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**ULTRA POWER UPTUP100AC**

# Ultra Power UP100AC Plus 100W Multi-Chemistry AC/DC Charger User Manual

Model: UPTUP100AC

## 1. Introduction

The Ultra Power UP100AC Plus is a versatile 100W multi-chemistry AC/DC charger designed for various battery types used in RC models. It offers efficient charging capabilities and advanced features for hobbyists.

Key features include selectable charge termination voltage, adjustable delta-peak for NiCd/NiMH batteries, individual cell balancing for Lithium-based batteries, a battery meter function, data storage for up to 10 profiles, and a USB port for firmware upgrades or charging external devices.

## 2. Safety Information

**WARNING: Failure to follow these safety instructions may result in fire, property damage, or injury.**

- Always operate the charger in a well-ventilated area, away from flammable materials.
- Do not charge batteries unattended.
- Ensure the charger is compatible with the battery type and cell count before connecting.
- Never attempt to charge damaged or swollen batteries.
- Keep the charger away from water, moisture, and extreme temperatures.
- Do not block the cooling fan or ventilation openings.
- Disconnect the power supply when the charger is not in use.
- This product is not a toy. Keep out of reach of children. Recommended age for use is 16 years and above.

## 3. What's in the Box

Upon opening the package, please verify that all components are present and in good condition:

- Ultra Power UP100AC Plus Charger Unit
- Instruction Manual (this document)

## 4. Product Overview

Familiarize yourself with the various parts and connections of your UP100AC Plus charger.




Figure 4.1: Front view of the UP100AC Plus charger. This image shows the main display screen, control buttons (Stop, Batt.Type, Status, Enter, Start), and various ports including Balance Socket, Temp. port, PC Link, and a 5V/2.1A USB output.




Figure 4.2: Side view of the UP100AC Plus charger. This image highlights the DC 11-18V input port and the integrated cooling fan for heat dissipation.




Figure 4.3: Top-down view of the UP100AC Plus charger with approximate dimensions. The charger measures approximately 135mm in length, 95mm in width, and 61mm in height.

## 4.1 Control Panel and Display

- **LCD Display:** Shows charging status, battery information, and menu options.
- **Stop Button:** Stops the current charging/discharging process or navigates back in menus.
- **Batt.Type Button:** Selects battery type and enters battery program settings.
- **Status Buttons (Left/Right Arrows):** Navigates through menu options and adjusts parameters.
- **Enter Button:** Confirms selections and enters sub-menus.
- **Start Button:** Initiates the charging/discharging process after settings are confirmed.

## 4.2 Ports and Connections

- **AC Input:** For connecting to a standard wall outlet (100-240V AC).
- **DC Input:** For connecting to a DC power source (11-18V DC), such as a car battery or power supply.
- **Main Charge Output:** Connects to the battery's main charge lead.
- **Balance Socket:** For connecting the balance lead of LiPo/LiFe/Li-ion/LiHV batteries for individual cell balancing.
- **Temp. Port:** For connecting an optional temperature sensor (not included) to monitor battery temperature during charging.
- **PC Link Port:** For connecting to a computer for firmware upgrades (software not included/available).
- **USB Output (5V/2.1A):** For charging mobile devices or other USB-powered accessories.

# 5. Setup

## 5.1 Power Connection

1. **AC Power:** Connect the supplied AC power cord to the AC input port on the charger, then plug the other end into a suitable wall outlet.
2. **DC Power:** Alternatively, connect a DC power source (11-18V) to the DC input port using appropriate cables. Ensure correct polarity.
3. The charger will power on and display the main menu.

## 5.2 Initial Settings

Before charging, ensure the charger is set to the correct battery type and parameters.

- Use the "Batt.Type" button to cycle through battery chemistry options (LiPo, LiFe, Li-ion, LiHV, NiMH, NiCd, Pb).
- Use the "Status" arrows to navigate and "Enter" to confirm selections within menus.

# 6. Operating Instructions

## 6.1 Charging Lithium Batteries (LiPo/LiFe/Li-ion/LiHV)

1. Connect the battery's main charge lead to the charger's main output port.
2. Connect the battery's balance lead to the charger's balance socket. Ensure the correct cell count (e.g., 2S, 3S) matches the port.
3. Press "Batt.Type" to select the correct Lithium battery type (e.g., LiPo).
4. Use "Status" arrows to select the desired charging mode (e.g., "LiPo Balance Charge", "LiPo Fast Charge", "LiPo Storage", "LiPo Discharge"). For most cases, "Balance Charge" is recommended.
5. Press "Enter" to adjust parameters. Set the charge current (e.g., 5.0A for a 5000mAh battery) and the cell count (e.g., 2S for a 2-cell battery).
6. Press and hold "Start" for 3 seconds. The charger will perform a cell count check. Confirm the cell count matches your battery.
7. Press "Start" again to begin charging. The display will show real-time charging data.
8. To stop charging at any time, press the "Stop" button.

## 6.2 Charging NiMH/NiCd Batteries

1. Connect the battery to the charger's main output port.
2. Press "Batt.Type" to select "NiMH" or "NiCd".
3. Use "Status" arrows to select the desired mode (e.g., "NiMH Charge", "NiMH Discharge", "NiMH Cycle").
4. Press "Enter" to adjust parameters. Set the charge current and the number of cells.
5. Press and hold "Start" for 3 seconds to begin charging.
6. To stop charging, press the "Stop" button.

## 6.3 Charging Pb (Lead-Acid) Batteries

1. Connect the battery to the charger's main output port.
2. Press "Batt.Type" to select "Pb".
3. Use "Status" arrows to select the desired mode (e.g., "Pb Charge", "Pb Discharge").
4. Press "Enter" to adjust parameters. Set the charge current and voltage (e.g., 6V, 12V).
5. Press and hold "Start" for 3 seconds to begin charging.

6. To stop charging, press the "Stop" button.

### 6.4 Data Storage and Recall

The charger can store up to 10 battery profiles for quick recall.

- To save a profile: After setting up a battery type and parameters, navigate to the "User Set System" menu (usually by pressing "Batt.Type" multiple times or holding it). Find the "Save Data" option.
- To load a profile: In the "User Set System" menu, find the "Load Data" option and select the desired profile number.

### 6.5 USB Output Function

The 5V/2.1A USB port can be used to charge compatible mobile devices or power USB accessories while the charger is powered on.

## 7. Maintenance

- Keep the charger clean and free from dust. Use a soft, dry cloth for cleaning.
- Do not use abrasive cleaners or solvents.
- Ensure the cooling fan and ventilation slots are clear of obstructions.
- Store the charger in a cool, dry place when not in use.
- Regularly inspect cables and connectors for signs of wear or damage. Replace if necessary.

## 8. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Charger does not power on. | No power supply; incorrect power connection. | Check AC/DC power connections. Ensure power outlet is functional. |
| "Connection Break" error. | Battery not connected or poor connection. | Ensure main charge lead and balance lead (for Lithium) are securely connected. |
| "Cell Error" or "Voltage Error". | Incorrect cell count setting; damaged battery. | Verify the cell count setting matches the battery. Inspect battery for damage. |
| Charger gets hot during operation. | Normal during high-power charging; blocked ventilation. | Ensure adequate ventilation around the charger. Do not block fan. If excessively hot, reduce charge current. |
| Charging stops prematurely. | Battery full; safety cutoff triggered (e.g., temperature, capacity limit). | Check battery status. Review charger settings for safety limits. |

## 9. Specifications

| Parameter | Value |
|---|---|
| Input Voltage | AC 100-240V, DC 11-18V |
| Charge Power | Max 100W |
| Discharge Power | Max 10W |

| Parameter | Value |
|---|---|
| Charge Current Range | 0.1-10A |
| Discharge Current Range | 0.1-5A |
| LiPo/Li-ion/LiFe/LiHV Cell Count | 1-6 Cells |
| NiCd/NiMH Cell Count | 1-15 Cells |
| Pb (Lead-Acid) Cell Count | 1-10 Cells (2V-20V) |
| Data Storage | 10 Profiles |
| USB Output | 5V / 2.1A |
| Product Dimensions | 4.38 x 9.38 x 3 inches (11.13 x 23.83 x 7.62 cm) |
| Item Weight | 1.47 pounds (0.67 kg) |
| Model Number | UPTUP100AC |
| Manufacturer | Ultra Power |
| Country of Origin | China |

## 10. Warranty and Support

Ultra Power provides an unconditional 1-year exchange guarantee for the UP100AC Plus charger.
For technical support, warranty claims, or further assistance, please contact Ultra Power customer service through their official channels. Refer to the product packaging or the Ultra Power website for the most current contact information.
**Online Resources:** For additional information, FAQs, or potential firmware updates, please visit the official Ultra Power website. (Specific URL not provided in product data).

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