



EXP-300CT

BATTERY DISCHARGE CYCLER

USER MANUAL

V1.0

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ATTENTION

- a) For testing safety and efficiency, please read the manual before operation.
- b) If the user requires the actual capacity estimation for each cell in the battery packs, wireless modules are essential accessories. Without them, the PC analysis software can't provide the voltage records and estimate the actual capacity.
- c) If overheating or over-current equipment failure occurs during a test, the warning alarm will activate automatically. Please press on the emergency button and turn off the AC power source to avoid further damage.

OPERATING INSTRUCTIONS

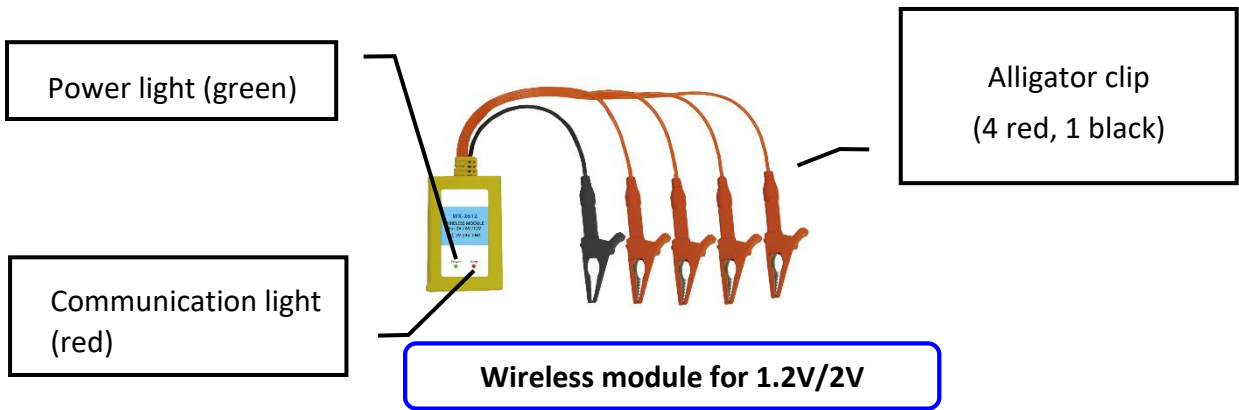
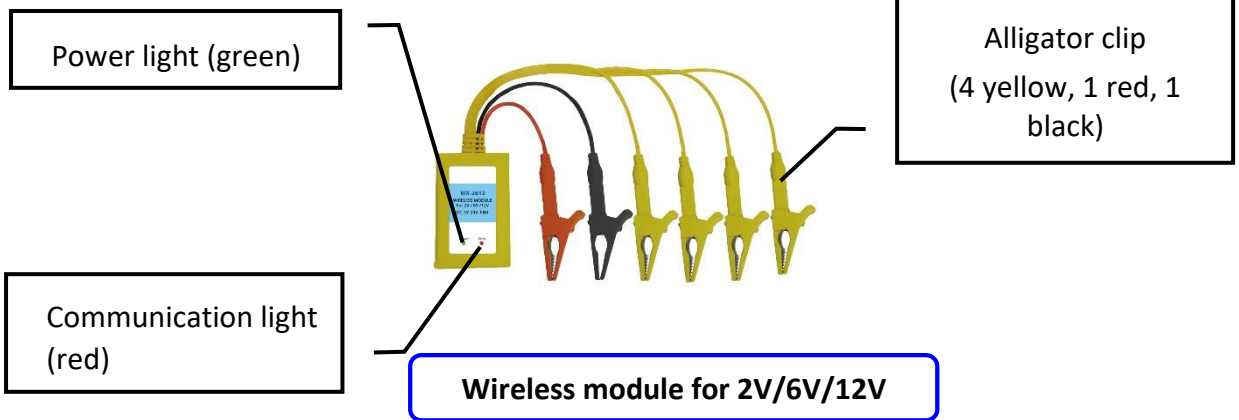
1. Environment

Should be NO CORROSIVE, NO EXPLOSIVE, NO ELECTRICAL BREAKDOWN AIR OR CONDUCTIVE DUST.

2. Main Tester Description

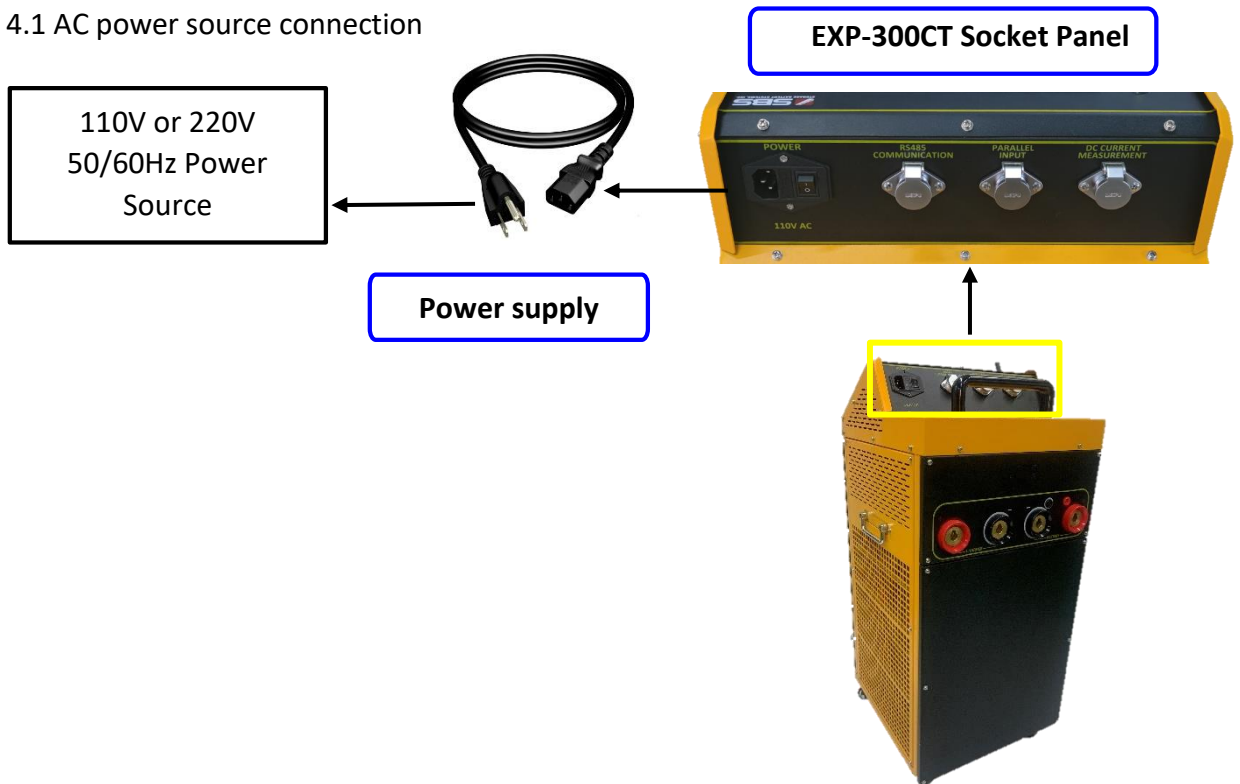


3. Wireless Module Description



4. Main Machine Connection

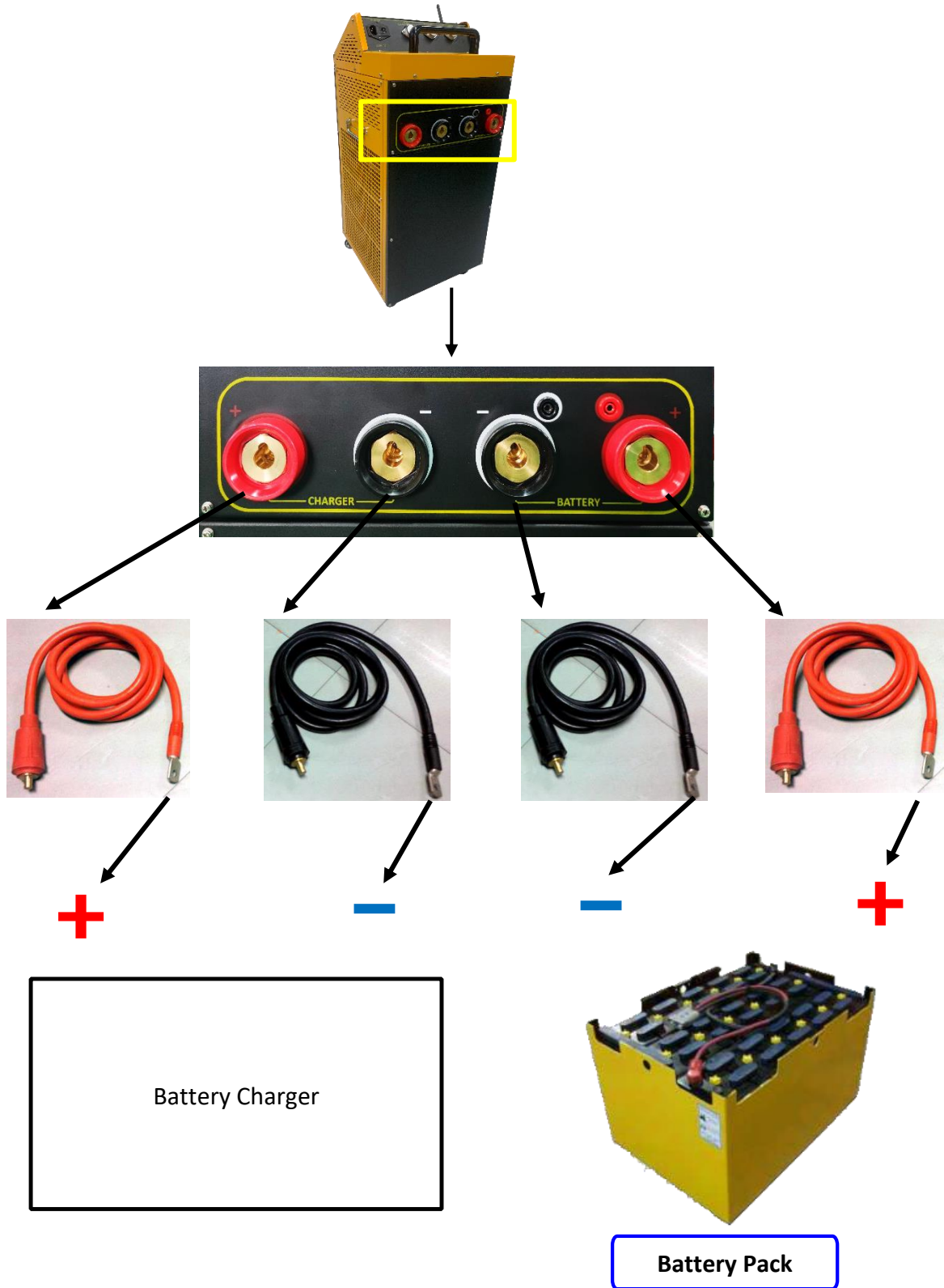
4.1 AC power source connection



4.2 Power Cable Connection

Connect EXP-300CT with the battery pack being tested and battery charger.

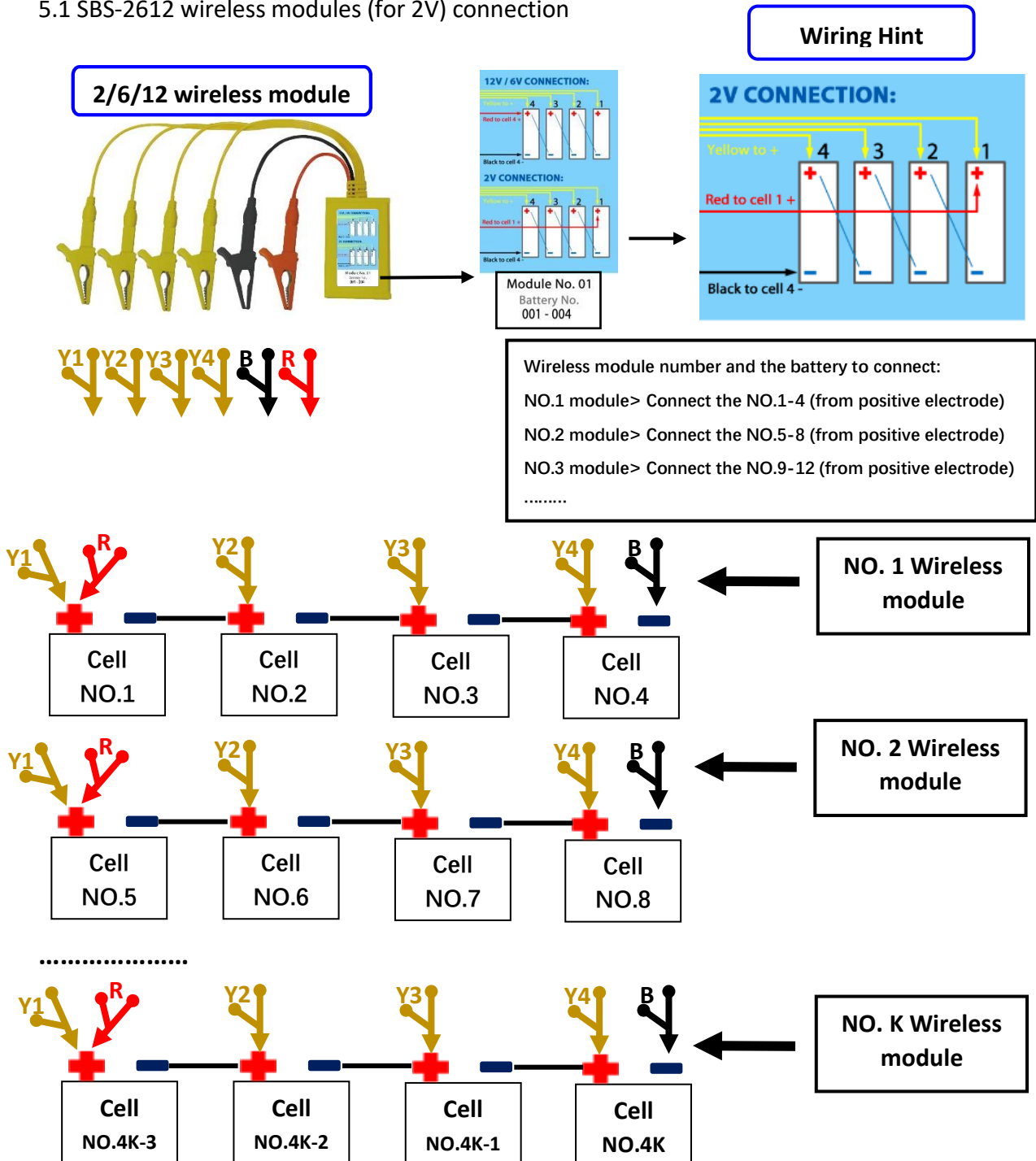
(Only connect to the battery pack being tested if charger isn't being utilized)



5. Wireless Module Connection

Before connecting, please install the antenna on the main tester.

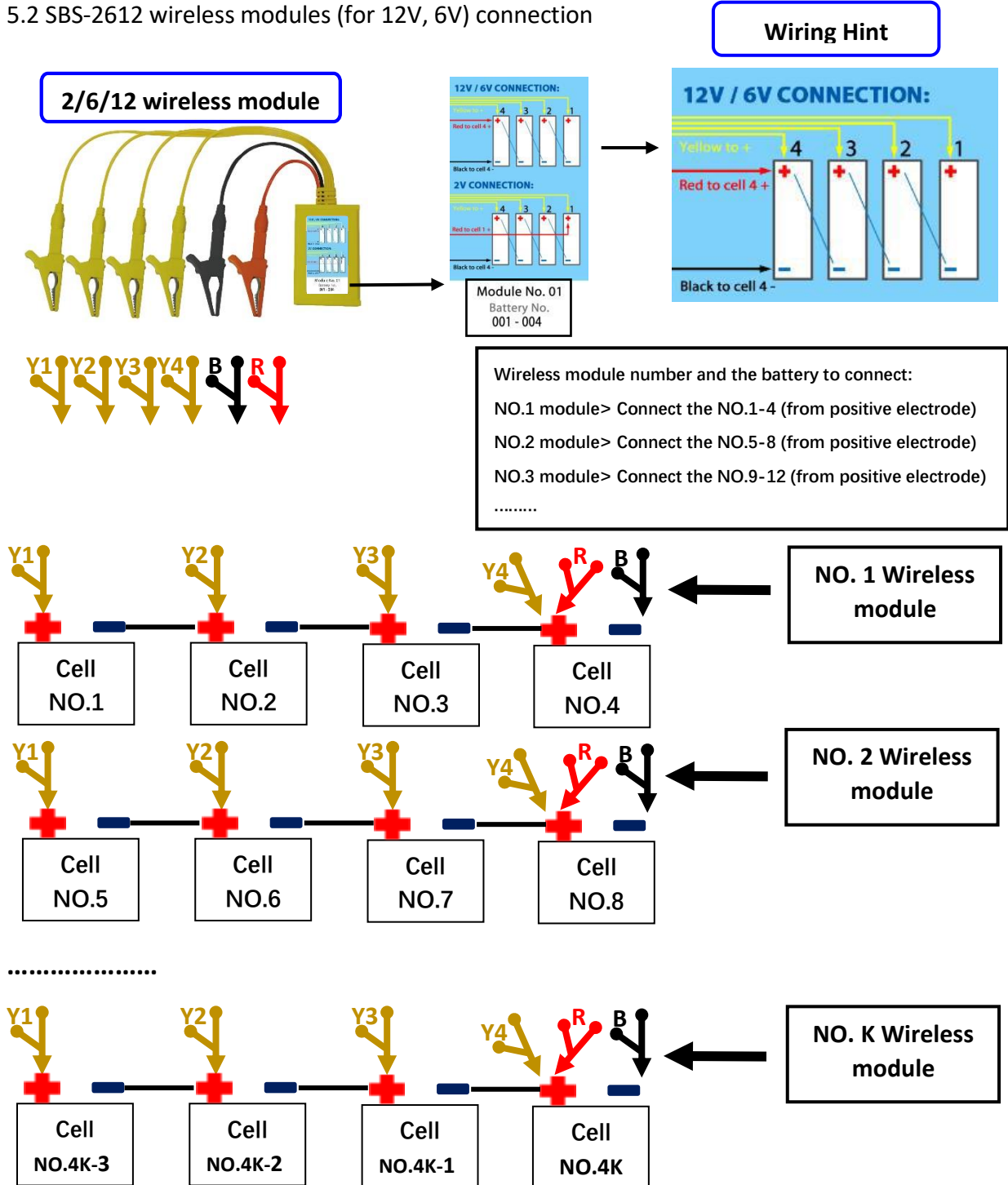
5.1 SBS-2612 wireless modules (for 2V) connection



5.1.1 Please note the module number on the labeled modules and connect to the corresponding batteries. Do not connect the modules to 4 batteries/cells that are not in sequence, (EX: NO.1,3,8,9) - this will damage the modules.

5.1.2 Use the alligator clips (1 red, 1 black, 4 yellow) to connect the modules to the batteries, please follow the right wiring rule "Yellow 1 to Yellow 4, from long to short". A wiring diagram is available on the module's label.

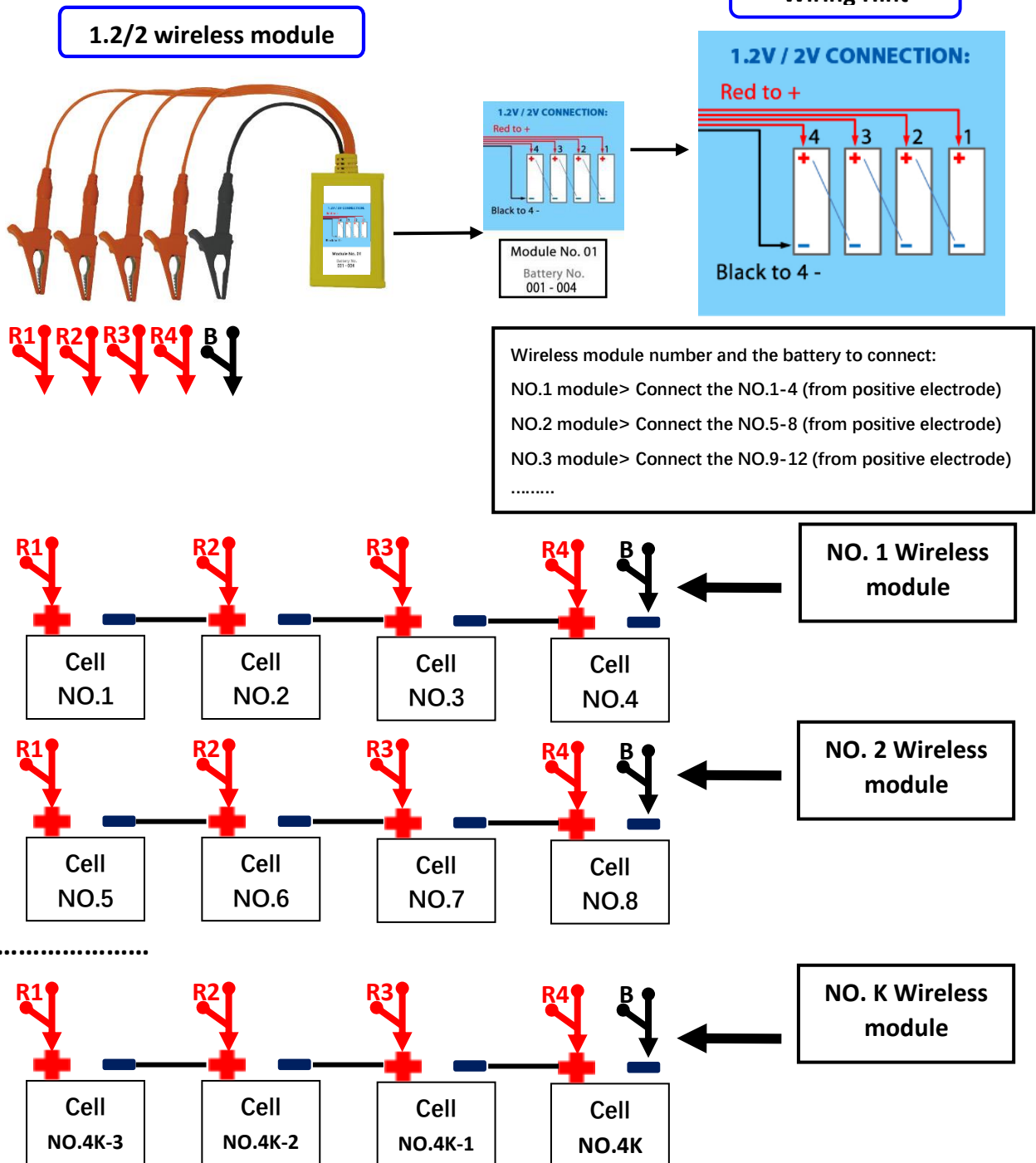
5.2 SBS-2612 wireless modules (for 12V, 6V) connection



5.2.1 Please note the module number on the labeled modules and connect to the corresponding batteries. **Do not connect the modules to 4 batteries/cells that are not in sequence, (EX: NO.1,3,8,9) - this will damage the modules.**

5.2.2 Use the alligator clips (1 red, 1 black, 4 yellow) to connect the modules to the batteries, please follow the right wiring rule “Yellow 1 to Yellow 4, from long to short”. A wiring diagram is available on the module’s label.

5.3 SBS-12612 Wireless Modules (for 1.2V, 2V) Connection





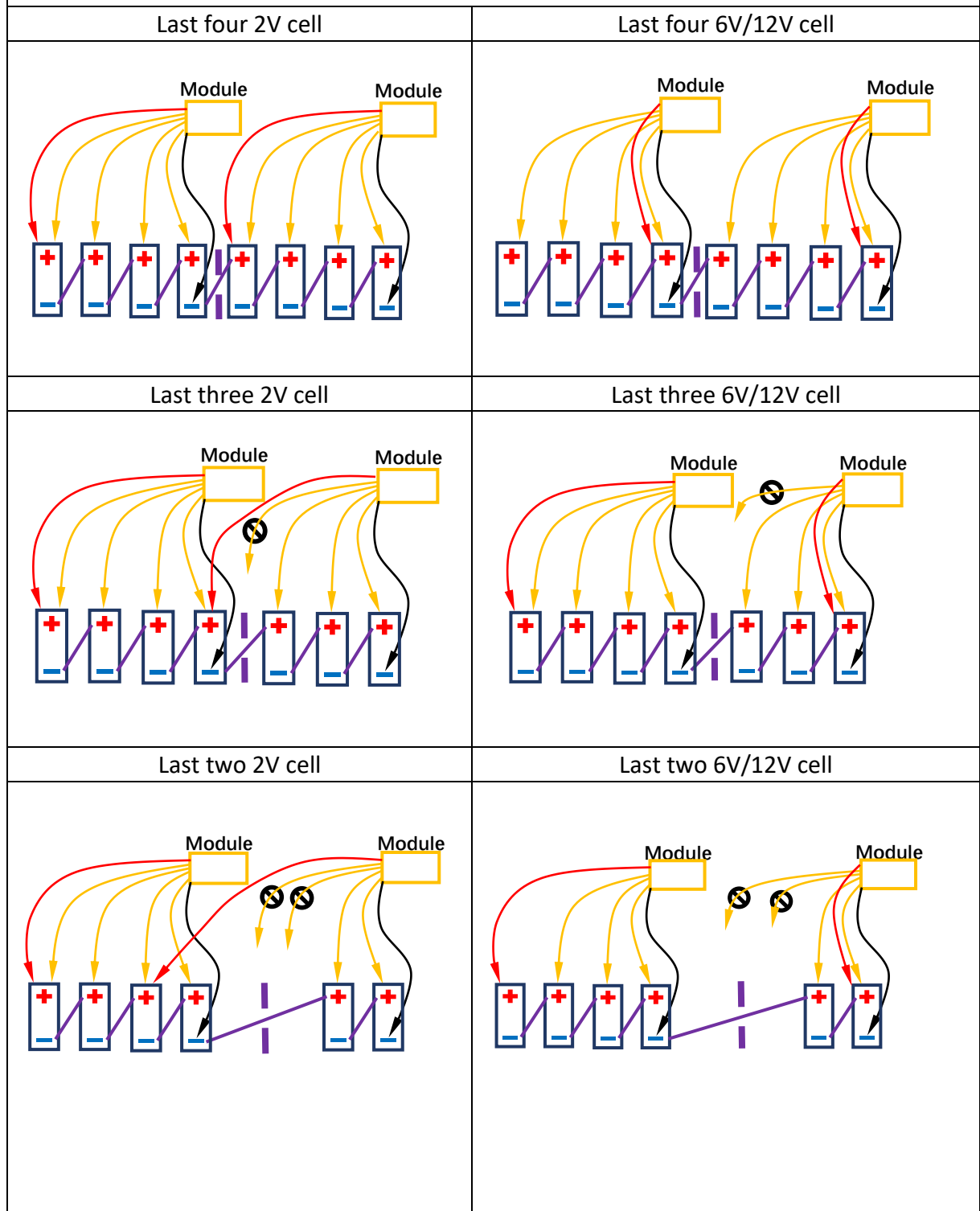
5.3.1 Please note the module number on the labeled modules and connect to the corresponding batteries. **Do not connect the modules to 4 batteries/cells that are not in sequence, (EX: NO.1,3,8,9) - this will damage the modules.**

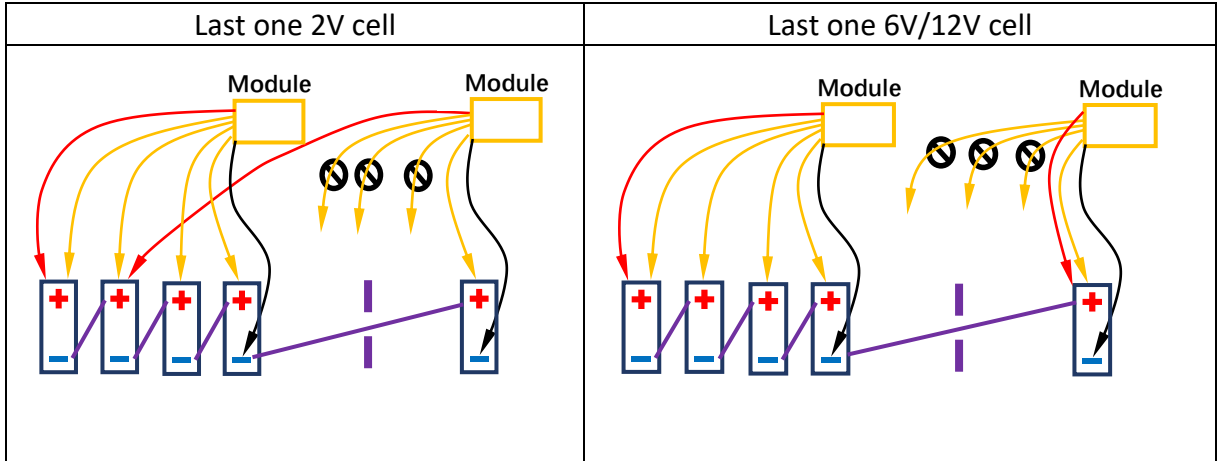
5.3.2 Use the alligator clips (1 red, 1 black, 4 yellow) to connect the modules to the batteries, please follow the right wiring rule “Yellow 1 to Yellow 4, from long to short”. A wiring diagram is available on the module’s label.

5.4 Connecting guide when cell quantity is not multiple of 4



5.4.1 SBS-2612 wiring for last 4 to 1 cells

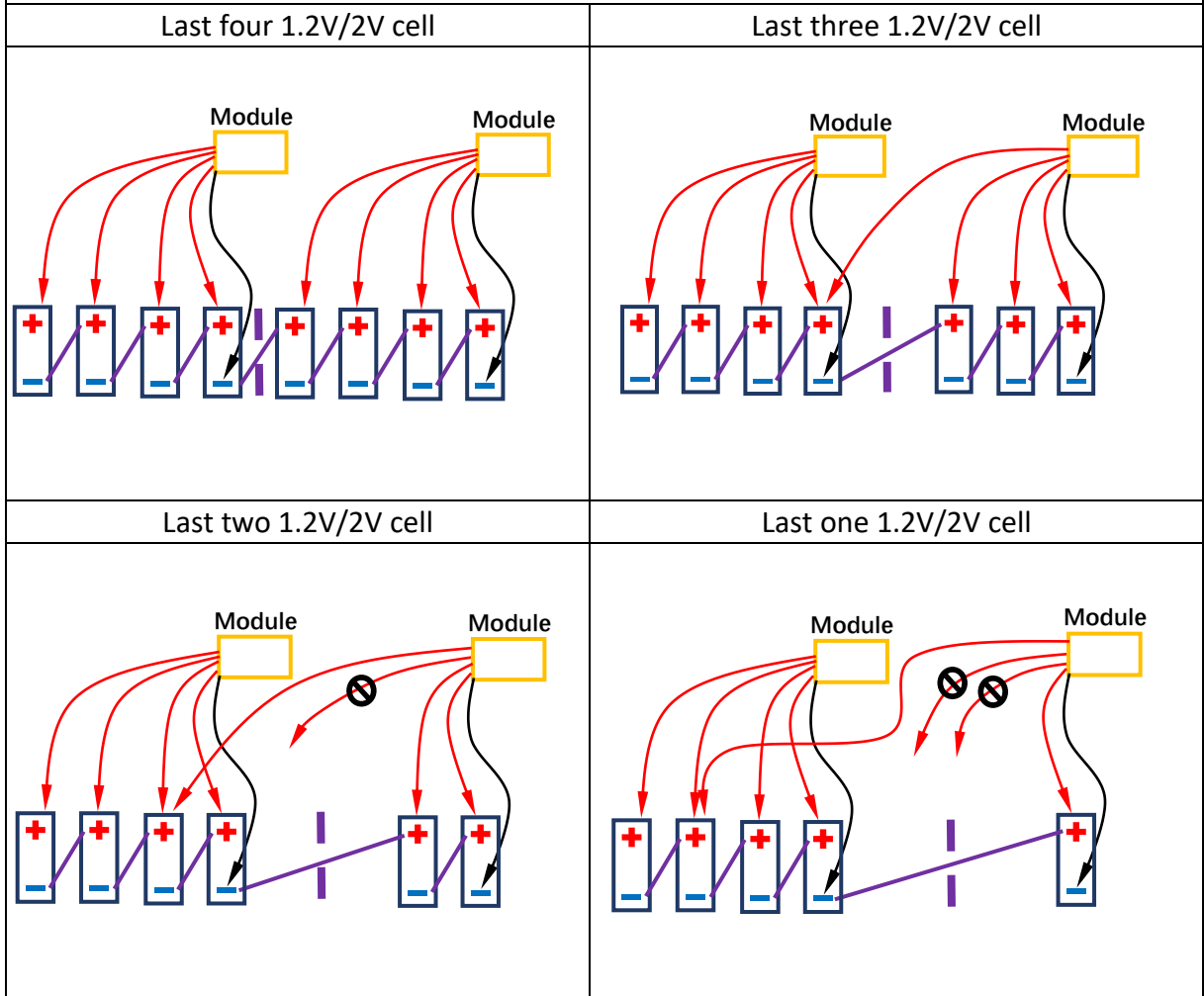
- 4 yellow wires, from left to right = from long to short
-  means this wire no need to connect
-  separate the last cells with other cells





5.4.2 SBS-12612 wiring for last 4 to 1 cells

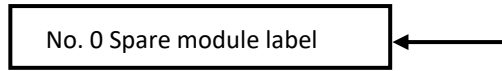
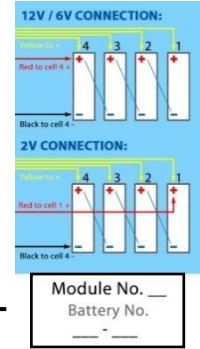
- 4 red wires, from left to right = from long to short
-  means this wire no need to connect
-  separate the last cells with other cells



5.5 About spare module & reassign module No.

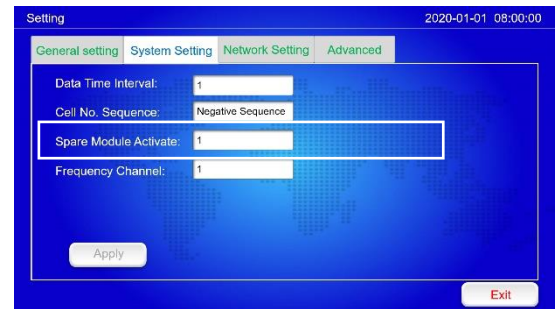
5.5.1 About No. 0 spare modules

In each unit we offer, you can find some No. 0 spare modules. They have the following label. No number assigned. They can assign to any module No., and assist you to proceed testing when any assigned module is faulty.



5.5.2 Activate No. 0 spare modules

When any assigned module is faulty (for example, No. 3 module), you can connect No. 0 spare module with 4 cells, just like a normal module, disconnect all other modules. Please edit spare module to No. 3 module to replace the faulty one at 'Spare Module Activate:' in 'SETTING' menu. Just set '3' and press 'Apply'. The spare module will become new No. 3 module.



5.5.3 How to erase and reassign the assigned module

If you don't have more spare modules, one assigned module is faulty (for example, No. 3 module) but you have no need assigned modules (No. 1 to No. 10 are needed for the recent testing, you have No.11 to No. 15), you can erase No.15 and reassign to No. 3 for urgent requirement.

- Open the box the No. 15 module, you will see a small button on the PCB. (yellow frame in the picture)
- Keep pressing on this button, don't loose it, and connect it with 4 cells, just like a normal module. It will be powered on, and wait about 5-8 seconds. And loose the button.
- Check 'MONITORING' in LCD, if Cell 57- Cell 60 (belong to No. 15 module) is not result, it means No. 15 module is erased to No. 0 spare one.
- Do the procedure in '4.4.5.2 Activate No. 0 spare modules', to edit it to No. 3.



6. Starting Up And Input Operation

6.1 After the main tester is connected, turn on the power switch.

6.2 On the welcome screen, you can see our company name & logo and the tester name. Press any key to access the main menu, the system will automatically open the main menu.

6.3 EXP-300CT input: press on the touch screen directly



Welcome screen



Main Menu

7. Important Settings Before Testing

Please remember to check the settings before each test.

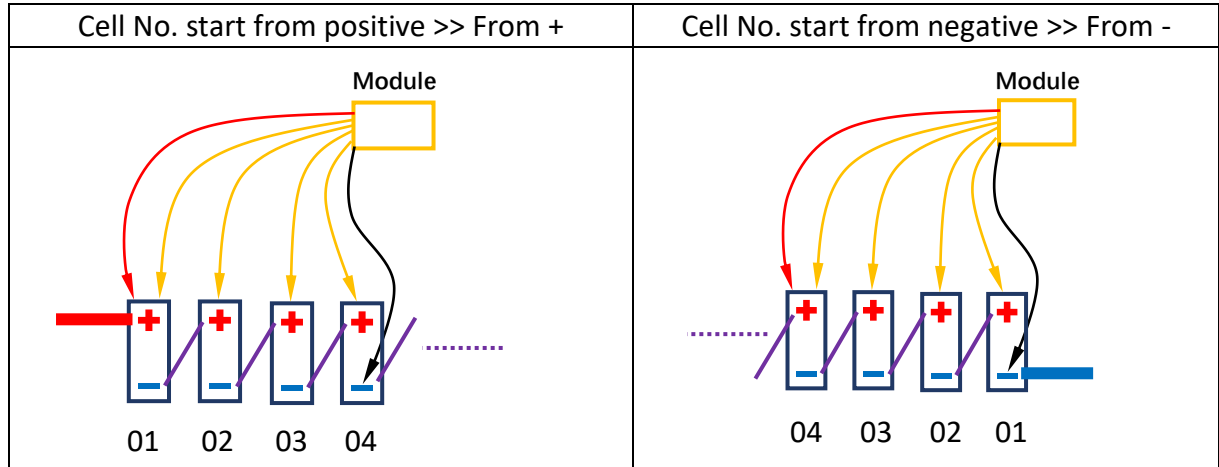
Other settings will be introduced in "12. Setting interface"

7.1 Press "SETTING" on the main menu screen to enter Setting menu

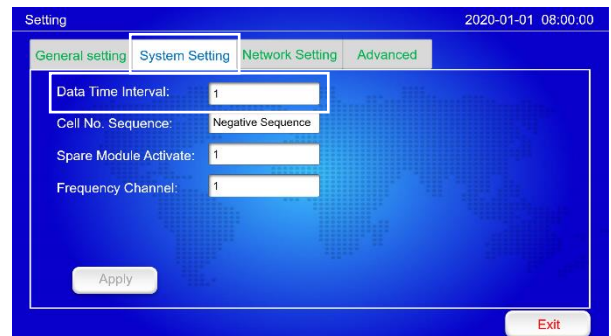
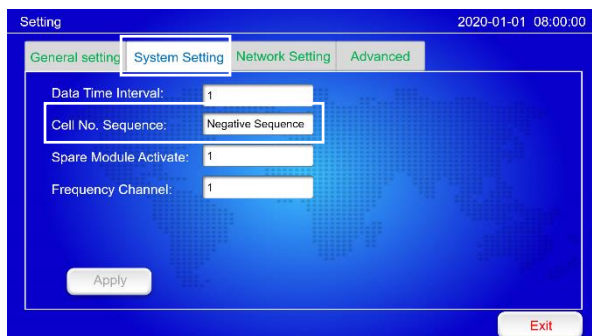
7.2 Set the date and time: this will be the Data File name of the recorded test data. Click "Apply" to save date and time



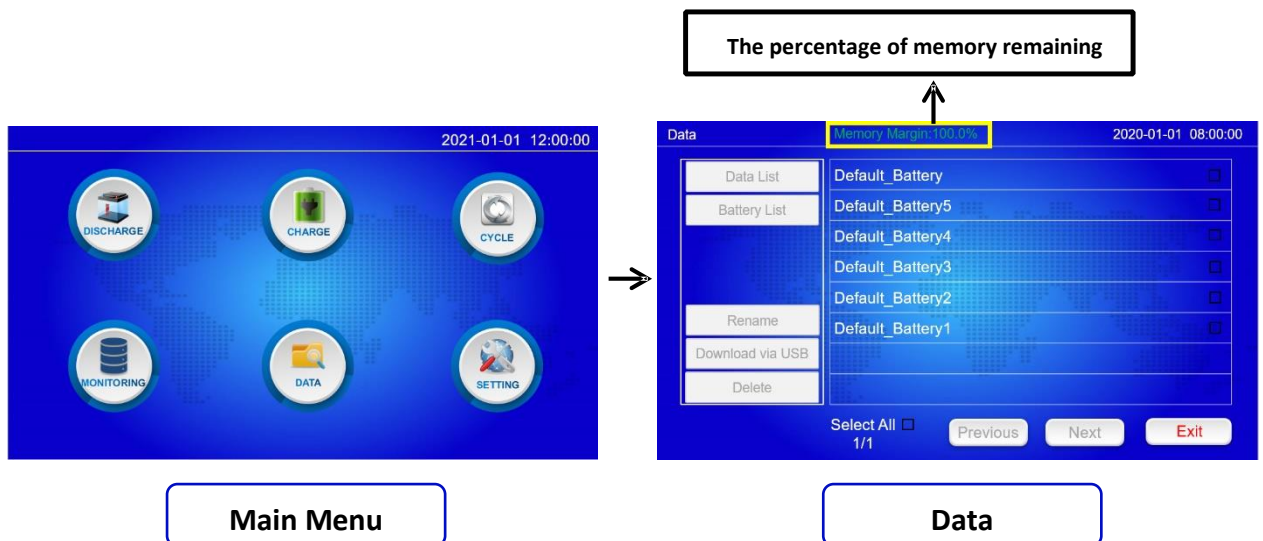
7.3 Set “Cell No. Sequence”: the sequence of wireless modules connecting from the positive or negative electrode. When cell No. of your battery pack starts from negative electrode, please set ‘Cell No. Sequence’ to ‘From Batt-’. EXP-300CT will reverse 4 cells sequence at each wireless modules to keep your testing result correct.



7.4 Set “Data Time Interval”, the data recording interval. The shorter the recording interval the more memory the test will utilize; the longer the recording interval, the less internal memory will be used.



To check the unit’s remaining memory, press “DATA” in the Main Menu



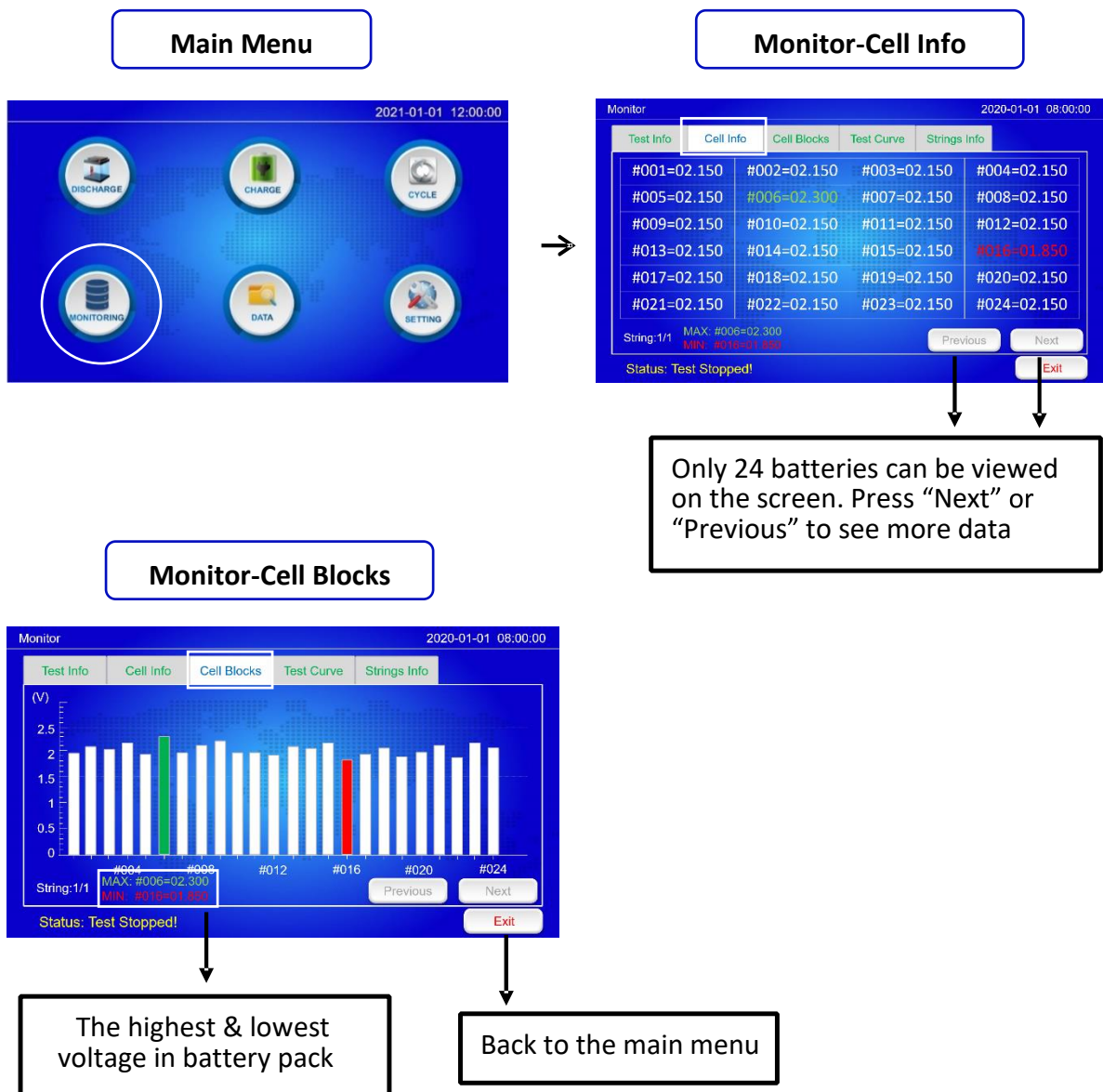
8. View Individual Cell Voltages

8.1 Press “MONITORING” in the main menu, then Press “Cell Info” column to access individual cell monitoring. If all wireless modules are connected correctly, you can see the voltage of each battery. If the voltages of some batteries are not visible, please check the wireless modules connection.

8.2 Press “Cell Blocks” column to see the histogram of each battery

8.3 In both table and chart screens, only 24 batteries can be viewed at one time; if the tested battery pack has more than 24 batteries, press “Next” & “Previous” scroll to the rest

8.4 Press “Exit” go back to the main menu



9. Start Testing

9.1 Test Mode Selecting

Press “DISCHARGE”, “CHARGE” & “CYCLE” in main menu to select the test mode.

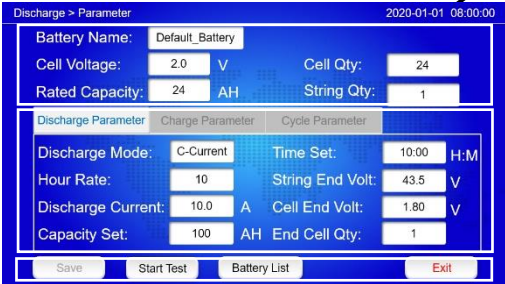
- “DISCHARGE”-----Single discharge test
- “CHARGE”-----Single charge monitoring
- “CYCLE”-----Charge/discharge cycle test



9.2 Single Time Discharge Test

9.2.1 Press “DISCHARGE” to enter single discharge test mode

9.2.2 In “Discharge > Parameter” page, enter the parameter settings. Press “Save” to save the inputted settings as a profile. If you already created a profile before, please press ‘Battery List’ to load it and adjust for the recent discharge requirement.



Battery Parameter
 Battery Name: name of the tested battery pack
 Cell Voltage: cell voltage level, 2V/6V/12V, etc.
 Cell Qty: cells quantity in the battery pack, input according to the actual number.
 Rated Capacity: the rated capacity of the battery pack

Discharge Parameter
 Discharge Mode: constant current/ constant power
 Hour Rate: discharge hour rate
 Discharge Current (C-Current): the current of discharge
 Discharge Power (C-Power): the power of discharge
 Capacity Set: the capacity plan to be discharged
 Time Set: the discharge time
 String End Volt: the lower limit of the pack voltage
 Cell End Volt: the lower limit of the cell voltage
 End Cell Qty: the quantity of cells which voltages below the “Cell End Volt”

Save: save the parameter
 Start Test: start the discharge test
 Battery List: view all battery packs list
 Exit: back to the main menu


9.2.2.1 “Capacity Set”, “Time Set”, “Cell End Volt”, “End Cell Qty” are all discharging stop conditions; if any of them are reached, the discharge will be stopped automatically

9.2.2.2 For 1 battery pack being discharged, please keep “String Qty” in “1”, if 2-4 packs will be parallel discharged simultaneously, they need 2-4 times the wireless modules and the current will be 1/2-1/4 for each pack.

9.2.2.3 If you want discharging to stop when one battery reaches the “Cell End Volt” parameter, keep “End Cell Qty” at “1”. If you want the discharging to stop when X no. of batteries reaches the “Cell End Volt”, set the “End Cell Qty” parameter to that number (“X”).

9.2.2.4 If you don’t need wireless modules in the discharge, please set the “Cell Qty” to “0”. “Cell End Volt” will be disabled as a parameter.

9.2.3 Press “Start” to enter discharge mode, then press “Start” again to start the discharge.



The screenshot shows the 'Discharge' screen with the following elements:

- Navigation Tabs:** Test Info, Cell Info, Cell Blocks, Test Curve, Strings Info.
- Parameters:** String Voltage: 0.00 V, Discharge Current: 0.00 A, Test Time: 00:00:00, Ah Tested: 0 AH, End Cell Qty: 0.
- Buttons:** Parameter, Start, Pause, Exit.
- Status:** Test Stopped!

Cell Info: the cells voltage table
 Cell Blocks: the histogram of each battery
 Test Curve: the string voltage, current, cell voltage & Ah tested curves
 Strings info: Each string voltage, current, max & min cell voltage

When the discharging starts, you can see the status in this screen; it includes:
 String Voltage: the voltage of battery pack
 Discharge Current: the discharge current
 Test Time: the time elapsed since the discharge started
 Ah Tested: the Ah already be discharged
 End Cell Qty: the quantity of the batteries which voltage

Parameter: change parameters in the process of discharging
 Pause: manual stop the discharge
 Start: start/resume the discharge

9.2.4 To manually stop the discharge: press “Pause” to pause the discharge, and press “Stop” to end the discharge or “Start” to continue the discharge.


9.2.5 Press “Parameter” to change the parameters during the discharging (if necessary), all changes can be activated immediately and the discharging will not be stopped.

9.2.6 “Status:” in the discharge interface it will help you know the status of the discharge.

9.3 Single Charge Monitoring

9.3.1 Press “CHARGE” to enter single charge monitoring mode.

9.3.2 in “Charge > Parameter” page, finish all parameters setting.



The screenshot shows the 'Charge > Parameter' screen with the following elements:

- Navigation Tabs:** Discharge Parameter, Charge Parameter, Cycle Parameter.
- Battery Parameters:** Battery Name: Default_Battery, Cell Voltage: 2.0 V, Cell Qty: 24, Rated Capacity: 100 AH, String Qty: 1.
- Charge Parameters:** Capacity Set: 300 AH, Time Set: 10:00 H:M, End Low Current: 20.0 A.
- Buttons:** Save, Start Test, Battery List, Exit.


Battery Parameter
 Battery Name: name of the tested battery pack
 Cell Voltage: cell voltage level, 2V/6V/12V, etc.
 Cell Qty: cells quantity in the battery pack, input according to the actual number.
 Rated Capacity: the rated capacity of the battery pack

Charge Parameter
 Capacity Set: the capacity plan to be charged
 Time Set: The Charge time
 End Low Current: the end charge current

Save: save the parameter
 Start Test: start the charge test
 Battery List: view all battery packs list
 Exit: back to the main menu

9.3.2.1 “Capacity Set”, “Time Set”, “End Low Current” are all the charging stop conditions; if any of them are reached, EXP-300CT will cut the channel between battery pack and battery charger automatically.

9.3.3 Press “Charge” into Charge interface, and Press “Start” again to start charge Monitoring. (You will hear the sound of internal contactor.) EXP-300CT will monitor the current and voltage from the battery charger.



Cell Info: the cells voltage table
 Cell Blocks: the histogram of each battery
 Test Curve: the string voltage, current, cell voltage & Ah tested curves
 Strings info: Each string voltage, current, max & min cell voltage

When the charging starts, you can see the status in this Screen; it includes:
 String Voltage: the voltage of battery pack
 Charge Current: the charge current
 Test Time: the time elapsed since the charge started
 Ah Charged: the Ah already be charged

Parameter: change parameters in the process of Charging
 Pause: manual stop the discharge
 Start: start/resume the discharge

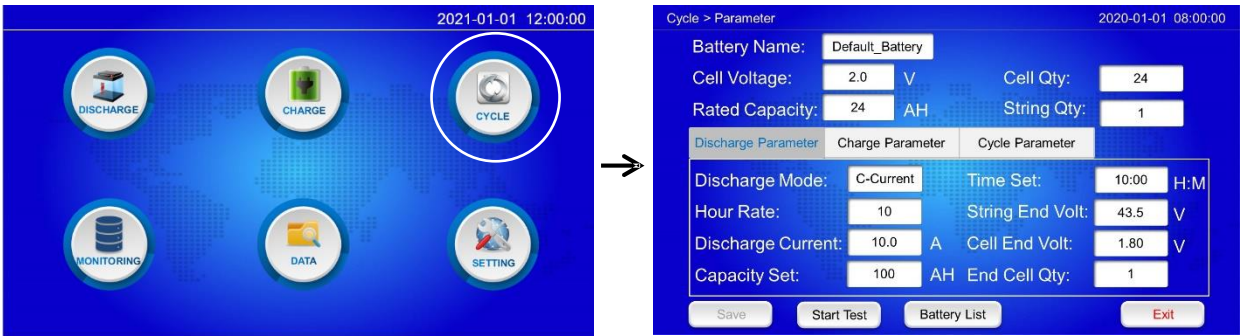
9.3.4 To manually stop the charge: press “Pause” to pause the charge, and press “Stop” to end the charge, or press “Start” to continue the charge.

9.3.5 Press “Parameter” to change the parameters during the charge (if necessary), all changes can be activated immediately and the charging will not be stopped.

9.3.6 “Status:” in the charge interface it will help you know the status of the charging.

9.4 Charge/Discharge Cycle Test

9.4.1 Press “CYCLE” into charge/discharge cycle mode




Main Menu

Cycle > Parameter

9.4.2 In “Cycle > Parameter” page, enter the parameter settings. Press “Save” to save the inputted settings as a profile. If you already created a profile before, please press ‘Battery List’ to load it and adjust for the recent discharge requirement.

9.4.3 The setting items in “Discharge Parameter” & “Charge Parameter” columns are total same with the items in “9.2 Single Time Discharge Test” and “9.3 Single Charge Monitoring”. For automatic cycle running, please finish the setting in “Cycle Parameter” column



Battery Parameter
 Battery Name: name of the tested battery pack
 Cell Voltage: cell voltage level, 2V/6V/12V etc.
 Cell Qty: cells quantity in the battery pack, input according to the actual number.
 Rated Capacity: the rated capacity of the battery pack

Cycle Parameter
 Start From: the cycle starts from discharge or charge
 Cycle Times: the cycle times
 Cooling Time After Charge: the break time after charge
 Cooling Time After Discharge: the break time after discharge

Example:
 If Start From is Charge,
 Cycle Times is 001, CDC (charge->discharge->charge)
 Cycle Times is 002, CDC DC
 Cycle Times is 003, CDC DC DC
 Cycle Times is 004, CDC DC DC DC

 If Start From is Discharge,
 Cycle Times is 001, DC (discharge->charge)
 Cycle Times is 002, DC DC
 Cycle Times is 003, DC DC DC
 Cycle Times is 004, DC DC DC DC

Save: save the parameter
 Start Test: start the charge test
 Battery List: view all battery packs list
 Exit: back to the main menu

9.4.3.1 “Capacity Set”, “Time Set”, “Cell End Volt”, “End Cell Qty” are all discharging stop conditions; if any of them are reached, the discharge will be stopped automatically


9.4.3.2 “Capacity Set”, “Time Set”, “End Low Current” are all the charging stop conditions; if any of them are reached, EXP-300CT will cut the channel between battery pack and battery charger automatically.

9.4.3.3 For 1 battery pack being discharged or charged, please keep “String Qty” in “1”, if 2-4 packs will be parallel discharged simultaneously, they need 2-4 times the wireless modules and the current will be 1/2-1/4 for each pack.

9.4.3.4 If you want discharging to stop when one battery reaches the “Cell End Volt” parameter, keep “End Cell Qty” at “1”. If you want the discharging to stop when X no. of batteries reaches the “Cell End Volt”, set the “End Cell Qty” parameter to that number (“X”).

9.4.3.5 If you don’t need wireless modules in the discharge, please set the “Cell Qty” to “0”. “Cell End Volt” will be disabled as a parameter.

9.4.4 Press “Start Test” into cycle mode test, then press “Start” again to start the first step of the cycle as your setting.



The screenshot shows the 'Cycle' test interface with the following sections highlighted by callouts:

- Cell Info:** the cells voltage table
- Cell Blocks:** the histogram of each battery
- Test Curve:** the string voltage, current, cell voltage & Ah tested curves
- Strings info:** Each string voltage, current, max & min cell voltage

When the cycle starts, you can see the status in this screen; it includes:

- String Voltage: the voltage of battery pack
- Discharge Current: the discharge or charge current
- Test Time: the time elapsed since the discharge or charge started
- Ah Tested: the Ah already be discharged or charge
- End Cell Qty (Only displayed in discharge steps): the quantity of the batteries which voltage already below the “Cell End Volt” you set

Cycle Step: the recent step and total steps

Parameter: change parameters in the process of discharging

Pause: manual stop the discharge

Start: start/resume the discharge

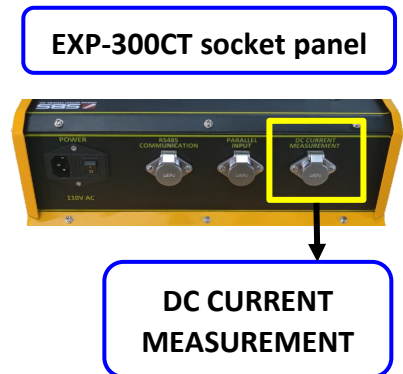
9.4.4 To manually stop the cycle: press “Pause” to pause the cycle and press “Stop” to end the cycle or “Start” to continue the cycle.

9.4.6 Press “Parameter” to change the parameters during the cycle (if necessary), all changes can be activated immediately and the cycle will not be stopped.

9.4.7 “Status:” in the cycle interface it will help you know the status of the cycle.

10. Monitor Function

The EXP-300CT provides an interface for monitoring the batteries freely. It can monitor and record all cell voltages during discharge, charge or floating charge. For this function, the EXP-300CT only needs to connect with an AC power source, and connect the wireless modules with each cell in the battery pack. (for monitoring the current, the optional external current clamp need to be connected to DC CURRENT MEASUREMENT port)



10.1 Press “MONITORING” in the main menu into “Monitor” menu.

10.2 Press “Start” to start monitoring. The monitoring data will be saved in internal memory. And monitor function don’t have a stop condition, pressing “Pause” or “Stop” manually is the only way to pause or stop the monitoring.



10.3 The monitor interface also can be used for confirming all wireless modules connecting with cells before running discharge or charge. Please follow the guide in “8. View Individual Cell Voltages”

11. Downloading Data To PC

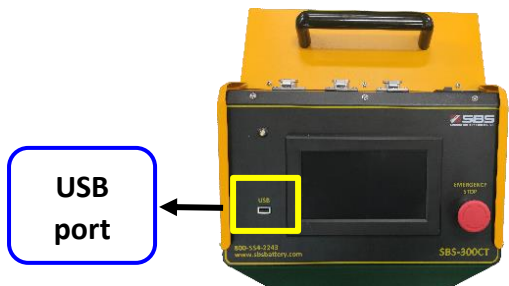
11. 1 Press “DATA” on the Main Menu to enter the Data screen. EXP-300CT provide two ways to record the test data:

11.1.1 RS485 real time monitoring: Use the RS485 to USB converter to connect main machine with PC, by analysis software, the real time test data can be download during the test. Please follow the guide in “16. Real Time Recording During The Testing”

11.1.2 USB downloading: EXP-300CT don’t need any external storage device to save data files. So USB disk need to be plugged into USB port only when you want to copy the data files and view them in PC software.

11.2 In data interface, all battery packs you tested will be listed in “Battery List”. Select the battery pack and press “Download via USB” to copy data files to USB disk. In USB disk, a file folder named as the battery name

EXP-300CT operation panel




Memory Margin: the rest internal memory can be use to storage more data files. If the percentage is low, please download the existing data files to USB disk and delete them to guarantee the enough space for new testing data saving.
In “DATA” screen, all battery packs tested will be listed, you can press on the small option box to select them

Rename: rename the battery pack name you selected
Download via USB: download all data files of the selected battery pack into USB disk
Delete: delete all data files of the selected battery pack

Select All: to select all items in this page
Previous & Next: to view more battery packs data can not be displayed on the recent page
Exit: back to the main menu

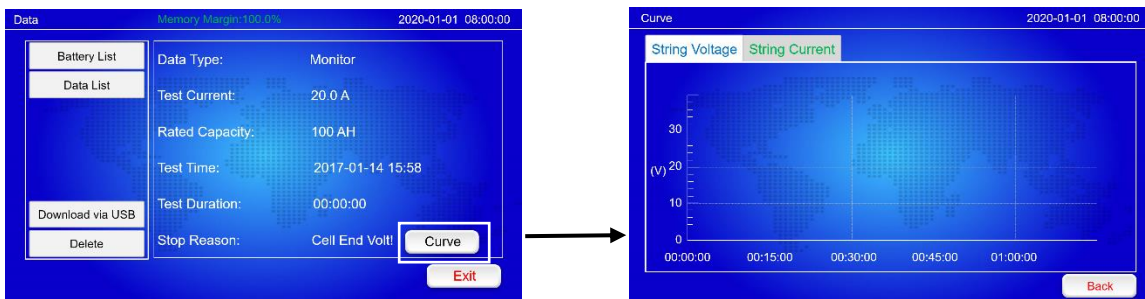
11.3 Press on the any battery name in the list, the data interface will show you the “Data list” for this selected battery pack.



In 'Data List' you can view the data files based on the testing types: Discharge, Charge, Cycle, Monitor

Download via USB: download the selected data files into USB disk
 Delete: delete the selected data files
 Select All: to select all items in this page
 Previous & Next: to view more data files can not be displayed on the recent page
 Exit: back to the main menu

11.4 Press on any data file name in the list, the data interface will show you the details of this data file. Press “Curve” to view the string voltage and current curve of this testing. Use “Download via USB” and “Delete” to download or delete this data file.



11.5 Press on “Battery List” or “Data List” at any screen of data interface, you can go back to the battery packs list or the data list of the selected battery pack.

12. Setting Interface

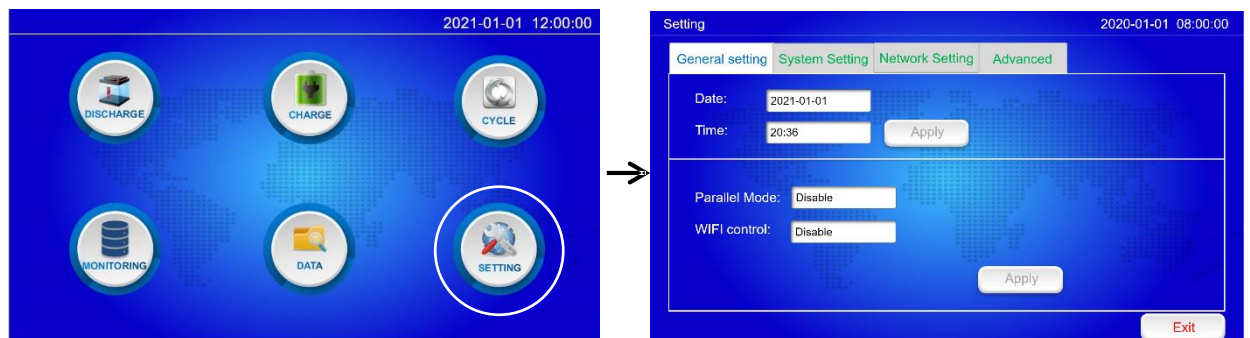
12.1 Press “SETTING” on the main menu screen to enter Setting menu

12.2 “General Setting” column:

12.2.1 Date & Time setting, please follow the guide in “7.2 Set the date and time”

12.2.2 “Parallel Mode” is for multiple EXP-300CT coworking in parallel for higher power discharge, if you run single tester, please select “Disable”. If you have multiple EXP-300CT, and use optional communication wire to connect them by PARALLEL INPUT port. Please select ‘Enable’

12.2.3 “WIFI control” is for wireless control and communication we reserved. Please select “Disable” before we launch this function.



Main Menu

Setting



12.3 “System Setting” column:

12.3.1 “Data Time Interval” setting, please follow the guide in “7.4 Set Data Time Interval”

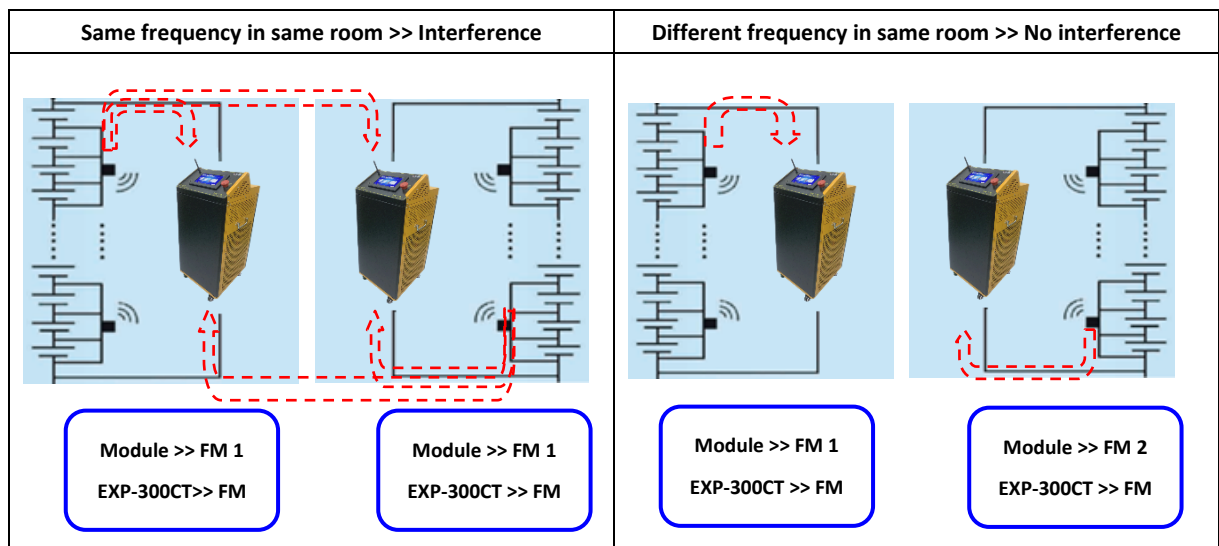
12.3.2 “Cell No. Sequence” setting, please follow the guide in “7.3 Set Cell No. Sequence”

12.3.3 “Spare Module Acitvate” setting, please follow the guide in “5.5.2 Activate No. 0 spare modules”



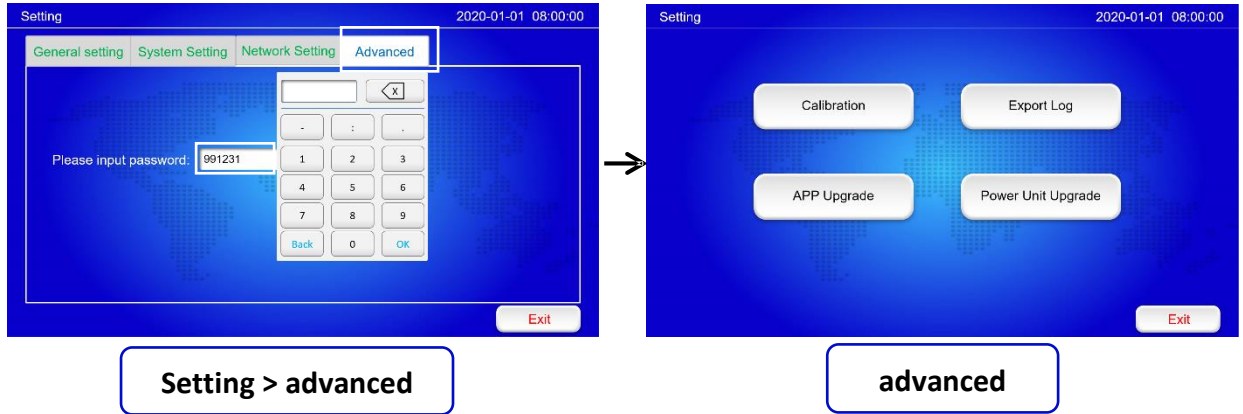
12.3.4 “Frequency Channel” for EXP-300CT frequency channel setting

If two EXP-300CT with 2 sets of wireless modules are testing different battery pack in same battery room, the same No. modules in two set have interference issue. In this kind of test application, it need 2 set of wireless modules with different frequency (You can find the frequency channel of in module label, for example “FM1” mean frequency channel 1). “Frequency Channel” can change frequency of EXP-300CT wireless receiver for working with different frequency wireless modules.



12.4 “Network Setting” column: for wireless control and communication we reserved. Please ignore it before we launch this function.

12.5 “Advanced” column: input the password “991231” into advanced setting screen.



12.5.1 “Calibration” please follow the guide in “13. Calibration Interface”

12.5.2. “Export Log”: exporting log to USB disk for hardware fault diagnosing, please contact us for further assistance on this function

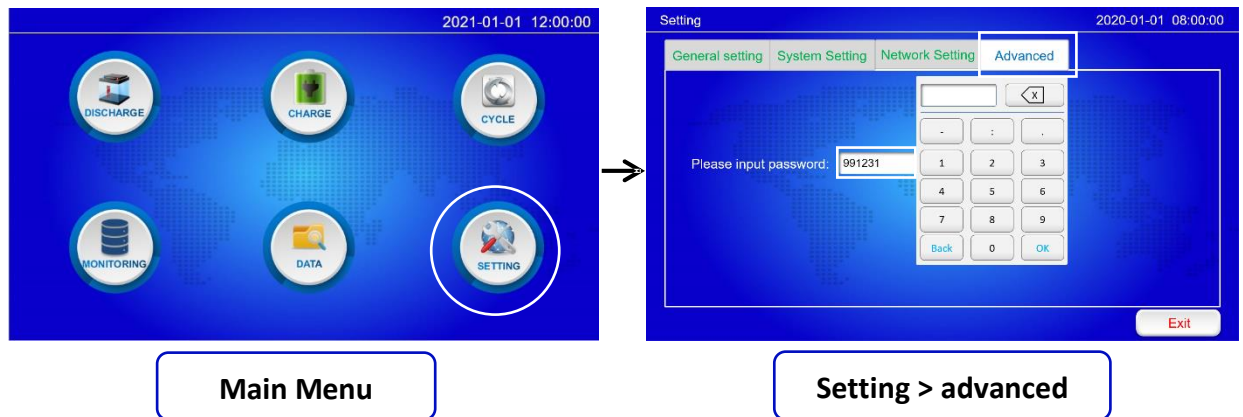
12.5.3 “APP Upgrade”: the firmware upgrading via USB disk, please contact us for further assistance on this function

12.5.4 “Power Unit Upgrade”: the drive program upgrading of the core power unit via USB disk, please contact us for further assistance on this function

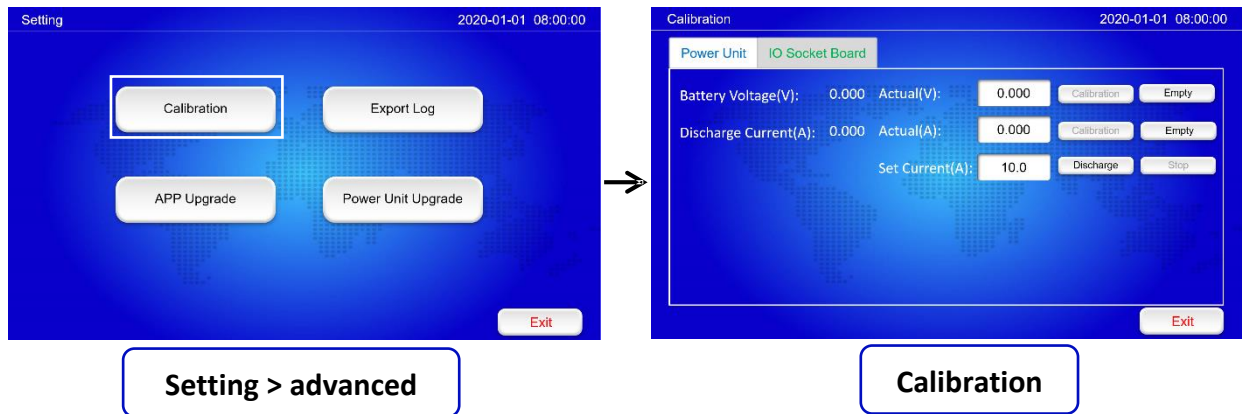
13. Calibration Interface

EXP-300CT provides a calibration interface to end user. If you have high accuracy instruments, you can calibrate the tester by yourself.

13.1 Press “SETTING” on the main menu screen to enter Setting menu, and select “Advanced” column, input the password “991231” into advanced setting screen.



13.2 Press “Calibration” in advanced setting screen, go into the calibration interface.



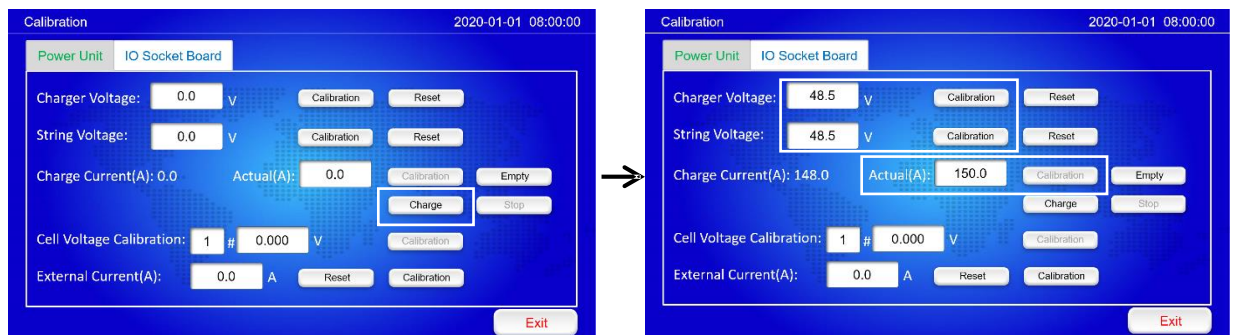
13.3 For battery voltage and current calibration during discharge, please connect a battery pack with EXP-300CT and input discharge current in “Set Current(A):” at “Power Unit” column. Press “Discharge” to run a discharge.

The voltage and current will be displayed, please use your high accuracy multimeter and Amp meter to check the actual values and input them into “Actual(V)” and Actual(A)”. Press



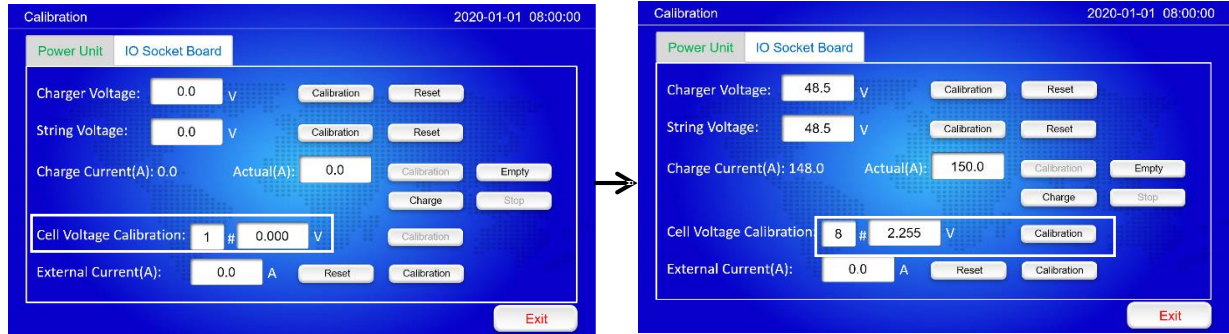
13.4 For battery voltage and current calibration during charge, please connect a battery pack and a charger with EXP-300CT. Set the charger to a stand by status, press “Charge” at “IO Socket Board” column. EXP-300CT will allow charger to charge battery pack.

The voltage and current will be displayed, please use your high accuracy multimeter and Amp meter to check the actual values and input them into “Charge Voltage”, “String Voltage” and Actual(A)”. Press “Calibration” to save your calibration. And Press “Empty” or “Reset” to erase your calibration and let the tester back to default status before your calibration.

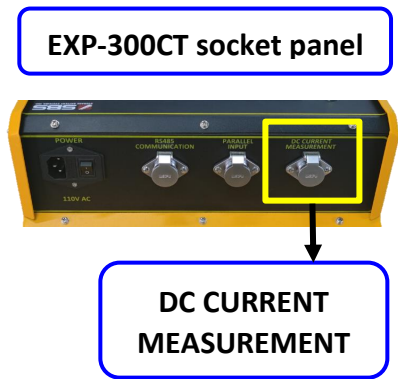


13.5 For Cell voltage calibration, connect the wireless module you want to calibrate with 4 cells, and disconnect all other modules to avoid the interference. please use your high

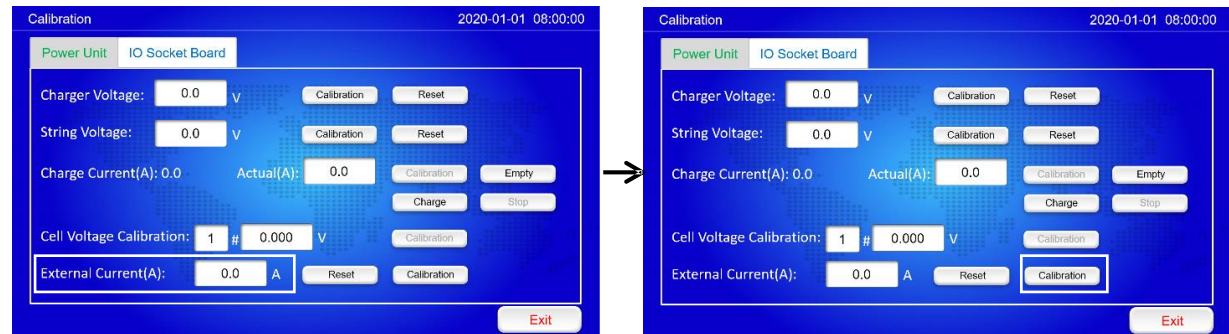
accuracy multimeter to check cells actual values, and the input the cell No. and voltage value into “Cell Voltage Calibration:”. Press “Calibration” to save your calibration.



13.4 For the calibration of the external current clamp (when EXP-300CT coworking with extension load in parallel, the optional external current clamp is needed for measured the external current from extension load). Please connect the external current clamp with EXP-300CT DC CURRENT MEASUREMENT port, and put the clamp on the power cable from the extension load.



Please use your high accuracy Amp meter to check the actual values and input them into “External Current(A)”. Press “Calibration” to save your calibration. And Press “Reset” to erase your calibration and let the tester back to default status before your calibration.



PC SOFTWARE INSTRUCTIONS

14. Software's Main Functions

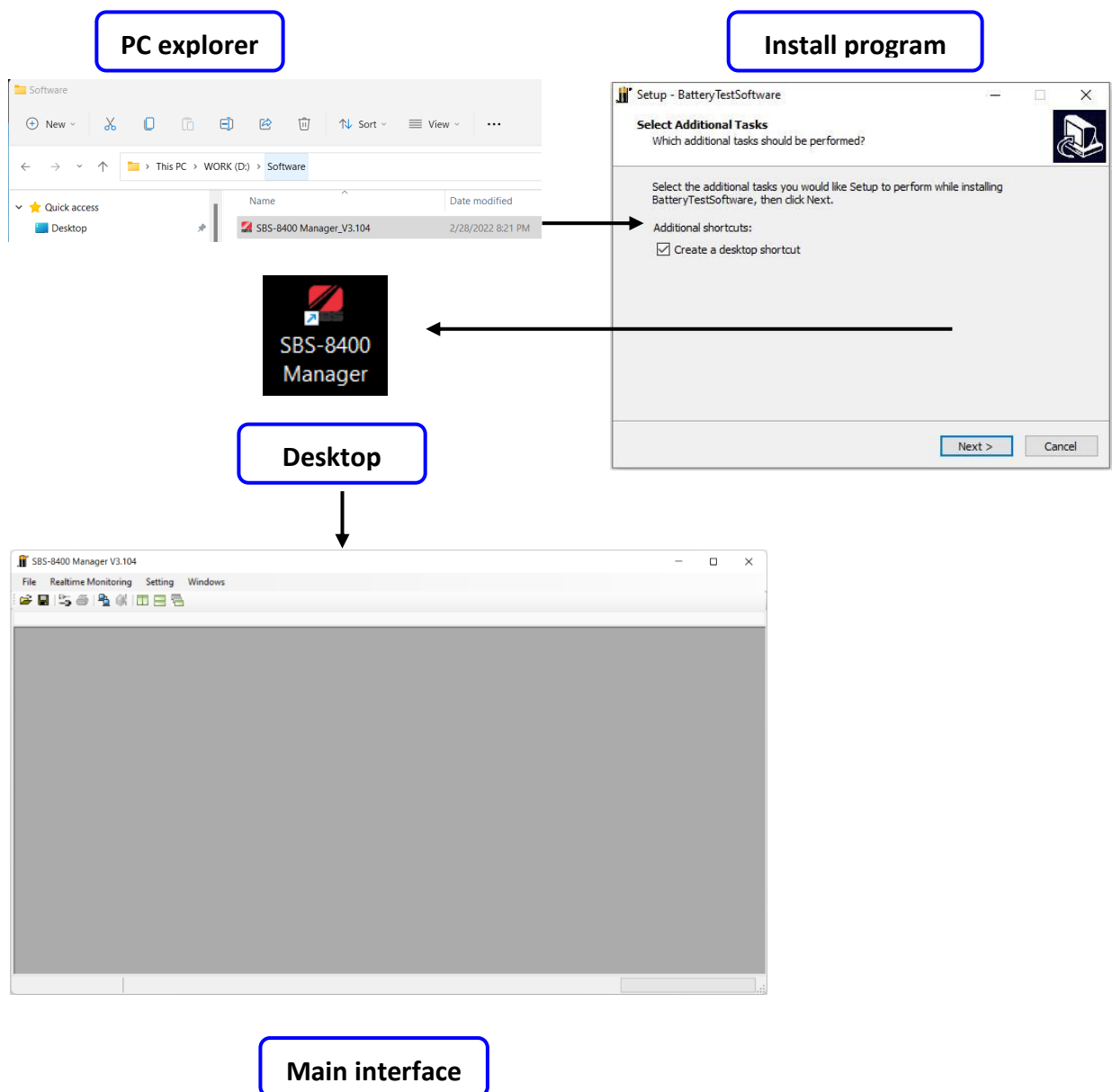
- a) recording the real time discharge data by connecting main machine with PC
- b) read, display and save the downloaded USB data.
- c) generate EXCEL test report

15. Install Analysis Software To PC

15.1 please find the install program of analysis software in USB disk.

15.2 according the prompts to finish the installation.

15.3 after the installation, you can click the desktop icon to open the software.

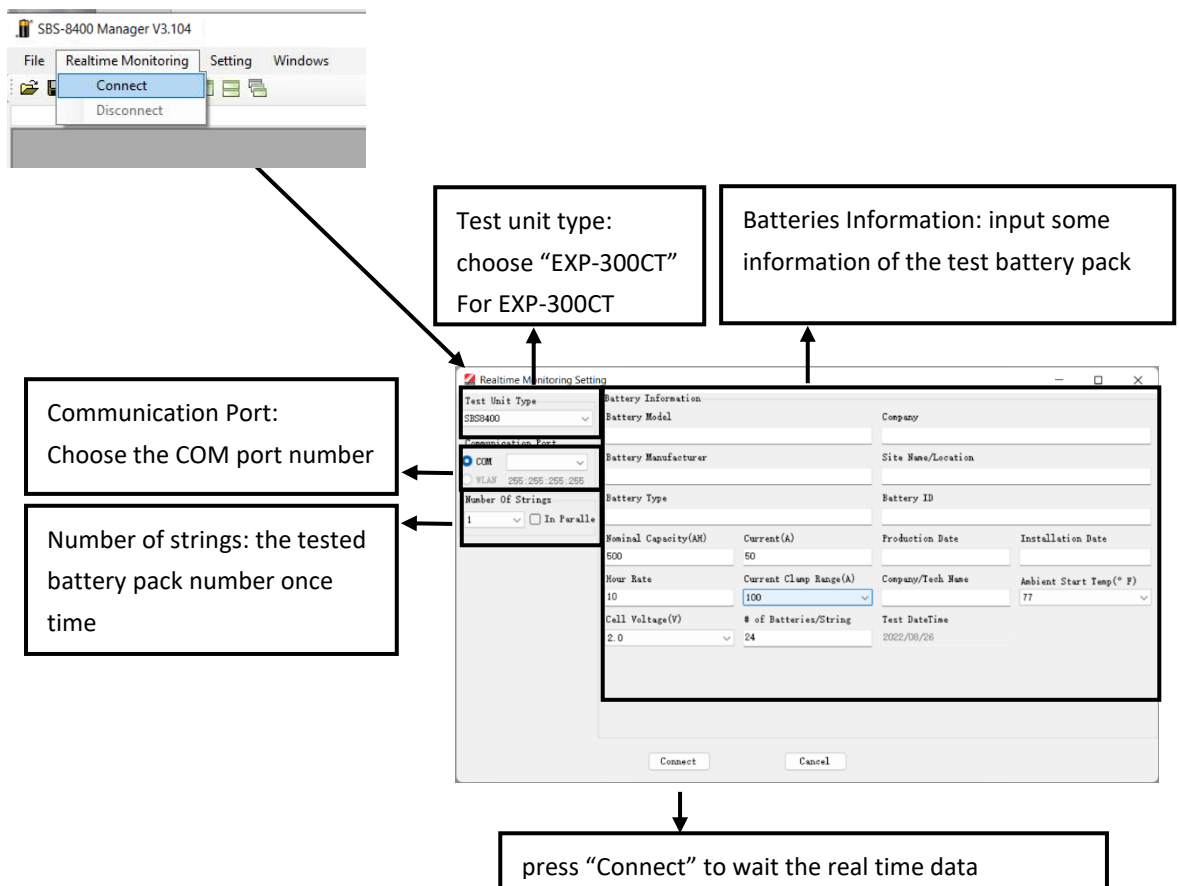


16. Real Time Recording During The Testing

16.1 use the RS485 to USB converter to connect the main machine with PC



16.2 choose “Connect” in “Realtime monitoring” menu to open “Real-time Monitoring Links” interface.



SBS-8400 Manager V3.104
File Realtime Monitoring Setting Windows
Connect
Disconnect

Realtime Monitoring Setting

Test Unit Type: choose “EXP-300CT” For EXP-300CT

Batteries Information: input some information of the test battery pack

Communication Port: Choose the COM port number

Number of strings: the tested battery pack number once time

press “Connect” to wait the real time data

Battery Information		Battery Information	
Test Unit Type	SBS8400	Battery Model	
Communication Port	COM	Battery Manufacturer	
Number Of Strings	1	Site Name/Location	
	<input type="checkbox"/> In Paralle	Battery ID	
Nominal Capacity(Ah)	50	Production Date	
Current(A)	100	Installation Date	
Hour Rate	10	Company/Tech Name	
Current Clamp Range(A)	100	Ambient Start Temp(°F)	77
Cell Voltage(V)	2.0	# of Batteries/String	24
		Test DateTime	2022/08/26

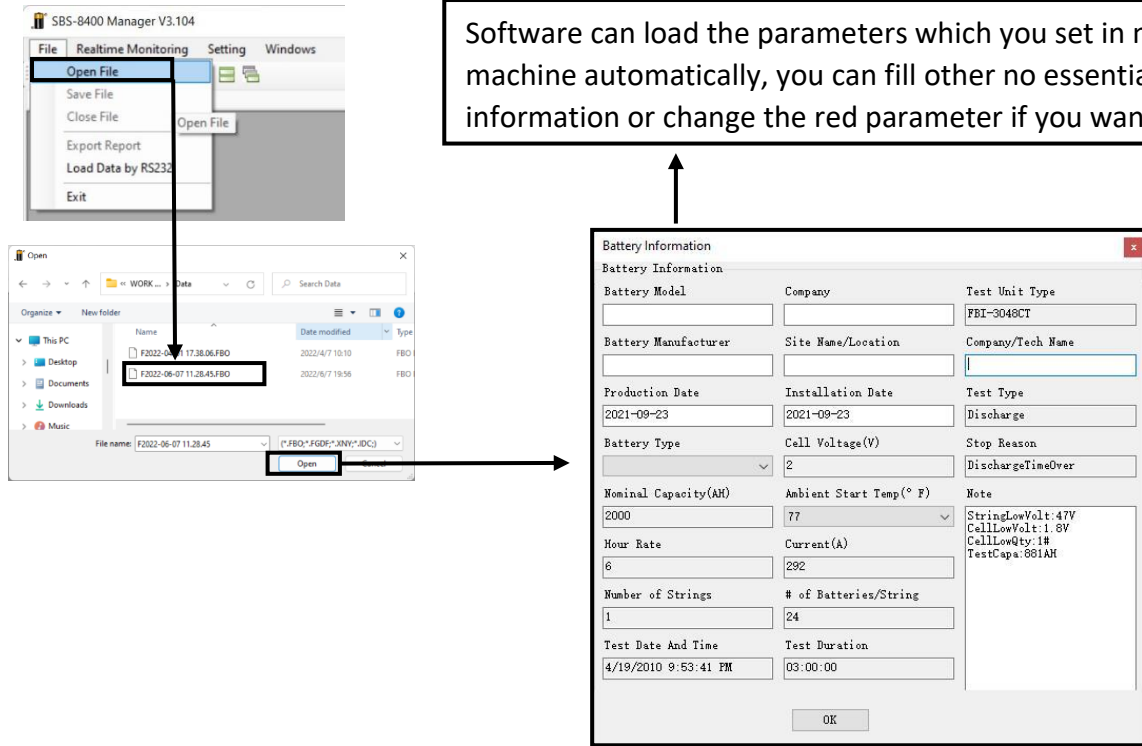
16.3 start the discharge in the main machine, and the real time data to update the PC software interface. Please input the red parameters correctly in the batteries information, it can affect the result of capacity evaluation.

16.4 the real time data can be saved simultaneously, even though you close the software in the process of discharging, the data file still can show the records before closing.

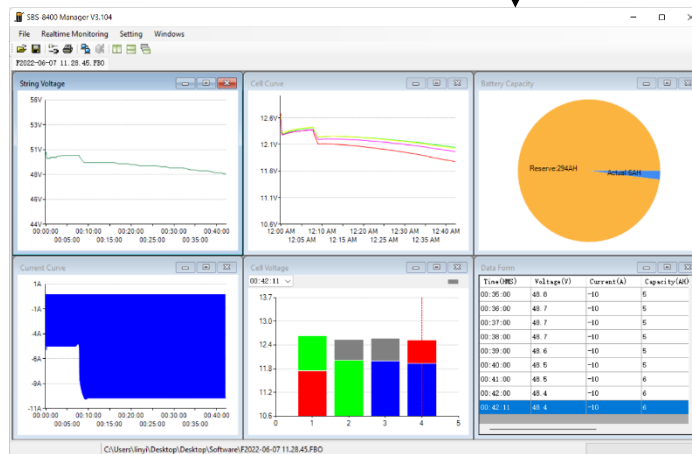
17. Download Data File From USB Disk

17.1 download the data file from the main machine, you can find the data file named “Fxxxxxxx.FBO”. (“xxxxxx” is the time & date of data downloading.)

17.2 you can open the software first and choose “Open file” in “file” menu.



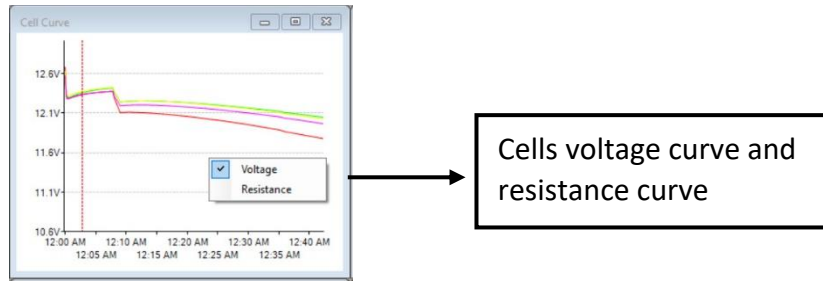
Software can load the parameters which you set in main machine automatically, you can fill other no essential information or change the red parameter if you want.



Main interface

17.3 in the main interface, you can see 6 windows to show all necessary testing information:

- a) Total current chart: the current during the discharging (the value is minus because discharging)
- b) Cell curve: the voltage curve of each battery, you also can see cells resistance curve (it can be chosen to be displayed by right click menu)




- c) Cell capacity- rest capacity: show the rest capacity, actual capacity and capacity percent of each battery (it can be chosen to be displayed by right click menu)
- d) Data form: show each discharge data by time-interval during the discharging
- e) Cell voltage: each battery voltage can be displayed by bar chart, the bar chart can show you the initial and end voltages. Using the scroll bar on the top of this window, you can locate to any time in the testing to see the relevant result.



- f) total voltage: the voltage curve of battery pack in the discharging process

18 Generate Excel Test Report

18.1 press  icon to generate a report, and in the "Save As" window, please select a folder and name the report file, click 'Save' to generate the report.

