Connect the cables

Connect the power cables between inverter and battery or the Busbars as mentioned.

Figure 2.1 Sol-Ark Battery Connector

As for the cable gauge that connects the busbar to the inverter, 4/0 gauge power cable is commended for Sol-Ark 15K model and 3/0 gauge power cable is commended for 8K/12K model.

A standard ethernet cable can be used for the communication since Sol-Ark inverter pin assignment is the same as Pytes E-BOX battery.

Figure 2.2 Sol-Ark Standard ethernet cable
Set the DIP Switch of every master battery as Figure 2.3 shown.

Figure 2.3 Sol-Ark inverter DIP Switch Setting

Plug in the battery end into the **CAN port** of the Pytes E-BOX battery and plug in the inverter end into Sol-Ark Battery **CANBus** Port as shown in the Figure 2.4.

Figure 2.4 Sol-Ark inverter comm cable connection

**Program the inverter**

Press the gear icon on the top right of the screen and then press battery set up menu.

Figure 2.5 Sol-Ark Batt Setup
Set the battery parameters

- Batt Capacity: 100Ah per unit
- Max A Charge/Discharge: 185A is the max amps that Sol-Ark 8K/12K mode supports and the corresponding number is 275A for 15K mode. Fill in the max amps or (50A*unit number) which is lower. (For example, there are three Pytes E-BOX batteries and one 12K Sol-Ark inverter in a system. The max amps of 12K is 185A and three batteries can support 150A(50*3). So the number should fill in is 150A.)
- Select “Use Batt% Charged”.
- Enable “BMS Lithium Batt” and set its value to “00”.
- Turn on “Activate Battery”.
  
  Note that enabling BMS Lithium Batt 00 will adjust some values and make other values unadjustable (like the temperature coefficient above). Just ignore those values - the BMS is in control.

Figure 2.6 Batt Setup

Program the Charge tab in Batt Setup

See the right picture in Figure 2.6.
- Start%: 15%
- A: Same as the Max A Charge in Batt Setting
- Float V: 55.6V
- Absorption V: 56V
- Equalization V: 56V

Program the Discharge tab in Batt Setup

- Shutdown: 10%
- Low Batt: 20%
➢ Batt Empty: 47.5V

Figure 2.7 Batt Discharge Setup

<table>
<thead>
<tr>
<th>Batt Setup</th>
<th>Charge</th>
<th>Discharge</th>
<th>Smart Load</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batt</td>
<td>51V</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Batt</td>
<td>51.4V</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restart</td>
<td>51.8V</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batt Empty V</td>
<td>47.5V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batt Resistance</td>
<td>5 mOhms</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please refer to the Sol-Ark inverter manual for more setting such as Grid Setup, PV Setting, Time-of-Use, etc.

Confirm Inverter-Battery Communication

Figure 2.8 communication confirm