INSTRUCTION MANUAL

iMAX C-403

Thank you for your choice of the iMAX C403, 12 V fast charger from the SkyRC range. The unit is simple to use, but its operation does require some knowledge on the part of the user. These instruction manual is designed to ensure that you quickly become familiar with the charger's features and how to operate it in the proper way.

1. General Description

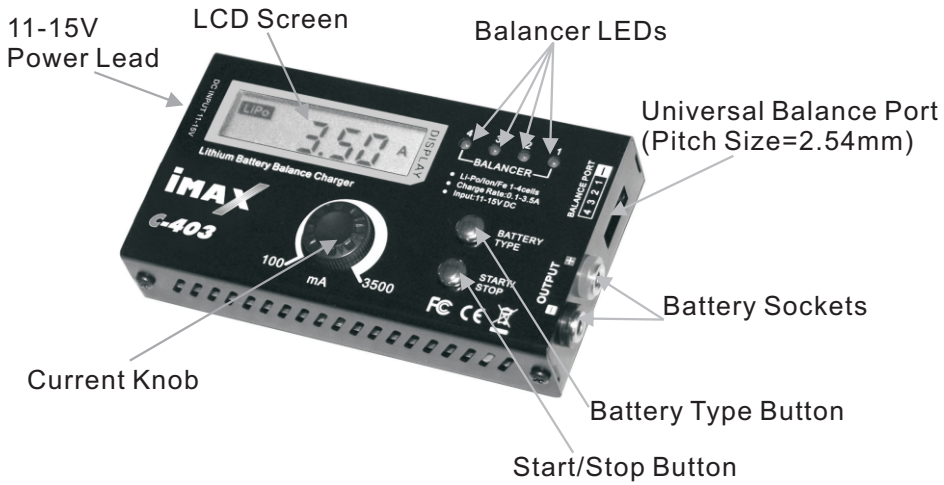
The iMAX C403 is a low-cost, high-quality 12 V DC fast charger with a metal case, designed for charging Lithium batteries of up to 4 cells. It can charge three kinds of Lithium batteries: Lithium Polymer, Lithium ion and LiFePo4(a123).

The charger includes an integral balancer and a large LCD screen for displaying current, voltage capacity and charging time. The charger detects the cell count, and therefore sets the correct charge cut-off voltage automatically. The charge current varies within the range of 100 to 3500 mA.

The recommended charge rate is 1C (battery capacity = charge current)

1C means: capacity value = charge current.
*Example: LiPo cell of 2200 mAh capacity; 1C = 2200 mA (= 2.2 A) charge current

2. The Charger's Illustration



3. How to Connect the Battery

First locate the power leads on the left-hand side of the charger, and connect it to a 12 V lead-acid car battery or 12 V DC mains PSU (red = positive / black =negative). The charger is now ready to use. The device is protected against incorrect polarity, but you should still make every effort to avoid this error.
The Lithium battery is connected to the battery sockets on the right-hand side of the case using a charge lead terminated in banana plugs. When connecting the pack take care to maintain correct polarity (red = + terminal / black = - terminal).
The charge output is protected against reverse polarity and short-circuit, but it is always best to avoid these errors, and to correct them immediately if they do occur.

4. Selecting the Battery Type

Push battery type button to select the battery type matching with the datasheet of the battery manufacturer. It's very important to select the correct battery type. Failure to do this may damage the battery or at worst it can cause fire.

Battery Type	Voltage Level	Max. Charge Volt.
LiPo	3.7V/cell	4.2V/cell
LiIon	3.6V/cell	4.1V/cell
LiFe	3.3V/cell	3.6V/cell

5. Selecting the Charge Current

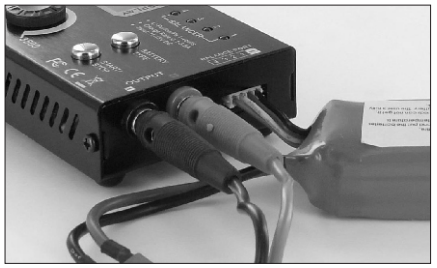
The correct charge current must be set before you initiate the charge process. This is carried out by rotating the adjuster knob on the front panel to set the charge current to suit the battery (100 ··· 3500 mA). Usually we are using “1C” to charge the battery.

This is the correct charge current for the most popular types of Lithium batteries. Naturally, the charger can cope with packs of higher capacity, but the charge time is proportionately longer. Certain high-performance Lithium batteries can be charged at rates higher than 1C. Please read and observe the datasheet provided by the battery manufacturer.

6.The Charge Procedures

- Connect the Lithium battery to the charger by plugging the voltage balance lead into the balance port. When making this connection take care to position it correctly and maintain correct polarity; the black wire of the balance lead must line up with the negative mark on the charger case.

- Locate the main power wires attached to the battery and connect them to the charger’s charge sockets.



- Start the charge process with a press on the Start/Stop button. You can stop the charge process at any time by repeatedly pressing the Start/Stop button again.
- During the charge process the LCD Screen alternately displays the overall voltage, the charge current, the charged-in capacity and charging time.

Voltage

Current

Capacity

Charging Time

- The balance LEDs indicate the state of the cells connected to the charger. If the LEDs constantly flash, the cells are being balanced. If the LEDs only flash sporadically, or do not light up at all, then the battery is properly balanced.
- When the battery is fully charged, the LCD screen will display "FULL" and at the same time you will hear beep sounds to inform you the charge process is completed.

Finished

7. Error messages

If the charger encounters a problem, an error message will be displayed on the LCD screen and at the same time you will hear warning beep sounds.

	Cause of error	LCD Display
1	no connection to the battery	ERR 1
2	during charging process, the balance lead or main power wire is disconnected or encounters intermittent connection	ERR 2
3	Wrong input voltage	ERR 3

8. Specification

DC Input	11-15V
Cell Count	1 - 4 Lithium Battery Cells
Battery Type	Lithium Polymer Lithium Ion LiFePo4 (A123)
Charge Current	100mA - 3500mA
Circuit Power	40W
Charge Cut-Off	Automatic
Dimension	119x66x32mm
Net Weight	144gram

9. Safety Notes

- IMAX C403 is suitable solely for charging rechargeable Lithium batteries. Do not attempt to recharge dry cells. Charging other types of batteries may cause fire or explosion.
- Do not leave the charger operating Unsupervised. It is normal for the charger to become quite hot when operating.
- The charger is designed for use with a DC power source supplying 11-15 V DC. Never connect it to any other voltage.
- Protect the charger from dust, dirt and damp.
- Never place the charger and batteries connected to it on any form of flammable surface. Never operate the charger in the vicinity of inflammable material or gas.
- Ensure that there is an unrestricted airflow to and from the charger's cooling slots. Never place the charger on a carpet or similar surface.
- Packs to be charged as a unit must consist of cells of the same maker, the same type and the same capacity.
- Take great care to maintain correct battery polarity, and avoid shot-circuit. Read the battery manufacturer's instructions and adhere to them strictly.

10. Guarantee

Naturally we guarantee this battery charger for the period of 12 months. If you believe you have a valid claim under guarantee, please contact your dealer in the first instance, who is responsible for processing guarantee claims.

11. Liability Exclusion

This charger is designed and approved exclusively for use with the types of batteries stated in these Instruction Manual. SkyRC accepts no liablility 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 which are incurred due to the incompetent or incorrect usage 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 which were immediately and directly involved in the event in which the damage occurred.

12. Conformity Declaration

iMAX C-403 satisfy all relevant and mandatory EC directives and FCC Part 15 Subpart B: 2008.

For EC directives:
The product has been tested to meet the following technical standards:

Test Standards
EN55014-1:2006
EN55014-2:1997+A1:2001
EN61000-6-1(2007)
EN61000-6-3(2007)


This symbol means that you must dispose of electrical from the general household waste when it reaches the end of its useful life. Take your charger to your local waste collection point or recycling centre. This applies to all countries of the European Union, and to other European countries with a separate waste collection system.

We accept no liability for errors and technical modifications.

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