Setup Wizard for RiiO Sun II in the Three-phase System V1.0

Version record

Date	Version	Remark	Author
03/07/2023	V1.0	First version	Allen Zeng Nikulas

1. Overview

RiiO Sun II series is a low-frequency transformer-based all-in-one solar inverter combining a battery inverter, an AC charger, and an MPPT charger in one enclosure, designed with a new-style display screen and an optional communication port, suitable for backup power and off-grid applications.

2. Requirement for the inverters

The inverters used in three phase must be of the same model and the same hardware & firmware version.

The firmware version must be higher than the version required below.

Device	Minimum version requirements
Display Software	V1.01 Check the display code of the setting item 55 through the LCD panel
Power Control Software	V1.01 Check the display code of the setting item 56 through the LCD panel
Hardware	V2.0 Check the display code of the setting item 57 through the LCD panel

3. Power ON and settings

1. Make sure that the connection has been completed according to the wiring diagram. Please refer to the document below for the detailed wiring diagram:

Installation Schematic Diagram for the 15KW Three Phase Power System with 3 RiiO Sun II 5KVA-S Paralleled V1.0

Installation Schematic Diagram for the 30KW Three Phase Power System with 6 RiiO Sun II 5KVA-S Paralleled V1.0

2. Press the "on/off" button for 2 seconds to turn on the master inverter firstly , press and hold 2s to enter the setting mode.

3. Please follow step 1 of the setup wizard at the end of the document to set it up, and set the related parameters refering to the RiiO Sun II user manual.

4. After finishing the settings of the master, turn on the slaves one by one and follow the steps in the setup wizard to set the related parameters.

5. After the all setting is completed and there is no alarm, RiiO Sun II can start the normal operation.

4. Trouble shooting

During the setup process for the master and the slave, there may be some alarms, which can be ignored first. After all settings are completed, the alarms will usually disappear. If the alarms have not disappeared, please refer to the following table for query.

Warning Code	Description	Solution
09	Parallel connection is abnormal.	Check the connection of the parallel communication cable. Check the parallel parameter setting（Setting item 02，03，04）.
10	CAN communication is abnormal	Check the connection of the parallel communication cable. Check the parallel parameter setting（Setting item 02，03，04）.
11	Parallel address conflict	Check the parallel parameter setting （Whether the setting item 04 of each machine is duplicated）
12	Parameters do not match	Check the parameter setting or trigger the Parameter Sync（Setting item 05）.
13	Synchronization overtime	Check the parameter setting or trigger the Parameter Sync（Setting item 05）.
15	Parallel system or three system's AC output is abnormal.	Check the output wire connection

For other alarms, please refer to the RiiO Sun II User Manual

5. Setup Wizard



① The code 13 is for setting the maximum charging current of each inverter in a three-phase system, and the maximum charging current of the system is the total value of the code 13 of each inverter (if the battery type is set to TBB SUPER-L, there is no such option).

② The code 05 is the parameter setting to synchronize slave inverter with with master inverter when multiple inverters are connected in parallel. Press the Enter button to start the synchronization. The indication of "Successful" means the master-slave parameter synchronization has been successfully made (The inverter is equipped with an automatic parameter synchronization function, so if a "failed" indication shows up, it simply means the synchronization has been automatically made; this is a normal process).

③ The parameters with the yellow background in the following wizard diagram should be set as specified in this setup wizard; the parameters with the white background allows for modifications based on the actual application.

④ There are two types of setup wizard diagrams: 3 inverters configured in 3-phase and 6 inverters configured in 3-phase. Make sure to choose the right diagram based on your actual system connection.

3台3相：

Step 1
Master(U)

Code 00→***V
(Output Voltage , default：230V)

Code 01→**Hz
(Output Frequency, default：50Hz)

Code 02→2
(Parallel Mode，2-Three Phase)

Code 03→1
(Parallel Phase，1- Phase U)

Code 04→1
(Parallel Address，address 1)

Code 30→*
(AC in source selection , default：0-Grid)

Code 10→*
(Battery Type, default：0-GEL/OPzV)

Code 13→**A
(Maximum charging current , default：30A)

Code 48→*
(Common neutral line , default：0-Disable)

Code 49→*
(Connect Neutral to GND Inside , default：1-Enable)

Code 50→Year
(Year, default：N/A)

Code 51→Month
(Month, default：N/A)

Code 52→Day
(Dav. default：N/A)

Code 53→Hour
(Hour, default：N/A)

Code 54→Minute
(Minute, default：N/A)

Step 2
Slave-1 (V)

Code 02→2
(Parallel Mode，2-Three Phase)

Code 03→2
(Parallel Phase，2- Phase V)

Code 04→1
(Parallel Address，address 1)

Code 50→Year
(Year, default：N/A)

Code 51→Month
(Month, default：N/A)

Code 52→Day
(Dav. default：N/A)

Code 53→Hour
(Hour, default：N/A)

Code 54→Minute
(Minute, default：N/A)

Code 05→Click the Enter Button
(Synchronize parallel parameters , default：1)

Step 3
Slave-2(W)

Code 02→2
(Parallel Mode，2-Three Phase)

Code 03→3
(Parallel Phase，3- Phase W)

Code 04→1
(Parallel Address，address 1)

Code 50→Year
(Year, default：N/A)

Code 51→Month
(Month, default：N/A)

Code 52→Day
(Dav. default：N/A)

Code 53→Hour
(Hour, default：N/A)

Code 54→Minute
(Minute, default：N/A)

Code 05→Click the Enter Button
(Synchronize parallel parameters , default：1)

6台3相：

Step 1
Master(U1)

Code 00→***V
(Output Voltage , default：230V)

↓

Code 01→**Hz
(Output Frequency, default：
50Hz)

↓

Code 02→2
(Parallel Mode，2-Three Phase)

↓

Code 03→1
(Parallel Phase，1- Phase U)

↓

Code 04→1
(Parallel Address，address 1)

↓

Code 30→*
(AC in source selection ,
default：0-Grid)

↓

Code 10→*
(Battery Type,
default：0-GEL/OPzV)

↓

Code 13→**A
(Maximum charging current
, default：30A)

↓

Code 48→*
(Common neutral line
, default：0-Disable)

↓

Code 49→*
(Connect Neutral to GND Inside
, default：1-Enable)

↓

Code 50→Year
(Year, default：N/A)

↓

Code 51→Month
(Month, default：N/A)

↓

Code 52→Day
(Day, default：N/A)

↓

Code 53→Hour
(Hour, default：N/A)

↓

Code 54→Minute
(Minute, default：N/A)

Step 2
Slave-1(V1)

Code 02→2
(Parallel Mode，2-Three Phase)

↓

Code 03→2
(Parallel Phase，2- Phase V)

↓

Code 04→1
(Parallel Address，address 1)

↓

Code 50→Year
(Year, default：N/A)

↓

Code 51→Month
(Month, default：N/A)

↓

Code 52→Day
(Dav. default：N/A)

↓

Code 53→Hour
(Hour, default：N/A)

↓

Code 54→Minute
(Minute, default：N/A)

↓

Code 05→Click the Enter Button
(Synchronize parallel parameters ,
default：1)

Step 3
Slave-2(W1)

Code 02→2
(Parallel Mode，2-Three Phase)

↓

Code 03→3
(Parallel Phase，3- Phase W)

↓

Code 04→1
(Parallel Address，address 1)

↓

Code 50→Year
(Year, default：N/A)

↓

Code 51→Month
(Month, default：N/A)

↓

Code 52→Day
(Dav. default：N/A)

↓

Code 53→Hour
(Hour, default：N/A)

↓

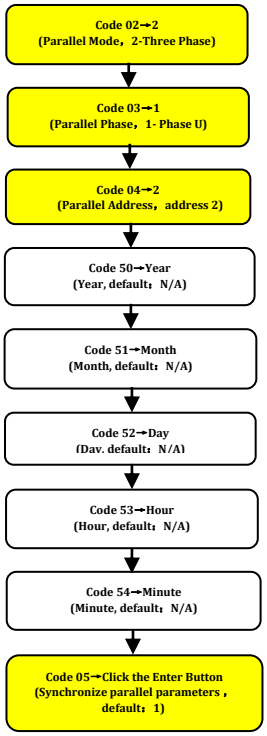
Code 54→Minute
(Minute, default：N/A)

↓

Code 05→Click the Enter Button
(Synchronize parallel parameters ,
default：1)

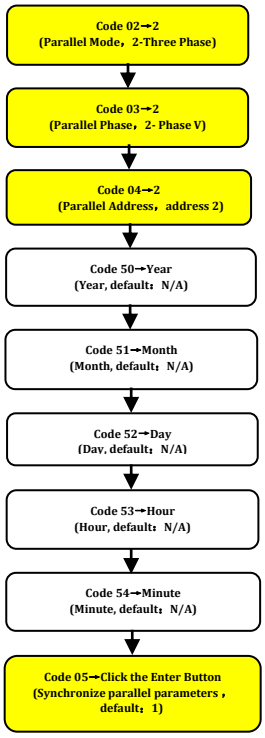
Step 4

Slave-3(U2)



Step 5

Slave-4(V2)



Step 6

Slave-5(W2)

