DLAB Magnetic Upper Unit Software

Operating Instructions

Scan the QR code below to download the upper software:



1. Connected Devices

1.1 Connecting magnetic stirrer equipment

Connect the magnetic device to the computer via the USB cable.



1.12 Viewing Magnetic Device Connection Port Numbers

Right-click on "Computer" and open "Properties" and select "Device Manager".



Open "Port" to view the port number as shown in the figure, "Silicon Labs CP210 \times USB to UART

If "Silicon Labs CP210 \times USB to UART Bridge (COM3)" is selected in the software, the port number COM3 will be selected;

1.12 The port number is not recognised

If at this time the device manager does not identify the "Silicon Labs $CP210 \times$ USB to UART "Bridge"port is not recognised in the device manager, the driver may not be installed, please install the driver as follows:

` 📜 > 此目	电脑 > local (D:) > 驱动	~ C	○ 在驱动中搜索	
*	名称	修改日期	类型	大小
low&dTrite	PL2303 Windows Driver User Manual v1.12.0.pdf	2015-10-07 18:55	WPS PDF 文档	1,455 KB
1.1	PL2303_DriverInstallerv1.12.0_ReleaseNote.txt	2015-10-07 18:59	文本文档	11 KB
- 1	PL2303_Prolific_DriverInstaller_v1.12.0.exe	2015-10-07 18:25	应用程序	3,631 KE
- 1				
ersonal				

After successful driver installation, check the "Device Manager" again and select "Silicon Labs $CP210 \times USB$ to UART Bridge" and right click to update the driver.



After updating the driver the port no longer has a yellow exclamation mark, then the computer has been successfully connected to the device.



2. Function

2.1 Connected Devices

Click the installation package to install the programme, after the installation is complete click MagnetStir.exe to run the programme, open the interface as follows.



Select the type of device to be connected and select the port of the connected

device. Click the connect button to connect the device

After successful connection, enter the main operation window

DIVB	Magnetic stirring software				v1. 0. 0. 0
1400 s		21400		Process setting	
1300 1200 1100 1000 1000 1000		1300 1200 1100 900		0#2 Setspeed 100-15	00Integer FPM ()
00 000 000 000 000 000 000 000 000 000		700 600 500 400 900		RealSpeed	
200 100 -100 00:00:00	00:00:01 00:00:02 00:00or	1 00 03 00:00:04 00:00:050		Tips stop the stirring of Temperature setting	
300	Time(sec)	300		Set Node B standard	heating mode
250 200		250 200		SetTemp 25°340.00	τ 🜔 🖲
100 50		100		Tip: stop the heating fit	
0 -50 00:00:00	00.00.01 00.00.02 00.00.0 time(sec)	0 03 00:00:04 00:00.25		SetTimer ()	ah:ma) 0 🛟 : 0 🛟 🕑 🖲
	Speed[rpm] SetSeed[rpm] Temp[*C]	<pre>[] SetTemp[* C]</pre>	Tip: The start is getting teap and st	RealTimer	
					<u></u>
Programable contro	1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1881			
					400 7600 7800
		100:00:00 00:00:01	00:00:02	00:00:03	
	d heating before control and not operator others		Time(sec)		

2.2Main function introduction

The software is divided into the curve display area (left window)

The curve display area can display the current set speed curve, **D O O C**, real-time speed curve, set temperature curve and real-time temperature curve in real time after pressing the get real-time data button.



Device control area (right window): the device control area completes the real-time control of the device (including magnetic control, temperature control and timing control), and also includes the control of whether to obtain the magnetic curve and temperature curve in real

time.

	Process setting	0
Device type MS-H-ProM Port: COM2	Rotation setting	
	Setspeed 100-1500Integer rpm	
	RealSpeed	
	Temperature setting	
	Set Tode B standard heating mode	.
	SetTemp 25 [~] 340.0 [°] C	τ 🜔 💽
	RealTemp	
	Tip: stop the heating first when setting	
	Timer setting	
	SetTimer (hh:mm) 0 = : 0	• 🕑 🕕
	RealTimer	
Tip: The start is getting temp and stir data		

Programme control area (lower window): programme control area mainly through the setting of the programme control steps to complete the automatic magnetic and temperature control for a long time, support for a maximum of ten steps, each step to support the maximum time of 99 hours and 59 seconds, the programme control area and the equipment control area can not be operated at the same time.



2.3 Curve display area



1. Partition zoom button, by clicking the partition zoom button, the maximised display and normal display of the region can be switched.

2. Save curve data button, save the current curve data into excel file according to the interval of 30s.

3. By clicking the Start button, the system starts to acquire the real-time data of the magnetic device (set speed data, real-time speed data, set temperature speed and real-time temperature data) and displays them in real-time as curves in the curve display area and in real-time as numbers in the device control area. The following diagram

	Rotation setting
	Setspeed 200 rpm 🕑 🔳
	RealSpeed 0
	Temperature setting
	Set Mode B standard heating mode
	SetTemp 50.0 C 🕑
	RealTemp 25.5
	Timer setting
	SetTimer (hh:mm) 12 🛊 : 0 🛟 🜔 🔳
	RealTimer
200	

4. Stop Acquiring Data button, by clicking the Stop button, the system stops acquiring real-time data from the magnetic device (set speed data, real-time speed data, set temperature speed and real-time temperature data).

5. Disconnect button, by clicking the Disconnect button, the system disconnects the serial connection to the magnetic device.

6. Real-time speed display hide button to control the display and hide of the speed curve.

7. SetSeed[rpm] : The Set Speed Show Hide button controls the display and hiding of the set speed curve.

Temp[°C]

8. Real-time temperature display hide button to control the display and hide of the temperature profile.

9. SetTemp[° C] : The Set Temperature Speed Show Hide button controls the display and hiding of the set temperature profile. 2. 4 Equipment control area: Real-time control of equipment is accomplished in the equipment control area

1. Magnetic Control

Rotation setting			
Setspeed	100-1500的整数	rpm	۵
RealSpeed			
~			

The magnetic control button is responsible for sending the magnetic speed button and starting the magnetic rotation.

It is necessary to stop the magnetic rotation before sending the magnetic speed and to stop acquiring the magnetic temperature data.

B: Magnetic stop button, responsible for stopping the magnetic rotation.

Setspeed 500 rpm : Set the magnetic speed value, fill in the integer from 100 to 1500, you need to stop getting the real-time magnetic temperature data before filling in the magnetic speed value.

RealSpeed -- : Real-time magnetic velocity values are

displayed when the Start Acquiring Real-Time Data button is clicked.

2. Temperature control

Temperature se	tting			
Set ∎ode	A rapid heating	mode		•
SetTemp	25 [~] 340.0℃		1 0	
RealTemp -				
Tip: stop the				
Timer setting	3			
SetTimer	(hh:mm)	0 🛟	: 0 🛟	
RealTimer			0	
: Temperature set temperature set temperature con acquiring the ma : Temperature	re control button, re- ting value, and stan atrol it is necessary agnetic temperature of e control stop button,	sponsible for s rt heating. Be to stop the he lata. , responsible fo	sending the efore sendin eating up an or stopping t	heating mode, g the start of d also to stop he heating.
Set Mode A rapid heating mode	. Setti	ng the tempera	ature rise mo	ode
SetTemp	25 [~] 340.0°C		C	: Real-time
display of the actual valu	e of the temperature			
RealSpeed	· · · · · · · · · · · · · · · · · · ·	Real-time mag	gnetic veloc	ity values are
SetTimer (hh:nm) 0 🛟 : 0		15 CIICKED.	ating timer for
a maximum time of 99 h	ours and 59 seconds.			aung unici 101
RealTimer		: Timer tim	e	

2.5 Process Control Area: The programme control area is mainly used to complete the automatic magnetic force and temperature control for a long time by setting the programme control steps, supporting a maximum of ten steps, each step supporting a maximum time of 99 hours and 59 seconds, the programme control area and the equipment control area cannot be operated at the same time.

It is necessary to stop the magnetic rotation and heating function of the current device before controlling the magnetic rotation and heating of the device programmatically.

1. Partition zoom button, by clicking the partition zoom button, the maximised display and normal display of the region can be switched.

Add program control step buttons to add up to ten steps.

	time(hh:mm)	Speed(100~1500)	Temp(~340℃)
1	55: 26	300	60
2	15: 20	200	55

3. Step Delete button, clicking Delete will delete the selected step in the list.

4. The Step Import button allows you to import a previously exported step profile for direct use.

5. The Step Export button allows you to export the program steps in the list to a local file.

6. Start programme control button, by clicking the start button, the system starts to operate the instrument according to the time length and speed temperature value set in the steps for automatic parameter update and operation at regular intervals. And the magnetic force value and temperature value etc. are displayed in the curve table in real time.

7. The programme control end button, responsible for immediately stopping the ongoing programme control process.

2.6 Others

1. Chinese and English switching buttons to realise the function of switching between Chinese and English in the interface.