# Setup Wizard for RiiO Sun II in Parallel V1.0

**Version Record**

| Date | Version | Remark | Author |
|---|---|---|---|
| 2023/2/23 | V1.0 | First Version | Vic Wu |
| | | | |

# 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 parallel 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<br>Check the display code of the setting item 55 through the LCD panel to check the display software version |
| Power Control Software | V1.01<br>Check the display code of the setting item 56 through the LCD panel to check the power control software version |

# 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 Single Phase Power System with 3 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 ↵ for 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 by referring to the *RiiO_Sun_II_User_Manual_A1.0*.

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 settings are completed and there is no alarm, RiiO Sun II can start the normal operation.

# 4. Troubleshooting

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 do not disappear, please refer to the following table for query.

| Warning Code | Description | Solution |
|---|---|---|
| 09 | Abnormal parallel connection | Check the connection of the parallel communication cable. |
| 10 | Abnormal CAN communication | Check the parallel parameter setting （Setting item 02，04）. |
| 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 | Abnormal AC output in the parallel system | Check the output wire connection |

For other alarms, please refer to the *RiiO_Sun_II_User_Manual_A1.0*

# 5. Setup Wizard

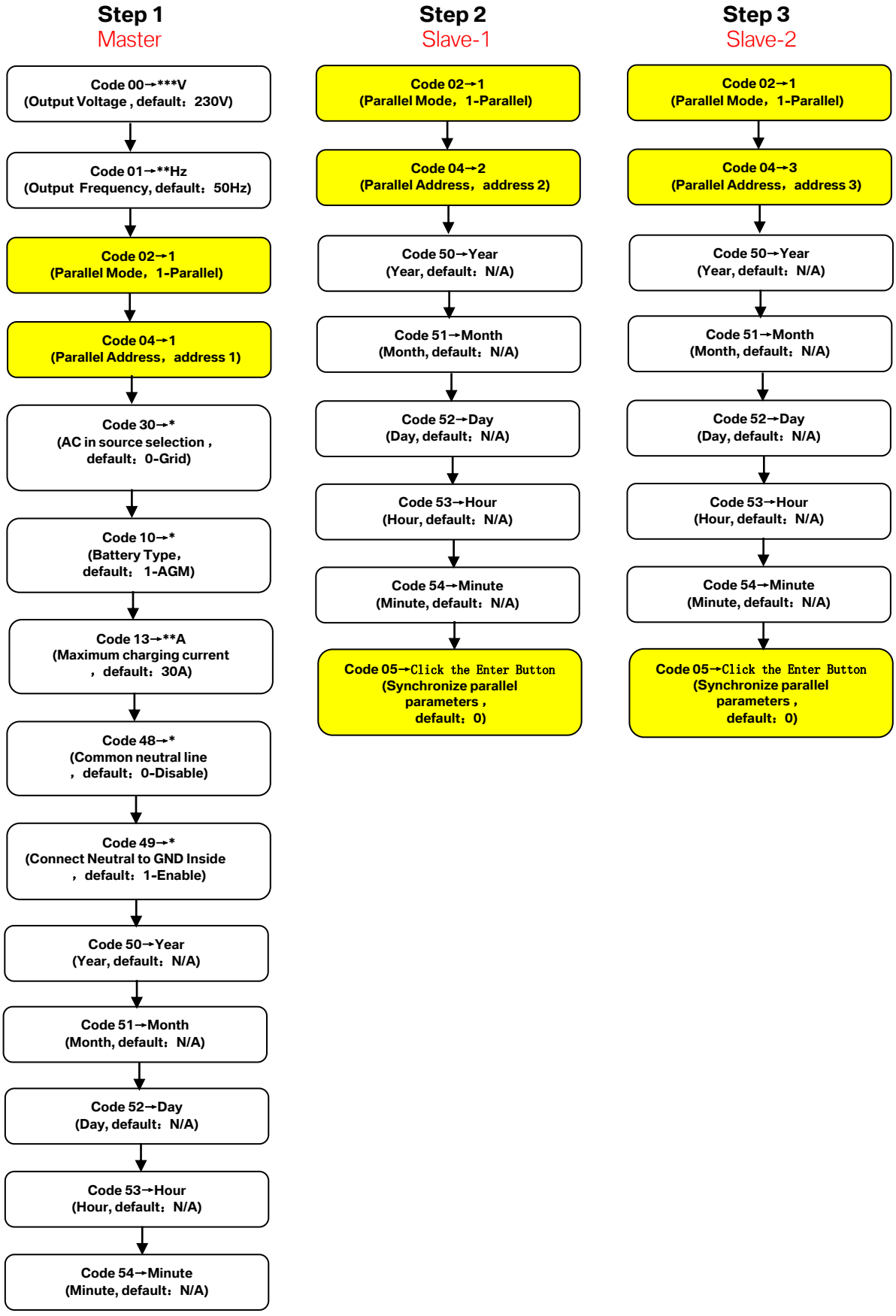


① The code 13 is for setting the maximum charging current for each inverter in parallel, and the maximum charging current of the system is the total value of the code 13 in each inverter (if the battery type is set to TBB SUPER-L, this option is not available).

② The code 05 is to set the parameter for synchronizing slave inverter with the master inverter when multiple inverters are connected in parallel. Press the Enter button to trigger the synchronization, and a prompt of "Successful" indicates that the synchronization is successful (since the inverter has automatic parameter synchronization function, if the prompt says "Failed", it means the synchronization has already been done automatically, which is normal).

③ Parameters with a yellow background are set according to the specified settings in the wizard, while parameters with a white background can be modified based on the actual situation.

④ If there are two inverters in parallel, only need to complete Step 1 and Step 2. If there are three inverters in parallel, you need to complete all three steps.


Step 1
Master
Code 00→***V
(Output Voltage , default：230V)
Code 01→**Hz
(Output Frequency, default：50Hz)
Code 02→1
(Parallel Mode，1-Parallel)
Code 04→1
(Parallel Address，address 1)
Code 30→*
(AC in source selection ,
default：0-Grid)
Code 10→*
(Battery Type,
default：1-AGM)
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
Code 02→1
(Parallel Mode，1-Parallel)
Code 04→2
(Parallel Address，address 2)
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)
Code 05→Click the Enter Button
(Synchronize parallel
parameters ,
default：0)
Step 3
Slave-2
Code 02→1
(Parallel Mode，1-Parallel)
Code 04→3
(Parallel Address，address 3)
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)
Code 05→Click the Enter Button
(Synchronize parallel
parameters ,
default：0)