

User's Manual

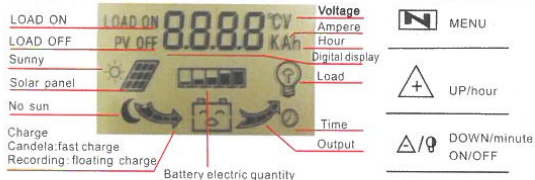
SAFETY INSTRUCTIONS

- This controller is 12V/24V automatic adapting mode, or another version 12/24/36/48/60V manually set the appropriate battery charging mode. When installing for the first time, please make sure that the battery has enough voltage to start and automatically set the controller parameters.
- The battery cable should be as short as possible to minimize loss.
- This controller is suitable for all kinds of lead-acid batteries (including open, sealed, gel and other batteries). If you charge a lithium battery, you must be familiar with its battery characteristics, and you must set the charging parameters before you can use it. For example: charge 12V lithium battery, prohibit output protection setting 9.5V, full protection 12.2V, start charging voltage 11.5V when the battery drops.
- The charge regulator is only suitable for regulating solar modules. **Never** connect another charging source to the charge regulator.

PRODUCT FEATURES

- Industrial-grade master chip, 16 AD sampling accuracy, temperature, charging current, discharge current accurate real-time display, power generation at a glance
- Automatic focusing MPPT tracking charging, high charging efficiency, non-stop detection during charging, bidirectional focusing tracking.
- Large-screen LCD display, adjustable charging and discharging parameters. Ultra-wide charge and discharge adjustable, as long as you understand the characteristics of the battery set its corresponding charging parameters, you can charge a battery. When the output is off, the time can be adjusted, which is more convenient (on the market, there is no point adjustment).
- A complete three-phase charge management, effectively protect the battery, the battery is more durable.
- built-in overheating, overcurrent, short circuit, open circuit protection, reverse connection protection, when the fault is eliminated, the controller automatically recovers, does not damage the device.
- bidirectional MOS tube anti-backflow circuit, high-power charging mode, ultra-low heat.
- R5.0 solar charging DC plug, R5.0 DC lamp output DC plug, convenient connection.

LCD DISPLAY/KEY



MENU: Used to switch the parameter display interface and settings, lightly press to switch, long press to enter to modify the parameters, and automatically remember the parameters after modification.
 UP: press to increase value.
 DOWN: Press to decrease value. Add as follows, rearrange suitable positions
 In the main interface, long press the middle button to display rEST, reset all parameters except the battery.

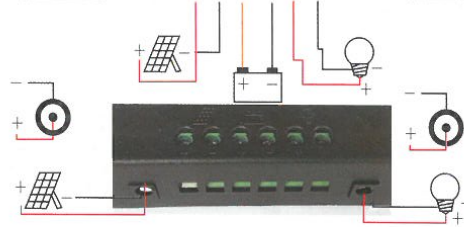
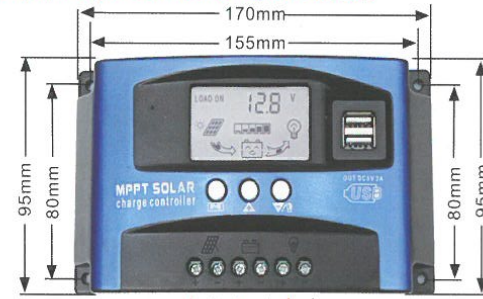
SYSTEM CONNECTION

- Connect the battery to the charge regulator-plus and minus.
- Connect the photovoltaic module to the regulator-plus and minus.
- Connect the consumer to the charge regulator-plus and minus.

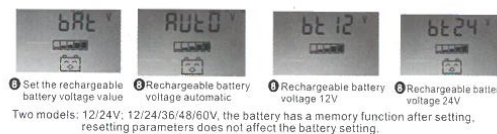
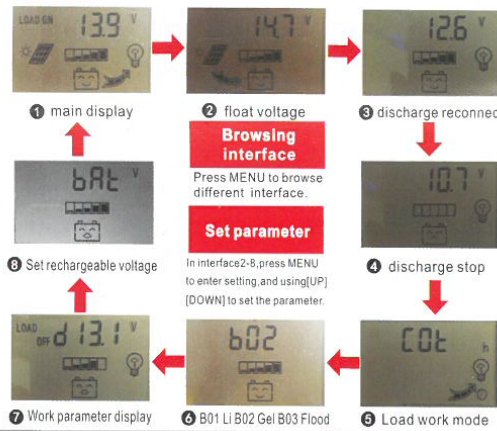
Setting Description:

- Main interface Press the menu key, select the interface to adjust the corresponding parameters, and set the working status of the equipment
- Load working mode Cot manual control load output Auto automatic light control mode 00:58/OUT continuous output
- Set real-time working status d13.1V display battery voltage value load output current display.d29.1°C temperature display.d2.1 A solar charging flow shows that high current charging and charging arrows flow fast, and current flows slowly.
 The d0.0A output load current shows that the large current discharge discharge arrow flows fast and the current flows slowly.
- BAT sets the voltage value of the rechargeable battery, AU10 automatic identification mode, low-voltage machine 12/24V, high-voltage machine 12V 24V 36V 48V 60V

The reverse order applies when deinstalling!
 An improper sequence order can damage the controller!



DISPLAY/SETTING



TROUBLE SHOOTING

Situation	Probable cause	Solution
Charge icon not on when sunny	Solar panel opened or reversed	Reconnect
Load icon off	Mode setting wrong	Set again
	Battery low	recharge
Load icon slow flashing	Over load	Reduce load watt
Load icon fast flashing	Short circuit protection	Auto reconnect
Power off	Low Battery voltage / reverse	Check battery/connection
Suddenly not charging	Solar energy disappears, only arrows	Overheat protection, self-recovery of temperature drop

TECHNICAL PARAMETER

MODEL	BL912A	BL912B	BL912C	BL912D	BL912E	BL912F
Charge current	20A	30A	40A	50A	60A	120A
Discharge current	10A	10A	20A	20A	30A	30A
Equalization	B01 Lithium	B02 Gel	B03 Flood			
12V/24V	12. 2V/24. 4V	14. 2V/28. 4V	14. 6V/29. 2V			
Max Solar input	18V solar panel for 12V battery, 36V solar panel for 24V <40V					
Equalization	B01 Lithium	B02 Gel	B03 Flood			
36V/48V	37V/49V	42V/56V	44V/58V			
Max Solar input	54V solar panel for 36V battery and 72V solar panel for 48V <80V					
Equalization	B01 Lithium	B02 Gel	B03 Flood			
60V	61V	71V	73V			
Max Solar input	60V battery is charged with 90V solar panel, voltage is less than 100V					
12V Float	14. 2V (default, adjus table)	12. 0--15. 0V				
12V Discharge stop	10. 7V (default, adjus table)	9. 0--11. 5V				
24V Float	28. 4V (default, adjus table)	24. 0--29. 0V				
24V Discharge stop	19. 0V (default, adjus table)	18. 0--22. 0V				
36V Float	42. 0V (default, adjus table)	36. 0--45. 0V				
36V Discharge stop	30. 0V (default, adjus table)	27. 0--33. 0V				
48V Float	56. 0V (default, adjus table)	48. 0--60. 0V				
48V Discharge stop	40. 0V (default, adjus table)	36. 0--44. 0V				
60V Float	71. 0V (default, adjus table)	60. 0--75. 0V				
60V Discharge stop	50. 0V (default, adjus table)	45. 0--55. 0V				
60V Discharge reconnect	63. 0V (default, adjus table)	60. 0--70. 0V				
Self-consume	<10mA					
USB output	5V/2A Max					
Operating temperature	-10+60°C					
Size/Weight	170*92*45mm/450g					

Device number binding instructions

GPRS machine APP can only be used in China; Bluetooth/WIFI global use

- Click the device number cloud allocation option in the software My page.
 Install RuiBlue Cloud Control APP support Android and Apple mobile phones, there are mobile data module version and WiFi version (foreign version).
 0 no mobile phone manages multiple modules, or multiple mobile phones manages one module, which is authorized and managed by the main administrator. The example is the installation instructions for Android phones.
- On the assignment interface, click Scan Device and Device Number, shoot a QR code or manually enter the device number or module number.
- After the input is complete, click the bind button to bind.

example 13800000000
 password:123456

BL-912V APP INSTALLATION PROCESS



- Scan the QR code on your Android phone to enter, or search for "RuiBlue Cloud Control" in the app store to download and install. <https://fir.sdhzwj.cn/5w4b>
 Download and install the software, enter the installation password 123456
- The mobile phone scans the QR code of the machine, adds the device, and enters the device name to facilitate multi-device and multi-project operations.
- Apple mobile phone installation
 A. <https://apps.apple.com/cn/app/%E8%93%9D%E8%95%8A%E4%BA%91%E6%8E%A7/id1580688215>
 B. Search for "RuiBlue Cloud Control" installation in the appstore.

4. Working status and modification interface



Memory and monitoring of daily power generation.



Instructions for remote control APP

1. APP interface description



The following refers specifically to Bluetooth/WIFI connection and operation

- The device is equipped with the network, and the mobile phone Bluetooth is turned on to connect with the controller RuiBlue--xx. Bluetooth will automatically copy the WIFI used by the current mobile phone, enter the password and press "Confirm". When the machine is only connected to Bluetooth, it can also be used for short-distance APP operation with the machine through Bluetooth. WIFI connection for remote control, mobile phone WIFI or flow card for remote control
- The name can be modified to facilitate management.
 - Data collection corresponds to 5, which displays the current working status of the equipment.
 - Parameter configuration can modify the solar control parameters, and automatically memorize them after modification
 - Real-time power generation collection and display, daily sunlight utilization, and clear records of power generation.

2. Solar controller remote control adjustment

Use battery type settings: 1, lithium battery, 2, gel battery, 3, lead-acid battery

It is effective in timing output mode. Turn off the light by the hour after no sunlight, the range is 0-23 hours.

Effective in timing output mode, turn off the light by minute after no sunlight, the range is 0-59 minutes.

Set the battery's full voltage value to prevent over charging damage to the battery. The setting range is 12.0--15.0V. You can also automatically select the appropriate parameters when the battery is selected. Set the use mode of the load: 0 manual control load output, 1 automatic light control mode, 2 load output when there is no sunlight, 3 always output four use states. Set the battery's over-discharge voltage value to prevent over-discharge damage to the battery. The setting range is 9.0--12.0V. You can also choose the battery to automatically select the appropriate parameters. Load output control, close or open, and display the current status through data collection.

Battery voltage selection, select the voltage value of the rechargeable battery, automatic detection mode (low-voltage models only 12V and 24V batteries), or high-voltage models lock 12V, 24V, 36V, 48V, 60V batteries.

* Product specifications are subject to change without prior notice.