SPECIALIZED
POWER SYSTEMS
www.SpecializedPowerSystems.com | sales@specializedpower.net

Operating Instructions

ADJUSTING HEAT PARAMETERS

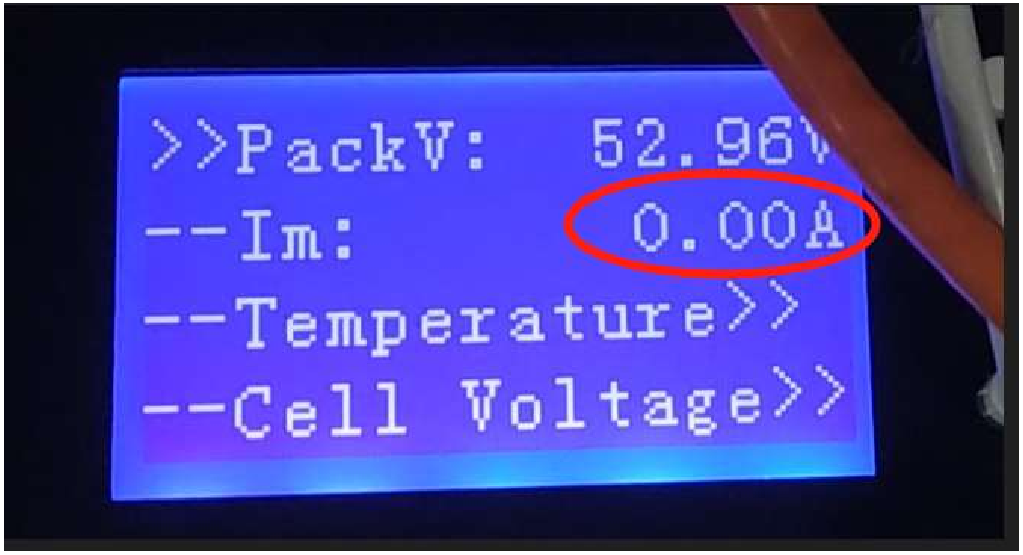
Via the software program
modify the charging low temperature protection parameters and the
opening and closing temperature values of the heating film

ADJUSTING HEATED LiFeP04 BATTERY

13513183683

You will need to use the communication cable included with your battery. We also include a cold weather, please remove this if needed to access the battery’s communication port.

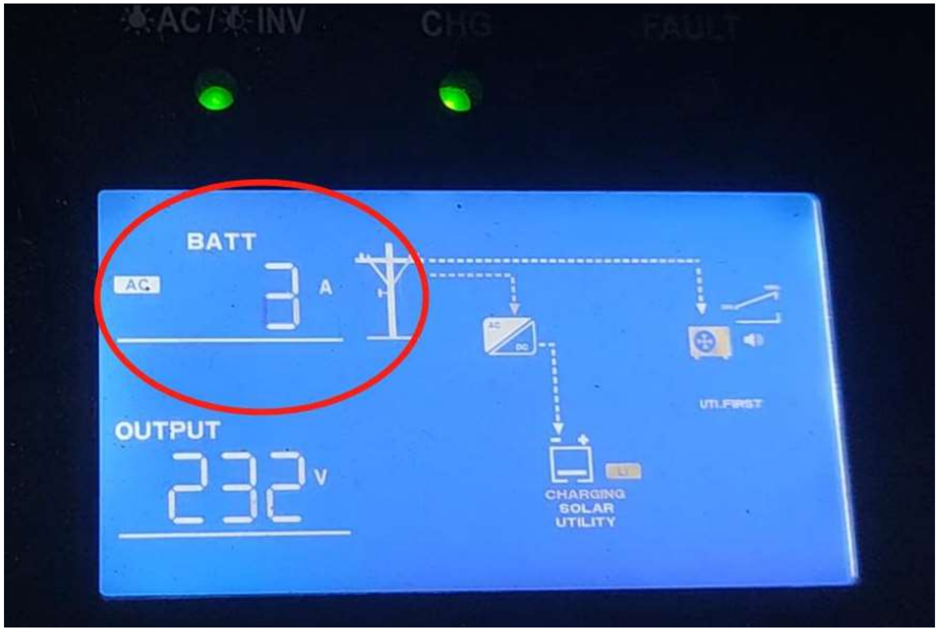
CCT LFP-51.2V-280Ah



```
>>PackV:    52.96V
--Im:        0.00A
--Temperature>>
--Cell Voltage>>
```

When the temperature is below 0 degrees, the battery will not be charged, so the working current shows 0, but at this time the heating film is already working.

While on the it shows low working current when heating film is working.


AC/INV
CHG
FAULT
BATT
AC
3 A
OUTPUT
232 V
AC
DC
UTI.FIRST
LI
CHARGING
SOLAR
UTILITY

Heated Batteries: OEM setting before shipment

Heater is ON: when the temperature is lower than 0°C and there is a charging current.

Heater is OFF: when the temperature is higher than 10°C.

Common Issue: I suspect that the heating elements are not working since we are not seeing any current flowing into the batteries when the chargers are applied.

Answer: No current can be seen flowing into the battery, because the battery temperature is too low at this time, the battery is not being charged, but the heating film is already recharged/activated and working (you may also see the current on the inverter, is about 2-3A)

CCT LFP-51.2V-280Ah- Questions need to know

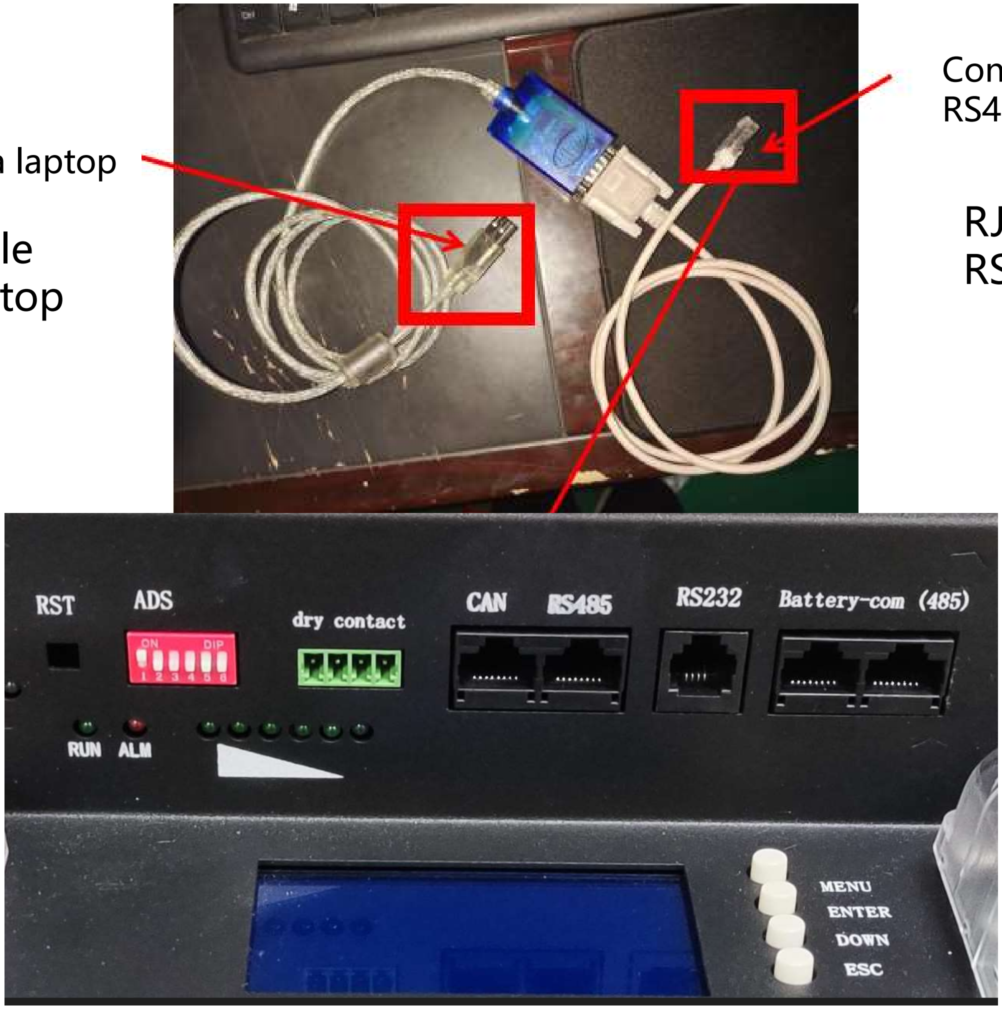
1. What is the state of the battery now? Has it been turned off?

2. How to charge the battery: Mains power? PV? other? Or Mains + Photovoltaic

3. Battery usage time period: For example, discharge at night and rely on photovoltaic charging during the day? Or will it be used on and off throughout the day? As well as the power of the load, the power of the photovoltaic, whether it is judged whether the electricity generated by the photovoltaic is enough? Is it enough for the load, and can the excess electricity fully charge the battery?

4. Is the battery indoors or outdoors? The local temperature situation, the temperature in winter?

Step 01: Connect the laptop with the battery pack by the RS485 communication cable.


RST
ADS
ON
DIP
dry contact
CAN
RS485
RS232
Battery-com (485)
RUN
ALM
MENU
ENTER
DOWN
ESC

Connecting a laptop

USB port of the cable
is connected to laptop

Connecting the battery pack
RS485 Port

RJ45 port is connected to
RS485 port of battery

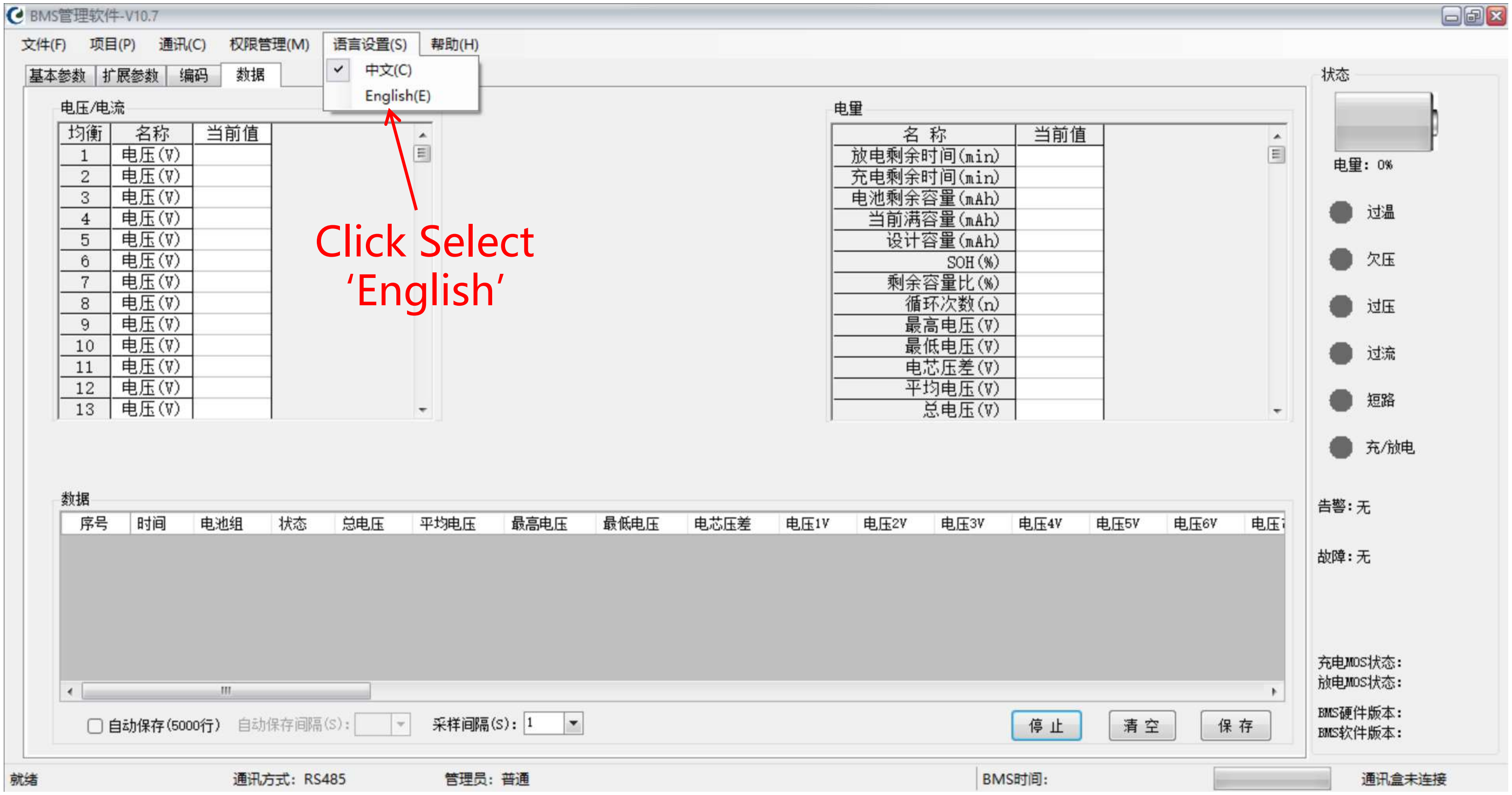
Step 02: Connect the battery and laptop, click the program and get into the below interface

BMS-V10.7-安装包-2022.6.11

Download the program

BMS-V10.7

Click and get into the program


BMS管理软件-V10.7
文件(F)
项目(P)
通讯(C)
权限管理(M)
语言设置(S)
帮助(H)
中文(C)
English(E)
基本参数
扩展参数
编码
数据
状态
电量: 0%
过温
欠压
过压
过流
短路
充/放电
告警: 无
故障: 无
充电MOS状态:
放电MOS状态:
BMS硬件版本:
BMS软件版本:
☐ 自动保存(5000行)
自动保存间隔(S):
采样间隔(S): 1
停 止
清 空
保 存
就绪
通讯方式: RS485
管理员: 普通
BMS时间:
通讯盒未连接

Click Select ‘English’

电压/电流

均衡	名称	当前值
1	电压(V)	
2	电压(V)	
3	电压(V)	
4	电压(V)	
5	电压(V)	
6	电压(V)	
7	电压(V)	
8	电压(V)	
9	电压(V)	
10	电压(V)	
11	电压(V)	
12	电压(V)	
13	电压(V)	

电量

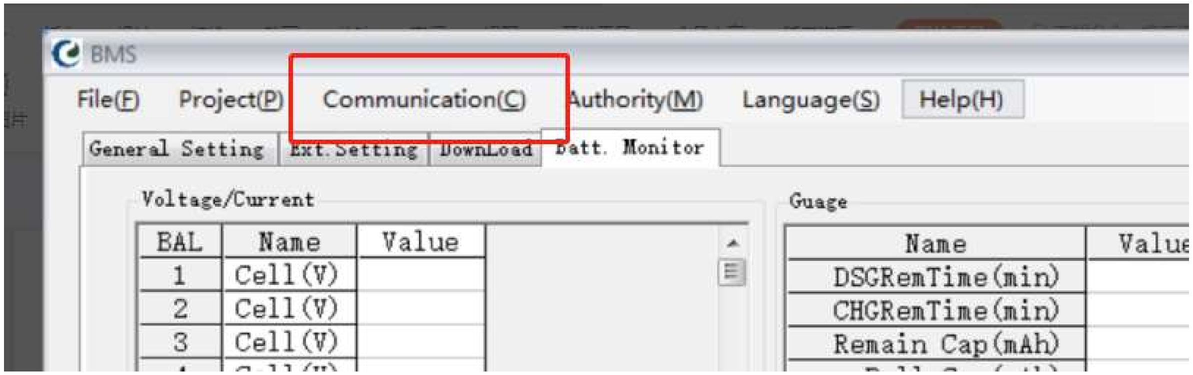
名 称	当前值
放电剩余时间(min)	
充电剩余时间(min)	
电池剩余容量(mAh)	
当前满容量(mAh)	
设计容量(mAh)	
SOH(%)	
剩余容量比(%)	
循环次数(n)	
最高电压(V)	
最低电压(V)	
电芯压差(V)	
平均电压(V)	
总电压(V)	

数据

序号	时间	电池组	状态	总电压	平均电压	最高电压	最低电压	电芯压差	电压1V	电压2V	电压3V	电压4V	电压5V	电压6V	电压

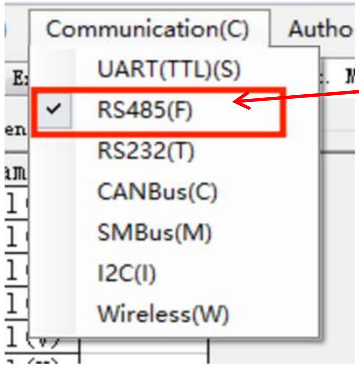
Step 03: Click the "communication(C)" key and select the communication mode, and then click the project key to select the corresponding serial port.

①


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
Language(S)
Help(H)
General Setting
Ext.Setting
DownLoad
Batt. Monitor
Voltage/Current
Guage

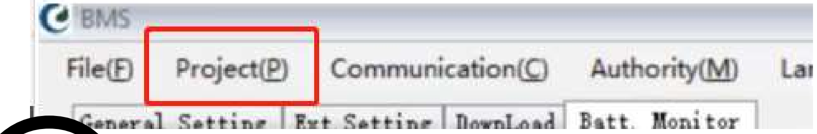
BAL	Name	Value
1	Cell(V)	
2	Cell(V)	
3	Cell(V)	

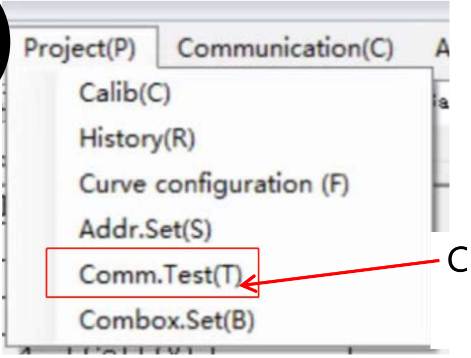
Name	Value
DSGRemTime(min)	
CHGRemTime(min)	
Remain Cap(mAh)	


Communication(C)
Autho
UART(TTL)(S)
✓ RS485(F)
RS232(T)
CANBus(C)
SMBus(M)
I2C(I)
Wireless(W)

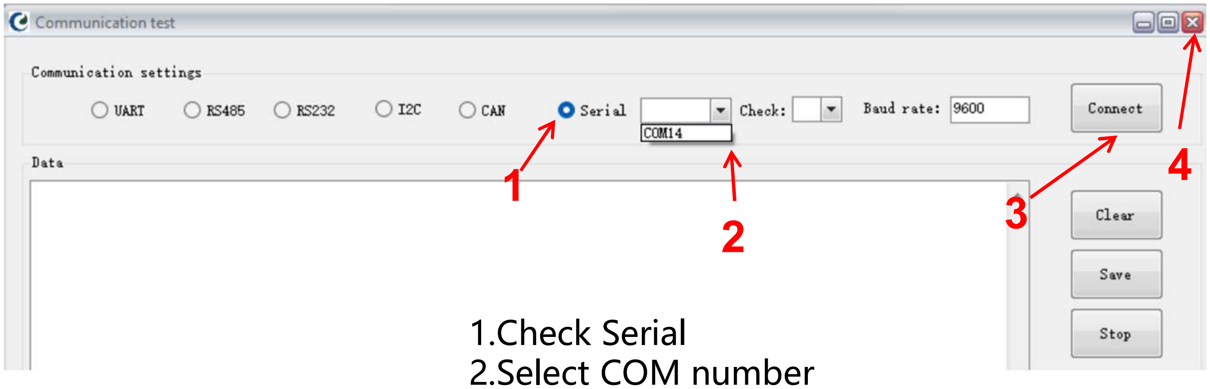
Check RS485

②


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
General Setting
Ext.Setting
DownLoad
Batt. Monitor


Project(P)
Communication(C)
Calib(C)
History(R)
Curve configuration (F)
Addr.Set(S)
Comm.Test(T)
Combox.Set(B)

Check Comm.Test

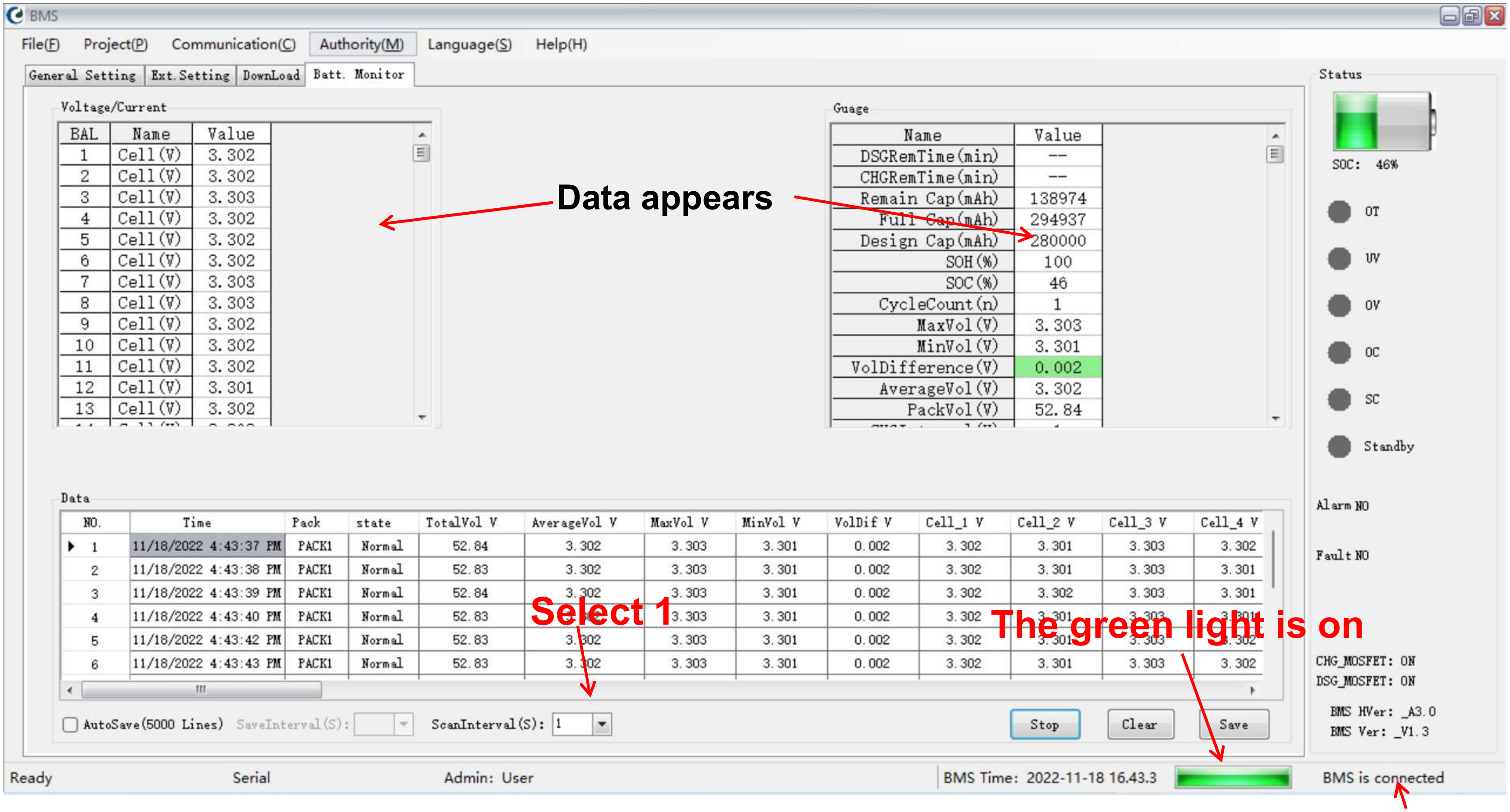

Communication test
Data
Connect
Clear
Save
Stop
1
2
3
4

Communication settings

○ UART ○ RS485 ○ RS232 ○ I2C ○ CAN ● Serial COM14 Check: Baud rate: 9600

1.Check Serial
2.Select COM number
（不同电脑，数字可能不一样）
3.Check Connect
4、关闭此窗口

Step 04: After successful connection, return to the data page, the lower right corner shows connected, the page pops up data and the green light is on. Then click the Scan Interval(s) to select 1.



Voltage/Current

BAL	Name	Value
1	Cell(V)	3.302
2	Cell(V)	3.302
3	Cell(V)	3.303
4	Cell(V)	3.302
5	Cell(V)	3.302
6	Cell(V)	3.302
7	Cell(V)	3.303
8	Cell(V)	3.303
9	Cell(V)	3.302
10	Cell(V)	3.302
11	Cell(V)	3.302
12	Cell(V)	3.301
13	Cell(V)	3.302

Data appears

Guage

Name	Value
DSGRemTime(min)	--
CHGRemTime(min)	--
Remain Cap(mAh)	138974
Full Cap(mAh)	294937
Design Cap(mAh)	280000
SOH(%)	100
SOC(%)	46
CycleCount(n)	1
MaxVol(V)	3.303
MinVol(V)	3.301
VolDifference(V)	0.002
AverageVol(V)	3.302
PackVol(V)	52.84

Status

SOC: 46%

Alarm NO

Fault NO

CHG_MOSFET: ON
DSG_MOSFET: ON

BMS HVer: _A3.0
BMS Ver: _V1.3

Data

NO.	Time	Pack	state	TotalVol V	AverageVol V	MaxVol V	MinVol V	VolDif V	Cell_1 V	Cell_2 V	Cell_3 V	Cell_4 V
1	11/18/2022 4:43:37 PM	PACK1	Normal	52.84	3.302	3.303	3.301	0.002	3.302	3.301	3.303	3.302
2	11/18/2022 4:43:38 PM	PACK1	Normal	52.83	3.302	3.303	3.301	0.002	3.302	3.301	3.303	3.301
3	11/18/2022 4:43:39 PM	PACK1	Normal	52.84	3.302	3.303	3.301	0.002	3.302	3.302	3.303	3.301
4	11/18/2022 4:43:40 PM	PACK1	Normal	52.83	[illegible]	3.303	3.301	0.002	3.302	3.301	3.303	3.301
5	11/18/2022 4:43:42 PM	PACK1	Normal	52.83	3.302	3.303	3.301	0.002	3.302	3.301	3.303	3.302
6	11/18/2022 4:43:43 PM	PACK1	Normal	52.83	3.302	3.303	3.301	0.002	3.302	3.301	3.303	3.302

Select 1

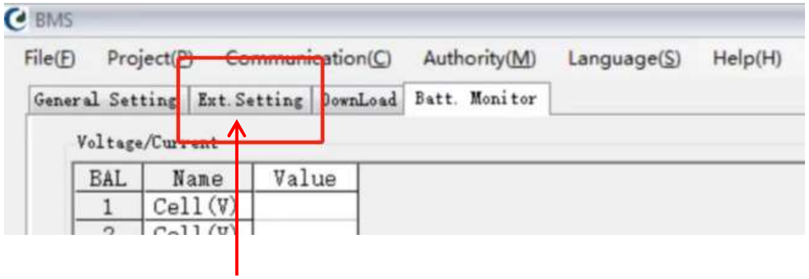
The green light is on

☐ AutoSave(5000 Lines)   SaveInterval(S):   ScanInterval(S): 1

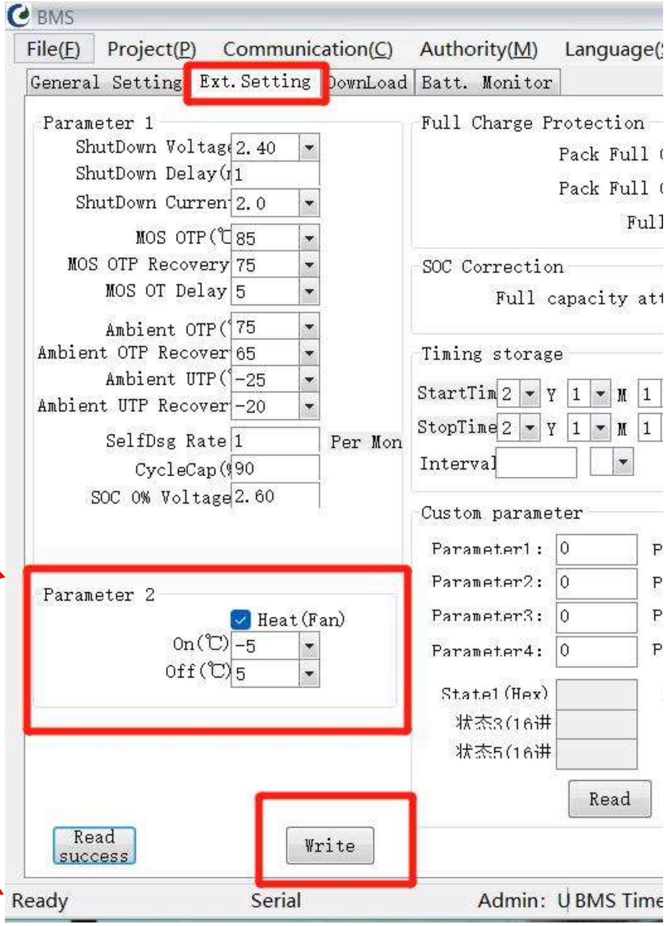
Ready   Serial   Admin: User   BMS Time: 2022-11-18 16.43.3   BMS is connected

Show connected

Step 05: Click Ext. Setting and find the heating function in the lower left corner to change the temperature setting. After the change is completed, click the Write button to save the settings.


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
Language(S)
Help(H)
General Setting
Ext.Setting
DownLoad
Batt. Monitor
Voltage/Current
BAL
Name
Value
1
Cell(V)

Click Ext.setting to enter the function settings


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
Language(
General Setting
Ext.Setting
DownLoad
Batt. Monitor
Read
Read success
Write
Ready
Serial
Admin: U BMS Time

Parameter 1
ShutDown Voltag 2.40
ShutDown Delay(1
ShutDown Curren 2.0
MOS OTP(℃ 85
MOS OTP Recovery 75
MOS OT Delay 5
Ambient OTP(75
Ambient OTP Recover 65
Ambient UTP(-25
Ambient UTP Recover -20
SelfDsg Rate 1 Per Mon
CycleCap(90
SOC 0% Voltage 2.60

Parameter 2
☑ Heat(Fan)
On(℃) -5
Off(℃) 5

Full Charge Protection
Pack Full
Pack Full
Full

SOC Correction
Full capacity at

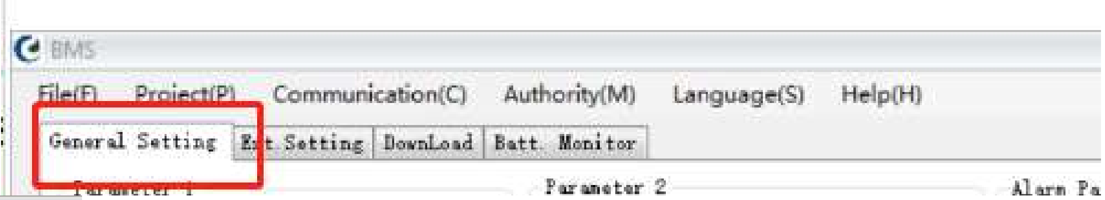
Timing storage
StartTim 2 Y 1 M 1
StopTime 2 Y 1 M 1
Interval

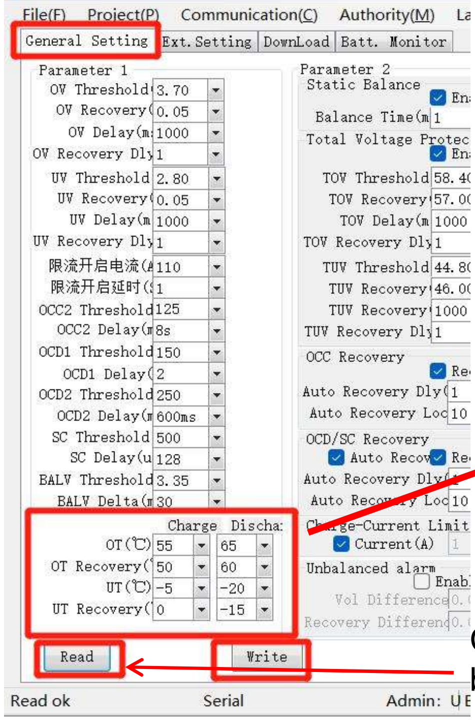
Custom parameter
Parameter1: 0 P
Parameter2: 0 P
Parameter3: 0 P
Parameter4: 0 P
State1(Hex)
状态3(16进
状态5(16进

Change the temperature setting and click the Write button to save the settings.
Set to - 5 ℃ on and 5 ℃ off.

After clicking the Write button, the lower left corner will prompt that the writing is successful

Step 06: the General Setting to enter the parameter setting page. Click the read key at the lower left corner to obtain the battery pack parameters. Then, find the temperature setting parameters, set them to - 5 ℃ for protection and 0 ℃ for recovery and click write key.


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
Language(S)
Help(H)
General Setting
Ext.Setting
DownLoad
Batt. Monitor
Parameter 1
Parameter 2
Alarm Pa


BMS
File(F)
Project(P)
Communication(C)
Authority(M)
La
General Setting
Ext.Setting
DownLoad
Batt. Monitor
Read
Write

Parameter 1

OV Threshold(	3.70
OV Recovery(	0.05
OV Delay(m	1000
OV Recovery Dly	1
UV Threshold	2.80
UV Recovery(	0.05
UV Delay(m	1000
UV Recovery Dly	1
限流开启电流(A	110
限流开启延时(S	1
OCC2 Threshold	125
OCC2 Delay(m	8s
OCD1 Threshold	150
OCD1 Delay(	2
OCD2 Threshold	250
OCD2 Delay(m	600ms
SC Threshold	500
SC Delay(u	128
BALV Threshold	3.35
BALV Delta(m	30

	Charge	Discha
OT(℃)	55	65
OT Recovery(	50	60
UT(℃)	-5	-20
UT Recovery(	0	-15

Parameter 2

Static Balance ☑ Ena
Balance Time(m 1

Total Voltage Protec ☑ Ena
TOV Threshold 58.40
TOV Recovery 57.00
TOV Delay(m 1000
TOV Recovery Dly 1
TUV Threshold 44.80
TUV Recovery 46.00
TUV Recovery 1000
TUV Recovery Dly 1

OCC Recovery ☑ Re
Auto Recovery Dly(1
Auto Recovery Loc 10

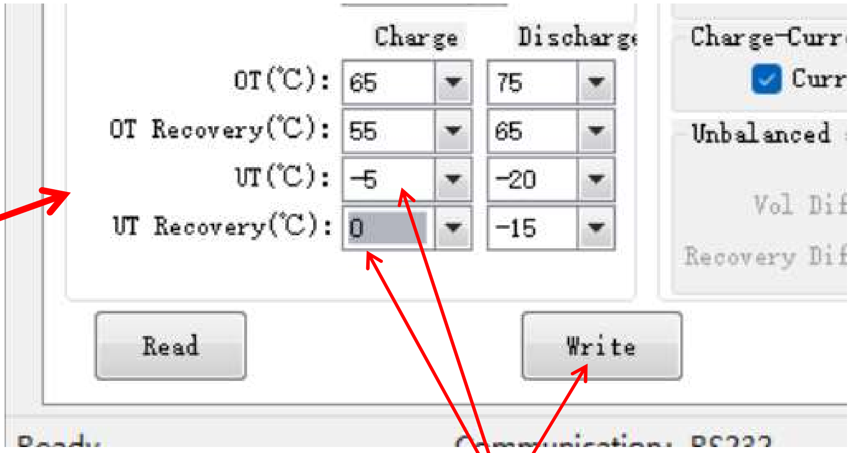
OCD/SC Recovery ☑ Auto Recov ☑ Re
Auto Recovery Dly(1
Auto Recovery Loc 10

Charge-Current Limit ☑ Current(A) 1

Unbalanced alarm ☐ Enabl
Vol Difference 0.0
Recovery Differenc 0.0

Read ok   Serial   Admin: U E

Click the read key to obtain the battery pack parameters.


Charge-Curr
Curr
Unbalanced
Vol Dif
Recovery Dif
Read
Write
Ready
Communication: RS232

	Charge	Discharge
OT(℃):	65	75
OT Recovery(℃):	55	65
UT(℃):	-5	-20
UT Recovery(℃):	0	-15

Set them to - 5 ℃ for protection and 0 ℃ for recovery and click write key.

SPECIALIZED
POWER SYSTEMS

www.SpecializedPowerSystems.com | sales@specializedpower.net