

● NOTE

For Distributor Commissioning or Debugging Only



YILINK Battery BMS Tool Software User Manual

Version:V1.0

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BMS Tools Instructions

The BMS tool is designed for distributor commissioning or debugging the battery system. It allows distributor to monitoring, setting or download the battery real time data.

Check list:

YILINK Battery	Computer (Microsoft System)	RS232 Communication Cable(USB To RJ11)
		

1.Connecting the battery with PC: Connected the battery RS232 port with PC by USB-RJ11 cable.

2.Software Running Environment

01

The software running on the PC and its compatible computer, using the WINDOWS operating system. System environment requires Microsoft.net Framework version 2.0 or above Framework support, please make sure you have installed well before use, installation is as follows:

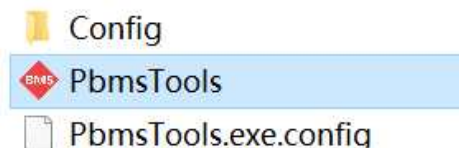
Step 1 : Download Microsoft version of Microsoft.net Framework.

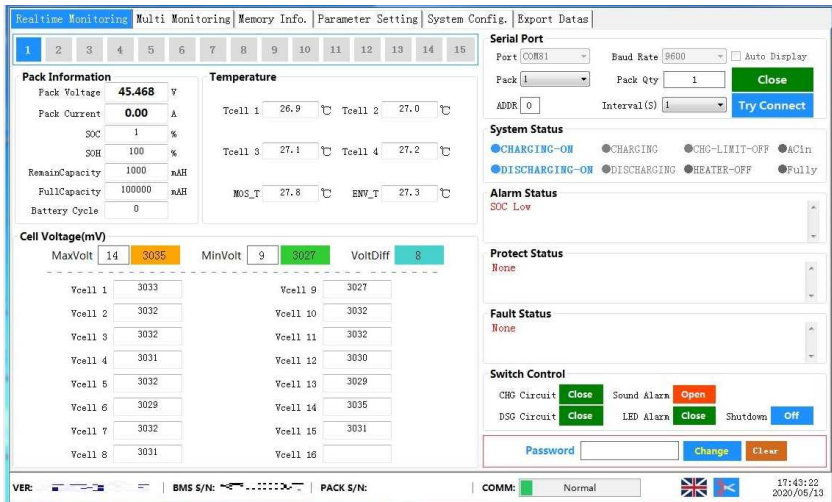


Step 2: Double-click the downloaded program to install (different versions of the installation steps, but follow the Microsoft instructions).

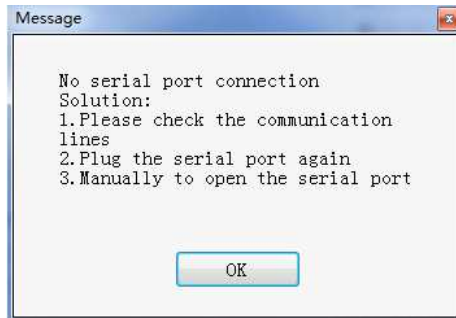


Step 3: The software does not need to be installed independently, only the environment content, double-click the exe file to run, The runtime displays the software's main interface.





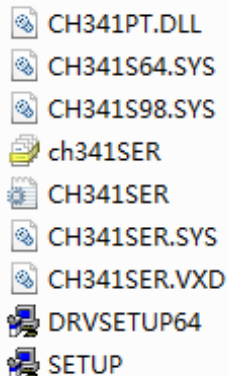
Step 4: After open the main interface , the software will automatically search all the existing serial port,if found effective serial port, and will automatically connect the serial port communication, real-time read battery information, temperature, monomer voltage, the system state and alarm status, such as protection, fault state battery parameters, If an effective serial port is not found, it will be prompted to open the serial port and start the monitoring manually.Unsuccessful search for serial prompt .



02

3. Install USB Turn Interface Drive

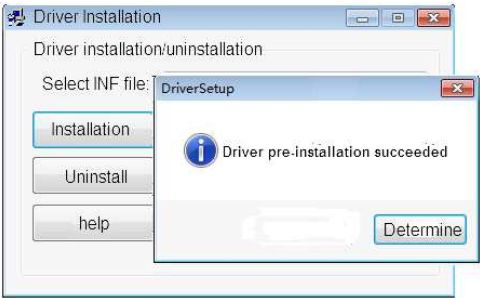
Step 1 : Double click the SETUP button to enter the installation interface.



Step 2 : Double click the SETUP button to enter the installation interface.

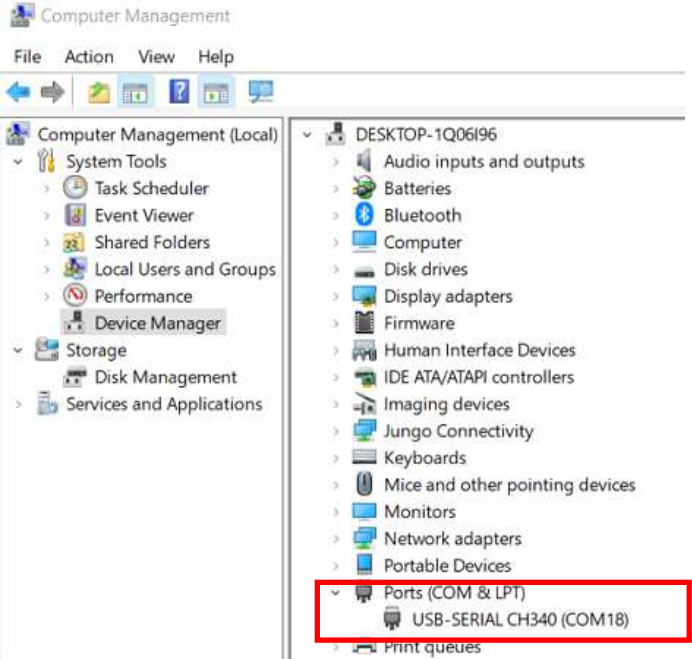


Step 3 : Click the install button, and install it, wait until finished the installation.



03

Step 4: Insert the communication converter USB line, then turn on the computer manage device to check if there is a display USB turn interface driver, the device name of communication converter is CH340, indicate that the driver is installed successfully, and remember the corresponding serial port number COMx. It will be used below:



4. Realtime Monitoring Function UI

PbmTools V2.5(编号P00407-1)

Realtime Monitoring | Multi Monitoring | Memory Info. | Parameter Setting | System Config. | Export Datas

Pack Information

- Pack Voltage: 45.468 V
- Pack Current: 0.00 A
- SOC: 1 %
- SOH: 100 %
- RemainCapacity: 1000 mAh
- FullCapacity: 100000 mAh
- Battery Cycle: 0

Temperature

- Tcell 1: 26.9 °C
- Tcell 2: 27.0 °C
- Tcell 3: 27.1 °C
- Tcell 4: 27.2 °C
- MOS_T: 27.8 °C
- ENV_T: 27.3 °C

Cell Voltage(mV)

MaxVolt	14	3035	MinVolt	9	3027	VoltDiff	8
Vcell 1	3033		Vcell 9	3027			
Vcell 2	3032		Vcell 10	3032			
Vcell 3	3032		Vcell 11	3032			
Vcell 4	3031		Vcell 12	3030			
Vcell 5	3032		Vcell 13	3029			
Vcell 6	3029		Vcell 14	3035			
Vcell 7	3032		Vcell 15	3031			
Vcell 8	3031		Vcell 16				

Serial Port

- Port: COM1
- Baud Rate: 9600
- Auto Display: ☐
- Pack 1: 3
- Pack Qty: 14
- Close
- ADDR: 05
- Interval(s): 16
- Try Connect

System Status

- CHARGING-ON
- CH2-LIMIT-OFF
- AC1S
- DISCHARGING-ON
- DISCHARGING
- HEATER-OFF
- Fully

Alarm Status

SOC Low

Protect Status

None

Fault Status

None

Switch Control

- CH2 Circuit:
- Sound Alarm:
- BSC Circuit:
- LED Alarm:
- Shutdown:

Bottom Bar

- VER: 1.2
- BMS S/N: 13
- PACK S/N: 14
- COMM: Normal
- 15
- 17:43:22 2023/5/13

No.	Main control instructions	Remark
1	Port	Select the drop-down option and select the serial port to communicate. Available when the serial port is not opened
2	Baud Rate	Optional drop down, choosing the baud rate for communication. Available when the serial port is not opened
3	Pack	You can select the drop-down item, the current read Pack, and the RS232 interface to the host when you select FF, and you can get all the Pack data. Available when monitoring is not started
4	Pack Qty	Read-only values, the number of Pack packs that were read from the BMS board when applied to multi-machine parallel, from the main Pack to the Pack data
5	ADDR	A read-only value, the current read BMS address values
6	Interval(s)	Optional items. This PC to read data from the BMS samples of time interval
7	Open/Close	Alternate function button, open or close serial port
8	Start Monitor	Alternate function button, start or stop the monitoring, monitoring time and frequency of data read is 6 set time interval
9	Group Packs	The data key, which is the pack serial number, displays the pack that the current interface is reading and rendering with the blue bottom white. The "auto" button, alternate function button. When the three pack selects the FF and starts the monitoring, the automatic loop displays the various pack data (applied in parallel for multiple machines)
10	System Status	When a system state occurs, the text is blue. Gray means not happening
11	Administrator Password bar	Some Settings are required for the administrator password to be used, such as some functionality in system Settings. (note: when the password is correctly entered, the input box will be green, and you have access to the administrator)
12	Versions	BMS software version number

13	BMS S/N	Barcodes for BMS boards
14	PACK S/N	Barcodes for PACK
15	COMM State	This software with BMS board status of communication. For effective when started monitoring and communication is normal.
16	Change Language	Display the national flag icon of the current language country, click to switch the language
17	Screenshot	Click to enter the screenshot state, and after you draw the screenshot area with the mouse, a toolbar will appear, and you can copy/save the screenshot
18	Time	PC time
19	Switch Control	When the button is red, it means the function processing is off, and when it is green, it means it is on

▲ NOTICE

More information about battery protection settings, data downloading please read the Upper Computer Software Manual, only qualified and trained electrical technicians are allowed to operate the value modifications. Operation personnel should understand the composition and working principles of the battery system.

5. Multi Monitoring

a). UI: Click on the main interface TAB [Multi Monitor] to enter the interface.

Realtime Monitoring

Multi Monitoring

Memory Info.

Parameter Setting

System Config.

Export Datas

Date Time	Pack_NO	BMS S/N	Pack S/N	Pack Current(A)	Pack Voltage(V)	RemainCapacity(Wh)	FullCapacity(Ah)
2020-05-13 17:45:02	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:03	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:04	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:05	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:06	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:07	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:08	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:09	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:10	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:11	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:12	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:13	1	9877119520067J	28962005...	0.00	45.465	1.000	100.000
2020-05-13 17:45:14	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:15	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:16	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:17	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:18	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:19	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:20	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000
2020-05-13 17:45:21	1	9877119520067J	28962005...	0.00	45.466	1.000	100.000

1

☒ To the Bottom

CLS

☒ Data save to database (642)

Export

Re Save

Table Name 2020-05-13 17:27:34

VER: P15S100A-9877-1.20

BMS S/N: 9877119520067J

PACK S/N: 2896200500005

COMM: Normal



17:45:23
2020/05/13

b). Display real-time data

Check the bottom left "To the Bottom", the data area can display the monitoring of real-time data.

c). Empty interface data

Check the "CLS" button to empty the real-time data on the screen.

d). Recorded data

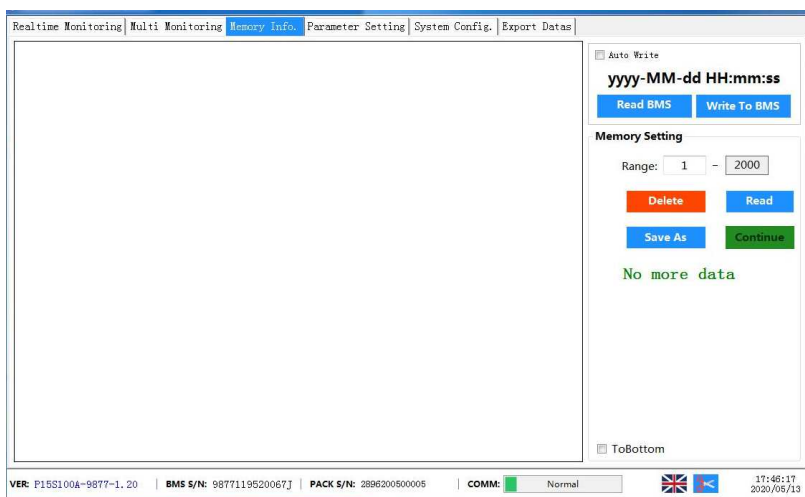
Check "Data save to database" to start recording data. When there is a data record, the number of saved data bars appears on the right.

e). Export data

Click the "Export" button to export recorded real-time data. You can also export on the [Export Datas] page.

6. Memory Information

a). UI: Click on the main interface TAB [Memory Information] to enter the interface.



NOTE

Only alarm or protection status data can be recorded automatically.

b). Read/Write BMS time.

Click "Read BMS" the button on the right side to read the BMS time;
Click "Write To BMS" the button on the right hand side to write the BMS time

c). Memory Setting.

Range: starting serial number and maximum serial number;

Delete: delete BMS storage record;

Read : read storage record;

Save As: save records on the interface to local;

Continue/Pause: when reading, click pause to read, and then click to continue reading.

Note: when read, when prompted "no more data" indicates that it has been read.

7.Parameter Setting

a). UI:Click on the main interface TAB [Parameter Setting] to enter the interface.

Realtime Monitoring		Multi Monitoring		Memory Info.		Parameter Setting		System Config.		Export Datas	
☒ Call OV Alarm(V)		3.60		☒ Pack OV Alarm(V)		54.00		☒ Call UV Alarm(V)		2.80	
Call OV Protect(V)		3.70		Pack OV Protect(V)		55.50		Call UV Protect(V)		2.50	
Call OV Release(V)		3.38		Pack OV Release(V)		50.20		Call UV Release(V)		2.90	
Call OV Delay Time(ms)		4000		Pack OV Delay Time(ms)		1000		Call UV Delay Time(ms)		1000	
☒ CHG OC Alarm(A)		105		☒ CHG OT Alarm(C)		60		☒ CHG UT Alarm(C)		0	
CHG OC Protect(A)		110		CHG OT Protect(C)		65		CHG UT Protect(C)		-5	
CHG OC Delay Time(ms)		1000		CHG OT Release(C)		55		CHG UT Release(C)		0	
☒ BSG OC Alarm(A)		105		BSG OT Alarm(C)		65		BSG UT Alarm(C)		-15	
BSG OC 1 Protect(A)		110		BSG OT Protect(C)		70		BSG UT Protect(C)		-20	
BSG OC 1 Delay Time(ms)		1000		BSG OT Release(C)		60		BSG UT Release(C)		-15	
BSG OC 2 Protect(A)		150		Balance Threshold(V)		3.50		Pack FullCharge Voltage(V)		52.50	
BSG OC 2 Delay Time(ms)		100		Balance ΔVcell(mV)		30		Pack FullCharge Current(A)		1000	
SCP Delay Time(ms)		300		Sleep Vcell(V)		3.15		SOC Low Alarm(A)		5	
Delay Time(min)		5		Sleep Vcell(V)		3.15					
Read All		CLS		Write All		Reset Setting		Import		Export	
VER: P15S100A-9877-1.20 BMS S/N: 9877119520067J PACK S/N: 2896200500005 COMM: ■ Normal 17:47:14 2020/06/13											

b). Function.

Read the Parameter: click "Read All" button to read all the parameter of the interface;

Clear the Parameter: click "CLS" button to clear all the parameter of the interface;

Write Parameter: click "Write All" button to write parameter, this operation requires administrator privileges;

Reset the Parameter: click the "Reset Setting" button to reset the interface to the default parameter. The default parameters come from the preset parameters in the BMS. This operation requires administrator authority.

Import Parameter: read the data in the local file into this interface.
Note: the data is only read to the interface and has not been written to the BMS.

Export Parameter: click on the "Export" button, the data on the interface can be saved in the form of an XML file to the local.

8.System Configuration

a). UI:Click on the main interface TAB [System Configuration] to enter the interface.

Realtime Monitoring | Multi Monitoring | Memory Info | Parameter Setting | **System Config** | Export Datas

Voltage(mV)
Vref **Calibration**
Pack Voltage **Calibration**

Current(mA)
CHG Current (1000-60000mA) **Calibration** **Resetting**
Zero Current **Calibration** **Resetting**
DSG Current (1000-60000mA) **Calibration** **Resetting**

Cell Number Setting
Cell Number **Setting**

CHG Current Setting
Start Current (A) **Setting** **Read**

Gap Charge Setting
Gap Charge Threshold **Setting**

Capacity(mAH)
DesignCapacity
RemainCapacity
FullCapacity
Read **Write**

Battery Cycle Setting
Battery Cycle **Setting**

Manufacture Information
☐ Clear text box after writing
☐ no-repeat BMS S/N **Write**
☐ no-repeat PACK S/N (20) 2896200500005 **Write**

VER: P15S100A-9877-1.20 | BMS S/N: 9877119520067J | PACK S/N: 2896200500005 | COMM: Normal | 17:47:49 2020/05/13

b). Function.

According to the interface prompt operation. You need administrator rights part function.

NOTE

This item is limited to the manufacturer write product code. In order to make your battery warranty valid, please do not modify this item.

08

9.Export Datas

a). UI:Click on the main interface TAB [Export Datas] to enter the interface.

Realtime Monitoring | Multi Monitoring | Memory Info | Parameter Setting | System Config | **Export Datas**

Only the data in the last two months are kept.
Please export and save in time.

All tables

2020-04-26 14:32:39
2020-04-26 15:37:46
2020-04-26 15:56:49
2020-04-26 18:39:54
2020-04-26 19:13:40
2020-04-27 16:58:10
2020-04-28 09:21:05
2020-04-30 09:25:39
2020-05-13 17:27:34

Export **Delete** **Delete All**

VER: P15S100A-9877-1.20 | BMS S/N: 9877119520067J | PACK S/N: 2896200500005 | COMM: Normal | 17:48:01 2020/05/13

b). Function.

After checking "Re Save" on the [Multi Monitoring] page, the recorded data can be exported on this page. The table is named after the starting point of the record. The data is saved for up to two months, and the expired data is automatically cleared. Double-click the table name to export data.



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