and time '2024-01-30 14:59', a 'Ready' status with a green dot, and the brand name 'DAKEWE' with a dropdown arrow. Below this is a navigation bar with two tabs: 'Print Settings' (active) and 'Mode Config'. Under 'Print Settings', there are three sub-tabs: 'Process Settings', 'Pathology ID Settings' (active), and 'Template Settings'. The 'Pathology ID Settings' section is titled 'Sub Id Settings' and contains two columns of checkboxes. The first column includes: 'Reverse By Sub Id' (unchecked), 'Sub ID Uppercase' (unchecked), 'Show Separator2 When Sub Id is Hidden' (unchecked), 'ID Increment After Adding' (checked), 'Auto Print After Reset' (checked), 'Print Immediately After Scanned' (unchecked), 'Generate data files when printing' (unchecked), 'Using custom scan rules' (unchecked), and 'Other Settings' (unchecked). The second column includes: 'Year After Id' (unchecked), 'Hide the 1st Sub Id No.' (unchecked), 'Hide the 1st Sub ID When Printing Single Cassette' (unchecked), 'Reset Sub ID After Adding' (checked), 'Enable Custom List Cache' (unchecked), 'Using external collection' (unchecked), 'Sub ID start from 0' (unchecked), and 'Restrict ID input' (unchecked). At the bottom of the settings area, there is a 'Using Custom2 For Date' checkbox (unchecked). At the very bottom of the screen, there are two buttons: 'Back' and 'Save'.

Figure 4- 26 ID Setting

### 3. Voice prompt

The SurePrint Cassette Printer provides preset voice prompts:

- (1) Add cassettes: Use voice control to add cassettes when the magazine runs out of cassettes.
- (2) Change the tray: When the tray is full of cassettes, use voice control to change the tray.

### 4. Scanning

The SurePrint C100 cassette printer device has a built-in scanner located at the upper right of the tray (Figure 4-29). The user can directly scan the barcode on the pathological examination application or specimen bag through the built-in scanner, and print the data in the barcode on the cassette. The scanning function is suitable for normal printing process, channel process and color recognition process.



Figure 4-29 the Location of the Built-in Scanner (C100)

### Decoding capability

1D: UPC-A, UPC-E, UPC-E1, EAN-13, EAN-8, ISBN/ISSN, Code 39, Code 39 (full), Code 32, Trioptic Code 39, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Codabar (NW7), Code 128, ISBT 128, Code 93, Code 11 (USD-8), MSI/Plessey, UK/Plessey, UCC/EAN 128 (GS1-128), China Post, GS1 DataBar (formerly RSS) variants;

2D: PDF417, MicroPDF417, QR Code, Micro QR Code, Data Matrix, Aztec Code, GS1 Composite.

### Enable the scanning function (C100)

The built-in scanner has a red LED indicator to automatically sense the barcode. For scanning, place the barcode on the pathological examination application or specimen bag 10 to 20 mm in front of the scanner, and align the barcode on the pathological examination application or specimen bag with the red LED indicator. The ID will be displayed in the print jobs list in the main interface after successful scanning for printing. Enable or disable the scanning function (See [4.9 Debug](#)).

For your convenience, you can configure the scanner in the "ID Settings" interface of "Print Settings" (Figure 4-30).

- Print Immediately After Scanned: Print the content immediately after scanning the code.

## IV. Instructions before Use

2024-01-30 14:59 Ready DAKWE

Print Settings Mode Config

Process Settings Pathology ID Settings Template Settings

Sub Id Settings

- ☐ Reverse By Sub Id
- ☐ Year After Id
- ☐ Sub ID Uppercase
- ☐ Hide the 1st Sub Id No.
- ☐ Show Separator2 When Sub Id is Hidden
- ☐ Hide the 1st Sub ID When Printing Single Cassette
- ☒ ID Increment After Adding
- ☒ Reset Sub ID After Adding
- ☒ Auto Print After Reset
- ☐ Enable Custom List Cache
- ☐ Print Immediately After Scanned
- ☐ Using external collection
- ☐ Generate data files when printing
- ☐ Sub ID start from 0
- ☐ Using custom scan rules
- ☐ Restrict ID input

Other Settings

- ☐ Using Custom2 For Date

Back Save

Figure 4-30 Scan Configuration

2024-01-30 14:59 Ready DAKWE

Print Settings Mode Config

Process Settings Pathology ID Settings Template Settings

QR code Template

- ☒ QR code Format Edit

Scan Data Template

- ☒ Scan Data Parse with separator Edit
- ☒ Supplementary data Modify after scanning Edit

Date Template

Date Format 2024-01-30

Print Template

Template DAKWE Edit

Driver Setting

- ☐ Enable monitor 9100
- Rotate 0

Change Pen No. by Type

Type 1 Pen No. 0 Apply

Back Save

Figure 4-31 Scan Data Template

### Scan Parser

The Scan Parser is used to convert the data in the barcode. The input data is transferred through a Scan Parser to extract part of the data and move it into the printing system. The output data is created using the Scan Parser to construct the textual data for the printing system.

Scan data parser facilitates extracting information from barcodes of different formats. Users can separate and match the contents of the barcode, and then use the concatenate function to rearrange and them to the required format. Scan data parser is available in two formats: with separators and without separators (Figure 4-31).

- Barcode without separator: It means that the position and length of the information in the barcode are consistent, but there is no sign to distinguish it.

- Barcode with separator: It means that the information in the barcode is separated by a separator and displayed regularly.

User can also add or modified the information extracted from the barcode via Supplementary data feature (Figure 4-31).

- Pre-Input: Set contents before scanning. When a barcode is scanned, the print job containing the

information in the barcode and the fields on the homepage will be directly added to the print job list.

- **Modify after scanning:** Add content after scanning. When a barcode is scanned, the information in the barcode will be extracted according to the parser and fill to the input box on the homepage, instead of being added to the print job list.



- **Scan Data Parse:** This function can be used independently to complete the entry of barcode content.
- **Supplementary data:** This is only effective when [Scan Data Parse] is enabled and the parser configuration is complete.

**Example of scanning a barcode with data without separator:**



B2022012345-A01

Scan Parser		
Start	End	Data Distribution
1	1	Prefix = B
2	5	Year = 2022
6	11	Main ID = 012345
12	12	Separator2=-
13	15	Sub ID = A01

Figure 4-33 Scan Parser



B2022-012345-A01

Figure 4-34 Data Printed

Figure 4-35 Scan Parsing Config - Correlation

**Steps for creating format of scan parser without separators:**

- (1) Tick "Scan Data Parse" (Figure 4-31).
- (2) Select "Without Separators" from the drop-down list.
- (3) Click the "Edit" button to open the Scan Parsing Config interface (Figure 4-35).
- (4) Tick "Concatenate";

## IV. Instructions before Use

**Concatenate:** When the data in the barcode cannot meet the printing requirements, you can add fixed data through the Concatenate function or rearrange the existing data.

For example, you can add a fixed separator 2 between the year and the main ID when concatenating.

(5) Set the Correlation (Figure 4-35) according to the scan parser (Figure 4-33); allocate the data in the scan parser according to the existing rules.

(6) Click the "Save" button to create the scan parser.

### An example of scanning a barcode with data with separators:



H\$22-18634\$B02

Scan Parser	
Separator	-
Separator 2	\$
Position	Data Distribution
1	Prefix = H
2	Year = 22
3	Main ID = 18634
4	Sub ID = B02
-	Special = -

Figure 4-36 Scan Parser



H2218634-B02

Figure 4-37 Print result

Figure 4-38 Scan Parsing Config - Correlation

### Create a scan parser format with separators:

(1) In "Print settings", tick "Scan Data Parse" and select "With Separators" from the drop-down list (Figure 4-31);

(2) Click "Edit" to enter scan content configuration (Figure 4-38);

(3) Tick "Concatenate", and add fixed special characters before the subId through the concatenation function;

(4) Set the Correlation (Figure 4-38) according to the scan parser (Figure 4-36); allocate the data in the scan parser according to the existing rules;

(5) Click the "Save" button to complete the creation of the scan parser;

(6) The print result is as shown in Figure 4-37.

## 5. Template settings

### QRcode template

In order to apply the data traceability system and the slide data printing function, the software system is equipped with QR code Template function. You can add, edit, and modify the printed barcode by editing the QRcode format.

**Example of data printed by the printing system:**

**B2022-012345-A01**

QRcode Format Converter	
S/N	Data Distribution
1	Separator = \$
2	Prefix = B
3	Main ID = 2022-012345
4	Sub ID = A01

Figure 4- 39 QRcode Format Converter

### Steps for creating output data for barcode:

(1) Tick "QRcode Format" (Figure 4-41).

(2) Click the "Edit" button to open the QR Code Format Config interface.

(3) Set the Correlation (Figure 4-41) according to the QR code format converter (Figure 4-39). If you need to add fixed data, you can enter the data in the Custom 1, Custom 2, and Special input boxes.

The data in the QR code format converter is allocated by the user according to the existing rules.

(4) Select objects from the drop-down list to order.

Concatenate rules: When the data in the barcode cannot meet the printing requirements, you can add fixed data through the Concatenate function or rearrange the existing data.

(5) Complete the creation of the barcode format by clicking the "Apply" button.

(6) The data printed by the printing system is shown in Figure 4-40.

## IV. Instructions before Use

Example of output data for creating a barcode to be printed:



*B\$2022-012345\$A01*

Figure 4- 40 Barcode Display Example

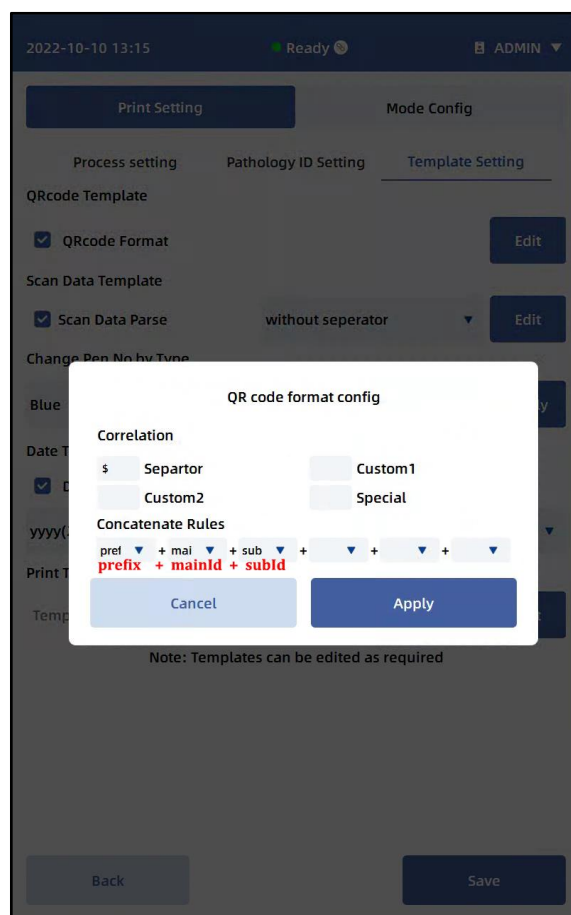


Figure 4- 41 QR Code Setting Interface

### Change pen No. by type

In order to improve the printing effect of different types or different colors of cassettes, the pen number will be configured in the software system. You can set the corresponding pen number in the template, and the laser will mark according to the parameters of corresponding pen number during printing. This function is only applicable to the channel process or the color recognition process.

## Date Template

The software system provides the Date Template Setting for displaying the format of the date to be printed in different regions. You can adjust the date format to be printed by changing the date format. After completing the date setting, printing will be performed according to the updated date format.

## Print Template

The software system is configured with two print templates by default: DAKWE and DAKWE1. When the default printing template of the device cannot meet the printing requirements, you can log in to the administrator account to enter the template editing interface and perform visual operations such as printing effect debugging, template object editing, and object position adjustment of existing templates.



The name of common objects in the print templates must be kept consistent with that of provided objects. You must not change the name.

Prerequisites for setting QR code Template and Date Template: There should be a QR code and date objects in the print template.

2024-01-30 14:59 Ready DAKWE

**Print Settings** Mode Config

Process Settings Pathology ID Settings Template Settings

**QR code Template**

☒ QR code Format Edit

**Scan Data Template**

☒ Scan Data Parse with separator Edit

☒ Supplementary data Modify after scanning

**Date Template**

Date Format 2024-01-30

**Print Template**

Template DAKWE Edit

**Driver Setting**

☐ Enable monitor 9100

Rotate 0

**Change Pen No. by Type**

Type 1 Pen No. 0 Apply













Back Save

Figure 4-42 Template Setting Interface

### Template editor

In order to adapt to the common needs of inconsistent pathology number information and diversified printing styles used in different regions, the software has embedded visual template editing function. This function has a simple and easy-to-use interface (Figure 4-43), and fundamental template edition can be achieved by editing directly on this interface.

The commonly used buttons:

Button	Function Description
	Delete selected objects in the list
	Edit the properties of the selected object, including fill type, line spacing, and margin
	Add objects, including object types, object names, and preset content
	Minimize the template preview
	Expand the template preview
	Display the print content border
	Hide the print content border
	Rotate the object counterclockwise
	Flip the object vertically
	Flip the object horizontally
	Increase font size of the object
	Reduce font size of the object

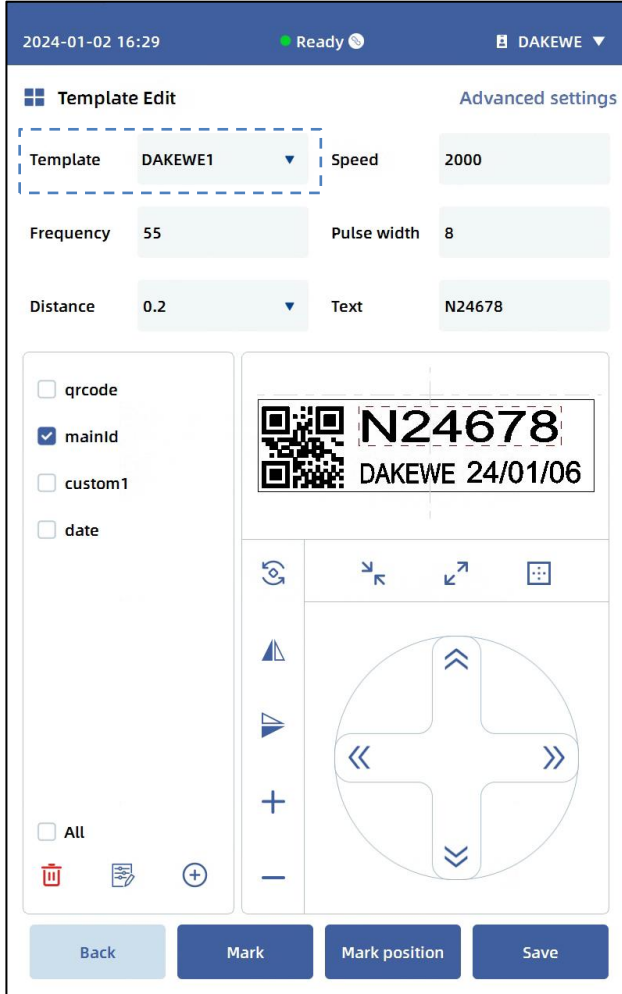


Figure 4-43 Template editor

- Configuration**

The template preview area has a two-dimensional orientation map displaying the real time preview of the template chosen in the print parameters.

- Objects preview**

The text input box above the template preview area is the object preview editor. For example, the preview content of mainId can be edited by following these steps:

Step 1: Select the “mainId” object in the object list on the left;

Step 2: Enter "N24678" in the "text" box and click "Save".

- Print parameter settings

To accommodate different materials, cassettes color, and special content printing effects, the laser print frequency, pulse width, and speed in the template editor can be configured to achieve satisfying print outcome.

Different templates can set different parameter values. In the case when separated parameters must be allocated to various objects in one templates, please go to "Advanced Settings".

- Marking

To estimate the actual print position, place a cassette on the slideway and click the "Mark position" button in the template editor. After confirming the print position, click the "Mark" button on the interface to mark on the cassette.

### **Edit objects in the template**

- Add an object

In order to meet the needs of inconsistent pathology number information used in different regions, the template editor provides the function of adding objects. Click the "+" button on the template editing interface to enter the Add Object interface (Figure 4-44) and complete the filling in the content of the added object.

The parameters on adding objects page include object type, object name, and preview content.

Object type: object type can be either text or barcodes, selecting from the drop-down menu according to the needs.

Object Name: An object name is bond to one object type. Object name can be created. In the case if a entered name is existed, a prompt "Object name already exists." will appear.

Common object names of "text" type: number, mainId, subId, prefix, suffix, date, subIdnum, section, custom1, custom2, custom3, custom4, custom5 (for the explanation of object names, see [4.4.1 Process Settings](#))

Common barcode type: QR Code, Data Matrix, Code 128A.

Preview content: Texts entered in this box will be displayed in preview Default preview text is "12345678".

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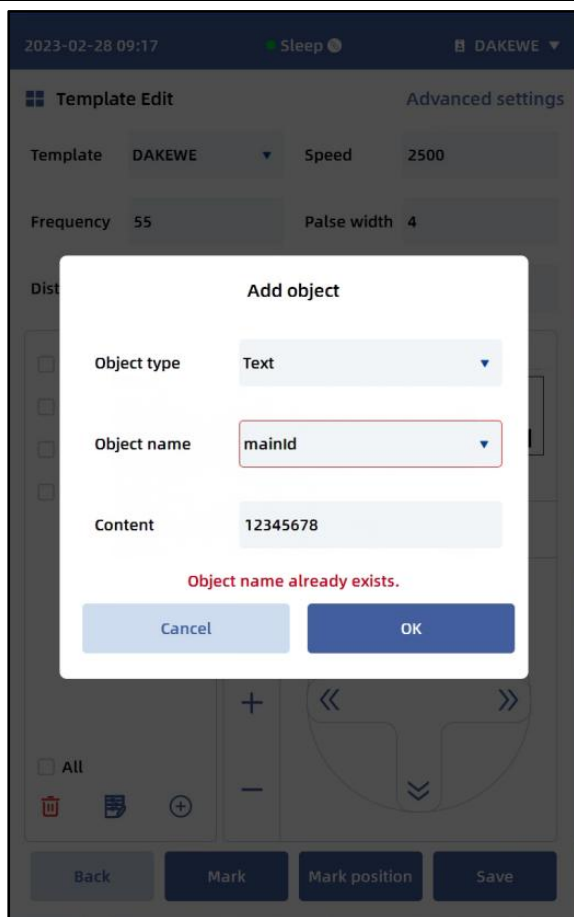


Figure 4-44 Add an object

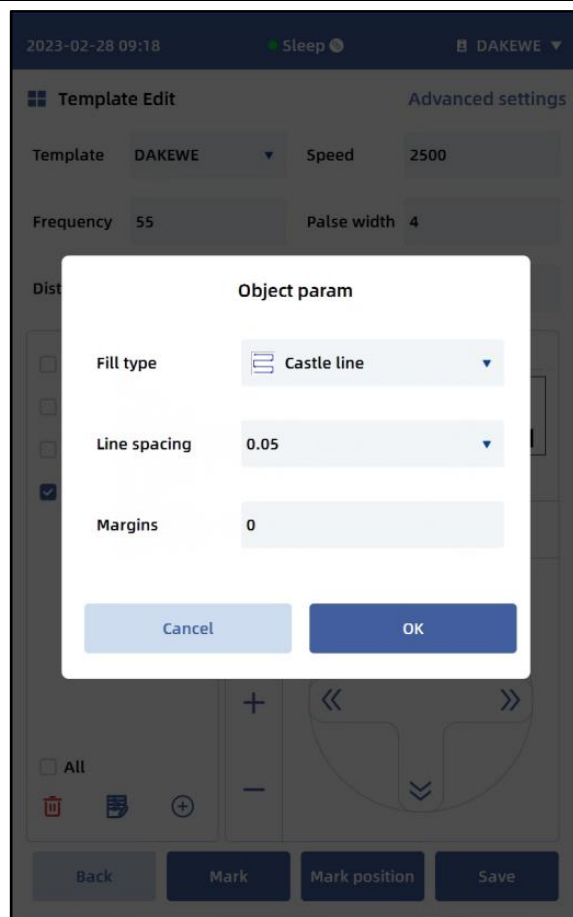


Figure 4- 45 Object param

- Modify the object name

Double-click the object name in the list to modify the object name.

- Delete the object

Check the objects to be deleted in the list and click the "🗑️" button to delete them.

- Fill settings

In order to meet the printing effect needs of different objects, the template editor provides the function of setting object properties. To modify the fill parameters, select the object that needs to be modified, click the "📄" button below, enter the object param interface (Figure 4-45). Editable properties include fill type, line spacing, and margins. For more object property settings, go to “Advanced Settings”.

**Fill Type:** The default fill type is “castle line”. Select other fill types from the drop-down list: Multi line single direction, Multi line back & forth, Spiral inwards, Castle line and Optimized castle line. Fill types affect printing results:

**Multi line single direction:** The pattern is filled from left to right.

**Multi line back & forth:** The pattern is filled first from left to right, then filled from right to left, and

the rest is filled in cycles.

Spiral inwards: The pattern is cycled inward from the outer outline of the object to offset the fill.

Castle line: Similar to a back-and-forth fill, but with connecting lines between the ends of the fill lines.

Optimized castle line: Similar to a castle line fill, the fill still jumps over where the object is empty.

Line spacing: The darkness of the printed pattern increases as the line spacing decreases. The default value of the line spacing 0.05 and the value range is [0.02, 0.2].

Margins: The thickness of the printed pattern line increases as the margin decreases. The default margin is 0 and the value range is [-0.4, 0.4].

### **Object position adjustment**



- Object position movement

The position of the objects in the list can be adjusted using the arrow keys.

- Step distance

The distance of a step of movement can be changed to achieve desired position adjustment. The default distance is 1.0 and the presets in the drop-down menu are: 0.1, 0.2, 0.5, 1.0, 2.0, 3.0.


- Template preview size


Click the " " and " " buttons to expand or minimize the preview display of the template (the font size of the objects will not change accordingly).

- Object vertical and horizontal mirroring

The template editor is configured with vertical and horizontal mirroring of the objects. For example, the whole template can be flipped 180° both vertically and horizontally by following these steps:

Step 1: Click the "All" button in the object list on the left to select all objects in the template;

Step 2: Click the " " button to flip all the objects along the vertical axis and the result is shown synchronously in the template preview;

Step 3: Click the " " button to flip all the objects along the horizontal axis and the result is shown synchronously in the template preview.

### (V) Mode Config

#### 1. Color recognition (C100)

To facilitate the printing of cassettes in multiple colors, you can use the Auto Color Recognition System. The system determines the color of the cassette by identifying the RGB values of that color on the surface of the cassette, where the error range of the RGB color value is within 10 by default. You can print the corresponding data for different colored cassettes through the mode config. For example, white cassettes, blue cassettes, yellow cassettes, and red cassettes can be used respectively for normal tissue, frozen section, supplemented tissue, and urgent section.

**Enable the color recognition function, and set the Color Config with the following 6 steps:**

- (1) Select the Print Mode: Auto Color Recognition (Figure 4-47. See [4.5.1 Process Setting - Print Process](#)).
- (2) Add the name of required tissues in order in the tissue type list, such as: normal, frozen, urgent, and supplemented (Figure 4-48).
- (3) Add the color of the cassettes in order in the cassette color list, such as: white, blue, yellow, and red (Figure 4-48).

The screenshot shows the 'Mode Config' interface. The 'Print Settings' tab is active. Under 'Process Settings', the 'Print Mode' dropdown menu is open, displaying options: 'Normal', 'Channel Selection', 'Auto Color Recognition' (highlighted), and 'Numbers only'. Other visible settings include 'Pathology ID' (Year: 24, Separator1: -, Separator2: 00001, Section: A, 01), 'Custom Suffix Options' ((101),LO,HP), 'Custom Prefix Options' (SN,PL), 'Custom Section Options' (A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,1), 'Custom Length' (Normal), 'Print order' (By ID sequential), and 'Advance Tray Using' (Line Feed Sensor). 'Back' and 'Save' buttons are at the bottom.

Figure 4-47 Auto Color Recognition (C100)

The screenshot shows the 'Color Config' tab within 'Mode Config'. It features two main sections: 'Tissue List' and 'Color List/Channel List'. The 'Tissue List' section has an input field 'Enter tissue name' with an 'Add' button, and checkboxes for 'normal', 'frozen', 'urgent', and 'supplemented'. Below these are 'All' and 'Delete' buttons. The 'Color List/Channel List' section has an input field 'Enter channel/color' with an 'Add' button, and checkboxes for 'Blue', 'Yellow', 'Red', and 'White'. It also includes 'All' and 'Delete' buttons. 'Back' and 'Save' buttons are at the bottom.

Figure 4-48 Add Tissue/Color

(4) Select the "Correlation" interface, and then select the name of the tissue and the color of the cassette in the Correlation for setting. To ensure the accuracy of color recognition, white cassettes must be loaded in the magazine.

The same tissue name cannot be set for the correlation of multiple colors, and the same color can be set for the correlation of multiple tissues. Click the "Save" button after setting (Figure 4-49).

(5) Assign a corresponding color to each channel in the "Color Config" interface, and click the "Save" button. The Auto Color Recognition System is calibrated against white, and channel 1 must be assigned white (Figure 4-50).

Then, load the cassettes of corresponding color in the organizer tray on the turnplate according to the colors assigned by the channels, and there should be no less than 5 cassettes in each magazine.

(6) Click the "Collect" button, the Auto Color Recognition System will automatically collect the colors of cassettes. The automatic collection procedure takes about 20 seconds. After automatic collection is completed, the system will give a voice notification that the collection is over.

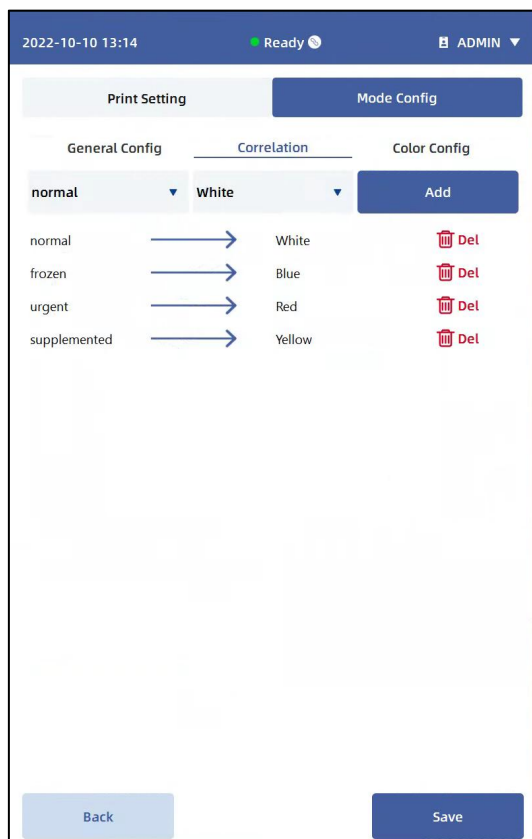


Figure 4-49 Setting the Correlation (C100)

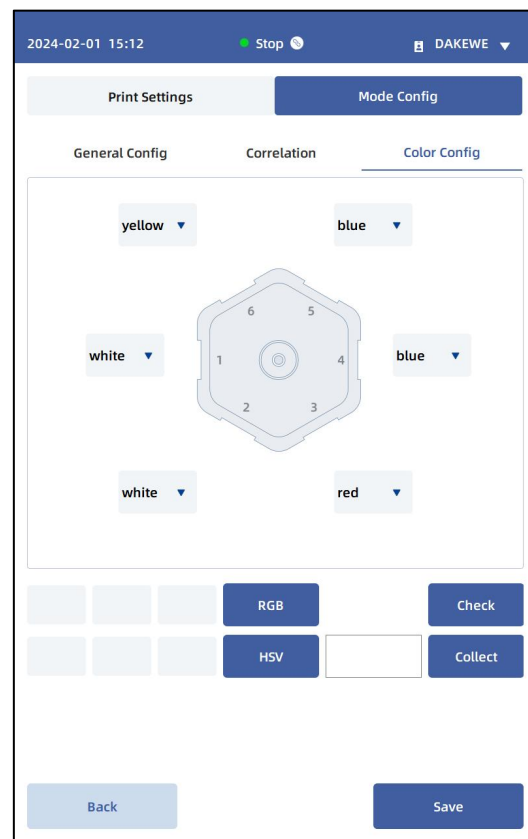


Figure 4-50 Channel Configuration and Color Calibration (C100)



- The color recognition system is greatly affected by environmental factors, and the Auto Color Recognition System needs to be reconfigured when the operating environment changes.
- Correlation: An organization name can correspond to only one cassette color, and a cassette color can correspond to multiple organization names.

### 2. Channel selection

To facilitate the printing of different types of cassettes, you can use the channel selection for printing. The system prints the data according to the channel identification of the turnplate. You can set the channel configuration to print corresponding data for channels of different types of cassettes. For example, channel 1 and 2 are used to print on the cassettes used to contain normal tissue, channel 3 and 4 are used to print the data on the cassettes used to contain frozen tissue, and channel 5 and 6 are used to print the data on the cassettes used to contain urgent tasks.

Figure 4- 51 Add Tissues/Channels

Figure 4- 52 Correlation



- The channel numbers are fixed values (1, 2, 3, 4, 5, 6) and cannot be changed.
- No color config is required for channel selection.
- After channel configuration, please confirm the print mode again: channel process.

**Enable the channel selection with the following 5 steps:**

- (1) Select "Menu" - "Print Settings" - "Mode Config" on the home page to open the Mode Config interface;
- (2) Add the name of required tissues in order in the tissue list, such as: normal, frozen, and urgent (Figure 4-51).
- (3) Add the channel numbers in order in the Channel List: 1, 2, 3, 4, 5, 6. The channel number is a fixed value so it cannot be changed (Figure 4-52).
- (4) Select the "Correlation" interface, and select the tissue name and the channel number in the Correlation for setting. Then, click the "Save" button (Figure 4-52).
- (5) Select the Print process: channel process (See [4.4.1 Process Setting - Print Mode](#)).

## (VI) Setting

Click "Setting" in the Menu interface to open the Setting interface (Figure 4-53). The setting module allows the user to perform basic settings on language, font size, date format, screen timeout, volume, etc.

**Language:** switch between languages of the software system. Select the corresponding language in the drop-down list, and click "Save". The language is switched after the system restarts.

**Font size:** set the font size of the software system. Select the corresponding font size in the drop-down list, and click "Save". The font size is switched after the system restarts.

**Screen timeout:** If you stop operating on the display when the power is on, the screen will be locked after a period of time. Enter the value in the input box and click "Save". The number "0" means the screen will not be locked.

**Laser timeout:** If there is no printing task, the laser will enter the sleep state after the above time.

**Laser unit fan mode:** It is divided into manual mode and auto mode. In the manual mode, the fan runs at the minimum wind speed. In the auto mode, the automatic speed adjustment function is enabled, and three-gear temperatures are controlled with the corresponding wind speed.

**Clean day:** To ensure the cleanliness of the device and a good operating environment, the software system is configured with a cleaning reminder. The cleaning cycle is calculated in weeks. After selecting

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the corresponding date in the drop-down list, the software system will give a prompt for cleaning when the software is started for the first time on that day.

**Virtual keyboard:** It refers to the touch keyboard, which can be enabled/disabled.

**ID Type:** It allows to enter main ID containing either characters + number or only number.

**Add virtual keyboard:** It refers to the addition of a touch keyboard to the original virtual keyboard, which currently supports Chinese Traditional, Thai, Korean, and Turkish.

**Date format:** It refers to the format of the system date displayed in the upper left corner of the interface.

**Local IP:** Switch the online IP address of the device. When the device is connected to multiple network cards, select the IP address of the PC software connected to the drop-down box, click "Save", and the online address switch can be completed after the system restarts.

**Volume:** Drag the slider left or right to adjust the volume.

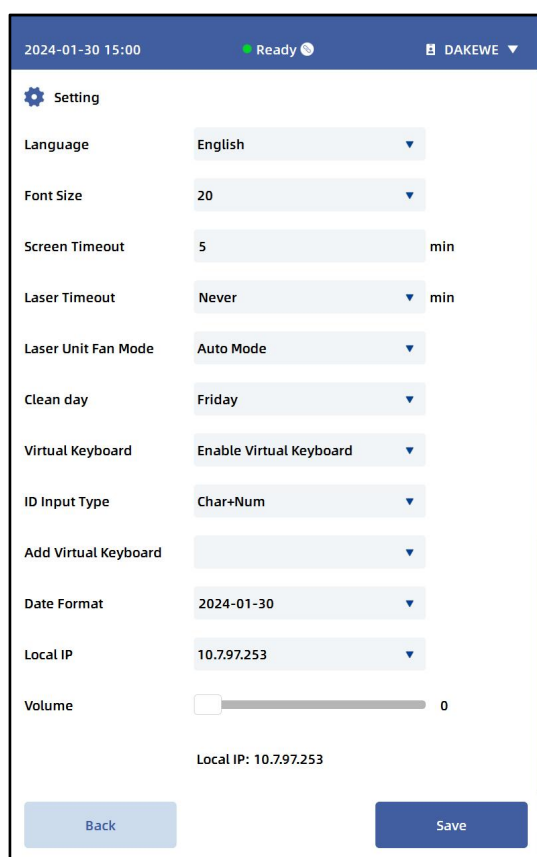


Figure 4-53 Software Setting Interface

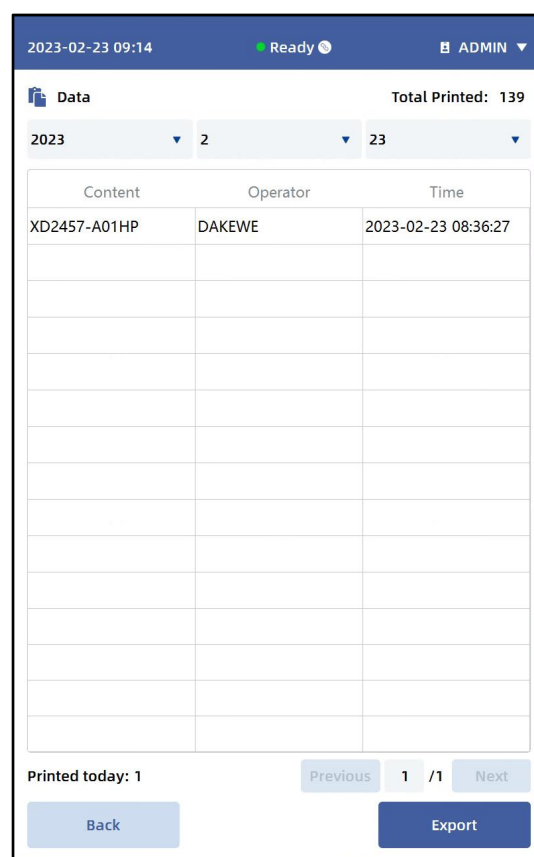


Figure 4-54 Data

## (VII) Data Management

Click the "Data" button in the Menu interface to open the data management module (Figure 4-54). In

the data management interface, you can view the total printing quantity of the device, the printing quantity of a day, and search the printing records of a day by the date. A printing record mainly includes the enter content, operator, and date. Fifteen records are displayed in a list per page.

To manage printing records, insert a USB flash drive into the USB interface of the device to export records. The exported records will be stored in a USB flash drive as a .xlsx file.

### (VIII) Help Interface

Click "Help" in the Menu interface to open the Help interface. The Help interface mainly consists of three parts:

**FAQ:** a reserved interface, which is under development.

**User guide:** You can get simple operating instructions of the SurePrint Cassette Printer through the user guide.

**More:** You can scan the QR code in the interface to log in to Dakewe pathology equipment system to learn more about the use of the device.

### (IX) Debug

Click "Debug" in the Menu interface to open the Debug interface (Figure 4-56). You can reset various motion components of the device, enable and disable the scanning function and tray light, and restore and back up the current user data.

**Turnplate:** Click the button to reset the turnplate assembly. [See 3.2 Device Overview](#) for the position of the turnplate.

**Transfer:** Click the button to reset the transfer push block assembly. [See 3.2 Device Overview](#) for the position of the transfer push block.

**Pushrod:** Click the button to reset the output push block assembly. [See 3.2 Device Overview](#) for the position of the output push block.

**Device:** Click the button to reset the various motion components of the equipment.

**Scanner enable/disable (C100):** Scanning function on/off button. Click Scanner Enable to enable the scanning function; otherwise, disable the scanning function ([see 4.4.4 Scanning Function](#)).

**Tray (C100):** Click the button to reset the tray components. [See 3.2 Device Overview](#) for the position of the tray.

**Tray light enable/disable:** Tray light on/off button. You can click the button in the "Tray Light Disable"

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state, the tray light will be turned on; otherwise, the tray light will be turned off. [See 3.2 Device Overview](#) for the position of the tray light.

Backup management: Click the "Backup Management" button to enter the backup management interface (Figure 4-56). Users can backup and restore the current user's data, and export system logs.

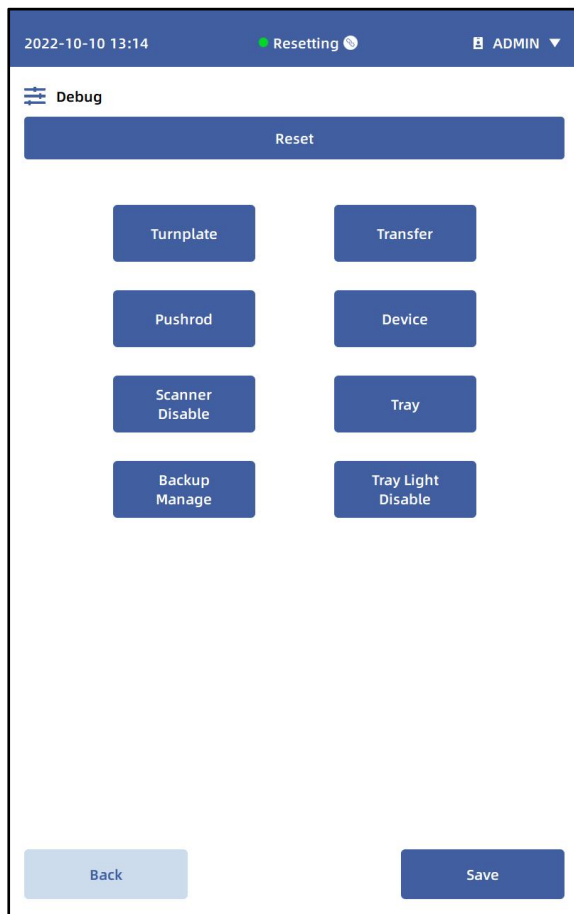


Figure 4-55 Debug interface

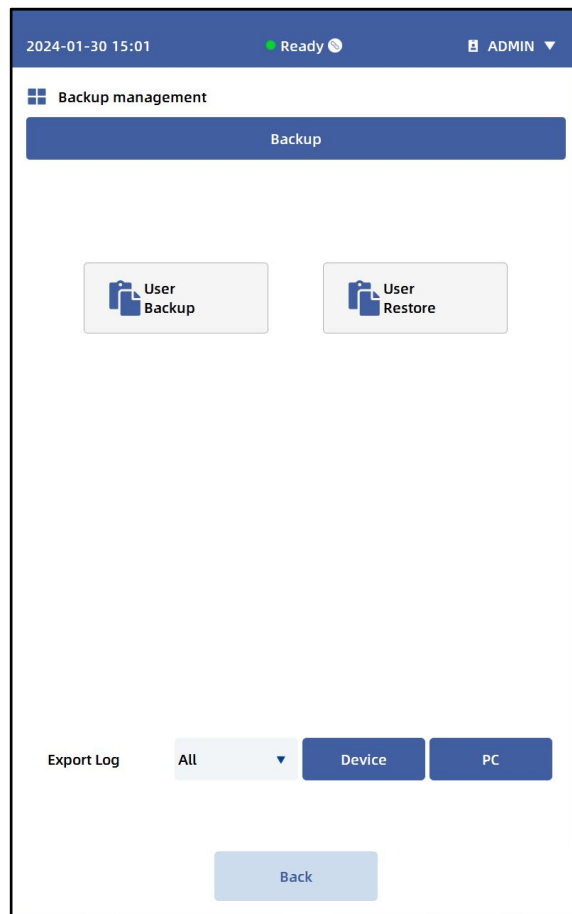


Figure 4-56 Backup Management Interface

## V. Computer Software

### (I) Software Running Requirements

Make sure that there is enough space on the hard drive for installation. The installation of the computer software requires at least 500 M space available on the hard drive. However, the remaining space on the drive should preferably be greater than 1 GB for the smooth operation of the program.

For stable performance, use only the matching software on the printer and the PC, of which version are the same.

Operating systems compatible with the software:

Windows 7, Windows 10, Windows 11, Linux and macOS.

Operating systems incompatible with the software: Windows XP.

### (II) Network Interface Connection

Insert one end of the network cable into the top Ethernet port of the device, and connect the other end to the USB adapter to the host computer (Figure 5-1). When the indicator of the Ethernet port of the device turns solid yellow, it means that the network is connected.

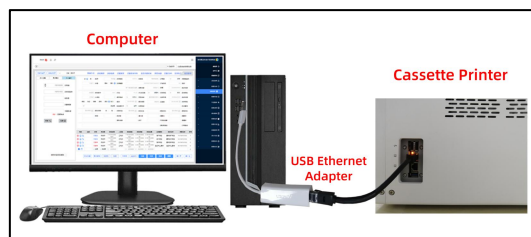


Figure 5-1 Network Cable Connection

### (III) IP Address Settings

After the network is connected, it is necessary to set the IP address of the device and the computer for data communication.

#### 1. Setting the IP address on the device

Set the device IP address in the properties window of Internet Protocol Version 4 (TCP/IPv4):

Step 1: Click the network icon ① in the taskbar of the device, and select "Network and Internet Settings" ② (Figure 5-2);

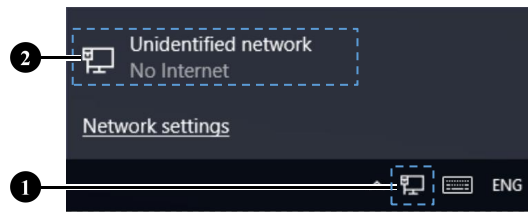


Figure 5-2 Network and Internet Settings

Step 2: In the "Network Status" window (Figure 5-3), select "Change Adapter Options" in the advanced network settings;

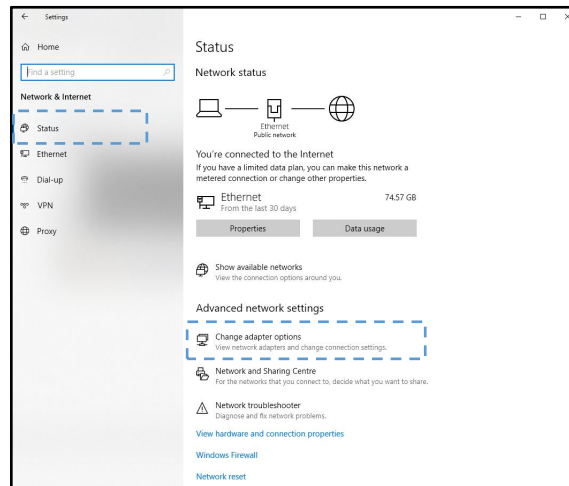


Figure 5-3 Network Status

Step 3: Select the connected network in the "Network Connection" window (Figure 5-4);

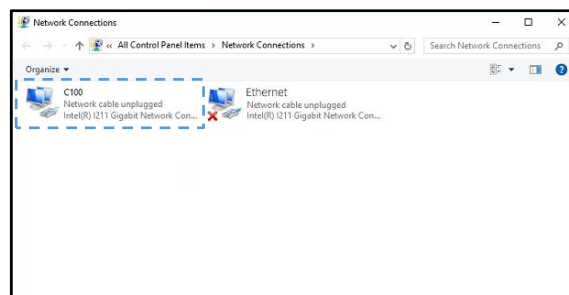


Figure 5-4 Network Connection

Step 4: Select "Properties" by right-clicking on the selected network icon (or double-click the network icon), open the "Ethernet Properties" window (Figure 5-5), select "Internet Protocol Version 4 (TCP/IPv4)", and then click the "Properties" button;

Step 5: In the "Internet Protocol Version 4 (TCP/IPv4) Properties" window (Figure 5-6), select "Use the following IP address";

Step 6: Enter the IP address data in the corresponding input box, such as:

IP address: 192.168.113.19

Subnet mask: 255.255.255.0

Default gateway: 192.168.113.1

After entering the IP address data, click the "OK" button. The IP address data can be changed according to the actual need, but it must be ensured that the IP address of the device and the computer are in the same network segment.

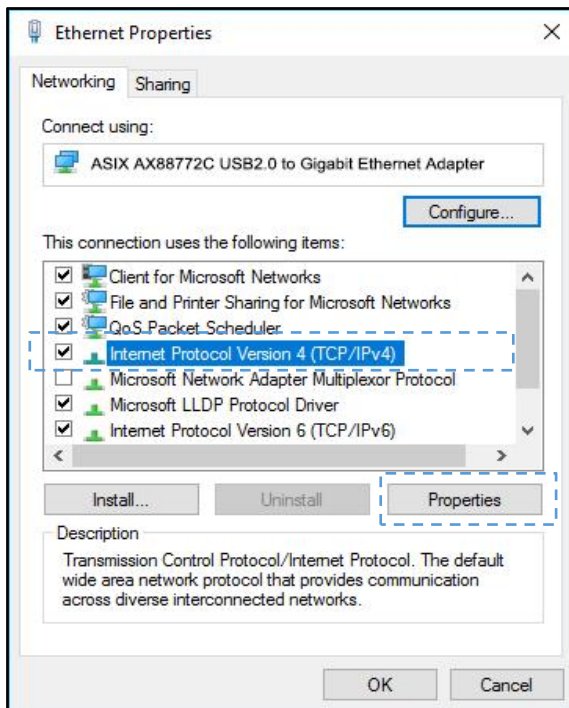


Figure 5-5 Ethernet Properties

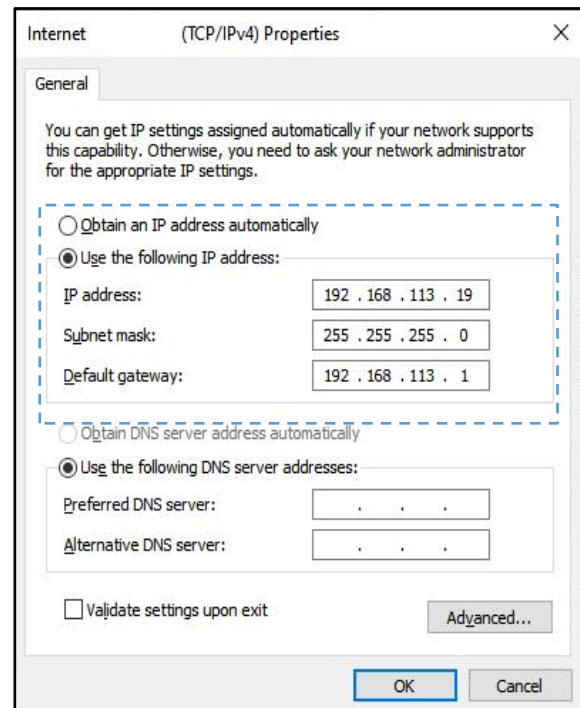


Figure 5-6 Internet Protocol Version 4 (TCP/IPv4) Properties

## 2. Setting the IP address on your computer

Set the device IP address in the properties window of Internet Protocol Version 4 (TCP/IPv4):

Step 1: Click the network icon ① in the taskbar of the device, and select "Network and Internet Settings" ② (Figure 5-7);

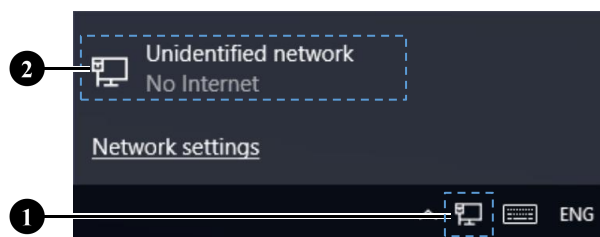


Figure 5-7 Network and Internet Settings

Step 2: In the "Network Status" window (Figure 5-8), select "Change Adapter Options" in the advanced network settings;

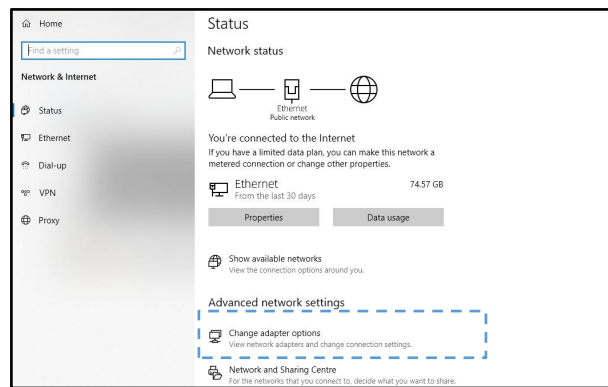


Figure 5-8 Network Status

Step 3: Select the "...AX88772C..." network in the "Network Connection" window (Figure 5-9);

Note: AX88772C\_Win... is the name of the USB Ethernet Adapter Driver, and the name will be displayed only when it is used. Before setting "Ethernet Properties", it should be confirmed that the network is the same network that the device is connected to .

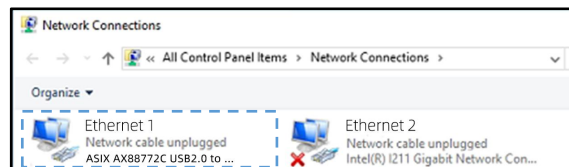


Figure 5-9 Network Connection

Step 4: Select "Properties" by right-clicking on the selected network icon (or double-click the network icon), open the "Ethernet Properties" window (Figure 5-10), select "Internet Protocol Version 4 (TCP/IPv4)", and then click the "Properties" button;

Step 5: In the "Internet Protocol Version 4 (TCP/IPv4) Properties" window (Figure 5-11), select "Use the following IP address";

Step 6: Enter the IP address data in the corresponding input box, such as:

IP address: 192.168.113.45 Subnet mask: 255.255.255.0 Default gateway: 192.168.113.1

After entering the IP address data, click the "OK" button. The IP address data can be changed according to the actual need, but it must be ensured that the IP address of the device and the computer are in the same network segment.

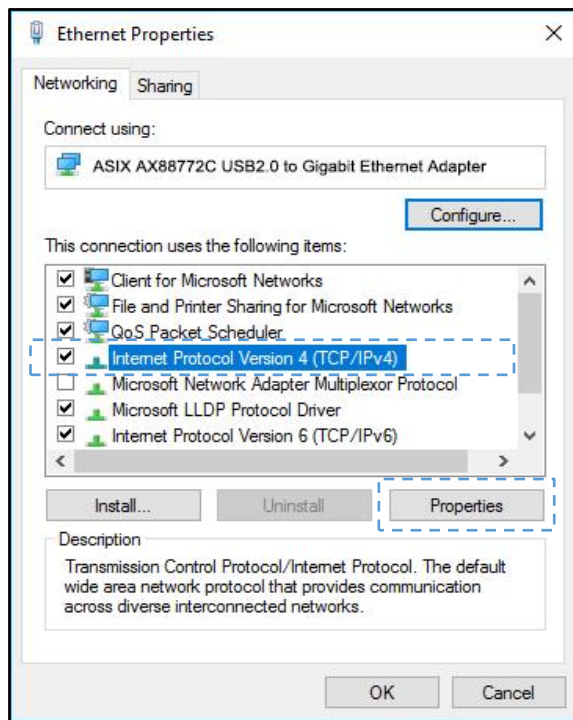


Figure 5-10 Ethernet Properties

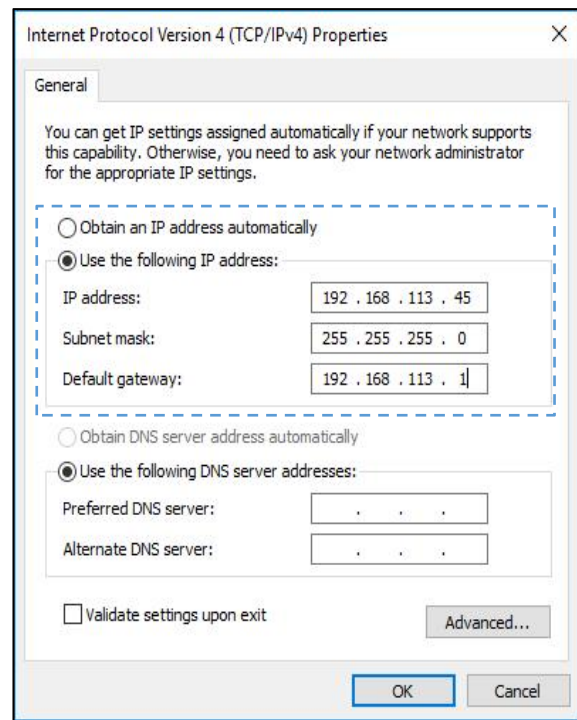


Figure 5-11 Internet Protocol Version 4 (TCP/IPv4) Properties

#### (IV) Home

The main interface of the software system on the computer includes four parts (Figure 5-12): menu bar, print settings, printing preview, and print jobs list.

If "☑" is selected, it means that this function is enabled, and the content of the input box behind this option is printed;

If "☐" is not selected, it means that this function is not enabled, and the content of the input box behind this option is not printed.

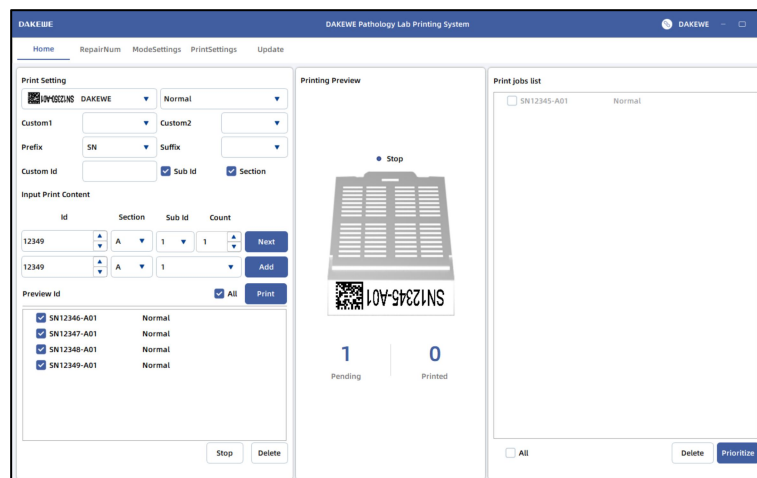


Figure 5-12 Computer Software - Home Page

### 1. Menu bar

It is located at the top of the main interface to switch various sub-interfaces, connect identifiers, self-adaptation and exit computer software.

Connect identifier:



White background indicates normal connection



Red background indicates abnormal connection

Software self-adaptation: When you click "□" on the right side of the menu bar, the window is displayed in full screen. When you click "-", the window is minimized. When the software system begins running when the computer first starts up, the window is minimized by default.

Exit from the software system: Click "×" to exit.

### 2. Print settings

The print settings is located on the left side of the main interface. It is the main section to realize the printing function. The main functions include: select template, set ID/Sub ID, set custom ID, add list, clear list, prioritize print, stop, pause, and print (see 4.1 Main Interface Description).

### 3. Printing preview

Located in the middle of the main interface, it displays the running status information of the device, the current pathology number and template print preview, the number of pathological numbers that have been printed and the number to be printed at the time of the last operation. If you need to rotate 180° to view the template preview, you can check the "Rotate Preview Pixmap" in the home menu bar - Print Settings (Figure 5-15). While the device is printing, the dynamic embedding box on the print preview interface displays the pathology number information being printed in real time.

### 4. Print jobs list

It is located on the right side of the Main interface. It displays the IDs to be printed in the form of a list. You can edit the print list, such as: prioritize print, and delete any ID.

**Prioritize:** Select the IDs that needs to be printed first, and click the "Prioritize" button below the print jobs list. Then, the IDs will be prioritized in the queue.

**Delete:** You can select the IDs to be deleted, and then click the "Delete" button below the print jobs list to delete the IDs.

## (V) Reprinting

To improve work efficiency and adapt to different scenarios, you can reprint or print multiple copies by searching the printed data. In the menu bar of the Main interface, click the RepairNum to open the Reprint interface (Figure 5-13). The Reprint function can reduce the time for continuing to enter data and allow the printed data to be viewed.

### Steps for reprinting:

(1) In the menu bar of the Main interface, click "RepairNum" to open the Reprint interface (Figure 5-13).

(2) Enter the printed data in the search input box.

(3) Select the data to be reprinted in the print jobs list, such as 2022-12345.

(4) Click the "Add" button to add repeat data.

(5) Enter the value in the input box after "Batch add subnum", and then click the "Batch add subnum" button to add data in batches according to the order of the sub IDs;

For example: enter the value 4, click the Add button to add the data of A02–A05.

(6) Select the newly added data and click the "Delete" button to delete the information.

(7) Click the "Print" button to start printing the added data.

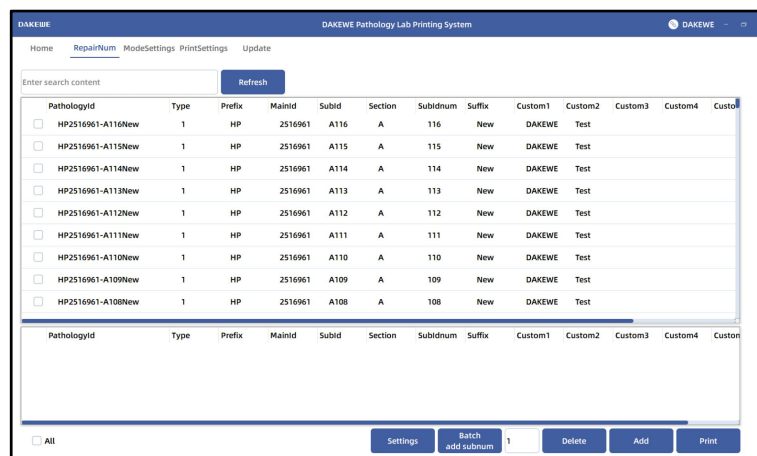


Figure 5-13 Computer Software - Reprint Interface

## (VI) Process settings

Select "Mode Config" in the menu bar of the main interface, click it to open the Process Setting interface (Figure 5-14), which can be used for channel process configuration (See [4.5.2 Channel Process](#)) and color config (See [4.5.1 Color Recognition](#)).

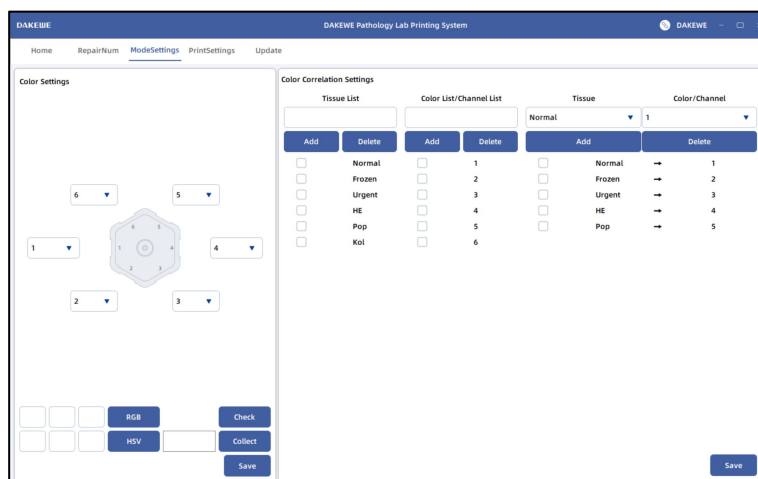


Figure 5-14 Software System on the Computer - Print Setting Interface

## (VII) Print settings

In the menu bar of the Main interface, click "Print Setting" to open the Print Setting interface (Figure 5-15). In this interface, you can perform computer software interface setting, software setting and print setting (See [4.4 Print Settings](#)).

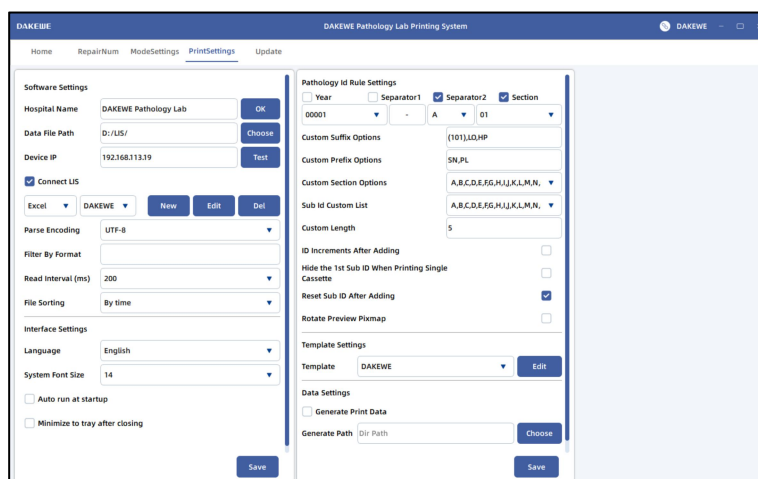


Figure 5-15 Software System on the Computer - Interface Setting Interface

### 1. Interface setting

- Hospital name: Enter the name to be displayed in the middle of the software system menu bar in the input box on the right, and then click the "OK" button.
- Data file path: It refers to the storage path of the data generated by the LIS.

- Device IP: It refers to the IP address of the device. Click the "Test" button to test the connection of the IP address.

- Connect to LIS: See 5.9 Connect to LIS.

- Parse encoding: It refers to the encoding format of the data files generated by the LIS (UTF-8 is used by default).

- Filter by Format: Print only the files of selected formats when connected to a laboratory information. For example, enter "txt" in the input box, and only files of ".txt" format will be read for parsing.

- Read interval (ms): It refers to the interval to read files when connected to the laboratory information system. The default value is 200 milliseconds.

- File Sorting: It refers to the rules to sort files generated by the information system. There are two parsing sorting rules: by time and by file name.

## 2. Settings

- Languages: It refers to the language displayed on the interface of the software system on the computer.

- System font size: Change the font size of the software system.

- Enable auto-run: It means that the software system runs automatically after the computer boots up. Selecting it means this function is enabled, and vice versa.

- Minimize to the tray when closed: It means that the software system can be minimized to display in the tray in the lower right corner of the desktop.

## 3. Pathology Id rule setting

You can preset the pathology number information through the pathology number rule settings (see [4.4.2 ID settings](#)).

- Rotate Preview Pixmap: The template preview image dynamically displayed in the embedding box in the print preview module on the home page of the PC side is rotated 180° .

## (VIII) Check for Updates

Select Check for Updates in the menu bar of the Main interface, and click it to open the Check for Updates interface (Figure 5-16). This interface displays the version of the current software system, and can also update the version of the software on the computer. Preconditions for updating the version of the computer software:

## V. Computer Software

- Prepare a USB flash drive with a total storage capacity greater than 1G;
- Create a new sureprint or SurePrint folder in the root directory of the USB flash drive, and copy the software update package to the sureprint folder;
- Insert the USB flash drive with the software update package into the USB interface of the SurePrint Cassette Printer;
- Click the "Check for Updates" button, and then the software system will guide you to update the version.

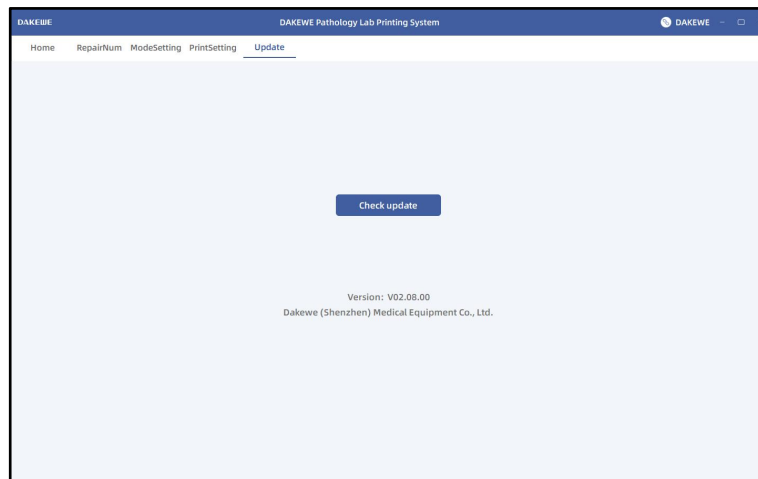


Figure 5-16 Software System on the Computer - Check for Updates Interface



- The device only supports a USB flash drive and does not support a portable hard drive.
- If there is a sureprint or SurePrint folder in the root directory of the USB flash drive, you do not need to create it again;
- Check the folder to see if there is a lower version of the installation package. If so, delete the installation package or backup it to another folder.
- Keep an eye on the capitalization of the name of the sureprint or SurePrint folder;
- When using online, update the software on the computer, and then update the software on the device.

## (IX) Connect to LIS

The ID parser is used to control how input and output data are filtered and formatted. The data input by the LIS is transferred by the ID parser in order to extract or add part of the data and proceed with data parsing. The output data is created using a parser to construct text strings for the printer software.

To improve the accuracy of input data and simplify the operation steps, you can print the data in the LIS through the ID parser without inputting the data on the printer software system.

### Example 1 of input data in text file format (.txt) generated by the LIS:

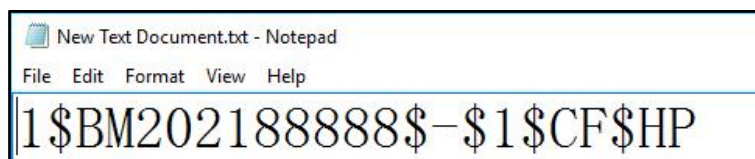


Figure 5-17 Data in TXT Format Generated by the LIS

Data Parser	
S/N	Data Distribution
0	Separator = \$
1	Type = 1
2	Main ID = BM202188888
3	Separator2=-
4	Sub ID = 1
5	Custom1 = CF
6	Suffix = HP

Figure 5-18 Data Parser - Data Distribution

### Steps for creating the pathology ID parse config in txt file format:

(1) Select the data file path: The data file path is the storage path of the data generated by the LIS.

Click the "Select" button on the right to select the data path (Figure 5-19).

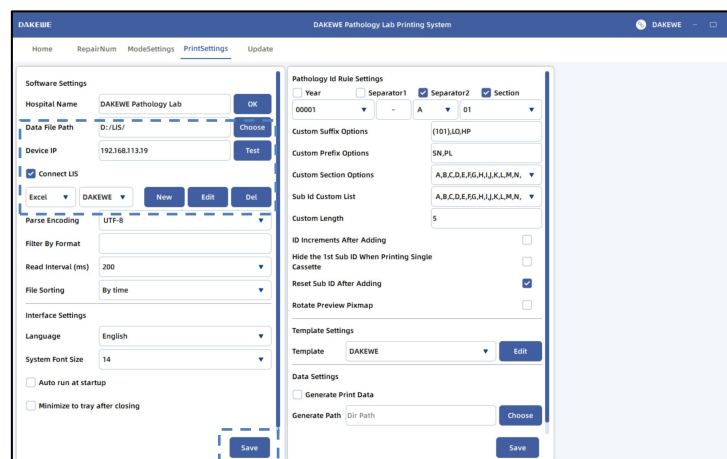


Figure 5-19 Print Setting – Text File

- (2) Tick "Connect to LIS".
- (3) According to the type of data file to be generated, select "Txt" in the drop-down list.
- (4) Click the "Add" button to open the Pathology ID Parse Config interface (Figure 5-20).

**Pathology ID Parse Config**

File Name:  Separator:  Joint: ☒

**Correlation**

☐ Pathology ☐ Prefix  MainId ☐ Section  Subid

☐ SubidNum  Suffix  Type  Custom1  Custom2

☐ Custom3  Custom4  Custom5

**Joint Rules**

+  +  +  +  +  +  +

Figure 5-20 Pathology ID Parse Config – Text File

**File name:** It refers to the parser name. You can set the name according to your need, such as DAKWE.

**Separator:** It is a symbol that separates each field in the file of the data generated by the LIS, e.g. \$.

**Concatenate:** When the correlation in the Pathology ID Parse Config cannot satisfy the display requirements of the enter content, the Concatenate Rules should be used.

- (5) Set the Correlation (Figure 5-21) according to "Data Parser - Data Distribution" (Figure 5-18).
- (6) Click the "Apply" button to complete the creation of the Pathology ID Parse Config.
- (7) Select "Parse Encoding" (The system uses UTF-8 by default).
- (8) Click the "Save" button.

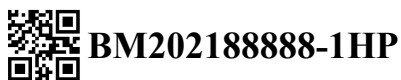


Figure 5-21 Data Printed by the Printing System

**Example 2 of input data in excel file format (.xlsx) generated by the LIS:**

	A	B	C	D	E	F
1	Type	Pathology ID	Separator	Sub ID	Name	Suffix
2	2	2022-99999	-	1	ML	H
3						
4						
5						

Figure 5-22 Data in TXT Format Generated by the LIS

Data Parser		
List Name	S/N	Data Distribution
/	0	Start Index = 1
A	1	Type = 2
B	2	Main ID = 2022-999999
C	3	Separator2=-
D	4	Sub ID = 1
E	5	Custom 5 = ML
F	6	Suffix = H

Figure 5-23 Data Parser - Data Distribution

**Steps for creating the pathology ID parse config in Excel file format:**

(1) Select the data file path: The data file path is the storage path of the data generated by the LIS.

Click the "Select" button on the right to select the data path (Figure 5-24).

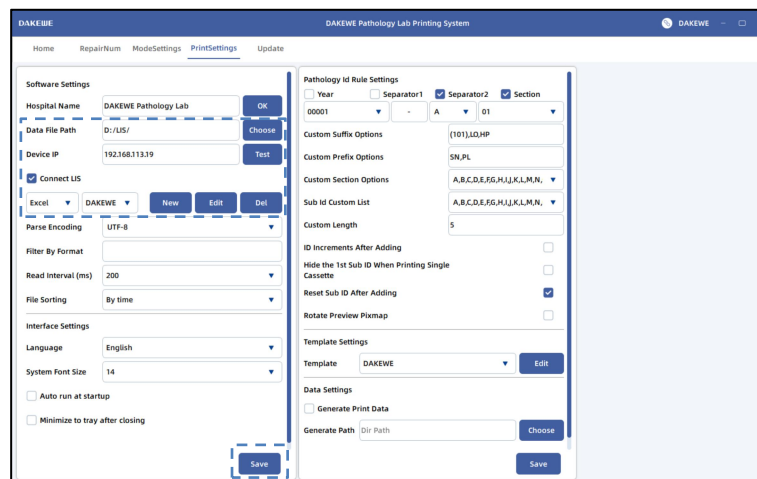


Figure 5-24 Print Setting – Excel File

(2) Tick "Connect to LIS".

(3) According to the type of data file to be generated, select "Excel" in the drop-down list.

(4) Click the "Add" button to open the Pathology ID Parse Config interface (Figure 5-25).

File name: It refers to the parser name. You can set the name according to your need, such as DAKWE.

Separator: It is a symbol that separates each field in the file of the data generated by the LIS, e.g. \$.

Concatenate: When the correlation in the Pathology ID Parse Config cannot satisfy the display requirements of the enter content, the Concatenate Rules should be used.

Pathology ID Parse Config

File Name

DAKEWE

StartIndex

2

Joint

☒

Correlation

☐ Pathology

☐ Prefix

2

MainId

☐ Section

4

SubId

☐ SubIdNum

6

Suffix

1

Type

3

Custom1

☐ Custom2

☐ Custom3

☐ Custom4

5

Custom5

Joint Rules

mainId

▼

+

custom1

▼

+

subId

▼

+

suffix

▼

+

▼

+

▼

+

▼

Cancel

Apply

Figure 5-25 Pathology ID Parse Config – Excel File

- (5) Set the Correlation (Figure 5-26) according to "Data Parser - Data Distribution" (Figure 5-23).
- (6) Click the "Apply" button to complete the creation of the Pathology ID Parse Config.
- (7) Select "Parse Encoding" (The system uses UTF-8 by default).
- (8) Click the "Save" button.

Note: For the moment, .xlsx and .scv formats are supported only.

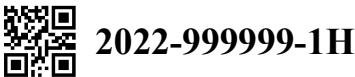


Figure 5- 26 Data Printed by the Printing System

## VI. Cleaning and Maintenance

### (I) Routine Cleaning

Clean the enclosure of the device, including the device enclosure, touch screen, turnplate, magazines, and the tray. Wipe with a lint-free cloth soaked with cleaning agent. Avoid scratching and damaging the surface of the device enclosure, touch screen, the turnplate, and the tray.

Clean the slideway: Use a handheld vacuum cleaner (Figure 6-1) or a brush to remove in the slideway and the dust on the edge of the slideway (Figure 6-2) at least once a month.



- Do not wipe the enclosure, warning labels and touch screen with organic solvents.
- To avoid scratching the surface of the device, do not use any metal tools for cleaning.



Figure 6-1 Handheld Vacuum Cleaner

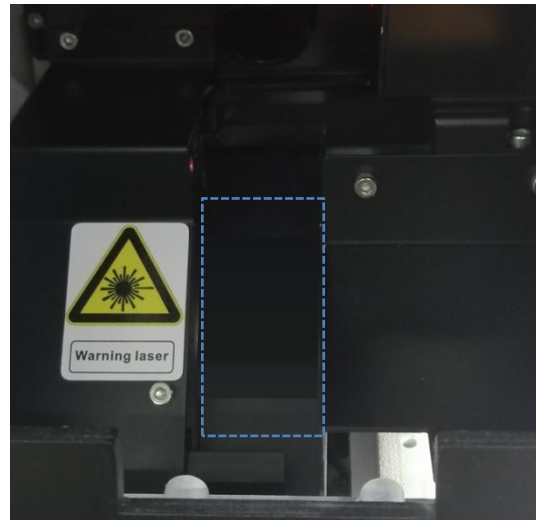


Figure 6-2 Slideway (blue area)

### (II) Replacing filter

Preparation: a cross screwdriver, a hand-held vacuum cleaner, a brush and other cleaning tools;

The printer reminds user to replace the filter when a filter reaches its maximum service life (30,000 prints or 180 days). Here are the steps to replace a filter element:

1. Remove the four screws on the filter cover on the left housing with a cross screwdriver, and remove the filter cover.
2. Remove the fixing glue, pull out the waste filter element from the inside out, and use a brush or other tools to clean the dust inside and nearby.
3. Replace it with a new one. Install the dust collection tank of the filter element towards the touch screen.
4. Hide the hand strap when closing the filter cover, and screw in the screws.

### (III) Severity level

The severity level of events are classified into 3 levels as follows:

Table 6-1 Severity Level of Events

No.	Severity level	Fault Alarm Description	Alarm Mode
1	Danger	Immediate danger which, if not avoided, will result in death or serious injury.	Screen prompt + red indicator + sound warning
2	Warning	Potential risk which, if not avoided, will result in serious injury or serious damage to the device.	Screen prompt+ sound warning
3	Information	Points to be noted for or helpful information.	Screen prompt

### (IV) Troubleshooting

#### 1. When the Cassette Printer fails, take the following three steps:

- (1) Read the message about the fault;
- (2) Follow the instructions as prompted;
- (3) Check whether there is any fault record in the operation log, and troubleshoot according to the fault record;
- (4) Check the quality control records of the system for any abnormal parameters, and report the abnormal parameters to service personnel.

#### 2. If the device cannot be powered on, perform a power check as follows:

- (1) Check what the plug is inserted into a powered socket ;
- (2) Confirm that the leakage protection switch on the back of the device is turned on.



If the issue persists, contact service personnel.

Table 6-2 List of Possible Faults

S/N	Problems	Possible Causes	Solution
1	The cassettes with lid failed to fall properly in the magazine	1. The cassette lid was not closed in place 2. The cassette width exceeded 29 mm	Check the cassette lid and size. The cassette width should be less than 29 mm
2	The cassette failed to fall properly at the laser printing position	1. There were burrs on the cassette 2. There was dust accumulating on the slideway	1. Ensure there are no burrs on the cassette 2. Clean up the dust on the slideway
3	Failed to detect the tray	When placing the tray, there was foreign objects blocking	Clean the foreign objects under the tray and place the tray again
4	The cassette cannot be ejected from the magazine properly	1. The magazine was not loaded properly 2. The cassette is too small, and the parameters of the printing position are not matched	1. Check the magazine placement status and reload the magazine 2. Add the parameters of the printing position

## Appendix 1: Technical Parameters

Table 1-1 General Parameters

Item	Parameter
<b>Voltage and frequency</b>	100-240 VAC, 50/60 Hz
<b>Power</b>	210 VA
<b>Laser power</b>	Adjustable 0-5 W
<b>Software language supported</b>	Multiple languages E.g : Simplified Chinese, English, Russian, German and Polski
<b>OS compatible with the computer software</b>	Windows 7, Windows 10, Windows 11, Linux, macOS
<b>Dust removal</b>	Built-in activated carbon purification system
<b>Operating temperature range</b>	+10°C to +35°C
<b>Transport and storage temperature range</b>	0°C to +50°C
<b>Operating relative humidity range</b>	10% to 80% (non-condensing)
<b>Relative humidity for transport and storage</b>	10% to max. 85% (non-condensing)
<b>Operating altitude</b>	Up to 2500 m above sea level
<b>A-weighted sound level</b>	< 60 db(A)
<b>Degree of protection</b>	IP20
<b>Contamination level</b>	II

Table 1-2 Printing Parameters

Item	Parameter
<b>Print technology</b>	Non-contact laser printing technology
<b>Print method</b>	Ready to use, no need for preheating, ribbon, and ink cartridges
<b>Print speed</b>	Up to 2.5 seconds/cassette (depending on the content)
<b>Enter content</b>	Numbers, characters in multiple languages, 1D & 2D barcodes and graphics (bitmap formats supported by the current system: .DXF, .SVG and .PLT)
<b>Maximum print resolution</b>	2500 dpi

## Appendix 1: Technical Parameters

Item	Parameter
<b>Print color</b>	Black
<b>Print Template</b>	The inclined surface of the cassette can be selected for multi-template printing in both positive and negative directions
<b>Print effect</b>	Resistant to acid, alkali, xylene, formalin, alcohol corrosion, and friction.
<b>Print angle</b>	35°- 45°
<b>Print range</b>	Print with zero margins

Table 1-3 Parameters of Hardware and Software

Item	Parameter
<b>Display</b>	8.0 inches
<b>Screen resolution</b>	800*1280
<b>Software</b>	Dynamically displays the operation processes and designed with HCI
<b>USB interface</b>	2*USB 2.0, 1*USB 3.0
<b>Ethernet</b>	2*LAN
<b>System interface</b>	LIS, HIS, PIS, PACS
<b>USB Rated Input/Output Voltage</b>	USB2.0: 5V, USB3.0: 5V

Table 1-4 Device Parameters

Item	Parameter - C100	Parameter - C10
<b>Net weight (kg)</b>	30 , ±5%	28.5 , ±5%
<b>Dimension, without packaging (W×D×H, mm)</b>	420 × 405 × 415, ±5%	
<b>Outer packing box: wooden crate (W×D×H, mm)</b>	790 × 560 × 790, ±5%	
<b>Enclosure color</b>	Medical white matte black	

Table 1-5 Loading and Unloading

Item	Parameter - C100	Parameter - C10
<b>Output</b>	Up to 100 cassettes	Continuous
<b>Organizer tray</b>	Yes	No
<b>Embedded scanner</b>	Yes	No
<b>Colour recognition</b>	Yes	No
<b>Cassette size (L×W×H, mm)</b>	Compatible maximum size: 45.0×29.0×8.0	
<b>Cassette type</b>	Cassette without lid, split cassette with lid, conjoined cassette with lid (printing with lid closed)	
<b>Operating mode of the magazines</b>	Auto-rotate clockwise	
<b>Size of standard magazine (mm)</b>	55 × 33 × 102, ±5%	
<b>Size of compatible magazine (mm)</b>	60 × 62 × 563, ±5%	
<b>Maximum capacity of standard magazine</b>	Up to 600 cassettes (cassette height < 5 mm)	
<b>Maximum capacity of compatible magazine</b>	Up to 450 cassettes (cassette height < 7 mm) Up to 510 cassettes (cassette height < 5 mm)	
<b>Cassette output method</b>	Automatically push out the cassettes to the right, cassettes are neatly arranged	

## Appendix 2: Common Buttons

Common Buttons	Functional Specification
	The device stops operating immediately
	Add the enter content to the print jobs list
	Print according to the print jobs list
	Unlock the turnplate function, which is mainly used for replacing the magazine and adding cassettes, so as to ensure that the turnplate can rotate freely and smoothly when changing the magazine.
	Device reset button
	Pop up the menu interface button
	Exit from the current interface and open the previous menu
	Save changed settings
	Reset the turnplate
	Reset the cassette pushed out of the magazine moving part
	Tray reset function
	Reset the cassette pushed out to the tray moving part
	Reset the device
	Back up the device parameters
	Enable/disable the scanning function
	Turn on/off the tray light
	Select unnecessary and redundant data to delete.
	Delete or prioritize the seleted print jobs in the print jobs list.

## Appendix 3: Warranty Instructions

### **Warranty**

DAKEWE guarantees that the contract products delivered adopt the comprehensive QC procedures based on DAKEWE's internal testing standards, and the products are in good condition and meet all technical specifications.

The warranty scope is based on the content of the agreement. If special warranty services are needed, please contact the local sales representative or the dealer who sold the device.

### **Technical service information**

If you need technical services or part replacement, please contact the local sales representative of DAKEWE or the dealer who sold the device.

Please provide the following information:

- (1) Model, name and serial number of the device.
- (2) Location of the device and name of the contact person.
- (3) Reason for the service request.
- (4) Delivery date.

### **Scrapping and disposal**

The device or its parts must be disposed of in accordance with local regulations.



## Appendix 4: Electromagnetic Compatibility Indicators

### Note:

Cassette Printer shall meet the emission and immunity requirements specified in

IEC61326-1, as shown in the table below.

The user shall be responsible for ensuring the electromagnetic compatibility of the environment for the equipment to work normally.

It is recommended to evaluate the electromagnetic environment before the equipment is used.

### Warning:

Cassette Printer is designed and tested according to Class A equipment in CISPR 11. In the home environment, the equipment may cause radio interference, so that protective measures should be taken.

It is prohibited to use the equipment next to an intense radiation source (such as an unshielded RF source), otherwise the Ordinary operation of the equipment will be affected.

**Table I: Electromagnetic emission**

Electromagnetic emission	
Emission test	Compliance
CISPR 11 conducted emission	Group 1, Class A
CISPR 11 radiated emission	
IEC61000-3-2 harmonic emission	N/A
IEC61000-3-3 voltage fluctuation/scintillation emission	N/A

**Table II: Electromagnetic immunity**

Electromagnetic immunity			
Immunity test items	Basic standards	Test values	Performance criteria
Electrostatic discharge (ESD)	IEC61000-4-2	Contact discharge: $\pm 4$ kV Air discharge: $\pm 2$ kV, $\pm 4$ kV, $\pm 8$ kV	B
Radio frequency electromagnetic field	IEC61000-4-3	3 V/m, 80 MHz~6.0 GHz	A
Pulse cluster	IEC61000-4-4	Power cord: $\pm 1$ kV(5/50 ns, 5 kHz)	B

## Appendix 4: Electromagnetic Compatibility Indicators

Electromagnetic immunity			
Immunity test items	Basic standards	Test values	Performance criteria
Surge	IEC61000-4-5	Line to ground: ±1 kV Line to line: ±0.5 kV	B
Radio frequency transmission	IEC61000-4-6	Power cord: 3 V, 150 kHz- 80 MHz, 80 %AM	A
Power frequency magnetic field	IEC61000-4-8	3 A/m, 50/60 Hz	A
Voltage sag and interruption	IEC61000-4-11	0.5 cycle, 0%	B
		1 cycle, 0%	B
		25/30 cycle, 70%;	C
		250/300 cycle, 5%	C
Performance criteria: A. In the test, the performance is Ordinary within the specified limit. B. In the test, the function or performance is degraded or lost temporarily, but can restore automatically. C. In the test, the function or performance is degraded or lost temporarily, and cannot restore until reference or system operation by the operator			

This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

This equipment is designed for use in a PROFESSIONAL HEALTHCARE FACILITY ENVIRONMENT. It is likely to perform incorrectly if used in a HOME HEALTHCARE ENVIRONMENT. If it is suspected that performance is affected by electromagnetic interference, correct operation may be restored by increasing the distance between the equipment and the source of the interference.

Do not use this device in proximity to sources of strong electromagnetic radiation (e.g. unshielded intentional RF sources), as these can interfere with the proper operation.

## Appendix 5: Laser Safety

### Laser Hazard Classification

According to the standard IEC 60825-1:2014, laser products are classified into 7 classes based on the amount of laser radiation that can be exposed to personnel during work. Laser products are classified into 5 classes according to 21CFR 1040.10. The SurePrint Cassette Printer is classified as Class 1 by taking protective control measures to completely seal off the laser radiation.

### Laser Hazard Control Measures

Control & Measurement	Class 1	Class 2	Class 3A	Class 3B	Class 4
Warning system	None	None	None	Should have	Should have
Indoor laser XE optic Laser control	None	None	None	Analysis for the danger zone of print should be performed	Analysis for the danger zone of print should be performed
Label	Should have	Should have	Should have	Should have	Should have
Zone signs	None	None	Should have	Analysis for the danger zone of print should be performed	Analysis for the danger zone of print should be performed
Standard Operating Procedures	None	None	None	Should have	Should have
Education and training	None	Should have	Should have	Should have	Should have
Authorized personnel	None	None	None	Should have	Should have
Warning signs & labels	None	Should have	Should have	Analysis for the danger zone of print should be performed	Analysis for the danger zone of print should be performed

The above table lists some of the requirements that need to be implemented in a lab environment. Laser Safety Specialist or designers should follow applicable safety regulations in order to take appropriate control measures in areas where the device is used.

### Safety Instructions for Laser Radiation

- If possible, use all protective enclosures, interlocks, and guards.
- Wear laser safety goggles should during laser repair, calibration, installation or when any laser safety controls are not in place.
- Device maintenance, calibration, and installation require professional services from the manufacturer. Do not open the device enclosure assembly without permission to prevent accidental laser damage.



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