



HOTA H6 PRO

AC/DC Smart Charger
Operating Instructions



Before using the charger for the first time, read these instructions carefully, especially Chapter 1 Safety Notes. Never leave the charger operating unsupervised.

Based on the original instructions of Shenzhen HOTA Technology Co., Ltd. · Keep for future reference.

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1. Safety Notes

Before using the charger for the first time, please read the details in this chapter. Make sure you use this charger safely and correctly.

1.1 Warnings

WARNING! FIRE HAZARD! NEVER USE CHARGER UNSUPERVISED!

- Please read the complete instructions carefully before using the charger.
- Make sure that the charger is kept away from heat and humid environments during use, pay attention to ventilation and heat dissipation, and keep it away from flammable materials.
- Do not let children operate the charger. Do not let the charger work without your attention.
- The product may only be used by persons aged 14 and over.
- Correctly set the battery charging and discharging parameters – wrong settings may lead to accidents.
- Failure to follow safety procedures may result in property damage or personal injury.
- If the operation is not proper, the charger and battery will have a serious fire risk.
- After use, disconnect the input power and remove the battery as soon as possible.
- In the case of AC connection, the **DC input port is prohibited from linking to any equipment** such as batteries.
- In power supply mode (*Power supply*), **it is forbidden to connect a battery** while operating.

1.2 Safety rules

- Do not modify or disassemble the charger.
- Do not place the charger or battery near flammable objects during use. Do not charge or discharge on carpet, paper, plastic products, vinyl, leather or wood, or inside the aircraft model or inside the car.
- Place the charger on a heat-resisting, non-flammable and insulating surface. Do not use it by placing it on car seats, carpet or other similar places. Keep inflammable and explosive objects away from the operating area of the charger.
- Keep the charger away from dust, humidity, rain and high temperature, and avoid direct exposure to sun and intense vibration.
- Do not place the charger within reach of children.
- Do not drop wires or other conductive objects into the charger.

- The DC input voltage of the charger is 6.5–30 V. When connecting the power supply, make sure that the input voltage matches the operating voltage range of the charger.
- Make sure the heat emission holes at the side of the charger are uncovered while in use, and ensure the cooling fan extracts heat smoothly. Do not use the charger in direct sunlight, in a confined space or in a high-temperature environment – the temperature protection inside the charger may activate so that charging and discharging cannot be performed normally.
- Fully understand the charging and discharging characteristics as well as the battery's specifications, and set up proper charging parameters in the charger. Incorrect setting of parameters can cause damage to the charger and battery and/or result in disastrous consequences such as fire or explosion.
- Ensure that the battery type and parameters are selected correctly. If you choose the wrong one, it may not only damage the battery, but may also be dangerous – a lithium battery must not be overcharged, it will cause a fire.
- Do not mix batteries of different types, capacities or manufacturers.
- Do not attempt to charge a dry battery that cannot be recharged.
- Do not charge or discharge if the battery leaks, swells, peels, changes colour or is deformed.
- Do not exceed the maximum charge limit specified by the battery manufacturer. Carefully follow the battery manufacturer's instructions and safety advice.
- Do not use the charger in an unattended manner. In case of any functional abnormality, stop using it and refer to these instructions.
- When charging or discharging is completed, press the O key to terminate the current task, and remove the battery when the charger shows the standby screen.

1.3 Batteries you must not charge

Do not charge or store the following types of batteries:

- batteries of different manufacturers, different models, different types or different capacities,
- non-rechargeable batteries (may cause an explosion),
- batteries of unrecognised type or unknown parameters,
- batteries with special requirements for charging technology,
- batteries that are damaged or defective,
- batteries with a built-in combined circuit or protection circuit,
- batteries installed in another device or connected to other components,
- rechargeable batteries suitable for the current of this charger without confirmation from the manufacturer.

The charger is designed for the battery types listed in these instructions. The manufacturer does not assume any responsibility if the user uses the charger for purposes other than those listed in the instructions.

2. Product Overview

Thank you for purchasing the HOTA series of smart chargers. Please read these instructions carefully before use so as to use the product better, and keep them in a safe place for easy access.

2.1 Features

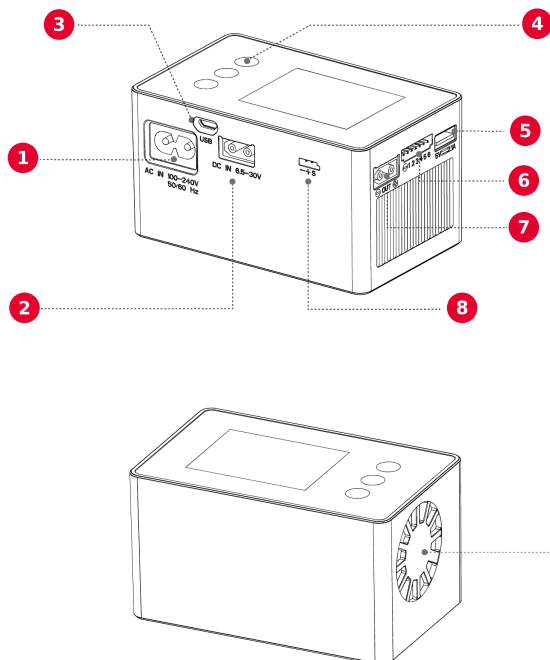
- **Small and smart** – a charger with an amazing power-to-volume ratio, supporting 200 W charging power with AC and 700 W with DC.
- **Wide-range AC input** – high-efficiency industrial power management, active PFC plus resonant control, with short circuit protection (SCP), overload protection (OLP), over voltage protection (OVP), over temperature protection (OTP) and over current protection (OCP).
- **Smart touch** – only a soft touch of a key starts the task. It is easy, fast, stable and waterproof, and provides strong anti-interference protection.
- **Recycling the discharge power** – unique regenerative discharge capability of up to 700 W takes most of the output battery's energy and puts it back into the input battery in a balanced way.
- **IPS display** – 2.4-inch IPS display with 260,000 colours and a new simple UI.
- **Firmware upgrade** – built-in Micro USB connector for an easier and faster firmware upgrade.
- **Safe and reliable** – the circuit design and charging algorithm ensure reliable charging and discharging even with overvoltage, overcurrent, overtemperature, short circuit and other anomalies.
- **Compatible with various batteries** – fully supports smart batteries and all other types of batteries.
- **Multiple languages** – user interface in simplified Chinese, traditional Chinese, Japanese, English and German.

2.2 Specifications

Parameter	Value
Input voltage	AC 100-240 V / DC 6.5-30 V
Charge power	DC 700 W (at input voltage > 24 V) AC 200 W
Regenerative discharge power	700 W
Discharge power	internal discharge: 30 W (balance port 10 W) external discharge: 700 W
Charge current	0.1-26 A
Balance current	2000 mA
Discharge current	0.1-5 A
USB output	5 V / 2.1 A
Battery type	LiHV / LiPo / LiFe / Lilon / LiXX: 1-6S NiZn / NiCd / NiMH: 1-14S Smart Battery: 1-6S Lead acid (Pb): 1-12S (2-24 V) Eneloop: 1-14S
Protection functions	temperature protection, time protection, capacity protection, input reverse protection, output protection, short circuit protection, output overcurrent protection, output overvoltage protection, overcharge protection
Screen	2.4" IPS, 320 × 240, 260,000 colours
Operating temperature	0 to 40 °C
Storage temperature	-20 to 60 °C
Dimensions	108 × 67 × 60 mm
Net weight	410 g

All specifications and parameters are subject to change without prior notice.

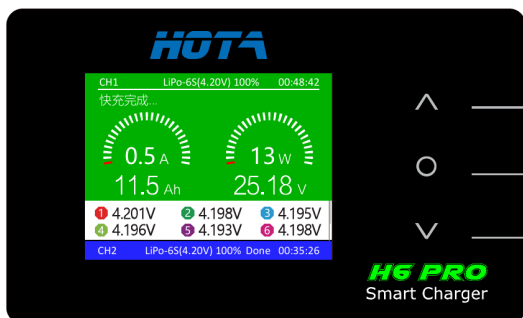
2.3 Introduction



Ports and controls of the charger

①	AC port – mains input 100–240 V, 50/60 Hz
②	DC port – DC input 6.5–30 V
③	Update port (Micro USB)
④	Touch keys
⑤	USB port 5 V
⑥	Balance port
⑦	Battery port (output)
⑧	Multi-function port
⑨	Fan

2.4 Keys



Display and touch keys Λ, O and v

Key	Function
O	Short press – confirm and execute the command. Long press – setup, entering the charger settings (<i>Charger Settings</i>).
Λ / v (up / down)	Select a task, adjust the parameter values, menu options and information settings.

2.5 Manufacturer and tests declared by the manufacturer

Manufacturer	Shenzhen HOTA Technology Co., Ltd.
Address	Floor 2, Building 2, Guorun Industrial Park, Min Zhi, Longhua District, Shenzhen, China
Telephone	0755-28180135
E-mail	info@hota-exp.com
Web	www.hota-exp.com

In the original instructions the manufacturer states that the H6 PRO AC/DC Smart Charger conforms to the relevant requirements of “B: 2017, PART15 CLASSB; PART15 CLASSC, FCC” and has passed the following tests:

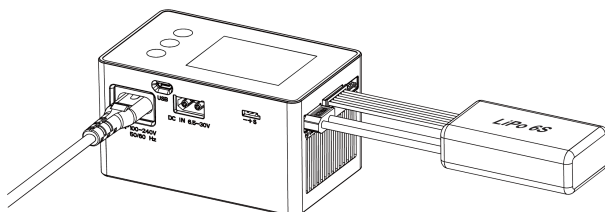
Testing standard	Result
EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013	Yes
EN 62311:2008	Yes
ETSI EN 301 489-1 V2.2.0 (2017-03) ETSI EN 301 489-3 V2.1.1 (2017-03)	Yes
ETSI EN 303 417 V1.1.1 (2017-09)	Yes

※ This is information taken over from the manufacturer. Conformity of the product with European Union legislation is confirmed by the EU declaration of conformity referred to in Chapter 8.2.

3. Connection

3.1 Recommended connected way

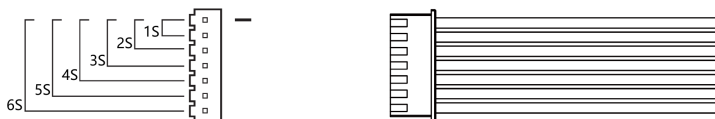
- ① Connect the power supply and wait for the self-checking to be completed.
- ② Connect the battery to the charger in the standby interface.
- ③ Set up task parameters applicable to your battery through the display and touch keys.
- ④ Start the task.



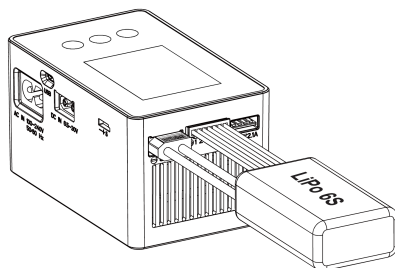
Charger powered from the mains with a LiPo 6S battery connected (power and balance connector)

3.2 Balance port connection and notes

- The detection balance port of this product is suitable for lithium battery packs.
- When the battery is connected, align the balance plug with the “—” sign. The diagram below shows the alignment of the balance plug.



Balance plug pin assignment for 1S to 6S batteries

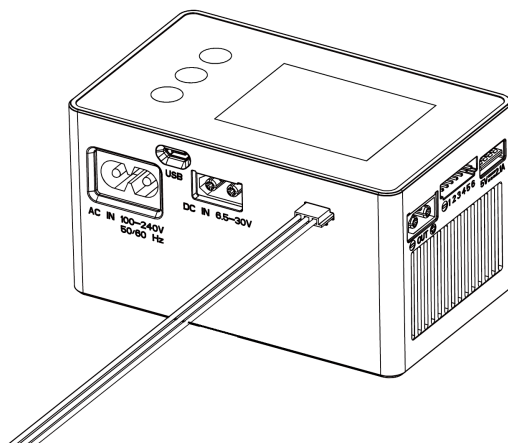


Connecting the battery balance plug

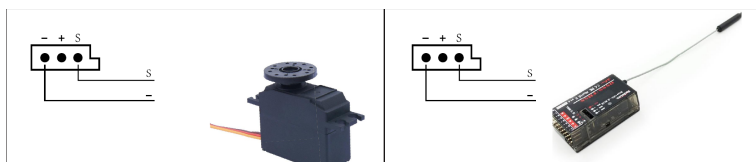
3.3 Multi-function port

The multi-function port is used to connect:

- ① the RC airplane control servo,
- ② the RC airplane receiver or RF transmitter.



Cable connected to the multi-function port



Left: RC airplane control servo connected to the multi-function port. Right: RC airplane receiver or RF transmitter connected to the multi-function port (– / + / S = signal).

The functions using the multi-function port are described in Chapter 6.5 Tools.

4. Batteries and Charging Current

4.1 Standard battery parameters

Voltages are given per cell.

Type	Rated voltage	Full charge voltage	Storage voltage	Discharge voltage
NiCd / NiMH	1.20 V	1.50 V	not supported	0.90 V
LiFe	3.20 V	3.65 V	3.30 V	2.90 V
Lilon	3.6 V	4.10 V	3.70 V	3.20 V
LiPo	3.70 V	4.20 V	3.80 V	3.30 V
LiHV	3.80 V	4.35 V	3.85 V	3.40 V
NiZn	1.50 V	1.93 V	1.60 V	1.20 V
LiXX	3.7 V	4.20 V	3.80 V	3.30 V
Smart Battery	3.70 V	4.20 V	3.80 V	3.30 V
Pb	2.00 V	2.46 V	not supported	1.90 V
Eneloop	1.20 V	1.50 V	not supported	0.90 V

Type	Balance charge	Unbalanced charge	Supported cells	Max. charge current	Max. charge C value
NiCd / NiMH	no	yes	1-14S	15.0 A	≤ 2C
LiFe	yes	yes	1-6S	15.0 A	≤ 4C
Lilon	yes	yes	1-6S	15.0 A	≤ 1C
LiPo	yes	yes	1-6S	15.0 A	≤ 1C
LiHV	yes	yes	1-6S	15.0 A	≤ 1C
NiZn	yes	yes	1-14S	15.0 A	≤ 0.5C
LiXX	yes	yes	1-6S	15.0 A	≤ 1C
Smart Battery	yes	yes	1-6S	15.0 A	≤ 1C
Pb	no	yes	1-12S	15.0 A	≤ 0.5C
Eneloop	no	yes	1-14S	15.0 A	≤ 0.5C

Be very careful to choose the correct voltage for different types of battery, otherwise you may cause damage to the batteries. Incorrect settings could cause the cells to vent, burn or explode, leading to injury or loss of property.

4.2 How to confirm charging current

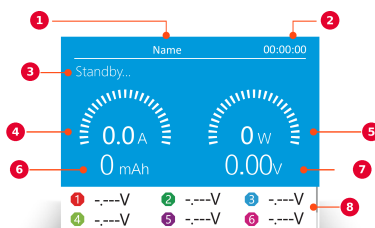
- It is very important to know the maximum charging current of the battery, as excessive current could influence the life span of the battery and/or cause damage. In addition, excessive current can cause heating and/or explosion of the battery during the charging process.
- The charging and discharging capacity of a battery is usually marked with a C value. Multiplying the charging C value and the battery capacity equals the maximum charging current supported by the battery. For example, for a 1000 mAh battery with a charging capacity of 5C, the maximum charging current would be $1000 \times 5 = 5000$ mA; therefore, the maximum charging current is 5 A.
- For a lithium battery, if it is impossible to confirm the supported charging C value, set the charging current below 1C for the sake of its safety.
- The reference relation between C value and charging time: charging time ≥ 60 minutes / charging C value (it therefore takes around 60–70 minutes to complete charging with 1C). Due to differences in battery conversion efficiency, the charging time might be extended.

5. Operation and Working Parameters Display

5.1 Operative skills

- ① Connect the power supply to the charger's AC or DC port and wait for the system to complete the self-checking. In the standby interface, connect the battery to the charger. Short press the O key to pop up the *Task Settings* menu, press the $\wedge$ / $\vee$ keys to select the operation task and adjust the task parameters, and short press the O key to start the task.
- ② When the task is being executed, short press the O key to pop up the *Adjust Task* menu to adjust the task's current or stop the task. Long press the O key to quickly end the current task.
- ③ In the standby interface, long press the O key to enter the *Charger Settings* menu.

5.2 Standby

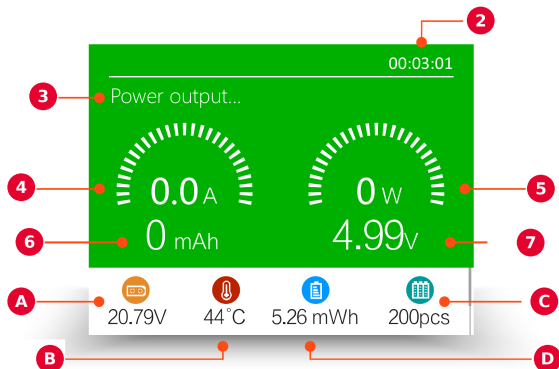


Standby screen

①	Device name	⑤	Present power
②	Operation time	⑥	Capacity charged
③	Task status	⑦	Current total battery voltage
④	Present current	⑧	Cell voltage

- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. Connect the battery to the charger in the standby interface.
- ② The display is blue in the standby state; the output current, output power, capacity charged and run time are all zero. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage and run data.
- ③ Short press the O key to pop up the *Task Settings* menu, adjust the task parameters and short press the O key to start the task.
- ④ Long press the O key to enter the *Charger Settings*.

5.3 Power output



Power output screen

②-⑦	Meaning as in Chapter 5.2
A	Input voltage
B	Operating temperature
C	Charged times
D	Input power

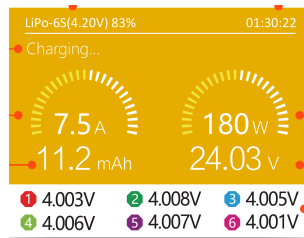
In power supply mode it is forbidden to connect a battery to the output.

- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. In the standby interface, connect the device that requires power to the output of the charger.
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Power supply*, adjust the task parameters and short press the O key to start the task. The lower half of the screen displays the input voltage, operating temperature, input power and charged times.
- ③ Short press the O key to pop up the *Adjust Task* menu to reset the output voltage and output power, or to stop the task (*Stop*).
- ④ Long press the O key to stop the current task.

5.4 Charging

During a task the top line of the screen shows the battery type and number of cells, the target cell voltage in brackets and the completion percentage, e.g. *LiPo-6S(4.20V) 83%*. The other items have the same meaning as in Chapter 5.2.

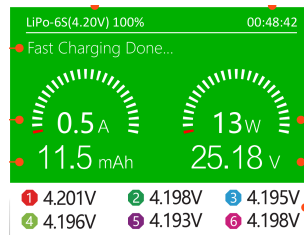
- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. Connect the battery to the charger in the standby interface.
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Charge*, adjust the task parameters and short press the O key to start the task. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage, cell internal resistance and run data. The cell voltage and internal resistance can only be displayed in balance charging mode (internal resistance after approx. 2 minutes).
- ③ When the charge task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the charge current. Long press the O key to stop the current task.



Charging screen

5.5 Fast charge done

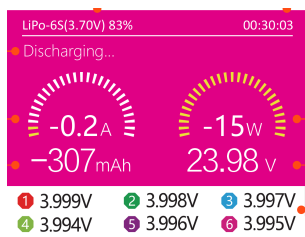
- ① When charging is completed and the cell voltage difference is less than 20 mV, *Fast Charging Done* is displayed. Press the O key to stop the task before removing the battery.
- ② Short press the O key to stop the current task.



Fast Charge Done screen

5.6 Discharging

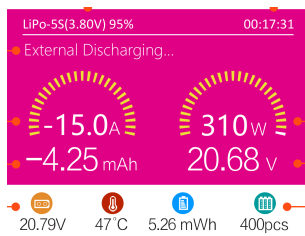
- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. Connect the battery to the charger in the standby interface.
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Discharge*, adjust the task parameters and short press the O key to start the task. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage and run data.
- ③ When the discharge task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the discharge current. Long press the O key to stop the current task.



Discharging screen

5.7 External discharging

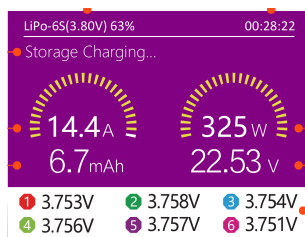
- ① Connect the battery that is going to be discharged to the input (DC port) of the charger and wait for the system to complete the self-checking. Then, in the standby interface, connect the high-power resistance load to the charger's output (for the wiring see Chapter 7.5).
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Ext. discharge*, adjust the task parameters and short press the O key to start the task.
- ③ When the external discharge task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the external discharge current. Long press the O key to stop the current task.



External Discharging screen

5.8 Storage charging

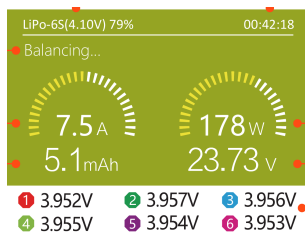
- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. Connect the battery to the charger in the standby interface.
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Storage*, adjust the task parameters and short press the O key to start the task. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage and run data.
- ③ When the storage task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the storage current. Long press the O key to stop the current task.



Storage Charging screen

5.9 Balancing

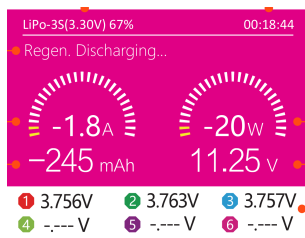
- ① Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. Connect the battery to the charger in the standby interface.
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *Balance*, adjust the task parameters and short press the O key to start the task. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage and run data.
- ③ When the balance task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the balance current. Long press the O key to stop the current task.



Balancing screen

5.10 Regenerative discharging

- ① Connect the battery that is going to receive power to the input of the charger and wait for the system to complete the self-checking. In the standby interface, connect the battery to be discharged to the output of the charger (for the wiring see Chapter 7.8).
- ② In the standby state, short press the O key to pop up the *Task Settings* menu, set the task to *ReGen. Discharge*, adjust the task parameters and short press the O key to start the task. Press the $\wedge$ or $\vee$ key to switch the information in the lower half of the screen – cell voltage and run data.
- ③ When the regenerative discharge task is executing, short press the O key to pop up the *Adjust Task* menu to adjust the discharge current. Long press the O key to stop the current task.



Regen. Discharging screen

6. Menus and Settings

The charger menus are displayed in the language selected in the system parameters. The menu item names below are given as displayed in the English interface.

6.1 Task Settings

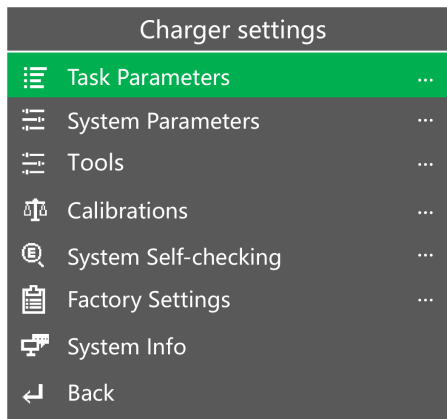
Task Settings	
 Select task	Charge
 Battery type	LiPo
 Cell voltage	4.20V
 Cell count	6S(22.2V)
 Current setting	1.0A
 Start task	
 Back	

Task Settings menu

Connect the power supply to the AC or DC port of the charger and wait for the system to complete the self-checking. In the standby interface, connect the battery to the charger and short press the O key to pop up the *Task Settings* menu. The menu items are as follows:

Item	Description
Select task	Select task content: <i>Power supply, Charge, Discharge, Ext. discharge, Storage, Balance, ReGen. discharge.</i>
Battery type	Select battery type: Smart battery, LiHV, LiPo, Lilon, LiFe, LiXX, NiZn, Pb, NiCd, NiMH, Eneloop.
Cell voltage	End voltage slight adjustment.
Cell count	Select the number of cells 1–6S. If the balance plug is inserted, the cell count is detected automatically and no setting is needed.
Current setting	Select current: charge / storage 0.1–26.0 A, discharge 0.1–5.0 A, external discharge 1.0–15.0 A.
Start task	Start to execute the task.
Back	Back.

6.2 Charger Settings

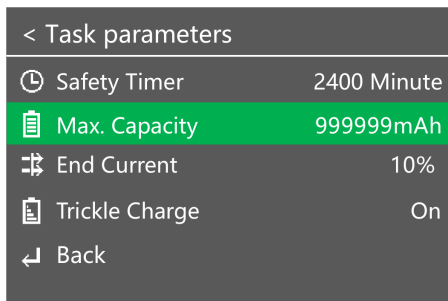


Charger Settings menu

In the standby interface, long press the O key to pop up the *Charger Settings* menu. The menu items are as follows:

Item	Description
Task Parameters	Adjust safety timer, max. capacity, end current and other parameters.
System Parameters	Adjust language, regen. discharge, input power, volume and other parameters.
Tools	For PWM measurement, servo test, PPM out.
Calibrations	For data calibration.
System Self-checking	Start self-checking of the charger.
Factory Settings	Restore all parameters to factory settings (user calibration data cleanup).
System Info	Display system information and serial number.
Back	Exit <i>Charger Settings</i> .

6.3 Charger Settings > Task Parameters



Task Parameters menu

In the standby interface, long press the O key to pop up the *Charger Settings* menu and then choose the *Task Parameters* item. The menu items are as follows:

Item	Description
Safety Timer	Allowed maximum running time; when running beyond this setting, automatic protection will stop the task.
Max. Capacity	Allowed maximum charging capacity; when running beyond this setting, automatic protection will stop the task.
End Current	The task is cut off when the ratio between the present current and the set current falls below this value.
Trickle Charge	Whether to turn on trickle charge: <i>On / Off</i> .
Back	Exit the <i>Task Parameters</i> menu.

6.4 Charger Settings > System Parameters

< System Settings		
	Language	English
	Regen. Discharge	...
	Max. input power	750W
	Min. input voltage	6.5V
	LCD backlight	High
	Volume	High
	Completion signal	Repeat
	Device name	Name
	Back	

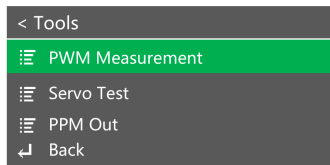
System Parameters menu

In the standby interface, long press the O key to pop up the *Charger Settings* menu and then choose the *System Parameters* item. The menu items are as follows:

Item	Description
Language	System language setting.
Regen. Discharge	Set current, voltage and power of the regenerative discharge.
Max. input power	Input power limit setting.
Min. input voltage	Input voltage limit setting.
LCD backlight	Backlight adjustment: high, middle, low.
Volume	Buzzer volume adjustment: high, middle, low.
Completion signal	Single (<i>Single</i>) or repeated (<i>Repeat</i>).
Device name	Enter the device name manually: use the $\wedge$ / $\vee$ keys to choose letters, long press the O key to exit.
Back	Exit the <i>System Parameters</i> menu.

※ Buzzer volume: the default is OFF – the operation sounds are muted, but not the sound of an error warning.

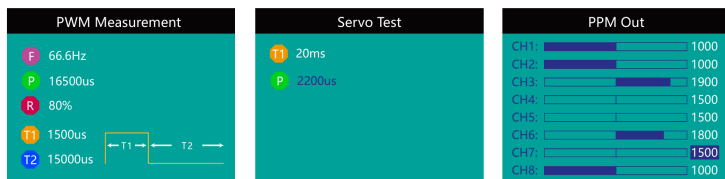
6.5 Charger Settings > Tools



Tools menu

In the standby interface, long press the O key to pop up the *Charger Settings* menu and then choose the *Tools* item. The tools use the multi-function port (Chapter 3.3). The menu items are as follows:

Item	Description
PWM Measurement	Test parameters such as PWM signal frequency, duty cycle and pulse width.
Servo Test	Regulate the parameters of the output signal – cycle and pulse width – for the RF airplane control servo.
PPM Out	Control the RC airplane receiver's PPM input signal; change the signal output of the eight channels.
Back	Back to the upper menu.



PWM Measurement, Servo Test and PPM Out screens

► PWM Measurement

The RC airplane control servo signal is analysed by the PWM protocol: the signal output of the RC receiver is connected, the signal period and pulse width of the PWM output are automatically detected and then converted into the rotation angle value of the servo output shaft.

► Servo Test

RF airplane PWM protocol; the servo is connected directly. By setting T1 (cycle) and the P pulse width, the angle of the servo arm is controlled.

► PPM Out

The RF airplane receiver receives the PPM protocol. By altering the signals of the eight channels, the signal output of the receiver is controlled.

7. Task Settings and Notes, Troubleshooting

7.1 General notes on tasks

The H6 PRO AC/DC smart charger operates in a series charging mode. When connecting the battery, the battery output (power) cable must always be connected. For lithium batteries, it is strongly recommended to connect the balance plug for balanced charging, so that the charger can accurately monitor the voltage of each cell and balance cells with poor consistency. When charging in unbalanced mode (without connecting the battery balance plug), the charger will show a warning before starting the task.

7.2 Power supply function

When the power supply function is selected, the entire charger is equivalent to an adjustable power supply; the voltage of the output port and the output power can be set. The output port voltage can be set between 5 V and 24 V, and the output power between 20 W and 700 W. The output port wires must not touch each other, to avoid a short circuit, and the output must not be overloaded, otherwise the device may burn.

7.3 Charge function

When charging is in progress, the screen is orange; the screen turns green or blue when charging is completed. When charging is completed and the cell voltage difference is less than 20 mV, the screen turns green. If you need to use the battery urgently, you can stop charging at this point. If charging is not stopped, the charger will continue to balance the battery. When the voltage difference is less than 10 mV, the screen turns blue; the charger then continues to balance the battery accurately.

After the battery has been charged, its voltage drops back slightly due to differences in cell performance – this is normal. As the number of charging cycles increases, the performance of the battery gradually declines and this phenomenon becomes more obvious. Charging with a larger charging current also causes a more obvious voltage drop after a full charge.

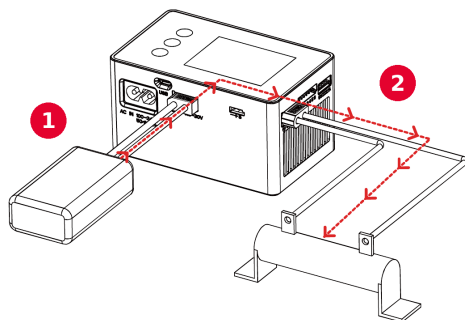
※ **Tip:** If you are charging outdoors and want to finish quickly, you can stop charging when the green state appears. When there is enough time and you want the battery to be well balanced, wait for the blue colour to appear, or wait a while longer after blue appears for a more accurate result.

7.4 Discharge function

The discharge function discharges the battery. It is recommended to connect the balance plug for discharging – it is faster and the detection of the discharge end is more accurate. Due to the limitation of the internal discharge power, the discharge process may be slower, which is normal.

7.5 External discharge function

The external discharge function uses an external high-power load resistor to discharge the battery quickly and accurately. The battery to be discharged is connected to the input port ①, the load resistor to the output port ②. It is recommended that the resistance of the load be between 1.5 and 2.5 Ω . Other resistance values can also be used, but the charger may not be able to operate at full power.



① input port – battery to be discharged, ② output port – load resistor

When the external discharge is running, the load gets very hot. Pay attention to safety to avoid accidents or personal injury.

7.6 Storage function

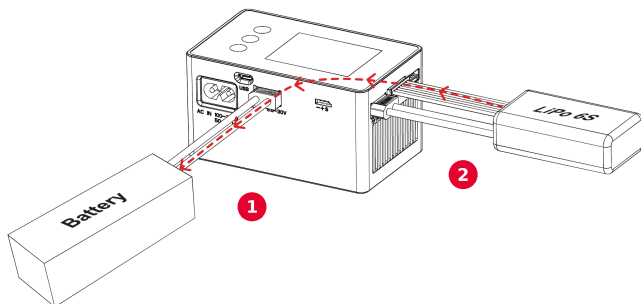
When the storage function is selected, the charger automatically performs a charging task if the battery voltage is lower than the preset storage voltage, or a discharging task if it is higher. In order to save task time, the storage and discharge tasks do not balance the cell voltage accurately. At the end of the task there may be some difference between the cell voltage and the preset value, which is normal.

7.7 Balance function

The balance function is used to balance the voltage of the cells and make them equal. The balance time depends on the cell voltage difference and the target voltage. When the menu is switched to balance mode, the charger automatically analyses and sets the initial balance voltage value, which the user can freely adjust. The charger's charging ability is much larger than its discharge capacity; in the balance operation, selecting a voltage equal to or higher than the present battery voltage usually gives a faster balancing result.

7.8 Regenerative discharge function

The H6 PRO AC/DC smart charger has a regenerative discharge function of up to 700 W, which transfers the energy of the battery on the output back to the battery on the input in a balanced way. There is no need to connect or switch on a power supply during operation: connect the battery that is going to receive power directly to the charger's input port ① and wait for the self-test to complete. Then connect the battery to be discharged to the charger's output port ②, set the task to *ReGen. Discharge* and start discharging. For lithium batteries, it is strongly recommended to connect the balance plug for balanced discharging.



① input port – battery receiving power, ② output port – battery to be discharged

7.9 Battery activation and repair

If, after the charging task starts, the charger detects that the cell voltage is lower than the pre-charging voltage, the cell is activated and repaired using one tenth of the set task current. After the voltage becomes higher than the pre-charging voltage, charging continues with the set current. This design protects an over-discharged battery, activates and repairs it.

7.10 About internal resistance measurement

The H6 PRO AC/DC smart charger has a cell internal resistance measurement function that is only effective when performing balanced charging tasks. About two or three minutes after the start of the charging task, the internal resistance of the battery is measured and calculated. The internal resistance varies with the state of charge; generally, the measured internal resistance is lower when the state of charge is higher. While measuring the internal resistance, the charger adjusts the charging current momentarily, so abrupt changes of current during charging are normal.

Due to the measuring method, the accuracy of professional measuring instruments cannot be achieved. The internal resistance value is therefore only suitable for comparison, such as judging the consistency of cell performance or comparing different batteries. The magnitude of the charging current has a

certain influence on the accuracy of the measurement – a battery with a large capacity and low internal resistance requires a large charging current to measure the internal resistance accurately.

7.11 Troubleshooting

Problem	Solution
Error during <i>System self-checking</i>	If a battery is connected to the output port during the self-checking, a self-checking error occurs. Remove the battery, wait 5 seconds and retry. Do not connect a battery to the DC port during the self-checking. Wait for the self-checking to complete before performing other operations.
Battery connection error	Re-plug the battery and ensure that all connections are in reliable contact. If the error message repeats, check the metal parts of the battery connectors for oxidation or burning that prevents good contact.

8. Information for the EU and Czech Market

The information in Chapters 8 and 9 describes the situation in the Czech Republic, where the product was purchased. European Union legislation applies in all member states, but national implementing regulations differ. If you operate the product in another country, the law of the country in which the product is operated is decisive.

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorاما.cz.
- **Product identification:** the type designation (H6 PRO AC/DC Smart Charger) is marked on the product; the serial number is displayed in the *Charger Settings* → *System Info* menu.

8.3 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste.**
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also <https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu>.

9. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.