

# SKYRC Q200neo DC Multi-Function Smart Charger Instruction Manual

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## SKYRC Q200neo DC Multi-Function Smart Charger

### Introduction

Introducing the SkyRC Q200neo AC/DC Multi-Function Smart Charger, an enhanced version of the Q200. With four independent ports and compatibility with various RC batteries, it adapts to different chemistries. It can act as a quad-output digital power, offering adjustable voltage (1.0V-30V), and current (0.1A-10.0A) per output. The 20W USB-C PD 3.0 charging port allows rapid charging of smartphones, tablets, and the 2020 MacBook Air. Connect effortlessly via Type-C or Bluetooth, and control it with Charger Master on a PC, Mac, or smartphone. Before using it for the first time, it is crucial to carefully read through the instructions, warnings, and safety tips provided. Improperly charging a battery or misusing the charger can lead to potentially hazardous situations such as fire or explosion.

### Package

### Meet Q200neo

### Specification

#### Warning

Q200neo is not intended for use by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning the use of the charger by a person responsible for their safety. Failure to exercise caution while using this product and comply with the following warnings could result in a product malfunction, electrical issues, excessive heat, FIRE, and ultimately injury and property damage.

- 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 place 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 an AC 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.

## Standard Battery Parameters

Select the correct operating procedure in accordance with the battery parameters. Incorrect settings may cause the battery to burn or even explode.

## Explanation of Buttons

### Port Switch Button

Switch Between Ports A,B, C,and D

### Scroll Button

- Navigate through Ports A,B, C, and D in the home menu
- Short-press to enter into the parameters setting and confirm your selection.
- Scroll the wheel to select different menus or adjust parameters.
- Press and hold the scroll wheel for two seconds to access the System Setting menu.

### Program Flow Chart

**Note:** This flow chart provides an example for one port, and the charts for the four ports (Ports A, B, C, and D) are identical

## Power and Battery Connection

1. Connect to power source There are two options of inputs for SkyRC Q200neo: AC 100-240V or DC 10-30V. AC 100-240V 12V DC Battery
2. Connect the battery

TO AVOID SHORT CIRCUITS, ALWAYS CONNECT THE CHARGE LEADS TO THE CHARGER FIRST AND THEN TO THE BATTERY. REVERSE THE SEQUENCE WHEN DISCONNECTING.

### LiPo Battery Connection with Balance Adapter

For safety reasons, it is highly recommended to charge Lithium batteries (LiPo, Lilon, LiFe, and LiHV) using Balance CHG mode unless the battery comes without a balance connector. The balance wire attached to the battery must be connected to the charger with the black wire aligned with the negative marking. Ensure correct polarity!

## **NiMH/NiCd or Pb Battery Connection**

### **Charging**

Various operations are applicable depending on the battery type. This chart illustrates which operations are relevant for different types of batteries.

#### **Lithium Battery Program(LiPo/LiFe/Lilon/LiHV)**

The following flowchart is a reference to set the program manually. Scroll to select the port and short-press to confirm.

#### **Enter CHARGE SETTING**

Short-press the Scroll Wheel to enter the CHARGE SETTING.

#### **Select Battery Type**

Short-press the Scroll Wheel to call out the Battery Type menu, and scroll to select LiPo.

#### **Select Battery Cell**

Scroll to Battery Cell to call out the menu and scroll to select the correct battery cells.

#### **Select Task**

Scroll to Task, call out the menu, and scroll to select the working mode.

#### **Select Condition**

Scroll to Condition, call out the menu and select the terminal charging voltage.

#### **Set Charge/Discharge Current**

Scroll to Charge/Discharge Current, call out the menu and scroll to select the current.

#### **Start**

Short-press the Scroll Wheel to confirm and initiate the program.

#### **Stop**

Short-press the Scroll Wheel to stop the program. If confirm to stop, short-press the Scroll Wheel again to confirm. If not stop, short-press the Port button to back.

### **ENTER CHARGE SETTING**

Short-press the Scroll Wheel to enter the CHARGE SETTING.

#### **Select Battery Type**

Short-press the Scroll Wheel to call out the Battery Type menu, and scroll to select NiMH.

#### **Select Battery Cell**

Scroll to Battery Cell, call out the menu and scroll to select the correct battery cells.

#### **Select Task**

Scroll to Task, call out the menu and scroll to select the working mode.

#### **Select Condition**

Scroll to Condition, call out the menu and set the delta voltage.

### **Set Charge/Discharge Current**

Scroll to Charge/Discharge Current, call out the menu and scroll to select the current

### **Start**

Short-press the Scroll Wheel to confirm and initiate the program.

### **Stop**

#### **Short-press the Scroll**

Wheel to stop the program. If prompted to stop, short-press the Scroll Wheel again to confirm, or short-press the Port button to return.

## **Pb Lead-Acid Battery Program**

### **ENTER CHARGE SETTING**

On the main interface, press the Scroll Wheel to enter CHARGE SETTING.

### **Select Battery Type**

Short-press the Scroll Wheel to call out the Battery Type menu, and scroll to select Pb.

### **Select Battery Cell**

Scroll to Battery Cell, call out the menu and scroll to select the correct battery cells.

### **Task Select**

Scroll to Task, call out the menu and scroll to select the working mode.

### **Select Condition**

Scroll to Condition, call out the menu and set the delta voltage.

### **Set Charge/Discharge Current**

Scroll to Charge/Discharge Current, call out the menu and scroll to select the current.

### **Start**

Short-press the Scroll Wheel to confirm and initiate the program.

### **Stop**

Short-press the Scroll Wheel to stop the program. If prompted to stop, short-press the Scroll Wheel again to confirm, or short-press the Port button to return.

## **Charger Master**

The Q200neo offers the convenience of charging and discharging directly from your computer, whether you're using Windows or MacOS. It provides a visual display of various parameters, such as charge time, capacity, charge current, and voltage, presented in a curve format.

1. Download the latest Charger Master onto your desktop. Unzip and open it;
2. Choose Data for USB work mode in System Setting>USB;
3. Connect Q200neo to your computer via a USB type-C cable; On the top left panel, choose the expected work mode to initiate the program

## **SkyCharger App Control**

With the built-in Bluetooth 5.0, Users can easily control the Q200neo charger through the SkyCharger app. The firmware can be upgraded over the OTA(On the Air). Scan the QR code below to download the SkyCharger app!

## DC Power

On the main menu, hold the Scroll Wheel for two seconds to enter Charger Setting>DC Power. Select the options of DC Power: adjust the output voltage and current. Select Start to activate the DC Power working mode. When acting as a digital power supply, Q200neo can regulate its output voltage or output current at a constant level. Constant Current(CC) Mode and Constant Voltage(CV) Mode can switch automatically as follows:

- If  $R \text{ load} > (V \text{ out} / I \text{ out})$  then the power supply is in CV mode
- If  $R \text{ load} < (V \text{ out} / I \text{ out})$  then the power supply is in CC mode

This is essential and vital for efficient and precise power delivery in various applications for our RC professionals

1. **Versatility:** CC/CV power supplies are versatile because they can switch between constant current and constant voltage modes. This makes them suitable for a wide range of applications, from powering delicate electronics to driving high-power devices. **Protection:** The CC mode can prevent overcurrent situations, which could damage electronic devices or create hazardous situations. By setting a maximum current limit, the power supply ensures that it won't deliver more current than the device can safely handle. **Battery Charging:** CC/CV power supplies are particularly useful for charging lithium-ion batteries, which require a precise charging protocol. Initially, the charger works in CC mode to restore most of
2. **Optimized for Various Loads:** Some loads require a specific voltage to operate correctly, while others need a particular current. A CC/CV power supply can adapt to these needs, providing a stable and suitable power output under various load conditions. **Improved Efficiency:** By dynamically switching between modes depending on the load, a CC/ CV power supply can often operate more efficiently than a power supply using only one mode. **Safe for LED Driving:** LEDs are current-driven devices, and a slight increase in voltage can lead to a high current, causing damage to LEDs. CC mode allows safe driving of LEDs. CV mode can be useful when LEDs are configured in parallel strings

## USB Type-C PD/QC3.0 Output

With the 20W USB-C PD 3.0 charging port, our RC players can enjoy rapid charging speeds like never before. Whether you're charging your smartphones, tablets, or 2020 MacBook Airs, this powerful port ensures that you can fuel up your devices in a fraction of the time.

## Voltage Calibration (For expert users only)

You can calibrate the voltage directly on the charger with a 6S LiPo battery. For more information, please contact us at [info@SkyRC.com](mailto:info@SkyRC.com)

## Charge Settings

On the main interface, press the Scroll Wheel to enter Charge Setting: switch between ports A, B,C, and D by pressing the Port button, or set parameters as below:

## System Setting

On the main interface, hold the Start button for two seconds to enter the System Setting.

## Firmware Upgrade

To recover from a firmware upgrade failure, please follow these steps:

1. Press and hold the Scroll Wheel, then connect the power cord; Q200neo will power on with a blue screen notice.
2. Connect Q200neo to your computer via a Type-C USB cable;

3. Launch the Charger Master on your computer;
4. When the status shows CONNECTED, click to check for new firmware;
5. Click to upgrade after detecting a new firmware;
6. Wait for the progress bar to finish and reach 100%; The process takes about 5 minutes

## Errors and Warnings

In the event of a fault, the charger will display an error message and sound an alarm. Conformity Declaration SkyRC Q200neo satisfies all relevant and mandatory CE directives and FCC Part 15 Subpart B.

## Warranty and Service

### 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 that were immediately and directly involved in the event in which the damage occurred.

### Warranty and Service

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 for 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 as a result of failure to observe the procedures outlined in this manual.


### Note:

The 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 custom clearance procedures to send back to China, please understand that SkyRC can't provide warranty service to overseas end users directly. If you have any questions that are not mentioned in the manual, please feel free to send an email to [info@skyrc.com](mailto:info@skyrc.com) The manual is subject to change without notice; please refer to our website for the latest version!

### Manufactured by

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## Documents / Resources

 <p><b>Q200neo</b> Instruction Manual</p>	<p><b><a href="#">SKYRC Q200neo DC Multi-Function Smart Charger</a></b> [pdf] Instruction Manual SK-100197 V1.0, Q200neo, Q200neo DC Multi-Function Smart Charger, DC Multi-Function Smart Charger, Multi-Function Smart Charger, Smart Charger, Charger</p>
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