FC001

User Manual V1.0

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www.foxwarerc.com

Shenzhen Likno Power Technology Co., Ltd

Thank You

Thank you for purchasing and using the FC001 Balance Charger. Please read this manual carefully before use.

Symbol Descriptions in This Manual

Tips

Important Notes

Tutorial

To ensure you get the best experience with this product, stay updated on charger news, information and firmware updates by visiting our website: www.foxwarerc.com

Safety Precautions

1. Interface Connection Requirements
The battery must be connected to the corresponding port based on cell count (2S battery to 2S port, 3S battery to 3S port).

2. Operating Environment Requirements
For indoor use only, in a ventilated room at ambient temperature. Do NOT expose to direct sunlight, rain, water immersion, heavy dust accumulation or enclosed high-temperature spaces. Place the charger on a flame-retardant heat-insulating surface during charging, and keep away from flammable materials such as paper, fabric and foam.

3. Prohibited Improper Operations
- Do NOT reverse the battery polarity or short-circuit battery terminals.
- Do NOT disassemble or modify the internal circuitry of the charger without authorization.
- Do NOT cover the charger or block its heat dissipation area while charging.
- Do NOT use swollen, leaking, damaged, aged or faulty batteries.

4. Emergency Handling
If the battery becomes hot, emits strange odors or smokes during charging or checking, immediately disconnect the power adapter and unplug the battery. Move the battery to an open outdoor area and leave it alone. Do NOT continue using it.

5. Temperature Protection Notice
This charger has a temperature-controlled fan and overheat protection.
- Fan auto-ON for cooling at 45°C, auto-OFF below 35°C.
- Charging cuts off automatically at 70°C and enters overheat protection.When overheat protection activates, disconnect power. Do not restart until the charger and battery fully cool down. If the battery remains hot, stop charging and check for battery defects.

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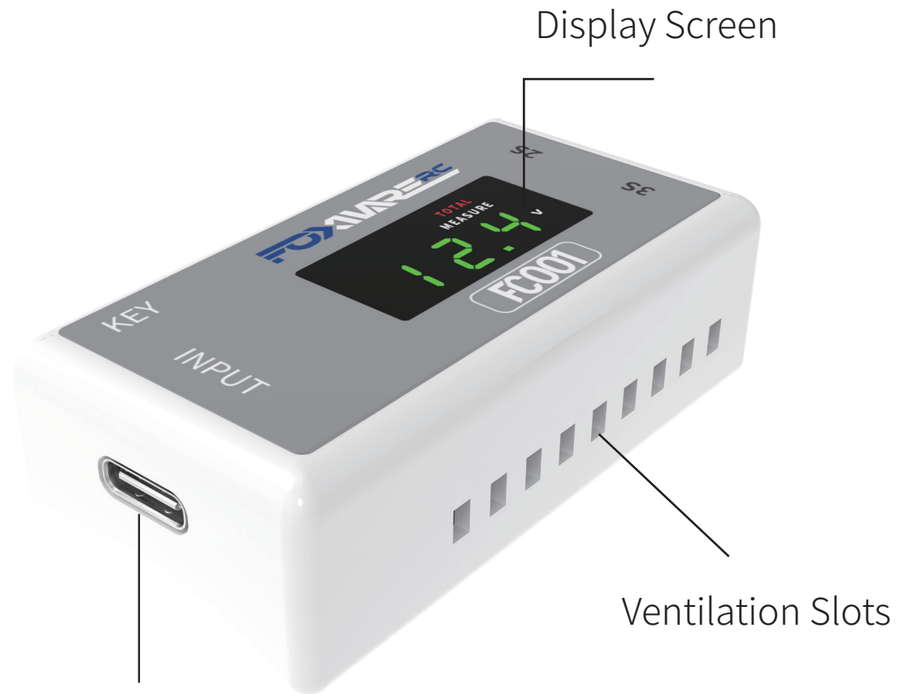
Product Overview

The FC001 is a dedicated balancing charger designed for 2S (7.4V) and 3S (11.1V) lithium battery packs. It integrates voltage detection, balanced fast charging, and real-time temperature monitoring. An internal balancing circuit automatically equalizes cell voltage differences. The device features an LCD display.

Compatible Batteries:

Compatible with standard 2S and 3S LiPo/Li-ion battery packs only.

Not suitable for lead-acid batteries, single 18650 cells, 4S or higher multi-cell lithium batteries, or non-rechargeable primary cells.



Front Side

Power Switch



Rear Side

Display Icon Description



1.Numerical Labels: 1 / 2 / 3 / TOTAL

1：Voltage of Cell 1；
2：Voltage of Cell 2；
3：Voltage of Cell 3；
TOTAL: Total battery voltage

2.Status Indicators： MEASURE：Indicator for Detection Mode
Steady ON = Battery connected only, voltage scanning in progress
CHARGING：Indicator for Charging Mode
Steady ON = Power supply and battery connected, charging in progress

3.Unit Labels on Right: A – Charging Current, V – Voltage, °C – Battery Temperature

4.3-digit Readout: Cycles through voltage, current and temperature values. The corresponding label lights up simultaneously for indication.

Operating Procedures

Procedure 1: Only Check Cell Voltages (Detection Mode)

1.With the DC power disconnected,connect the battery to the corresponding port.
2.The MEASURE LED illuminates, and the display automatically cycles through total voltage and individual cell voltages:
- 3S cycle: TOTAL → 1 → 2 → 3
- 2S cycle automatically skips cell 3.

3. Disconnect the battery directly after measurement.

Procedure 2: Lithium Battery Balance Charging (Charging Mode)

1.Connect the battery to the corresponding port first, then connect the DC power supply (mains adapter).
2.The CHARGING LED illuminates, and balanced charging begins automatically.
3.Short press the KEY to cycle through voltage, current, and temperature readings.
4.Short-press the key on the device to toggle and view charging voltage, real-time charging current and battery temperature.
5.Upon full charge, disconnect the power supply first, then the battery (to prevent pulse-related cell damage).

Notes:

- Both ports can be connected to batteries simultaneously; the device charges the battery connected first.
- When the cell voltage difference is large, the device continues balancing, which extends the charging time. This is normal.

Troubleshooting & Error Handling

Symptom	Cause	Solution
No display with battery	Poor contact / battery depleted or damaged	Reconnect; test with a known-good battery.
2S shows no cell 3	Normal (preset logic)	No action required (if a 3S skips cell 3, stop using it immediately).
Unable to charge	Adapter unpowered / poor connection	Replace power source；reseat connections.
KEY unresponsive	Poor contact / system lock-up	Disconnect power and battery, wait 10s, then retry.
Display digits flicker	Oxidized contacts / poor connection	Clean terminals; reseat connections.
Heat during charging	Normal under high current	Ensure ventilation; do not cover the device.
Fan runs continuously	Temperature⩾45°C	Maintain ventilation; stop at ⩽35°C
Charging interrupted	Over-temperature protection at ⩾75°C	Disconnect power, allow to cool, inspect battery, and retry.
E0 display	E1 cleared; reset required	Disconnect power first, then battery, and power-cycle.
E1 display	Temperature protection	
E2 display	Overcurrent protection	
E3 display	Battery fault	
Long charging time	Large cell voltage difference	Normal condition; Charging completes once all cell voltages are balanced
CHARGING and MEASURE toggle continuously	Charging current too high, exceeding the power adapter's capacity	Press and hold the KEY to adjust the current to 1A, then continue charging

Specifications

Item	Specification
Compatible Batteries	2S (7.4V)、3S (11.1V) LiPo/Li-ion
Charging Current	1.0A / 2.5A, 2-level adjustable
Display	LCD
Display Duration	Total voltage: 2sec; single cell: 1s
Ports	Independent 2S and 3S ports
Temperature Control	Fan ON ⩾45°C, Fan OFF ⩽35°C, Output cut-off ⩾75°C
Operating Environment	0°C ~ 40°C, indoor use with adequate ventilation