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> [IDUINO PC1080 Dual Channel LiPo Battery Charger User Manual](#)

IDUINO SKYRC PC1080

IDUINO PC1080 Dual Channel LiPo Battery Charger User Manual

Model: SKYRC PC1080

1. INTRODUCTION

The IDUINO PC1080 is a high-performance dual-channel 6S LiPo charger specifically designed for industrial application drones. It offers reliable, safe, and user-friendly operation with a comprehensive set of functionalities. These include a battery voltage meter, internal resistance meter, LiHV charging mode, and a time-saving synchronization mode. Its robust design ensures stable performance in various environments.

2. PACKAGE CONTENTS

Please verify that all items listed below are present in your package:

- 1 x PC1080 Dual Channel LiPo Charger
- 1 x AC Power cord
- 1 x Synchronous data connectors
- 1 x English Manual (this document)

3. KEY FEATURES

The IDUINO PC1080 charger incorporates several advanced features for efficient and safe battery management:

- **High-Frequency Capacitor:** Utilizes high-specification large capacitors to ensure prolonged and stable operation.
- **Active PFC:** Features Active Power Factor Correction circuitry for optimal power draw, achieving high efficiency (93%) and reducing interference to the power grid.
- **Switched-mode Power Supply:** Designed to accept power from mains supplies globally.
- **Conformal Coating:** Electronic components are protected with a conformal coating, enhancing resistance to moisture, dust, chemicals, corrosion, and temperature extremes, ensuring stable field performance.
- **Automatic Sequential Charging:** When paired with G630 charging hubs, the PC1080 can automatically charge up to 12 LiPo battery packs in sequence, prioritizing batteries with the highest remaining capacity.

- **One-Key Start:** Simplifies the charging process with a single button press (default 20A current).
- **Unique Synchronization Function:** Allows one charger to control multiple other chargers for streamlined operation.
- **Battery Status Monitoring:** Provides real-time battery voltage and internal resistance detection.
- **Comprehensive Protections:** Includes short circuit maintenance, reverse polarity protection, over-temperature protection, and a built-in anti-fire protection circuit to prevent sparking during battery connection.

4. SPECIFICATIONS

Parameter	Value
Brand	IDUINO
Manufacturer	SKYRC
Model	SKYRC PC1080
Input Voltage	100-240 V AC
Output Power	1080 W (540 W x 2)
Discharge Power	100 W (50 W x 2)
Charge Current	1.0-20.0 A x 2
Balance Current	1.2 A
Battery Type	LiPo/LiHV
Battery Cell Count	6S x 2
Charging Modes	Balance Charge Mode / Storage Mode / Charge Mode
Product Dimensions	5 x 3 x 4 cm
Item Weight	1 kg
Country of Origin	China

5. PRODUCT OVERVIEW

5.1 Front View



This image displays the front of the IDUINO PC1080 charger, highlighting its dual charging channels, each with its own display screen, control buttons (STOP, STATUS, START), and battery connection ports. The robust handle for portability is also visible.

5.2 Rear View



The rear panel of the charger features the AC input port (100-240V), the main ON/OFF power switch, and two cooling fans to dissipate heat during operation. Data Link ports are also present for synchronization with other units.

5.3 Charger in Operation



This image shows the IDUINO PC1080 charger actively charging two 6S 16000mAh LiPo batteries. The display screens indicate the charging status, demonstrating the dual-channel capability of the device.

6. SETUP

Follow these steps for initial setup of your PC1080 charger:

1. **Unpack the Charger:** Carefully remove the charger and all accessories from the packaging.
2. **Connect AC Power:** Plug the supplied AC power cord into the AC input port on the rear of the charger. Connect the other end to a suitable 100-240V AC power outlet.
3. **Power On:** Flip the main ON/OFF switch on the rear panel to the 'ON' position. The display screens on the front will illuminate.
4. **Prepare Batteries:** Ensure your LiPo/LiHV batteries are in good condition and within their safe operating temperature range.
5. **Connect Batteries:** Connect your battery's main discharge lead to the corresponding output port on one of the charger channels. Then, connect the battery's balance lead to the balance port. Ensure correct polarity for all connections.

7. OPERATING INSTRUCTIONS

7.1 Basic Charging

To initiate a basic charge cycle:

1. **Select Channel:** Identify the channel (Master or Slave) you wish to use.
2. **Connect Battery:** As described in the Setup section, connect your battery to the chosen channel.
3. **One-Key Start:** Press the 'START' button on the desired channel. The charger will automatically begin charging with a default current of 20A.
4. **Monitor Progress:** The display screen will show real-time charging parameters such as voltage, current, and charged capacity.
5. **Stop Charging:** To stop charging at any time, press the 'STOP' button on the active channel.

7.2 Advanced Charging Modes

The PC1080 supports various charging modes:

- **Balance Charge Mode:** Recommended for LiPo/LiHV batteries to ensure all cells are charged to the same voltage, prolonging battery life.
- **Storage Mode:** Charges or discharges the battery to a specific voltage level suitable for long-term storage, preventing degradation.
- **Charge Mode:** Standard charging without balancing. Use with caution and only when balancing is not required.

To select a specific mode, navigate through the menu using the 'STATUS' button before pressing 'START'.

7.3 Synchronization Function

The unique synchronization function allows you to control multiple PC1080 chargers from a single master unit. Connect the synchronous data connectors between the chargers as per the diagram in the full manual (not provided here). Once connected, operations initiated on the master charger will be replicated on the slave chargers.

7.4 Battery Status Monitoring

During charging or when a battery is connected, you can press the 'STATUS' button to cycle through various battery parameters displayed on the screen, including:

- Total battery voltage
- Individual cell voltages
- Internal resistance of each cell
- Charging current and capacity

8. MAINTENANCE

Proper maintenance ensures the longevity and safe operation of your charger:

- **Cleaning:** Regularly wipe the charger's exterior with a soft, dry cloth. Do not use solvents or abrasive cleaners. Ensure ventilation openings are free from dust and debris.
- **Storage:** Store the charger in a cool, dry place away from direct sunlight, moisture, and extreme temperatures.
- **Cable Inspection:** Periodically inspect all cables and connectors for signs of wear, damage, or corrosion.

Replace damaged cables immediately.

- **Ventilation:** Ensure adequate airflow around the charger during operation. Do not block the cooling fans.

9. TROUBLESHOOTING

If you encounter issues with your PC1080 charger, refer to the table below for common problems and their solutions:

Problem	Possible Cause	Solution
Charger does not power on	No AC power; Power switch off; Faulty power cord	Check AC outlet; Ensure power switch is ON; Try a different power cord
Charging does not start	Battery not connected properly; Incorrect battery type selected; Safety error triggered	Reconnect battery (main and balance leads); Verify battery type and cell count; Check display for error messages (e.g., 'Connection Break', 'Cell Error')
Charger displays 'Over Temperature'	Poor ventilation; Ambient temperature too high; Internal fault	Ensure clear ventilation around charger; Move to a cooler environment; If problem persists, contact support
Battery not balancing correctly	Balance lead not connected; Damaged balance lead; Faulty battery cell	Ensure balance lead is fully inserted; Inspect balance lead for damage; Test battery with another device if possible
Synchronization not working	Data link cables not connected; Incorrect master/slave setup	Verify data link cable connections; Ensure one unit is set as master and others as slaves

If the problem persists after attempting these solutions, please contact customer support.

10. SAFETY INFORMATION

Always observe the following safety precautions when operating the IDUINO PC1080 charger:

- Never leave the charger unattended while in operation, especially when charging LiPo/LiHV batteries.
- Always charge batteries on a non-flammable surface, away from flammable materials.
- Ensure proper ventilation to prevent overheating.
- Do not attempt to charge damaged, swollen, or leaking batteries.
- Always connect the battery to the charger before connecting the charger to AC power. Disconnect AC power before disconnecting the battery.
- Keep the charger away from water, moisture, and high humidity.
- Do not disassemble or modify the charger. Refer all servicing to qualified personnel.
- Keep out of reach of children.

11. WARRANTY AND SUPPORT

The IDUINO PC1080 Dual Channel LiPo Battery Charger comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the

official IDUINO website. For technical support, troubleshooting assistance, or warranty claims, please contact IDUINO customer service through the contact information provided on their official website or your purchase receipt.

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