CAN POWER

UBird-XN Series

Portable Suitcase Energy Storage System

User Manual

Upower Electric Co.,Ltd

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Preface

UBird-XN Series Energy Storage System is a multi-functional power supply device designed to comprehensively use for residential and commercial projects. With built-in lithium battery, this system can provide uninterrupted and stable power supply, and ensure the normal use of the utility when the grid is out. This device can run in the most economical and practical mode based on the user requirement to bring objective economical benefits and not cause any environmental pollution.

This user manual mainly introduces the operation, installation and specification of the device. Please read through this user manual before install and operate the system. Please keep this user manual for future use.

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1 Introduction

1.1 Application

UBird-XN can connect with solar panels,grid,load, it built-in lithium battery, off-grid inverter and energy management system. UBird-XN has three working modes: SOL(Solar first),UEI(Utility first),SBU(Solar-Battery-Utility). These working modes are described in setting part.

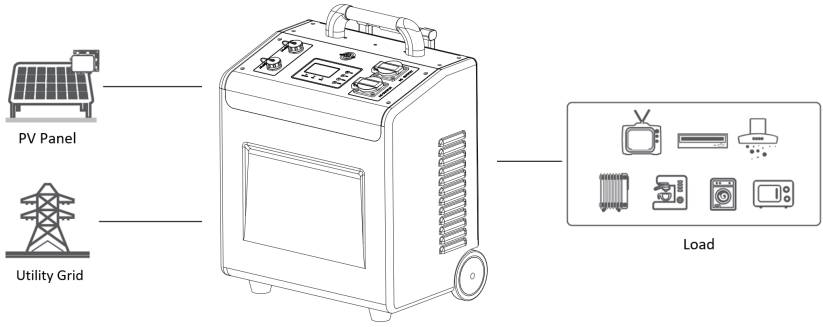
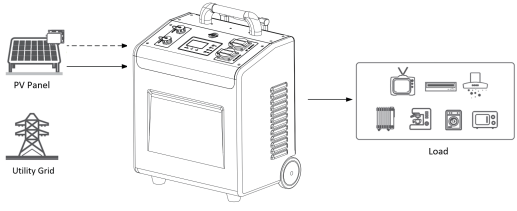
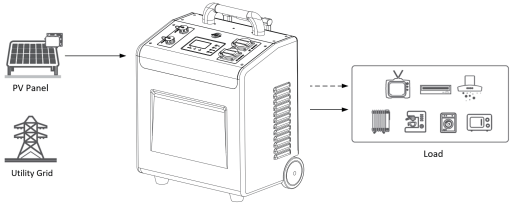
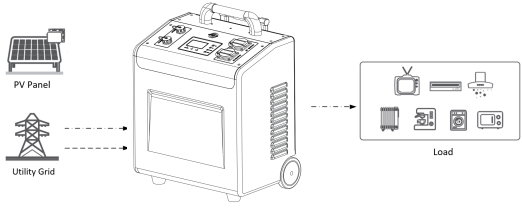
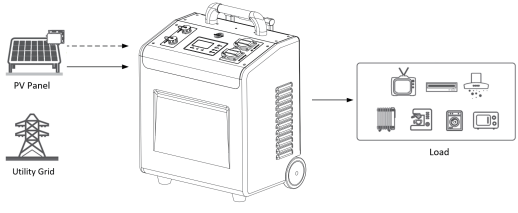


Figure 1 UBird-XN Working Diagram

1.1.1 Working Modes

Definition	Battery voltage too low: Lower than the value of setting 12. Battery voltage too high: Higher than the value of setting 13. Battery ----------→ PV Panel ——————→ Utility Grid —·—·—·→

<table>
<tr><td rowspan="2">SOL (Solar first):
Solar energy provides power to the loads as first priority</td><td>When PV power is greater than the consumption, and the battery capacity is low, the PV will supply power to the load and charge the battery at the same time.
 
</td></tr>
<tr><td>When PV power is less than the consumption, and the battery capacity is high,PV and battery supply power to the load at the same time.
 
</td></tr>
<tr><td>UEI (Utility first):
Utility gird will provide power to the loads as first priority.</td><td>The grid supplies power to the load and charges the battery when the battery capacity is low.
 
</td></tr>
</table>

<table>
<tr>
<td rowspan="3">SBU(Solar-Battery-Utility) :
Solar energy provides power to the loads as first priority.</td>
<td>When PV power is greater than the consumption, and the battery capacity is low, the PV will supply power to the load and charge the battery at the same time.
 
</td>
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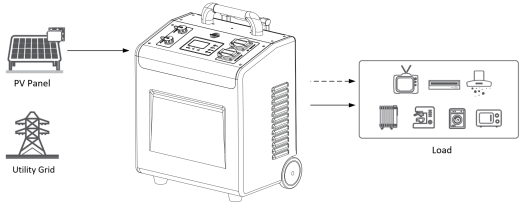
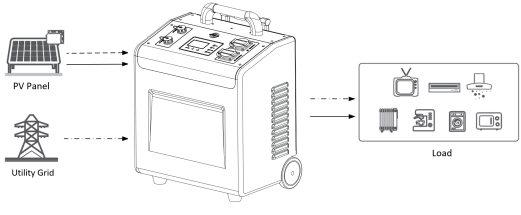
<tr>
<td>When PV power is less than the consumption, and the battery capacity is high,PV and battery suplay power to the load at the same time.
 
</td>
</tr>
<tr>
<td>When PV power is less than the consumption, and the battery capacity is low, grid supplies the load, PV charges the battery, if there is rest PV power, supply the load.
 
</td>
</tr>
</table>

1.2 Components

After unpacking the package, please inspect the components based on the below table.

Table 1 Component list

NO.	Pictures	Description	Quantity
1		UBird-XN Portable Suitcase energy storage system	1 pcs
2		AC input cable	1 pcs
3		PV input cable	1 pcs
4		Hexagonal wrench, D-1.5mm: L type	1pcs
5		User manual	1pcs
6		Packing List	1 pcs
7		Qualified Certificate	1 pcs

1.3 UBird-XN Dimension

The size is slightly different according to the type, below for reference.

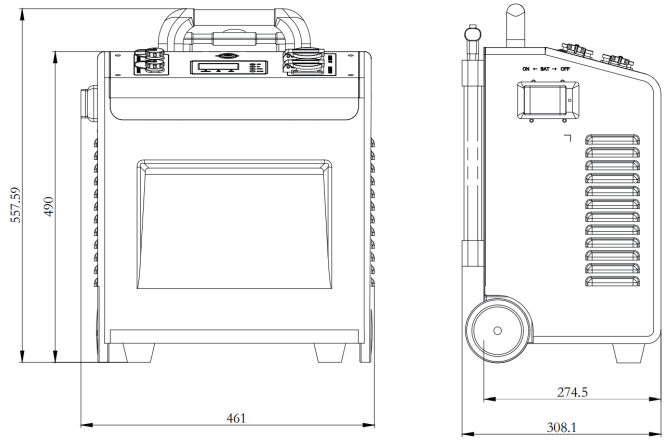


Figure 2 UBird-XN-Mini-30E Dimension

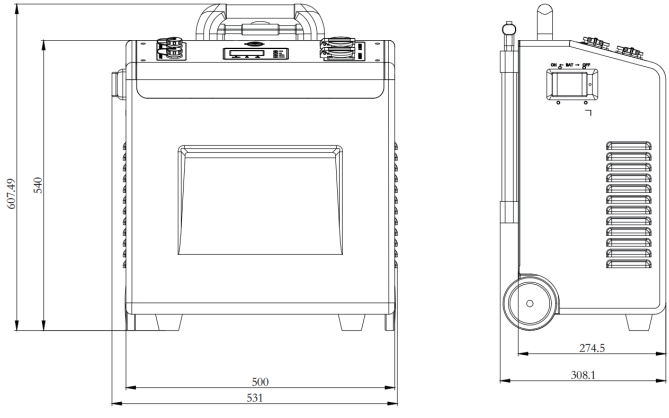


Figure 3 UBird-XN-Plus-50E Dimension

1.4 Quality Inspection

Before installation, please confirm that the packaging is unbroken, and after unpacking, check that all parts are consistent with the packaging list and are in good condition.

Table 2 Quality Inspection

Operation	Warning
Check Package	No damage
Check Component	No loss or damage
Check built-in accessory	No loss or damage

1.5 Label

	• Danger: Possibility of fatal voltage
	• Warning: Possibility of device damage or personal injury
	• Warning: Heat injure

1.6 Safety

This user manual includes safety introduction. Please read this manual carefully before installing, maintaining and operating the equipment. If you do not operate in accordance with this manual, if there is equipment damage or personal injury or death, manufacturer will not be responsible for it.

	❖ Must be grounded before operation.
	❖ There are electrostatic sensitive devices inside the device. Under any circumstances, do not open the case without permission to prevent the device from being damaged by static electricity.
	❖ Only qualified electricians are allowed to perform the maintenance, inspection, and components replacement of this product.
	❖ Do not remove any part and component of the storage unintended; otherwise damage to the device and physical injury may occur.

2 Installation

2.1 Device Overview

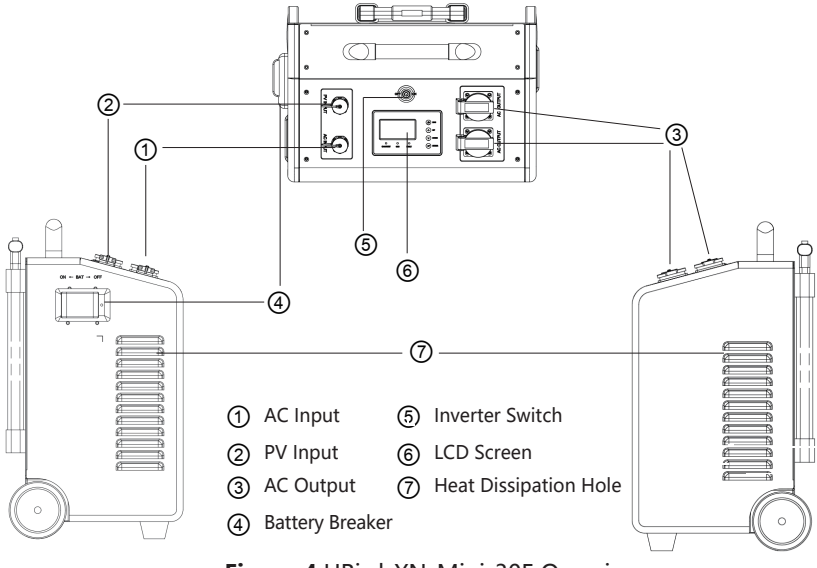


Figure 4 UBird-XN-Mini-30E Overview

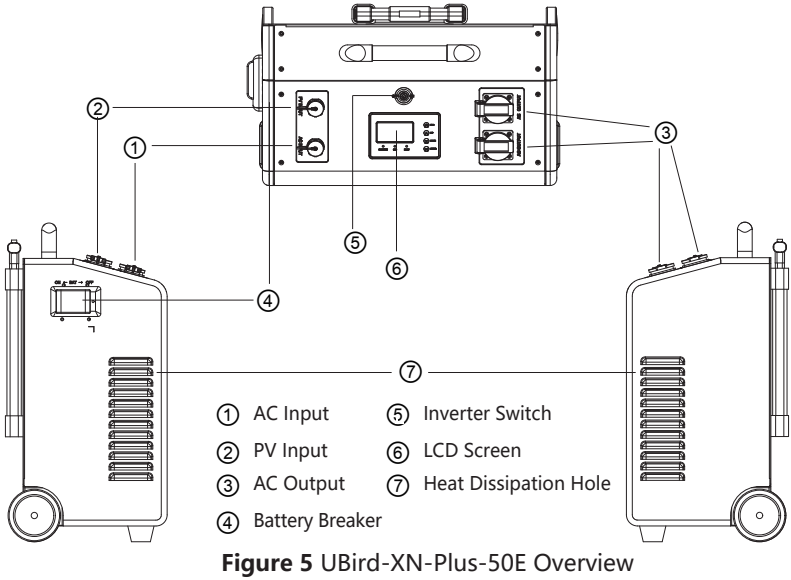


Figure 5 UBird-XN-Plus-50E Overview

2.1.1 Device Carrying

	**Warning!** **The device weight (50kg/68kg) may cause personal injury.** • Please note that the device weight when move or deliver the device. • Select the firm installation platform. • Use proper tools for installation. • At least two people to install.

2.1.2 Unboxing Guide

The iron buckle is sharp, please pay attention to personal safety when unboxing!

(1) Use screwdriver to pry off the top cover clasp.

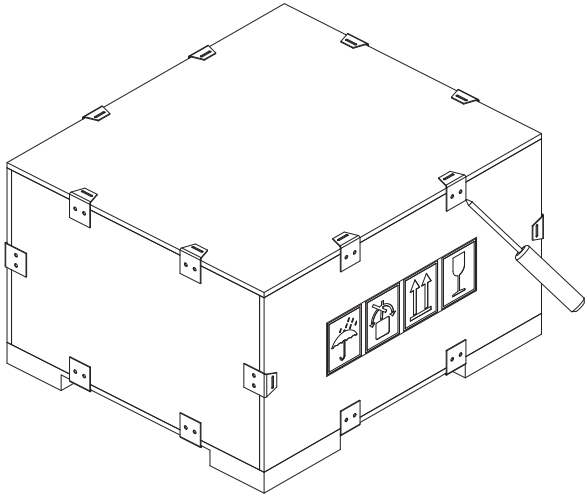


Figure 6

(2) Remove the top cover after prying off all the cover buckles.

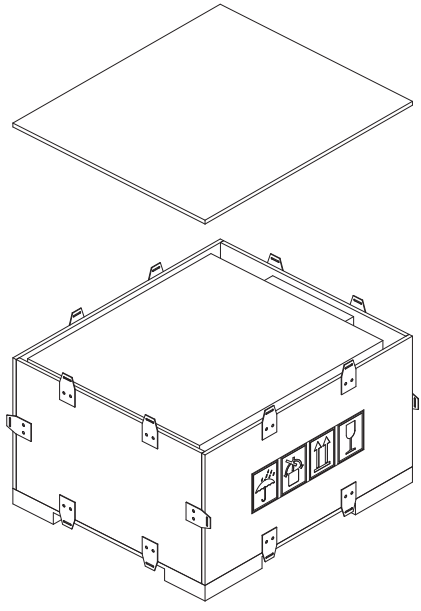


Figure 7

(3) After prying off the side cover iron buckle, remove the four side covers.

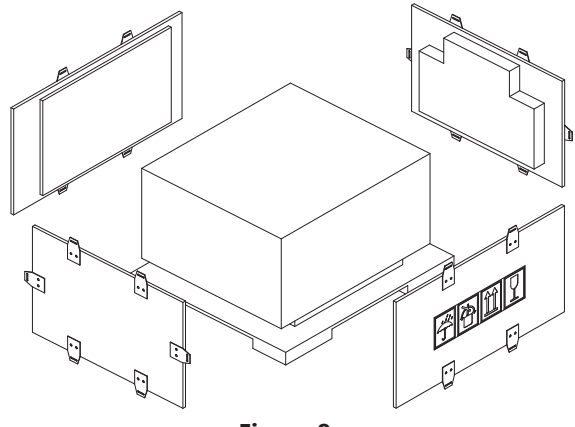


Figure 8

(4) Take out the machine. The machine is heavy, please pay attention.

2.1.3 Operating Environment

When use the product, it should be vertical placed both indoor and outdoor. The place where it is installed shall be able to ensure the stability and safety of the product. Other objects around the product should be more than 200mm away from the equipment to ensure good ventilation.

	**Warning:** ❖ Ensure the installed place be well ventilate and conform to device operating condition. ❖ No flammable and combustible objects are allowed to put within 4m. ❖ The environmental temperature shall keep between 0℃ and 40℃.
	**Warning:** ❖ No smoking and setting off fireworks nearby. ❖ Ensure clean and ventilate in the surrounding area. ❖ Ensure the wiring conform to requirement to avoid fire.
	❖ Aadequate ventilation of the room or location in which the device containing vented or valve-regulated batteries is located, to prevent the accumulation of hazardous gases.
	❖ Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions. When replacing batteries, replace with the same type and number of batteries or battery packs. -CAUTION: Do not dispose of batteries in a fire. The batteries may explode. -CAUTION: Do not open or damage batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

	-CAUTION: Battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries: a) Remove watches, rings, or other metal objects. b) Use tools with insulated handles. c) Wear rubber gloves and boots. d) Do not lay tools or metal parts on top of batteries. e) Disconnect charging source prior to connecting or disconnecting battery terminals. f) Determine if battery terminals are inadvertently grounded. If inadvertently grounded, remove. g) If the battery leaks and has been in contact for some time, it is recommended to see the doctor. h) Battery terminals and connectors shall be accessible for maintenance with the correct tools. All electrical connections must be in accordance with local and national standards. ❖ Only with the permission of the utility grid, the storage can be connected to the utility grid. Disconnect the storage from all the external power sources before service! Do not open the enclosure when the storage is working. ❖ When the enclosure lid is removed, live components can be touched which can result in death or serious injury due to electric shock. Batteries deliver electric power, resulting in burns or a fire hazard when they are short-circuited, or wrongly installed.
	❖ All the AC cables should be equipped with correctly colored cables for distinguishing. Please refer to related standards about the wiring color.
	❖ Do not touch live parts until 5 minutes after disconnection from the power sources.

2.2 Electric Installation

The UBird-XN is portable and ground mounted, make sure it is placed on the ground vertically.

2.2.1 Wiring Procedure

(1) Cut off the circuit breaker of grid and PV .
(2) Ensure the product be not carelessly turned on.
(3) Wiring refer to the Figure 9-11.

2.2.2 Wiring Diagram

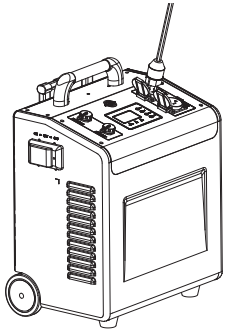


Figure 9 UBird-XN AC Output Wiring

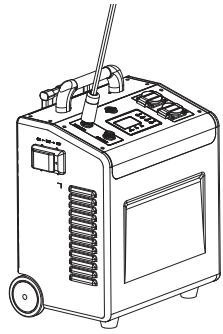


Figure 10 UBird-XN PV Input Wiring

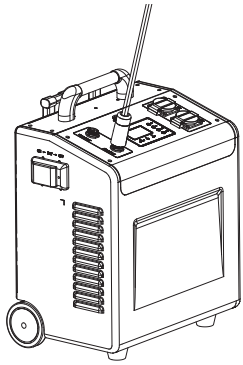


Figure 11 UBird-XN AC Input Wiring

3 Operation

3.1 LCD Display Overview

The operation and display panel, shown in below chart, is on the front panel of UBird. It includes three indicators, four function button and a LCD screen, indicates the operating status and input/output power information.

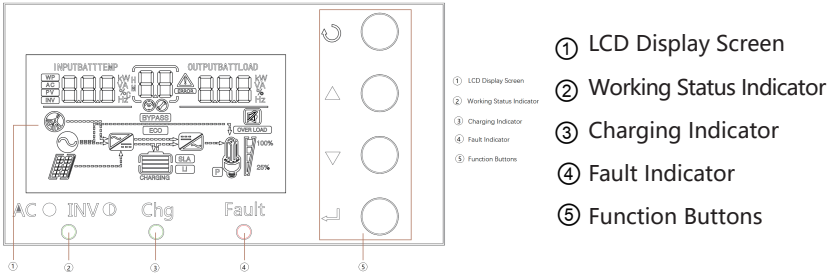


Figure 12 LED Display

Table 4 LED Indicator

LED Indicator			Messages
AC / INV	Green	Solid On	Output is powered by utility grid.
		Flashing	Output powered by battery or PV in battery mode.
CHG	Green	Solid On	Battery is fully charged.
		Flashing	Battery is charging.
⚠ FAULT	Red	Solid On	Fault occurs in the inverter.
		Flashing	Warning condition occurs in the inverter.

Table 5 Function Button

Function Button	Description
ESC	To exit setting mode
UP	To go to previous selection
DOWN	To go to next selection
ENTER	To confirm the selection in setting mode or enter setting mode

3.2 LCD Display Icons

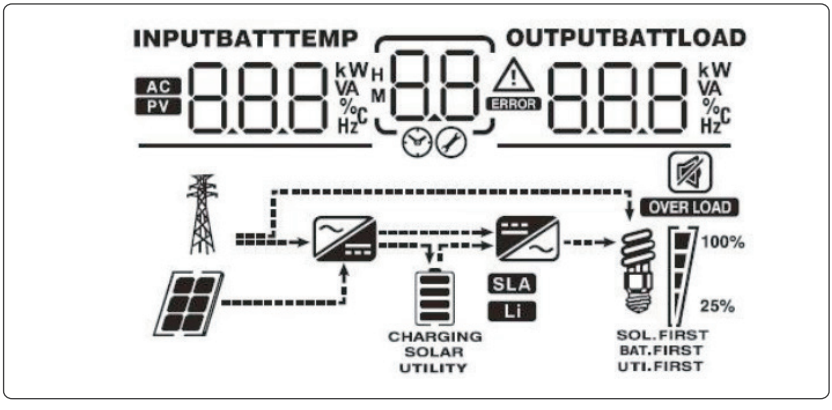


Figure 13 LCD Display Icons

Table 6 Input Information

Icon	Description
AC	Indicates the AC input
PV	Indicates the PV panel input
INPUT BATT M kWh VA % Hz	Indicate input voltage, input frequency, battery voltage, PV1 voltage, PV2 voltage, charger current

Table 7 Setting and ERRON Information

Icon	Description
	Indicates the setting programs.
	Indicates the warning and fault codes. Warning: Flashing  with warning code Fault: display  with fault code

Table 8 Output Information

Icon	Description
	Indicate the output voltage, output frequency, load percent, load VA, load W, and discharging current.

Table 9 Battery Information

Icon	Description
	Indicates battery level by 0-24%, 25-49%, 50-74% and 75-100% and charging status.

Table 10 Load Information

Icon	Description			
OVER LOAD	Indicates overload.			
	Indicates the load level by 0-24%, 25-50%, 50-74%, and 75-100%.			
	0%~25%	25%~50%	50%~75%	75%~100%
				

Table 11 Setting and ERRON Information

Icon	Description
	Indicates connecting to the mains.
	Indicates connecting to the PV panel.
	Indicates the load is supplied by the utility grid.
	Indicates the AC charger is working.
	Indicates the DC/AC inverter circuit is working.

Table 12 Other Information

Icon	Description
	Indicates that alarm is disabled.

3.3 LCD Setting

After pressing and holding ENTER button for 3 seconds, the unit will enter setting mode. Press "UP" or "DOWN" button to select setting programs. And then, press "ENTER" button to confirm the selection or ESC button to exit.

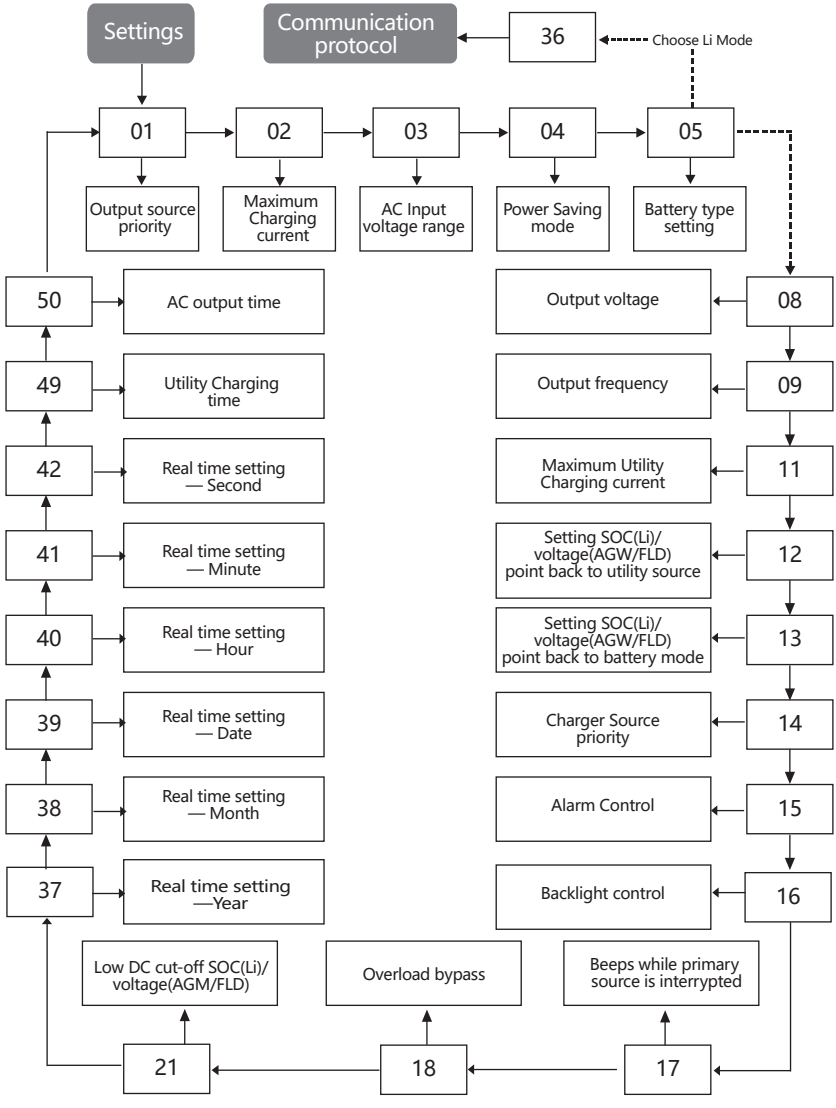
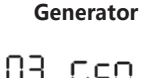
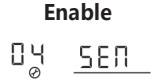
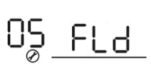
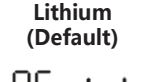
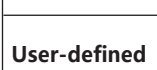
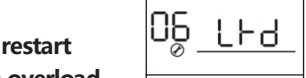
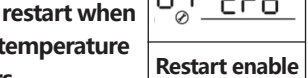
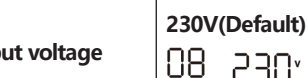
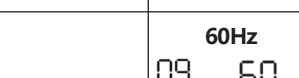

Settings
Communication protocol
36
Choose Li Mode
01
02
03
04
05
Output source priority
Maximum Charging current
AC Input voltage range
Power Saving mode
Battery type setting
50
AC output time
49
Utility Charging time
42
Real time setting — Second
41
Real time setting — Minute
40
Real time setting — Hour
39
Real time setting — Date
38
Real time setting — Month
37
Real time setting —Year
08
Output voltage
09
Output frequency
11
Maximum Utility Charging current
12
Setting SOC(Li)/ voltage(AGW/FLD) point back to utility source
13
Setting SOC(Li)/ voltage(AGW/FLD) point back to battery mode
14
Charger Source priority
15
Alarm Control
16
Backlight control
Low DC cut-off SOC(Li)/ voltage(AGM/FLD)
Overload bypass
Beeps while primary source is interrypted
21
18
17

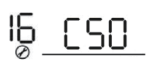
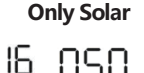
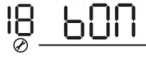
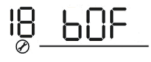
Table 13 Setting Program

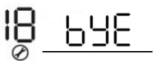
Program	Description	Setting option	
00	**Exit setting mode**	**Escape**	
01	**Output source priority selection**	**Solar First** 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, battery energy will supply power the loads at the same time. Utility grid provides power to the loads only when any one condition happens: -Solar energy is not available -Battery voltage drops to low-level warning voltage or the setting point in program 12.
		Utility Grid First 	Utility grid will provide power to the loads as first priority. Solar and battery energy will provide power to the loads only when utility grid power is not available.
		SBU (Default) 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, battery energy will supply power to the loads at the same time. Utility grid provides power to the loads only when battery voltage drops to either low-level warning voltage or the setting point in program 12.

Program	Description	Setting option	
03	**AC input voltage range**	**Appliances (Default)** 	If selected, acceptable AC input voltage range will be within 90 ∽280Vac.
		UPS 	If selected, acceptable AC input voltage range will be within 170∽280Vac.
		Generator 	If selected, acceptable AC input voltage range will be within 90 ∽280Vac.
04	**Power saving mode enable/disable**	**Disable (Default)** 	If disabled,no matter connected load is low or high,inverter will constantly output power to the load.
		Enable 	If enabled,the inverter output will be off when connected load is pretty low or not detected.
05	**Battery type (Keep the default setting)**	**AGM** 	Lead-acid battery, can be setup in program 19, 20 and 21.
		Flooded 	Lead-acid battery, can be setup in program 19, 20 and 21.
		Lithium (Default) 	Only suitable when communicated with BMS
		User-defined 	If "User-Defined" is selected, battery charge voltage and low DC cut-off voltage can be set up in program 26, 27 and 29.

Program	Description		Setting option
36	**Protocol to communicate with battery BMS (Keep the default setting)**	PtC 36 LI1 PtC 36 LI2 PtC 36 LI3 PtC 36 LI4	Different communication protocols, this machine can support more than one battery communication protocol, users do not have to set.
NOTE 1 : When set the battery type as "LI" in program 05, the setting option 12, 13, 21 will change to display percent. At the "LI" type battery, the maximum charge current can't be modified by the user. When the communication fails, the inverter will cut off output. If it lost the communication with the battery, you can set the battery type to "USER" for emergency, then contact the installer.			
12	**Setting SOC point back to utility grid when selecting "SBU priority" or "Solar first" in program 01.**	12 50%	Default 30%, 20%~50% Settable
13	**Setting SOC point back to battery mode when selecting "SBU priority" or "Solar first" in program 01.**	13 95%	Default 65%, 30%~100% Settable
21	**Low DC cut-off SOC, If "LI" is selected in program 05,this program can be set.**	CoU 21 20%	Default 10%, 5%~30% Settable
NOTE 2: When the inverter is cut-off, it must to charge by solar or utility until the SOC> setting 21+10%, the inverter will restart.			

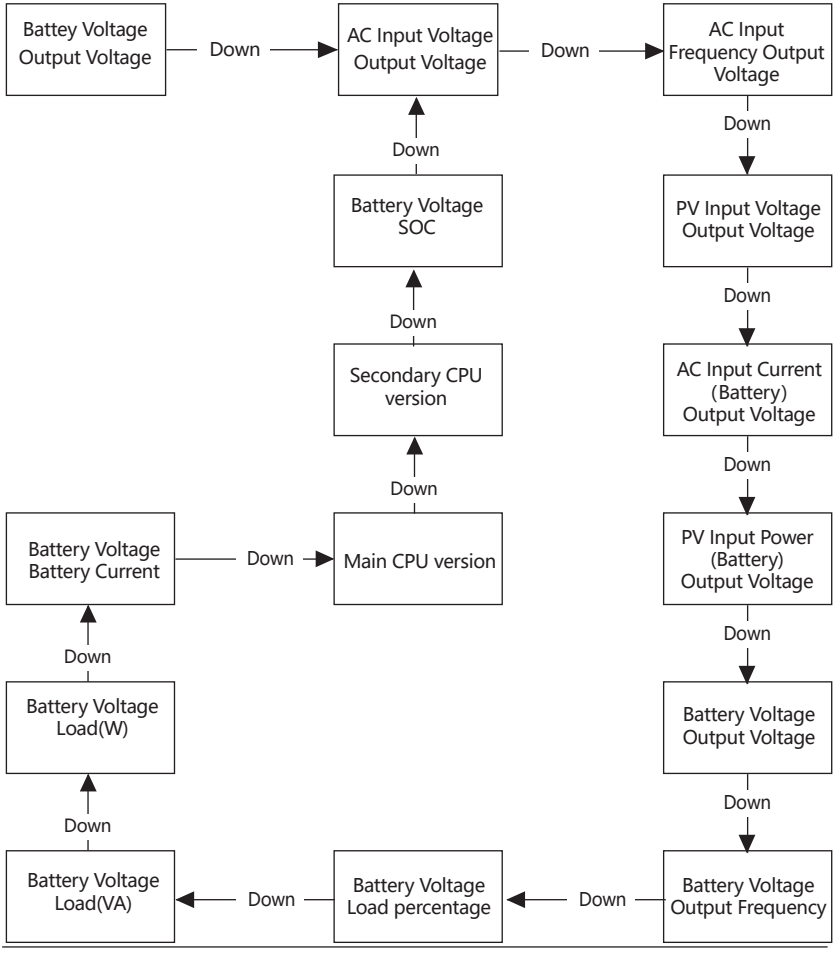
Program	Description		Setting option
06	**Auto restart when overload occurs**	**Restart disable** 	Can set the inverter restart or not when overload.
		Restart enable (Default) 	
07	**Auto restart when over temperature occurs**	**Restart disable** 	Can set the inverter restart or not when over temperature.
		Restart enable (Default) 	
08	**Output voltage**	**220V** 	Can set the inverter output voltage
		230V(Default) 	
		240V 	
09	**Output frequency**	**60Hz** 	Can set the inverter output frequency
		50Hz(Default) 	
10	**Number of series batteries connected**	No need to set, keep it default	
11	**Maximum utility grid charging current**	**30A(Default)** 	UBird-XN-Mini-30E 15A (10/15A Adjustable) UBird-XN-Plus-50E 30A (0~60A Adjustable)

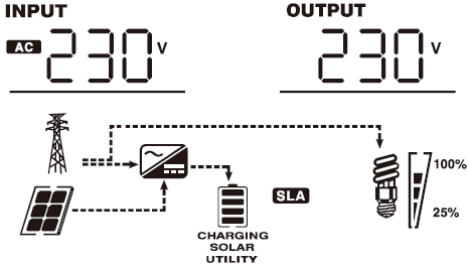
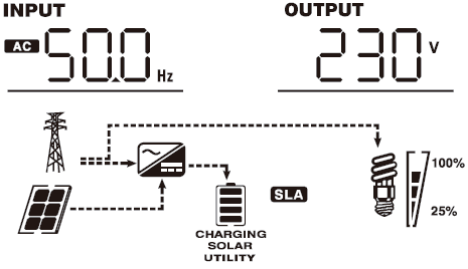
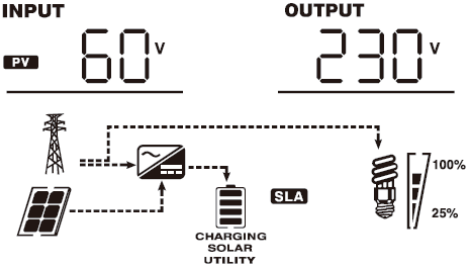
<table>
<tr><th>Program</th><th>Description</th><th colspan="2">Setting option</th></tr>
<tr><td rowspan="5">14</td><td rowspan="5">Configure charger source priority</td><td colspan="2">If this inverter/charger is working in utility grid, Standby or Fault mode, charger source can be programmed as below:</td></tr>
<tr><td>Solar first
  </td><td>Solar energy will charge battery as first priority. Utility grid will charge battery only when solar energy is not available.</td></tr>
<tr><td>Utility grid first
  </td><td>Utility grid will charge battery as first priority.
Solar energy will charge battery only when utility power is not available.</td></tr>
<tr><td>Solar and Utility(Default)
  </td><td>Solar energy and utility will charge battery at the same time.</td></tr>
<tr><td>Only Solar
  </td><td>Solar energy will be the only charger source no matter utility grid is available or not.</td></tr>
<tr><td colspan="2">If this inverter/charger is working in Battery mode or Power saving mode, only solar energy can charge battery. Solar energy will charge battery if it's available and sufficient.</td></tr>
<tr><td rowspan="2">15</td><td rowspan="2">Alarm control</td><td>Alarm on (Default)
  </td><td rowspan="2">Can set the inverter beep on or off when ALARM occurs</td></tr>
<tr><td>Alarm off
  </td></tr>
</table>

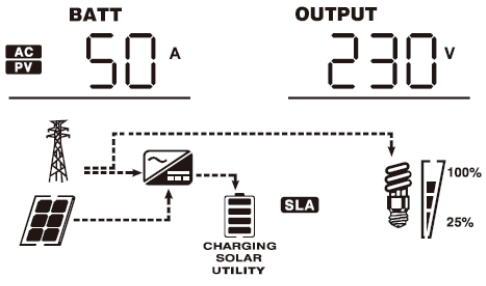
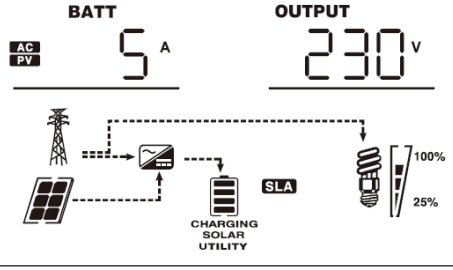
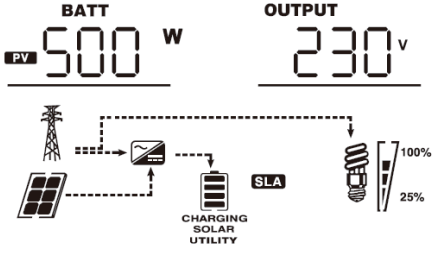
Program	Description	Setting option	
16	**Backlight control**	**Backlight on (Default)** 	Can set the inverter LCD Backlight on or off
		Backlight off 	
17	**Beeps while primary source is interrupted**	**Alarm on (Default)** 	Can set the inverter beep on or off when primary source is interrupted
		Alarm off 	
18	**Overload bypass**	**Disable** 	When enabled, the unit will transfer to utility mode if overload occurs in battery mode.
		Enable (Default) 	
02/19/20/22/23/24/43/44/ 45/46/47/48		No need to set, keep it default.	

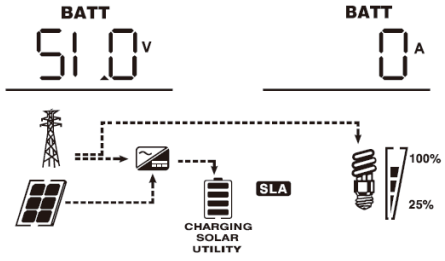
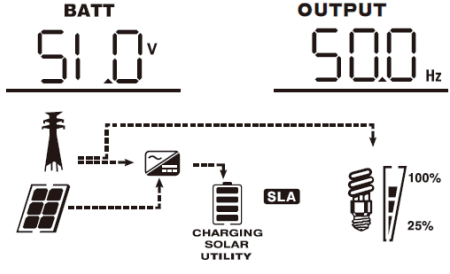
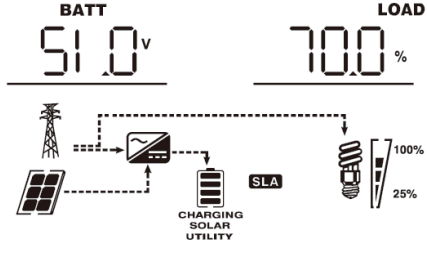
3.4 Display Information

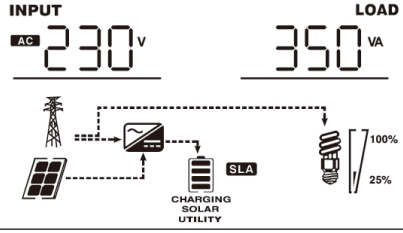
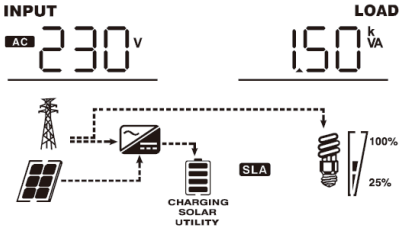
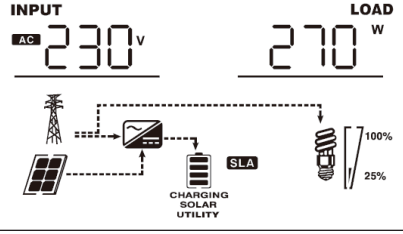
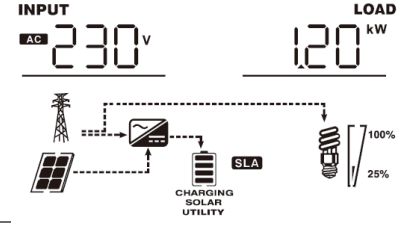
The LCD display information will be switched in turns by pressing "UP" or "DOWN" button. The selection information is switched as below order: input voltage, input frequency, PV voltage, MPPT charging current, MPPT charging power (only for MPPT models), battery voltage, output voltage, output frequency, load percentage, load in Watt, load in VA, load in Watt, DC discharging current, main CPU Version and second CPU Version.

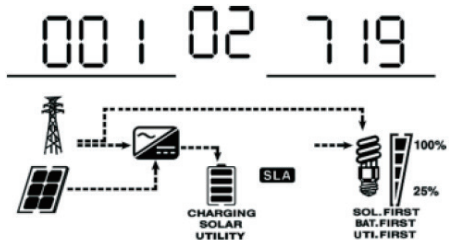
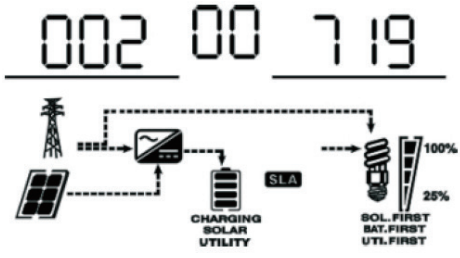
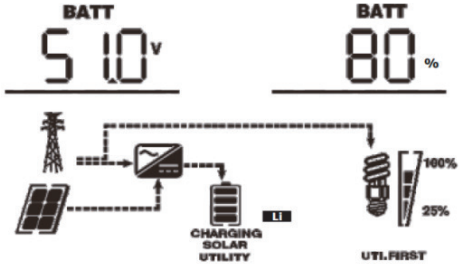


Setting Information	LCD display
Input voltage/Output voltage (Default Display Screen)	Input Voltage=230V, output voltage=230V 
Input frequency	Input frequency=50Hz 
PV voltage	PV voltage=60V 

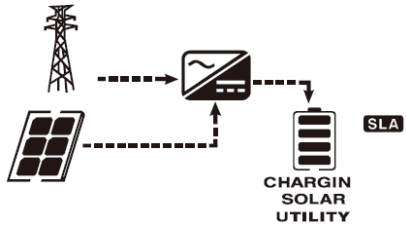
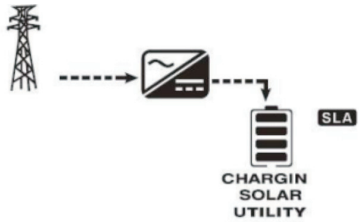
Setting Information	LCD display
Charging current	Current≥10A 
	Current < 10A 
MPPT charging power	MPPT charging power=500W 

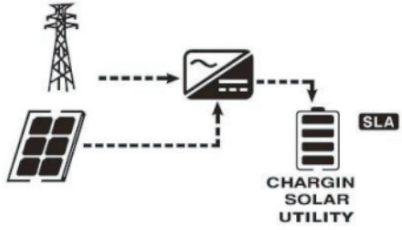
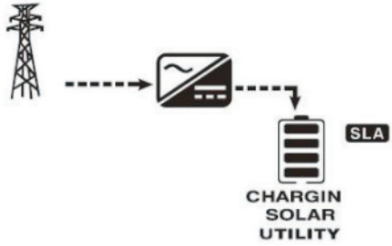
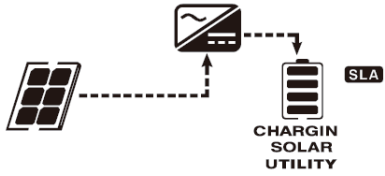
Setting Information	LCD display
Battery voltage	Battery voltage=51.0V 
Output frequency	Output frequency=50.0Hz 
Load percentage	Load percent=70% 

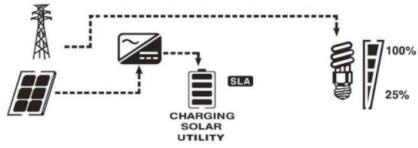
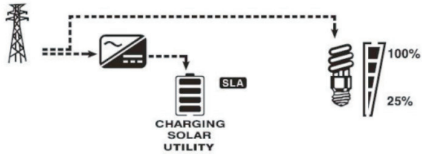
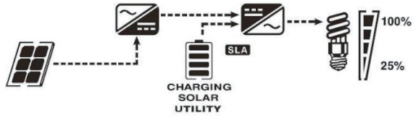
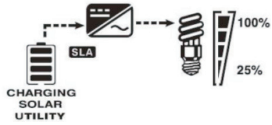
Setting Information	LCD display
Load in VA	When connected load is lower then 1kva,Load in VA will percent XXX VA like below chat: 
	When connected load is larger then 1kva,Load in VA will percent X.X kVA like below chat: 
Load in Watt	When connected load is lower then 1kw,Load in Watt will percent XXX W like below chat: 
	When connected load is larger then 1kva,Load in Watt will percent X.X kW like below chat: 

Setting Information	LCD display
Main CPU version checking	Main CPU version 001-02-719 
Secondary CPU version checking	Secondary CPU version 002-00-719 
Battery SOC	SOC=80% 

3.5 Operating Mode

Operation mode	Description	LCD display
Standby mode/ Power Saving mode Note: *Standby mode: The inverter is not turned on yet but at this time, the inverter can charge	No output is supplied by the unit but it still can charge batteries.	Charging by utility grid and PV energy. 
		Charging by utility. 
		Charging by PV energy. 
		No charging. 

<table>
<tr><th>Operation mode</th><th>Description</th><th>LCD display</th></tr>
<tr><td rowspan="4">Fault mode Note:
*Fault mode: Errors are caused by inside circuit error or external reasons such as over temperature, output short circuited and so on.</td><td rowspan="3">PV energy and utility gird can charge batteries.</td><td>Charging by utility grid and PV energy.
 
</td></tr>
<tr><td>Charging by utility grid.
 
</td></tr>
<tr><td>Charging by PV energy.
 
</td></tr>
<tr><td>No charging.
 
</td></tr>
<tr><td>Utility grid can power the loads when the unit starts up without Battery.</td><td>Power from utility grid only
 
</td></tr>
</table>

Operation mode	Description	LCD display
Utility Gird Mode	The unit will provide output power from the mains. It will also charge the battery at Utility gird mode.	Charging by utility grid and PV energy. 
		Charging by utility grid. 
Battery Mode	The unit will provide output power from battery and PV power.	Power from battery and PV energy. 
		Power from battery only. 

4 Maintenance

4.1 Fault Code

Fault Code	Fault Event	Icon on
01	Fan is locked	
02	Over temperature	
03	Battery voltage is too high	
04	Battery voltage is too low	
05	Output short circuited	
06	Output voltage is too high	
07	Overload time out	
08	Bus voltage is too high	
09	Bus soft start failed	
11	Main relay failed	
51	Over current or surge	
52	Bus voltage is too low	
53	Inverter soft start failed	
55	Over DC voltage in AC output	
56	Battery connection is open	
57	Current sensor failed	
58	Output voltage is too low	
80	CAN fault	
81	Host loss	

4.2 Warning Indicator

Warning Code	Warning Event	Icon flashing
01	Fan locked when inverter is on	
02	Over temperature	
03	Battery over charged	
04	Low battery	
07	Overload	
10	Output power derating	
12	Solar charger stop due to low battery	
13	Solar charger stop due to high PV voltage	
14	Solar charger stop due to overload	
15	Parallel input utility grid different	
16	Parallel input phase error	
17	Parallel output phase loss	
20	BMS communication error	
33	BMS communication loss	
34	Cell over voltage	
35	Cell under voltage	
36	Total over voltage	
37	Total under voltage	
38	Discharge over voltage	
39	Charge over voltage	

Warning Code	Warning Event	Icon flashing
40	Discharge over temperature	
41	Charge over temperature	
42	Mosfet over temperature	
43	Battery over temperature	
44	Battery under temperature	
45	System shut down	

4.3 Specification

Model	UBird-XN-Mini-30E	UBird-XN-Plus-50E
Battery		
Rated Voltage	51.2V	
Voltage Range	44.8~57.6V	
Capacity	3.58kWh	5.12kWh
Max. Discharge Current	70A	110A
Max. Charge Current(AC+PV)	45A	100A
Max. Charge Current (AC)	15A(10/15A Adjustable)	30A(10~60A Adjustable)
Battery Type	Li-ion (LFP)	
AC Output(Backup)		
Rated Power	3000W	5000W
Output Voltage	208/220/230/240Vac ± 5%	
Output Frequency	50/60Hz ± 1%	
Max Output Current	13.7A	22.7A
Rated Current	13A	21.7A
Output Wave	Pure Sine Wave	
Peak Efficiency (Battery Mode)	＞90%	
Transfer Time	20ms	
Output type	Multi-purpose AC Outlet×2	
AC Input		
Input Sources	L+N+PE	
Rated Input Voltage	170~280Vac	
Rated Input Voltage	230	
AC input frequency	50/60Hz	
PV Input		
Max PV Input Power	1800W	3500W
Max. PV Input Voltage	145Vdc	
MPPT Voltage Range	60~115Vdc	
Max PV Input current	30A	
Max. DC Short Circuit Current	32A	32A
General Data		
Range of working temperature	Charge: 0℃~50℃/Discharge: -10℃~55℃	
Optimal working temperature range	20℃~30℃	
Storage temperature	-15℃~60℃	
Humidity	20-95% non-condensing	
Cooling strategy	Fan	
Weight	52kg	70kg
Dimension [W x H x D]	461*558*308mm	531*608*308mm
Enclosure protection rating	IP43	
Packing	wooden case	
Certificate	CE,UN38.3,TUV mark	

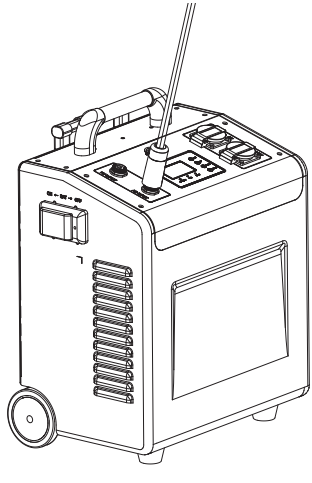
4.4 Trouble Shooting

Problem	LCD/LED/Buzzer	Explanation / Possible cause	What to do
Unit shuts down automatically during start up process.	LCD/LEDs and buzzer will be active for 3 seconds and then complete off.	The battery voltage is too low(<setting in program 5)	1. Re-charge battery. 2. Replace battery.
No response after power on.	No indication.	1. The battery voltage is far too low. 2. Battery polarity connect reversed.	1. Check if batteries and the wiring are connected well. 2. Re-charge battery. 3. Replace battery.
Mains exist but the unit works in battery mode.	Input voltage displayed as 0 on the LCD and green LED is flashing.	Input protector is tripped	Check if AC breaker is tripped and AC wiring is connected well.
	Green LED is flashing.	Insufficient quality of AC power. (Shore or Generator)	1. Check if AC wires are too thin and/or too long. 2. Check if generator (if applied) is working well or if input voltage setting is correct. (UPS - appliance)
	Green LED is flashing.	Set "Solar First" as the priority of output source.	Change output source priority to Utility first.
When the unit is turned on, internal relay is switched on and off repeatedly.	LCD display and LEDs are flashing	Battery is disconnected.	Check if battery wires are connected well.
Buzzer beeps continuously and red LED is on.	Fault code 01	Fan fault	Replace the fan.
	Fault code 05	Output short circuited.	Check if wiring is connected well and remove abnormal load.
	Fault code 02	Internal temperature of inverter component is over 100°C.	Check whether the air flow of the unit is blocked or whether the ambient temperature is too high.
	Fault code 03	Battery is over-charged.	Return to repair center.
		The battery voltage is too high.	Check if spec and quantity of batteries are meet requirements.

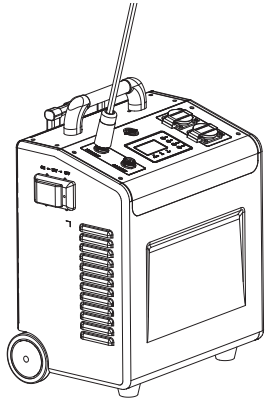
Problem	LCD/LED/Buzzer	Explanation/Possible cause	What to do
Buzzer beeps continuously and red LED is on.	Fault code 06/58	Output abnormal (Inverter voltage below than 190Vac or is higher than 260Vac)	1. Reduce the connected load. 2. Return to repair center
	Fault code 07	Overload error. The inverter is overload 110% and time is up.	Reduce the connected load by switching off some equipment.
	Fault code 08/09/53/57	Internal components failed.	Return to repair center.
	Fault code 51	Over current or surge.	Restart the unit, if the error happens again, please return to repair center.
	Fault code 52	Bus voltage is too low.	
	Fault code 55	Output voltage is unbalanced.	
	Fault code 56	Battery is not connected well or fuse is burnt.	If the battery is connected well, please return to repair center.

4.5 Activation

If you accidentally discharge the UBird-XN-Mini battery capacity to zero and can’ t turn it on, you need to activate it by connecting Utility grid to reuse it.



If you accidentally discharge the UBird-XN-Plus battery capacity to zero and can’ t turn it on, you need to activate it by connecting PV to reuse it.



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Email : info@ucanpower.com

Web : www.ucanpower.com