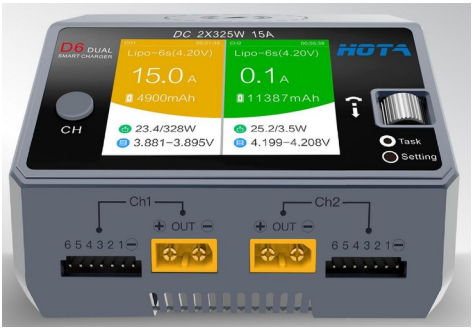
HOTA D6 Dual

Dual-channel smart charger
User manual



Read the entire manual carefully before first use. Never leave the charger operating unsupervised – fire hazard!

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

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1. Safety instructions

Before first use, read this entire manual carefully, especially the safety chapter, and keep it in a place where it is easy to find. Improper use of the charger can cause fire, damage to property or injury.

1.1 Warning

WARNING – FIRE HAZARD! Never use the charger unsupervised.

- 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. Never let the charger work without your supervision.
- Set the charging and discharging parameters correctly – wrong settings may lead to accidents.
- Failure to follow the safety procedures may result in property damage or personal injury.
- If operated improperly, the charger and the battery present a serious fire risk.
- After use, disconnect the input power and remove the battery as soon as possible.
- Do not connect a battery while the charger is powering up and performing its self-check.

1.2 Safe use

- This product is intended for persons aged 14 and over.
- Do not modify or disassemble the charger.
- The input voltage of the charger is **DC 6.5–30 V**. Before connecting the power supply, make sure its voltage is within this range.
- Place the charger on a heat-resistant, non-flammable and insulating surface. Do not use it on a car seat, carpet or similar surface. Keep flammable and explosive objects away from the work area.
- Do not charge or discharge on carpet, paper, plastic, vinyl, leather or wood, or inside the model or inside a car.
- Keep the charger away from dust, humidity, rain, high temperatures, direct sunlight and strong vibration.
- Do not cover the vent at the bottom of the charger and make sure the cooling fan can extract heat freely. Do not use the charger in direct sunlight, in a confined space or in a hot environment – the temperature protection may activate and charging or discharging will not work properly.
- Keep the charger out of the reach of children.

- Do not drop wires or other conductive objects into the charger.
- Understand the characteristics and specifications of your battery and set the correct battery type and charging parameters. A wrong choice can damage the battery and be dangerous – a lithium battery must never be overcharged, otherwise it may catch fire.
- Do not mix batteries of different types, capacities or manufacturers.
- Do not charge a battery that leaks, is swollen, has a damaged wrapping, 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.
- If the charger behaves abnormally, stop using it and refer to this manual.
- When charging or discharging is completed, end the task by pressing the speed shuttle key and remove the battery only after the charger shows the standby screen.

1.3 Batteries you must not charge or store (Storage)

- batteries of different manufacturers, models, types or capacities (connected together),
- non-rechargeable (primary) cells – risk of explosion,
- batteries of an unrecognised type or with unknown parameters,
- batteries with special charging technology requirements,
- 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 current supplied by this charger.

The charger is designed for the battery types listed in this manual. The manufacturer accepts no responsibility if the charger is used for purposes other than those described in this manual.

2. Product description

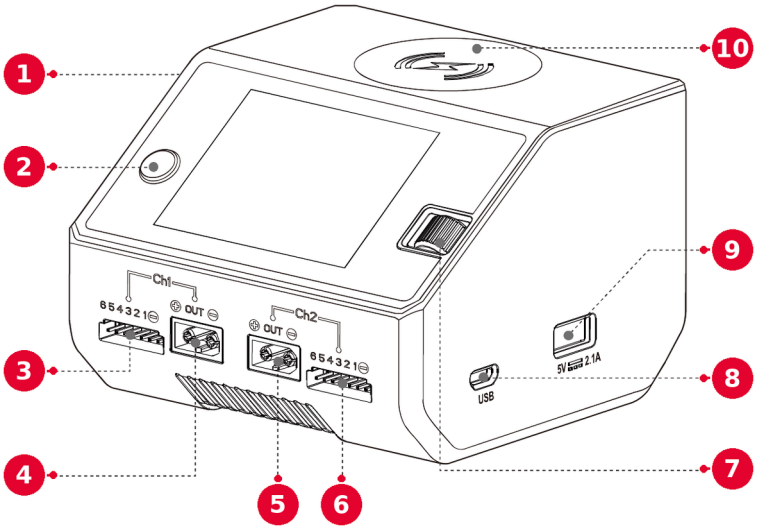
The HOTA D6 Dual is a DC-powered dual-channel smart charger. Each of the two channels works independently and can charge, discharge, balance and prepare batteries for storage. The charger has a colour display, a USB output and a wireless charging pad for a mobile phone.

2.1 Specifications

Parameter	Value
Input voltage	DC 6.5–30 V
Charge current	2 × 0.1–15 A
Charge power	2 × 325 W (at input voltage above 24 V)
Discharge power – internal	2 × 15 W (via balance port 2 × 10 W)
Discharge power – external	2 × 325 W (650 W in total)
Discharge current	2 × 0.1–3 A
External discharge current	2 × 1–15 A
Balance current	2 × 1600 mA
Supported batteries	LiHV, LiPo, LiFe, LiIon, LiXX: 1–6S NiZn, NiCd, NiMH: 1–16S Smart Battery: 1–6S Pb: 1–12S (2–24 V) Eneloop: 1–16S
USB output	5 V / 2.1 A
Wireless charging	max. 5 W output
Display	2.8", 320 × 240 pixels, 260,000 colours
Operating temperature	0 °C to 40 °C
Storage temperature	−20 °C to 60 °C
Dimensions	108 × 105 × 76 mm
Weight	360 g
Protection functions	temperature protection, time protection, capacity protection, input reverse polarity protection, output protection, short-circuit protection, output overcurrent protection, output overvoltage protection, overcharge protection

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

2.2 Charger overview



Controls and ports of the charger

① DC input – power supply connection (DC 6.5–30 V)
② CH key – channel selection
③ Balance port for channel 1 (CH1)
④ Output of channel 1 (CH1) – battery connection
⑤ Output of channel 2 (CH2) – battery connection
⑥ Balance port for channel 2 (CH2)
⑦ Speed shuttle key – turn to move through the menu, press to confirm
⑧ Update port (USB)
⑨ USB output 5 V
⑩ Wireless charging pad

2.3 Standard battery parameters

The table shows the per-cell voltages used for each battery type. The maximum charge current is 15.0 A for all types, and all types can also be charged without the balance lead (unbalanced). A dash (—) means that Storage is not supported for that type.

Type	Rated voltage	Full charge	Stor-age	Dis-charge	Balance charge	Cells	Max. C
NiCd / NiMH	1.20 V	1.50 V	—	0.90 V	no	1–16S	≤ 2C
LiFe	3.20 V	3.65 V	3.30 V	2.90 V	yes	1–6S	≤ 4C
LiIon	3.6 V	4.10 V	3.70 V	3.20 V	yes	1–6S	≤ 1C
LiPo	3.70 V	4.20 V	3.80 V	3.30 V	yes	1–6S	≤ 1C
LiHV	3.80 V	4.35 V	3.85 V	3.40 V	yes	1–6S	≤ 1C
NiZn	1.50 V	1.93 V	1.60 V	1.20 V	yes	1–16S	≤ 0.5C
LiXX	3.7 V	4.20 V	3.80 V	3.30 V	yes	1–6S	≤ 1C
Smart Battery	3.70 V	4.20 V	3.80 V	3.30 V	yes	1–6S	≤ 1C
Pb	2.00 V	2.46 V	—	1.90 V	no	1–12S	≤ 0.5C
Eneloop	1.20 V	1.50 V	—	0.90 V	no	1–16S	≤ 0.5C

Always choose the voltage according to the actual battery type. Incorrect settings could cause the cells to vent, burn or explode.

2.4 Standards stated by the manufacturer

The manufacturer declares conformity with these standards and FCC Part 15:

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

2.5 Manufacturer

Manufacturer	ShenZhen HOTA Technology Co., Ltd.
Address	Floor 2, Building 2, Guorun Industrial Park, Min Zhi, Longhua District, Shenzhen, China
E-mail	info@hota-exp.com
Phone / web	0755-28180135 · www.hota-exp.com
Importer in the EU	see chapter 8.1

3. Getting started

3.1 Recommended connection procedure

① Connect the power supply and wait for the self-check to be completed.

② Select the channel you want to use and connect your battery to it.

③ Set the task parameters for your battery using the display and the speed shuttle key.

④ Start the task.

Do not connect the battery during the charger self-check – see chapter 7.

3.2 How to determine the charge current

- It is very important to know the maximum charge current of the battery. Excessive current can shorten the battery life, damage the battery and cause overheating or explosion during charging.
- The charge and discharge capability of a battery is usually stated as a C value. The maximum charge current equals the charge C value multiplied by the battery capacity. For example, a 1000 mAh battery rated for 5C charging can be charged with at most 1000 × 5 = 5000 mA, i.e. **5 A**.
- If the supported charge C value of a lithium battery cannot be confirmed, set the charge current below 1C for safety.
- Relation between the C value and charging time: charging time ≥ 60 minutes / charge C value. Charging at 1C therefore takes about 60–70 minutes. Due to differences in battery efficiency, charging may take longer.

3.3 Controls

The charger is operated with the **CH** key ② and the speed shuttle key ⑦ (see chapter 2.2).

Control	Action	Function
	short press	switch the displayed channel
CH key	long press	quick stop of the running task, or entry to the *Task Settings* menu of the selected channel
	short press in standby	open the *Task Settings* menu of the selected channel
Speed shuttle key	short press during a task	open the *Adjust Task* menu – adjust the current of the running task
	long press in standby	open the *Charger Settings* menu
	turn during a task	switch the information in the lower half of the display

4. Charger settings (Charger Settings)

In standby, long-press the speed shuttle key to open the *Charger Settings* menu. Menu items are given as shown on the display.

4.1 Charger Settings menu

Item	Function
Task Parameters	adjust the safety timer, maximum capacity, end current and other task parameters
System Parameters	adjust the language, input power, volume and other system parameters
CH1 Calibrations	channel 1 data calibration
CH2 Calibrations	channel 2 data calibration
System Self-checking	start the self-check of the charger
Factory Settings	restore all parameters to factory settings (also clears user calibration data)
System Info	display system information and the serial number
Back	exit the *Charger Settings* menu

4.2 Task Parameters

Path: *Charger Settings → Task Parameters*

Item	Function
Safety Timer	maximum running time; when exceeded, the protection stops the task automatically
Max. Capacity	maximum charged capacity; when exceeded, the protection stops the task automatically
End Current	end current – the task ends when the ratio of the actual current to the set current drops below the set value (in %)
Trickle Charge	switch trickle charging on or off: *On* / *Off*
Back	exit the *Task Parameters* menu

4.3 System Parameters

Path: *Charger Settings → System Parameters*

Item	Function
Language	system language
Max. Input Power	input power limit
Min. Input Voltage	input voltage limit

Item	Function
LCD Backlight	backlight brightness: *High* / *Middle* / *Low*
Wireless Charge	wireless charging pad setting
Volume	buzzer volume: *High* / *Middle* / *Low*
Completion Signal	sound signal at the end of a task: once (*Single*) or repeated (*Repeat*)
Device Name	device name – press the speed shuttle key to start entering the name, long-press it to finish
Back	exit the *System Parameters* menu

※ Buzzer volume: the manufacturer states the default is OFF. Operation sounds are then muted, but the error warning sound remains active.

5. Tasks (Task Settings)

5.1 Setting up a task

Connect the power supply and wait for the self-check to be completed. In standby, connect the battery, select the channel with a short press of the CH key and open the *Task Settings* menu with a short press of the speed shuttle key.

Item	Function
Select Task	task selection: charge (*Charge*), discharge (*Discharge*), external discharge (*Ext. discharge*), storage (*Storage*), balance (*Balance*)
Battery Type	battery type: Smart Battery, LiHV, LiPo, LiIon, LiFe, LiXX, NiZn, Pb, NiCd, NiMH, Eneloop
Cell Voltage	fine adjustment of the cell end voltage
Cell Count	number of cells in series 1–6S; if the balance lead is connected, the charger detects the cell count automatically and no setting is needed
Current Setting	current setting: charge and storage 0.1–15.0 A, discharge 0.1–3.0 A, external discharge 1.0–15.0 A
Start Task	start the task
Back	back

5.2 General notes

The charger works in series charging mode – the battery output (main) cable must always be connected. For lithium batteries, it is strongly recommended to connect the balance lead as well. The charger can then accurately monitor the voltage of each cell and balance cells with poor consistency. When charging without the balance lead, the charger shows a warning before starting the task.

5.3 Charge

While charging is in progress, the screen is orange. When charging is completed, the screen turns green or blue:

- **green** – charging is completed and the cell voltage difference is less than 20 mV (*Fast Charge Done*). If you need the battery urgently, you can stop charging. If you do not stop it, the charger continues to balance the cells,
- **blue** – the cell voltage difference is less than 10 mV. The charger then continues to balance the cells accurately.

After charging, the battery voltage drops slightly because of differences between the cells – this is normal. As the number of charge cycles increases, battery performance gradually declines and the voltage drop becomes more noticeable. It is also more noticeable after charging with a higher current.

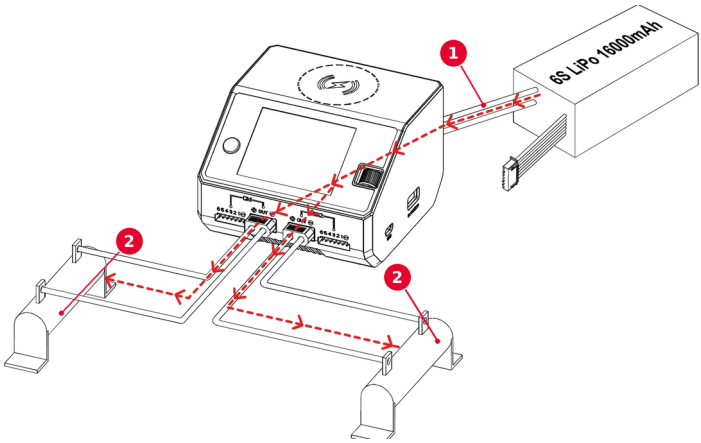
❉ Tip: If you are charging outdoors and want to finish quickly, you can stop charging once the screen turns green. If you have enough time and want good cell balance, wait for the blue colour, or a little longer after it appears.

5.4 Discharge

The discharge function discharges the battery with the internal load of the charger. Connecting the balance lead is recommended – discharging is then faster and the end of discharge is detected more accurately. Because the internal discharge power is limited, discharging may take a long time, which is normal.

5.5 External discharge (Ext. 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 input)** ① and the load resistors are connected to the channel **outputs** ②. The recommended load resistance is **1.5–2.5 Ω**. Other resistance values can also be used, but the charger may then not operate at full power.



External discharge connection: ① battery connected to the DC input, ② load resistors on the outputs

During external discharge the load becomes very hot. Pay attention to safety and avoid accidents and injuries.

① Connect the battery to be discharged to the charger input (DC input) and wait for the self-check to be completed. Then, in standby, connect the high-power resistive load to the charger outputs.

② Select the channel, open the *Task Settings* menu with a short press of the speed shuttle key, set the task to *Ext. discharge*, adjust the parameters and start the task with a short press of the speed shuttle key.

③ During the task, a short press of the speed shuttle key opens the *Adjust Task* menu for adjusting the discharge current. A long press of the CH key stops the task.

5.6 Storage

When the storage function is selected and the battery voltage is lower than the preset storage voltage, the charger automatically charges the battery. If the voltage is higher, it automatically discharges it. To save time, the storage and discharge tasks do not balance the cell voltages accurately. The cell voltages may therefore differ slightly from the preset value at the end of the task, which is normal.

5.7 Balance

The balance function equalises the voltages of the individual cells. The balancing time depends on the cell voltage difference and on the target voltage. When you switch to balance mode, the charger analyses the battery and sets an initial target voltage, which you can adjust freely. The charging capability of the charger is much higher than its discharge capability, so selecting a target voltage equal to or higher than the current battery voltage usually gives faster balancing.

5.8 Internal resistance measurement

The charger can measure the internal resistance of the individual cells. The measurement works only during **balance charging** – about 2–3 minutes after charging starts, the charger measures and calculates the internal resistance. Internal resistance varies with the state of charge; generally, the higher the charge level, the lower the measured value. During the measurement the charger briefly changes the charge current, so a sudden change of current during charging is normal.

Because of the measuring method, the accuracy does not reach the level of professional measuring instruments. The measured internal resistance is suitable only for comparison – for example, to judge the consistency of cells or to compare different batteries. The charge current also affects the accuracy: a battery with a large capacity and low internal resistance requires a high charge current for an accurate measurement.

5.9 Activation of deeply discharged cells

If, after charging starts, the charger detects that a cell voltage is below the pre-charge voltage, it first charges the cell with one tenth of the set current. Once the voltage rises above the pre-charge voltage, charging continues with the set current. This function protects an over-discharged battery.

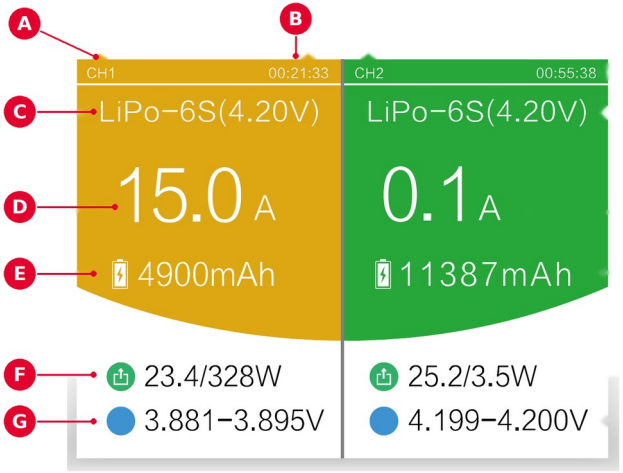
❊ Do not charge a battery that is swollen, damaged or shows any other sign of a defect – see chapter 1.

6. Display

Display texts are given as shown by the charger. The values in the pictures are examples only.

6.1 Split-screen display

After power-up the charger shows a split screen with the status of both channels. In the picture, channel CH1 is charging (orange) and fast charging on channel CH2 is completed (green). The CH2 information is arranged in the same way as for CH1.



Split-screen display

A	channel	E	charged capacity
B	operation time	F	output voltage / power
C	battery type, cell count and task status	G	battery voltage
D	present current		

① After power-up the charger shows the split screen – idle state.

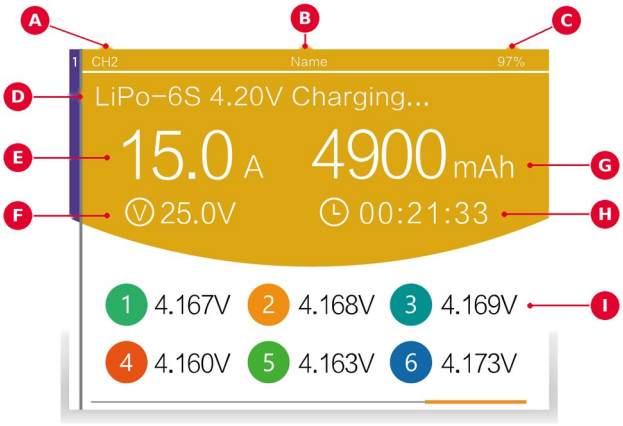
② In standby, long-press the speed shuttle key to open the *Charger Settings* menu.

③ Short-press the CH key to display the selected channel.

④ Long-press the CH key to stop the current task.

6.2 Channel screen

In standby, the upper part of the single-channel screen is black and all values (current, power, capacity, time) are zero. During a task the upper part changes colour according to the task. The picture shows charging.



Channel screen during charging

A	channel	F	total battery voltage
B	device name (*Device Name*)	G	charged capacity
C	completion percentage	H	operation time
D	battery type, cell count and task status	I	individual cell voltages
E	present current		

Turning the speed shuttle key during a task switches the information in the lower half of the display: cell voltages, cell internal resistance and run data. Cell voltages and internal resistance are shown only during balance charging (internal resistance after about 2 minutes).

6.3 Screen colours

Colour	Display status	Meaning
orange	Charging...	charging in progress
green	Fast Charge Done	charging completed, cell voltage difference < 20 mV
blue	—	cell voltage difference < 10 mV, the charger continues to balance the cells accurately
magenta	Discharging... Ext. Discharging...	discharge or external discharge in progress

Colour	Display status	Meaning
purple	Storage Charging...	storage task in progress (Storage)
olive green	Balancing...	balancing in progress
black	Standby...	standby

When charging is completed (Fast Charge Done), press the speed shuttle key to stop the task before removing the battery.

6.4 Procedure for individual tasks

① Connect the power supply and wait for the self-check to be completed. In standby, connect the battery.

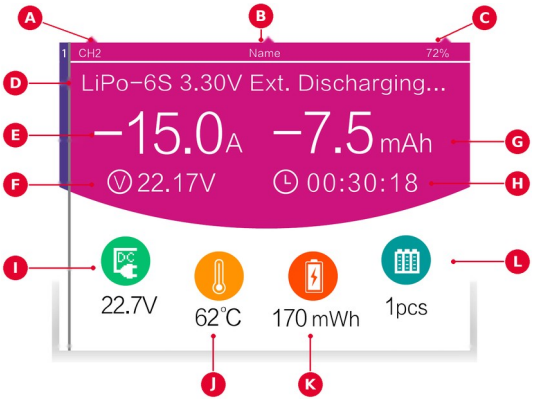
② Select the channel and open the *Task Settings* menu with a short press of the speed shuttle key. Set the task (*Charge*, *Discharge*, *Storage* or *Balance*), adjust the parameters and start the task with a short press of the speed shuttle key.

③ During the task, a short press of the speed shuttle key opens the *Adjust Task* menu for adjusting the task current. A long press of the CH key stops the task.

During discharging, current and capacity are shown with a minus sign.

6.5 Information during external discharge

During external discharge, the lower part of the screen shows supply and temperature information instead of cell voltages.



Channel screen during external discharge

A–H	same as in chapter 6.2	J	operating temperature
I	input voltage	K	*Input Power* value (in mWh)
		L	*Charged Times* value (in pcs)

7. Troubleshooting

Problem	Solution
Error during the self-check (*System Self-checking*)	If a battery is connected to the output during the self-check, the self-check ends with an error. Remove the battery, wait 5 seconds and try again. Do not connect the battery during the self-check and wait for it to be completed before any further operation.
Battery connection error	Unplug and reconnect the battery and make sure all connections are reliable. If the error message repeats, check the metal contacts of the battery connectors for oxidation or burning that impairs good contact.
Charging or discharging does not work properly, the charger overheats	Make sure the vent and the fan are not covered and do not use the charger in direct sunlight, in a confined space or in a hot environment – the temperature protection may have been activated.
A warning appears before the task starts	The battery is connected without the balance lead. For lithium batteries, connect the balance lead as well.

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 D6 Dual) is marked on the product; system information and the serial number are shown 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

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 repairs the product free of charge. Free repair is not provided if the fault is caused by improper use or modification by the customer. If your product has a fault covered by the warranty, contact the manufacturer as soon as possible – it will assist you with the service.

If parts need to be replaced after the warranty period, the manufacturer charges for the parts and a service fee.

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

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