P200 V2

ToolkitRC · Adjustable power supply
User manual



Please read this entire manual carefully before first use, especially the safety instructions in chapter 1, and keep it for future reference.

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

Contents

1. Safety

2. Product description

2.1 Features

2.2 P200 layout

3. Quick start

4. Output settings and display instructions

4.1 Main interface

4.2 USB interface

5. System settings

6. Other functions

6.1 Firmware upgrade

6.2 Fan level

6.3 Manual voltage and current calibration

7. Specifications

8. Information for the EU and Czech Market

9. Warranty and rights arising from defective performance

1. Safety

1.1 Manufacturer's instructions

① The P200 accepts an input voltage of **DC 7–28 V** or **AC 100–240 V**. Make sure the voltage of your power source matches these ranges, and pay attention to the positive and negative polarity when connecting a DC power source.

② Do not use this product near heat sources, in humid conditions or in an environment with flammable or explosive gas.

③ Always supervise the product during use to prevent accidents.

④ When the product is not in use, unplug the input power in time.

⑤ When using the product for charging, set a current that matches the battery. Do not set an excessive charging current, so as not to damage the battery.

1.2 General safety rules

- The product is intended for use by persons aged 14 and over. Keep it out of the reach of children.
- Use it only in dry indoor areas. Protect it from water, dust, direct sunlight and impacts.
- Do not cover the ventilation openings or the fan on the back, keep the air flowing freely around the device and do not place any objects on it.
- Only use an undamaged power cord and undamaged cables. Do not continue to use a damaged device or cable.
- Do not open or modify the device. It contains mains voltage and there are no user-serviceable parts inside.
- Before connecting a load, check the set output voltage and current limit. Do not short-circuit the output terminals and observe the correct polarity: red socket = +, black socket = −.
- Clean the device with a dry cloth only. Disconnect all power before cleaning.

1.3 Charging batteries

- The power supply has no balance connector and does not monitor individual cell voltages. Charge multi-cell Li-Po and LiHV batteries with a balance charger.
- When charging a lithium battery, set the output voltage no higher than the fully charged voltage of the battery: **4.20 V per cell** for Li-Po (e.g. 12.6 V for 3S), **4.35 V per cell** for LiHV (e.g. 13.05 V for 3S).
- Charge the battery on a non-flammable surface, never leave it charging unattended and never charge a swollen, damaged or hot battery.

2. Product description

The P200 is a mini desktop adjustable power supply with two input modes, AC or DC. It has a built-in 100 W GaN AC power supply and an IPS wide-angle display that shows the output voltage and current, including their curves.

2.1 Features

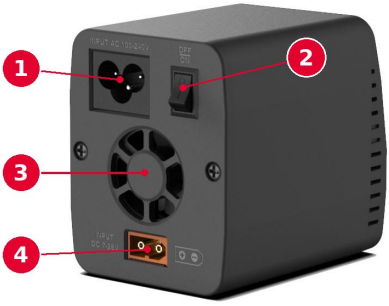
- Built-in compact gallium nitride (GaN) AC power supply.
- Two input modes: AC or DC.
- Conversion efficiency up to 95%.
- AC input: full output power up to 100 W.
- DC input: full output power up to 200 W.
- USB-C output up to 65 W.
- Full fast-charging protocol support: PD3.0 / PD2.0 / PPS / QC4 / QC3.0 / QC2.0 / AFC / FCP / SCP / PE2.0 / PE1.1 / SFCP / VOOC.
- Adjustable output voltage 1.0–30.0 V.
- Adjustable constant current 1.0–10.0 A.
- Over-voltage, over-current, over-temperature and short-circuit protection.
- Metal dial wheels with a solid feel.
- High-brightness, high-definition 1.54" IPS display.
- Firmware upgrade: the device appears on a computer as a USB drive; the upgrade file is simply copied to it.

2.2 P200 layout



Front

① Display
② **A** wheel – current adjustment
③ **V** wheel – voltage adjustment
④ Power button
⑤ Main output – negative pole (black 4 mm banana socket)
⑥ Main output – positive pole (red 4 mm banana socket)
⑦ USB-C fast-charge output



Back

① AC input port 100–240 V
② AC power switch
③ Cooling fan
④ DC input port 7–28 V (XT60 connector)

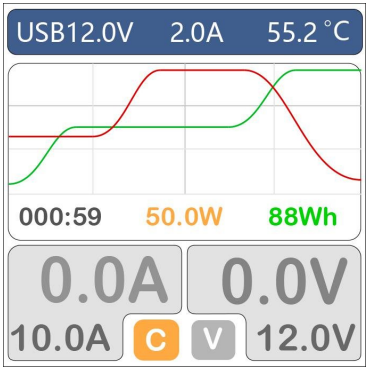
3. Quick start

① Connect a 7–28 V DC power supply to the **DC input port** on the back of the P200, or connect AC 100–240 V to the **AC input port** and turn on the **AC power switch**.

② Press the **power button** on the front once. The display shows the boot logo for 2 seconds.

③ At the same time, a do-re-mi boot sound plays.

④ After booting, the screen enters the main interface:



Main interface after power-on (output off)

⑤ Turn the **V** wheel to set the output voltage.

⑥ Turn the **A** wheel to set the output constant current (current limit).

⑦ Short press the **V** wheel to output the set voltage from the main port.

⑧ Short press the **A** wheel to enter the USB-C information interface.

⑨ Long press the **V** wheel to stop the output and enter the system settings.

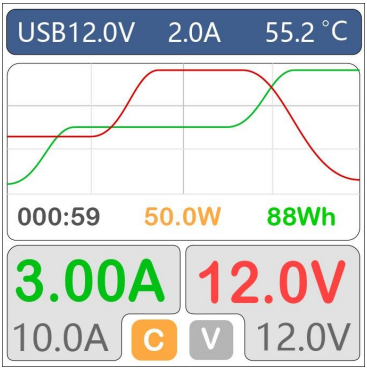
⑩ Long press the **A** wheel to clear the accumulated time and energy.

Warning:

- Applying too high a DC input voltage may damage the product.
- Do not connect a source to the input if its voltage is not marked.
- When the main output is used to charge a lithium battery, pay attention to the fully charged voltage of the battery (see chapter 1.3).

4. Output settings and display instructions

Turn the **V** wheel on the main interface to set the output voltage. The voltage step can be adjusted in the system menu. Turn the **A** wheel to set the maximum constant current value. After setting the required voltage and current, short press the **V** wheel once to output the set voltage from the main port. The real-time monitoring values are then displayed in colour:



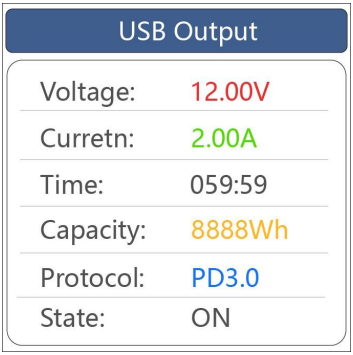
Main interface with the output on

4.1 Main interface

Value	Meaning
USB 12.0V 2.0A	Output voltage and current of the USB-C port
55.2 °C	Internal temperature, monitored in real time
Curve	Real-time record of the main port output voltage and current
000:59	Accumulated output time of the main port
50.0W	Present output power of the main port
88Wh	Total energy delivered by the main port
3.00A	Real-time output current of the main port
12.0V	Real-time output voltage of the main port
10.0A (bottom)	Set maximum constant current value
12.0V (bottom)	Set constant voltage value

4.2 USB interface

On the main interface, short press the **A** wheel once to enter the USB-C output monitoring interface:



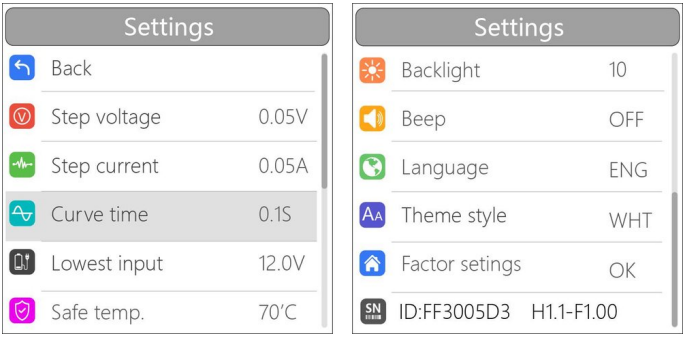
USB-C output interface

Value	Meaning
Voltage	Real-time output voltage of the USB-C port
Current	Real-time output current of the USB-C port
Time	Accumulated output time
Capacity	Accumulated output energy (Wh)
Protocol	Fast-charging protocol currently used by the connected device
State	USB-C output status (ON = on)

- Long press the **A** wheel once to clear the accumulated values.
- When a USB-C charging device is connected, the port outputs the voltage and current according to the negotiated protocol.

5. System settings

Long press the **V** wheel on the main interface to enter the *Settings* system menu.



System settings – both parts of the menu

Item	Meaning	Range
Back	Back to the main interface.	–
Step voltage	Step by which the output voltage changes when the V wheel is turned by one notch.	0.05–0.5 V
Step current	Step by which the output current changes when the A wheel is turned by one notch.	0.05–0.5 A
Curve time	Curve recording period.	0.1–10 s
Lowest input	When the DC input voltage drops below this value, the output stops.	–
Safe temp.	Internal temperature protection: when the internal temperature exceeds this value, the output stops.	–
Backlight	Display backlight brightness.	1–10
Beep	Buzzer tone; can be switched off.	–
Language	System display language, e.g. English, Chinese.	–
Theme style	Display colour theme – bright or dark.	–
Factory settings	Restores all setting items to factory values.	–
ID	Unique identification number of each device, followed by the hardware (H) and firmware (F) version.	–

6. Other functions

6.1 Firmware upgrade

Connect the P200 to a computer with the USB data cable supplied in the box. The computer recognises a USB drive named **Toolkit**. Download the upgrade file **app.upg** from the official website www.toolkitrc.com and copy it to the drive, overwriting the existing file. The firmware is then upgraded.

6.2 Fan level

When the internal temperature of the device exceeds 45 °C, the fan runs at half speed to reduce noise. When the internal temperature exceeds 53 °C, the fan runs at full speed to maximise heat dissipation.

6.3 Manual voltage and current calibration

① Press the power button and, within 1 second, press and hold the **A** and **V** wheels simultaneously. The device enters the manual voltage calibration mode.

② Measure the actual input and output voltage with a voltmeter.

③ Move the cursor to the corresponding voltage value and adjust it to match the voltmeter reading.

④ When the calibration is complete, move the cursor to save and short press once. A long beep confirms that the settings have been saved.

⑤ Exit the calibration or switch the device off.

7. Specifications

Parameter	Value
Manufacturer	ToolkitRC Technology (Shenzhen) Co., Ltd, www.toolkitrc.com
Model	P200 V2
AC input voltage	100–240 V, max. 100 W
DC input voltage	7–28 V, max. 10 A / 200 W
Main output – voltage	1.0–30.0 V
Main output – current	1.0–10.0 A
Main output – power	max. 100 W with AC input / max. 200 W with DC input
USB-C output	5.0–20.0 V, max. 65 W
USB-C protocols	PD3.0 / PD2.0 / PPS / QC4 / QC3.0 / QC2.0 / AFC / FCP / SCP / PE2.0 / PE1.1 / SFCP / VOOC
Conversion efficiency	up to 95%
Protection	over-voltage, over-current, over-temperature, short circuit
Protection response	< 1 ms (short circuit, over-current, over-voltage)
Adjustment period	8 ms
Interfaces	main port: 4.0 mm banana sockets; USB-C: fast charging and firmware upgrade
Display	IPS LCD 1.54", 240 × 240 px
Product size	84 × 63 × 78 mm
Product weight	360 g
Package size	160 × 150 × 73 mm
Package weight	670 g

8. Information for the EU and Czech Market

The information in this chapter describes the legal situation in the Czech Republic, where the product is sold. European Union legislation applies in all Member States, but national implementing rules may differ. When the product is used in another country, the law of the country in which the product is operated prevails.

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 (P200) is shown on the device and its packaging; the unique device identification number (ID) and the firmware version are shown on the last line of the *Settings* system menu (chapter 5).

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.