



TCP450 TISSUE CASSETTE PRINTER

User's Manual

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1 Brief Introduction

1.1 TCP450 - Tissue Cassette Printer

The Tissue Cassette Laser Printer is an instrument designed for standard tissue cassette printing. The instrument uses ultraviolet laser (UV) to perform high-precision ablation of the embedding cassette (if embedding cassette with laser engraving additives is used, the printing effect is even better) to achieve information marking, simple operation and good printing effect, suitable for long-term storage. The instrument is designed for use with standard sample tissue cassettes in pathology, histology, cytology, toxicology, and similar laboratory environments.

1.2 The main advantages

- The marking effect is clear and the passing rate of marking is 100%
- ► There is no print quantity limit
- The writing content is anti-corrosion, high temperature resistance, low temperature resistance, and can be stored permanently
- ► Allow for adequate clearance

1.3 Technical Specifications

- Operation interface: 10-inch color touch screen, can be connected to an external monitor to achieve dualscreen display
- Software system: Built-in Windows Embedded Standard system
- Writing technology: UV laser printer
- Writing content: Texts, numbers, letters, symbols, bar codes and other information
- Writing form: Drag and drop editing, what you see is what you get. Factory templates or user-defined templates can be used
- Writing direction: Supports 0° and 180°
- Content preview: Support synchronous preview, what you see is what you get
- Information input: Keyboard + mouse input, virtual keyboard input, scan gun input, remote LIS input, remote printing service software input, etc
- ▶ Tissue cassette specifications: (length) 40-41.2 mm×(width) 28.1-29 mm×(height) 6-7 mm
- Print area: 23 mm×6.1 mm
- ▶ Input loading capacity: 75/slot, with 6 slot-box channels as standard
- Output storage capacity: Tube queue storage (up to 100 cassettes) / Slider output (click and take) Two modes
- Output mode: FIFO (first in first out)
- ▶ Printing speed: ≤4 s (The printing speed is affected by the printing content, laser parameters and other factors influence, this value is for reference only)
- Physical size: (Length) 478 mm×(width) 310 mm×(height) 508 mm
- ▶ Instrument weight: Net weight≤23 Kg
- ► The overall noise: 50 DB
- Power: 240 W

1.4 Conditions of use of the instrument

- ► The power supply voltage : AC (100~240) V, frequency : 50/60 Hz
- ▶ The environment temperature : $10^{\circ}C \sim 30^{\circ}C$ (Recommended $10^{\circ}C \sim 28^{\circ}C$)
- ► Relative humidity ≤70% No condensation



1.5 The main structure of the TCP450



2 Instrument installation

2.1 Loading procedure for embedding cassette bin/storage bin







- Step 1: As shown in Figure 2.1, put the embedding cassette bin filled with the blank embedding cassettes (pay attention to the direction) into the corresponding slot box channel (there are 6 slot box channels in total, and the one near the screen is the 6# slot box channel, the one near the back of the fuselage is the 1# slot box channel).
- Step 2: As shown in Figure 2.2, the user can choose to slide the box through the guide rail below (first in first out), or vertically insert the tissue cassette storage bin at position as shown in this figure, and make the tissue cassette enter the storage bin and queue up.



3 Instrument use

In order to use the tissue cassette laser printer (hereinafter referred to as instrument or laser printer) safely and stably, please use it according to the correct procedure.

3.1 Starting

- Connect instrument power cable;
- ▶ Turn on the power switch on the back of the instrument;
- ▶ Tap the POWER switch on the front of the instrument;
- After waiting for 1~2 minutes, the instrument enters the operating system desktop and completes the boot.

3.2 Printing

- Mount tissue cassette bin and tissue cassette storage bin;
- Double-click the icon on the desktop to start the print management software;
- Set the tissue cassette writing template (if you don't need to change it, you can omit it);
- Enter the written information and select the slot box channel to create a task;
- Switch the printing status to "Start" to start printing;
- Take out the printed tissue cassette.

Note: For the process of printing area setting, template setting, printing content editing, etc., please refer to the following sections.

3.3 Shutdown

- Switch the printing state to "pause", wait for the instrument to complete the work, click the "exit" button on the main interface, exit the printing management software;
- Press the POWER switch in front of the instrument to wait for the system to complete the shutdown of the instrument;
- ► If the instrument will not be used for a long time, please turn off the power switch at the back of the instrument and unplug the power cord.

3.4 Precautions

Please pay attention to the following points during use:

- Please switch on and off the machine according to the above-mentioned order of startup and shutdown, so as not to damage the instrument;
- Do not turn on the instrument for a long time without turning it off, so as not to accelerate the aging of the laser;
- During the use of the instrument, do not put any objects into the instrument;
- ▶ The instrument requires regular maintenance (see Chapter 8 below);
- When a fault occurs, you can refer to the content of Chapter 9 below for troubleshooting;
- When there is a problem that cannot be solved, please contact the after-sales service department of our company in time.



4 Software Installation

The tissue cassette laser printer has been installed with the supporting stand-alone multilingual printing management software before leaving the factory. After the instrument is installed, it is ready to use. If you need to use the tissue cassette laser printer as a network printer, please refer to the relevant instructions in Chapter 6.

4.1 Install/Upgrade Software

🕞 1.0 Setup	
	Welcome to the 1.0 Setup Wizard
	This wizard will guide you through the installation
	It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
	Click Next to continue.
	Next > Cancel



- Double-click the latest version of the software installation package, the installation interface is shown in Figure 4.1;
- Click Next to enter the installation directory setting interface, as shown in Figure 4.2;
- After setting the installation directory, click Next and then click the Install button, wait and complete the installation, as shown in Figure 4.3.

😚 1.0 Setup	- • •	🕞 1.0 Setup	
Choose Install Location Choose the folder in which to install 1.0.			Completing the 1.0 Setup Wizard
Setup will install 1.0 in the following folder. To install in a different and select another folder. Click Install to start the installation.	folder, click Browse		1.0 has been installed on your computer. Click Finish to close this wizard.
Destination Folder C: \Program Files (x86)\TB	Browse	凤	
Space required: 150.1MB Space available: 40.4GB Nullsoft Install System v2.08			
< Back	Install Cancel		< Back Finish Cancel
Figure 4.2		Figure 4.	3



4.2 Uninstall software

- Double-click the uninstaller uninst.exe in the software installation directory ;
- Click "Yes" and wait for a while to complete the software uninstallation.

5 Software Usage

5.1 Software introduction

The functions of the printing management software supporting this instrument include [Printing], [History], [Template], [Setting], [Debugging], [About] and [Exit].

[Printing]: Main interface, used for editing and managing printing tasks; [History]: Used to query/delete/export historical records; [Template]: Used to create/edit/delete print templates; [Settings]: Used to set user parameters; [Debugging]: used to set the debugging parameters of the instrument; [About]: Copyright information; [Exit]: Exit the software.

5.2 Software startup

After the instrument is powered on, please double-click the shortcut on the desktop to start the print management software, and its interface is shown in Figure 5.1.

5.3 Printing

After starting the print management software, the print management interface appears, including areas such as "realistic interface", "entry area", "task list", and "print list", as shown in Figure 5.1.





All operations can be done with shortcut keys:

- Task List [Print (E)]: Ctrl + "E"
 - Task list [Delete (R)]: Ctrl + "R"
 - Task list [select all]: Ctrl + "Q"
 - Task list [Cancel]: Ctrl + "W"
- Print list [Start (F)]: Ctrl + "F"
 - Print list [Pause (F)]: Ctrl + "F"
 - Print list [Delete (G)]: Ctrl + "G"
 - Print list [select all]: Ctrl + "S"
 - Print list [Cancel]: Ctrl + "D"
- Switch the cursor to the task entry area: Ctrl + Enter;
- The cursor switches to the next entry box: Tab / Enter (if you press Enter in the last entry box, the task will be generated directly, and then the cursor will switch back to the first entry box);
- Create a task: Ctrl + "/";
- Create a task and print: Ctrl + "*";
- Create a task and print (cut queue): Ctrl + "-";
- Clear all input boxes: Ctrl + "=";
- +1/-1 operation of numbers/letters in the input box: " \uparrow "/" \downarrow " arrow keys.
 - Example: If the information in the input box where the current cursor is located is "A01", after clicking the "↑" arrow key on the keyboard, the information in the input box will be changed to "A02".
 - Example: If the information in the input box where the cursor is currently located is "Item B", after clicking the "↓" arrow key on the keyboard, the information in the input box will be changed to "Item A".

5.3.1 Entry area

5.3.1.1 Entry box properties

Click the button the left side of the entry area to display the property setting buttons of each entry box, as shown in Figure 5.2 below.



Figure 5.2



Please select the input box you want to set, and click the button to enter the input box property setting interface, as shown in Figure 5.3 below.

LABSIM mode	
The "single number task" and "multi number task	" share one input box.
Single number task:	Example : 1
Multi number task	Example : 1-10
Classic mode	
Two input boxes are provided, and users are not	required to input "-".
Single number task:	Example : 1 -
	Example : - 1
Multi number task	Example : 1 - 10
Provide leading and rear guide input	boxes
Provide "leading input box" and "rear guide inpu	t box" to assist the "main input box".
	Enter "20210301ABC#": 20210301 C # 5
Only the "main input box" is provided	Ŀ
Only the "main input box" can be retained to save	e space.
	Enter "20210301ABC#": 20210301ABC#
) Do not provide "+1" button	
Do not provide "+1" button.	
Provide "+1" button	+1
Each click will increase the number / letter in the	input box by 1
Provide "+1 Auto" button	· · · · · · · · · · · · · · · · · · ·
After creating a task, the number / letter in the in	put box will increase by 1.
Keep the input box information	尋
After creating a task, keep the information in the	input box.
Do not keep the input box information	on 译
After creating a task, delete the information in th	e input box.
) Masked input method	IMI IMI
> masked input method	



- Special mode
- "Single-number task" and "multi-number task" share the same input box. If you want to enter a single number task, please enter it directly; if you want to enter a serial number task, please enter a format similar to "1-10" ("-" is a multi-number continuous character, the symbol can be modified in the setting window).
- Traditional mode
- Provides 2 input boxes, the user does not need to input "-", just input "1" in the first input box and "10" in the second input box to achieve the above "1-10" effect.
- Provide "pre-entry box" and "post-entry entry box"
- Provide "leading entry box" and "back import entry box" to assist "main entry box". For specific usage, please refer to 5.3.1.5 Pre-entry box/Follow-up entry box below.
- Only provide "main entry box"
- If the user does not need to use the "leading entry box" and the "post import entry box", select this option, the entry box only provides the main entry box, and hides the "leading entry box" and "back import entry box", making the interface more concise.
- Does not provide a "+1" button
- ▶ The "+1" button is not provided to the right of the main entry box.
- Provides a "+1" button
- ► A "+1" button is provided on the right side of the main entry box. For the specific use of the "+1" button, please refer to the "+1"/"-1" operation of the input box in 5.3.1.7 below.
- Provides a "+1 Auto" button
- ► The "+1 Auto" button is provided on the right side of the main entry box. For the specific use of the "+1 Auto" button, please refer to the "+1"/"-1" operation of the input box in 5.3.1.7 below.
- Keep the information in the entry box
- After the task is created, the information in the main entry box is preserved. For specific use, please refer to 5.3.1.4 Fixing the input box information below.



- Do not keep the information in the entry box
- After the task is created, the information in the main input box is automatically cleared. For specific use, please refer to 5.3.1.4 Fixing the input box information below.
- Shield input method
- If you only need to enter numbers/letters/symbols in this input box without spelling words, please select the shield input method.
- If you need to use a scan code gun, and the scan code contains letters, please also select the shield input method.
- Do not shield input method
- If the input box requires spelling text, please select Keep input
- method.

5.3.1.2 Virtual keyboard

Click the button is on the left side of the input area to open the virtual keyboard, as shown in Figure 5.4. The virtual keyboard can be used to input printing information for the input area, and letters, numbers and symbols are supported. Note: The "Enter", "Backspace", "Tab" and other function buttons in the virtual keyboard have the same functions as the corresponding buttons on the real keyboard. For example, the "Enter" button of a real keyboard can make the cursor of the entry box jump to the next entry box (if it is the last entry box, pressing the "Enter" button can directly create a task). The "Enter" button of the virtual keyboard does the same thing.



Figure 5.4

The virtual keyboard has two modes, namely "full keyboard" and "numeric keyboard", which can be switched by the buttons on the right side of the virtual keyboard, as shown in Figure 5.5.

	Ŷ	_	1	2	3	4	5	←	Digital
¢	Ŷ	⇒	6	7	8	9	0	Enter ←	Keyboard

Figure 5.5



5.3.1.3 Create a task

Before entering the task information, you can select the current work template through the template drop-down box in Figure 5.6, and then click the slot box channel button at the bottom to preset the slot box channel for the task (single selection or multiple selection, but at least one slot must be selected box channel). Then click each input box, activate the cursor, and select the appropriate input method (if no input method is required, this step can be omitted, if you need to use the input method, please activate the icon $\overline{\mathbf{h}}$ on the left side of the input box).

→1	▼ 1 ▼ Create(+) ↓	
M P No. 적]
庸 Remark1 폭	pathology	
Slots	s: 123456	

After entering the printing information in each input box, click the [Create] button to create a task or a group of tasks. You can also click the drop-down menu to the right of the [Create] button and select

- Create a task
- Create a task and put it in the task list (same as clicking the [Create] button directly).
- Create task and print
- Create a task, put it into the task list, and put it into the print list for queued printing.
- Create task and print (cut queue)
- Create a task, put it in the task list, and put it at the head of the print list at the same time to cut the queue to print.



5.3.1.4 The input box information is fixed

Before creating a task, click the button as shown in Figure 5.7 to set whether to clear the information in each input box after creating a task. If choose 4^{-1} , after a task is created, the information in the input box is cleared so that you can directly enter new information when editing a task next time. If choose 4^{-1} , the information in the input box is retained, you do not need to repeat the input in the next editing task.

Take FIG. 5.7 as an example, after clicking the "Create" button, the information in the input boxes of "P No." and "Alt No." will be cleared, while the information in the input boxes of "Note 1" will be retained.



5.3.1.5 Lead entry box/follow entry box

To avoid repeated entry of information segments, you can write the information segments that need to be repeated into the leading entry box/subsequent entry box, as shown in Figure 5.8 below.

Click the button on the right of the leading entry box/subsequent entry box to activate the corresponding leading entry box/subsequent entry box. The information in the leading input box or subsequent input box will be automatically combined with the information in the main input box during task generation, and the information in the leading input box or subsequent input box will not be cleared after task generation, which is convenient for the next task editing.

Take Figure 5.8 as an example, the information in the leading input box of pathology number is "210929", the information in the main input box is "001", and the information in the subsequent input box is "#". When clicking the "create" button to generate the task, pathology number will be merged into "210929001#".

	1 Create(+) ↓	
		٦
Lead entry box	210929 C # Follow entry box	
	Ē P No. ♀ 1234567890 +1 ▼	1
	Alt No. 平 1 - 3 +1 ▼	
	ि Remark1 ़ Pathology ▼	
	Slots: 123456	
	rigule 3.0	



5.3.1.6 Enter the memory list of box information

After a new task is generated, the input information will be automatically saved in the drop-down menu on the right of the input box (20 at most), as shown in Figure 5.9.

Just click the corresponding sub-item in the drop-down menu to write the selected information into the input box, to save the time of manual re-typing. If information already exists in the input box, new information will be appended to the input box with a "multiple delimiter" (default"."), as shown in Figure 5.10.



5.3.1.7 Input box "+1"/" -1 "operation

During editing tasks, we sometimes need to "+1" the number or letter in the input box.

As shown in FIG. 5.11, the information in the main input box of [Pathology No.] is now "001". If you click the "+1" button on the right of the input box, the information in the input box will change from "001" to "002", as shown in FIG. 5.12. This function also works for letters. If the input box information is "1A", click the "+1" button and the input box information will change to "1B". To facilitate +1/-1 operations, you can also use arrow keys \uparrow and \downarrow on the keyboard. Assuming that the information in the input box is "HE", if you click the input box to activate the cursor, and then click " \uparrow " on the keyboard, the information in the input box will change to "HE".





The "+ 1" button can be switched to The "+ 1 Auto" button (see 5.3.1.1 above), as shown in Figure 5.13 below. The "+ 1 Auto" button comes in two forms, active (button in blue) and inactive (button in gray), and switched by left mouse click. In the active state, the information in the input box on the left side of the button automatically performs a "+ 1" operation after each creation task. As shown in Figure 5.13, the information in the input box of [pathology Number] is now "001". If the "+ 1 Auto" button on the right side of the [Pathology Number] input box is activated, the information in the [Pathology Number] input box will automatically become "002" after the task is created, as shown in Figure 5.14.

If the "+ 1 Auto" button is inactive, the automatic +1 function of "+ 1 Auto" does not take effect.



5.3.1.8 More number entry

When editing tasks, if the pre-created multiple tasks are regular (for example, the pathology number is 20180131001-20180131005), the mode of multi-number input can be used to improve the input efficiency. The "-" and "."in quotation marks in the following parts of this section. Two symbols, namely, the "minus" and "decimal point" symbols on the main keyboard and keypad (assuming that the multiple serial character is set to "-" and the multiple separator character is set to"."in the Settings window)

- Simple continuous multi number input
 - Example : If you enter A1-A3, it is automatically split into A1, A2, and A3.
 - Example : If you enter 2A-2c, it is automatically split into 2A, 2B, and 2C.
- Simple separation number input
 - Example : Enter "1.2.3B" and automatically split into "1", "2", and "3B".
- Comprehensive the entry of multiple numbers
 - Example : Enter "A1-A3.HE" and automatically split into "A1", "A2", "A3", "HE".
 - "Fixed Information Length" of the number / sub-number input box
 - Assume that the current template sets the "fixed message Length" of the sub-number to 4 (see 5.4.3 below) :
 - Example : If you enter "1", the automatic completion is "0001".
 - Example : If you enter "1-3", the split and complement parameters are " 0001, 0002, or 0003".
 - Example : Input "1-3", input "#" in the leading input box, input "L" in the subsequent input box, automatically split and merged into: "#01L", "#02L", "#03L".
- Multiple input box comprehensive multi number input
 - Multiple entry is not limited to a single-entry box, multiple entry boxes can also be integrated multiple entry.
 - Figure 5.15 below is an example (assuming that the "fixed information length" of the number is 9 and that of the sub-number is 4) :
- Pathology number was split and merged into "210929001", "210929003", "210929004";
- ▶ The sub-number is split and merged into" 05LD "and "06LD".
 - Click the [Create] button, the above input information is split and merged, and the corresponding order is combined one by one, to generate the 6 tasks shown in Figure 5.16.





Figure 5.16

- Number of tasks repeated
 - The drop-down menu shown in Figure 5.17 allows you to set the number of times you want to repeat the task. As shown in Figure 5.15 above, 6 tasks are generated by default. However, if the user sets the task repetition times to "2", two groups of 12 tasks can be generated eventually.

1	▼ 1 ▼ Create(±) ↓				
扁 P No. 목	210929 C S 001 +1 ▼				
톪 Alt No. 뀩	- +1 V				
📕 Remark1 🛱					
Slots: 123456					



5.3.1.9 Sweep code entry

This instrument can use the attached scanning gun to scan code input printing tasks. This function needs to be selected in the Settings menu "Number as scan as play" and "Code as scan and split" (see below 5.6).

Before scanning code input, please select an appropriate printing template, activate the cursor of the first input box in the task editing area, place the scanning head of the scanning gun about 5 cm in front of the bar code to be scanned, and press the scanning gun button. If you hear the prompt tone of the scanning gun, you can see that the printing task has been generated. If there is no prompt tone, adjust the scan distance or direction and scan again.

5.3.2 The task list

Tasks created by users are automatically added to the task list, and related printing times, creation information, and printing information are displayed, as shown in Figure 5.18. Tasks in the task list can be deleted as required without affecting preprint tasks that have been added to the print list.

If you want to add the task in the task list to the print list for printing, you only need to double-click the task, or click the [Print] button on the upper end after selecting the task (multiple options are available), or right-click to activate the right-click menu and choose the [Print] option.

The functions of the task list are as follows:

- Print
- Place the selected tasks in the print list and queue them up for printing.
- Jump to the front of the line
- Put the selected task at the head of the print list and jump the queue to print.
- Select all
- Select all tasks in the task list.
- Cancel
- Cancels all selections in the task list.
- Delete
- Delete the selected task from the task list.





5.3.3 Print list

The print list stores pre-printed tasks, as shown in Figure 5.19.

After clicking the [Start] button on the top, the instrument will start the printing cycle and monitor in real time whether there are tasks that can be printed in the print list. If so, the instrument will print the tasks in the print list in sequence. The print status of the job being printed will be changed from "Waiting" to "Printing". After successful printing, the task will disappear from the print list, and then the instrument starts to print the next task.

Except for the tasks in the "Printing" state, all other tasks can be manually deleted by the user.



Figure 5.19

The print list function is as follows:

- Start/Pause
 - Start or pause printing.
- Select all
 - Check to print all tasks in the list.
- Cancel
 - o Cancels all selections in the print list.
- Resume printing

0

- Change the selected task to "waiting" state.
- ▶ Jump to the front of the line
 - Change the selected task to "waiting" state and jump to the head of the print lists.
- Frozen
 - Change the selected task to the "frozen" state and move it to the end of the print list.
- Delete
- Delete the selected task (this directive has no effect on the task being printed).

Note: If there is a task that has been put into the printing list but does not want to be printed at the moment, the user can use the "freeze" command to change the task to the "frozen" state, then the task will remain at the end of the printing list and will not be printed by the instrument. When the user wants to print the task, the user can use the command "resume printing" or "insert to the front of the queue" to remove the "frozen" state of the task.



5.4 Template

Different user application requirements and application scenarios, the style of organization box printing will be different. Through the print management software, users can design a print style that meets the current application scenario according to their own needs and save it as a template, so that it can be directly called in daily use.

After entering the print management software, click the [Menu] drop-down menu at the top of the software with the left mouse button and select [Template] to enter the interface as shown in Figure 5.20.

The print management software provides a default template that cannot be modified. Users can also create templates based on their own requirements.

If you select a template in the template list, you can see the simulation effect of the template in the simulation interface on the right. Click the [New], [Copy], [Edit], [Delete], [Save], [Cancel] buttons to perform corresponding operations on the template. After selecting a template, click the [Copy] button, enter the name of the new template in the pop-up query box, and a new template that is exactly the same as the parent template will be generated.

After selecting a template, click the [Delete] button to delete the template after confirmation.



After selecting a template, click the [New] or [Edit] button to enter the template editing interface shown in Figure 5.21.

5.4.1 Tissue Cassette Printing Orientation

The immersive interface in the figure above shows the effect when the printed tissue cassette is looking forward. Click the direction arrow to set the printing direction of the tissue cassettes to 0° or 180°.



5.4.2 Select barcode type

The printing area of the tissue box can place a 1D code/QR code, or no barcode can be placed. If you need to use a barcode, please select the appropriate barcode type in the barcode list (recommended to use "QR Code" or "Data Matrix" twodimensional code). If you do not need to use barcodes, please set the barcode type to "null".

The information in the barcode is bound to the first input box by default, that is, the "pathology number" input box in Figure 5.21. If necessary, the barcode can also be bound to multiple input boxes. For the setting method, please refer to 5.4.7 below.

emplate				↑₽
01				10
				ö√
		■ % ■ 12240	67800	
		A01P	atholog	v
ode type				<u></u>
mpty				
2R Code				
Data Matrix	Pie			
Lode 39		Text	Fo	int
ode 39 ode 93	P No.	1234567890	Fo	nt
ode 39 ode 93 AN 8 AN 13	P No.	Text 1234567890	Fo	Editable -
ode 39 Code 93 AN 8 AN 13 AN 128C	P No. Alt No.	1234567890 A01	Fo	Editable 👻
ode 39 ode 93 AN 8 AN 13 AN 128C ode 128A	P No. Alt No. Remark1	Text 1234567890 A01 Pathology	Fo	Editable 👻 Editable 👻 Editable 👻
ode 39 ode 93 AN 8 AN 13 AN 128C ode 128A	P No. Alt No. Remark1	1234567890 A01 Pathology	Fo	Editable 👻 Editable 👻 Editable 👻 Hide 👻
code 39 code 93 AN 8 AN 13 AN 128C code 128A code Parameter w w	P No. Alt No. Remark1	1234567890 A01 Pathology	Fa	Editable V Editable V Editable V Hide V
iode 39 iode 93 AN 8 AN 13 AN 128C iode 128A ode Parameter W W	P No. Alt No. Remark1	Text 1234567890 A01 Pathology	Fo	nt Editable V Editable V Editable V Hide V Hide V
Code 39 Code 93 AN 8 AN 13 AN 128C Code 128A Def Parameter H W Q Q Q Q Q Q Q Q Q Q Q Q Q	P No. Alt No. Remark1	Text 1234567890 A01 Pathology	Fa	nt Editable V Editable V Hide V Hide V Hide V
ode 39 ode 93 AN 8 AN 13 AN 128C ode 128A de Parameter W W ↓ W ↓ W ↓ H ↓ Z 2	P No. Alt No. Remark1	Text 1234567890 A01 Pathology	Fc	nt Editable * Editable * Editable * Hide * Hide * Hide * Hide *



5.4.3 Edit template content



Click the "Content" column of 5.4.3.1 in Figure 5.22 to edit the template content in the following order:

- Edit the properties of each entry box in 5.4.3.2:
 - Editable: Indicates that the input box can be used by the user to input the print content as needed when editing the task. This attribute is generally used for the entry box of pathology number entry box, subnumber entry box and other entry boxes with different printing content each time.
 - Fixed: Only need to set the printing information of the input box in the template, then when editing the task, this section of printing information will be automatically filled in the task, and the user cannot modify it. This attribute is generally used for input boxes with fixed printing content, such as hospital input boxes and department input boxes.
 - Hidden: Indicates that this input box is not used in this template.
- Double-click 5.4.3.3 to pop up a dialog box, you can edit the name of each input box.
 - Edit the information of each entry box in 5.4.3.4 (the information in the default pathology number entry box will be automatically converted into a barcode), and enter a predefined string. If the property of the input box is set to "editable", then the information in the input box is only used for typesetting, and the real printing information needs to be input during task editing.
 - Edit the "fixed message length" of the pathology number/small number entry box in 5.4.3.5.
 - The default will be set to "-1", that is, the message length is not fixed. There are two usage scenarios for the "fixed message length" of the input box:
- Normal mode: When the information length of the input box is
 - less than the set "fixed information length", the front end will automatically fill in "0". For more usage scenarios, see 5.3.1.8 above.
 - Example: Taking the sub-number as an example, if the sub-number used in a hospital is specified as 3 digits, the user only needs to set the "fixed information length" of the sub-number input box to 3. When editing a task, the user only needs to input valid digits, such as "1", and the "00" at the front of the sub-number is filled by the instrument, and finally a complete sub-number "001" is synthesized, which can save the user's time for repeated input.
- Scanning mode: If [Scanning Split] -> [Number Length] is
 - o checked in the setting window, the "Fixed Information Length"
 - o is used to split the information entered by scanning in the scene
 - o scanning and entering.
 - Example: For example, if the "fixed information length" of the pathological number input box is set to 9, and the "fixed information length" of the sub-number input box is set to 3, when the user edits the task, scan the code and enter the information segment of "202081001A01HE", then the first 9 digits "202081001" will be filled in the pathology number entry box, "A01" will be filled in the sub-number entry box, and finally the remaining "HE" will be filled in the next entry box.
- Edit the time display mode in 5.4.3.6, there are 9 time formats for users to choose.



- Note: Information such as the name of the institution can be set as fixed information to avoid repeated entry; Please set the unused input box to "hidden" to save the task input time;
- When editing the input box parameters, the corresponding input box name and immersive interface string will be automatically lit (in orange), and vice versa.

5.4.4 Edit template font

Click the "Font" column of 5.4.3.7 in Figure 5.22 to edit the font and font size of each input box.

5.4.5 Typesetting

Each input box corresponds to a string of information in the simulation interface, as shown in Figure 5.23 below. Users can directly drag with the mouse, or light up the string of information and then use "Alt + arrow keys" to move frame by frame, and place each piece of information in a reasonable position to design a beautiful and personalized print layout.



5.4.6 Barcode width and height

Figure 5.23

Drag the adjuster shown in Figure 5.24 to set the width and height of the barcode.

5.4.7 QR code binding input box

The QR code is bound to the pathology number input box by default. If the user needs to package and bind the information of multiple input boxes in the QR code, it needs to be set according to the following.

As shown in Figure 5.25, after lighting the QR code, a setting button will appear at the bottom right of the QR code. Clicking this button will pop up the QR code binding window shown in Figure 5.26 below.



Example: Take the Settings shown in Figure 5.26 as an example, the final binding information in the QR code is: "Pathology information # Hospital information # Department information # Project information".

When you exit the [Module] window, the last selected module is the default working module. When you return to the main window, the working module is automatically switched to the current module.



5.5 History

Users can refer to the printed the historical tasks in this window and export them to a local disk. Click the [Menu] drop-down menu at the top of the print management software by the left mouse button and select [History] to enter the interface as shown in Figure 5.27.



[Search]: According the specified search range, the system searches for desired historical records and displays them in the history list. [Clean the screen]: Clean history records in the history list (only clean the records in the list, not the local history).

[Export]: Export the selected history from the history list to the local

record, as shown in Figure 5.28 below.

[Delect]: Deletes the selected history from the history list (the

corresponding local history will be also deleted).

[Select all]: Select all the history records in the history list.

	Export	×		
7 Setting the	Save path		←	6. Set the save path of the history
file name	File name	01~2022-07-08)(Local_tasks) .txt		
The name	Fields	ime, State, Source, Template 🔹	\leftarrow	8 Set export items
	TXT format	ANSI		
	Leading			
	Delimiter	🔿 🚺 💿 Tab 🖕 🗸		9 Set the spacer
	Terminator			
	Tasks quantity	r: 460		
		🗅 Export	\leftarrow	10. Click to export file
		Figure 5.28		



[Figure out]: Figure out daily/monthly/annual print numbers as figure 5.29 below.

Print count	(79701)	×
Day	Month	Year	
Day	C	Count	
2022-06-11		971	
2022-06-13		1211	
2022-06-14		694	
2022-06-17		155	
2022-06-24	64		
2022-06-27	92		
2022-06-28	3021		
2022-06-29		6029	
2022-06-30		3053	
2022-07-01		407	
2022-07-02		9	
2022-07-04		44	
Г:			

Figure 5.29

5.6 Settings

Before using the instrument, some basic parameters need to be set up.

After entering the print management software, click the [Menu] drop-down list at the top of the software by the left mouse button and select [Settings] to enter the interface as shown in Figure 5.30. Click the "Edit" button to modify the setting parameters as required.

TB686 Tissue cassette laser printer	⊞ Menu [⊇Quit
Setting		K- Back
Language	English	
Multi number continuous	-	
Multi number delimiter		
Add identifier to the front of sub-number		
Maximum number of optional repeats	20	
Multi task repetition mode	•	
Print field layout	Left	
Automatically delete expired tasks	Disabled	
Lazer automatically sleeps	Disabled	
Task list fields interval symbol	&	
Print list fields interval symbol	&	
Show task list (reboot effective)	Streamline	
Show print list (reboot effective)	Streamline	
Print immediately after the task is established		
Allow duplicate tasks in the print list		
Automatic increase after blank enter	\bigcirc	
✓ Number ✓ Sub-number		
Task intelligence complement 0		
Print automatically after scanning	\bigcirc	
Separate scan code	\bigcirc	
 Separator 		
🔁 Reset	🗌 🗹 Edit	:56:07

Figure 5.30



- ► Language
 - The language in which the user interface is used when the software is running.
- Multiple consecutive characters
 - The default value is "-", and users can also set it to other symbols as required (English symbols are
 recommended to avoid confusion between Chinese and English symbols, for example,
 - Chinese symbol ", "may make users mistake it as English symbol", ").
 - It is effective for all input boxes in the task entry area of the main interface.
- Multiple serial characters support information
 - Segments that end with a digit or letter.
 - Example: Enter "A1-A3" in any input box of task input area, click "Create" button, and the three tasks whose printed information is "A1", "A2" and "A3" will be split. If you enter 3A-3D, four tasks whose printing information is 3A, 3B, 3C, and 3D are split.
- Multi-digit separator
 - The default symbol is ".", the user can also set to other symbols as required (English symbols are
 recommended to avoid confusion between Chinese and English symbols). It is effective for all input
 boxes in the task input area of the main interface.
 - Example : Enter "1.3.5" in any input box of task input area, click [Create] button, and the three tasks whose printed information is "1", "3" and "5" will be split. Input "1A.HE.# Special" and click the [Create] button to split the three tasks whose printed information is "1A", "HE" and "# Special" respectively.
- ▶ The small front end automatically inserts an identifier
 - The default value is null, that is, does not take effect. Users can also set a symbol as required, the user
 input small content will automatically insert the symbol.
 - Example: For example, set the identifier to " -". If the user does not enter a small number when creating a task, the small number is null. If the minor content entered when creating a task is 01, the final minor content of the task is " -01".
- The maximum optional Value of the number of tasks repetitions when creating a task
 - Set the number of options available from the drop-down menu of the "Number of Task repeats" function in 5.3.1.8 above.
 - Example: For example, if the "Maximum number of repetitions" is set to 20, the "Number of repetitions" drop-down menu above provides a total of 20 options ranging from 1 to 20 for users to select.
- The arrangement mode of multiple tasks after the number of repetitions
 - When user creates a task in the mode of multi-number entry, if select the number of "tasks repetition times" is greater than 1, the instrument will determine the order of task creation according to this "multi-number repetition mode", so as to facilitate user group use
 - For example, if user enter "1-3" when create the task, the number of repetitions will be set as "2".
 123..123.. : If select this method, the above example generates six tasks with the printed information of "1", "2", "3", "1", "2", and "3" in sequence
- The printed layout of fields
 - User may select the left/center/right. When tasks are displayed and printed, the printed information
 is laid out according to this layout. Figure 5.31 shows the printing effect when "left" is selected, and
 figure 5.32 shows the printing effect when "right" is selected.



Figure 5.31

Figure 5.32



Automatically deletes expired tasks from the task list

If select "OFF ", the software does not automatically delete tasks in the task list. You need to manually delete unnecessary tasks regularly. If select a time such as "5 working days", the software will automatically delete the printed tasks created in the task list more than 5 working days, and the unprinted tasks will not be deleted. Eg: If select "5 working days", the software will automatically delete all printed tasks in the task list before October 11, 2021 when it starts on October 18, 2021 (Monday). Saturday/Sunday are not counted as working days.

The interval between fields in the task list

When set the interval between fields in the task list, the default interval is "#". Figure 5.33 shows the task list separates the fields with "#".



Figure 5.33

• The interval between fields of printed list

Set the interval between fields in the print list. The default interval is "#". Same as above.

Task list display mode

User can select compact/detailed. If thin mode is selected, only pathology sign and minor information are displayed in the task list. If detailed mode is selected, complete information is displayed. To switch the display mode, restart the software for the switch to take effect.

Print list display mode

You can select simple/detailed. If select the simple mode, only pathology number and small information are displayed for tasks in the print list. If select detailed mode, complete information will be displayed. If switch the display mode, user need to restart the software for the switch to take effect.

• Print the task automatically after input

If selected this option, the tasks created by the user are directly saved to the print list as well as to the task list. In other words, whenever a user creates a task, the instrument assumes that it needs to be printed.

If this option is not selected, the tasks created by users are only saved to the task list. When a user wants to print a task, the user needs to select the task to be printed from the task list and add it to the print list.

• Allow to print the tasks from the list automatically.

To set whether allow the list to have duplicate print tasks.

Empty series number to add it automatically.

If there is no information in the input box of Pathology

No/small No, directly click Enter, and the "+1" operation will be

performed on the basis of the input information last time.

eg: If you enter "A01" in the small input box and create a task, the small input box will remember "A01". In the next editing task, the user only need to directly press enter in the blank small input box, then the small input box will automatically fill in "A02".

Intelligent complement 0 at the high level for serial tasks

If this option is not selected, 7, 8, 9, 10, and 11 will be generated when create a serial number task, such as 7-11. If this option is selected, 07, 08, 09, 10, and 11 will be generated when create a serial number task, such as 7-11. That means each task will add 0 in the front according to the maximum number of serial tasks.



• Scan and print the number immediately

For the use scenarios of scanning gun scan code input, if this option is selected, the software will directly generate tasks after the user performs code scanning input without clicking the "Create" button.

• Scan code to division

For the use scenarios of scanning gun scan code input, if this option is selected, the input information can be split and filled into each input box.

- Delimiter: Separates the entered information by using delimiters. eg: If the separator is set to "#" and the input information is "202081001#A01#HE", the software will split the information into "202081001", "A01", and "HE".
- The length of template preset field: Use the template predefined pathology number/small "fixed message length" to split the information entered in the scan code.

eg: if the "fixed information Length" of the pathology number input box is set to 9 and that of the small number input box is set to 3, when the user sweeps the code to enter the information section of "202081001A01HE", "202081001" will be filled in the pathology number input box, "A01" will be filled in the small number input box, and "HE" will be filled in the next input box.

Network name of instrument

Set the network name of the instrument so that when the instrument is used as a remote printer, other terminals that want to bind to the instrument can search and identify the instrument on the LAN.

• Split the remote task field

Set the remote print symbol for the instrument, including leading/delimiter/terminator. When the instrument is used as a remote printer, this symbol will be used to split the printed information received.

eg: If the task information generated by the pathology system is 1234567/A01/HE, set the preceding leading character to "", delimiter to"/", and end to "".

eg: If the task information generated by the pathology system is "\$1234567/A01/HE\$", set the preceding leading character to" \$", delimiter to "/", and end to "\$".

eg: If the task information generated by the pathology system is "\$1234567\$A01\$HE", please set the preceding leading character to "\$", delimiter to" \$", and end to "".

Analysis of remote task slot box

Sets the remote slot selection symbol for the instrument,

including leading/separator/end character. When the instrument is

used as a remote printer, this symbol will be used to identify the

tissue box channel number that the pathology system can use for this task.

eg: If the task information generated by the pathological system is "1234567/A01/HE[135]", please set the preceding leading character as "[", delimited character as" ", and ended character as "] ", the instrument can parse out the tissue box channel numbers specified by the pathological system that can be used by the task as channel 1, channel 3, and channel 5.

eg: If the task information generated by the pathological system is "1234567/A01/HE[1/3/5]", please set the preceding leading character as "[", the separator character as"/", and the end character as "] ", the instrument can parse out the tissue box channel numbers specified by the pathological system that can be used by the task as channel 1, channel 3, and channel 5.

Synchronous printing

If you want the instrument to complete a printing task, the bound slide marking machine can automatically print the same task, please check this option. Please see Chapter 7 below for detailed usage.

Target IP: If the instrument and slide printer are to be bound by a network, need to determine the IP of the slide printer . Please click the search button on the right to search for online instruments in the LAN and select the target printer to bind with it.



Restore factory Settings

Please click the button on the right, enter the activation code

in the pop-up window and confirm it, the software will automatically shut down. After the user starts the software again, the "Restore factory Settings" command takes effect and automatically restores the parameters to factory Settings.

There are four options to choose "Restore factory Settings" feature:

Task Information: The task list and print list on the main menu will be cleared.

History Record: The history record on the history window will be cleared.

User Settings: Function parameters of the Settings menu will be restored to factory Settings.

User Template: The user template page will be cleared .

5.7 Special Parameter Setting

This module is used to debug the motor movement parameters and laser printing parameters of the instrument, which are set by the manufacturer, after-sales personnel and trained users, as shown in Figure. 5.34.

5.8 About

It shows the software version and manufacturer information.

5.9 Exit

After finishing all the work, the user should click the "Pause" button in the print list on the main menu of the software, wait until the instrument stops printing, and then click the "Exit" button on the upper right corner of the main menu to exit the software. Then, press the POWER button on the front panel of the instrument, and wait until the instrument shuts down and the system shuts down.

Note: When the instrument is printing, it cannot exit the software (if click the "exit" button during printing, the instrument will send out an alarm).

Note: Please strictly follow the sequence of "Turn off the software" \rightarrow "Turn off the system" \rightarrow "Turn off the power" to turn off the power. It is strictly forbidden for users to power off the software and the system directly without turning off the software and the system, so as not to damage the software and hardware systems.

TB686 Tissue cassette laser printer	⊞ Menu	🖂 Quit
Debug		K Bac
Laser debug		
Correction: X-axis offset (mm)	0	
Correction: Y-axis offset (mm)	-20	
Correction: X-axis scaling	8.5	
Correction: Y-axis scaling	8.5	
Correction: Angle adjustment (°)	0	
Code: Preset parameters	Para 2	-
Code: Power (1~100%)	70	
Code: The running speed (500~5000 mm/s)	1000	
Code: Filling spacing (0.2~0.005 mm)	0.05	
Code: Barcode dot matrix mode	Default	-
Text: Preset parameters	Para 2	-
Text: Power (1~100%)	70	
Text: The running speed (500~5000 mm/s)	1000	
Text: Filling spacing (0.2~0.005 mm)	0.05	
Movement debug		
Optional: Slot box specification	6 Slots	-
Optional: Print angle of tissue box	45°	-
Control: Waiting time before get a tissue box	200	
Control: Waiting time before platform reset	200	
Reset		Edit

Figure 5.34



6 Remote printing service software

This instrument can be used as a remote printer (Supports Windows XP、Windows 7 and Windows 10 system).

6.1 Remote printer connection Settings

The packing box of the instrument includes an USB-to-serial cable, an USB-to-RJ-45 converter and an RJ-45 network cable.

6.1.1 Serial interface mode

Serial mode means the instrument uses serial mode to communicate with the computer that needs to use the remote printing function.

When using the serial port printing function, please connect the serial interface of the instrument and the USB interface of the computer with the attached USB to serial port cable, and then put the attached driver CD into the computer drive, click THE DVD ROM to open the driver installation program to install the driver.

6.1.2 Network mode

Network mode means the instrument through LAN and need to use the remote printing function of the computer for communication.

When using the network printing function, please connect the instrument to the same LAN as the computer that needs to use the remote printing function with the rJ-45 network cable attached.

Then connect the network cable, as shown in Figure 6.1 and 6.2.



Figure 6.1

Figure 6.2

If there is no LAN in the place where the instrument is used, the RJ-45 network cable can also be used to connect the RJ-45 network port of the instrument to the RJ-45 network port of the computer directly (the network cable is directly connected). If the rJ-45 network port of the computer cannot be used, you can also insert the attached USB to RJ-45 converter into your computer, and then connect the converter directly with the RJ-45 network port of the instrument with the rJ-45 network cable, and then put the attached CD into the computer drive. Click the DVD-ROM to open the driver installation program to install the driver.

After connecting the line, it is necessary to set up IP and other information, the instrument and the need to use remote printing computer set in the same LAN segment.





Local Area Connection 3 Properties	Internet Protocol Version 4 (TCP/IPv4) Properties
Networking	General
Connect using: Reatek PCIe GBE Family Controller #3 This connection uses the following items: Configure. This connection uses the following items: Configure.	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. C Obtain an IP address automatically C Use the following IP address: IP address: Subnet mask: 255 : 255 : 255 : 0
Link-uper Toplong Discovery Responder Link-uper Toplong Discovery Responder Link-uper Toplong Discovery Responder Link-uper Toplong Discovery Responder Install. Install. Properties	Default gateway: 192 - 168 - 1 - 254 C Obtain DNS server address automatical C Use the following DNS server addresses Prefered DNS server:
Description Transmission Control Protocol/ Nernet Protocol. The default wide at actoss 3. Double Click	Akernate D 4.Set the IP addres
OK Car	ncel OK Cancel
Figure 6.5	Figure 6.6

Note: IP and other information of computer and instrument need to be set only in network mode, if it is serial mode, no need to set it.

6.2 The installation and settings of drive program

6.2.1 Software installation

Before the instrument is used as a remote printer, the remote printing service program needs to be installed on the corresponding computer. Currently, it supports Windows XP, Windows 7 and Windows 10 systems. Please run the remote print installation program prInternet.exe on the corresponding computer, as shown in Figure 6.7 below.

🕞 PrinterNet 1.0 Setup	
	Welcome to the PrinterNet 1.0 Setup Wizard This wizard will guide you through the installation of PrinterNet 1.0. It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
	Next > Cancel

Figure 6.7

Click Next and select the installation target folder.

🕞 PrinterNet 1.0 Setup	- • •
Choose Install Location Choose the folder in which to install PrinterNet 1.0.	Viiii
Setup will install PrinterNet 1.0 in the following folder. To install in a diffe Browse and select another folder. Click Install to start the installation.	rent folder, dick
Destination Folder C: (Program Files (x86))PrinterNet	Browse
Space required: 34.9MB Space available: 40.0GB	
Nullsoft Install System v2.08	all Cancel
Figure 6.8	

Click Install to start to install the drive program



During the installation, if the antivirus software prompts you whether to prevent the installation program from modifying the system, select Allow the modification. Otherwise, the installation may fail. When the installation is complete, the following interface appears:



Figure 6.9

Click Finish to complete the installation of drive program.

6.2.2 Parameter setting

Double-click the PrinterNet icon on the computer desktop to open the remote printing software. Before using the remote printing function, you need to set some basic parameters. Select [Function Setting] to enter the menu as shown in Figure 6.10. Click the "Modify" button to modify the Settings.

Tissue Cassette Printer(6 Slots) Pathology	r Remote Print Software	ıt		Hide to tra	y∣– ×
Language		English		Ý	
Printer Type		Tissue Cas	sette Printer	(6 Slots) ~	
 Serial port 	Serial number	COM2		~	
Networks	IP address	192.168	8.3.10		EQ
	Print network name	001			
Remote print symbol Leadi	ng/Delimiter/Terminator		1		
Remote slots symbol Leadi	ng/Delimiter/Terminator	1		1	
Coding	ANSI ~	English		~	
TXT folder path	C:/	'Users/lab	sim/Desk	top/AAA\	
		Edit	Save	Cancel	
Send type: Networks	State: Fail 🔘			Dev na	ime:
	F'				

Figure 6.10

Language

Switch to other language.

Model No of printers

Set it to the model corresponding to the instrument.

Serial port communication

Select this option if the PrinterNet software is connected to the printer by a serial port. On the right is a list of serial serial numbers available to the computer. Please select the serial number used for the connection described in 6.1.1 above.

Network communications

Select this option if the PrinterNet software is connected to the printer over the network. Click the button on the right to search the printer, and the user can select the corresponding printer. After the selection is complete, printer IP Address and Printer Network Name will display the IP address and network name of the printer.

Remote print the symbol



Please set it according to the symbol used by the user's LIS pathology system, and set the [Remote Printing symbol] in the [Settings] menu of the dialing machine as a consistent symbol. Examples are as follows: eg: If the task information generated by the pathology system is "1234567/A01/HE", please set the leading character to "", delimiter to "/", and end character to "". eg: If the task information generated by the pathological system is "\$1234567/A01/HE\$", please set the leading character to "\$", the delimiter to "/", and the end character to "\$". eg: If the task information generated by the pathological system is "\$1234567/A01/HE\$", please set the leading character to" \$", the delimiter to "/", and the end character to "\$". eg: If the task information generated by the pathology system is "\$1234567\$A01\$HE", please set the leading character to "\$".

Remote slot selection symbol

Please set it according to the symbol used by the user's LIS pathology system, and set the symbol of remote Slot selection in the [Settings] menu of the dialing machine as a consistent symbol. Examples are as follows:

eg: If the task information generated by the pathological system is "1234567/A01/HE[135]", please set the preceding leading character as "[", delimited character as" ", and terminated character as "] ", then it can be resolved that the tissue box channel numbers that can be used by the pathological system are channel 1, channel 3, and channel 5. eg: If the task information generated by the pathological system is "1234567/A01/HE[1/3/5]", please set the preceding leading character as "[", delimit character as"/", and end character as "] ", then it can be used by the pathological system are channel 1, channel 3, and channel 5. eg: If the task information generated by the pathological system is "1234567/A01/HE[1/3/5]", please set the preceding leading character as "[", delimit character as"/", and end character as "] ", then the pathologic system can parse out the tissue box channel numbers that can be used by the task as channel 1, channel 3, and channel 5.

Code

Please set according to the user's operating system encoding format and the TXT print file encoding format.

TXT Monitoring directory

Please set the monitoring directory of the remote service software, which is used to monitor and read the TXT printed files output by the pathological system on the user's computer

Note: The LIS pathology system of the user's computer will generate TXT files (UTF-8 encoding format) for the contents to be printed in the agreed format, and save them in the "TXT monitoring directory" of the customized path, for example, "D:\Print_TXT" (the path of this directory is determined by the user's LIS pathology system). There is no limit on the number of TXT files generated by LIS pathology system and filename. New TXT files can be generated every time there is a printing requirement. PrinterNet software will real-time monitor the "TXT monitoring directory" mentioned above, extract all TXT files inside, read the task content in TXT files, and send to the binding machine, and then automatically delete the TXT file.

6.3 Remote print test

When the setting is complete, if the [Connection Status] icon in the status bar below the remote printing service software is green, and the [Remote] icon in the status bar below the printing service software of the bound printer is also green, it indicates that the remote printing service software is successfully bound to the target printer.

We can simulate the pathological system and create TXT documents to test the remote printing function. Create a TXT file on the computer where the remote printing service software is located, and edit the content of the file in a certain format (the delimiters should correspond to "Remote Printing symbols" in 5.6 and 6.2.2), as shown in Figure 6.11. Then copy the TXT document to the folder specified in the above "TXT monitoring directory".





If the remote printing service software is started at this time, after it monitors the TXT document, it will read the content of the document and display it in the "Task List", as shown in Figure 6.12. Click the "Start" button, then the task will be sent to the bound dialing machine. After receiving the task data, the dialing machine can print the task. So far, the function of remote printing is realized.

Tissue Cassette Printer(6	Slots) Pathology Remote	Print Software Hide to tray - ×
II Stop	Tasks list 1 1234567/1/HE 2 1234567/2/HE 3 1234567/3/HE 4 1234567/4/HE	Create tasks
Send type: Network	\$	State: Fail 🥥 Dev name:

Figure 6.12

If the remote printing service software is bound to a marking machine that can switch the channel number of tissue box, we can also simulate the pathological system and create a TXT document with slot selection instructions to test the remote printing function, as shown in Figure 6.13 below (in addition to setting printing symbols such as delimiters, You also need to set the slot symbol according to "Remote Slot Symbol" in 5.6 and 6.2.2).

		📗 * test.txt - Notepad2-me	od
		<u>File Edit View Settings</u>	s <u>?</u>
	test.txt	1234567/1/HE[123] 1234567/2/HE[123] 1234567/3/HE[123] 1234567/4/HE[123]	
Select slot 1, slot 2, and slot 3			
		Figure 6.13	



6.4 Other functions

As shown in Figure 6.14 below, in the remote printing service software, users can also directly input the printing information to create a task, and then send it to the number printer bound to it through the serial port or network for printing. This function also supports the use of "multiple number entry", "fixed", "memory", "single number/double number", "+1/-1", "channel number" and other common functions in the process of input tasks, as in Figure 5.3.1.1.

			Hide to tray - ×
🏠 Tasks list	Setup	🕖 About	
O Today's count II Stop & Up Vp > Down Delete Clear Clear	Tasks list	Create tasks	() () () () () () () () () ()
Send type: Network	s	State: Fail 💿	Dev name:

Figure 6.14



7 Synchronous printing function

Through LAN or serial port, the instrument can be bound to the slide

printer of our company, so that the slide printer can receive the same information synchronously after the printing task of the instrument, and realize the synchronous printing function.

Note: The synchronous printing function must be to organize the cassette printer to send tasks to the slide printer.

7.1 Synchronizing Printer Connection Settings

The packing box of the instrument includes a serial cable, a USB-to-serial cable, a USB-to-RJ-45 converter and an RJ-45 network cable.

7.1.1 Serial interface mode

Serial port mode means the instrument uses serial port mode to communicate with the slide printer which needs to use synchronous printing function. Please connect the instrument with the COM port on the back of the slide printer with the double male serial cable (the instrument is not equipped with the double male serial cable, please buy it by yourself).

7.1.2 Network mode

Network mode means the instrument communicates with the slide printer which needs to use synchronous printing function through local area network. The connection and setting methods are the same as 6.1.2.

7.2 Parameter setting

After setting the connection according to 7.1, it is necessary to set the setting parameters of the instrument and the slide printer.

7.2.1 This instrument

Click the setting menu of the instrument and set the following items.

• Synchronous printing

Check the "Print synchronously" option and set the "network"/" serial "option below according to the connection properties.

- Network: Check this option if the instrument uses a local area network to connect to the slide printer. After connecting the network cable and turning on the slide printer, please click the button on the right of this item to search for the marking machine, and then select the slide printer to be bound according to the IP and network name in the drop-down menu
- Serial port: Select this option if the instrument is connected to the slide printer in serial port mode

7.2.2 Slide printer

Open the Settings menu of the slide printer you want to bind and set the following items.

Remote print symbol

Set the [remote print symbol (lead/separate/end)] of the slide printer to the same symbol as the instrument.

7.3 Synchronous print test

After setting, if the [Sync] icon in the status bar below the print management software of the instrument is green, and the [Sync] icon in the status bar below the print management software of the slide printer is also green, it means that the instrument has been successfully bound with the target slide printer.

Set up the current template for the two printers. Create a print task in this instrument and print. After printing, if the printing list of the slide printer can receive the corresponding printing task and print, it means that the synchronous printing function has been tuned.



8 Equipment maintenance

This instrument uses ultraviolet laser printing technology to write and mark POM medium, and the use environment is complex. In order to prolong the service life of the instrument, users need to maintain the instrument regularly.

- Check whether software parameter Settings are changed regularly to prevent others from changing device parameters.
- Check whether there is any deviation in the printing positi regularly on , if there is any deviation, please adjust the printing position in time.
- Do not cover or stack other items on the equipment, so as not to affect the cooling effect of the machine.
- Check the operation status of the fans regularly, and please contact the after-sales service for replacement of the abnormal fans.
- Do not force high power to operate for a long time, so as not to shorten the service life of the laser.
- Please maintain a suitable environment for use, and it is strictly forbidden to start the operation in a harsh environment.
- After the work is completed, please shut down according to the correct shutdown steps, so as not to damage the software and hardware.
- Do not turn on the instrument for a long time without turning it off, so as not to accelerate the aging speed of the laser.
- It is strictly forbidden to move the equipment during the working process, so as not to damage the machine.
- It is strictly forbidden to move the equipment during the working process, so as not to damage the machine.
- Check whether the various parts of the equipment are fastened to ensure the reliability of the installation regularly.



9 Daily failure analysis and handling

9.1 Failure of the instrument to start normally

☞ Analyze the reason:

- (1) The power socket has no electricity
- (2) The main switch of the instrument is not turned on
- (3) The fuse is open
- (4) No voltage output of switching power supply
- 🖙 Methods:
- (1) Check whether the indicator light of the power socket is displayed normally or use a multimeter to measure the output voltage of the power socket.
- (2) Turn on the main switch of the instrument.
- (3) Replace the fuse (specification model: 3A 250V/5*20mm).
- (4) Replace the switching power supply.

9.2 Software system failure

- Analyze the reason:
- (1) The software cannot be started
- (2) Network printing, no action
- 🖙 Methods:
- (1) Uninstall the software and reinstall it.
- (2) Check whether the network cable is plugged in properly, and whether the parameters are set according to 6.1.2.

9.3 The Screen does not display well

Analyze the reason:

- (1) FPC cable and LVDS cable are not connected well. LVDS driver board is damaged
- (2) The button battery of the industrial control board is exhausted, resulting in the loss of the parameters of the LCD screen
- (3) Industrial control board failure
- (4) Display failure

☞ Methods:

- (1) At first, check whether the voltage of the LVDS driver board is normal. If it is not normal, replace the LVDS driver board; secondly, check whether the FPC cable is connected well, and whether the LVDS cable is well connected. If it is all connected, replace it with a new wire.
- (2) Then check whether the button battery is normal, if not, replace the button battery, and then redesign the LCD screen parameters of the system.
- (3) Connect the external monitor to see if it can display normally, if not, replace the industrial control board; if it can display normally, the industrial control board is faultless.
- (4) If the external monitor displays normally, and the LVDS driver board is also normal, replace the LCD monitor.

9.4 The instrument cannot print the tissue box properly

P Analyze the reason:

- (1) The software sets the dry run mode
- (2) The laser board card control line and the galvanometer control line are not well connected, and the laser connection line is discounted



(3) Laser damage

🖙 Methods:

- (1) Enter the setting interface to set the normal printing mode.
- (2) Straighten out the relevant wires and ensure their reliable connection.
- (3) Replace the laser.

9.5 Serial communication failed

Analyze the reason:

- (1) Data packet loss during software startup
- (2) The serial communication line is not connected properly
- (3) The main control board is damaged

Methods:

- (1) Start the instrument according to normal operation.
- (2) Re-plug the serial communication cable to ensure its reliable connection.
- (3) Replace the main control board.

9.6 Failed to get laser board ID

☞ Analyze the reason :

- (1) The communication line of the laser board is not well connected
- (2) Damage to the laser board
- ☞ Methods :
- (1) Re-plug and unplug the communication cable of the laser board to ensure its reliable connection.
- (2) Replace the laser board.

9.7 Turntable motor blocked

Analyze the reason:

- (1) The tissue box or the tissue box compartment is stuck on the rotating structure of the turntable
- (2) The turntable motor detects photoelectric damage

🖙 Methods:

- (1) Load the tissue box and the tissue box compartment correctly, and remove the tissue box on the turntable structure.
- (2) Replace the detection photoelectric.

9.8 Take box motor blocked

Analyze the reason:

- (1) The tissue box/tissue box compartment is not placed properly, and the tissue box falls onto the movement structure of the box
- (2) Detection of photoelectric damage

🖙 Methods:

- (1) Load the tissue box and the tissue box compartment correctly, and remove the tissue box on the box removal platform.
- (2) Replace the detection photoelectric.

9.9 The motor of the carrier platform is blocked

Analyze the reason:

- (1) The tissue box is dropped onto the motion structure of the carrier platform
- (2) Detection of photoelectric damage



- ☞ Methods:
- (1) Clear the tissue box on the delivery platform.
- (2) Replace the detection photoelectric.

9.10 Queued motor is blocked

- ☞ Analyze the reason :
- (1) The tissue boxes are not all pushed to the queuing platform, causing the queuing motor to get stuck when pushing the boxes
- (2) Detection of photoelectric damage
- 🖙 Methods:
- (1) Increase the stroke of the motor of the carrier platform.
- (2) Replace the detection photoelectric.

Note: Please contact our technical team to handle the above related technical operations or operate under the guidance of our technician.

10 Alarm information of the instrument

Tips	Description	Methods
Tissue box is used up	The tissue box in the box compartment has been used up	Reload the unprinted tissue cassettes
The front panel opened	The front panel of the instrument is opened by the user	Please close the front panel in time after opening the front panel to clean the instrument or dispose of the tissue cassette blocking the channel.





Label	Explanation
	Slot number
2,005	Moving parts. Beware of collisions
Mind Your A Beware of Hands Collisions	Watch out your hands and be ware of collisions
*	Beware of lasers
	Forbidden to be opened when running
	Be careful

12 Technical DTM Print Support

If you have difficulties operating your TCP450, contact your local distributor or alternatively the DTM Medical support team during the official business hours using the online live chat on our website <u>dtm-medical.eu</u>.

Alternatively, fill in the support form <u>dtm-medical.eu</u> or send us an e-mail at any time to <u>support@dtm-print.eu</u>. This service is free for all our customers. Please be aware that you have to be registered with your product first, to get free support. Register your device here: <u>register.dtm-medical.eu</u>

