HOTA T6

Smart Charger 300 W / USB-C PD 90 W
Operating Instructions



Before first use, read these instructions carefully, especially the safety notes in chapter 2. Never leave the charger operating unsupervised.

Importer: Rotorama, s.r.o. · www.rotorama.cz

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1. Product Overview

Thank you for purchasing the HOTA T6 smart charger. Please read these instructions carefully before first use, especially the safety notes in chapter 2, and keep them in a safe place for easy access.

1.1 Features

- **Small yet powerful** – an ultra-small transparent body that fits in your pocket.
- **XT60 / USB-C dual input** – DC input via XT60 or USB-C; the USB-C port is compatible with the PD 3.0 and QC fast-charging protocols.
- **Efficient heat dissipation** – a fan-cooled design for efficient cooling.
- **Regenerative discharge up to 700 W** – the energy of the discharged battery is fed back into the battery connected to the charger input.
- **2.4" IPS display** (320 × 240 pixels, 260,000 colours) with a simple user interface.
- **Firmware upgrade** via the built-in USB-C connector.
- **Protection functions** – reliable charging and discharging even with overvoltage, overcurrent, overtemperature, short circuit and other anomalies.
- **Wide battery support** – including smart batteries and all battery types listed in chapter 3.
- **Menu languages** – Simplified Chinese, Traditional Chinese, Japanese, English and German. Menu items are given in this manual in italics, exactly as shown on the charger.

1.2 Specifications

Input voltage	DC 10–30 V (XT60) / USB-C PD 3.0 / QC 20 V
Charge power	DC: 300 W (0.1–15 A) USB-C PD: 90 W
Charge current	DC: max. 15 A / USB-C PD: max. 5 A
Discharge power	internal: 30 W (balance port 10 W) external: 700 W
Discharge current (internal)	600 mA
Power supply mode	0.1–15 A at 5–29 V
Battery types	LiHV / LiPo / LiFe / LiIon / LiXX: 1–6S NiZn / NiCd / NiMH: 1–14S Smart: 1–6S Pb (lead acid): 1–12S (2–24 V) Eneloop: 1–14S
Display	2.4" IPS, 320 × 240, 260,000 colours
Dimensions	70.5 × 49.5 × 30.5 mm
Net weight	93 g
Operating temperature	0 °C to 40 °C
Storage temperature	−20 °C to 60 °C
Protection functions	temperature, time and capacity protection, input reverse-polarity protection, output protection, short-circuit protection, output overcurrent and overvoltage protection, overcharge protection

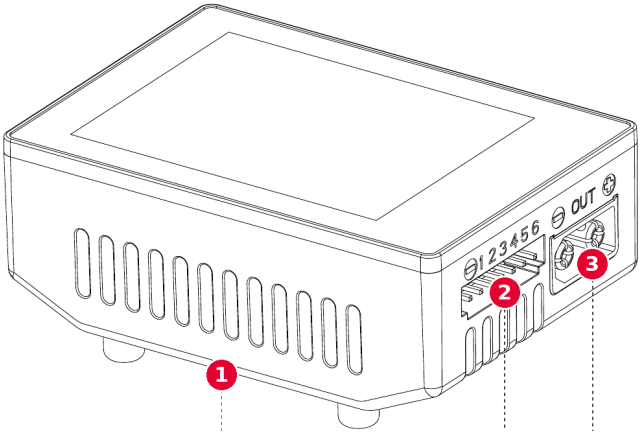
All specifications and parameters are subject to change without prior notice.

1.3 Manufacturer

Manufacturer	ShenZhen HOTA Technology Co., Ltd.
Address	213/215, Floor 2, Building 6, Monli Industrial Park, You Song Road, Longhua District, Shenzhen, China
E-mail	info@hota-exp.com
Web	www.hota-exp.com

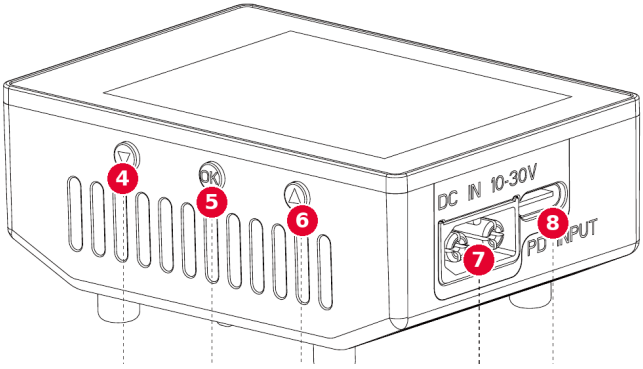
The importer and responsible person in the EU is given in chapter 8.1.

1.4 Introduction



Fan and output side

① fan (ventilation slots)
② balance port (1–6S)
③ output port (OUT) for connecting the battery



Key and input side

④ Down key (▽)
⑤ OK key
⑥ Up key (△)
⑦ DC IN port 10–30 V (XT60)
⑧ USB-C input port (PD INPUT)

2. Safety Notes

WARNING – FIRE HAZARD! Never use the charger unsupervised.

2.1 Warnings and safety notes

① Do not use the charger unattended. In case of any functional abnormality, stop using it and refer to this manual.

② Keep the charger away from dust, humidity, rain and high temperature, and avoid direct exposure to sunlight and intense vibration.

③ The input voltage of the charger is 10–30 V DC. When connecting the power supply, make sure its voltage matches this range.

④ Place the charger on a heat-resistant, non-flammable and insulating surface. Do not place it on car seats, carpets or similar surfaces. Keep flammable and explosive objects away from the charger's operating area.

⑤ Make sure the ventilation slots on the side of the charger are uncovered during use and that the cooling fan can extract heat freely.

⑥ Fully understand the charging and discharging characteristics and the specifications of the battery, and set up proper parameters in the charger. Incorrect parameters can damage the charger and the battery and may result in fire or explosion.

⑦ When charging or discharging is completed, press OK to end the current task and remove the battery only when the charger shows the standby screen.

2.2 Do not charge or store the following batteries

- batteries of different manufacturers, models, types or capacities combined together,
- non-rechargeable batteries – they may explode,
- batteries of an unrecognised type or with unknown parameters,
- batteries with special requirements for the charging technology,
- damaged or defective batteries,
- batteries with a built-in circuit or protection circuit,
- batteries installed in another device or connected to other components,
- batteries whose manufacturer has not confirmed that they can take the charging current of this charger.

2.3 Further safety notes

- Read the complete instructions carefully before using the charger.
- During use, keep the charger away from heat and humidity, ensure good ventilation and heat dissipation and keep it away from flammable materials.

- Do not let children operate the charger and keep it out of their reach. The product is intended for persons aged 14 and over.
- Improper operation creates a serious fire risk for the charger and the battery. Failure to follow the safety procedures may result in property damage or personal injury.
- After use, disconnect the input power and remove the battery as soon as possible.
- In power supply mode (*Power supply*) it is forbidden to connect a battery to the output.
- Do not modify or disassemble the charger.
- Do not place the charger or the battery near flammable objects during use. Do not charge or discharge on carpet, paper, plastic, vinyl, leather or wood, or inside a model or a car.
- Do not drop wires or other conductive objects into the charger.
- Make sure the battery type and parameters are selected correctly. A wrong selection may damage the battery and is dangerous – a lithium battery must not be overcharged, it may cause a fire.
- Do not mix batteries of different types, capacities or manufacturers.
- Do not attempt to charge non-rechargeable batteries.
- Do not charge or discharge a battery that leaks, swells, peels, has changed colour or is deformed.
- Do not exceed the maximum charge current specified by the battery manufacturer and follow its instructions and safety advice.
- Do not cover the fan outlet. Do not use the charger in direct sunlight, in a confined space or at high ambient temperature – the temperature protection may activate and charging or discharging will not run normally.
- The charger is designed only for the battery types listed in these instructions. The manufacturer assumes no responsibility for use for other purposes.

3. Batteries and Charge Current

3.1 Standard battery parameters

Voltages are given per cell. “–” means the function is not supported for this battery type.

Type	Rated voltage	Full charge	Storage voltage	Discharge voltage
NiCd / NiMH	1.20	1.50	–	0.90
LiFe	3.20	3.65	3.30	2.90
Lilon	3.6	4.10	3.70	3.20
LiPo	3.70	4.20	3.80	3.30
LiHV	3.80	4.35	3.85	3.40
NiZn	1.50	1.93	1.60	1.20
LiXX	3.7	4.20	3.80	3.30
Smart	3.70	4.20	3.80	3.30
Pb	2.00	2.46	–	1.90
Eneloop	1.20	1.50	–	0.90

All voltages in volts (V) per cell.

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

The maximum charge current is **15.0 A** for all battery types.

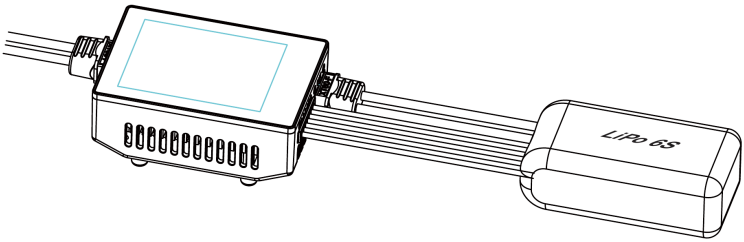
Be very careful to choose the correct voltage for each battery type, otherwise you may damage the battery. Incorrect settings could cause the cells to vent, burn or explode, leading to injury or loss of property.

3.2 How to confirm the charge current

- It is very important to know the maximum charge current of the battery, as excessive current can shorten the battery's life span, damage it and cause heating or explosion of the battery during charging.
- The charging and discharging capability of a battery is usually marked with a C value. Multiplying the charging C value by the battery capacity gives the maximum charge current supported by the battery. Example: a 1000 mAh battery with a charging capability of 5C → 1000 × 5 = 5000 mA, so the maximum charge current is **5 A**.
- If the supported charging C value of a lithium battery cannot be confirmed, set the charge current below 1C for safety.
- Reference relation between C value and charging time: charging time ≥ 60 minutes / charging C value, so charging at 1C takes about 60–70 minutes. Due to differences in battery conversion efficiency, the charging time may be longer.

4. Connection and Operation

4.1 Recommended connection



Battery connected with both the main lead and the balance lead

① Connect the power supply to the DC IN or USB-C port and wait for the self-check to complete.

② Connect the battery to the charger on the standby screen.

③ Use the keys to set up task parameters suitable for your battery.

④ Start the task.

For the DC IN port the power supply must deliver **10–30 V** DC; for the USB-C port use a power supply supporting PD 3.0 or QC (20 V). The full charge power of 300 W is only available when powered via DC IN; via USB-C the power is limited to 90 W.

The T6 charges in series mode – the main battery lead must always be connected. For lithium batteries it is strongly recommended to also connect the balance port so that the charger can accurately monitor the voltage of each cell and balance cells with poor consistency. When charging in unbalanced mode (without the balance port), the charger shows a warning before starting the task.

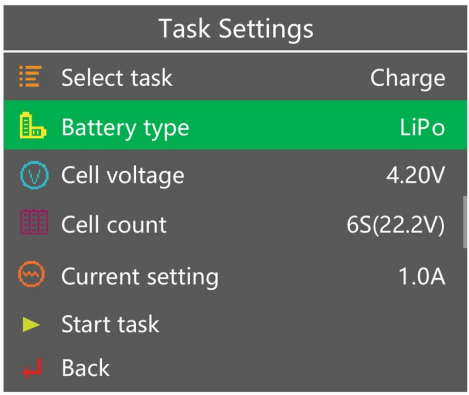
Do not connect a battery to the output or to the DC input during the self-check. Wait for the self-check to complete.

4.2 Keys

Key	Function
OK – short press	confirm and execute the command; on the standby screen opens the *Task Settings* menu; during a task opens the *Adjust Task* menu (adjust the current or stop the task)
OK – long press	on the standby screen opens the *Charger Settings* menu; during a task quickly ends the task
Up / Down	select a task, adjust parameter values, move through menus; during a task switch the information in the lower half of the screen

4.3 Task Settings menu

With the battery connected, short-press OK on the standby screen to open the menu.

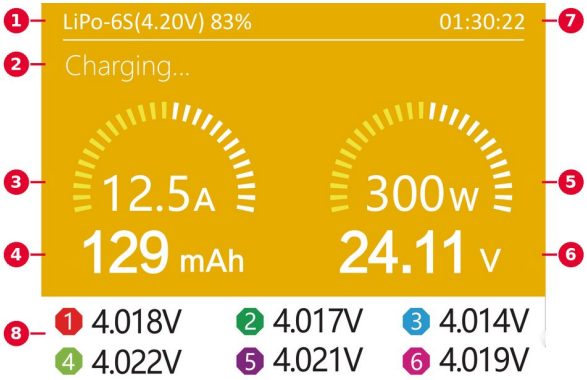


Task Settings menu

Item	Description
Select task	task: *Power supply*, *Charge*, *Discharge*, *External discharge*, *Storage*, *Balance*, *ReGen discharge*
Battery type	battery type: Smart, LiHV, LiPo, LiIon, LiFe, LiXX, NiZn, Pb, NiCd, NiMH, Eneloop
Cell voltage	fine adjustment of the end voltage per cell
Cell count	number of cells 1–6S; if the balance port is connected, it is detected automatically
Current setting	task current: charge and storage 0.1–15.0 A, discharge 0.1–5.0 A, external discharge 1.0–15.0 A
Start task	start the task
Back	back

5. Tasks and Working Screens

5.1 Screen elements



Screen while charging

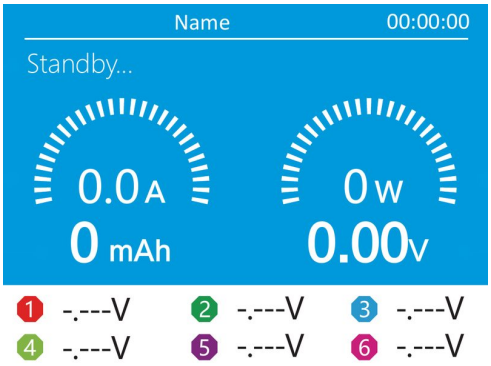
①	battery type, cell count, target cell voltage and completion percentage
②	task status
③	present current
④	capacity charged (discharged when discharging)
⑤	present power
⑥	current total battery voltage
⑦	operation time
⑧	cell voltages

During a task, use the Up and Down keys to switch the lower half of the screen between cell voltage, cell internal resistance and run data. Cell voltage and internal resistance are only displayed in balance charging mode (internal resistance after approx. 2 minutes).

In power supply mode and during external discharge the lower half of the screen shows the input voltage, the charger's operating temperature, the input energy (mWh) and the charge counter (pcs).

5.2 Standby

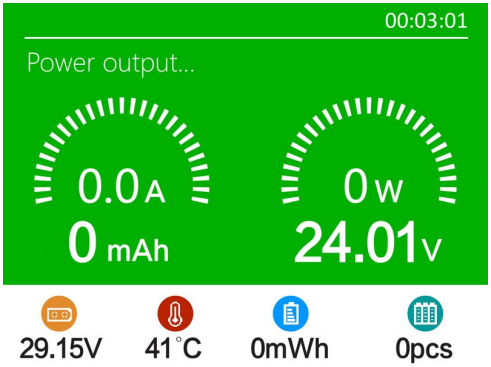
- After connecting the power supply and completing the self-check, the blue standby screen is displayed. Current, power, capacity and run time are all zero; the top bar shows the device name.
- Short-press OK to open *Task Settings*, long-press OK to open *Charger Settings*.



Standby screen

5.3 Power supply

In this mode the charger works as an adjustable power supply. The output voltage can be set between **5–29 V** and the output power between **20–300 W**.



Power supply mode

① Connect the power supply and wait for the self-check to complete. On the standby screen, connect the device to be powered to the output.

② Short-press OK to open *Task Settings*, set the task to *Power supply*, adjust the parameters and short-press OK to start the task.

③ Short-press OK to open the *Adjust Task* menu to reset the output voltage and power or to stop the task (*Stop*). Long-press OK to stop the task.

The output wires must not touch each other – risk of short circuit. Do not overload the output, it may destroy the charger. Never connect a battery to the output in this mode.

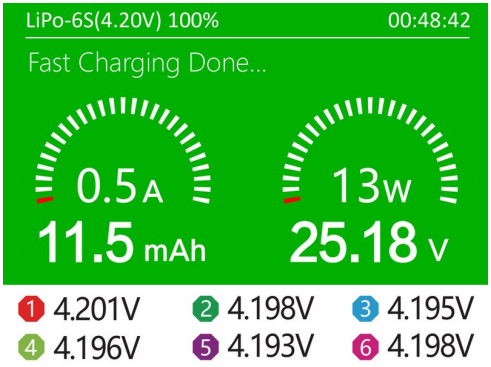
5.4 Charge

① Connect the power supply to the DC IN or USB-C port and wait for the self-check to complete. Connect the battery on the standby screen.

② Short-press OK to open *Task Settings*, set the task to *Charge*, adjust the task parameters and short-press OK to start the task.

③ While the task is running, short-press OK to open the *Adjust Task* menu, where you can adjust the charge current. Long-press OK to stop the task.

While charging, the screen is **orange**. When charging is completed and the cell voltage difference is less than 20 mV, the screen turns **green** (*Fast Charging Done*) and you can disconnect the battery if you need it urgently. If charging is not stopped, the charger continues balancing; when the voltage difference is less than 10 mV, the screen turns **blue** and the charger continues to accurately balance the battery.



Fast charge done

Always end the task with the OK key before removing the battery.

After charging, the voltage drops back slightly due to differences in cell performance – this is normal. As the number of charge cycles increases, the battery performance gradually declines and this phenomenon becomes more obvious. It is also more obvious after charging with a higher current.

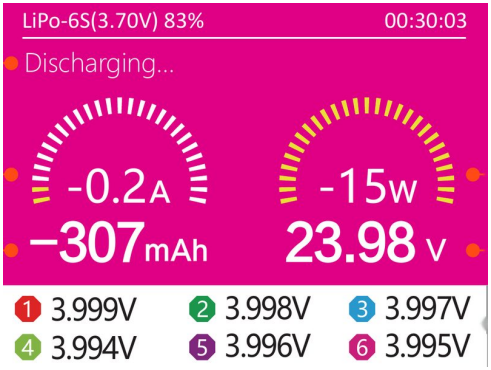
Tip: If you are charging outdoors and want to finish quickly, you can stop charging when the screen turns green. When you have enough time and want a good balance, wait for the blue screen, or a while longer after it turns blue.

5.5 Discharge

① Connect the power supply to the DC IN or USB-C port and wait for the self-check to complete. Connect the battery on the standby screen.

② Short-press OK to open *Task Settings*, set the task to *Discharge*, adjust the task parameters and short-press OK to start the task.

③ While the task is running, short-press OK to open the *Adjust Task* menu, where you can adjust the discharge current. Long-press OK to stop the task.

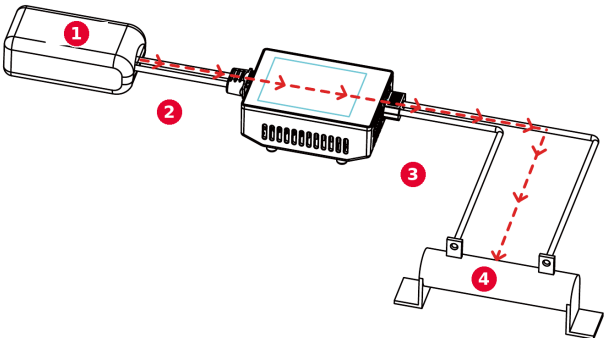


Discharging

It is recommended to connect the balance port for discharging – it is faster and the end of discharge is detected more accurately. Due to the limited internal discharge power (30 W), discharging may be slow, which is normal.

5.6 External discharge

External discharge uses an external high-power load resistor to discharge the battery quickly and accurately. The battery to be discharged is connected to the charger **input** (DC IN) and the load to the **output**.



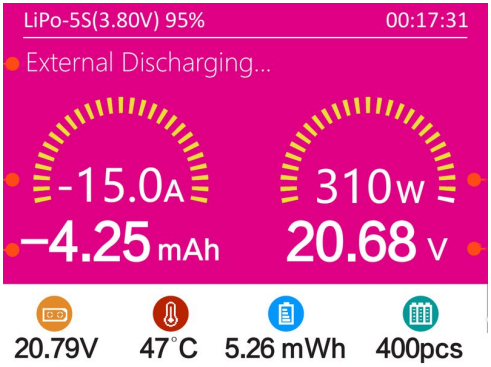
① battery to be discharged · ② DC IN port · ③ output port · ④ load

① Connect the battery to be discharged to the DC IN port and wait for the self-check to complete. On the standby screen, connect the high-power load to the output.

② Short-press OK to open *Task Settings*, set the task to *External discharge*, adjust the parameters and short-press OK to start the task.

③ Short-press OK to open the *Adjust Task* menu, where you can adjust the discharge current. Long-press OK to stop the task.

The recommended load resistance is **1.5–2.5 Ω**. Other values can also be used, but the charger may not operate at full power.



External discharging

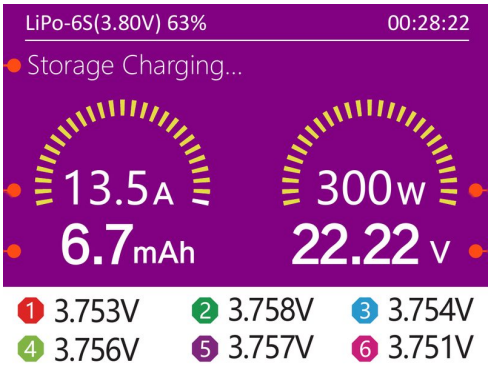
The load gets very hot during external discharge. Pay attention to safety, keep it away from flammable materials and avoid burns.

5.7 Storage

① Connect the power supply to the DC IN or USB-C port and wait for the self-check to complete. Connect the battery on the standby screen.

② Short-press OK to open *Task Settings*, set the task to *Storage*, adjust the task parameters and short-press OK to start the task.

③ While the task is running, short-press OK to open the *Adjust Task* menu, where you can adjust the task current. Long-press OK to stop the task.



Storage charging

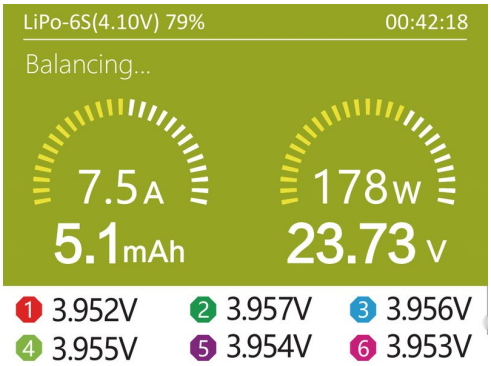
If the battery voltage is lower than the preset storage voltage, the charger automatically charges it; if it is higher, the charger automatically discharges it. To save time, the storage and discharge tasks do not balance the cell voltages accurately – a small deviation of the cell voltages from the preset value at the end of the task is normal.

5.8 Balance

① Connect the power supply to the DC IN or USB-C port and wait for the self-check to complete. Connect the battery on the standby screen.

② Short-press OK to open *Task Settings*, set the task to *Balance*, adjust the task parameters and short-press OK to start the task.

③ While the task is running, short-press OK to open the *Adjust Task* menu, where you can adjust the task current. Long-press OK to stop the task.

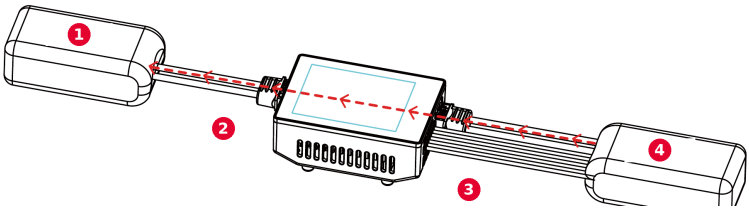


Balancing

The balance function equalises the cell voltages. The balancing time depends on the cell voltage difference and the target voltage. When this task is selected, the charger automatically analyses and sets an initial target voltage, which you can freely adjust. The charger's charging capability is much higher than its discharging capability, so selecting a target voltage equal to or higher than the current battery voltage usually balances faster.

5.9 Regenerative discharge

The T6 can discharge with up to **700 W** by feeding the energy of the battery on the output back into the battery connected to the input. No separate power supply is needed for this task.



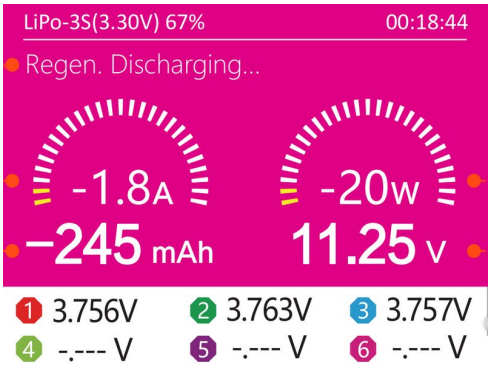
① receiving battery · ② DC IN port · ③ output port · ④ battery to be discharged

① Connect the receiving battery to the charger input and wait for the self-check to complete. On the standby screen, connect the battery to be discharged to the output.

② Short-press OK to open *Task Settings*, set the task to *ReGen discharge*, adjust the parameters and short-press OK to start the task.

③ Short-press OK to open the *Adjust Task* menu, where you can adjust the discharge current. Long-press OK to stop the task.

For lithium batteries it is strongly recommended to connect the balance port of the discharged battery. Current, voltage and power limits for regenerative discharge are set in *Charger Settings → System Parameters → Regen. Discharge*.



Regenerative discharging

5.10 Charging a deeply discharged cell

If, after the charging task starts, the charger detects that a cell voltage is lower than the pre-charge voltage, it first charges the cell at one tenth of the set current. Once the voltage exceeds the pre-charge voltage, charging continues at the set current. This protects over-discharged batteries and helps recover them.

※ Deep discharge can permanently damage a lithium battery. Do not charge a swollen, deformed or heating battery and dispose of it safely.

5.11 Internal resistance measurement

The charger measures the cell internal resistance only during balance charging. The value is calculated about 2–3 minutes after charging starts. Internal resistance varies with the state of charge – generally, the higher the charge level, the lower the measured resistance.

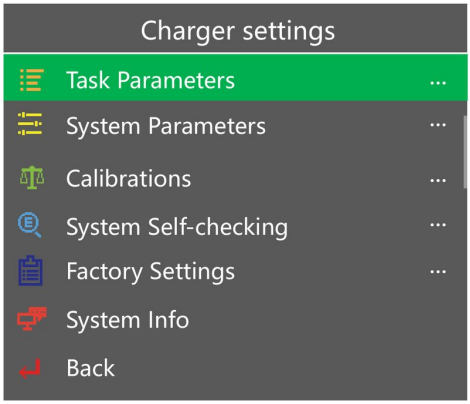
During the measurement the charger briefly adjusts the charge current, so sudden current changes during charging are normal.

The charger does not reach the accuracy of professional measuring instruments. The values are suitable for comparison only – for example to judge the consistency of cells or to compare different batteries. The charge current also affects accuracy; a battery with a large capacity and low internal resistance requires a higher charge current for an accurate measurement.

6. Charger Settings

6.1 Main menu

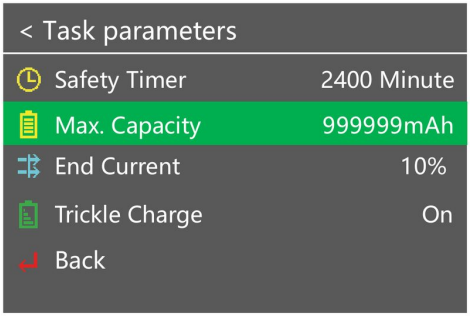
On the standby screen, long-press OK to open the menu.



Charger Settings menu

Item	Description
Task Parameters	adjust safety timer, max. capacity, end current and other parameters
System Parameters	adjust language, regenerative discharge, input power, volume and other parameters
Calibrations	data calibration
System Self-checking	start the charger self-check
Factory Settings	restore all parameters to factory settings (also clears user calibration data)
System Info	system information, serial number
Back	exit the menu

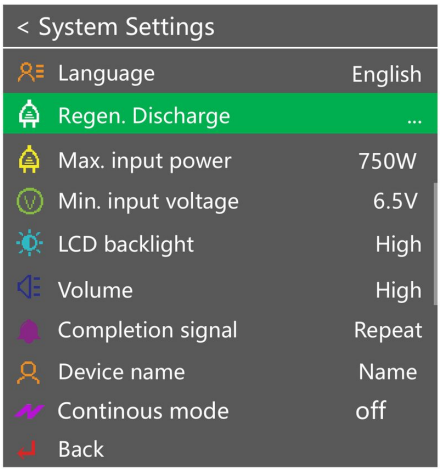
6.2 Task Parameters



Task Parameters menu

Item	Description
Safety Timer	maximum running time; beyond this setting the protection stops the task automatically
Max. Capacity	maximum charged capacity; beyond this setting the protection stops the task automatically
End Current	end current – the task ends when the ratio of the present current to the set current drops below this value
Trickle Charge	trickle charge on or off (*On / Off*)
Back	back

6.3 System Parameters



System Settings menu

Item	Description
Language	system language
Regen. Discharge	current, voltage and power settings for regenerative discharge
Max. input power	input power limit
Min. input voltage	input voltage limit
LCD backlight	backlight: high, middle, low
Volume	buzzer volume: high, middle, low
Completion signal	completion signal: *Single* or *Repeat*
Device name	device name – choose letters with the Up/Down keys, long-press OK to exit
Continous mode	continuous mode on or off
Back	back

When the buzzer is off, operation sounds are muted, but error warning sounds remain active.

7. Troubleshooting

▶ Error during the system self-check

If a battery is connected to the output port during the self-check, the self-check ends with an error. Remove the battery, wait 5 seconds and try again. Do not connect a battery to the DC port during the self-check and wait for it to complete before performing other operations.

▶ Battery connection error

Re-plug the battery and make sure all connections are in reliable contact. If the error message repeats, check the metal contacts of the battery connectors for oxidation or burn marks that affect good contact.

8. Information for the EU and Czech Market

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@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.cz

8.2 Product conformity

CE

- 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@rotorama.cz.
- **Product identification:** the type designation (HOTA T6) is shown on the front of the device; the serial number and system information can be displayed in *Charger Settings → System Info*.

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

9.1 Rights of the buyer under Czech law

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 manufacturer's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- 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.

9.2 Manufacturer's warranty terms

❊ The following text is the manufacturer's original warranty statement.

The manufacturer provides a one-year warranty for this charger from the date of purchase. Within this period the manufacturer will repair the product free of charge. Free repair is not provided if the failure is caused by improper use or modification by the customer. If parts need to be replaced after the warranty period, the manufacturer charges a component fee and a maintenance fee.

During the warranty period, repairs are not free of charge in case of:

- failure or damage caused by improper use, disassembly, attachment or modification contrary to the instructions,
- failure or damage caused by natural disasters, falls, collisions or improper voltage.