

## GB Quick Start Guide

# Charger 30 V / 30 A

Item No. 1900460

### Notes to all users

For features not listed in this Quick Start Guide (e.g. programming, set up, servo testing, firmware update, or USB & SD card usage), refer to the full operating instructions on the supplied CD or download them as outlined in chapter [Full Operating Instructions](#).

Remark: Features/Instructions not listed in this Quick Start Guide are intended for users that have an in-depth knowledge of battery chemistry (types) and battery charging techniques. Programming of settings allows users to adjust the charging techniques, and users without such knowledge should never attempt to meddle with any such setting.

### Full Operating Instructions

Download the latest full operating instructions at [www.conrad.com/downloads](http://www.conrad.com/downloads) or scan the QR code shown. Follow the instructions on the website.



### Intended use

The product is designed to charge different types of rechargeable batteries.

Never leave the product unattended during use.

It is intended for indoor use only. Do not use it outdoors. Contact with moisture, e.g. in bathrooms, must be avoided under all circumstances.

For safety and approval purposes, you must not rebuild and/or modify this product. If you use the product for purposes other than those described above, the product may be damaged. In addition, improper use can result in short circuits, fires, electric shocks or other hazards. Read the instructions carefully and store them in a safe place. Make this product available to third parties only together with its operating instructions.

This product complies with the statutory national and European requirements.

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### Explanation of symbols



The symbol with the lightning in the triangle is used if there is a risk to your health, e.g. due to an electric shock.



The symbol with the exclamation mark in the triangle is used to indicate important information in these operating instructions. Always read this information carefully.



The arrow symbol indicates special information and advice on operation.

### Safety instructions



**Read these instructions and the full operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.**

#### a) General information

- The unauthorized conversion and/or modification of the product is prohibited for safety and approval reasons. Never dismantle the product.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.
- Do not leave packaging material lying around carelessly, as it may become dangerous playing material for children.
- If you are not sure how to operate the product correctly, or if you have any questions that are not answered in the operating instructions, contact us or another specialist.
- Handle the product with care. Impacts or falls (even from a low height) may damage the product.

#### b) Children

- This product is not a toy and must be kept out of the reach of children.
- The product must be installed, used and stored in areas that are inaccessible to children.

#### c) Facilities

- In schools, educational facilities, hobby and DIY workshops, the product must be operated under the supervision of qualified personnel.
- Always comply with the accident prevention regulations for electrical equipment when using the product in industrial facilities.

#### d) Setup location

- Only use in temperate climates. Refer to the technical data section for information on the permitted ambient conditions.
- The charger must only be used in dry, enclosed indoor areas. It must not become damp or wet. Never place the product next to a bathtub, shower or other sources of moisture.
- Avoid direct sunlight, intense heat and cold temperatures. Keep the product away from dust and dirt. The same applies to connected batteries.
- Do not use the product in rooms or areas where flammable gas, vapours or dust may be present, as this may cause an explosion!
- Place the charger on a clean, level surface. Do not place the charger on flammable materials (e.g. a carpet or tablecloth). Always use a non-flammable, heatproof surface.
- Keep the charger away from flammable or combustible materials (e.g. curtains).
- Never cover the product, as this may cause it to overheat and catch fire. Do not insert any objects into the ventilation slots on the charger.
- If the product has a fan, do not interfere with the built-in fan.
- Always use suitable protection when placing the charger on valuable furniture, otherwise it may cause scratch/pressure marks or discolour the furniture.
- Do not use the charger inside vehicles.
- Do not use the charger in the immediate vicinity of strong magnetic/electromagnetic fields, transmitter aerials or HF generators. These may affect the electronic control system.
- Do not place any objects that contain liquid (e.g. vases or plants) on or next to the charger, battery or cable.
- Liquids that get into the interior of the charger (or inside the connection sockets) may destroy the charger and cause a fire.
- If liquid does get inside the device or the connection sockets, disconnect the charger from the power supply. Remove the battery from the charger. Discontinue use and take the charger to a specialist repair centre.

#### e) Cables

- Make sure that cables are not pinched or damaged by sharp edges. Do not place any objects on cables.

#### f) Operation

- The charger is powered by stabilized direct voltage (e.g. an external car lead-acid battery or a suitable mains adapter). Make sure the power supply complies with the details given in the technical data.
- Never wear metal or conductive objects (e.g. jewellery such as necklaces, bracelets or rings) to avoid short circuits, which can lead to fire or explosion.
- **Never leave the product unattended during use.**
- Ensure there is sufficient ventilation during use; never cover the charger. Ensure that there is a sufficient distance (min. 20 cm) between the charger and other objects, otherwise the charger may overheat and cause a fire!
- Only charge battery types listed in the technical data.
- To prevent fire or explosion, always connect the cable to the charger before connecting a battery. When disconnecting, proceed in the reverse order – disconnect the battery from the charging cable, and then unplug the cable from the charger.
- Do not connect several chargers together.
- Only connect a single battery/battery pack to the charger.
- If you do not plan to use the charger for an extended period, disconnect any connected batteries from the charger, and then disconnect the charger from the power supply.
- Never use the product immediately after it has been brought from a cold room into a warm one. This may generate condensation, which can cause the charger to malfunction or damage the interior components.
- Allow the product to reach room temperature before using it. This may take several hours.
- If you suspect that safe operation is no longer possible, discontinue use immediately and prevent unauthorized use. Disconnect the charger from the power supply.
- Safe operation is no longer possible if the product is visibly damaged or stops working, or if the product was stored in unfavourable conditions for an extended period or mishandled during transport.

#### g) Cleaning and Storage

- Before you clean the charger, disconnect any connected batteries.
- Before you clean, disconnect the power supply from the charger.
- Keep the product in a cool, dry place out of the reach of children.

## Battery information



There are numerous hazards associated with the use of rechargeable batteries.

Always observe the following safety information when handling rechargeable batteries.

In addition, ensure that you observe any additional safety information provided by the battery manufacturer.

### a) Children

- Rechargeable batteries are not toys. Keep batteries out of the reach of children.
- Do not leave batteries lying around, as they constitute a choking hazard for children and pets. Seek immediate medical advice if a battery is swallowed.

### b) Handling

- Never wear metal or conductive objects (e.g. jewellery such as necklaces, bracelets or rings) to avoid short circuits, which can lead to fire or explosion.
- Rechargeable batteries must never be short-circuited, dismantled or thrown into fire. This may cause a fire or explosion!
- When handling leaking or damaged batteries, always use suitable protective gloves to avoid burning your skin.
- Do not attempt to recharge disposable, non-rechargeable batteries. This may cause a fire or explosion!
- Rechargeable batteries must not become damp or wet.
- Place the charger and rechargeable battery on a non-flammable, heat-resistant surface (e.g. stone tiles).
- Keep the charger and battery away from flammable objects.
- Maintain a sufficient distance between the charger and the battery.
- Never place the battery on top of the charger.
- The battery may heat up during the charging process. Always ensure that there is sufficient ventilation. Do not cover!
- Never use battery packs that are made of different types of cells.
- Never charge/discharge a battery when the charger is unattended.
- Never charge/discharge a rechargeable battery when it is inside a model. Remove the battery from the model before charging it.
- Always ensure that the battery is connected in the correct polarity (observe the plus/+ and minus/- symbols). Connecting the battery incorrectly may damage the model and the battery and cause a fire or explosion!
- Do not charge a battery when it is still hot (e.g. due to a high discharge current in your model). Allow the battery to cool down to room temperature before charging or discharging it.
- Never damage the casing of a rechargeable battery. This may cause a fire or explosion!
- Never charge or discharge damaged, leaking or deformed batteries. This may cause a fire or explosion!
- Disconnect the battery from the charger when the battery is fully charged.
- Rechargeable batteries should be charged at least once every 3 months to prevent damage due to overdischarge.

### c) Storage

- Store rechargeable batteries in a suitable location. Install a smoke detector in the room. Batteries present a fire hazard and may generate toxic fumes. This applies in particular to batteries for model toys, which are subjected to high charging/discharge currents and vibrations.

### d) Additional information about lithium rechargeable batteries

The following section provides an overview of the potential hazards associated with lithium batteries and explains how these hazards can be avoided to ensure a long lifespan.

- The casing of many lithium batteries is made of a thick film, which is very sensitive.
- Do not dismantle, drop or insert any objects into lithium batteries. Do not apply mechanical loads or pull on the battery's connection cables. This may cause a fire or explosion!
- Always observe these instructions when inserting or removing a battery from your model.
- Ensure that the battery does not overheat during use, recharging, discharging, transport or storage. Do not place rechargeable batteries next to sources of heat (e.g. a speed controller or motor) or expose them to direct sunlight. This may cause the battery to overheat, which can cause a fire or explosion!
- The temperature of the battery must not exceed 60 °C (or the maximum temperature stated in the manufacturer's instructions).
- If there are any signs of damage (e.g. if your model is subjected to an impact), or the battery casing is swollen, discontinue use immediately. Do not attempt to recharge the battery, as this may cause a fire or explosion!
- Exercise caution when handling the damaged battery and use suitable protective gloves. Dispose of the battery in an environmentally friendly manner.
- Never store damaged batteries in an apartment or in a house/garage. Damaged or swollen lithium batteries may catch fire.
- Always use a compatible charger to charge lithium batteries and ensure that the charging specifications are correct. Do not use NiCd, NiMH or lead-acid battery chargers, as these may cause a fire or explosion.
- Always select the correct charging specifications for your rechargeable battery.

- Always use a balancer when charging a lithium battery with more than one cell (the charger comes with a built-in balancer).
- The charge rate for LiPo batteries must not exceed 1 C (or the value stated in the battery specifications). This means that the charging current must not exceed the battery capacity (e.g. battery capacity = 1000 mAh, max. charging current = 1000 mA = 1 A).
- Always refer to the manufacturer's specifications when using LiFe, Li-ion and LiHV batteries.
- The discharge current must not exceed the value stated on the battery.

For example, if "20C" is printed on the LiPo battery, the maximum discharge current is 20 times the battery's capacity (e.g. battery capacity = 1000 mAh, max. discharge current = 20C = 20 x 1000 mA = 20 A).

Exceeding the maximum current may cause the battery to overheat or become deformed, which can lead to a fire or explosion!

The printed value (e.g. 20C) indicates the maximum current that the battery can deliver for a short period. The continuous current should not be higher than one half of the stated value.

- Do not allow the individual cells of a lithium battery to become fully discharged. This may destroy the battery or cause permanent damage.
- If your model does not have overdischarge protection or a low battery indicator, stop using it before the battery becomes empty.

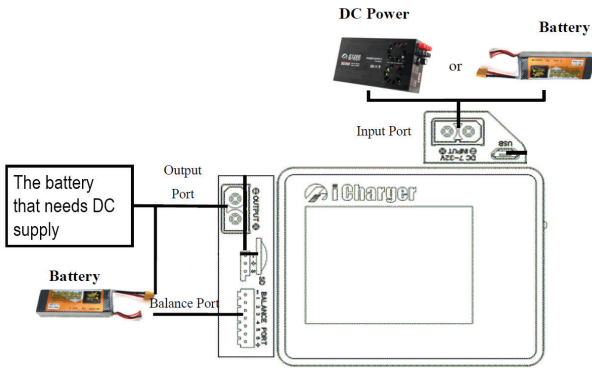
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## Battery Types

The below tables gives details on the battery types the charger can charge.

Type	Nominal voltage	Charge voltage	Discharge voltage	Storage voltage	Support Cells	Support Balance
LiPo	3.7V	3.85V – 4.35V Default: 4.20V	3.00V – 4.10V Default: 3.50V	3.70V – 3.90V Default: 3.85V	1-6s	Yes
LiIo	3.6V	3.75V – 4.35V Default: 4.10V	2.50V – 4.00V Default: 3.50V	3.60V – 3.80V Default: 3.75V	1-6s	Yes
LiFe	3.3V	3.30V – 3.80V Default: 3.60V	2.00V – 3.50V Default: 2.50V	3.10V – 3.40V Default: 3.30V	1-6s	Yes
LiHV	3.8V	3.90V – 4.40V Default: 4.35V	3.00V – 4.25V Default: 3.60V	3.75V – 4.10V Default: 3.90V	1-6s	Yes
LTO	2.4V	2.50V – 3.10V Default: 2.85V	1.50V – 2.90V Default: 1.80V	2.40V – 2.60V Default: 2.50V	1-6s	Yes
NiZn	1.6V	1.20V – 2.00V Default: 1.90V	0.90V – 1.60V Default: 1.10V	-----	1-6s	Yes
User	-----	1.00V – 4.80V Default: 1.00V	0.50V – 4.50V Default: 1.00V	1.00V – 4.50V Default: 1.00V	1-6s	Yes
Pb	2.0V	2.00V – 2.60V Default: 2.40V	1.50V – 2.40V Default: 1.80V	-----	1-12s	No
NiCd/ NiMh	1.2V	-----	-----	-----	1-20s	No

## Setup



### a) Important Notes

- The voltage of the output port and the input port cannot exceed the rated value (32 V/DC), and there should be no connection between, otherwise the charger will be damaged.
- Since the included input/output cables are all open-wire, make sure there is an extra charging cable or connector plug from the rechargeable battery which can connect to an XT60 socket.

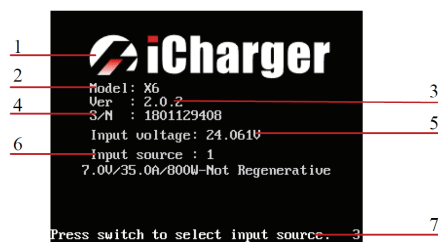
### b) Connection

- Establish power supply as indicated in the above diagram. The charger starts up automatically. Refer to section a) Turning on and off for details.
- Connect the rechargeable battery as indicated in the diagram.

## Operation

### a) Turning on and off

- The charger boots automatically when the power is turned on and the startup screen displays.

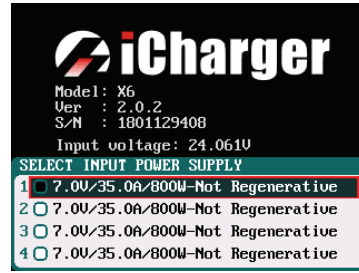


- |                    |                       |                |
|--------------------|-----------------------|----------------|
| 1 Logo             | 4 Serial number       | 7 Hint message |
| 2 Model            | 5 Input power voltage |                |
| 3 Firmware version | 6 Input power source  |                |

- Turn the charger off by disconnecting the power supply.

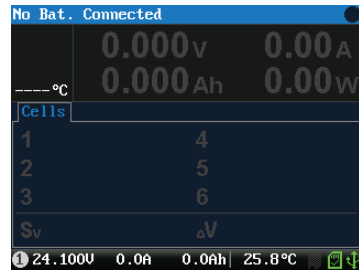
### b) Selecting an input source

- While the startup screen shows (approx. 5 seconds), press <|←> to select the input source. Confirm by pressing any other button.



**Note:** There are different parameter settings available for the four types of power supply the user can set in SYSTEM MENU→Charger Setup→Input & Power Supply. Refer to chapter X6 Parameters Setup in the full operating instructions.

- After selecting the input power supply, confirm and enter the initial interface.



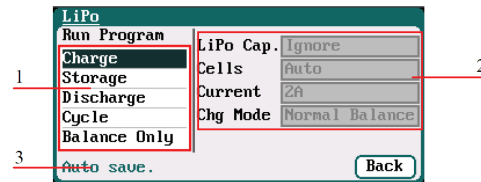
- When not in "Regenerative discharging mode", the icon ① on the left bottom is grey.
- When in "Regenerative discharging", the icon turns green.

### c) Run Charging Program

- After selecting a program on MEMORY SELECTION, click to enter the Run Program interface (By pressing <|←> you will enter Run Program from the last run program). See Fig. 1.

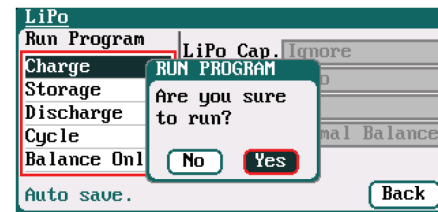
Also observe section Autosaving of programs in this chapter to learn more about how settings can be saved automatically for later reuse.

Fig. 1



- Program Selection
- Common Parameters Setup
- Auto-save Hint

- After selecting the program to run, click <|←> to pop up the RUN PROGRAM.

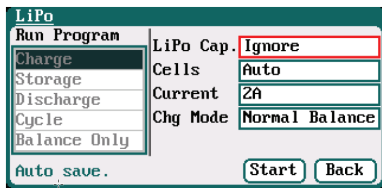


- Click Yes to run the program, click No to abort.
  - If you clicked Yes, the charger now starts charging the battery.
  - Observe the charging status on the status display. See chapter d) Status Display for details.
- In case an error occurs, charging stops and you are notified. See chapter e) Error Handling and Messages for details.
  - To stop a running program, press <|↓>. Press <|↓> again to return to the initial interface.

### Autosaving of programs

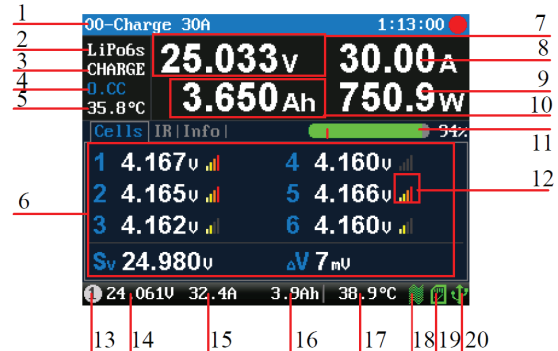
- The revised common parameters of built-in program will be saved by default automatically after running, while the program customized by the user can be set to be saved or not in MEMORY SETUP→MEMORY OPTION→Auto save before the program runs.
- After setting the Cap. value, when the Current value exceeds the certain value, the system will show a warning and alarm. The Current value of each battery type is:

- LiXX battery: > 3C
- NiMH/NiCd battery: > 2C
- Pb battery: > 0.3C
- NiZn battery: >2C
- Press <↑> or <↓> to choose Run Program. The common parameters are in grey. Press <←> to change them.



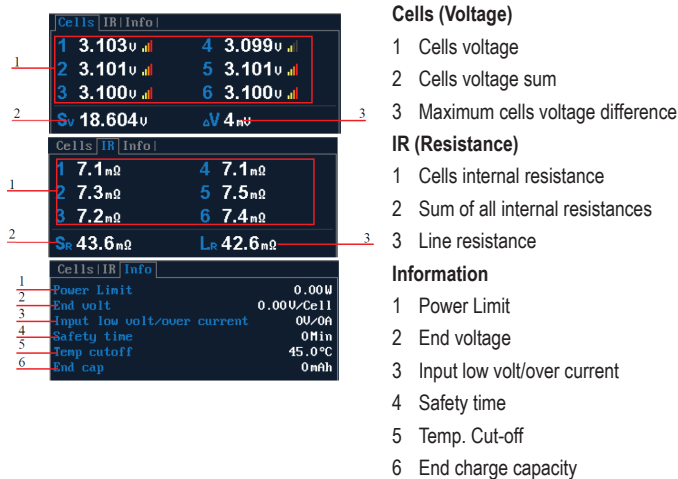
#### d) Status Display

Fig. 2



- |                         |                                    |
|-------------------------|------------------------------------|
| 1 Program name          | 11 Indication of electric quantity |
| 2 Battery type          | 12 Balance strength                |
| 3 Running status        | 13 Input power source type         |
| 4 Control status        | 14 Input voltage                   |
| 5 External temperature  | 15 Input current                   |
| 6 Multipage information | 16 Input capacity                  |
| 7 Pack voltage          | 17 Internal temperature            |
| 8 Output current        | 18 Fan status                      |
| 9 Output power          | 19 SD card status                  |
| 10 Output capacity      | 20 USB status                      |

While charging is in progress, press <↑> or <↓> to switch from single display (see Fig. 2) to the multipage information display:

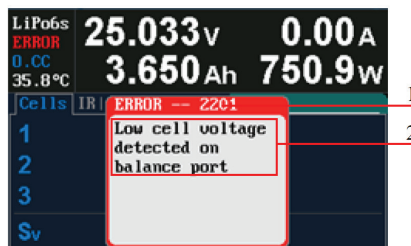


**Note:** Different types of batteries and programs have different multipage information displays:

Types of battery	Cells	IR	Info	Cycle
LiPo/LiIo/LiFe/LiHV/NiZn	✓	✓	✓	✓
NiMH/NiCd	x	x	✓	✓
Pb	x	x	✓	✓
Power	x	x	✓	x

#### e) Error Handling and Messages

- Refer to the full operating instructions for full details on errors.
- If an error is detected while running a program, charging on the affected channel immediately stops. You will be informed by a buzzer and a pop-up with error information.
- Press <↓> to exit the interface.



- 1 Error number
- 2 Error message

#### Disposal

##### a) Product



Electronic devices are recyclable waste and must not be disposed of in the household waste. At the end of its service life, dispose of the product in accordance with applicable regulatory guidelines.

##### b) (Rechargeable) batteries



You as the end user are required by law (Battery Ordinance) to return all used (rechargeable) batteries. Disposing of them in the household waste is prohibited.

Contaminated (rechargeable) batteries are labeled with this symbol to indicate that disposal in the domestic waste is forbidden. The designations for the heavy metals involved are: Cd = Cadmium, Hg = Mercury, Pb = Lead (name on (rechargeable) batteries, e.g. below the trash icon on the left).

Used (rechargeable) batteries can be returned to collection points in your municipality, our stores or wherever (rechargeable) batteries are sold.

You thus fulfill your statutory obligations and contribute to the protection of the environment.

#### Technical data

Operating voltage .....	Mains voltage input: 7 – 32 V/DC
Input current .....	max. 35 A
Charging current/power .....	max. 30 A / max. 800 W
Discharging current/power .....	max. 30 A / max. 30 W
Regenerative discharging power .....	max. 800 W
Discharging current for balancer .....	Max. > 2.0 A
Suitable rechargeable batteries .....	LiPo / Lilon / LiFe / LiHV / LTO / NiMH / NiCd / NiZn / Pb
Ambient conditions .....	0 to +40 °C, 0 – 90 % RH, non-condensing
Weight .....	approx. 350 g
Dimensions (W x D x H) .....	approx. 83 x 64.5 x 36.5 mm