



Data Management Software Operating Guide

Version Information

Version	Version Number
Software Version	1.0.9273
Release Version	1.1

Software Operating Environment

Supported Operating Systems	Windows 7 Ultimate; Windows 8.1 Pro; Windows 10 Pro ; Microsoft Windows XP Professional SP3
Supported Languages	Chinese; English; Spanish;
Supported Resolution	1024*768 or above

Release Date: 2019-5-8

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1. Installation

1.1 Installation

- 1) Decompress the files;
- 2) Run the data management software installer and follow the prompts to complete the software installation;
- 3) When completed, please input the user name and password;

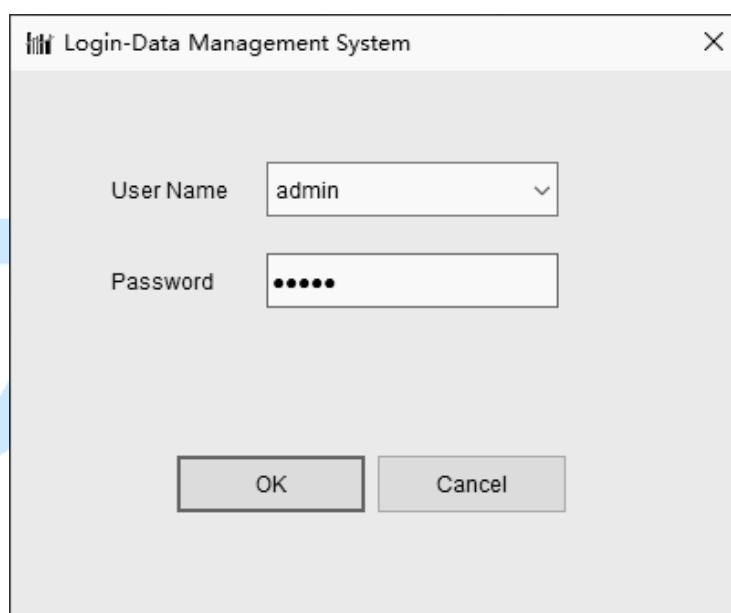


Figure 1 Login Page

Default User Name: **admin**

Default Password: **admin**

2. Communication Preparation

2.1 Instrument: Communication Setting

Path: Management – Setup — General — Communication – Set the IP address

and default gateway

Reminder:

- IP address of the instrument must be on the same network segment as the IP of the computer and **can't be same with the IP of computer** (where the data management software is installed).

For example:

- If the IP of the computer is 192.168.0.10, then the IP of instrument must be 192.168.0.xxx but can't be 192.168.0.10 (for example, it can be 192.168.0.2/192.168.0.3/192.168.0.4/192.168.0.5/192.168.0.6)

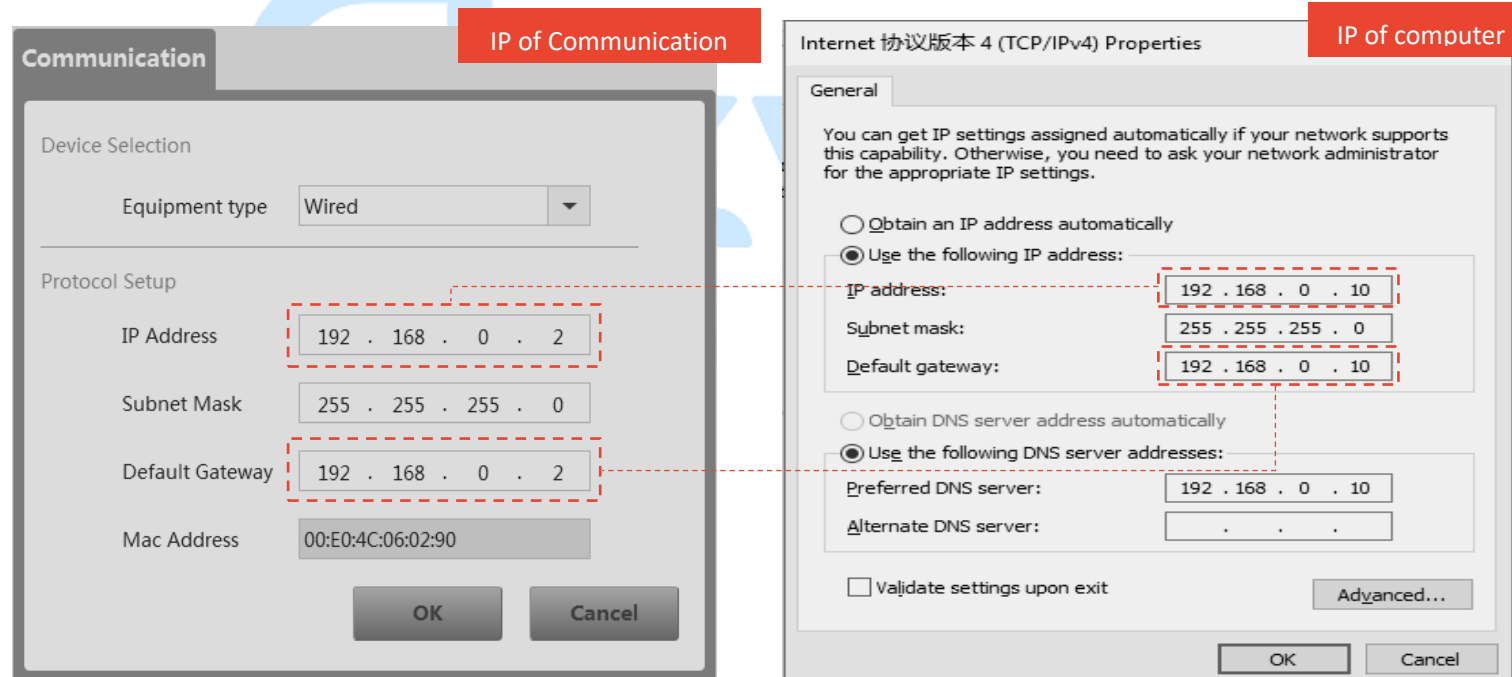


Figure 2 Communication Setting

2.2 Instrument: LIS Setting

Path: Management – Setup — General – LIS – set the LIS IP address and LIS port

Reminder:

- The LIS IP address must be same with the IP address of the computer where the data management software is installed.
- “LIS port” is the listening port of the data management software, the default port is “10001”.

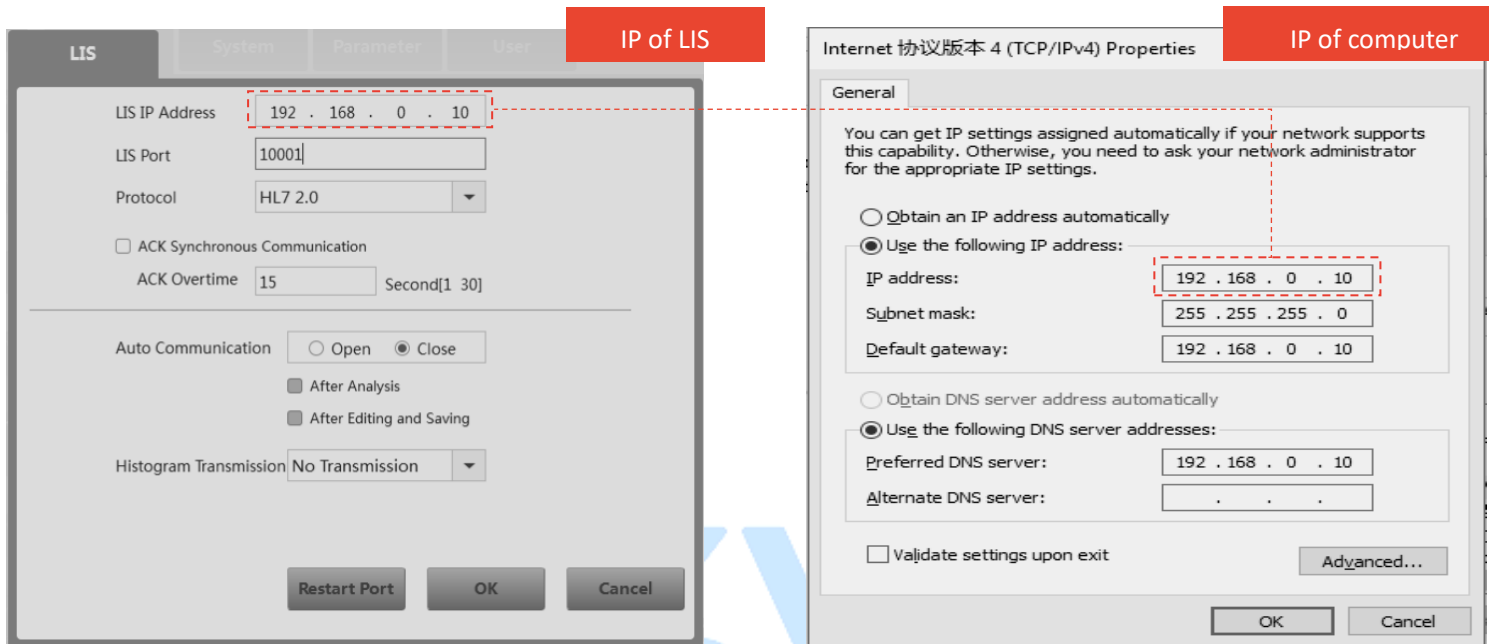


Figure 3 LIS Setting

2.2.1 If the data management software and instrument are successfully connected, and the LIS icon in the lower left corner of the instrument status bar is highlighted in blue, while gray indicates connection failure. At the same time, there will be a prompt **[Connected:10001]** in software interface.

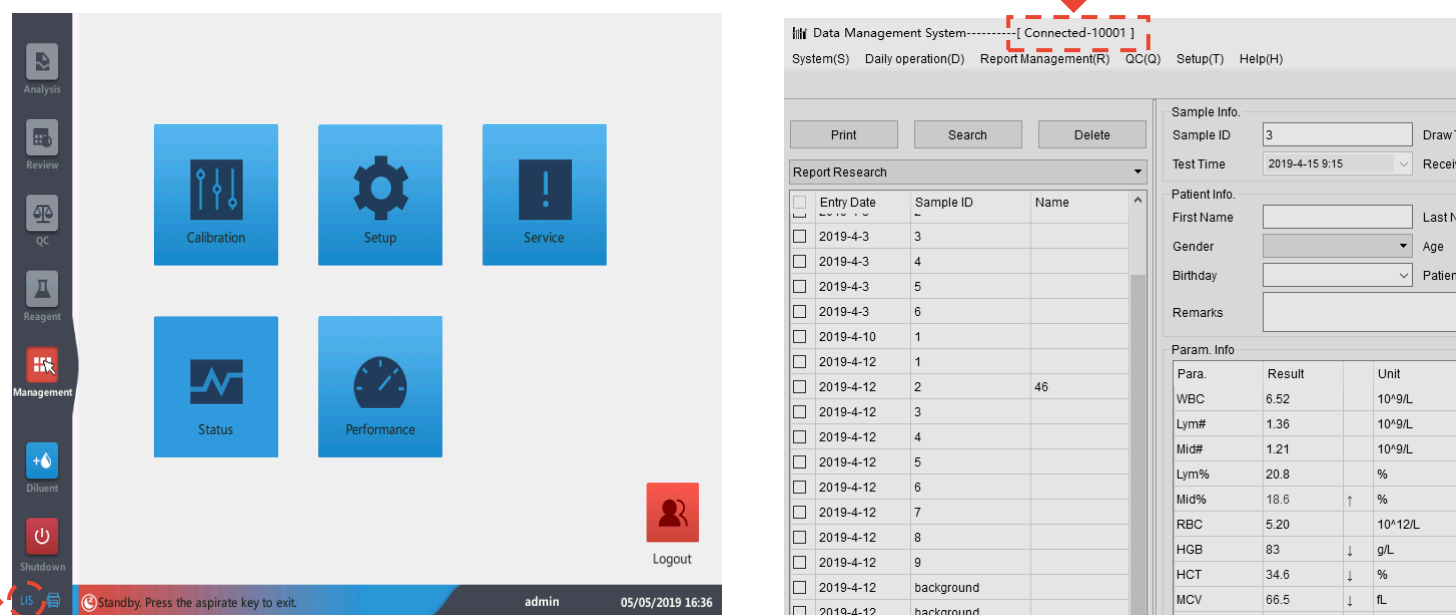


Figure 4 Connected successfully

2.2.2 If the LIS is not connected to the instrument successfully, do as the following:

- 1) Path: Management – General – Setup – LIS – Restart Port;

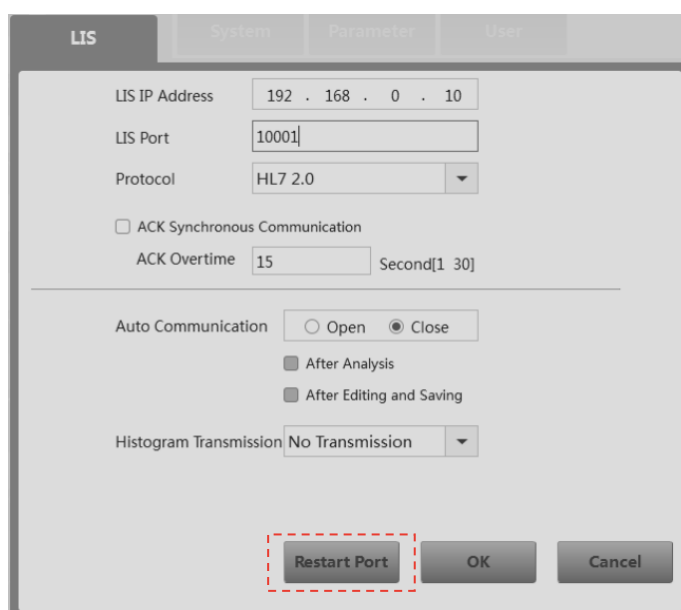


Figure 5 Restart Port Page

- 2) Restart data management software;
- 3) Check if there is a port conflict, modify the port number and restart the software.

2.3 Communication Mode Setting

2.3.1 ACK synchronous communication is not implemented.

2.3.2 The histogram transmission method: No Transmission / Bit Transmission.

2.3.3 Auto communication: Open / Close

- 1) If chose "Open",
 - When check (v) "After Analysis", test results will be automatically transferred to the software after analyzing;
 - When check (v) "After Editing and Saving", test results will be automatically transferred to the software after test results are edited and saved.
- 2) If chose "Close", you need to communicate data manually on "Review Interface" or "L-J QC interface". Operation is as follow:

Click "Review" – choose the required sample – click "communication"

LIS

System Parameter User

LIS IP Address 192 . 168 . 0 . 10

LIS Port 10001

Protocol HL7 2.0

☐ ACK Synchronous Communication

ACK Overtime 15 Second[1 30]

Auto Communication ☐ Open ☒ Close

☐ After Analysis

☐ After Editing and Saving

Histogram Transmission No Transmission

No Transmission

Bitmap Transmission

Restart Port OK Cancel

Figure 6 Automatic Communication Setting

Sequence	11	12	13	14	15	16
Sample ID	4	5	6	7	8	9
Status						Validated
MCH	***	***	***	***	***	***
RDW-CV	***	***	***	***	***	***
RDW-SD	***	***	***	***	***	***
MPV	14.8	14.7 ↑	14.5 ↑	14.9 ↑	14.6 ↑	14.7 ↑
PDW	13.7	12.9	12.7	13.1	13.1	13.0
PCT	0.244	0.216	0.244	0.257	0.253	0.259
P-LCC	116	109 ↑	124 ↑	123 ↑	123 ↑	125 ↑
P-LCR	70.5	73.9 ↑	73.9 ↑	71.3 ↑	70.7 ↑	70.6 ↑
Patient ID						
Name						
Blood Model	WB	WB	WB	WB	WB	WB

Search Graph Review Trend Graph Comm. Export Delete

Position/Sum 13/43 factory 2019-04-04 15:31

Figure 7 Manual Communication Setting

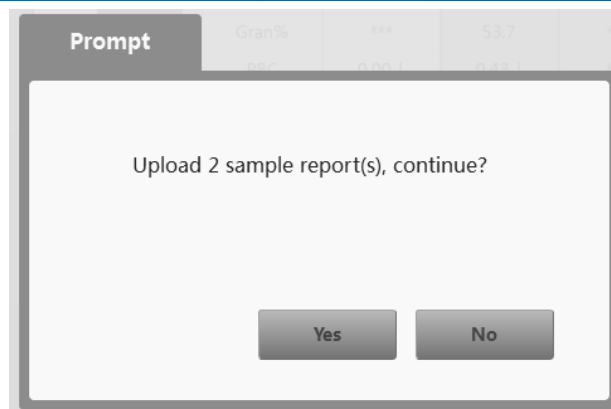


Figure 8 Uploading

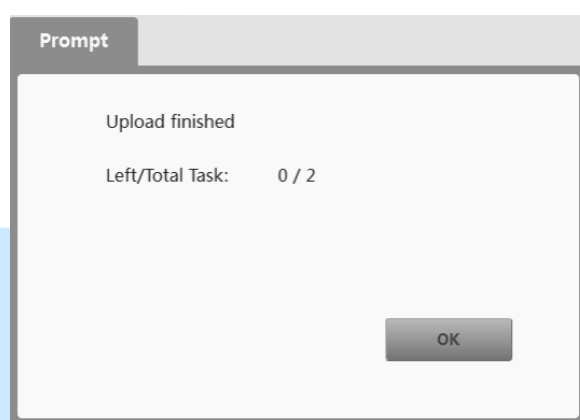


Figure 9 Upload Fished

3. Faults and Precautions

3.1 Faults

3.1.1 Faults flag: LIS communication abnormal

When automatic communication is opened but connection is failed, after analyzing or editing, faults flag “LIS communication abnormal” will be reported.

3.1.2 Faults clear: If the LIS connection is successful, the fault will be automatically cleared, otherwise not.

3.2 Precautions

- 3.2.1 Please do not open the **Automatic Communication** when not connected.
- 3.2.2 Please do not open **ACK synchronous communication** since it is not available.
- 3.2.3 Please click “restart port” and restart your software after changing the IP address or port number.
- 3.2.4 One-way communication from the instrument to the data management software only;

4. Function Instruction

4.1 Software Interface

- 4.1.1 The main interface only displays the communication results of the “Analysis” / “Review”.
- 4.1.2 Basic operation such as “Print”, “Search”, “Validate” and “Delete” button are consistent with the instrument.
- 4.1.3 The instrument can transmit basic information other than "Remarks" to the data management software.
- 4.1.4 Pre-enter: users can enter patient information in advance.

After that, the information transmitted from the instrument will be automatically matched according to the "Entry Date" and "Sample ID" in the communication process.

Sample List

Entry Date	Sample ID	Name
2019-3-29	background	
2019-4-1	321	
2019-4-1	3	
2019-4-1	31	

Sample Information

Sample Info: Sample ID: 3, Draw Time: 2019-4-1 8:56, Delivery Time: , Ref. Group: General
 Test Time: 2019-4-1 8:56, Receiving time: 2019-4-4 9:47, Status: Not Validated, Not Printed

Patient Info: First Name: , Last Name: , Patient ID: , Deliverer: , Gender: , Age: , Year(s): , Dept: , Tester: admin, Birthday: , Patient Type: , Bed No. , Auditor: , Remarks:

Result

Para.	Result	Unit	Ref. Range	Para.	Result	Unit	Ref. Range
WBC	0.00	10 ⁹ /L	3.50-9.50	MCHC	***	g/L	316-354
Lym#	***	10 ⁹ /L	1.10-3.20	RDW-CV	***	%	11.5-16.0
Mid#	***	10 ⁹ /L	0.10-1.50	RDW-SD	***	fL	35.0-56.0
Gran#	***	10 ⁹ /L	1.80-6.30	PLT	0	10 ⁹ /L	125-350
Lym%	***	%	20.0-50.0	MPV	***	fL	6.5-12.0
Mid%	***	%	3.0-15.0	PDW	***	fL	9.0-17.0
Gran%	***	%	40.0-75.0	PCT	***	%	0.108-0.282
RBC	0.00	10 ¹² /L	3.80-5.80	P-LCC	***	10 ⁹ /L	30-90
HGB	0	g/L	115-175	P-LCR	***	%	11.0-45.0
HCT	0.0	%	35.0-50.0				
MCV	***	fL	82.0-100.0				
MCH	***	pg	27.0-34.0				

Histogram

Sum:4

New Save Validate Cancel Validate Previous Next

Figure 10 Software Interface

4.2 QC Management : L-J QC

4.2.1 Menu – click “QC” – “L-J QC”, and then you can view L-J quality control communication information in this interface.

Data Management System-----[Unconnected-10001]

System(S)

Daily operation(D)

Report Management(R)

QC(Q)

Setup(I)

Help(H)

L-J QC

File No.	Lot	Valid Date	QC Type	QC ID											
Mode	Level														
Date	Time	WBC	Lym#	Mid#	Gran#	Lym%	Mid%	Gran%	RBC	HGB	HCT	MCV	MCH	MCHC	RDW-CV
Target	/														
Limits(#)	/														

Figure 11 QC Management

4.2.2 Switch to other QC files by using the [Select File].

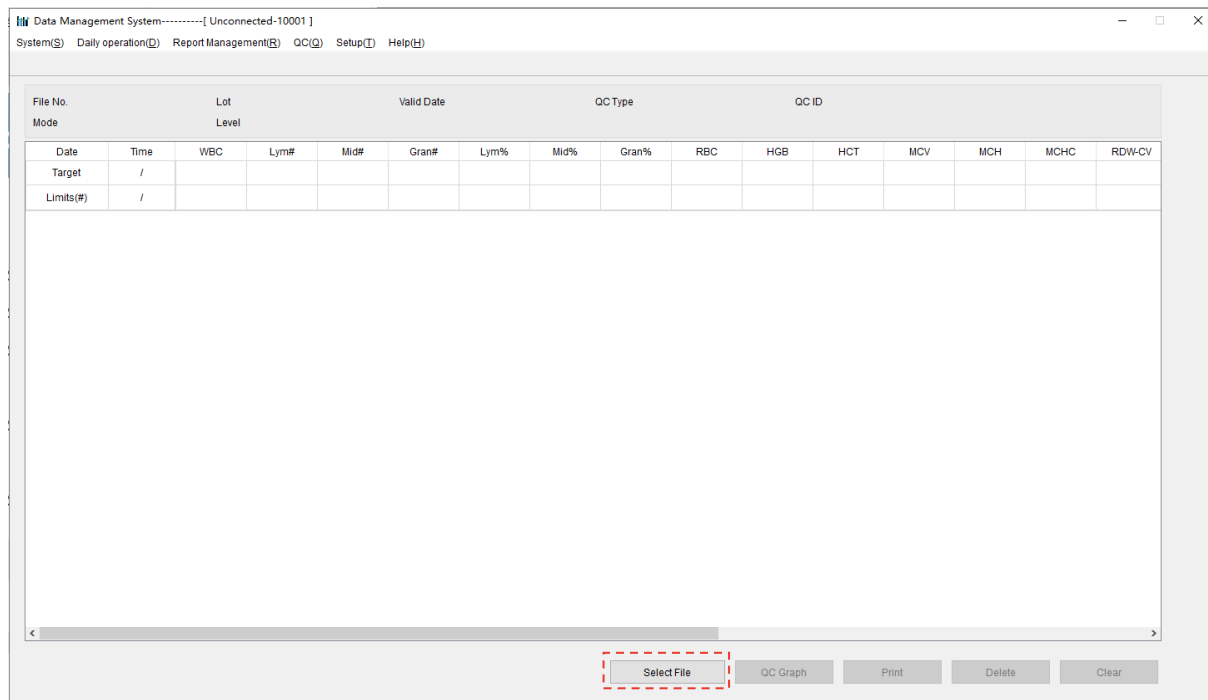


Figure 12 Select File

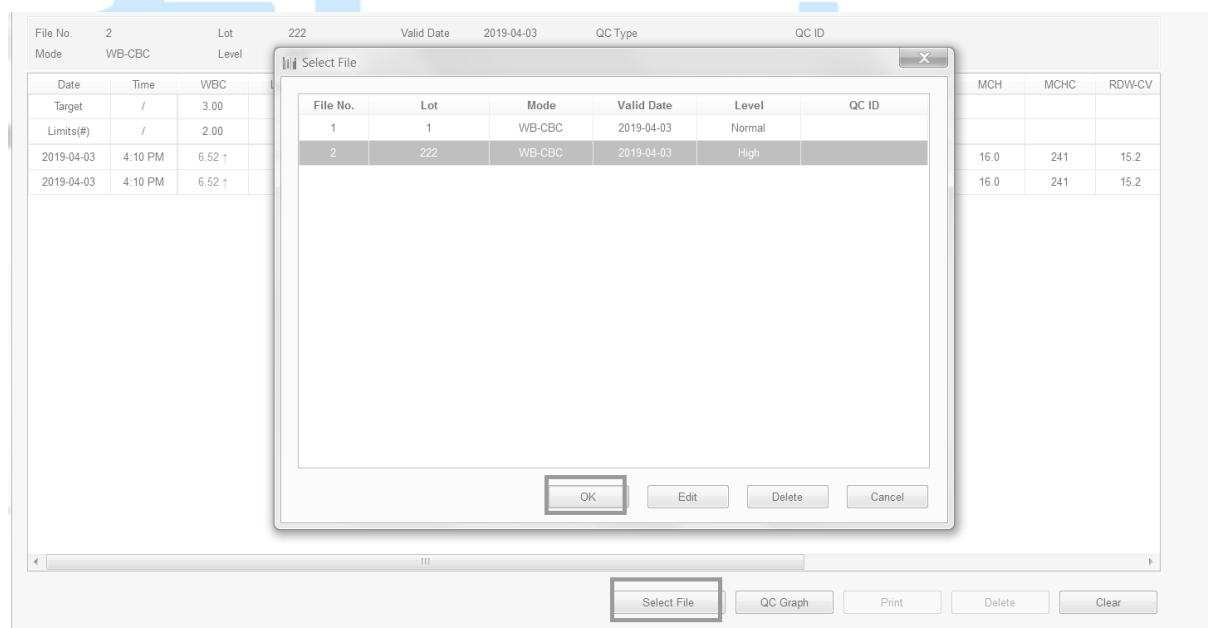


Figure 13 Select File

4.3 Setup

4.3.1 Parameter Setting

Menu – Setup – Parameter – Para.Info.Setting

This interface is used to set the parameter names for display and printing.

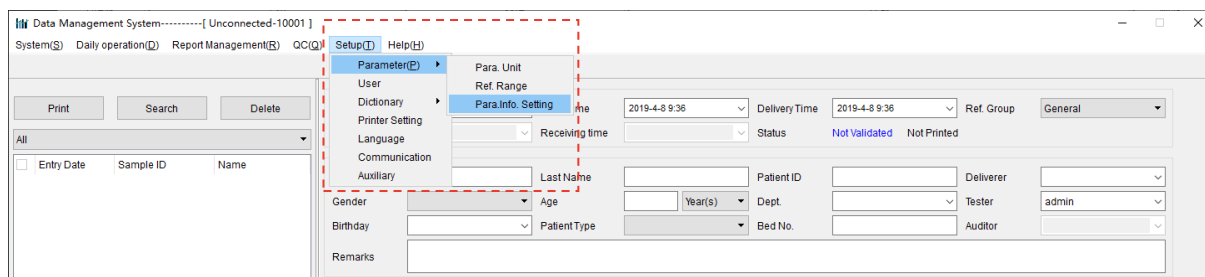


Figure 14 Para.Info.Setting

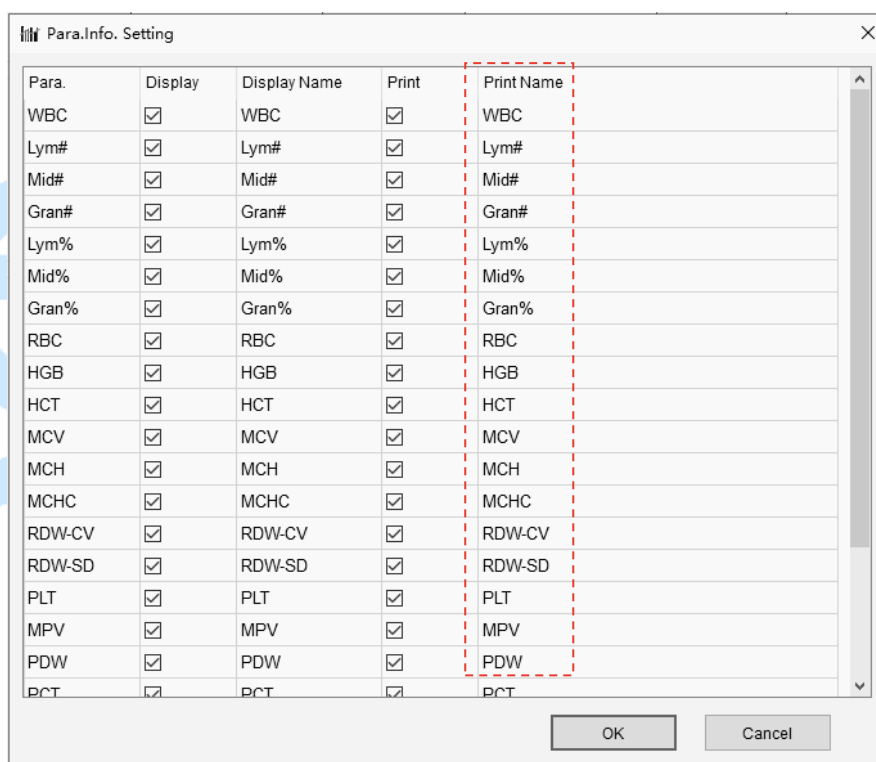


Figure 15 Modify Print Name

4.3.2 Communication Setting

Menu – Setup – Communication

This interface can be used to set the port number when communicating.

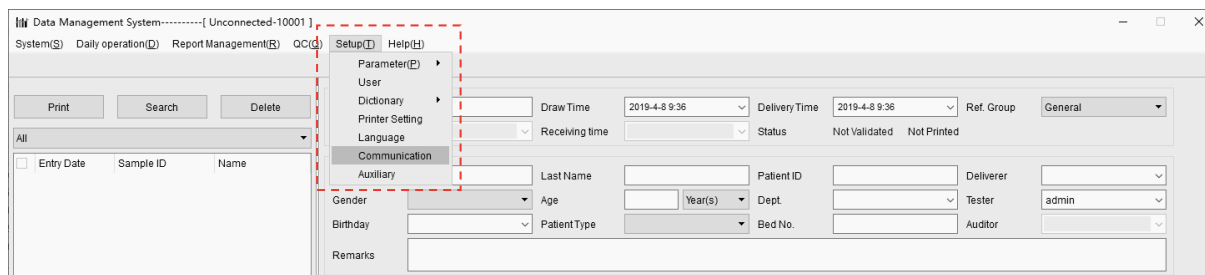


Figure 16 Communication Setting

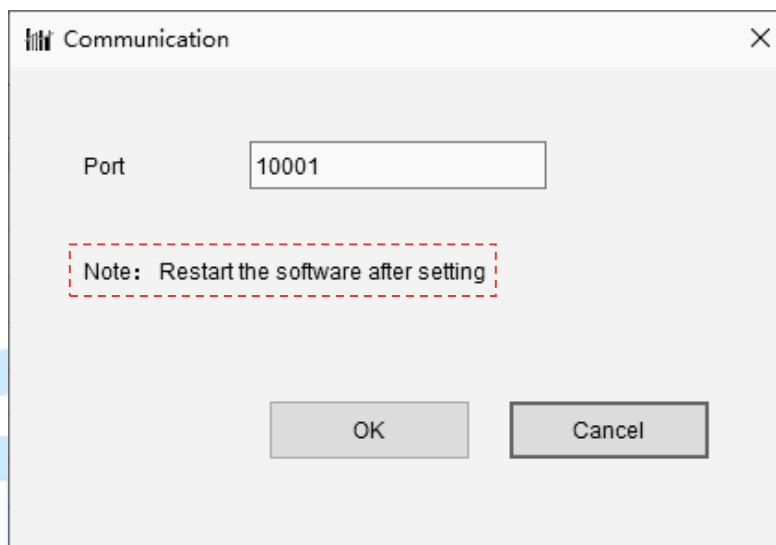


Figure 17 LIS Port Setting and Restart

4.3.3 Auxiliary Setting

1) Menu – Setup – Auxiliary

“Input Delivery Date” and “Input Sample Date” only take effect when new samples information are added.

2) Flag: used to set the mark symbol of high and low alarm.

3) Database conflict: used to solve the problem when the sample information is inconsistent between the instrument and the data management software.

- i. Subject to “Entry data”: After transferring a sample result to the data management software, the sample information is modified and saved under

the data management software. Afterwards, the sample information is re-communicated. At this time, the modified sample information on the data management software is not updated, and only the parameter results are updated.

- ii. Subject to “Receiving data”: After transferring a sample result to the data management software, the sample information is modified and saved under the data management software. Afterwards, the sample information is re-communicated. At this time, and the sample information and parameter results of the data management software are both updated.

Reminder: this setting take no effect on the parameter results. After re-communication, the communication data will update the results of the data management.

The screenshot shows the 'Auxiliary' dialog box. The 'Info. Entry' section has two checked checkboxes: 'Input Delivery Date' and 'Input Sampling Date'. The 'Database conflict' section has two radio buttons: 'Entry data' (selected) and 'Receiving data'. The 'Flag' section has two dropdown menus: 'High' and 'Low'. The 'High' dropdown shows '↑' and '↓'. The 'Low' dropdown shows '↓', 'L', and 'I'. There are 'OK' and 'Cancel' buttons at the bottom right. Red dashed boxes highlight the 'Info. Entry' section and the 'Flag' dropdowns.

Figure 18 Auxiliary Setting

4.3.4 Printer Setting

1) Menu – Setup – Printer setting

In this interface, you can select the printer for printing.

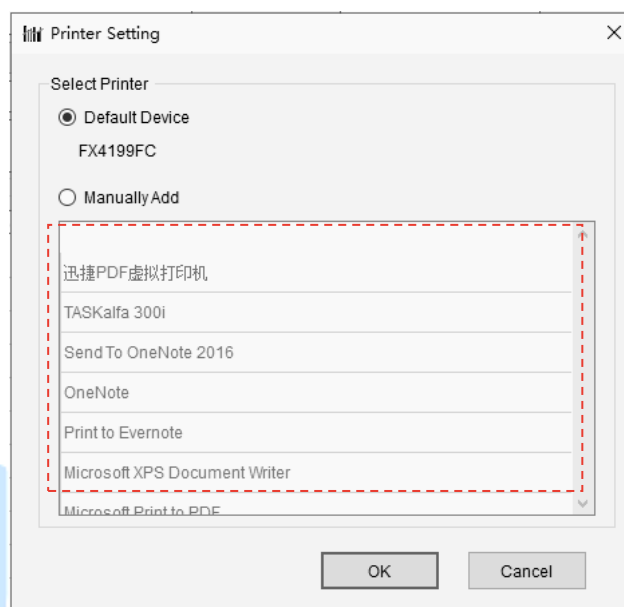


Figure 19 Printer Setting

2) If you need to add a new printer, add it through the operating system.

4.3.5 Language Setting

1) Menu – Setup – Language

Language can be set here.

2) Supported language: English, Chinese, Spanish

3) Restart the software to take effect after switching languages.

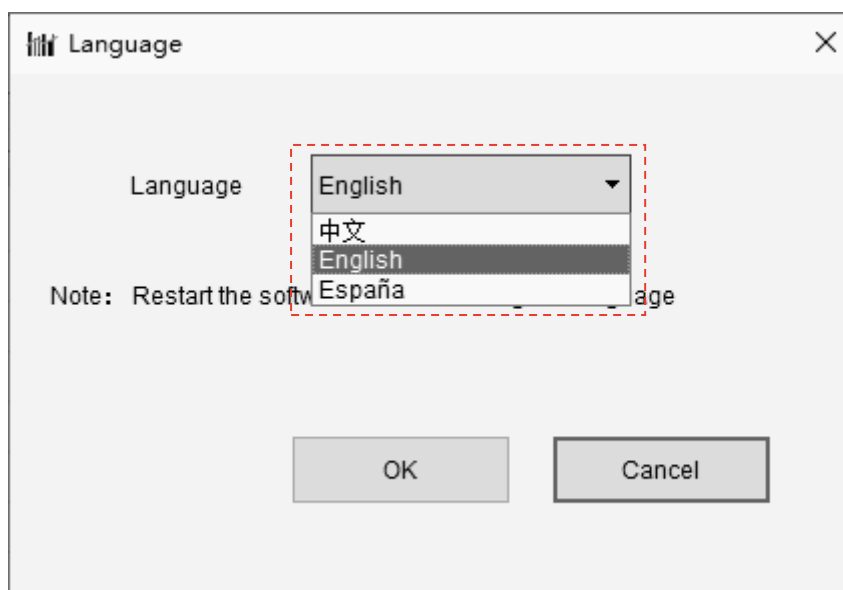


Figure 20 Language Setting

4.4 Report management

4.4.1 Report management can be used for printing related settings.

Report Management

Print Template Setting

Template type Report

Paper A5

Print Template A5 Landscape + Graph

Report Setting

Report Title Hematology Analysis Report

Copies 1 [1 - 20]

Import Export Delete

OK Cancel

Figure 21 Report Management

4.4.2 Support for customized print template import, operation is as follow:

- 1) Click "Import", open the file where the template is located, select and save.

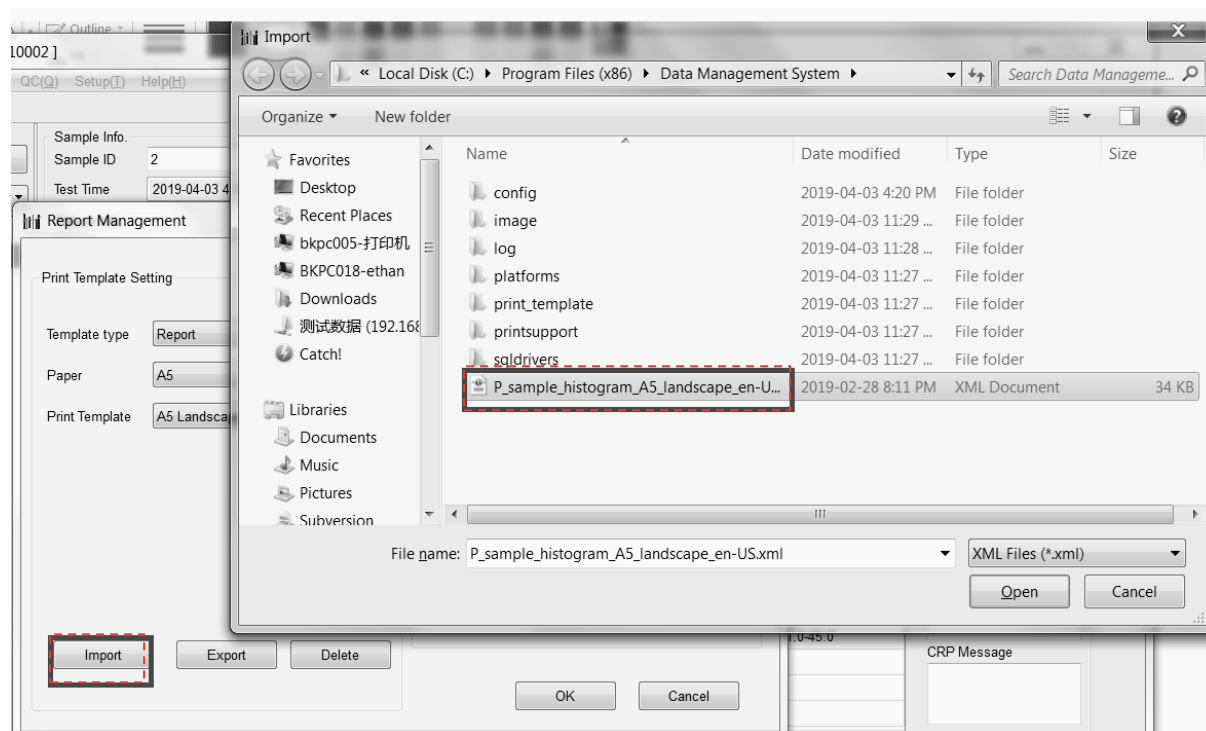


Figure 22 Import Template

- 2) After importing successfully, the imported template can be found under the corresponding paper type.

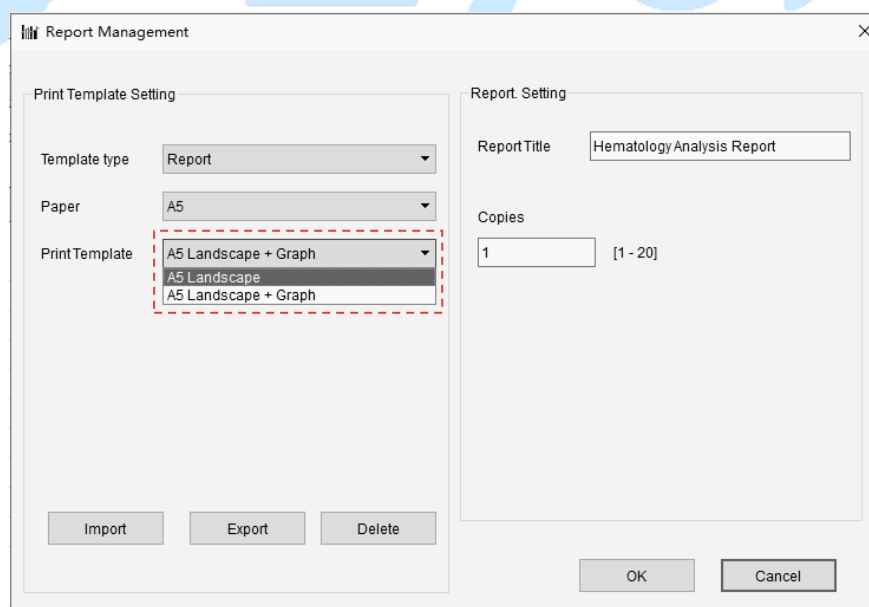


Figure 23 Choose Print Template

Reminder:

- The current print template authoring tool has not been completed yet. If you need to add a new print template. Please contact after-sales service department.
- Please do not delete the print template that comes with the system.

