SUMAKE®

Professional & Industrial

N-DAS FOR SMT-C1
System Operation Manual

Y2F210-9-003

2021/07/12

SUMAKE®

Professional & Industrial

Table of Contents

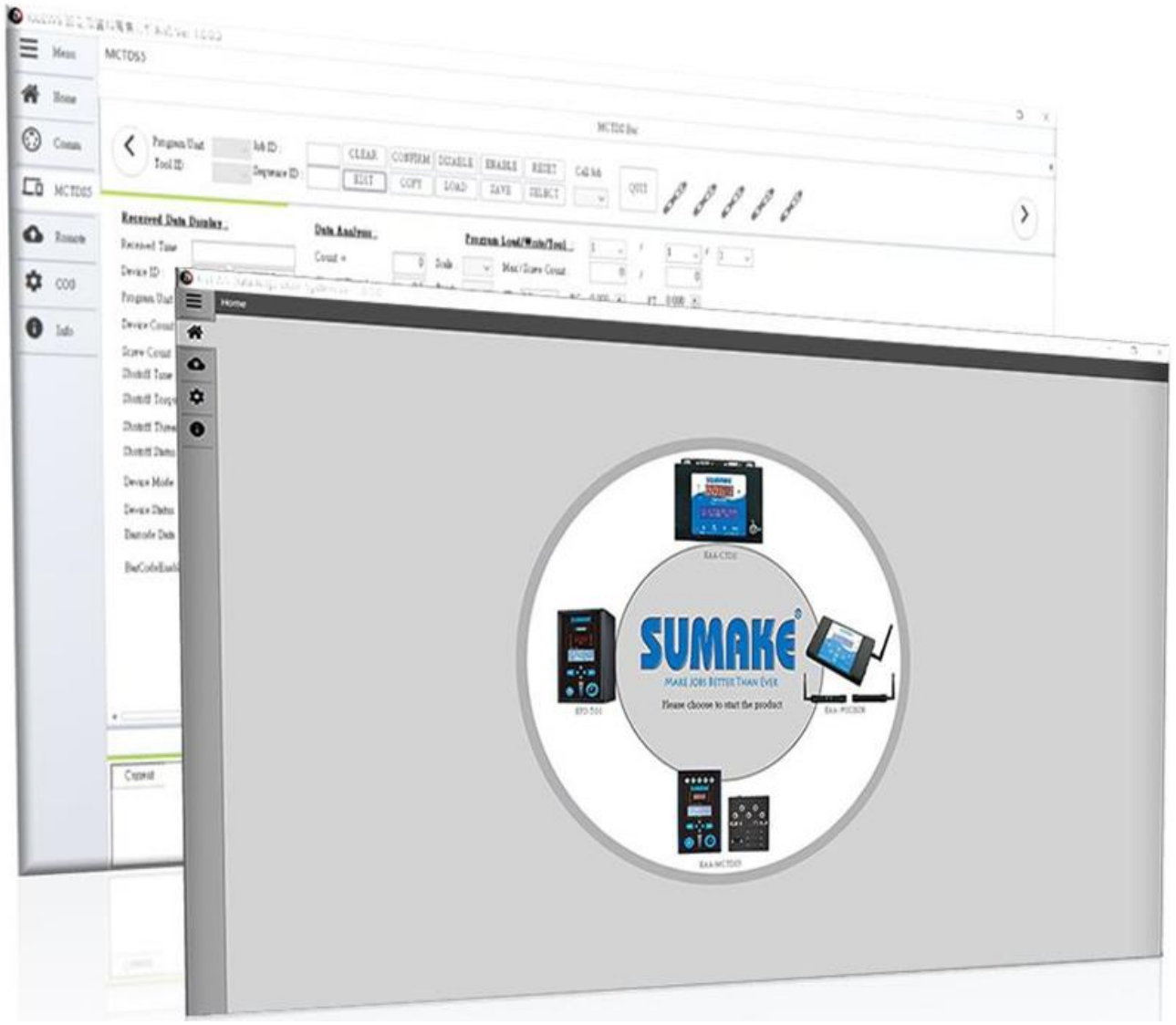
SUMAKE®

Professional & Industrial

① User Guide

This manual describes how to quickly operate the “Data Acquisition System” and get started with the SMT-C1 controller.

Diverse and well-rounded operation interface, simple and user-friendly design allows users to get quick understanding, and this system can simultaneously work with the four controllers under the **SUMAKE** brand, and has the functions of report and table printing, data analysis, trend graph, parameter setting, etc. It is very convenient for users.



② System Requirements

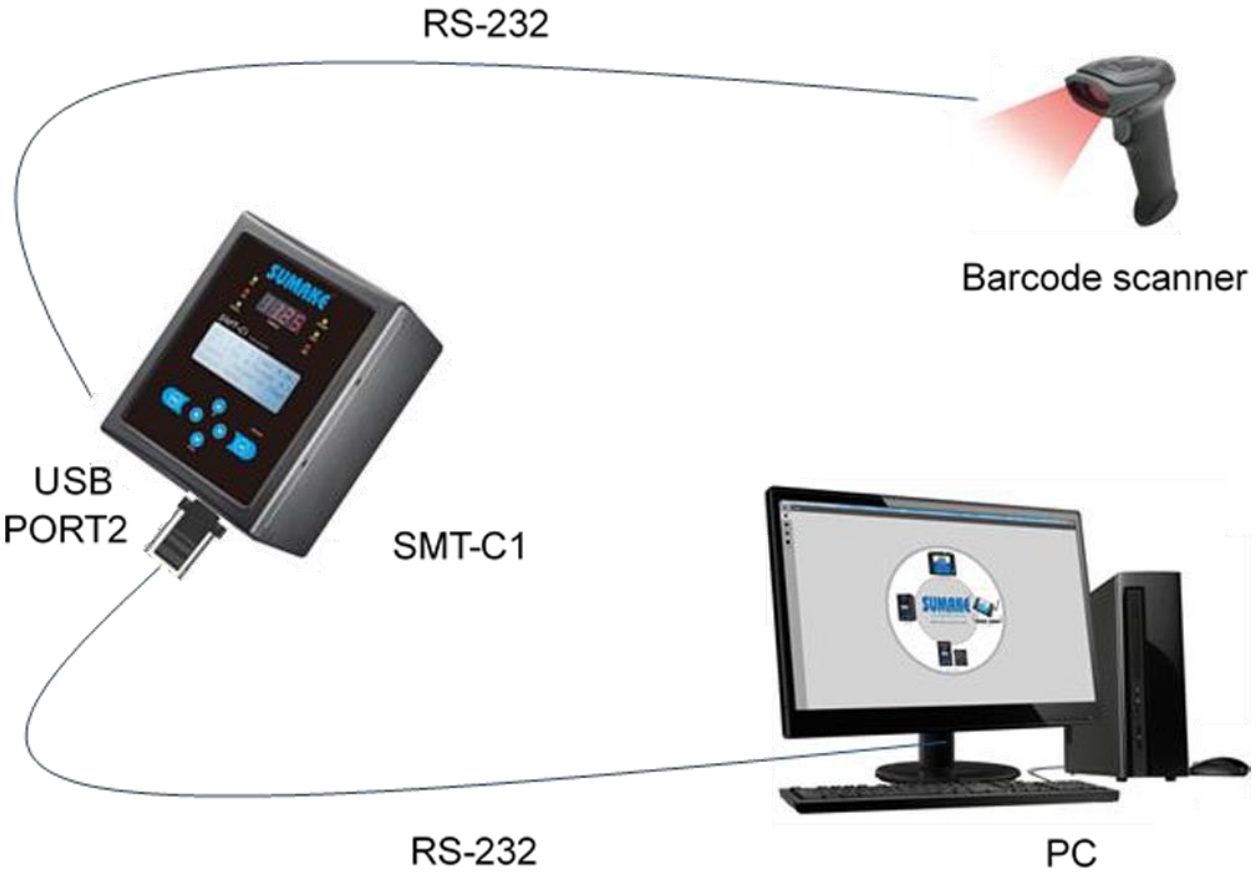
- Windows 10, Windows 8, Windows 7, Windows XP or Windows Vista
- Hardware memory at least 768MB/2GBHz processor
- At least 2GB hard disk
- Recommended at least 16-bit color and 1024x768 screen resolution
- .NET Framework 4.0 or above must be installed

③ Hardware

1. The following must be prepared before operating this system:

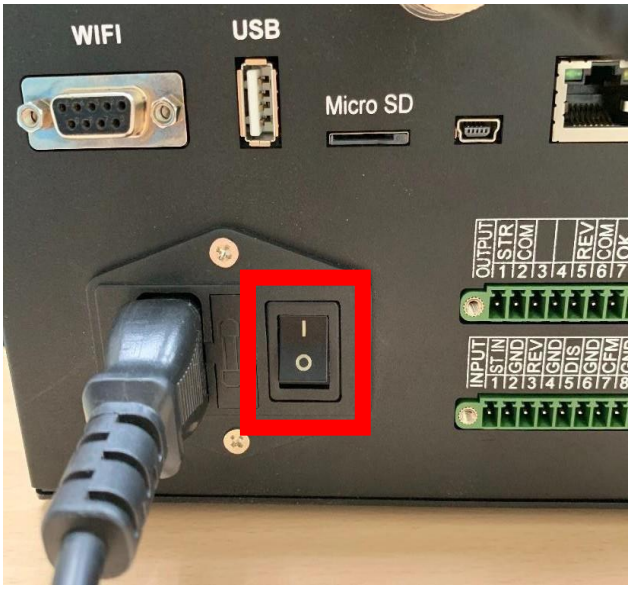
   - **SUMAKE** brand controller (EAA-CTDS、EAA-MCTDS5、EAA-SCBSN6,SMT-C1).
   - Executable file for the operating system Executable file for the operating system Data_Acquisition_System.exe.
   - One RS-232 serial port.
   - One 1D(Linear) barcode scanner (*not necessary).

2. Device connection as in the following diagram:



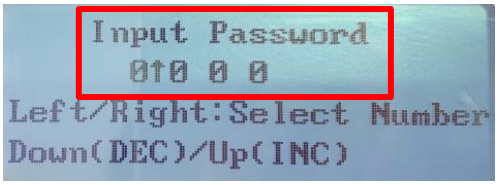
④ Controller Preparation

Step 1: Turn ON power (I)

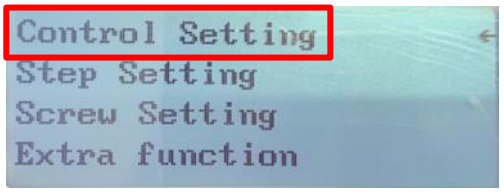


Step 2: Press the **ESC** button for 3 seconds, enter the password (InputPassword) **0000** and press **Enter** to go into setup.

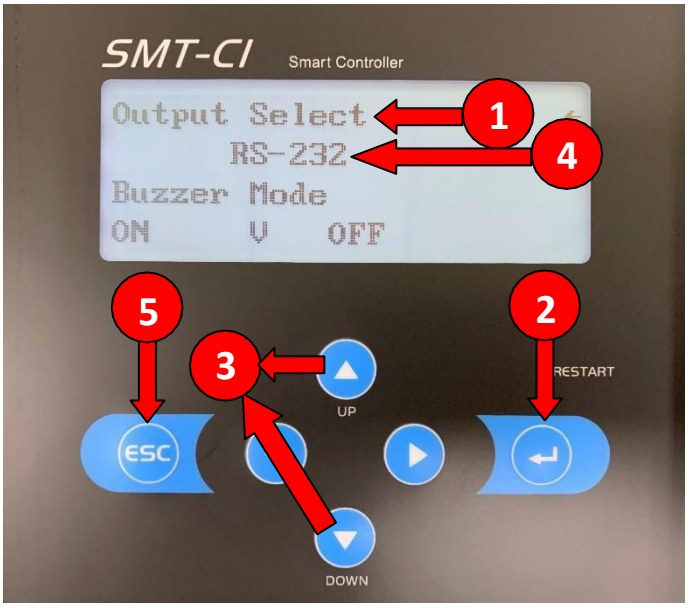
NOTE: 0000 as default password.



Step 3: Press the down arrow key (↓) to find the **Control Setting** and press **Enter**.



Step 4: Find **Output Select** and then press **Enter**. Use the up and down arrow keys (↑ ↓) to select the **RS-232** setting, and then press **Enter** to exit the network settings, and then press **ESC** to return to the previous page to complete the setup.



NOTE: This is **RS-232** (flashing light indicates successful connection).

⑤ NEW-DAS System Connection

Step 1: Before log in NEW-DAS, it is required to set the date format inthe computer system as "**YYYY/MM/DD**".

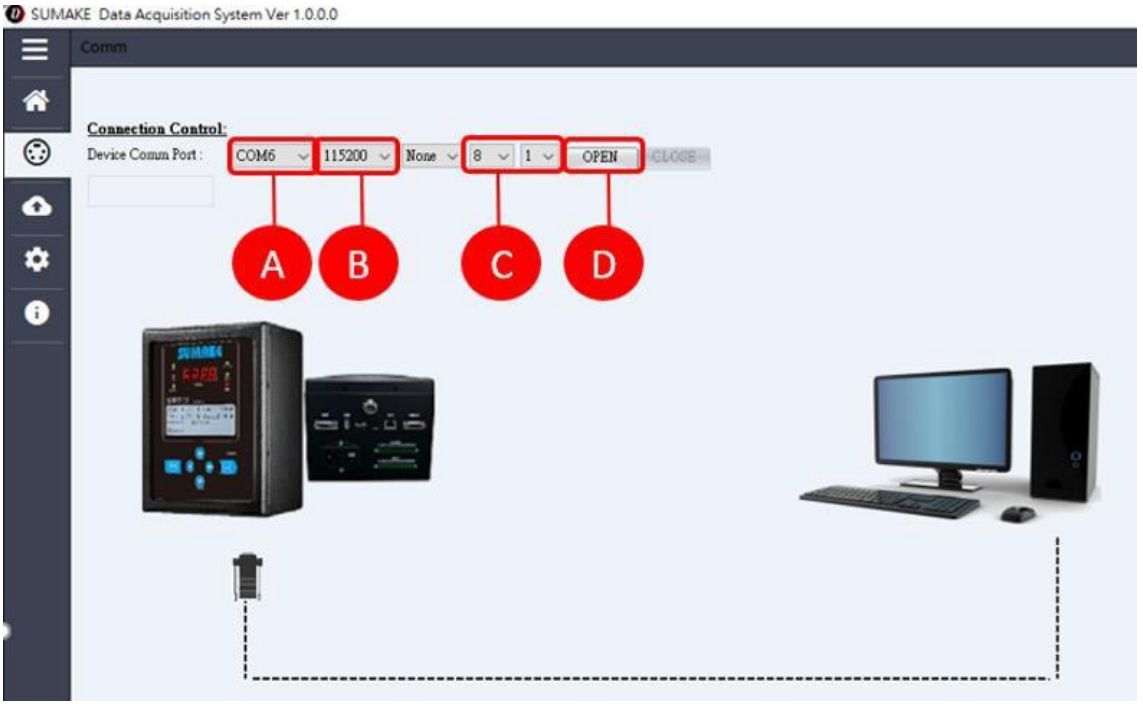
Step 2: Open the executable file  Data_Acquisition_System.exe.

Step 3: Move the mouse cursor to 

and display the fourcontrollers.

Step 4: Controller selection (SMT-C1).

Step 5: Go to Comm page.



A Select device comm port
B Select 115200
C Select 8 1
D Press OPEN

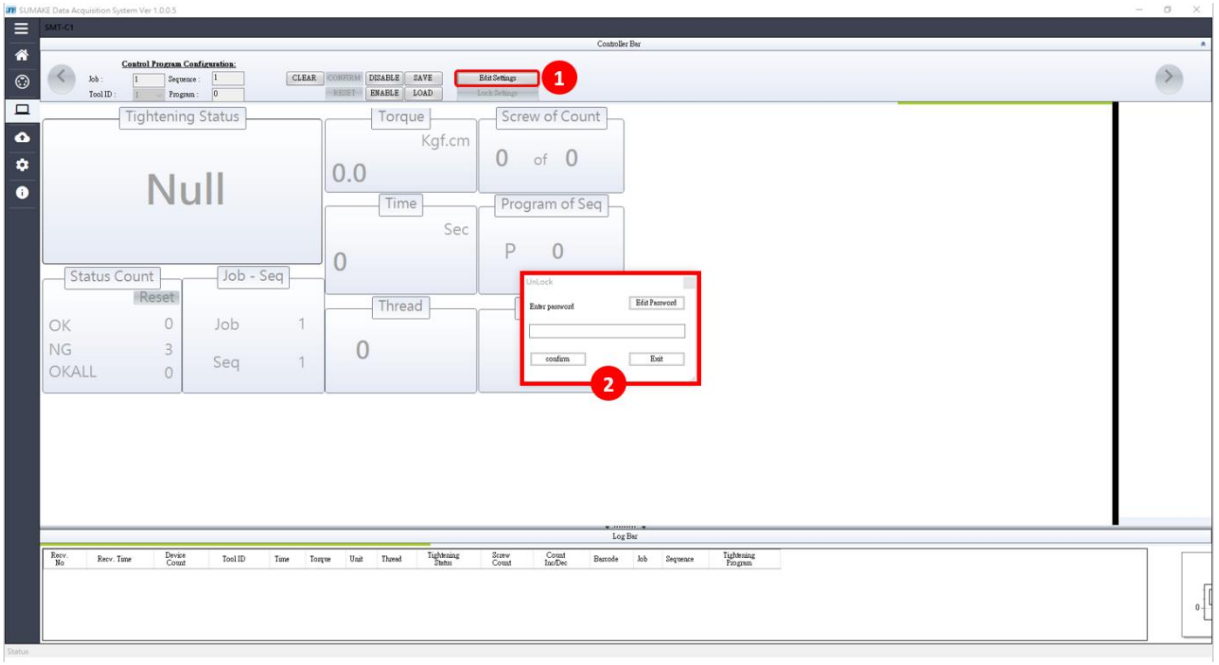
⑥ System Screen Introduction

➢ Unlock Settings

The page displayed is Instant data display after entering the screen. At this time, no operation can be performed due to locked setting. You must enter the password first if need to unlock for operation.

Step 1: After clicking the button of "Edit Settings", the unlock window will pop up.

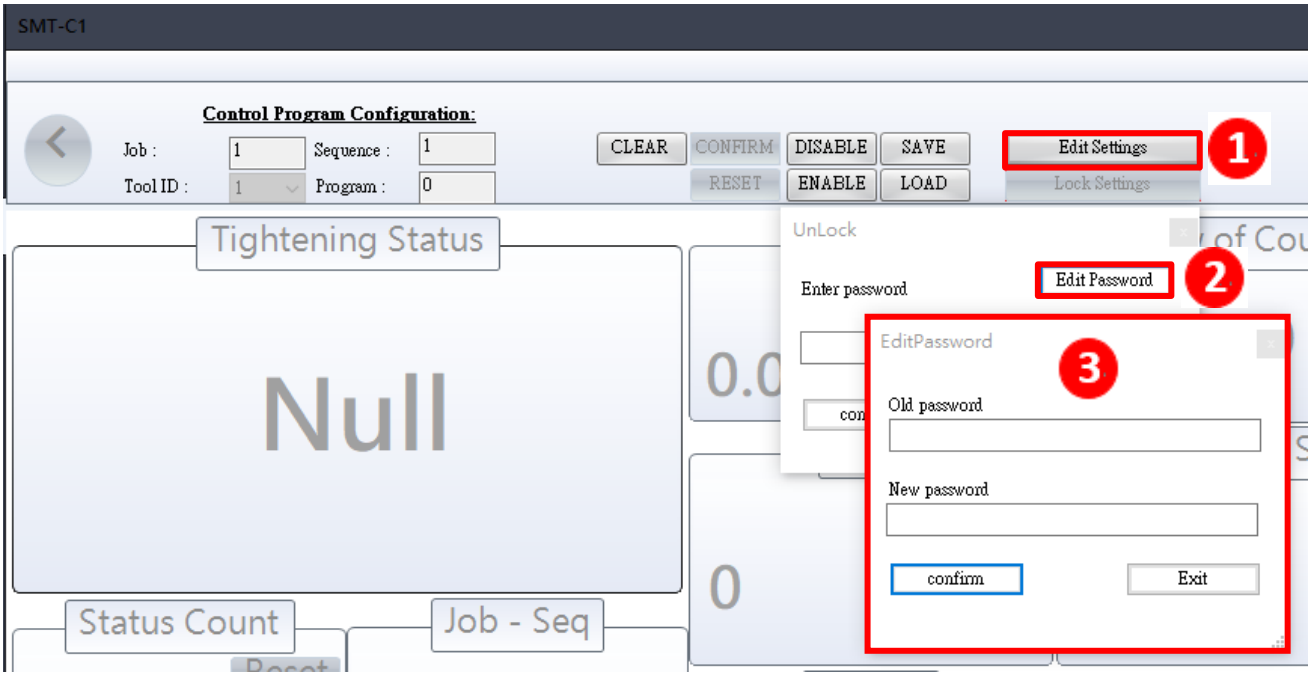
Step 2: Enter the default password "admin123" and click confirm button.



➢ Password change setting method

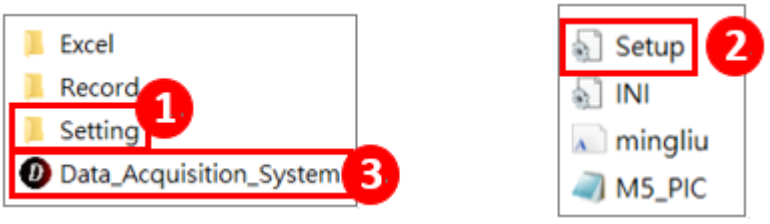
Click "Edit Settings" button → "Edit Password" to enter the old password and the new password, and then click OK button to complete the setting.

NOTE: New password setting: Six to eight characters in length, including English uppercase and lowercase, numbers.

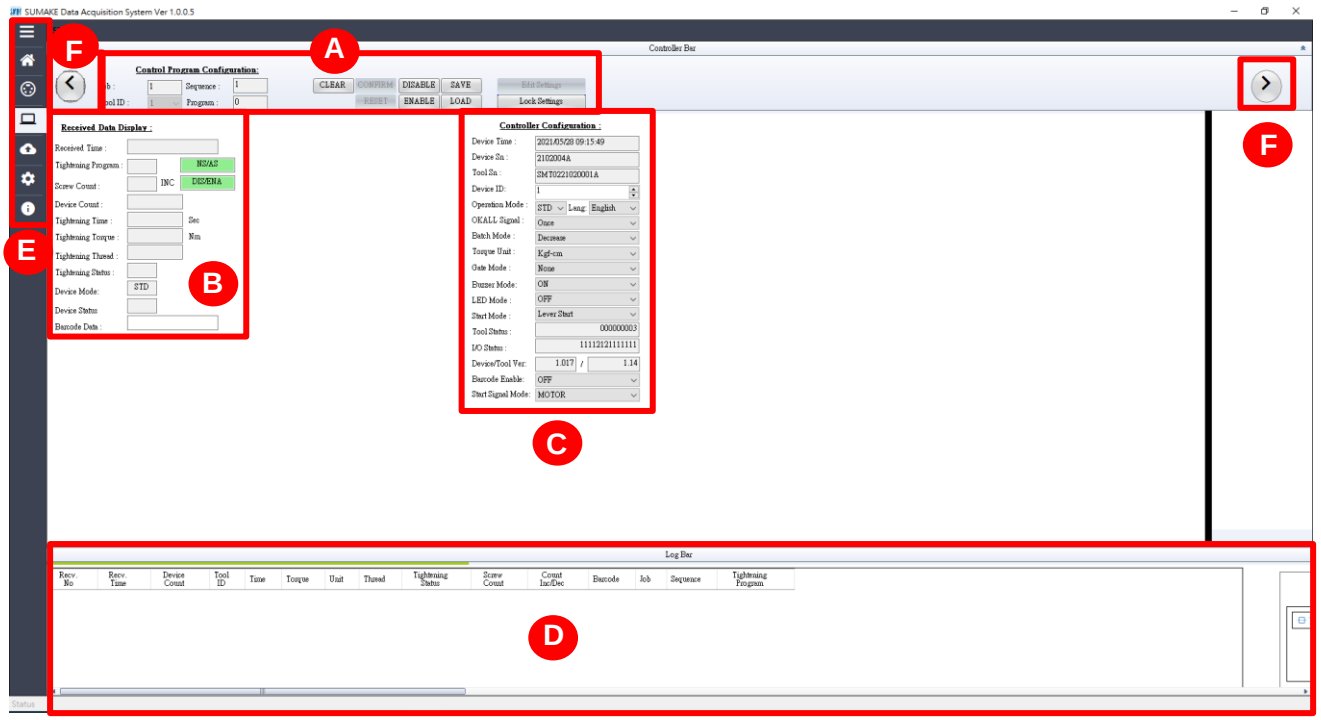


➢ Restore default password

Select to enter the 1 Setting folder, delete the file named 2 Setup and Reopen it 3 Data_Acquisition_System can restore the default password (admin123)



1. Product setup page: divide the setup page into partitions and introduce them in order.



NOTE: The pages of the system can be operated by sliding left and right , so the software can be operated on the touch screen.

A Control Program Configuration

NOTE: Before setting the SMT-C1 controller, please connect the screwdriver to the controller first

- Job: Display the current number of job (Job1 ~ 50) being used.
- Sequence: Display the current number of sequence (Sequence1 ~ 50) being used.
- Tool ID: Display the current used tool's id.

- Program: Display the current number of Program (Program 1 ~ 99) being used.
- CLEAR: Click 

to reset counting.
- CONFIRM: Click 

to dismiss controller C3 status.

(refer to SMT-C1 User Manual for C3 function introduction).

- DISABLE: Click 

to immediately stop screwdriver operation.
- SAVE: Click 

to save the settings into controller.
- RESET: Click 

to restart the controller and restore factory parameters. (This command is only available in controller)
- ENABLE: Click 

to immediately allow the screwdriver to run.
- LOAD: Click 

to load the settings from the controller.
- Edit Settings：After entering the system, you must click 

and enter the password to unlock the screen and switch to other pages.

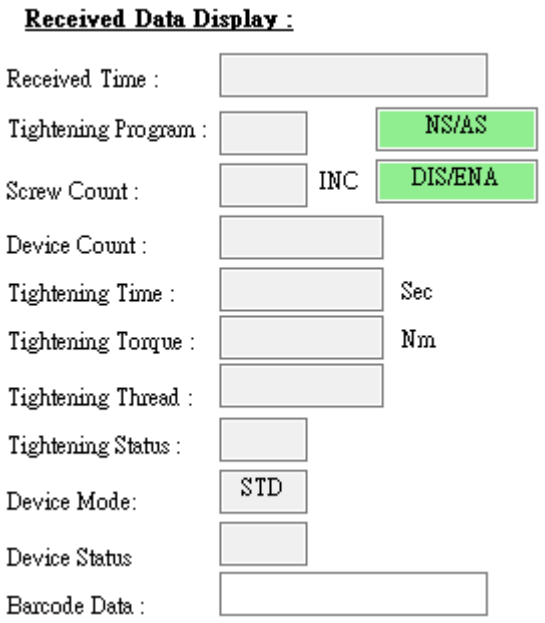
(Please refer to **"P.11 Password Change Setting Method"**)

- Lock Settings：Click 

to automatically jump to the "Instant data display" screen, and no operation can be performed. The lock settings must be unlocked.

(Please refer to **"P.32 Instant data display"** , **"P.10 Unlock Settings"**)

B Received Data Display: All fastened data can be displayed instantly.



- Received Time: The time to fasten the data.
- Tightening Program: This fastened program group.
- Screw Count: The number of fastened units.
- Device Count: The total number of times the device is fastened.
- Tightening Time: How long driver ran before clutch tripped. (Sec)
- Tightening Torque: the torque for the fastening.
- Tightening Thread: Number of rotations at output shaft.
- Tightening Status: shut off status (OK, NG, OKALL, REV).
- Device Mode: STD mode, ADV mode **(please refer to manual)**.
- Device Status: **(Refer to the "Display Status Code Description" in User Manual)**.
- Barcode Data: Display the barcode data which is from a barcode scanner.

C Controller Configuration: Click SAVE or LOAD to Save / Load settings to / from the controller.

Controller Configuration :

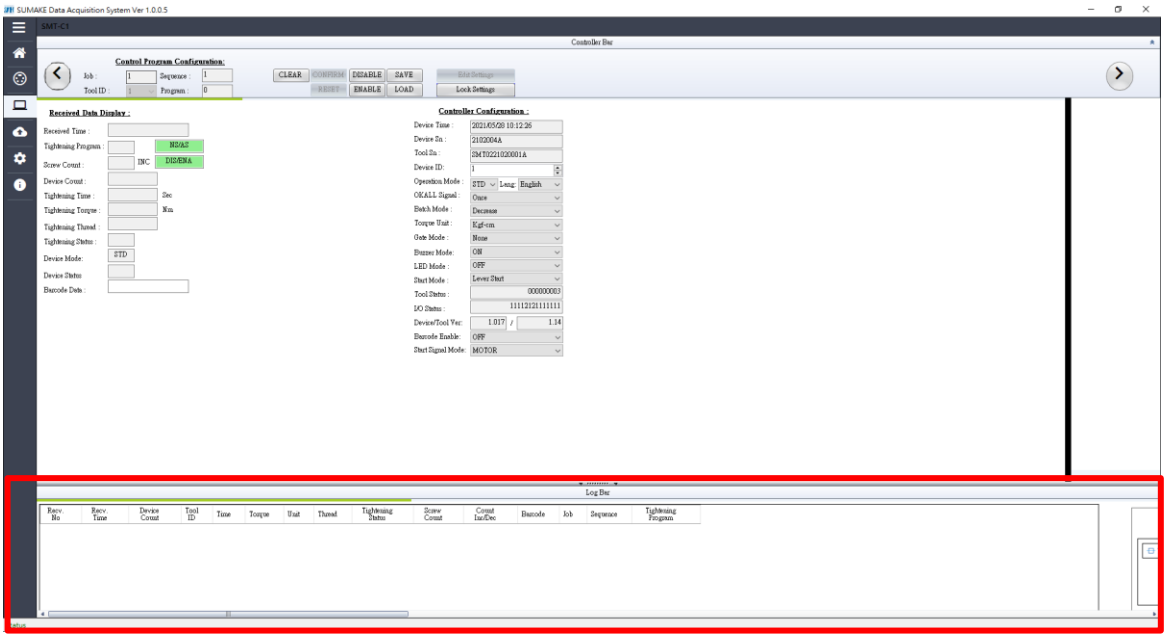
Device Time :	2021/05/28 10:10:19
Device Sn :	2102004A
Tool Sn :	SMT0221020001A
Device ID:	1
Operation Mode :	STD Lang: English
OKALL Signal :	Once
Batch Mode :	Decrease
Torque Unit :	Kgf-cm
Gate Mode :	None
Buzzer Mode:	ON
LED Mode :	OFF
Start Mode :	Lever Start
Tool Status :	000000003
I/O Status :	11112121111111
Device/Tool Ver:	1.017 / 1.14
Barcode Enable:	OFF
Start Signal Mode:	MOTOR

NOTE: Refer to manual for condition parameters.

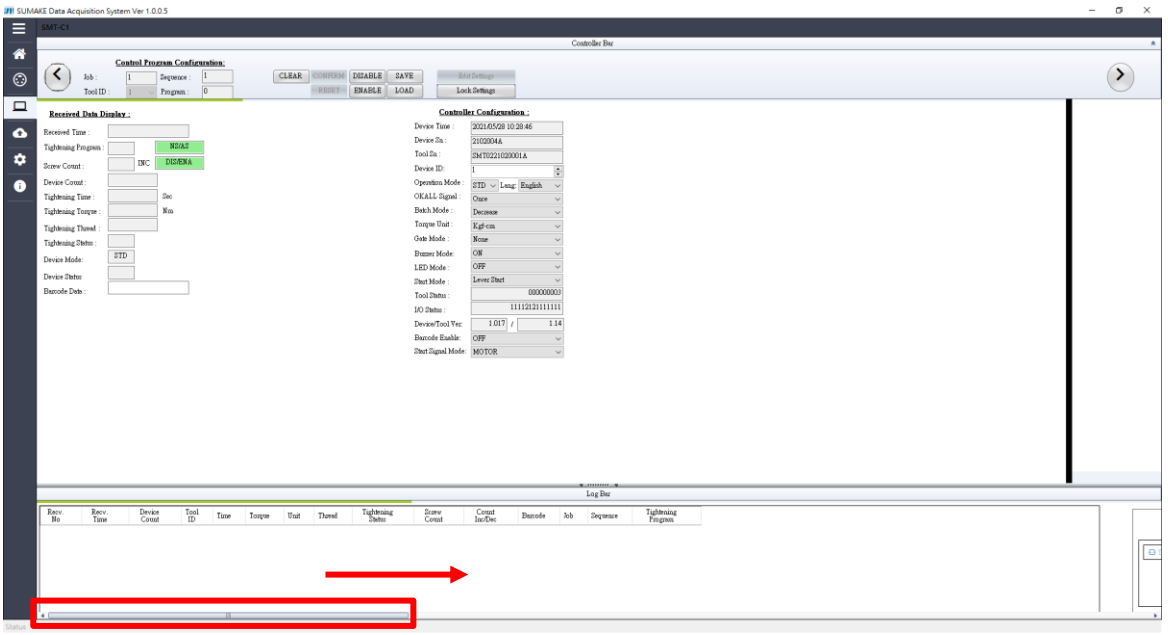
Ⓓ Data collection: When the fasten tool is started, the data will be displayed in the Log Bar field at the bottom of the page

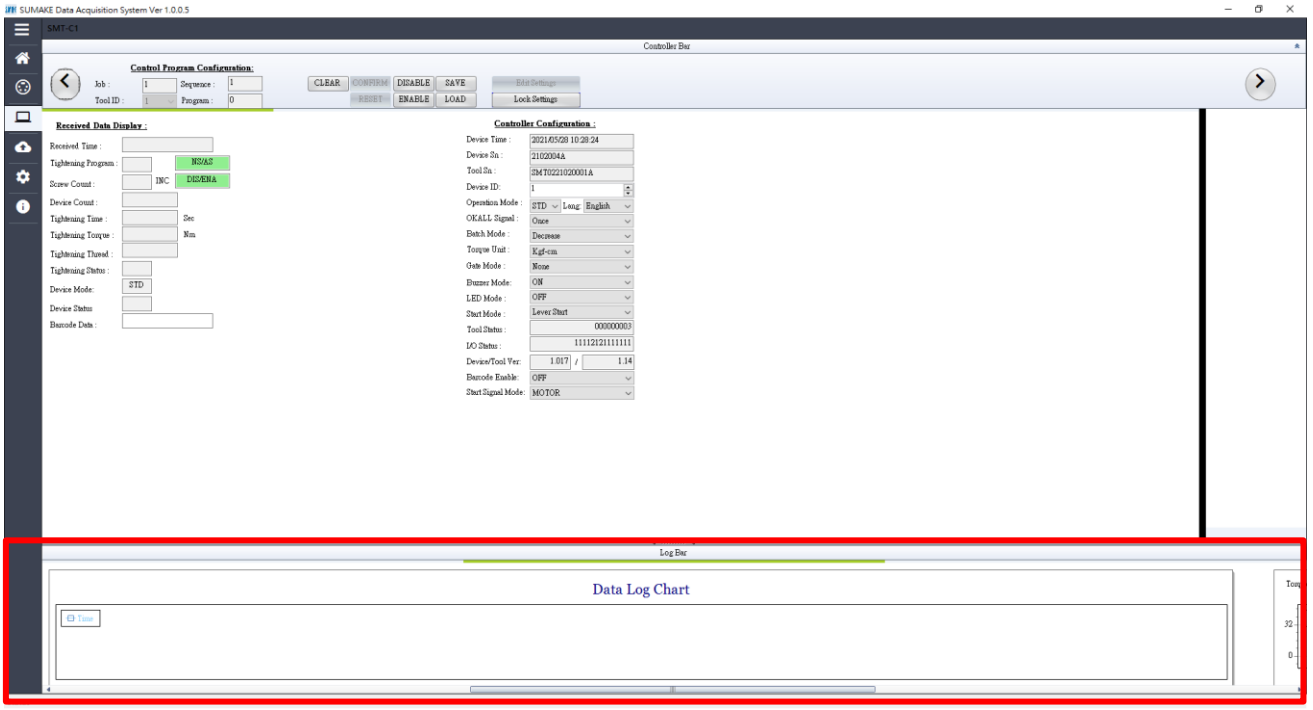
(Fasten data sheet, TQC Trend Setting).

- Fasten data sheet

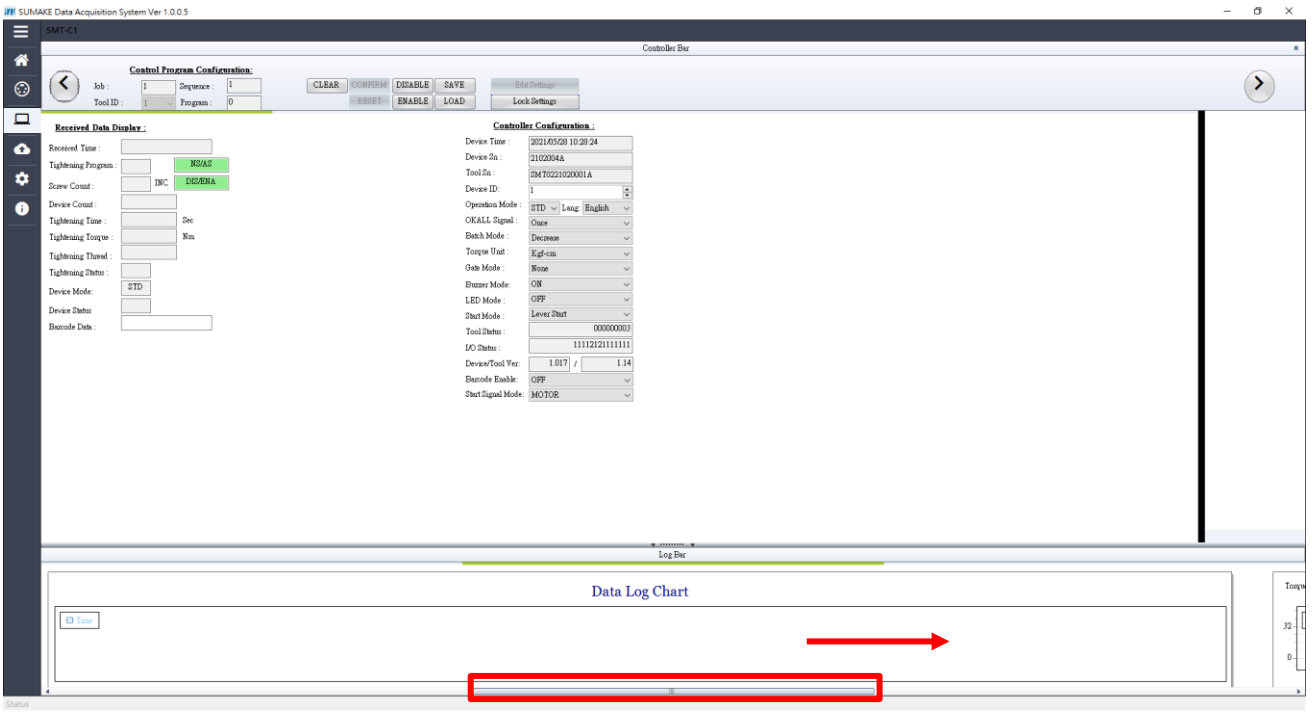


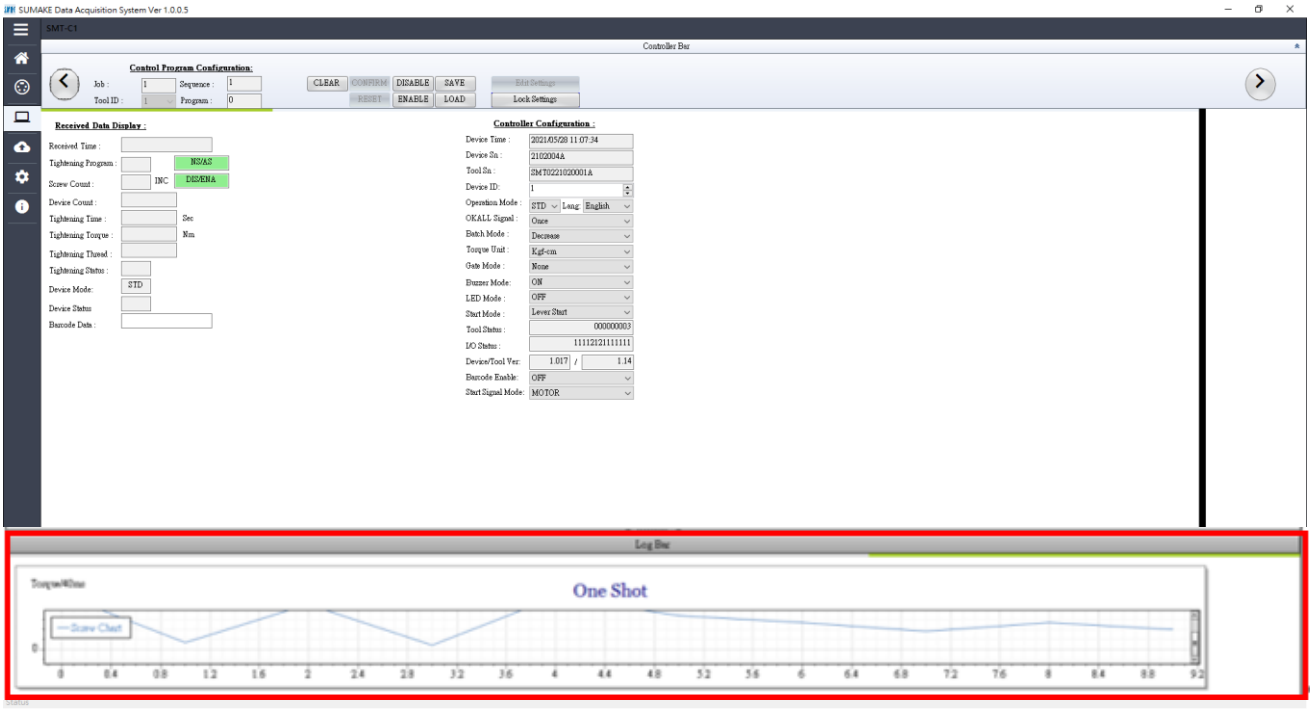
- Depress the scroll bar and swipe to the next page to display TQC Trend Setting (Please refer to **“P.31 Trend Setting”** for the TQC setting)





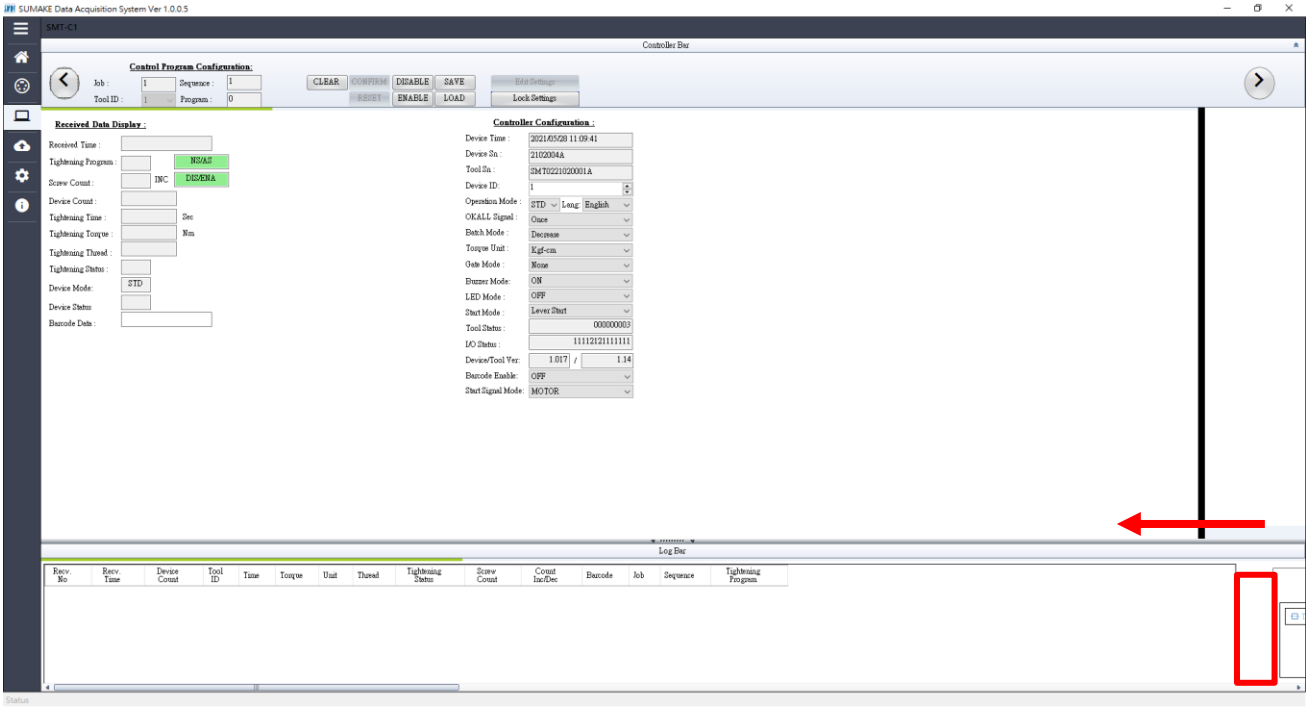
- Depress the scroll bar and swipe to the next page to display Torque Trend Setting (Torque Trend from a single screw fastening)



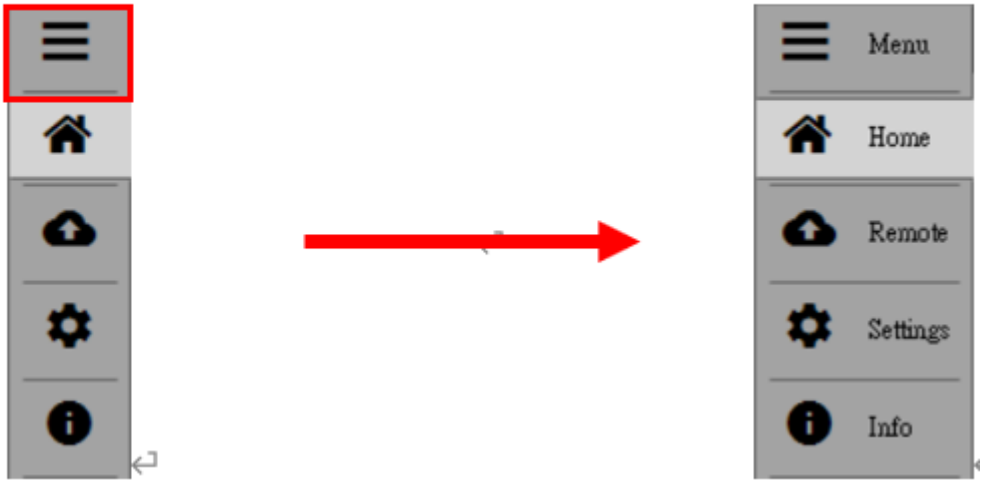


NOTE:

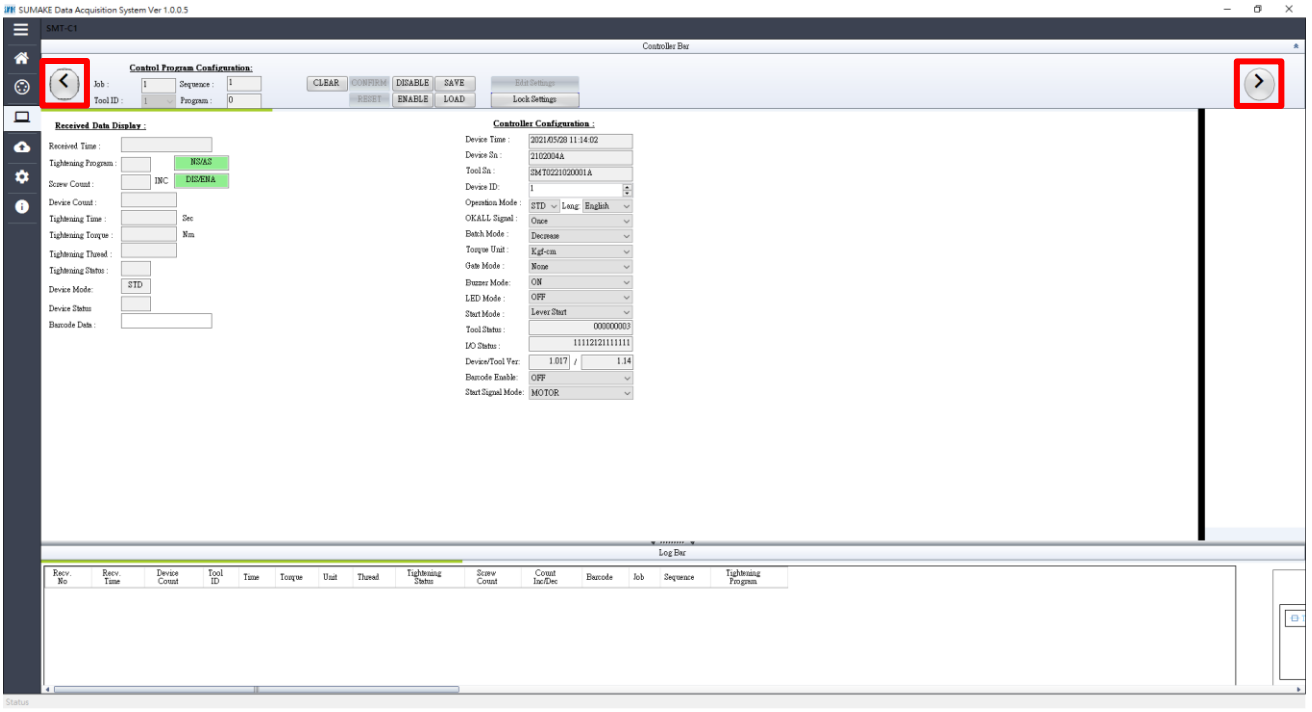
Touch the red box area and swipe to the next page to display a trend graph.



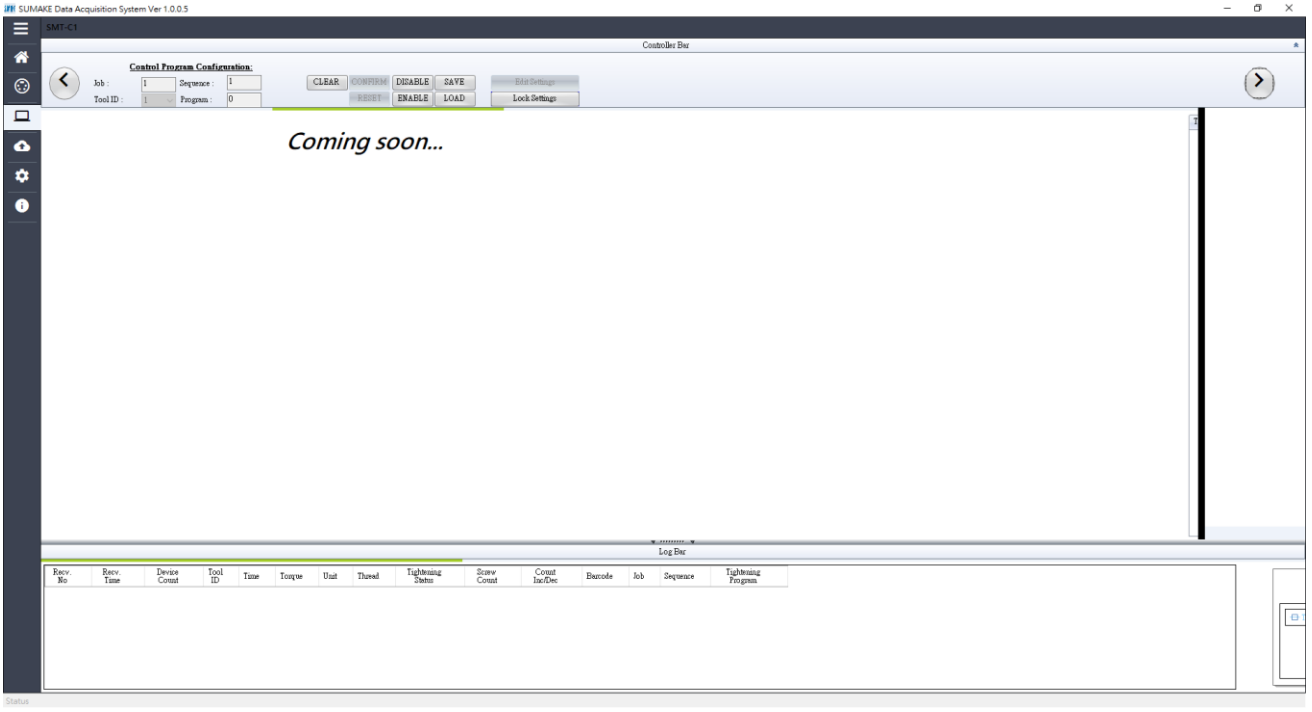
E. Main menu: click  to hide or display English title.



F. Go to previous page by pressing  button, next page by pressing  button.

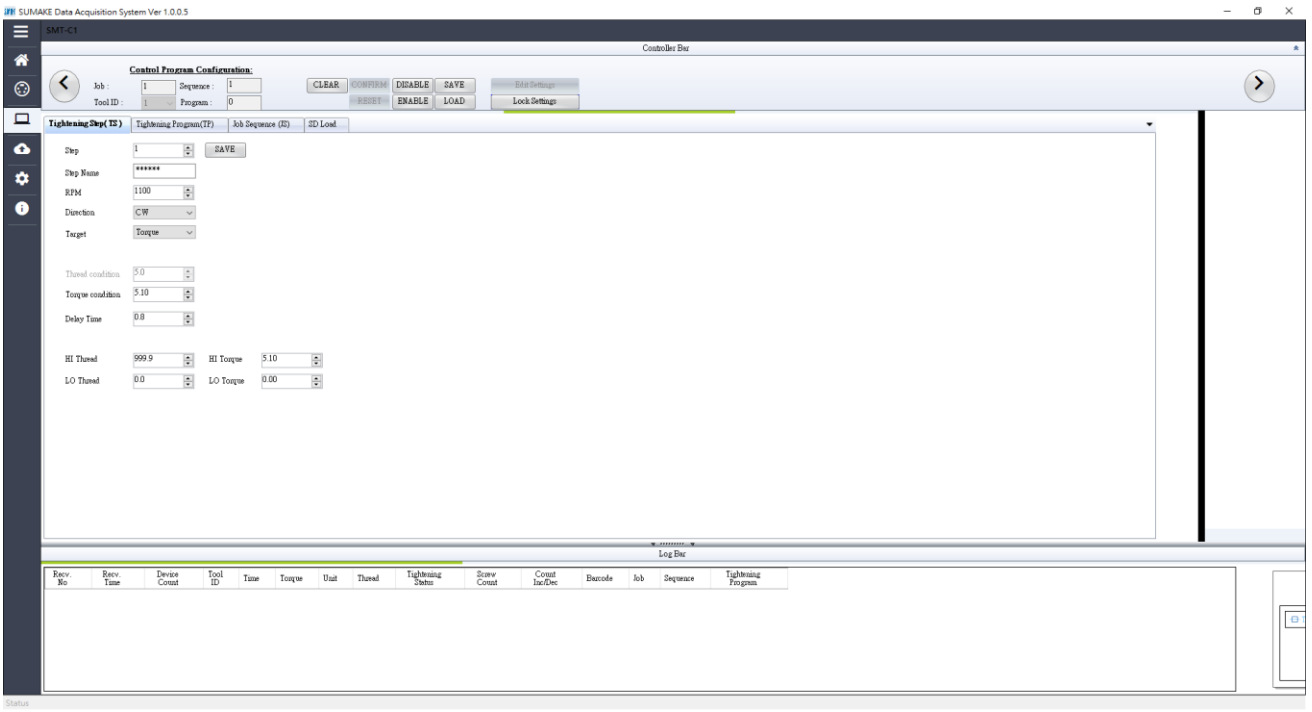


2. Barcode

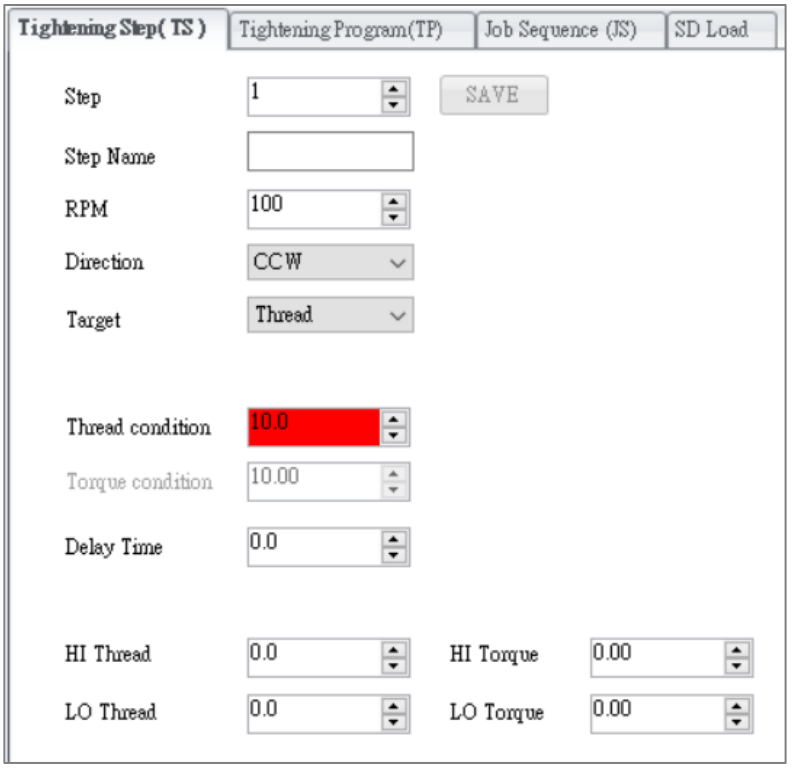


This area functional coming soon

3. Programming the Jobs / Tightening Programs / steps / SD Load page



A Tightening Step (TS)

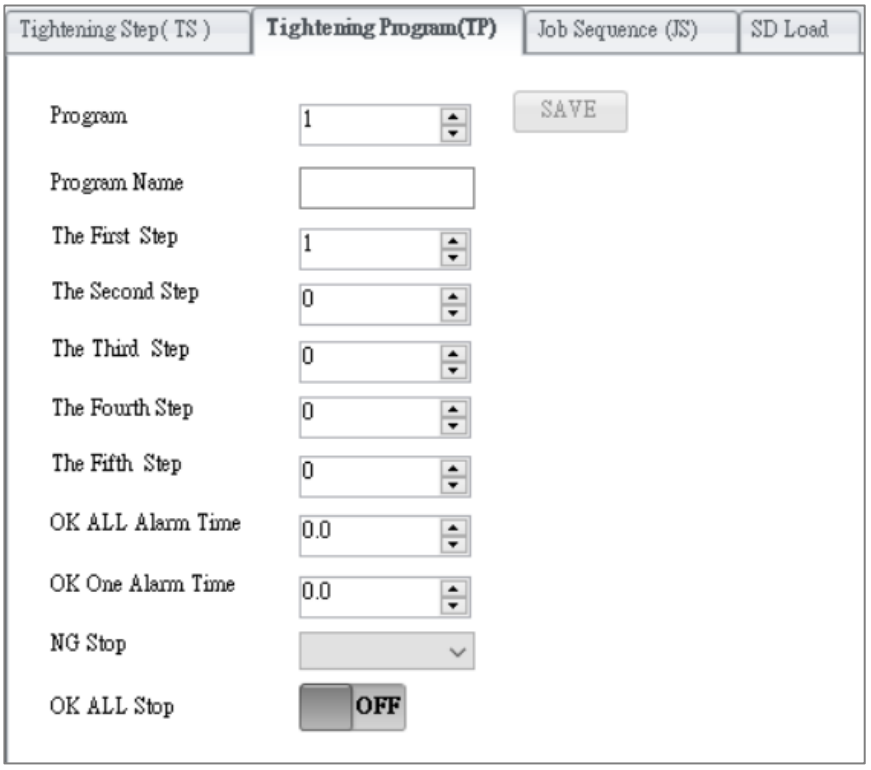


- Step: Step NO.1 ~ Step No.250 could be selected.
- Step Name: 6 characters are available for the name including English, Chinese, and Number).
- RPM: The speed (rpm) that the tool will run.
- Direction: Forward (CW), Reverse (CCW).
- Target: Thread, Torque.
- Thread condition: This step will be finished when it meets this thread setting.
- Torque condition: This step will be finished when it meets this torque setting.
- Delay Time: The delay time interval between current step and next step (Sec).
- HI Torque: The controller will make a NG alarm when the torque reading value over this setting.
- LO Torque: The controller will make a NG alarm when the torque reading value lower than this setting.
- HI Thread: The controller will make a NG alarm when the shaft rotation cycles over this setting.
- LO Thread: The controller will make a NG alarm when the shaft rotation cycles lower than this setting.

NOTE: Tightening Step (TS) settings will be saved after clicking the 

button.

B Tightening Program (TP)



- Program: Program NO.1 ~ Program No.99 could be selected.
- Program Name: 6 characters are available for the name including English, Chinese, and Number).
- The First Step: Select a step No. for the first step of this selected program.
- The Second Step: Select a step No. for the second step of this selected program.
- The Third Step: Select a step No. for the third step of this selected program.
- The Fourth Step: Select a step No. for the fourth step of this selected program.

- The Fifth Step: Select a step No. for the fifth step of this selected program.
- OK All Alarm Time (AT): Set the time for OK All output signal duration (Sec.)
- OK One Alarm Time (OT): Set the time for OK One output signal duration (Sec.)
- NG Stop (NG): Disable the tool or not when a NG signal generated.

  (OFF, The maximum NG counter 1-9)
- OK All Stop (AS): Disable the tool or not when a OK ALL signal generated.

  (ON: Disable the tool, OFF)

NOTE: After clicking the 

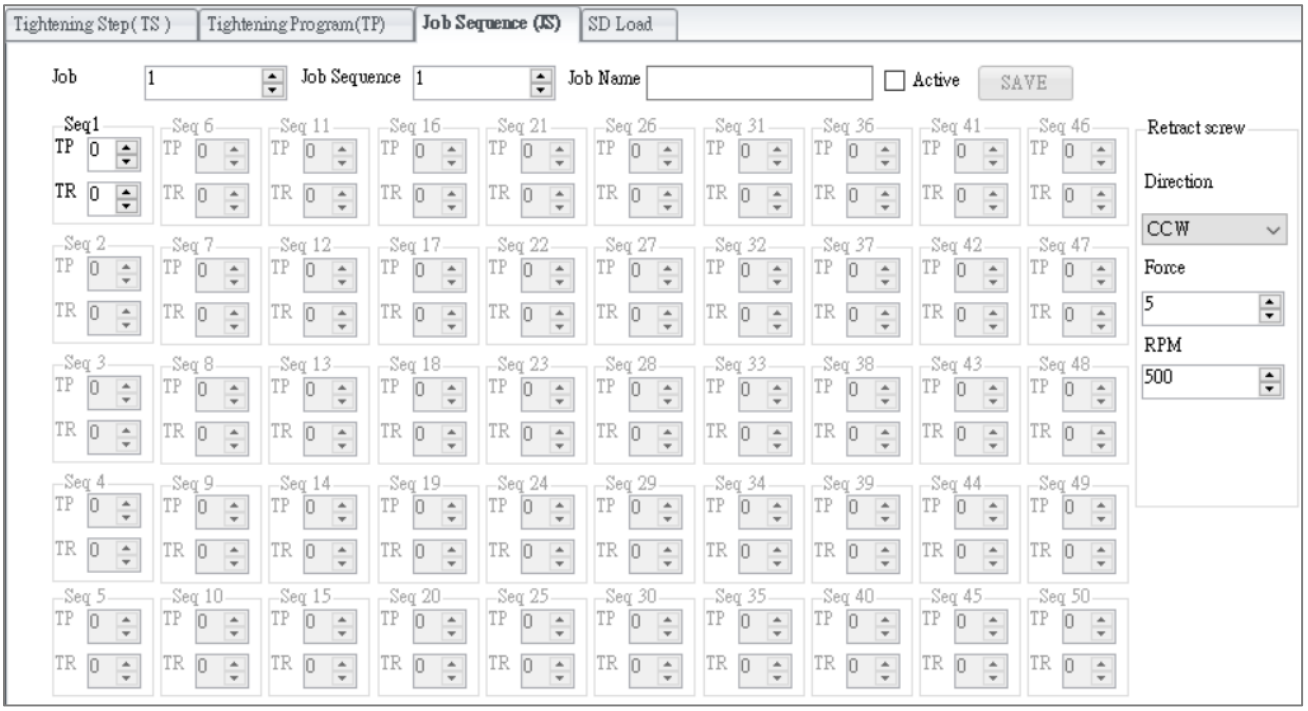
button, the above settings will be saved to the selected Tightening Program (TP).

NOTE: User can set “0” to specific Step to ignore executing that Step.

Example: If you set Second & Third Steps to “0” but First, Fourth and Fifth Steps are non-zero. The controller will execute First, Fourth and Fifth Steps.

NOTE: Refer to manual for condition parameters.

C Job Sequence (JS)



- Job: Job NO.1 ~ Job No.50 could be selected.
- Job Sequence: Job Sequence NO.1 ~ Job Sequence No.50 could be selected.
- Tightening Program (TP): Tightening Program (TP) NO.1 ~ Tightening Program (TP) No.99 could be selected.
- Tightening Repeat (TR): Tightening Repeat (TR) NO.1 ~ Tightening Repeat (TR) No.99 could be selected.
- Direction: CW, CCW.
- Force: Setting value from 1 to 9, (9 maximum force).
- RPM: Set desired RPM. The limitation is based on screwdriver specifications.
- Job Name: Assign the name of job (1~10 characters can be input).

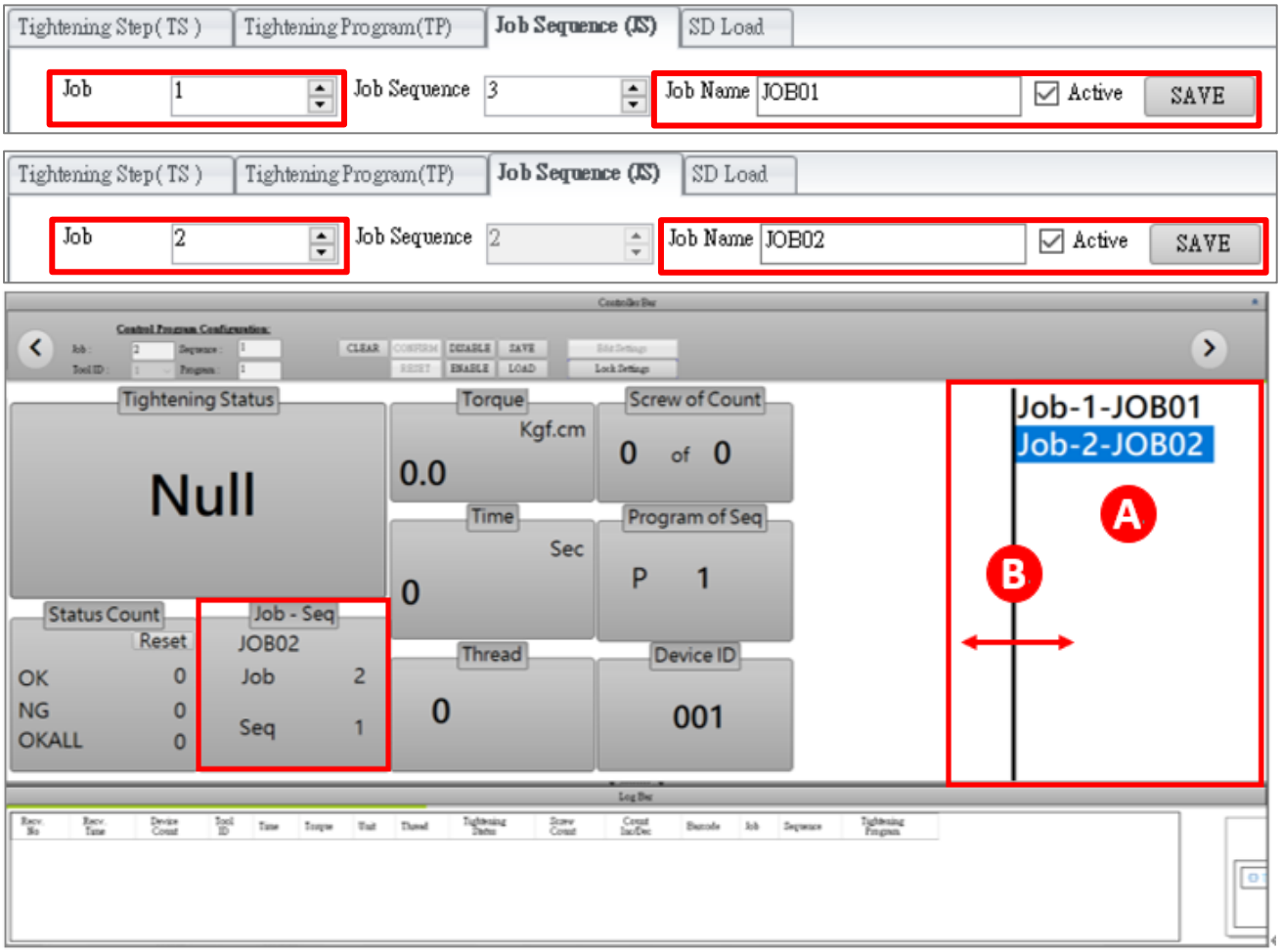
- Active: After naming the job and checking "☑Active" and click save, the checked job will be displayed on the right side of the real-time display data page, and you can choose to switch to the specified task.

NOTE: After clicking the SAVE button, the Job Sequence (JS) will be saved to the controller.

Example: On the right side of the Instant data display page, a list of the selected jobs will be displayed

Step 1: Set Job 1、Job Name: JOB01、☑Active、SAVE

Step 2: Set Job 2、Job Name: JOB02、☑Active、SAVE

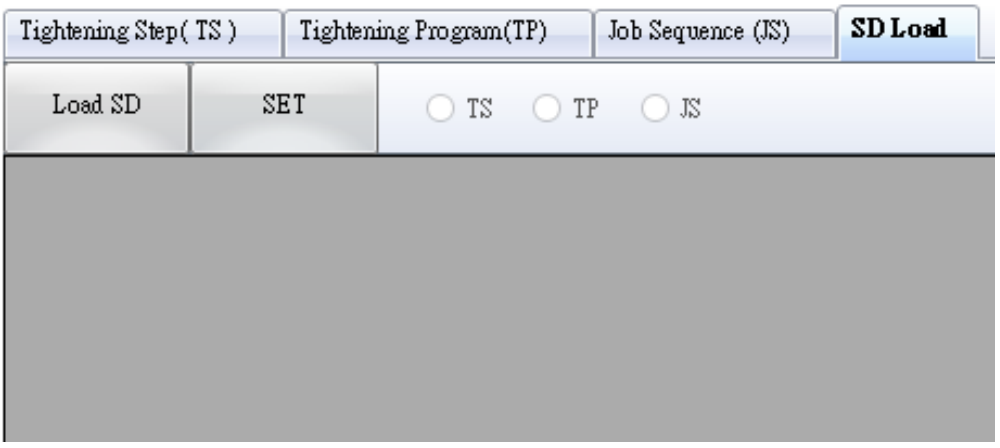


NOTE A : Activated Job list docks on right side of each screen, click on the program to be executed on the list (JOB-2-JOB2 with a blue background as shown above) and wait for about five seconds JOB-Seq will display the selected program.

NOTE B : If the JOB Name is blocked, you can adjust the horizontal bar on the left to display the full name on the job list.

D SD Load

Setting data can be stored in the SD card. Insert the SD card into the computer and use the SD card loading function of this system to load the data into other controllers, if there are multiple controllers in same setting.



- Load SD: Select the file extension of .kls in the SD card.
- SET: After confirming that the data is correct, click SET.

NOTE: File naming rules, for example: the file name is

P_cTToxx _____- 05081107.kls

- P: Tightening Program (TP)

J=Tightening Step(JS)
P= Tightening Program(TP)
S=Job Sequence(TS)

- cTToxx: Display controller serial number
- 05081107: Display time saved to SD card

  (The format is month, day, hour, and minute, 05 is month, 08 is day, 11 is hour, 07 is minute)

- .kls: file name

Example: Write the data stored in the SD card to this system

(Select the file name as P_cTToxx_____-05081107.kls)

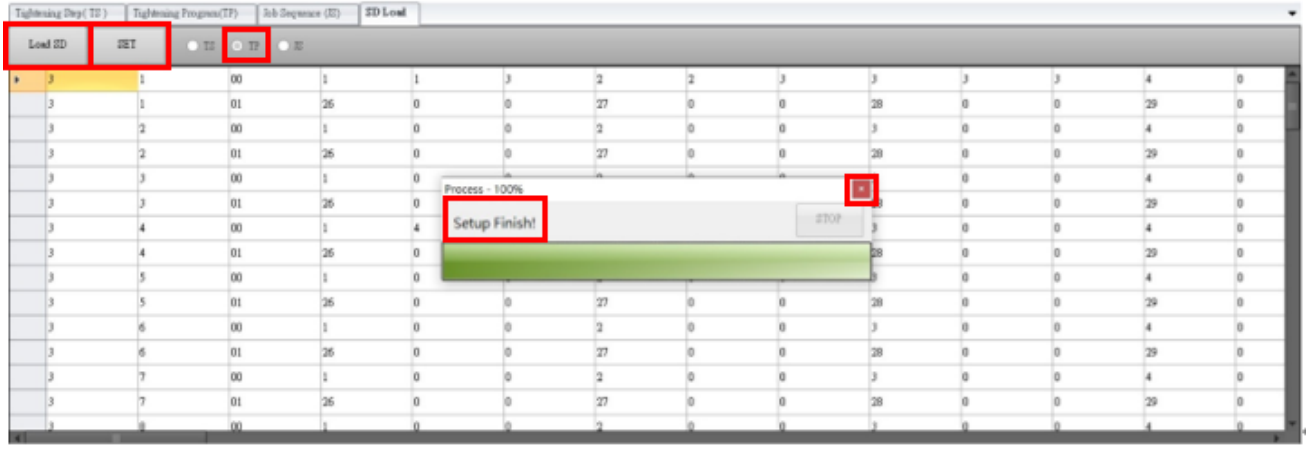
Step 1: Click “Load SD”

Step 2: Selected file name is the extension of .kls (after clicking, the selected file will be displayed as 

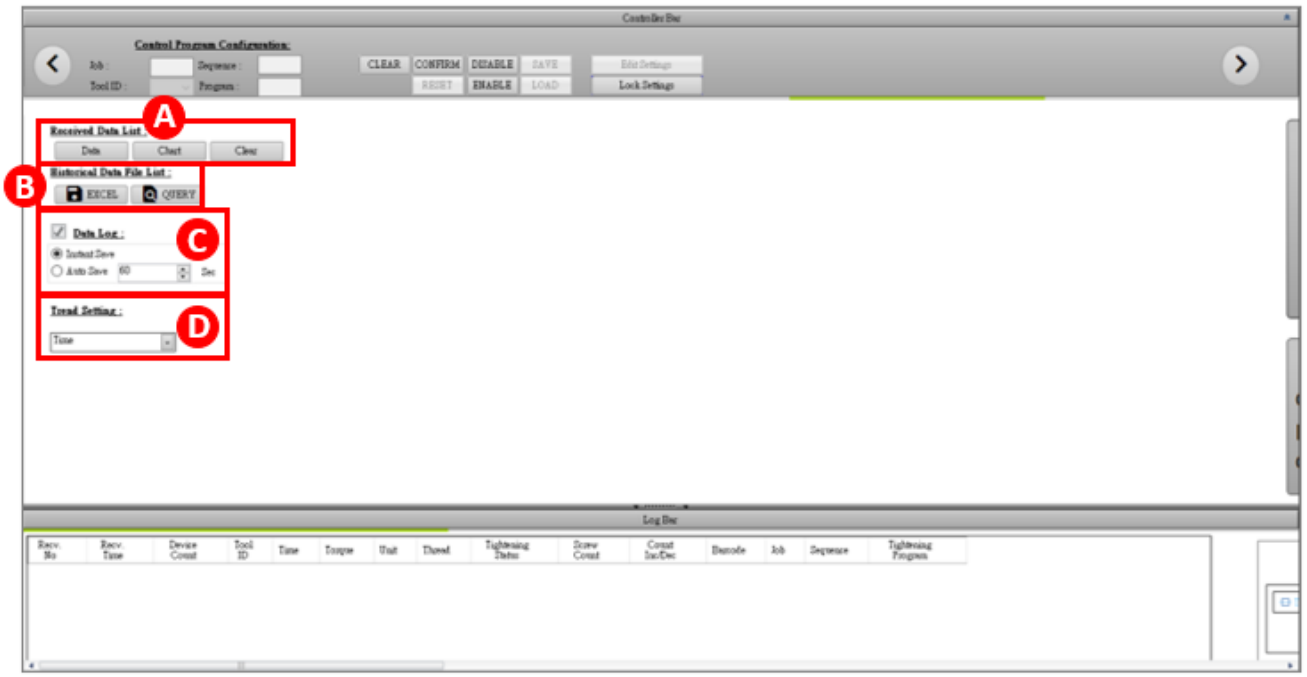
)

Step 3: Press SET and wait for loading to complete.

(After loading, click “X” in the window)



4. Report and trend graph setup page



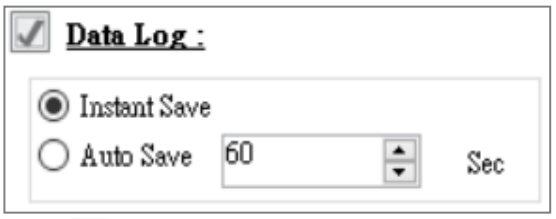
A Received Data List

There are two types of display data Data Chart. If you need to clear it, press the Clear button to clear all the data immediately.

B Historical Data File List

- Excel export: When swiping the Controller Bar to page 4, press EXCEL to export the Excel report to the specified location.
- Excel import: When swiping the Controller Bar to page 4, press QUERY and then click the Excel file to import it.

C Data Log

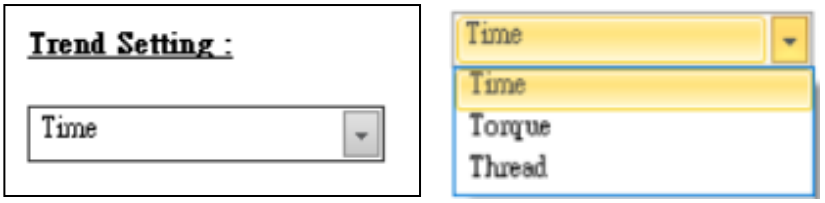


➢ Data Log: When Data Log : is checked, there are two ways to automatically export Excel reports (instant archive, automatic archive).

- When Instant Save is selected, any data fastened will be automatically exported to the bottom of Excel . When the system passes the integral time point, the form will be cleared to ensure sufficient memory space.
- When Auto Save is selected, the data will be recorded in “seconds” as set in 60 and the report will be exported below Excel .

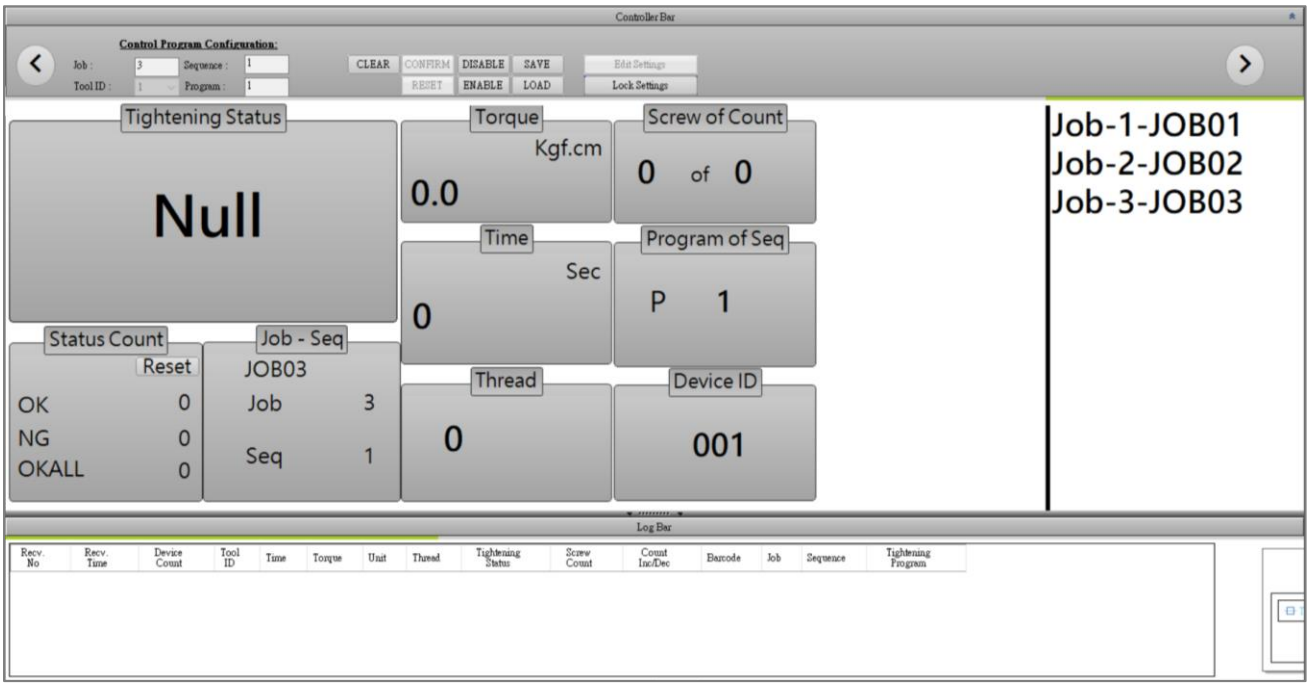
D Trend Setting: Time, Torque, Thread

Select one of the Time, Torque, and Thread from the pull-down menu. It will show the graphic trend chart. (Refer to**“P.16 TQC Trend Setting”****)**



NOTE: When changing the “Trend Setting”(T/Q/C) setting, the screen of the chart will be clear and then display again after finished a new tighten.

5. Instant data display



- Tightening Status: Display current complete status of fasten process.
- Status Count: Display current screw fastening status.

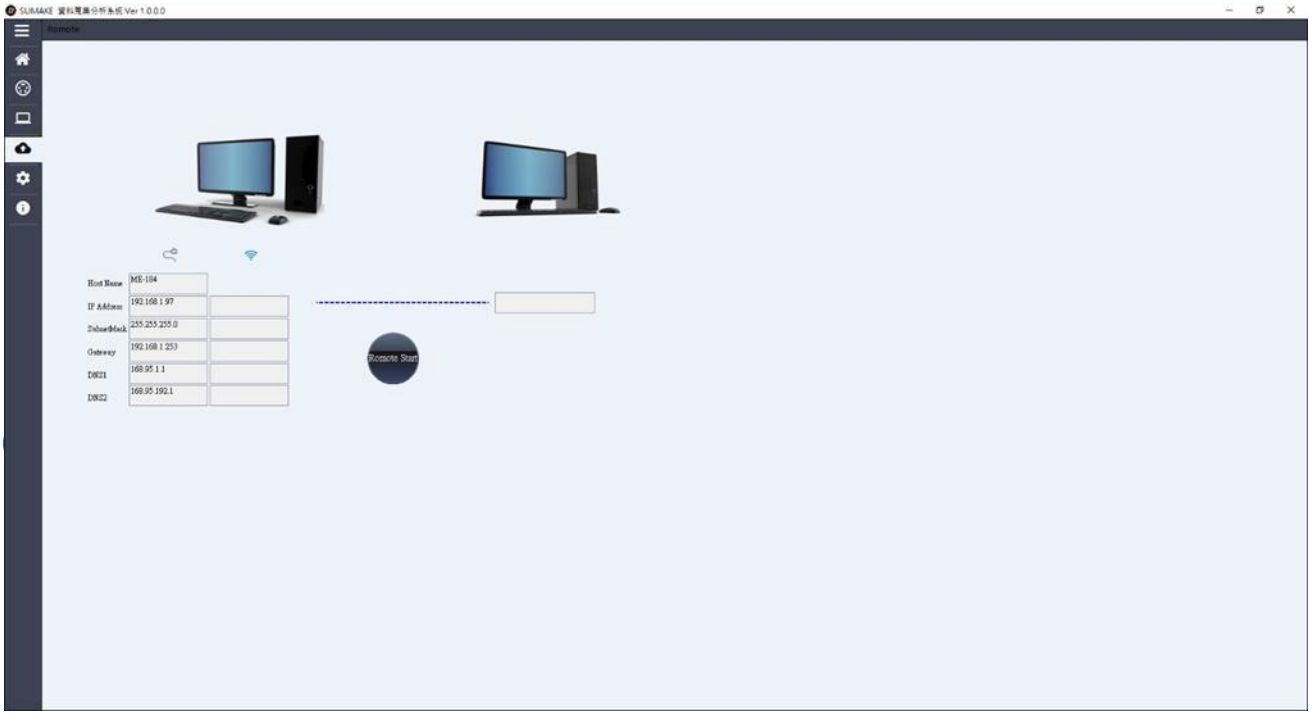
Reset: Reset "Status Count" counters.

- Job-Seq: Display current fastened tasks and work sequence.
- Torque: Display fastening torque.
- Time: Display screw fastening time.
- Thread: Display the number of turning screwdriver.
- Screw of Count: Display the number of current screw count status.
- Program of Sequence: Indicate the current Program of the Sequence.
- Device ID: Display controller device number.

⑦ Remote Screen

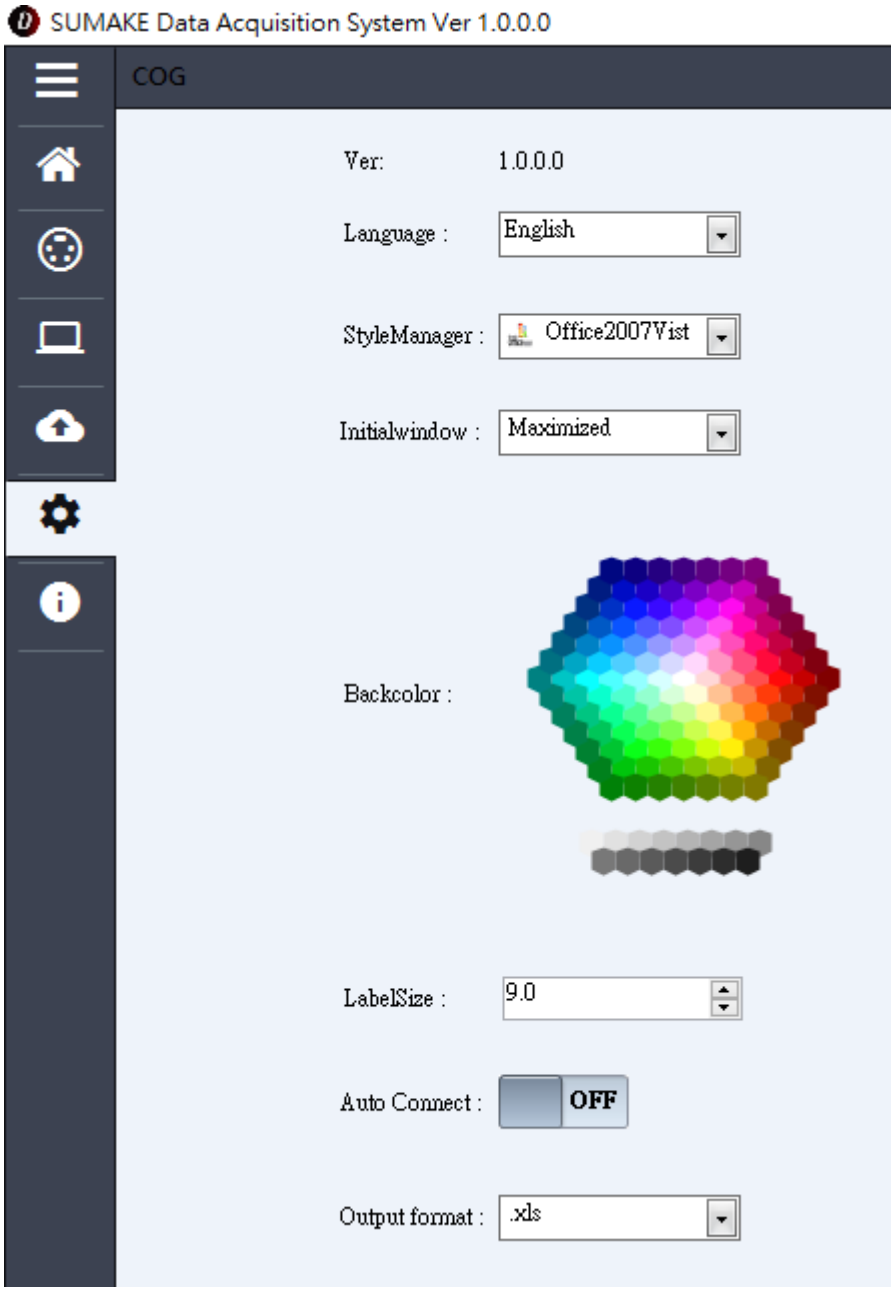
The screen image by remote monitoring.

NOTE: Please contact with local distributors for the detail information.



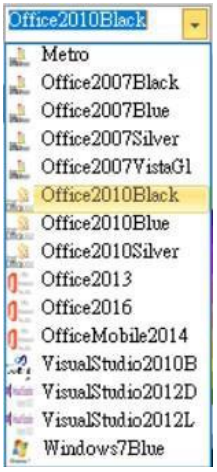
⑧ System Function Setup

Switch to ⚙ Settings page to operate system functions



1. Language: 

three language options are available.

2. Style: 

system operating style can be changed.

3. Initial window: 

To set the initial windows setting.

4. Background color:  system background color can beselected.

5. Font size: 

system font size can be modified (8~11).

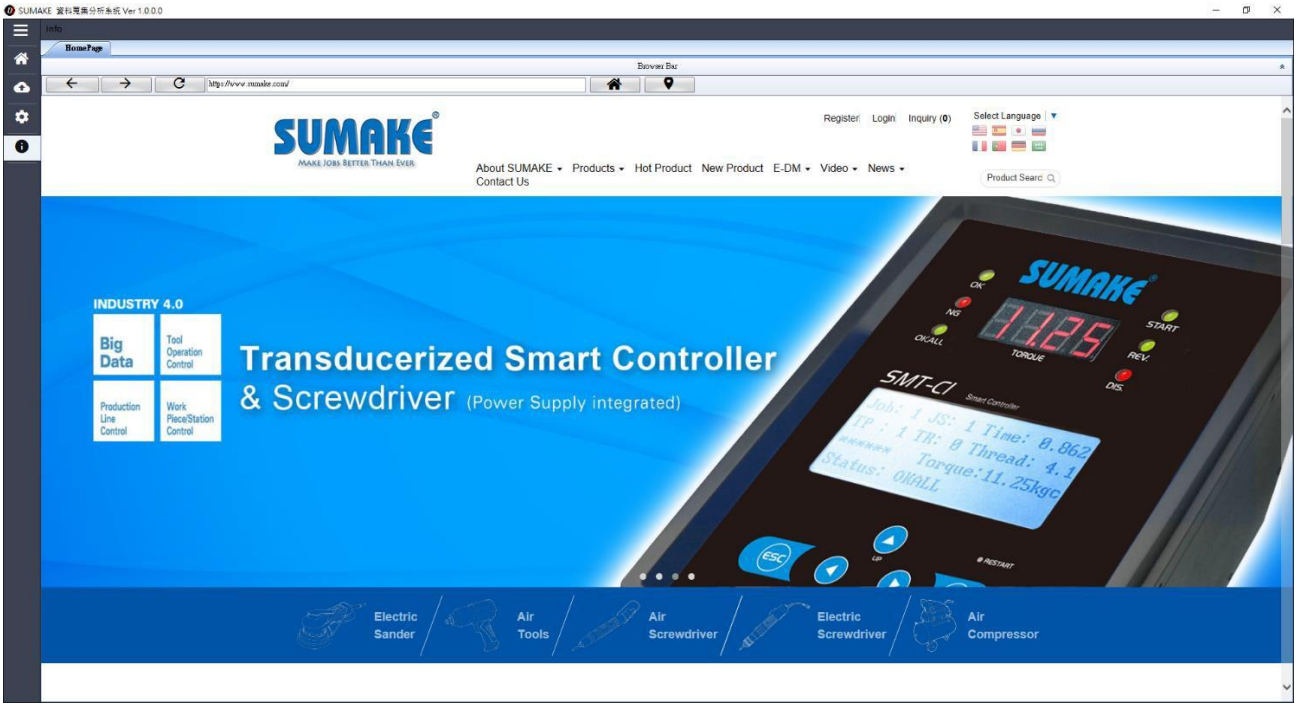
6. Auto connection: When switching 

, the serial port (COM) willautomatically connect to the device the next time you start the software.

7. Output format: Different formats for record storage can be select.

⑨ Info Company Website

Switch to Info page to browse **Sumake** official website.

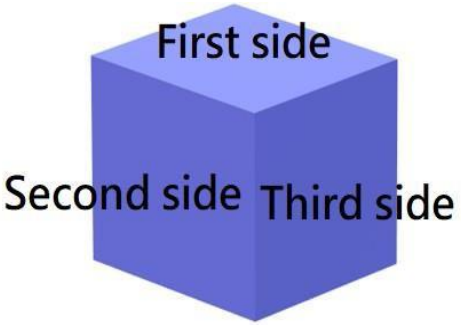


⑩ Example Description

NOTE:

1. 1 Job (Job No.1 ~ Job No.50) = Sequence (Sequence *50)
2. 1 Sequence (Sequence No. 1 ~ No. 50) = Tightening Program (TP *1) + Tightening Repeat (TR No.1 ~ TR No.99)
3. 1 Tightening Program (TP No.1 ~ TP No.99) = Tightening Step (TS *5) + Reverse Parameter
4. 1 Tightening Step (TS No.1 ~ TS No. 255) = TS NO.1 ~ TS No.255 could be selected.
5. Tool: always Tool1

When screws are fastened on 3 sides of a product, the condition is as follows:



Job

Sequence	Tightening Program (TP)	Tightening Repeat (TR)	Tightening Step (TS)
First Side (Sequence 1)	First TP	4 pcs	3.0 kgf.cm (Torque)
Second Side (Sequence 2)	Second TP	3 pcs	2 rotation (Thread) 3.0 kgf.cm (Torque)
Third Side (Sequence 3)	Second TP	2 pcs	5.0 kgf.cm (Torque)

Set the Seq 1 ~ Seq 3 condition (refer to **"P.21 Programming the Jobs Tightening Programs/steps page"** for setting up the parameter condition):

1. Set to Seq 1 when the first side is fastened

Seq 1 condition = Tightening Repeat (TR) 4 screws + Tightening Step (TP) First TP

= 3.0 kgf.cm (Torque)

2. Set to Seq 2 when the first side is fastened

Seq 2 condition = Tightening Repeat (TR) 3 screws + Tightening Step (TP) Second TP

= 2 rotation (Thread)、3.0 kgf.cm (Torque)

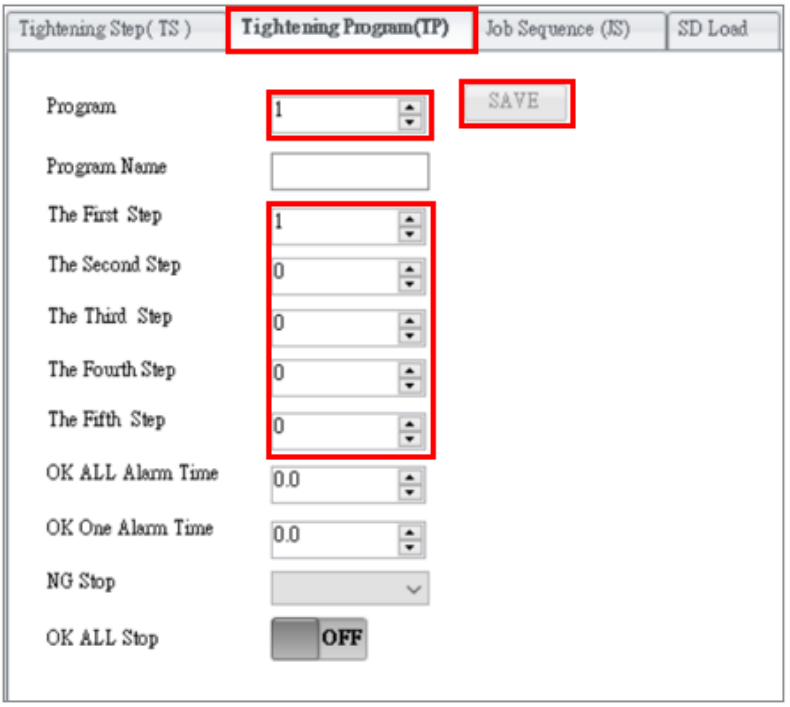
3. Set to Seq 3 when the first side is fastened

Seq 3 condition = Tightening Repeat (TR) 2 screws + Tightening Step (TP) Third TP

= 5.0 kgf.cm (Torque)

Step 1: After setting Seq 1 ~ Seq 3 parameters to Job Sequence (JS) No. 1, then click SAVE button to save the data to the controller.

Step 2: After setting parameters to Program 1 in Tightening Program (TP), then click SAVE button to save the data to the controller.

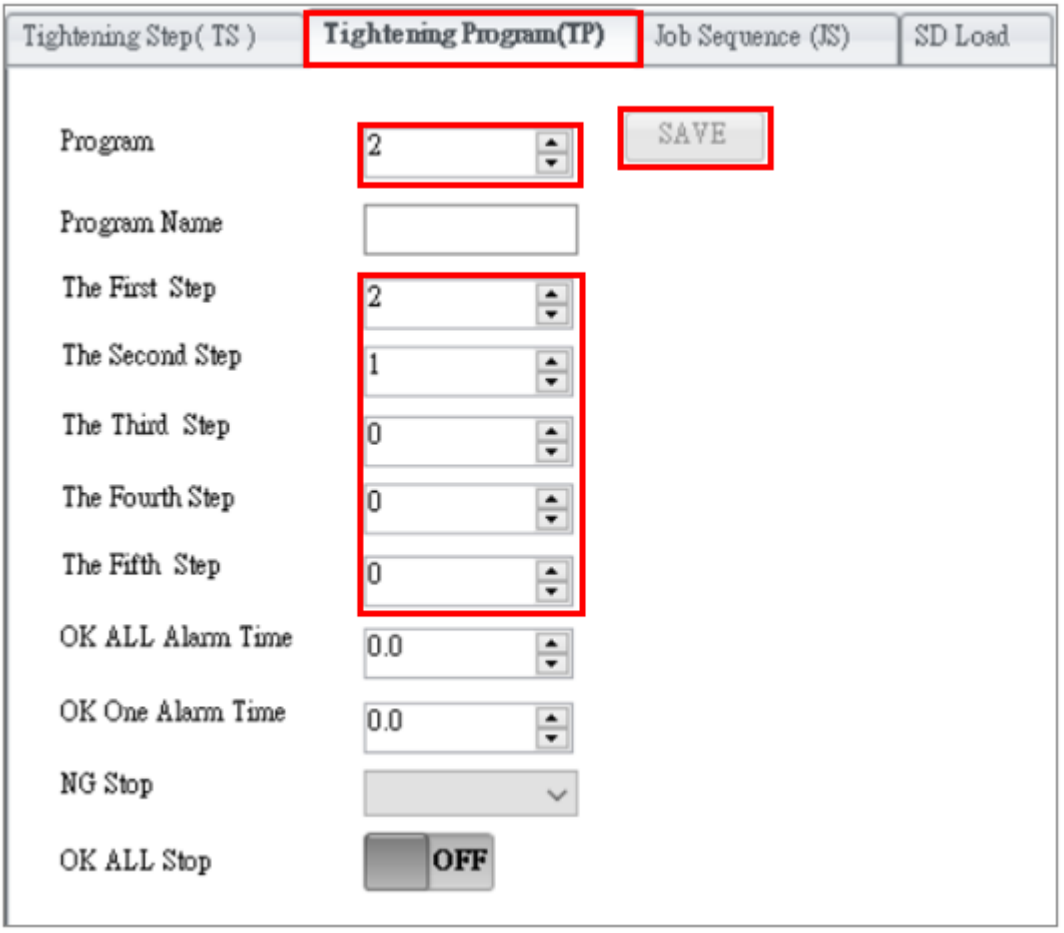


NOTE: Input “0” to the steps which are not activated.

Step 3: After setting parameters to Step 1 in Tightening Step (TS), then click SAVE button to save the data to the controller.

NOTE: Step 1 was already assigned to “The First Step” previously.

Step 4: After setting parameters to Program 2 in Tightening Program (TP), then click SAVE button to save the data to the controller.



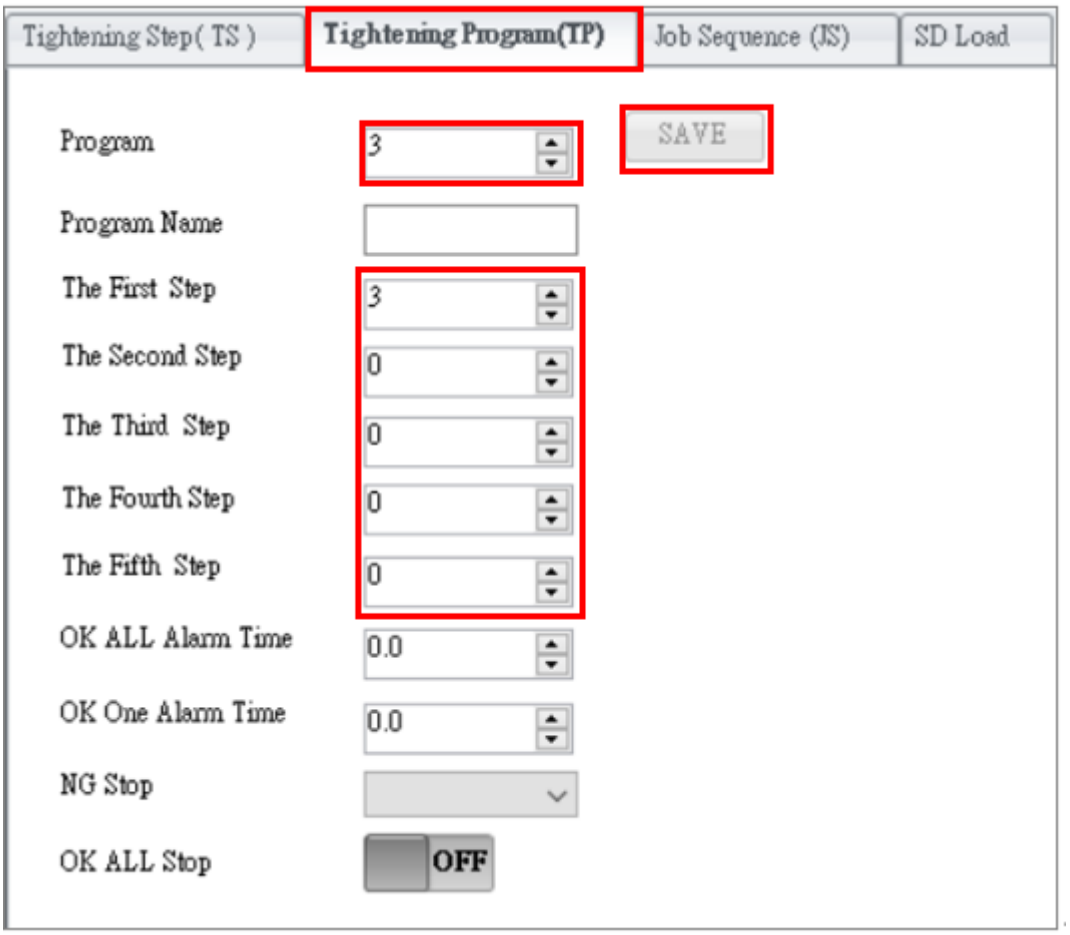
NOTE: Input “0” to the steps which are not activated.

NOTE: The digit “2” in the “The First Step” is a new setting, the detail setting condition of Step 2.

Step 5: After setting parameters to Step 2 in Tightening Step (TS), then click SAVE button to save the data to the controller.

NOTE: Step 2 was already assigned to “The First Step” of Program No.2 previously.

Step 6: After setting parameters to Program 3 in Tightening Program (TP), then click SAVE button to save the data to the controller.



NOTE: Input “0” to the steps which are not activated.

NOTE: Program 3 was already assigned to “Seq3” previously.

Step 7: After setting parameters to Step 3 in Tightening Step (TS), then click SAVE button to save the data to the controller.

NOTE: Step 3 was already assigned to “The First Step” of Program No.3 previously.

NOTE: After completed Step 1 to Step 7 settings above, you finished the Job No.1 setting.

NOTE: For the rest Jobs settings, the concept is the same as this one.

⑪ Statement

Reminder again, please follow the relevant regulations and the international practice of the Internet. Never do anything illegal or harm to the company in any illegal way. You may not use this service to engage in violations of other's rights or illegal activities: Please acknowledge you have ownership for all your photos and texts. Do not post or transmit any files that are defamatory, insulting, threatening, offensive, indecent, defamatory, false, in violation of public order or good customs or other unlawful words, pictures or files in any form, nor infringe on the reputation or privacy of others, business secrets, trademarks, copyrights, patents, other intellectual property rights and other rights, and other acts that are deemed improper.