Commissioning of SH5K-20 Hybrid Inverters

Disclaimer

The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

The commissioning phase of the SH5K-20 inverter is straight forward and simple. All settings are done from the front panel, and there is no longer any need to manually enter the battery details – the system will automatically detect a powered-up battery.
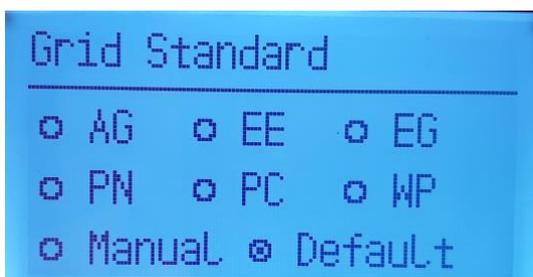
On first initialisation, the flowing will appear on the LCD screen.

 Enter to set/check the country code
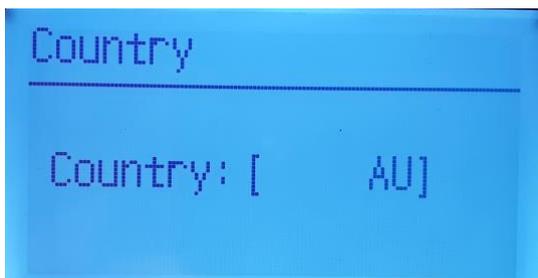
 Enter "AU" for AS/NZS 4777 as default

 Select appropriate DNSP, or manually enter grid protection parameters (Default DNSP power factor settings will be loaded)

Grid company Code	Company
AG	AusGrid, NSW
EE	Ergon Energy, QLD
EG	Energex, QLD
PN	SA Power Networks,SA
PC	Powercor,VIC
WP	Western Power,WA
Default	Company not mentioned above

Setting completed!

Enter to save

Initial Settings 1/3

Country
▶ Time
Zero-export

Check / set time and date as required

▶ Time   hh : mm : ss
          13:42:05

Date   DD / MM / YY
          17/04/19

Incorrect time setting will affect monitoring

Initial Settings 1/3

Country
Time
▶ Zero-export

Setting the Zero Export

'ON' = No power exported. "OFF" = All power exported. "PARTIAL" = set by watts
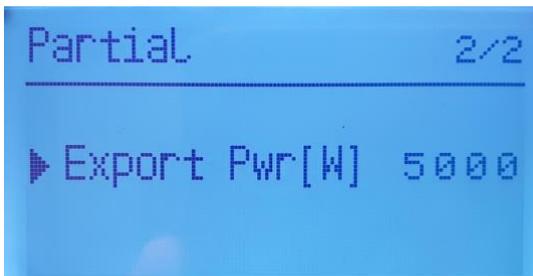
Default = Partial 5000 watts

Set Reactive power if required. Note: Grid settings already have State requirements loaded when DNSP selected.

Set if required

Set battery discharge times (only available if battery connected)

Bat Usage Time

▶ Weekday Usage

Weekend Usage

Weekday and weekend time zones available

▶ Start Time1 00:00
End Time1 24:00
Start Time2 00:00
End Time2 24:00

Generally, only set if customer is on TOU metering. Otherwise leave as default.

Initial Settings 2/3

Reactive Power
Bat Usage Time
▶ EPS Setting

EPS (Off-Grid) setting only if EPS box connected and maximum 3 kW output under EPS mode.

EPS Setting
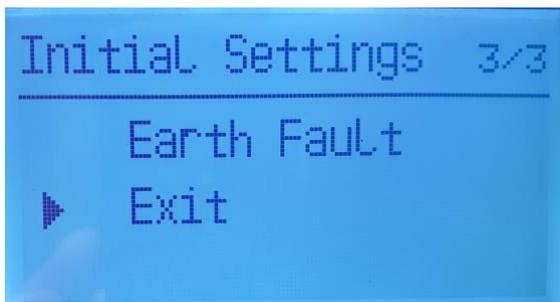
○ Disable

⊗ Enable

Enable and enter

Must install an EPS box if the EPS function is enabled!

Setting completed!

Enter to save

Initial Settings 3/3

▶ Earth Fault
  Exit

Enter to test Earth Fault alarm

Initial Settings 3/3

  Earth Fault
▶ Exit

Enter to save and exit

There are a couple of subsequent settings that may be required depending on the configuration.
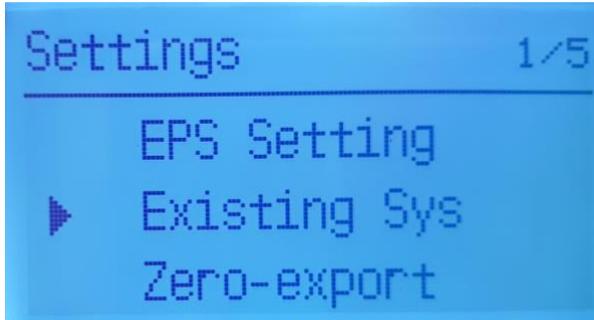
If there is an existing PV system on the same phase, it must be enabled in the settings otherwise some errors (error 084) may occur. This also allows battery charging from existing system.
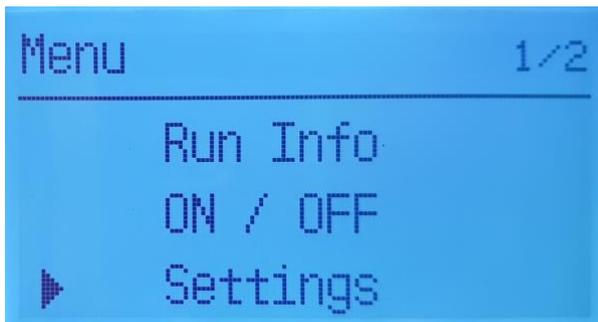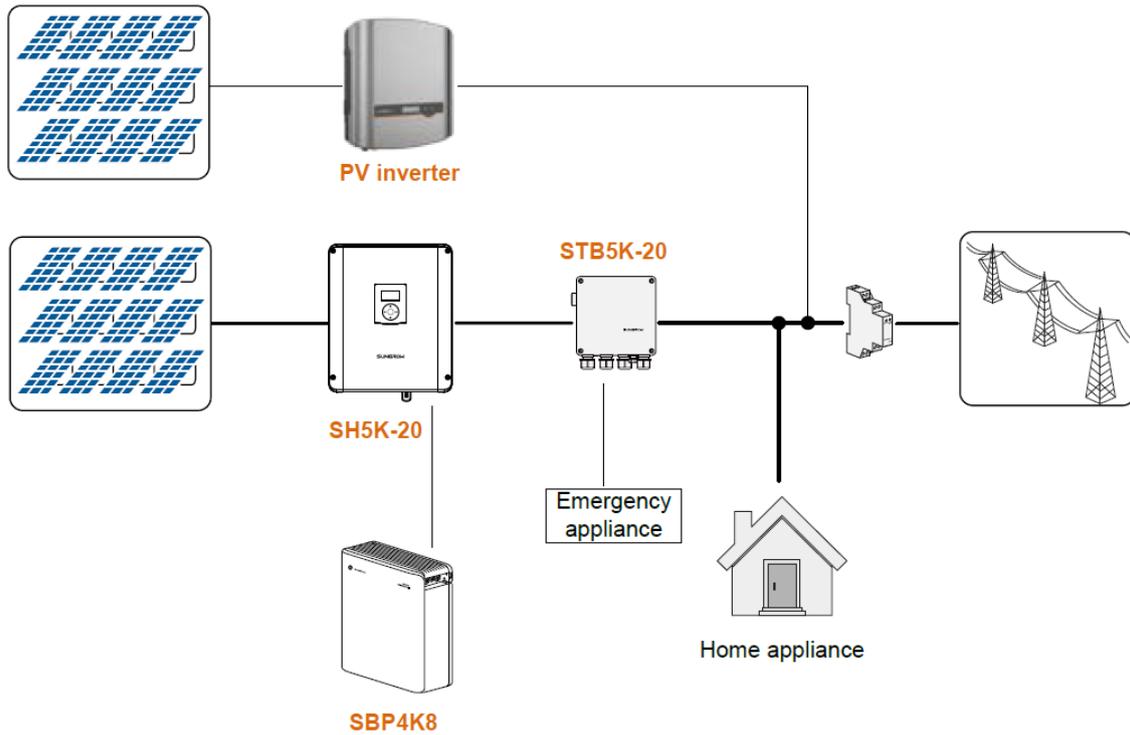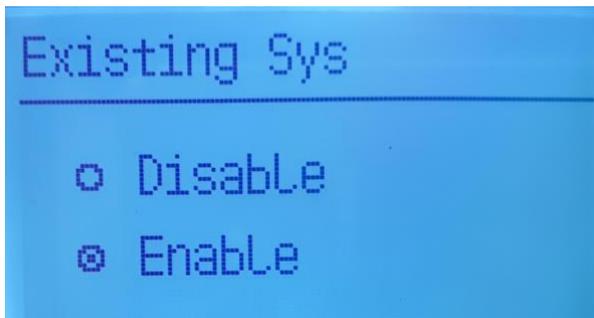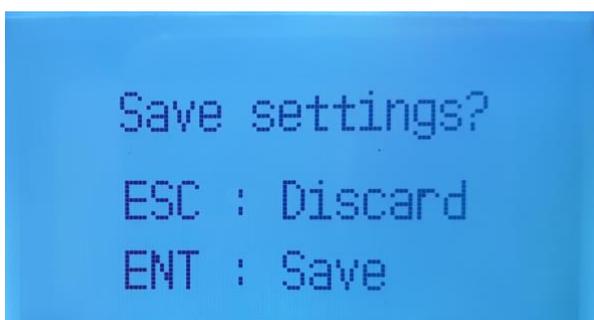

Enter

Password = 111 (Enter)

Enter 'Existing System'
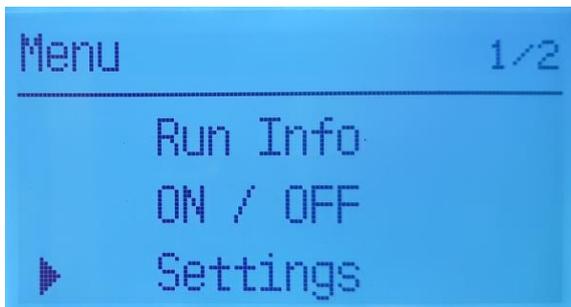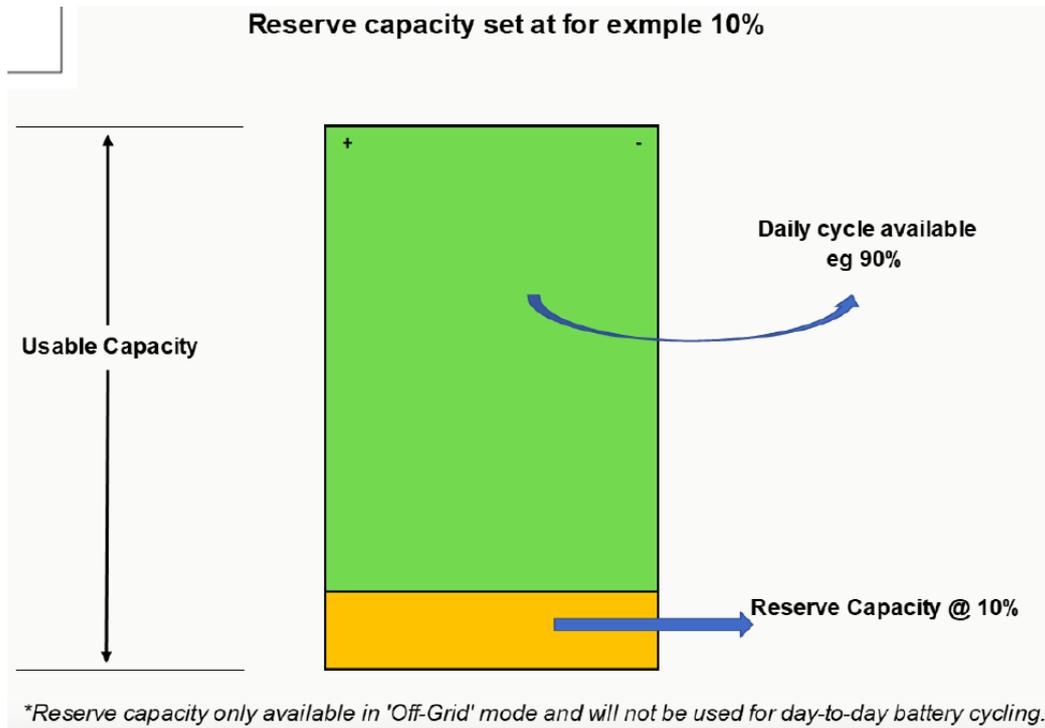
Enable and enter

Enter the AC power of the total inverters **on the same phase only** (you can also change the export limit here)
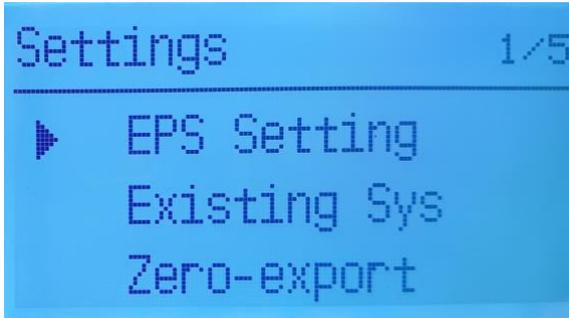
Enter to save

There may also be a requirement from the customer to reserve a set amount of battery capacity to be available in the event of a blackout. This will quarantine a pre-set amount and will take that amount out of the daily cycle capacity. This is only available after inverter has restarted with battery set.

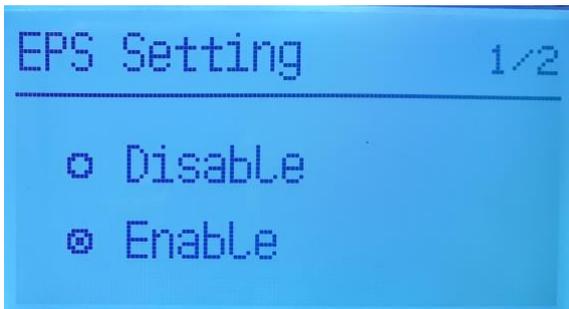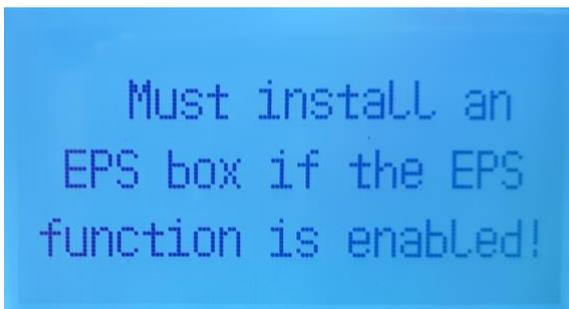Reserve capacity set at for exmple 10%

Daily cycle available eg 90%

Usable Capacity

Reserve Capacity @ 10%

*Reserve capacity only available in 'Off-Grid' mode and will not be used for day-to-day battery cycling.

Enter into settings

Password = 111

Settings   1/5

▶   EPS Setting
    Existing Sys
    Zero-export

EPS setting

EPS Setting   1/2

    ○ Disable
    ⊙ Enable

Enable

Must install an
EPS box if the EPS
function is enabled!

Enter to confirm

EPS Setting   2/2

▶ Reserved Capacity

        010%

Enter desired value, based on a calculation
of total capacity, load, and how long backup is required for.

Setting completed!

Enter to save and finish.

Once the commissioning is completed, please follow the below checklists to test the system.

1. The inverter only shows **green light ON** and **status shows Running**; if the existing solar power is sufficient, the system should charge the battery.

2. Turn **more house load ON** to see whether the battery discharges.
3. If the EPS box (or backup) is installed, **turn off the grid supply main to test the Off-grid function**; if the function is OK and then turn the grid supply main to ON.
4. After completing these testing, the system should run OK.

For any assistance, please contact Sungrow Service Department on 1800 786 476.