SkyRC B6neo 2

Smart Battery Charger
DC 300 W · USB-C PD 80 W



Read the entire manual carefully before first use, especially the safety instructions. Never leave a charging battery unattended.

Instruction Manual · English

Contents

1. Safety Instructions

2. Introduction

3. Overview and Specifications

3.1 Controls and connectors

3.2 Specifications

4. Power and Battery Connection

4.1 Connecting to a power source

4.2 Connecting the battery

4.3 Lithium battery connection with balance lead

5. Charge and Discharge Programs

5.1 Battery operations matrix

5.2 Lithium batteries (LiPo/LiFe/Li-ion/LiHV)

5.3 NiMH/NiCd batteries

5.4 Pb lead-acid batteries

6. Further Functions

6.1 DC power supply (DC Power)

6.2 Battery voltage meter

6.3 Battery resistance meter

6.4 Voltage calibration

6.5 Firmware upgrade

7. System Settings and Error Messages

8. Information for the EU and Czech Market

9. Warranty and rights arising from defective performance

1. Safety Instructions

1.1 Warning

The charger is intended for users **aged 14 and over**. Persons without experience in charging batteries may only use it under the supervision or guidance of a person responsible for their safety.

Failure to use this product properly and follow the warnings below may result in malfunction, electrical issues, overheating, **fire**, and could lead to injury or property damage. SkyRC Technology Co., Ltd. accepts no liability in such cases.

- **Never leave charging batteries unattended** during use.
- Never charge batteries overnight.
- Never attempt to charge dead, damaged, or wet battery packs.
- Never attempt to charge a battery pack containing different types of batteries.
- Never charge batteries in extremely hot or cold places or in direct sunlight.
- Never charge a battery if the cable has been pinched or shorted.
- Never connect the charger if the power cord has been pinched or shorted.
- Never attempt to dismantle the charger or use a damaged charger.
- **Never attach your charger to both a PD and a DC power source at the same time.**
- Always use the charger with the correct charging and discharging program.
- Always use only rechargeable batteries designed for use with this type of charger.
- Never use the charger on car seats, carpets, or similar surfaces.
- Always operate the charger away from flammable and explosive materials.
- Do not cover the fan on the underside of the charger (marked *DO NOT COVER!* on the device).
- Charge batteries on a non-flammable surface, ideally in a fireproof bag, and keep a suitable fire extinguishing agent at hand.

1.2 Standard Battery Parameters

Select the correct operating procedure based on the battery parameters. **Incorrect settings could lead to battery damage, fire, or even explosion.**

Parameter	LiPo	Li-ion	LiFe	LiHV	NiMH	NiCd	Pb
Nominal voltage (V/cell)	3.7	3.6	3.3	3.8	1.2	1.2	2.0
Charge voltage (V/cell)	4.15–4.25	4.05–4.25	3.58–3.70	4.25–4.50	–	–	2.30–2.75
Storage voltage (V/cell)	3.75–3.90	3.70–3.85	3.25–3.40	3.85–3.95	–	–	–
Allowable fast charge current	≤1C	≤1C	≤1C	≤1C	≤1C	≤1C	≤0.4C
Discharge voltage (V/cell)	3.0–3.4	2.9–3.3	2.6–3.0	3.1–3.5	0.6–1.0	0.6–1.0	1.8–2.0

※ The voltage ranges show the values permitted by the manufacturer for each battery type. For standard LiPo batteries use a charge voltage of **4.20 V/cell** (6S: 25.2 V), for LiHV **4.35 V/cell** (6S: 26.1 V) and for storage **3.8 V/cell** (6S: 22.8 V).

2. Introduction

2.1 About the charger

Congratulations on choosing the **SkyRC B6neo 2** Smart Charger!

B6neo 2 boasts a stylish, ultra-compact design. While it's simple to use, some basic knowledge is required to operate it effectively. These operating instructions are designed to help you quickly familiarize yourself with its features.

The B6neo 2 is a DC smart charger with a maximum output of **300 W**, capable of charging a variety of battery types (LiPo, LiFe, Li-ion, LiHV, NiMH, NiCd, Pb) and functioning as a **power supply**. This makes it a valuable tool for hobbyists who need to power DC equipment. Its unique feature of measuring battery voltage without powering on the device makes voltage checks hassle-free.

Please BE SURE to read these instructions, warnings and safety notes prior to using the charger for the first time.

Manufacturer	SkyRC Technology Co., Ltd.
Manufacturer's website	www.skyrc.com
Manufacturer's e-mail	info@skyrc.com

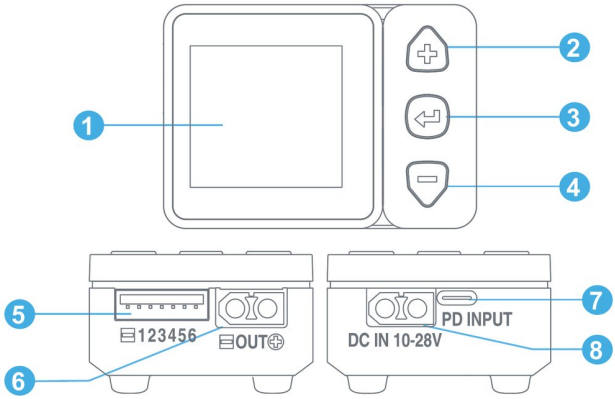
2.2 In the box

- 1× SkyRC B6neo 2 Smart Charger
- 1× Instruction Manual

※ A power supply, charging and balance leads and batteries are not included.

3. Overview and Specifications

3.1 Controls and connectors



① **LCD display**

② **+ / Up button** – increase the value or scroll through the menus/options.

③ **Enter button** – confirm or terminate the current program, enter Charge Settings and perform other actions.

④ **– / Down button** – decrease the value or scroll through the menus/options.

⑤ **Balance port**

⑥ **Main port** (XT60 charge/discharge port, marked OUT)

⑦ **USB-C port** (PD input, marked PD INPUT)

⑧ **XT60 DC input** (marked DC IN 10-28V)

3.2 Specifications

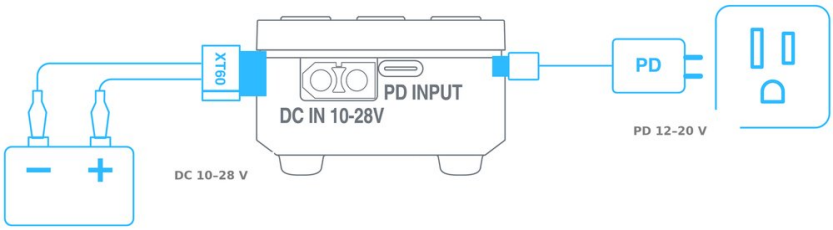
Parameter		Value
Input voltage	DC	10–28 V
	PD3.0/QC	12–20 V
Input current	DC	16 A (±2 A)
	PD	5 A (±1 A)
Max. output power	DC	300 W (±10 %)
	PD	80 W (±10 %)
Working modes	LiPo/LiFe/ Li-ion/LiHV	Balance CHG, Charge, Storage, Discharge
	NiMH/NiCd	Charge, Re-Peak, C_D Cycle, D_C Cycle, Discharge
	Pb	Normal, AGM Charge, Cold Charge, Discharge
Battery cells	LiPo/LiFe/ Li-ion/LiHV	1S–6S
	NiMH/NiCd	1S–15S
	Pb	3S/6S
Charge current	all types	0.2–0.5 A (±0.1 A)
		0.6–15 A (±10 %)
Discharge	current	0.1–0.5 A (±0.1 A)
		0.6–2 A (±15 %)
	power	max. 24 W (±10 %) based on 6S (4.2 V/cell)
DC power supply (DC Power)	voltage	5–27 V (±10 %)
	current	1–15 A (±10 %)
Balance current	LiPo/LiFe/ Li-ion/LiHV	max. 550 mA
Working environment	temperature	0 °C to 40 °C (32 °F to 104 °F)
	humidity	5–75 %
Storage environment	temperature	−10 °C to 70 °C (14 °F to 158 °F)
	humidity	5–75 %
Size		70 × 50 × 31 mm
Weight		84 g

4. Power and Battery Connection

4.1 Connecting to a power source

The SkyRC B6neo 2 supports two input methods:

- **DC 10–28 V** – via the XT60 input (DC IN) from a compatible DC power source or battery; maximum power 300 W.
- **PD 12–20 V** – via the USB-C port (PD INPUT) from a PD3.0/QC power supply; maximum power 80 W.



Power supply via the DC input (left) or USB-C PD (right)

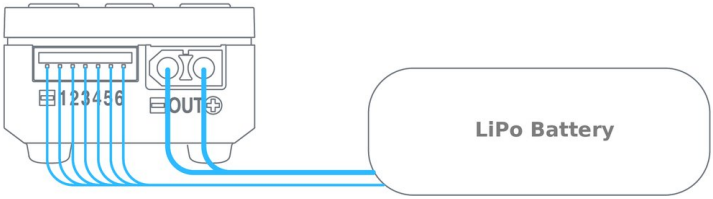
Never attach the charger to both a PD and a DC power source at the same time.

4.2 Connecting the battery

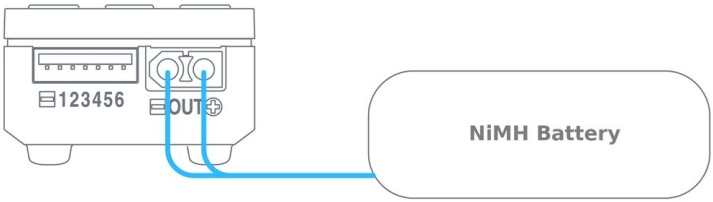
To avoid short circuits, always power the charger first via the DC or PD input, then connect the battery to the main port. When disconnecting, reverse the sequence.

4.3 Lithium battery connection with balance lead

- For safety reasons, it is highly recommended to charge lithium batteries (LiPo, Li-ion, LiFe and LiHV) using **Balance CHG** mode, unless the battery lacks a balance wire.
- Ensure that the balance wire is connected to the charger with the **black wire** aligned with the negative marking. **Check the polarity to ensure correct connection!**



Lithium battery – main port and balance port



NiMH/NiCd or Pb battery – main port only

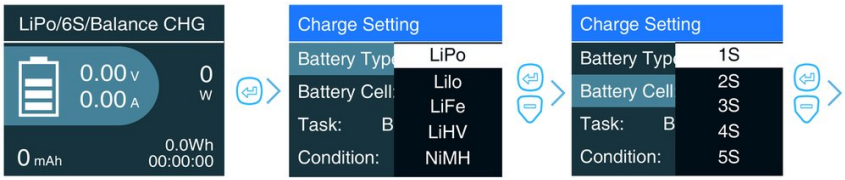
5. Charge and Discharge Programs

5.1 Battery operations matrix

Type	Mode	Description
LiPo Li-ion LiFe LiHV	Balance CHG	Charges the lithium battery in balance mode to ensure each cell's voltage is balanced. The balance lead must be connected.
	Charge	Charges the lithium battery without requiring a balance lead connection.
	Storage	Charges or discharges the battery to a specific storage voltage.
	Discharge	Discharges the lithium battery to a specific value, which can be set before discharging.
NiMH NiCd	Charge	Charges the battery based on the selected charging rate.
	Re-Peak	Charges the battery twice in a row automatically, which is useful for ensuring the battery is fully charged.
	C_D Cycle	1 to 5 cycles of charge → discharge for refreshing and restoring the performance of NiMH/NiCd batteries.
	D_C Cycle	1 to 5 cycles of discharge → charge for refreshing and restoring the performance of NiMH/NiCd batteries.
	Discharge	Discharges the battery based on the selected discharging rate.
Pb	Normal	Charges the Pb battery based on the selected charging rate.
	AGM Charge	Charges the AGM battery based on the selected charging rate.
	Cold Charge	Charges the Pb battery at low temperature based on the selected charging rate.
	Discharge	Discharges the Pb battery based on the selected discharging rate.

Use the **+** and **−** buttons to move through the menus and press **Enter** to confirm.

5.2 Lithium batteries (LiPo/LiFe/Li-ion/LiHV)



① **Enter Charge Setting** – press **Enter** to enter *Charge Setting*.

② **Select battery type** – press **Enter** to call out the *Battery Type* menu and select your lithium battery type.

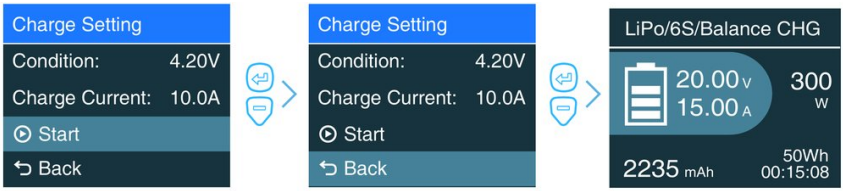
③ **Set battery cells** – call out the *Battery Cell* menu and select the number of cells.



④ **Select task** – call out the *Task* menu and select your desired working mode.

⑤ **Select condition** – call out the *Condition* menu and adapt the cut-off voltage to the demand.

⑥ **Select charge current** – call out the *Charge Current* menu and adapt the charge current to the demand.



⑦ **Start** – confirm to initiate the program.

⑧ **Back** – confirm to step back to the main interface.

⑨ **Stop** – to terminate the current program, press **Enter** once.

Do not connect the battery before turning on the charger!

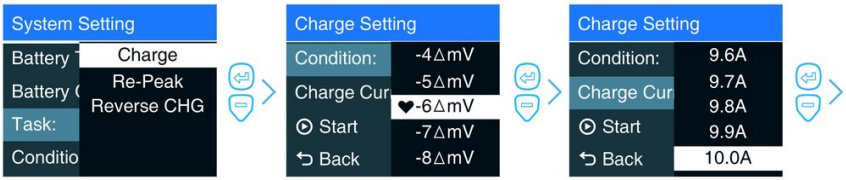
5.3 NiMH/NiCd batteries



① **Enter Charge Setting** – press **Enter** to enter *Charge Setting*.

② **Select battery type** – press **Enter** to call out the *Battery Type* menu and select NiMH or NiCd.

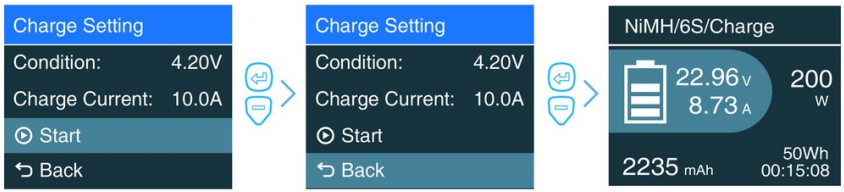
③ **Set battery cells** – call out the *Battery Cell* menu and select the number of cells.



④ **Select task** – call out the *Task* menu and select your desired working mode.

⑤ **Select condition** – call out the *Condition* menu and set the voltage drop (−ΔV) at which charging is terminated.

⑥ **Select charge current** – call out the *Charge Current* menu and adapt the working current to the demand.



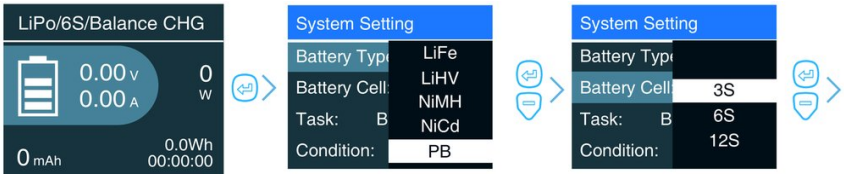
⑦ **Start** – confirm to initiate the program.

⑧ **Back** – confirm to step back to the main interface.

⑨ **Stop** – to terminate the current program, press **Enter** once.

※ For *Re-Peak*, you must set the rest times appropriately.

5.4 Pb lead-acid batteries



① **Enter Charge Setting** – press **Enter** to enter *Charge Setting*.

② **Select battery type** – press **Enter** to call out the *Battery Type* menu and select Pb.

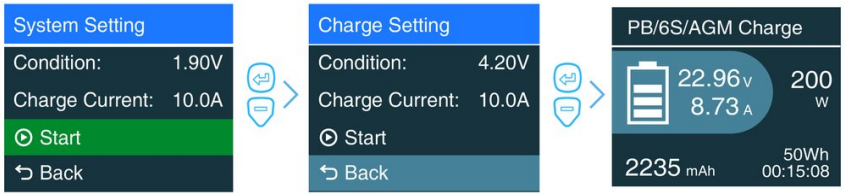
③ **Set battery cells** – call out the *Battery Cell* menu and select the number of cells.



④ **Select task** – scroll to *Task*, call out the menu and select the working mode.

⑤ **Condition** – there is no option to change it.

⑥ **Select charge current** – call out the *Charge Current* menu and adapt the working current to the demand.*



⑦ **Start** – confirm to initiate the program.

⑧ **Back** – confirm to step back to the main interface.

⑨ **Stop** – to terminate the current program, press **Enter** once.

* There is no option to change the current for *Reverse Charge*.

6. Further Functions

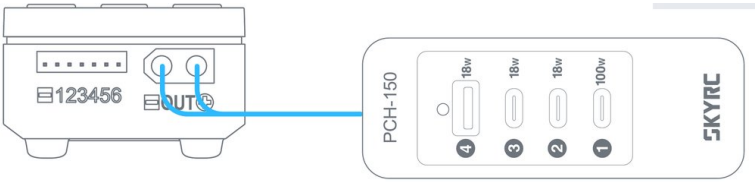
6.1 DC power supply (DC Power)

① On the main interface, hold **Enter** for a few seconds to enter the System Settings.

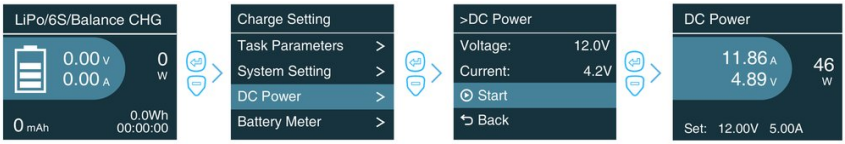
② Select *DC Power*, then adjust the output voltage (5–27 V) and current (1–15 A).

③ After setting up, select *Start* to activate the power function.

④ Connect your DC device.



Powering a DC device from the main port

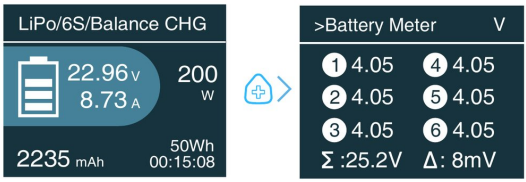


Manufacturer's video tutorial for the DC Power function: scan the QR code.

6.2 Battery voltage meter

▶ Method 1 – during charging

During the charging process, press **+** on the main screen to switch back and forth to view the cell voltages.



▶ Method 2 – without powering the charger

The charger can detect battery voltage on its own. Simply connect the lithium battery's balance connector directly to the charger's balance port – the charger powers on automatically and displays the battery voltage.

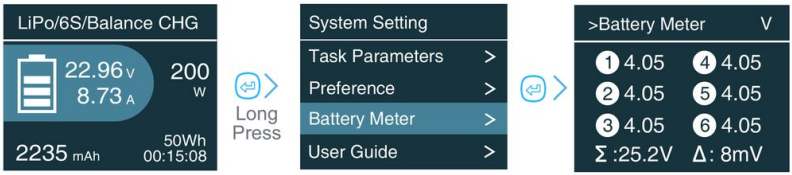


▶ Method 3 – in System Settings

① After connecting the charger to the power supply, press and hold **Enter** on the main screen to enter System Settings.

② Use **+** and **−** to select *Battery Meter*, then connect the battery to the balance port.

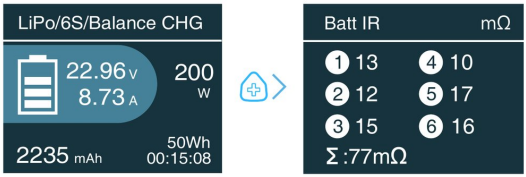
③ Press **Enter** to detect the battery voltage. Press **+** to switch between the cell voltages.



6.3 Battery resistance meter

▶ Method 1 – during charging

During the charging process, press **+** on the main screen to switch back and forth to view the internal resistance of each cell.



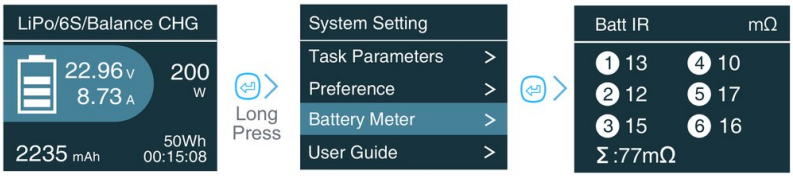
▶ Method 2 – in System Settings

① Connect the charger to the power supply, then press and hold **Enter** on the main screen to enter System Settings.

② Use **+** and **−** to select *Battery Meter* and connect the battery, ensuring the balance port is connected.

③ Press **Enter** to measure the internal resistance of the battery.

④ Press **+** to switch between the internal resistance values of each cell.



6.4 Voltage calibration

① Connect a 6S battery to the B6neo 2, ensuring that the balance port is connected.

② On the main page (battery voltage detection page), briefly press **+** to enter the cell voltage page.

③ Simultaneously press and hold **Enter** and **+** to enter the calibration page.

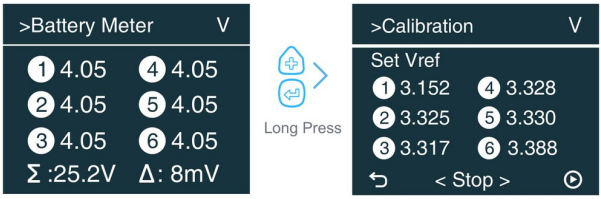
④ Press **+** to check the voltage of each cell one by one.

⑤ Press **Enter** to select the desired voltage; the value will turn blue.

⑥ Adjust the value using **+** or **−**.

⑦ After calibration, press **+** to enter the confirmation option.

⑧ Press and hold **Enter** to save the updated values.



6.5 Firmware upgrade

Connect the charger to a computer with a USB-C cable and use the manufacturer's **Charger Master** software.

Download Charger Master at www.skyrc.com/downloads or scan the QR code.

① Launch Charger Master, which will automatically detect the device.

② If detected, click to check for firmware updates.

③ If a new version is available, the *Update* button will appear.

④ Click *Update* and wait for the process to complete.



DO NOT power off or exit the program during the upgrade process!

7. System Settings and Error Messages

7.1 System settings

On the main interface, hold **Enter** for a few seconds to enter System Settings.

Menu	Option	Definition
Task Parameters	Safety Timer	Customize a time period for program protection.
	Max. Capacity	Customize the capacity protection.
	Trickle Charge	Enable or disable trickle charge.
	Holding Voltage	Enable or disable holding voltage. When enabled, if the battery voltage drops to a specified value, the charger will automatically charge with a small current.
	Back	Back to the previous interface.
Preference	Language	Select your preferred language.
	Min. Input Voltage	Set the minimum voltage for input protection.
	LCD Backlight	Adjust the screen brightness.
	Volume	Adjust the key and beep volume.
	Completion Signal	Choose how you'd like to be reminded when the program completes.
	Back	Back to the previous interface.
Battery Meter	–	Measure the battery voltage and internal resistance. Press − to exit.
User Guide	–	Check the instruction manual.
Factory Settings	–	Restore the factory settings.
System Info	–	Check the current system information. Press **Enter** to exit.
Regulatory	–	Check the certification information.
Back	–	Back to the previous interface.

7.2 Error messages

In case of a fault, the B6neo 2 displays an error message indicating issues like connection problems or battery mismatches. Refer to the table below for troubleshooting.

Error message	Explanation
DC In Too Low!	DC input voltage is lower than preset.
DC In Too High!	DC input voltage is higher than preset.
Connection Break!	The battery may be broken.
Cell Error!	The cells do not match.
Battery Type!	The battery type is wrong.
Overcharge Capacity Limit!	The charged capacity has reached the preset capacity limit.
Over Time Limit!	The program has timed out.
Int.Temp.Too High!	The internal temperature is high.
Over Load!	The charger is overloaded.
Reversed Polarity!	The battery connection is reversed.
Fully Charged!	The battery is already fully charged.
Outlet Volt. Too Low!	The DC output voltage is too low.
Outlet Overload!	The DC output is overloaded.
Balance Connection Error!	An error occurred with the balance connection.
Cell Volt Diff.!	The voltage difference between the cells is high.
Set Power Error!	There is an error in the DC power settings.

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 (SkyRC B6neo 2) is given on the device; the device identification number (PID) and the hardware and firmware versions are shown in the *System Info* menu, the certification information in the *Regulatory* 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.

We guarantee this product to be free of manufacturing and assembly defects for a period of **one year** from the time of purchase. The warranty only applies to material or operational defects which are present at the time of purchase. During that period, we will repair or replace free of service charge products deemed defective due to those causes.

This warranty is not valid for any damage or subsequent damage arising as a result of misuse, modification, or failure to observe the procedures outlined in this manual.

Manufacturer's notes:

- The manufacturer's warranty service is valid in China only.
- If you need warranty service overseas, please contact your dealer in the first instance, who is responsible for processing guarantee claims overseas. Due to high shipping costs and complicated customs clearance procedures to send back to China, SkyRC can't provide warranty service to overseas end users directly.
- If you have any questions not covered in this manual, please feel free to send an e-mail to info@skyrc.com.

Manufacturer's liability exclusion:

This charger is designed and approved exclusively for use with the types of battery stated in this instruction manual. SkyRC accepts no liability of any kind if the charger is used for any purpose other than that stated. We are unable to ensure that you follow the instructions supplied with the charger, and we have no control over the methods you employ for using, operating and maintaining the device. For this reason, we are obliged to deny all liability for loss, damage or costs that are incurred due to the incompetent or incorrect use and operation of our products, or which are connected with such operation in any way. Unless otherwise prescribed by law, our obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of those SkyRC products which were immediately and directly involved in the event in which the damage occurred.