

USB Step Motor 8810-S

Manual



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Version :1.0

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Introduction

No need any USB protocol knowledge to control Step Motor through PC easily .

If you want to use PC to control Step Motor , with the USB Step Motor 8810-S , you can do it simply plug and play. With no external case , just plug the USB port and use our software to control the motor direction and steps. There has time scheduler function , you can pre-set the time to auto control the motor .

Fit for Home / Office / Factory Automation application and school training purpose

Features

- Control through USB by PC software
- No need extra power source , use USB as power source and communication .
- Control one 5V Step Motor – Direction , Steps . Speed
- Scheduler - Timer control
- SDK (USB CDC mode) provided – command under hyper terminal/ putty directly .
as 2nd developing

**Note : This product supports both 5V /12V Step Motor and PWM DC Motor
For DC Motor need to adjust 2 sets black jump
Please contact your reseller to buy the DC motor if need .
This board controls one kind of motor only at a time**

Minimum System Inquire

- PC / Notebook with Windows OS like WIN 7 , VISTA or XP .
- USB 2.0 / 1.1.
- **Microsoft .NET Framework Version 3.5 or above**




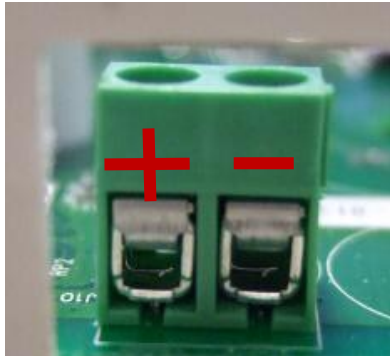
SPEC.

ITEM	SPECIFICATION
Rated Voltage	DC 5V
Motor Rated Load	0.25A/Phase
No. of Phases	Four (4)
Step Angle	7.5°
Excitation Method	2-2 Unipolar
Insulation Classification	Class A
Operating Temperature	0~+50°C
Operating Humidity	5~90%RH
Storage Temperature	-20°C~+70°C
Storage Humidity	5~95%RH

Package

8810-S x 1	
USB Cable (Male -Male)	For connect with PC
CD	With Driver , Manual and Software

Interface

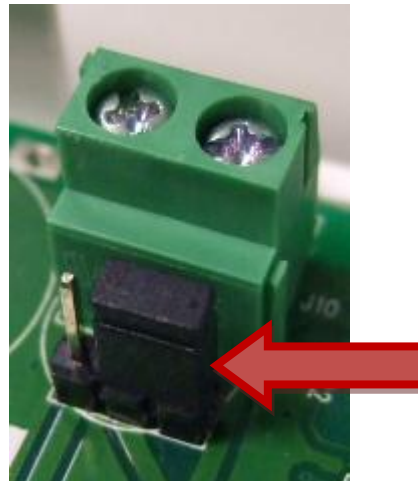
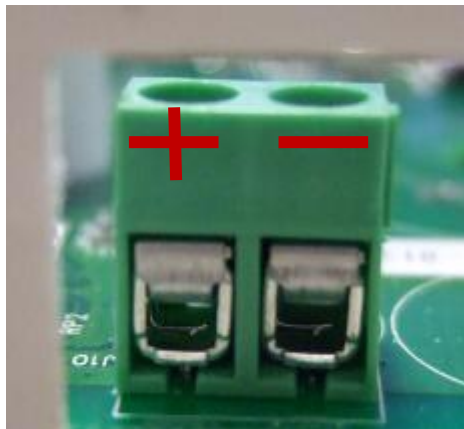
USB port	Connect with PC . 
Motor Socket	Connect to Step Motor 
5V Step Motor	Connect to Motor socket 
Other Motor Application	
12V Power In (Left+ / Right -)	For other 12V Step Motor . Need to adjust the JUMP position Please refer the Hardware Installation . 

Installation

Hardware

Please plug the Step Motor in package on the Motor Socket (White)
Connect the 8810-S board to PC by USB cable. Windows will show that there is Un-know hardware detected . Then install the driver and software from CD.

Notice : If use the option 12V Step Motor, user need to have the 12V power source first . Please plug the power source to the green socket for 12V power in (Left plus + & Right negative -) , and plug the 12V step motor to white socket and adjust the jumper as following :



Driver & Software

Installation Procedure

1. Please make sure that your PC had install .NET . or go to the link below to download before install USB Step Motor 8810-S . :
<http://www.microsoft.com/en-us/download/details.aspx?id=21>
2. After install .NET, please insert the CD in your CD ROM and it will execute

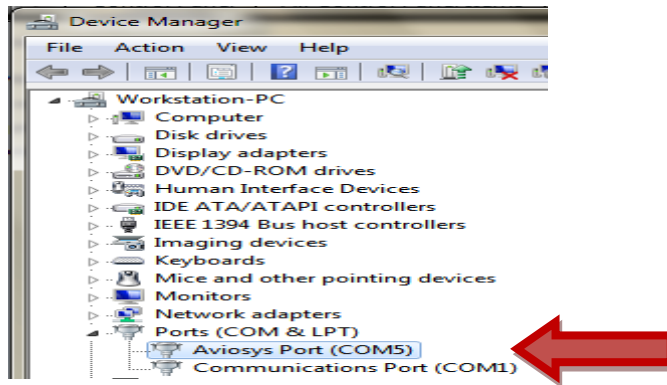
AUTORUN. file or you can open by Windows . Please use web browser “ IE “ to open the CD.

3. Then go to Manual → USB Series → USB Step Motor 8810-S to Download the driver “ USB Net Power Driver” and the software “USB Step Motor 8810-S.exe “ into your hard disk .

- Software : USB Step Motor 8810-S.exe
- 8810 Driver: USB Net Power Driver .

4. Connect the 8810 power and the USB port of 8810 power to PC . PC will pop up “ Detect New Hardware” , then select the 8810 driver and install .
5. After install the driver, you can get “Aviosys Port (COM X) in Ports (COM& LPT) device manager as following .

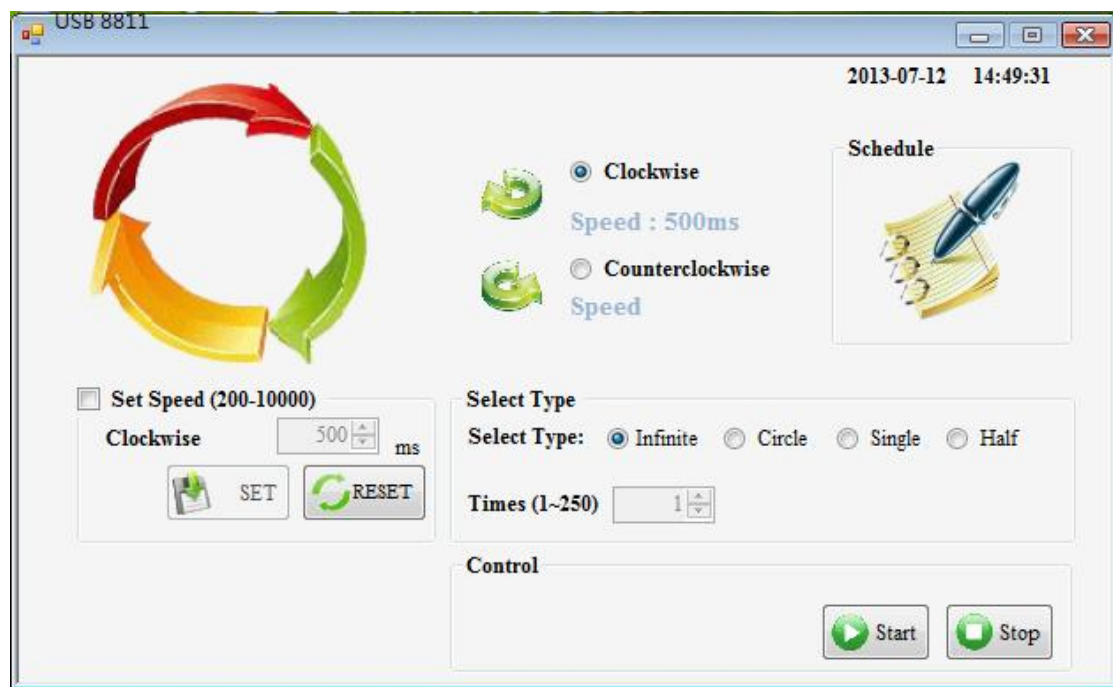
Control Panel → System → Device manager → Ports(COM& LPT) → Aviosys Port (COM X)



- 4.) After confirm the 8810-S shown in Device Manager , please execute the software “USB Step Motor 8810-S.exe “ and you will see as following :



Software Interface



Clockwise

Counter Clockwise

Set Speed

Here you can setup the Speedy , range as 200~ 10000, press SET button after confirm .

Select type

Here you can setup the type and times :

- Infinite – keep turning
- Circle – turn one loop (360 degree = 48 steps)

- Single – move one step (around 7.5 degree)
- Half - move half step

Times : Here user can setup the times range at 1 ~ 250.

Select “ Infinite “ then no need to setup the times .

Select “ Circle” + Times as “ 3 ” then the motor turn 3 loop

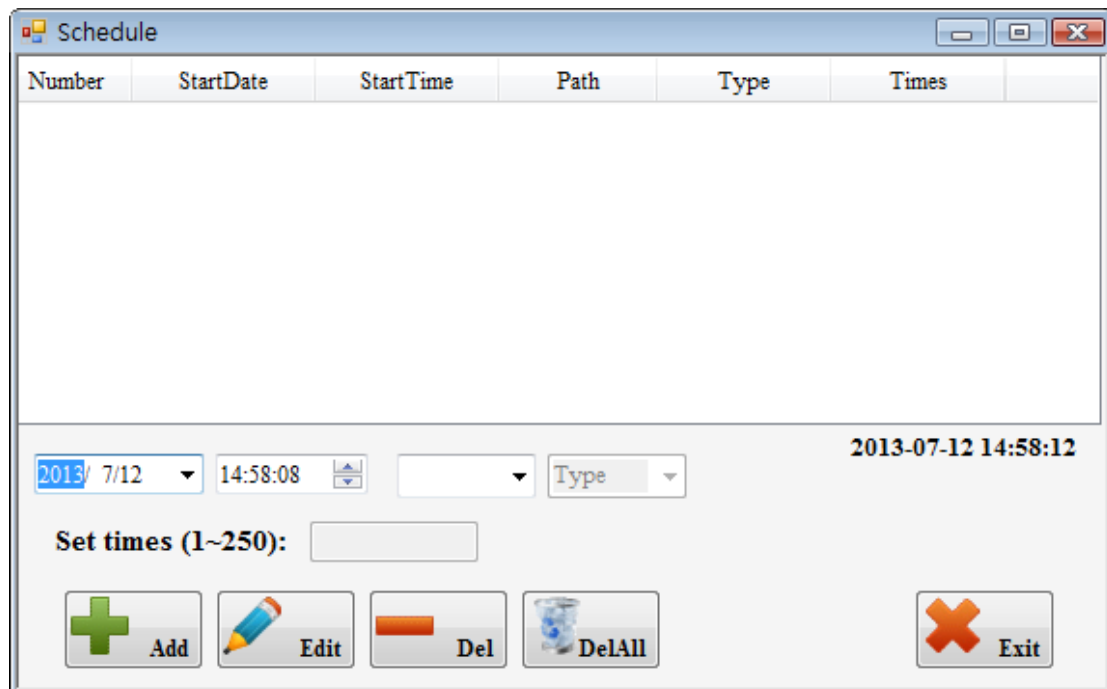
Select “ Single” + Times as” 6 “ then the motor turn 6 steps

Select “ Half “ + Times as “ 2 “ , then the motor turn 1 step.

Control

- Start
- Stop

Schedule



Set up the schedule to control motor. It is a helpful tool for auto control

Notice : Please turn off the Sleep function of PC and the 8810-S software need to be keep executing as use scheduler function.

Here user can select date , time , direction and type :

The screenshot shows a control interface with the following elements:

- Date: 2013/ 7/12
- Time: 14:58:08
- Direction: Left
- Type: Infinite (dropdown menu is open showing options: Infinite, Circle, Single, Half)
- Set times (1~250): [input field]
- Buttons: Add (green plus), Edit (pencil), Del (orange minus), DelAll (trash), Exit (red X)
- Timestamp: 2013-07-12 15:00:24

- Date : Select the date in calendar .
- Time : Select the time .
- Direction : Left(Counter clockwise) , Right (Clockwise) , Stop .
- Type :
There are 4 types : Infinite – Keep turning . Circle – Loop , Single step , Half step
- Set times : Range as 1~250

**For example : Select “ Left” + ” Single “ + “ 250” means
Turn Counter clockwise at 250 steps**

Add – add new time schedule

Edit – edit time scheduler

- 1.) Press the item want to revise .
- 2.) Revised the date , time , direction , type and times.
- 3.) Please EDIT button' s confirm .

Del – delete item

- 1.) Select the item want to delete
- 2.) Press DEL button .

Del All - delete all item in list

- 1.) Delete “ Del All” button to clear all list
- 2.) There is 2nd confirmation before delete all action

SDK - USB CDC emulation mode

For user to arrange its own development :

- Developing environment: :
 - VB.NET 2008
 - Microsoft NET. Framework Version 3.5
 - Microsoft office access 2007

USB CDC emulation mode .

Please refer the setting as following :

1. First , make sure that the 8810-S is connect with your PC. Please go to
Control Panel → System → Device manager → Ports(COM& LPT) → Aviosys Port (COM X)
2. Then open Hyper terminal to connect with 8810-S.

Start → All programs→ Accessories → Communication → Hyper terminal

* There is no Hyper terminal program in WIN 7. Please use other serial software like Putty .

Select the COM port 8810-S use .

3. Setup “ Bits per second” as 19200 and “ Flow control” as NONE. Then press **OK** to log in .



After go into the command windows, please press “ enter “ key to get all the command .

```

Comport - 超級終端機
檔案(F) 編輯(E) 檢視(V) 呼叫(C) 轉送(T) 說明(H)
Command:
p(1^8)=1/0:1-0n,0-0ff
readio :IO Status
z>_

```

[Command]

1. Step Motor

- ri --> keep turning clockwise
- rl --> keep turning counter clockwise
- rs --> turn clockwise one step
- ls --> turn counter clockwise one step
- rhs --> turn clockwise one step
- lhs --> turn counter clockwise half step

2.stop --> stop turning

3.? Or key "Enter" --> show command list

4 . Fast command —

- ~ - show 8811(step motor) °
- ! turn clockwise one step @ turn counter clockwise one step
- #,+ turn clockwise half step \$,- turn counter clockwise half step
- % clockwise one turn ^ turn counter clockwise one turn
- & keep turning clockwise * keep turning counter clockwise
- (stop turning

Note : This product support both 5V /12V Step Motor and PWM DC Motor .
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Thank you for supporting our USB Motor 8810-S.
 If any question , please e-mail to the distributor.