

## Parallel Option Installation Manual for RM180-300kVA V1.3

### Notes:

- Same phase of output power cable must be shorted together, then connect to load.
- When UPS in normal parallel mode, it is inhibitive to turn off output switch directly. For example, when the parallel system is running normal, you cannot turn off Q4 directly.

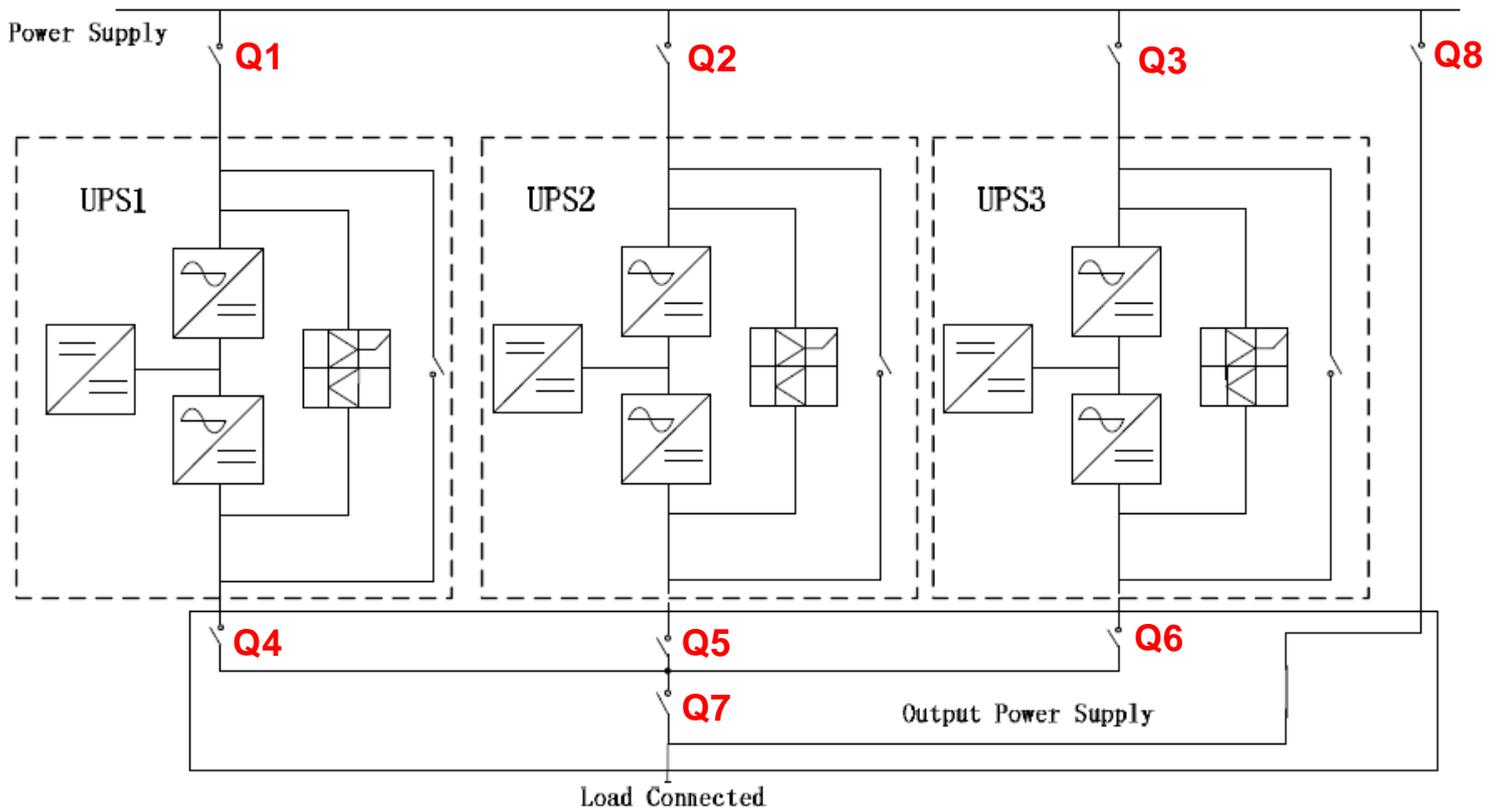


Figure 1 Output cables connection

1. The parallel signal cable is shown as figure 2. The parallel board code is PS1203-TF4, located on the back of cabinet, as is shown in figure 2.



Figure 2 Signal cables

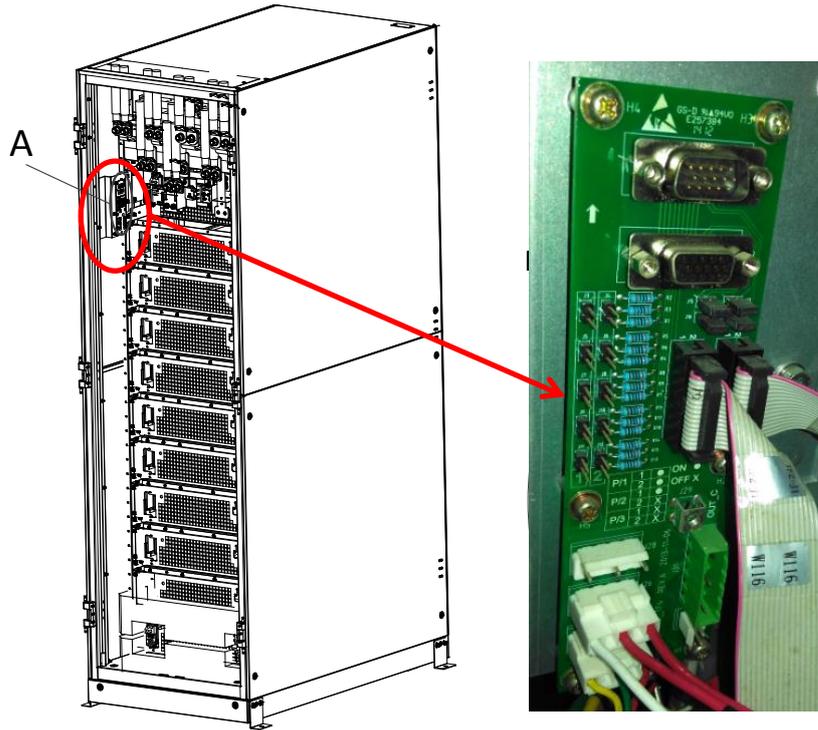


Figure 3 Parallel board Location

2. For 2 cabinets' parallel system, connect the parallel signal cables, and check the parallel board settings, as is shown in figure 4 and 5.

**Note:**

- J3, J5, J7, J9, J11 and J4 shorted with jumper
- J6, J8, J10 and J12 are open

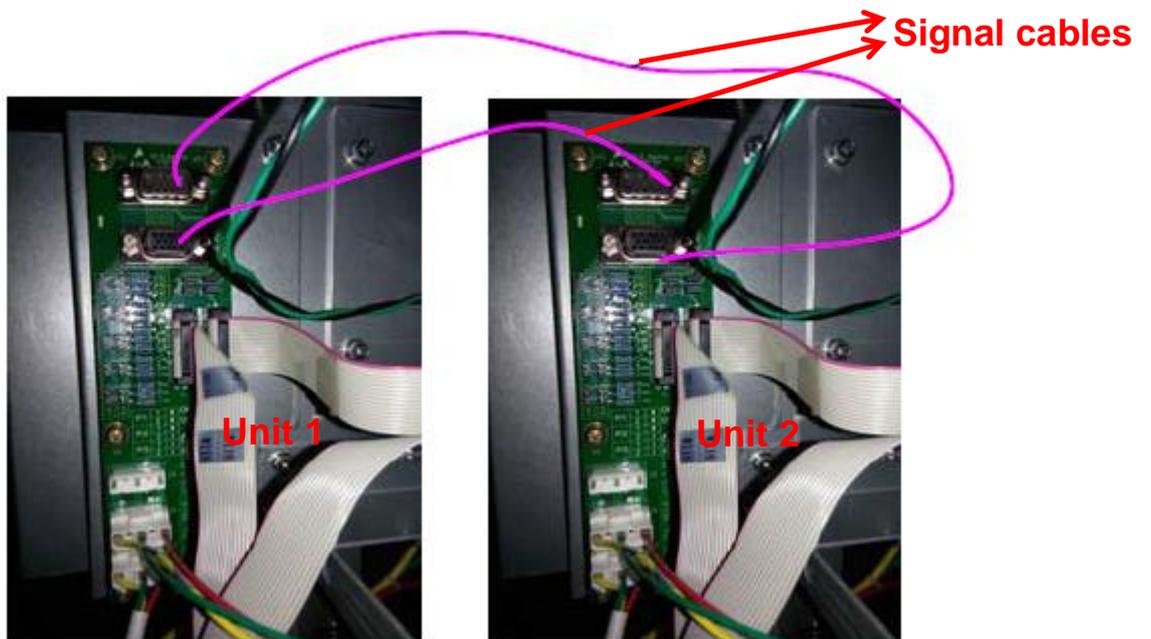


Figure 4 Parallel signal cables connection

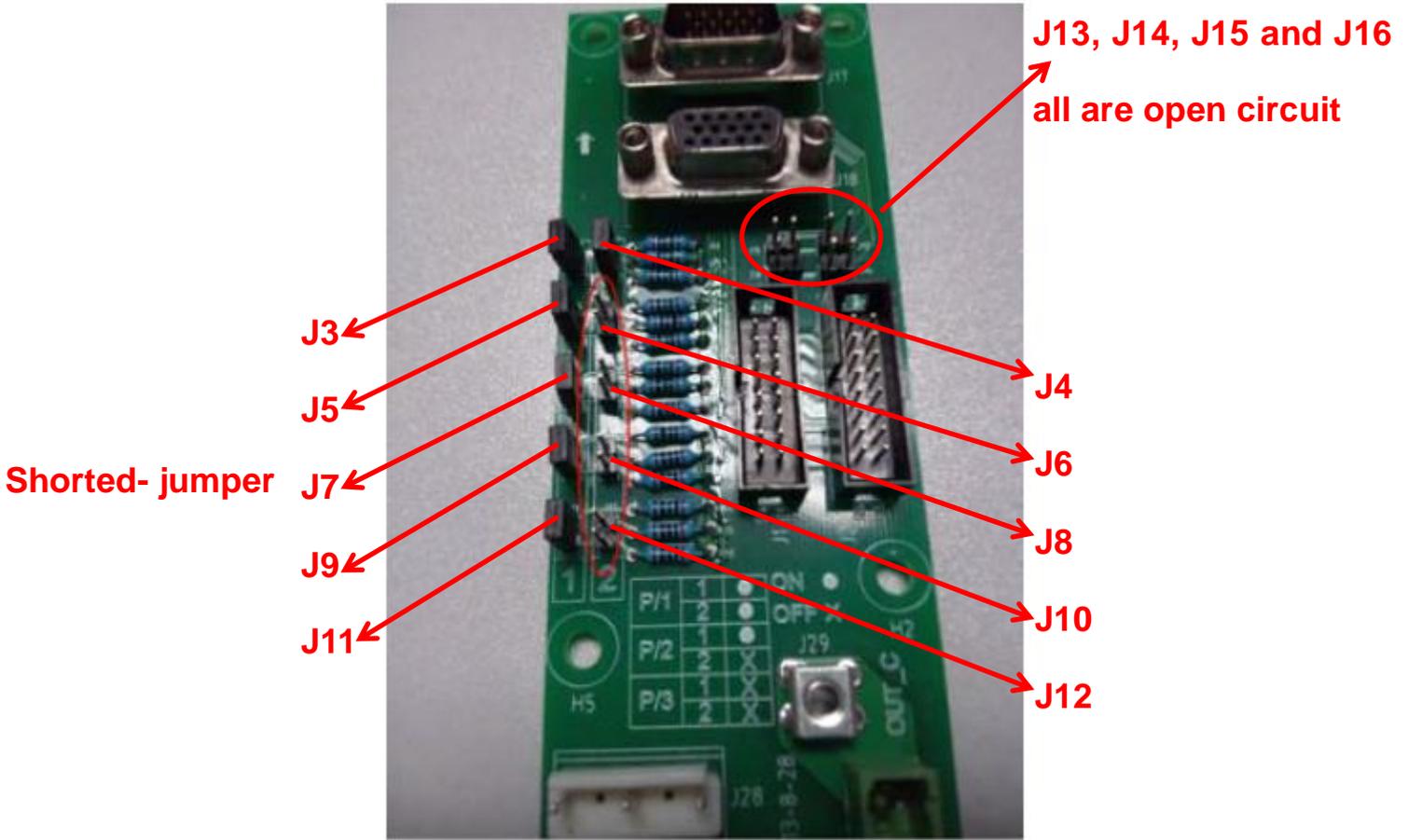


Figure 5 Parallel board settings

- For 3 cabinets' parallel system, connect the parallel signal cables, and check the parallel board settings, as is shown in figure 6 and 7.

**Note:**

- For 3 cabinets, **Only** J3 and J4 shorted with jumper

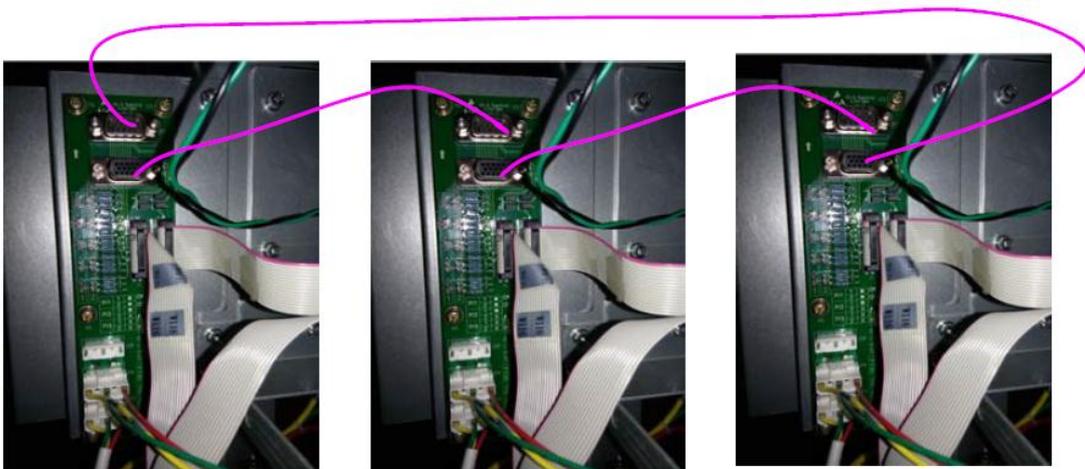


Figure 6 Parallel signal cables connection

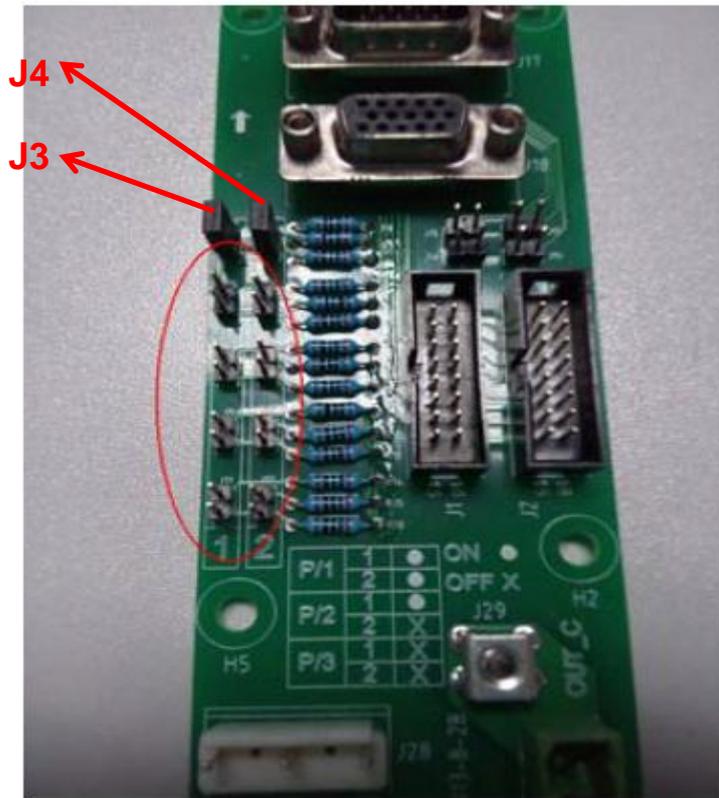


Figure 7 Parallel board settings

4. Power up one of the cabinets (Named as ID\_0, Close the external Input CB) and press EPO to inhibit the system operation.
5. Connect the monitoring software, and check the UPS rate settings, as is shown in figure 8.

**Note:**

- The rate settings should be same

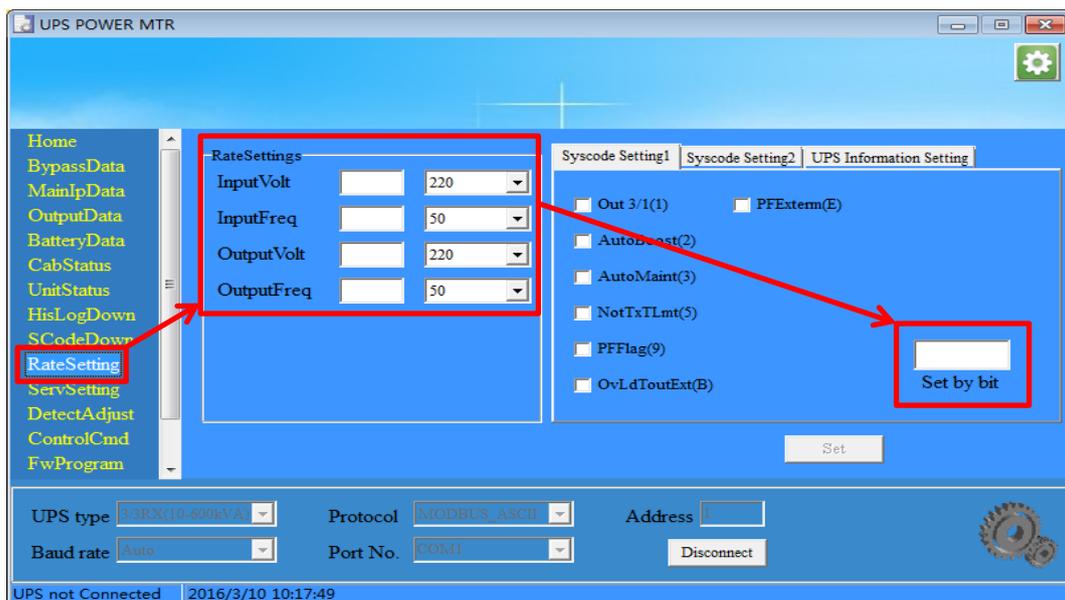


Figure 8 Rate settings

6. Modify the service settings, as is shown in figure 9.

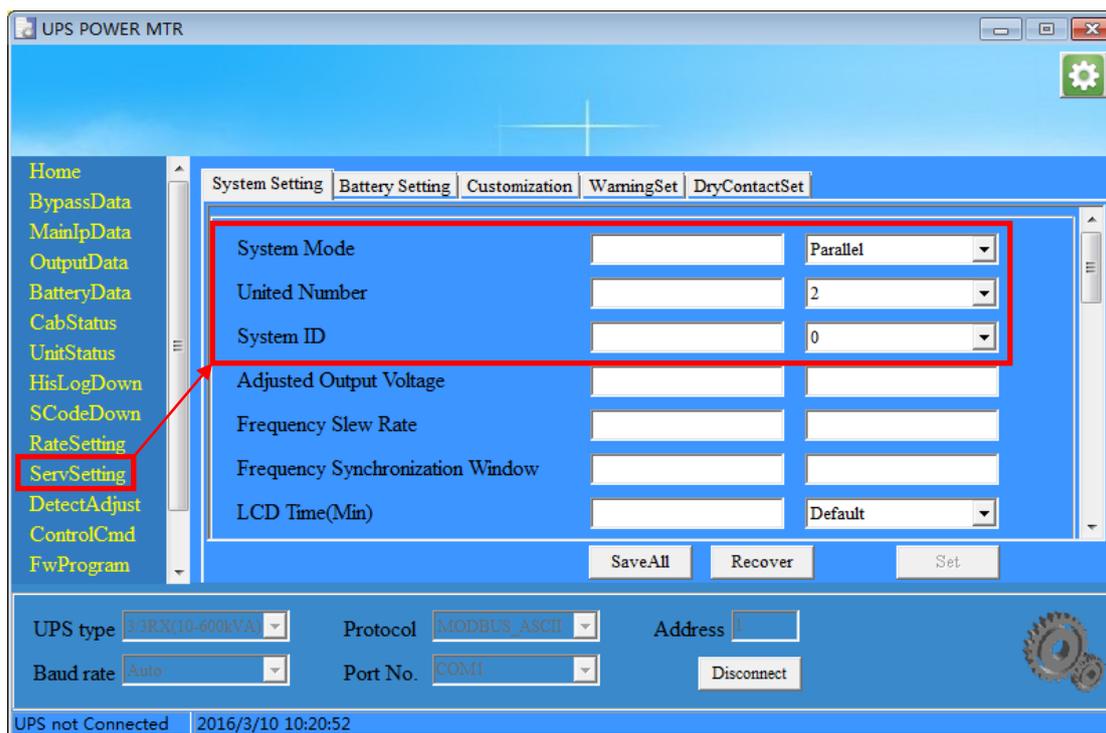


Figure 9 Service settings

Seq.	Item	Data Range	Notes/Setting data
1	System mode	Single 、 Parallel 、 S_ECO、P_ECO、LBS、 P_LBS-	Parallel
2	United Number	-	2- 2 cabinets parallel; 3-3 cabinets parallel
3	System ID	0/1/2	<b>First unit: 0, second: 1, then 2...</b>
4	Slew Rate(Hz/S)	0.1-5.0	2
5	Sync Window(Hz)	0.5-5.0	3

**(1) Setting the user configure**

Seq.	Item	Data Range	Notes/Setting data
1	Adjust Output(V)	(Rate-10V)-(Rate+10V)	Set to the same as the rated output

7. Reset the cabinet, (shut down this cabinet, then power on) and press EPO. Ensure the settings displayed on LCD are what we needed, then shut down this cabinet, as is shown in figure 10.

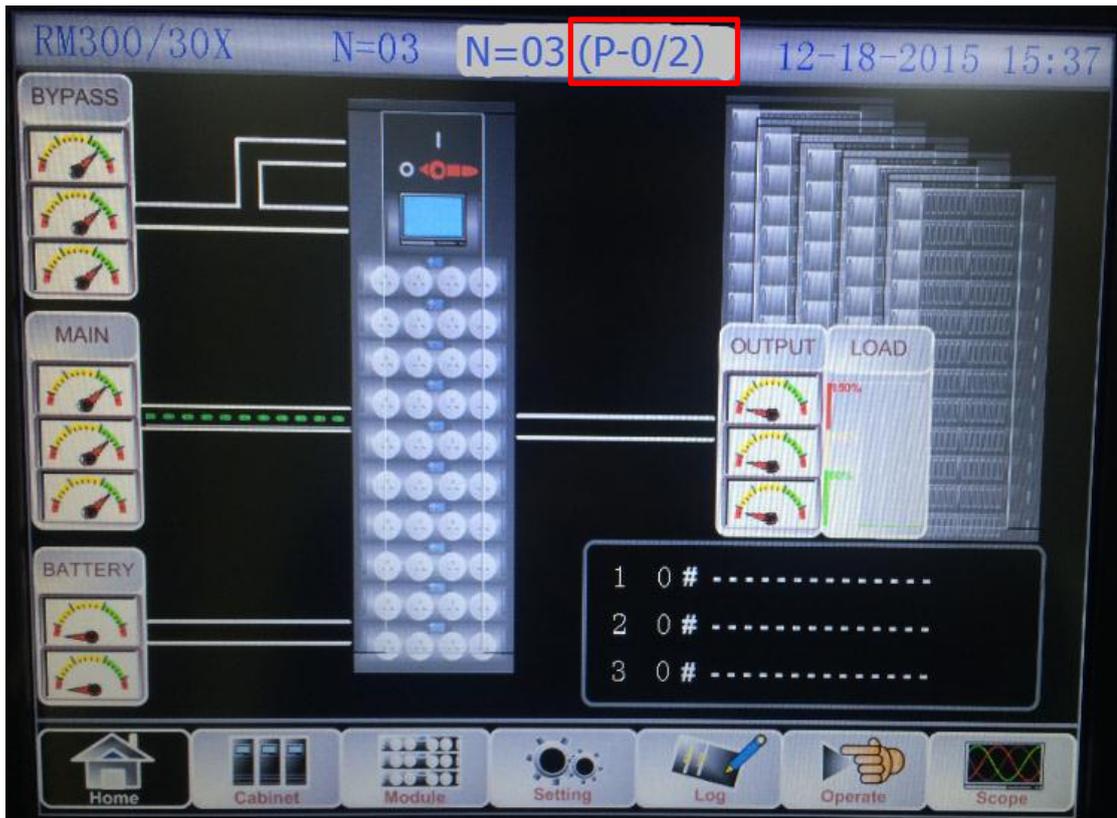


Figure 10 Parallel LCD

8. Power up the second cabinet (Named as **ID\_1**, Close the external Input CB) and modify the same settings except UPS ID.

**Note:**

- If the parallel system contains 3 cabinets, the united number is 3, UPS ID is 0, 1 and 2.
9. After all settings are done, please close the external output CB Q4 and input CB Q1 of unit 1, all the modules will be ON automatically. Then close the battery switch, and check the input/output, battery charging voltage and current, normal mode, bypass mode, battery mode, maintenance mode, and so on. If all tests are normal, please turn off unit 1 (Press “EPO”, then turn off all switches).
  10. Please test the unit 2 and 3 the same procedure, and then turn off all units.
  11. Close output switch Q4, Q5 and Q6 first, and then close input switch Q1.
  12. After unit 1 runs normal, then close Q2 and Q3 one by one.
  13. After all modules run in normal mode, please close all battery switches, and check the charging and output values.
  14. Click any cabinet function “Transfer to Bypass” on the LCD, as is shown in figure 11, all cabinets should go to bypass mode synchronously.

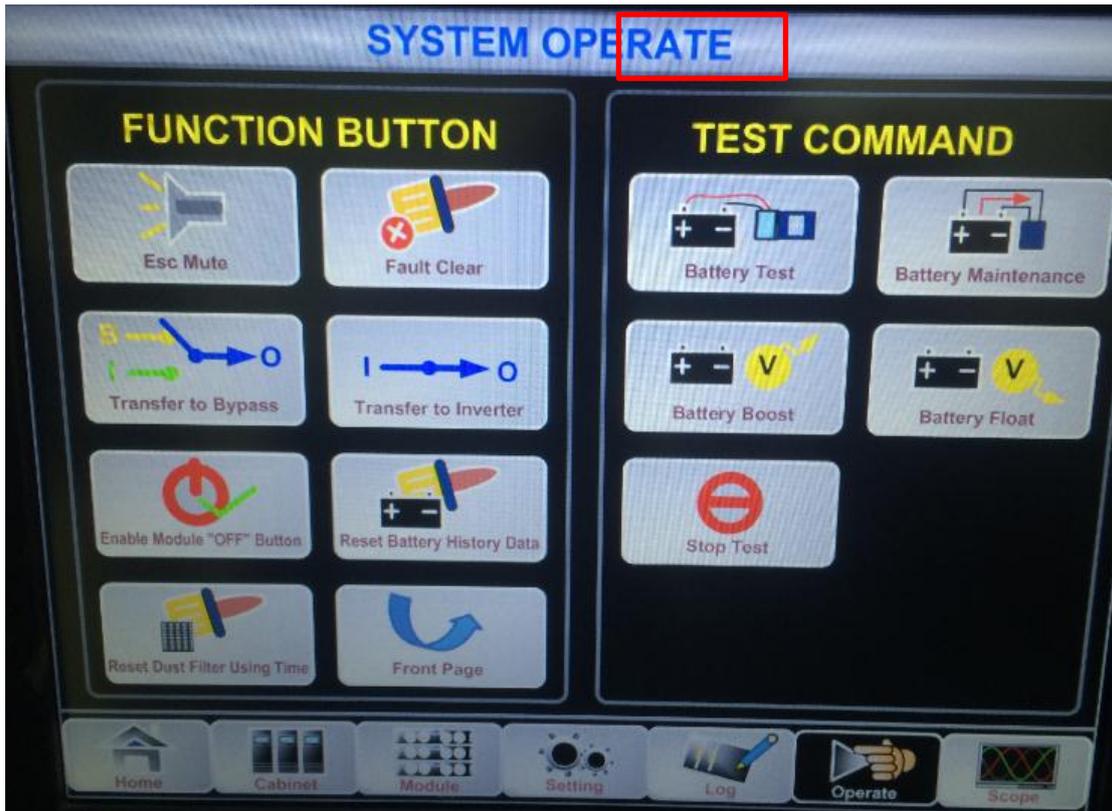


Figure 11 Manual bypass function

15. If you only connect one parallel signal cable or signal cables connected loosely, UPS will show alarm: Para CabErr, please check the cables.