PV Master OPERATION INSTRUCTIONS

GoodWe Technical Services Center January, 2019 Ver. 2.0

BRIEF INTRODUCTION

PV Master is an external application for GoodWe storage inverters to configure inverters or to do Wi-Fi configuration, used on smart phone for both Android and iOS system, main function of PV Master App as below:

PV Master

1. Edit system configuration to make the system work as it is required locally onsite.

2. Wi-Fi configuration

The following pages will introduce the usage of PV Master App on GoodWe hybrid inverters. Any operation on the App for the system please follow this instruction. Any confusion on this introduction, please contact GoodWe for explanation.

Android System & iOS System

PV Master is used on both iOS and Android system, customers need install this app on your device before using it.

For Android system:

Download Platform: *Google Play*

Search Keywords: *PV Master*

Compatible System: Android

For iOS system:

Download Platform: *App Store*

Search Keywords: *PV Master*

Compatible System: *iOS 8.0 or higher version for iPhone/iPad/iPod Touch*

INTERFACE INTRODUCTION

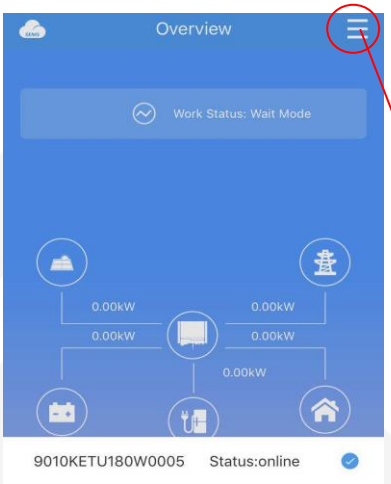
1. Parameters Configuration --- Local Configuration

Local configuration means do inverter configuration by optional two ways:

a. Connecting Solar-WiFi* from inverter directly to your smart phone or pad (pic 1):

Wi-Fi name: *"Solar-WiFi*" (* means the last 8 characters of inverter serial No.)*

Password: *12345678*

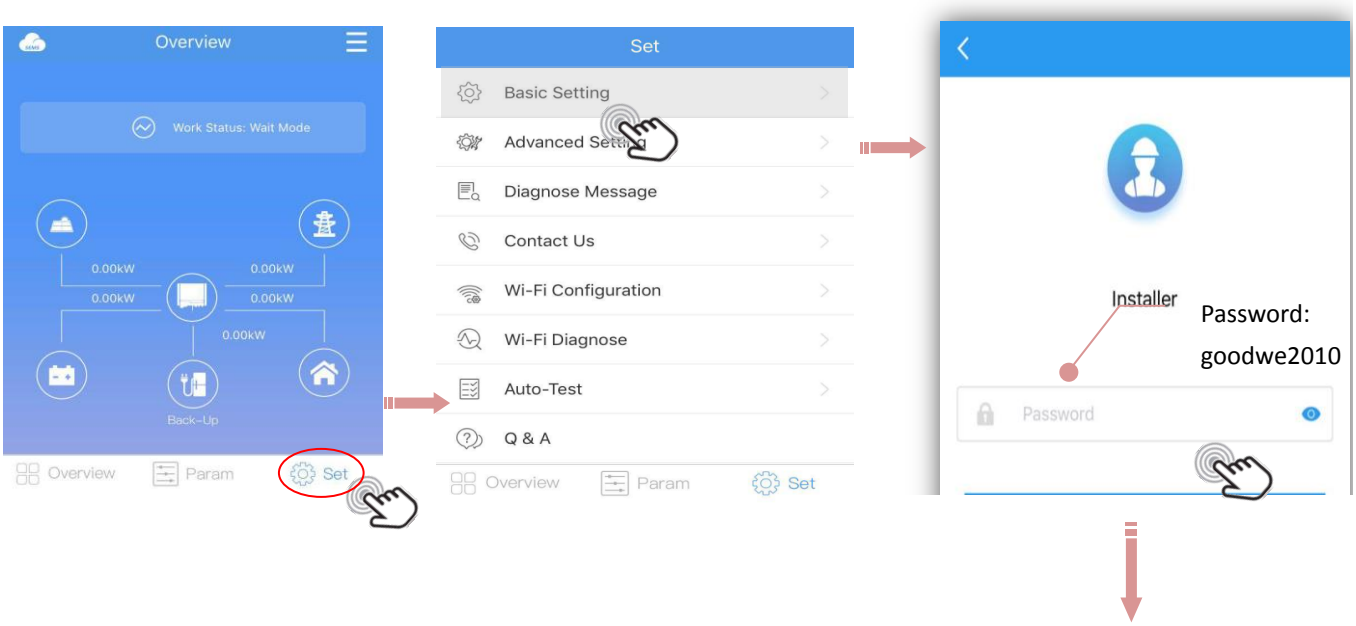


b. Connect your smart phone to the same network your inverter configured to (after Wi-Fi configuration) refer to Pic 2

Click here to choose the hybrid inverter you want to configure

Basic Setting

To select Safety Country, Work Mode and Battery Model (all Compulsive settings)

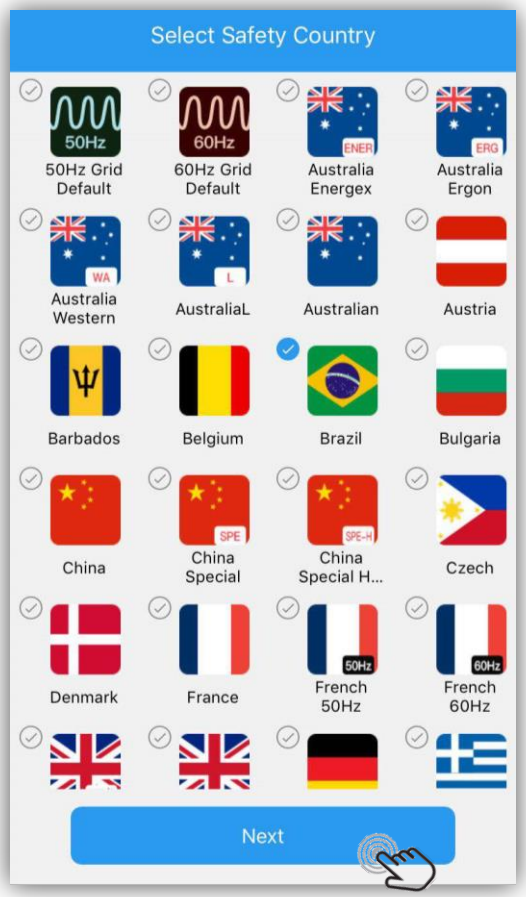


- Click “Login” to enter configuration pages

➔ **Select “Safety Country”**

Please select the right safety country according to the local grid regulations.

- *Scroll up on the page to show more options*
- *If you did not find your local safety country, please select “50Hz Grid Default” or “60Hz Grid Default” according to your local grid frequency*

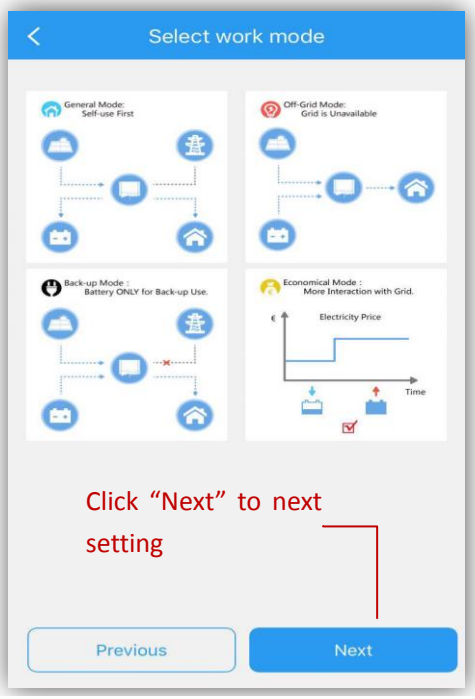


- After choose the right Safety Country, Click “Next” to select Work Mode for your hybrid inverter

➔ Select "Work Modes"

Work Modes decides the automatic operation logic of your hybrid system. So make sure what you select is exactly what you want.

- When you choose any mode, a instruction of the mode you choose will be pop up, as below:



General Mode: normally customer use this mode. Solar power firstly support loads, then charge battery, rest power exports to grid, battery will charge or discharge automatically based on the system condition.

Off-Grid Mode: used for off-grid condition (without grid access). Choose this mode, system will automatically cut off grid connection even though your grid is connected.

Click this option will turn on off-grid charge function permanently till inverter totally shut down, even though change to another mode.

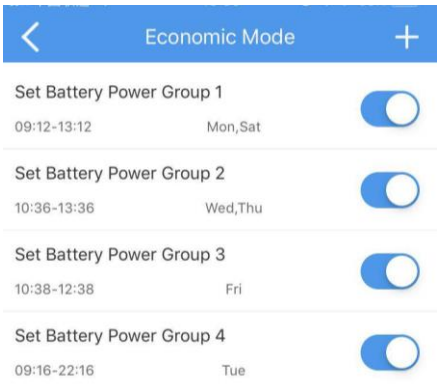
Back-Up Mode: Battery only discharge when grid is unavailable, for urgent use to support back-up loads. Battery charge time set as 00:00-23:59

Note: battery still possibly charge during 23:59-00:00 each day

Economical Mode: used to set charge/discharge time as customer need, details as below:

- If you choose Economical Mode, it will show options for charge/discharge management.

Note: Charge/discharge time and Rated Power only valid when grid is available,Now the inverter supports up to four group configurations



Battery Mode: *There are charge and discharge mode.*

Start time: *start time for charge or discharge.*

End time: *end time for charge or discharge*

Rated Power: *max charge or discharge power (% of nominal power of the inverter)*

*Eg. for GW3648D-ES, rated power set as 50%, then max charge power of battery from grid will be 50%*3600W=1800W during charge time when battery mode set discharge*

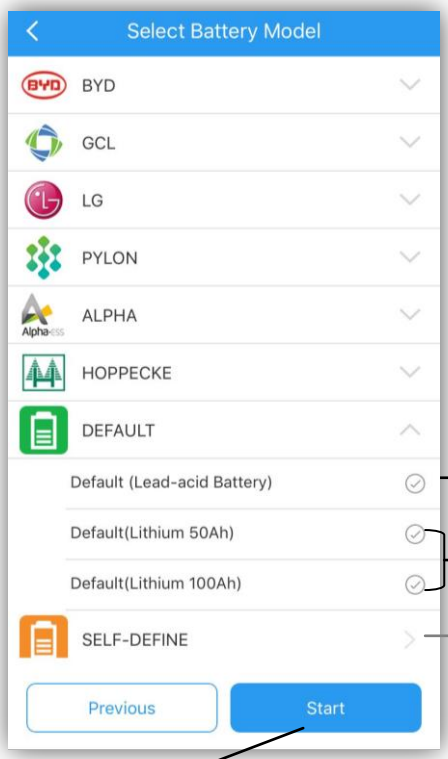
Repeat: *set weekday for charge or discharge*

Select “Battery Type”

- After set work mode, click “Next” to select battery type

NOTE:

1. *For lithium battery, choose wrong battery type will lead to BMS communication failure*
2. *When choose the battery type, the settings about this battery are all inset, do not have to change*



Normally NOT used. This is used only for previous hybrid inverters with lead-acid battery to reset discharge voltage back to default 40V

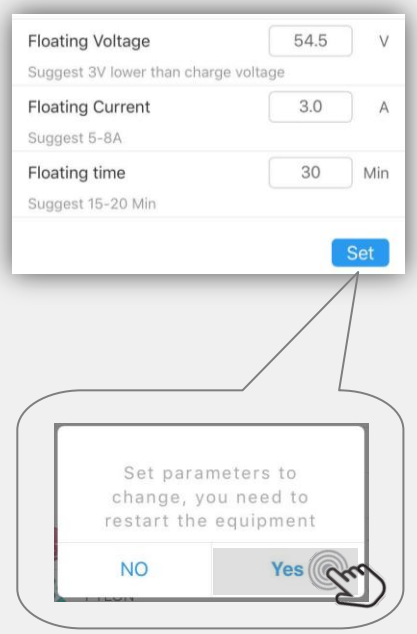
Used for connecting lithium batteries with BMS communication, which is not in the list with capacity of 50Ah or 100Ah
(normally only used for third-party lithium battery communication)

If your battery is not in the list, please choose SELF-DEFINE to set detailed parameters as below

Click “Start” as you choose your battery, basic setting done

There is explanation for each option

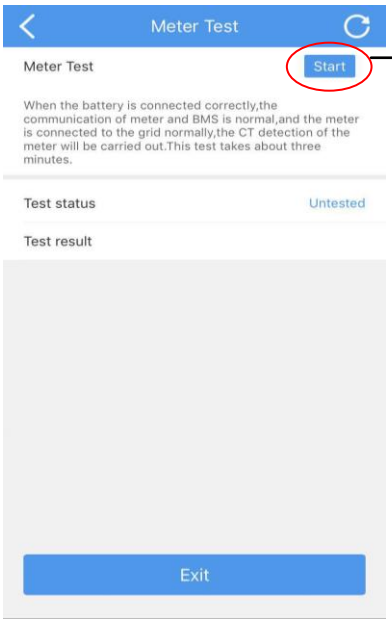
Scroll down to check more parameters

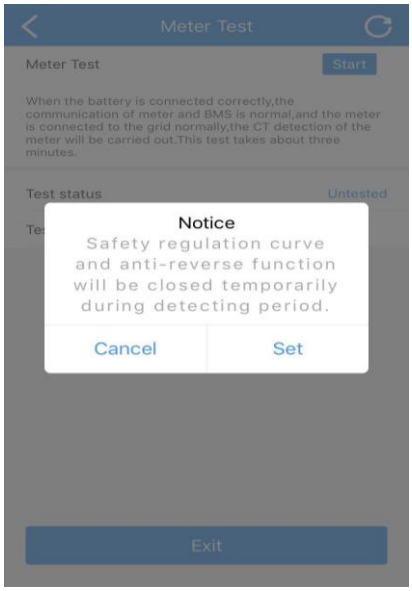


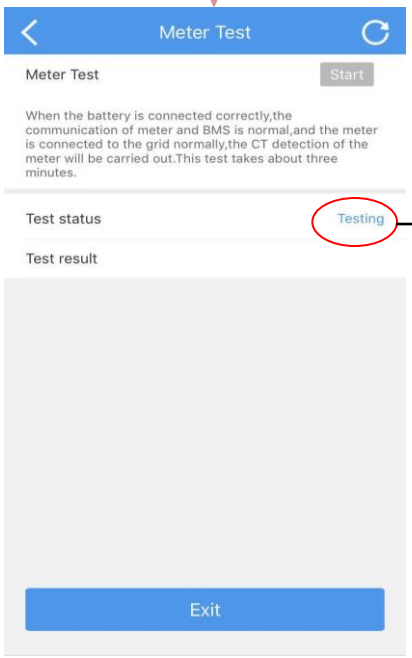
NOTE: *all the settings must be 100% honest to the battery specifications first*

“Meter Test”

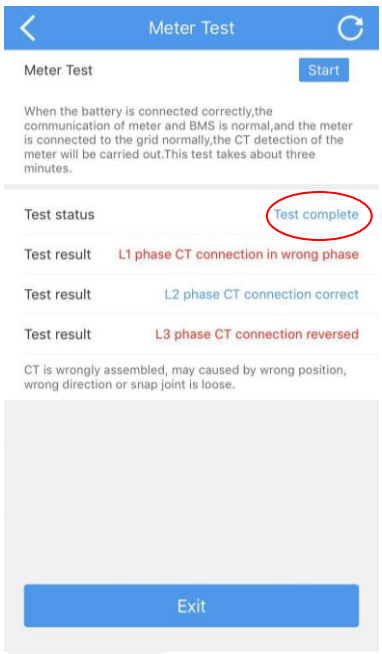
Start the meter test function





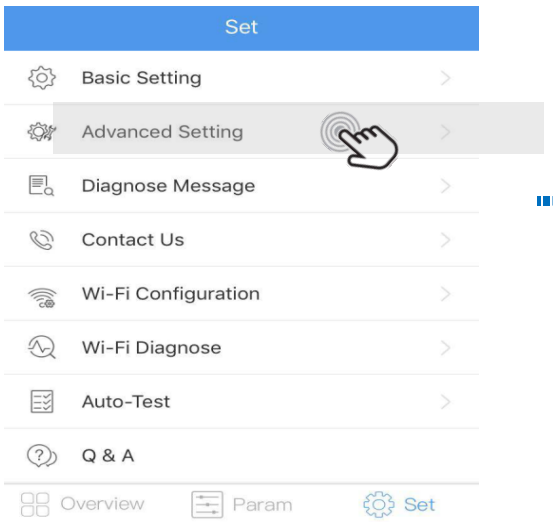


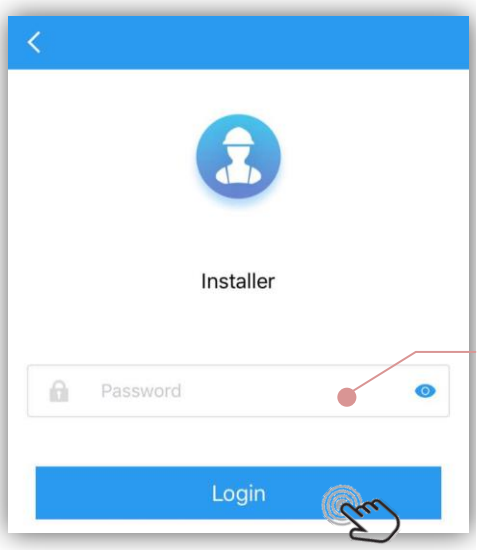
Because the test takes some time, the result will not be display immediately, and need to wait



Advanced Setting

NOTE: Advanced settings are used special use like "Power Limit" & "Back-Up Function". Normally the password is only for dealers and installers, so please do not tell end users the password if not necessary





Password:
goodwe2010

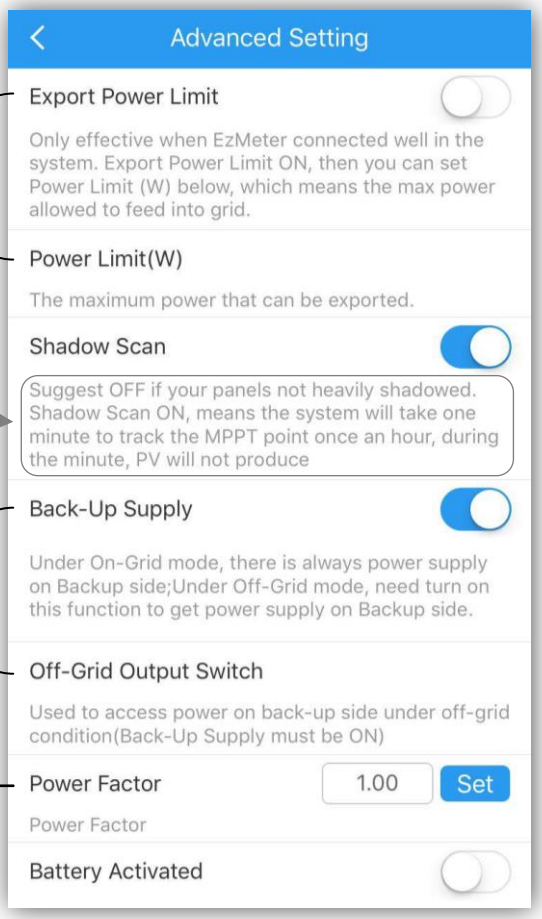
Turn on to use if your grid company does not allow external power feed into grid or customer himself do not want PV production exported to grid

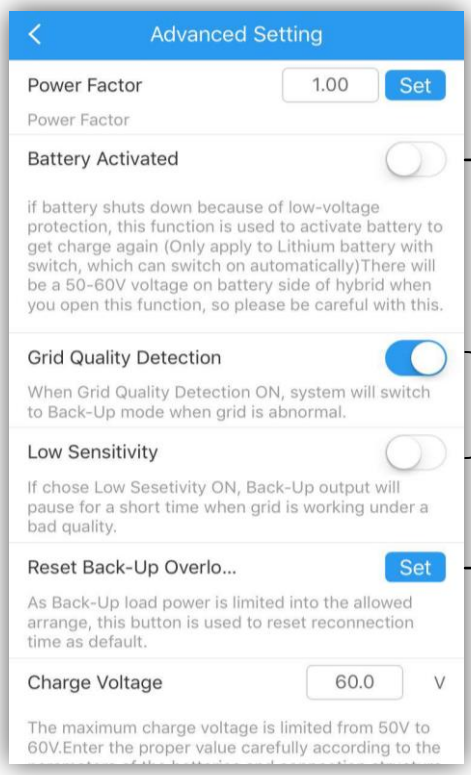
NOTE: If you use this function and set a Power limit value, then PV production could be limited if consumer or battery charge power is low

There is explanation for each option

Back-Up Supply should always be ON if you have load on Back-Up side (no matter grid is available or not)
Off-Grid Output Switch should be ON **when grid is not available** to access power on Back-Up side

Power Factor: Only used for adjustment when you have reactive power load connected to balance active and reactive power





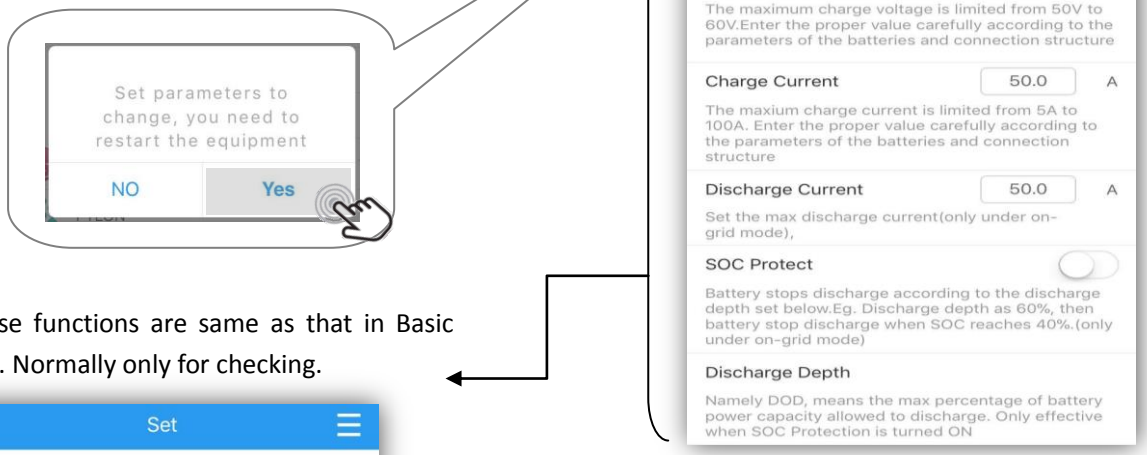
Battery Activated: Used when lithium battery switch off because of low voltage. But for some battery like LG, should switch on battery switch manually first.

Grid Quality Detection: only used when customer want system switch to Back-Up mode as grid quality is not good like high grid voltage or bad waveform

Low Sensitivity: normally not used. Same function with "Grid Quality Detection" but with lower sensitivity

Reset Back-Up Overload…: only used when the system report Back-Up Over Load fault continuously. After decrease Back-Up load to normal range, use this function to start up Back-Up function immediately.

Click here to choose yes to save advanced settings



All these functions are same as that in Basic Setting. Normally only for checking.

Diagnose Massage: If the system works abnormally, customer can click this to check operation condition

Contact: Please contact local GoodWe office or service@goodwe.com if you want consult

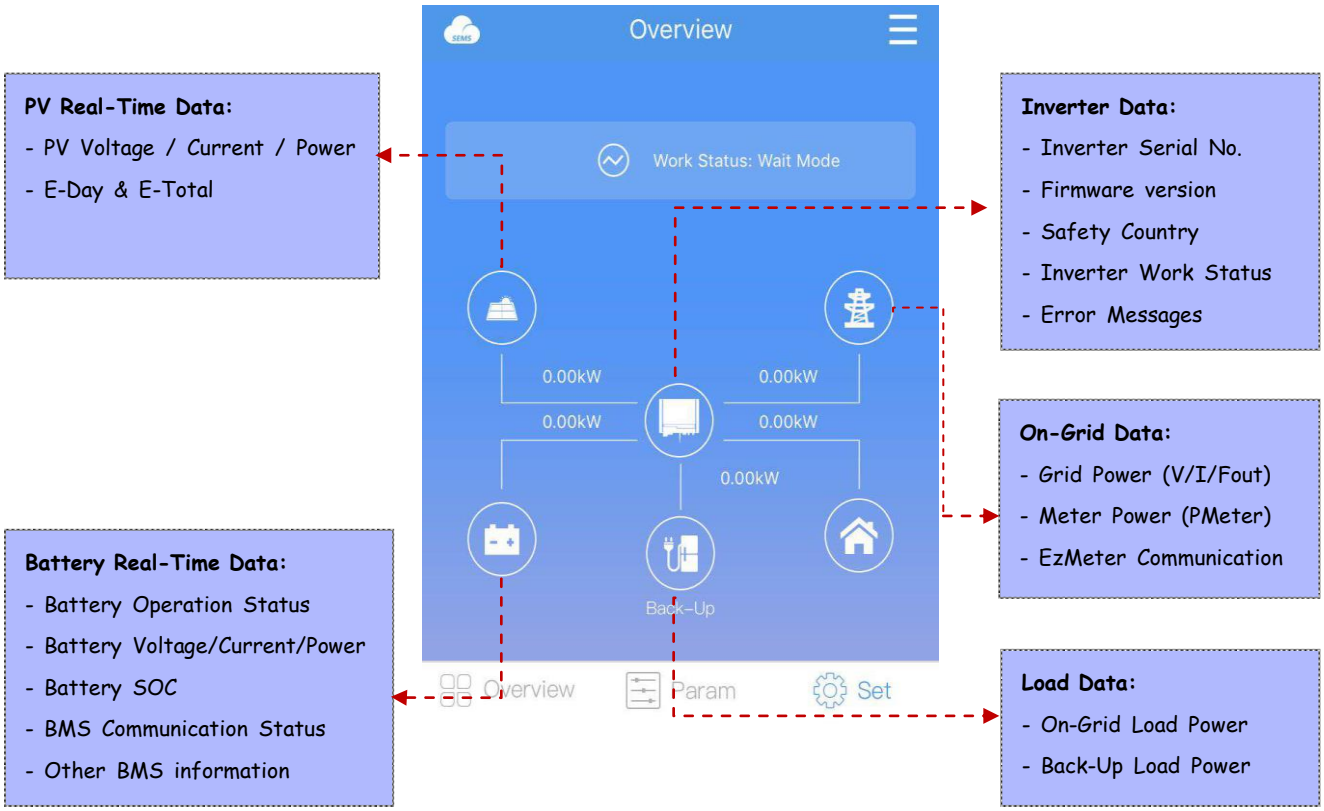
Check commonly-asked questions and answers

2. Check Parameters of System

- The first page is device status page as below:

  Note:

  - *The statues and data on this page might be a few minutes delay from the real-time inverter data*
  - *By touch the icons on the diagram, it will show the real-time data of each part, as below:*



- Or Click "Param" to check more parameters

  Note: the parameters might be different from that on homepage because of refresh time delay and different calculation formula

Battery Status: showing real-time battery SOC and work status including "Charge" or "Discharge"

BMS Status: showing real-time BMS communication status of lithium battery (*"Communication OK" means normal)*

SOH: BMS send out this info, showing the health status of lithium battery – 100% means perfectly healthy

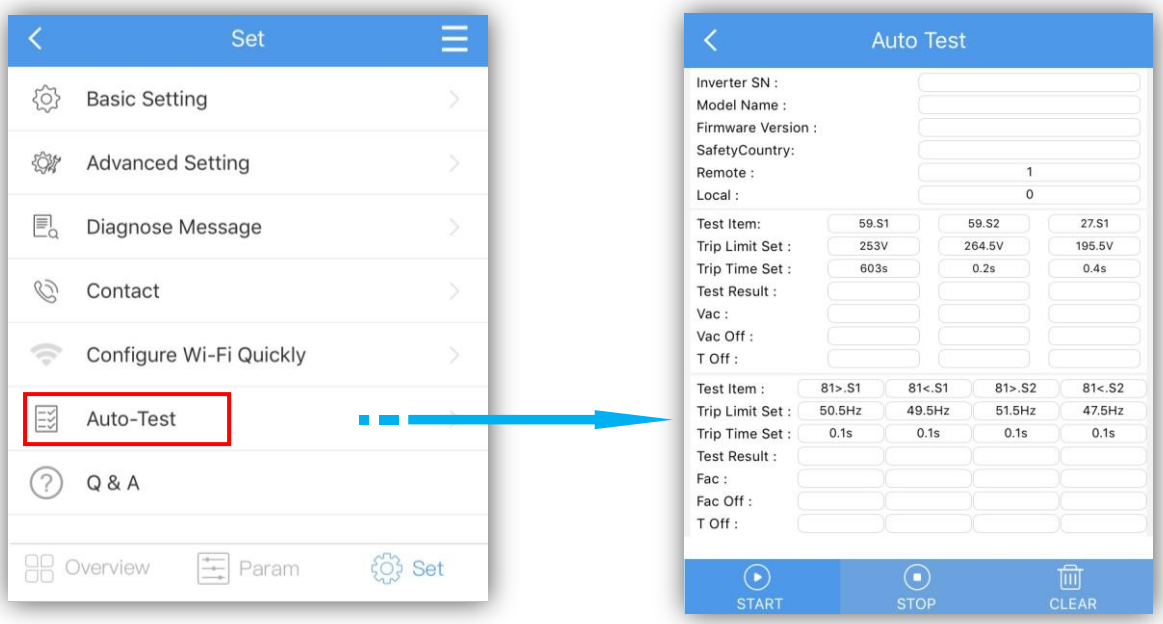
Charge/Discharge Current Limit: showing the real-time limitation on battery charge/discharge – this determines the real allowed charge/discharge current for Lithium battery.

3. Auto-Test (for Italy only)

Note:

a. Auto-test option only accessible when you choose "Italy" as safety country

b. Before use Auto-Test, make sure Solar-WiFi signal is connected on your smart phone stably



- **Auto-Test Operation Process**

1. Click Auto-Test ,then inverter will be under auto-test mode
2. Connect AC, the inverter shows on-grid successfully, and output power is zero.
3. Under normal communication condition, the inverter SN, model, firmware version and safety country (If it's not Italy, please change it to Italy) will be obtained automatically

   Note:

   a. "Remote" default set is 1, unable to be modified

   b. "Local" default set is 0, which can be set to 0 or 1.

4. If no setting "Remote" and "Local", then test with the default value.
   Testing in order : 59.S1, 59.S2, 27.S1, 81>S2, 81<S2

   NOTE: If set "Local" to 1, then testing order would be 59.S1, 59.S2, 27.S1, 81>S2,81<S2

5. If sub test finishes and shows Pass, inverter relay breaks off and reconnect to grid automatically according to CEI 0-21 requirement. Then start the next testing.

   NOTE:

   a. After passing Auto-test, testing data will be stored in the album, for future reference.

   b. If you quit the test or exit testing screen halfway, test will be terminated.

WARNING:

1. Make sure your smart phone keeps unlocked during Auto-Test, or, the test will stop and fail

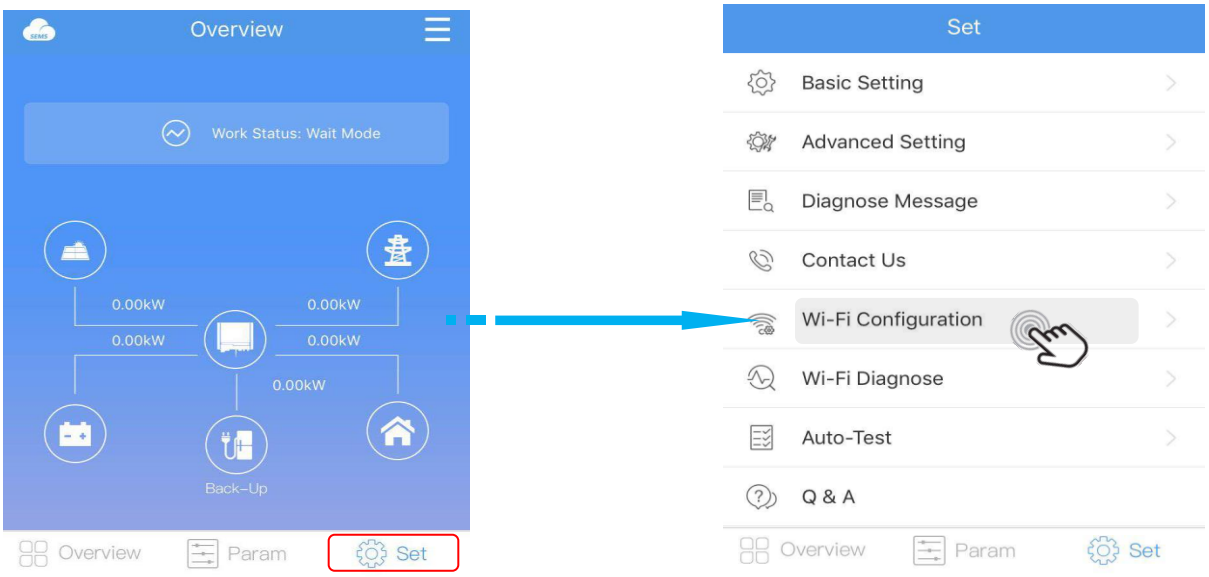
2. *If the test fails during Auto-Test, inverter will enter wait mode. Will need reconnect Solar-WiFi* to finish the test or totally power inverter and reboot to try again.*

4. Wi-Fi Configuration

A successful Wi-Fi configuration is necessary for remote monitoring, configuration and after-sales maintenance and control.

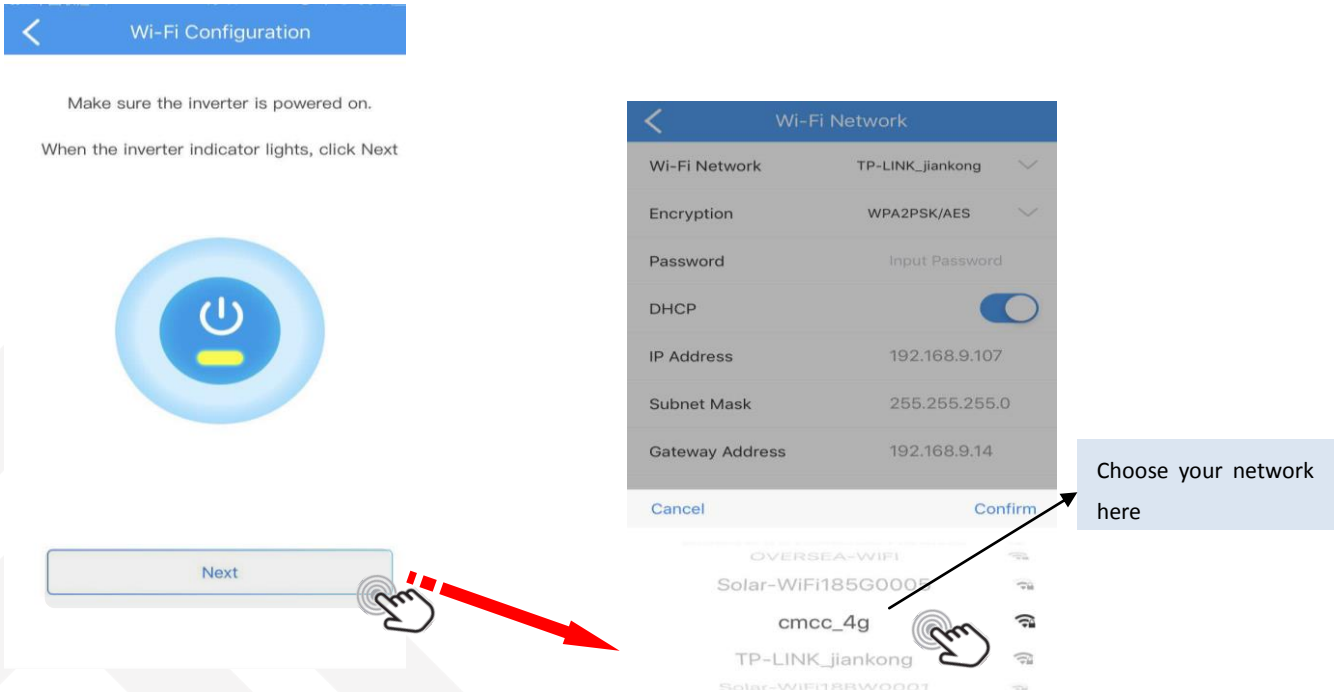
➔ Enter Wi-Fi Configuration page:

Set→ *Wi-Fi Configuration* as below*:*



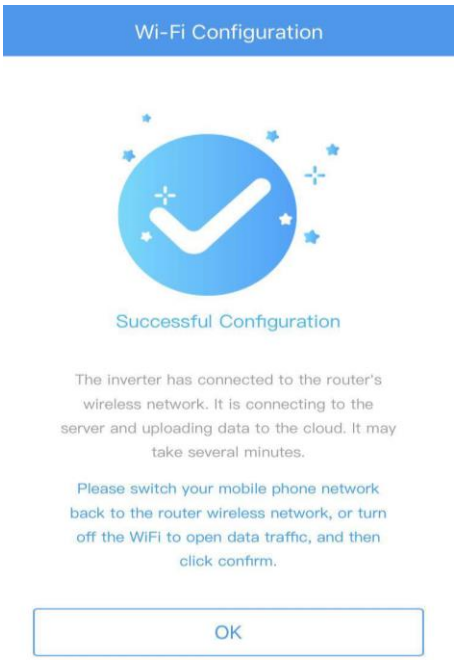
➔ Wi-Fi Configuration Process:

Step 1: Make sure your inverter is powered and Solar-WiFi signal is connected on your smart phone



Step 3: Input the password, and press "Set" to start connection

Step 4: As the page shows success, then click "OK" to finish configuration process

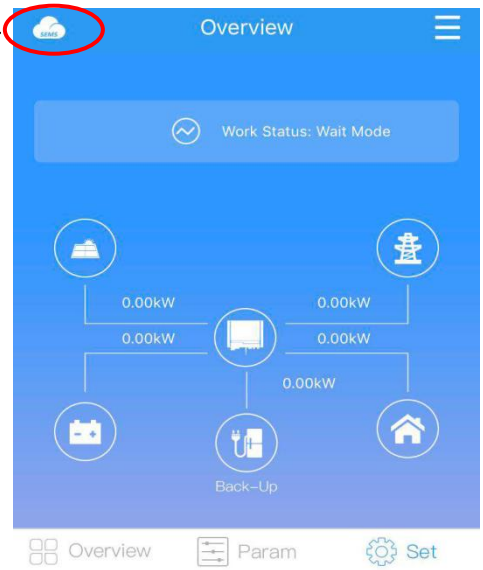


NOTE:

1. *After configuration, normally the Wi-Fi or Power led on inverter will change from double blink to quartic blink then burning after around 10 seconds*
2. *The configuration process might still finish even password of your network is wrong, so make sure the password you input is absolutely right.*

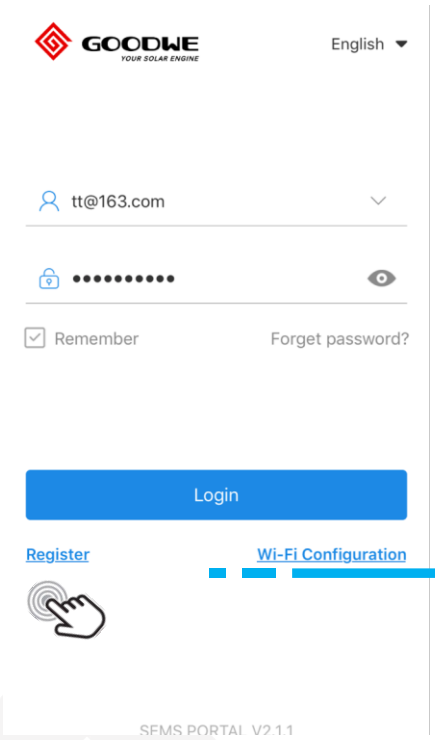
5. Account register and build plant for your inverter on SEMS Portal App

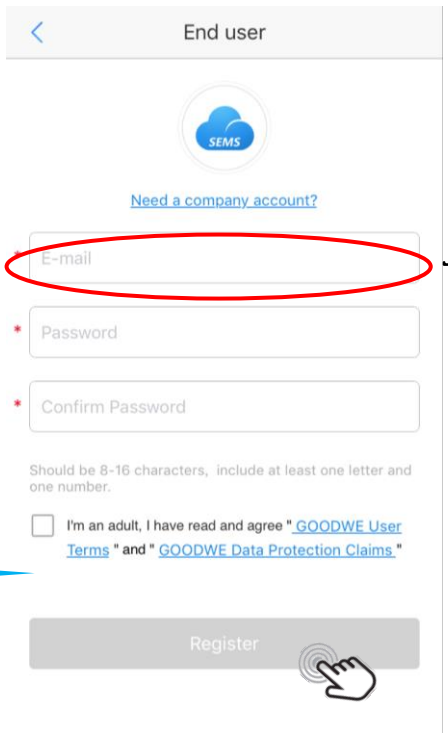
Click the SEMS logo, you can download the SEMS Portal to remote control the inverter.



On SEMS Portal APP, you can register an account via E-mail for monitoring and remote control.

➔ **Register an Account**



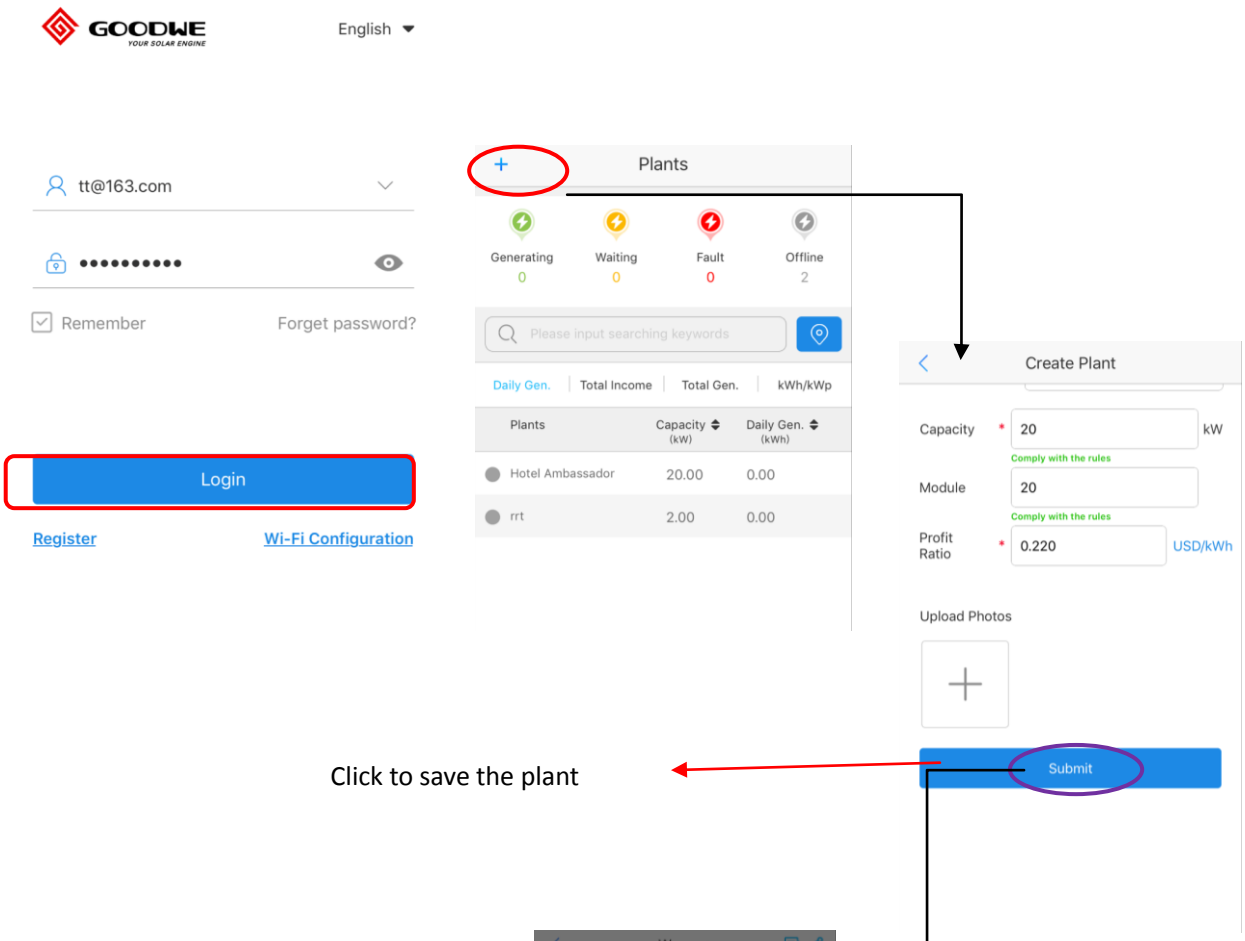


As input your E-mail. click here to receive a registration information by E-mail.

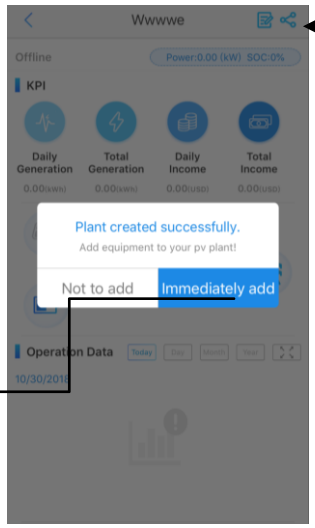
NOTE: Each E-mail address can register only one account

➔ Build plant and register device in it

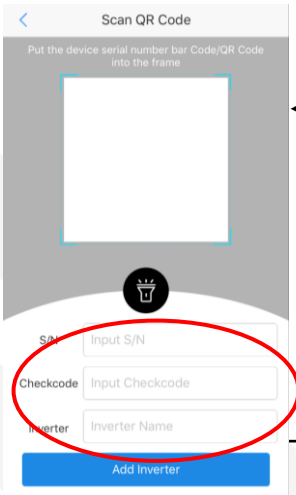
Step1: Log in your account



Click to save the plant



Click here to add new plant for your devices, by scanning serial No. bar code

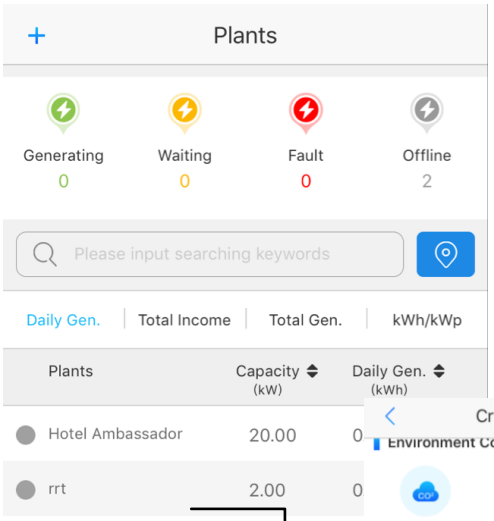


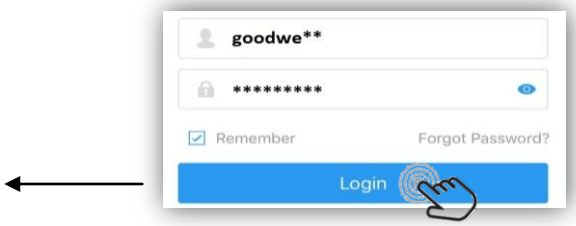
Or input inverter serial No. and check code manually

6. Remote Configuration and Monitoring

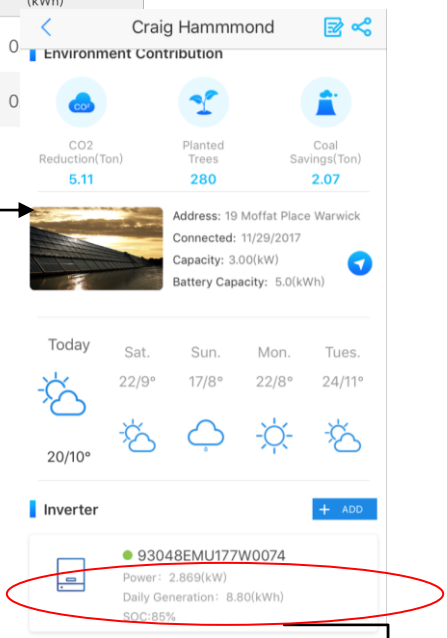
Remote configuration and monitoring is ***only accessible for dealer account*** after Wi-Fi configuration successfully and build plant on SEMS Portal.

➔ **Remote Configuration**

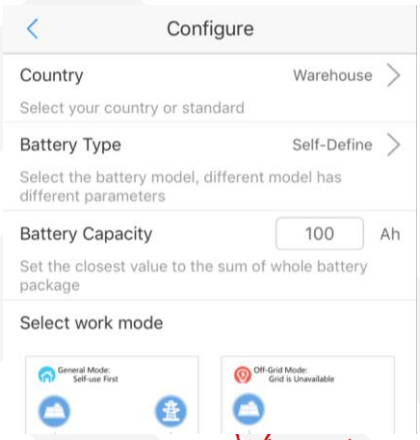




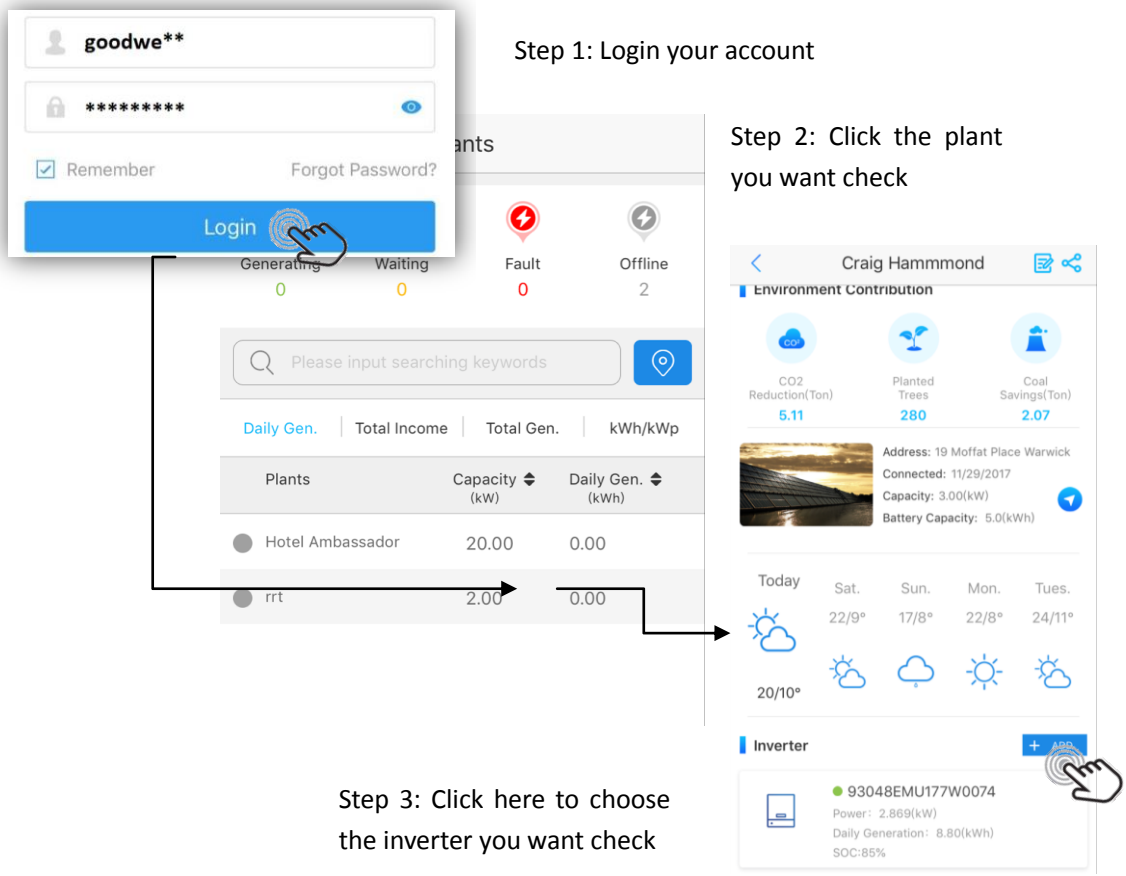
Click plant name to find device you want to configure remotely



Scroll down to see more settings and click "Send" to save all the settings



➔ Remote Monitoring



Step 1: Login your account

Step 2: Click the plant you want check

Step 3: Click here to choose the inverter you want check

In the monitoring page, you can check data as below:

Daily performance

Monthly / Yearly performance