VOLTCRAFT®

GB OPERATING INSTRUCTIONS

CE

VERSION 02/16

CHARGER

ITEM NO. 1409523 (TYP "V-CHARGE ECO LIPO 2000")

ITEM NO. 1409525 (TYP "V-CHARGE ECO LIPO 3000")

INTENDED USE

The charger is intended for charging LiPo batteries (Item No. 1409523 = 2 - 3 cells; Item No. 1409525 = 2 - 4 cells) with rated cell voltage of 3.7 V. Please note data of charging current, charging voltage etc. provided in chapter "Technical Data" at the end of these operating instructions.

The charger is equipped with a built-in power supply unit (operating voltage 100 - 240 V/AC, 50/60 Hz); connect the charger to the voltage/current supply via the supplied power cord to a regular power outlet.

Always observe the safety instructions and all other information included in these operating instructions!

Read the operating instructions closely and carefully, and keep them for later reference. If you pass the product on to a third party, please pass on these operating instructions as well.

Use other than that described above can lead to damage to the product and may involve additional risks such as, for example, short circuits, fire, electrical shocks etc. No part of the product may be modified or rebuilt, and the housing must not be opened!

This product complies with the applicable National and European requirements. All names of companies and products are the trademarks of the respective owners. All rights reserved.

PACKAGE CONTENTS

- Charger
- Power cable
- Operating instructions

→ **Up-to-date operating instructions:**

1. Open www.conrad.com/downloads in a browser or scan the displayed QR code.
2. Select document type and language and enter the item number into the search field. After submitting the query you can download displayed records.

EXPLANATION OF SYMBOLS

The lightning symbol inside a triangle is used when there is a potential risk of personal injury, such as electric shock.

An exclamation mark in a triangle indicates important instructions in this operating manual which absolutely have to be observed.

→ The "arrow" symbol is used where special tips and notes on operation are provided.

SAFETY INSTRUCTIONS

The warranty will be void in the event of damage caused by failure to observe these safety instructions! We do not assume any liability for any resulting damage!

We do not assume any liability for personal injuries and material damages caused by the improper use or non-compliance with the safety instructions! In such cases, the warranty will be null and void.

Dear Customer, the following safety instruction is intended not only for the protection of your health, but also for the protection of the product.

Therefore, please read the following points very carefully before connecting and using the product for the first time.

a) General

- The unauthorised conversion and/or modification of the product is not permitted for safety and approval reasons (CE). Never dismantle the product.
- Maintenance, adjustment, or repair work should be carried out only by a specialist/specialist workshop.

There are no components for you to adjust or maintain within the device.

- The product is not a toy and does not belong in the hands of children! The product may only be set up, used or stored in places that are not accessible to children. The same applies to rechargeable batteries. Children could short-circuit the rechargeable battery/battery pack, which may cause an explosion. This presents a danger to life!
- The product design corresponds to the protection-class II (double or reinforced isolation). Make sure that the insulation (of the casing or the output cable) is neither damaged nor destroyed.
- The charger is designed for operation from a power outlet with rated voltage of 100 - 240 V/AC, 50/60 Hz. Never operate the device on a different voltage/ frequency.

  The outlet must be located in direct proximity to the device and easily accessible.
- Do not pull the mains plug from the mains socket by pulling on the cable!
- In schools, educational centres, hobby and self-help workshops, the operation of the product is to be supervised by trained employees.
- In commercial institutions, the accident prevention regulations of the Employer's Liability Insurance Association for Electrical Systems and Operating Facilities are to be observed.
- Do not leave packaging material carelessly lying around. It may become a dangerous plaything for children!
- If in doubt about how to connect the device correctly, or should any questions arise that are not answered in these operating instructions, please contact our technical service or another specialist.

b) Installation location

- The product may be used only in dry areas indoors. It may not get wet or damp; there is danger of electric shock!

  Do not use the charger within a vehicle.
- Select a stable, flat, clean, and sufficiently large place for the charger.

  Do not place the charger on a flammable surface (e.g. carpet, tablecloth). Always use a suitable, non-flammable, heatproof base.

  Do not place the charger on surface of valuable furniture without suitable protection. The impact of heat could lead to colour or material changes.

  Keep the charger away from easily flammable materials (e.g. drapes, paper), liquids (e.g. gasoline) or gases.
- Avoid direct sunlight, strong heat or cold. Keep the product away from dust and dirt.
- Do not use in the immediate vicinity of strong magnetic or electromagnetic fields, transmitter aerials or RF generators. This can impact the electric control system.
- Do not place any containers filled with liquid, e.g. vases or plants, on or next to the charger.

  If these liquids get into the interior of the charger, it will be destroyed, and there is also a high risk of a fire or an explosion.

  In this case, switch off immediately the mains socket to which the charger is connected (switch off at the corresponding circuit breaker or remove the safety fuse, then switch off the respective earth leakage circuit breaker).

  Then remove the battery from the charger and pull the mains plug out of the mains outlet.

  Allow the battery and charger to dry, and then have it checked by a specialist workshop or dispose of the product in an ecologically sound fashion.
- Make sure that the mains cable is not pinched or damaged by sharp edges. A damaged power cable may never be used again! Place the cable so that nobody can trip over it.

c) Operation

- Only LiPo batteries may be charged by this charger (rated voltage per cell 3.7 V).

  Never charge any other batteries (e.g. NiMH, NiCd or lead batteries) or non-rechargeable batteries. There is a great risk of fire or explosion!
- Only connect a single battery to the charger.
- Maintain sufficient distance to flammable objects. Allow adequate distance between the charger and the battery (min. 20 cm), and never put the battery onto the charger.

- As both the charger and the battery heat up during the charge/discharge procedure, it is necessary to ensure sufficient ventilation. Never cover the charger and/or the connected battery.
- Do not operate the product unattended. Although there is a wide range of comprehensive safety mechanisms on the device, it is impossible to exclude the possibility of malfunctions or problems occurring while charging a battery.
- When you work with the charger or rechargeable batteries, never wear metallic or strongly conductive materials, such as jewellery (necklaces, bracelets, rings or similar objects). A short circuit at the battery or charger poses a danger of fire and explosion.
- Never leave batteries connected to the charger, if the charger is not in use.

  Disconnect the charging set from the mains voltage. Pull the mains plug out of the mains socket. Afterwards, keep the product in a clean and dry place out of children's reach.
- Only use the device in a moderate climate, do not use it in a tropical climate. For more information on acceptable environmental conditions, see the chapter "Technical Data".
- Never use the product immediately after it has been brought from a cold room into a warm one. The resulting condensation may lead to malfunctions or damage under certain circumstances! Furthermore, this could cause a lethal electric shock!

  Allow the charger (and the battery/batteries) to reach room temperature before connecting the charger to the mains supply and using it. This may take several hours!
- Handle the product with care. The product can be damaged if crushed, struck, dropped even from a low height or subjected to mechanical pressure and vibrations.
- If it can be assumed that safe operation is no longer possible, the product must be turned off and precautions must be taken to ensure that it is not used unintentionally.

  It can be assumed that safe operation is no longer possible if the product is visibly damaged, the product does not work at all, if it was stored long-term in unfavourable conditions, or if it was exposed to heavy loads during the transport.

d) Handling rechargeable batteries

- Keep batteries out of the reach of children. Always keep batteries out of the reach of children.
- Do not leave the batteries lying around in the open; there is a risk of them being swallowed by children or domestic animals. In such a case, call a doctor immediately!
- Rechargeable batteries must never be short-circuited, dismantled or thrown into fire. There is a risk of fire and explosion!
- If your skin comes into contact with leaking or damaged batteries, you may suffer burns. For this reason you should use suitable protective gloves in this case.
- If any battery connector cables need to be cut to size (e.g. if the battery is supplied without a connector plug), cut each cable individually to prevent a short circuit occurring. Risk of fire and explosion!
- Use the charger to charge only the batteries with appropriate technology (LiPo). Never try charging other batteries or non-rechargeable batteries using this device. There is a risk of fire and explosion!

  Non-rechargeable batteries are meant to be used once only and must be disposed of when empty. Charge rechargeable batteries intended for that use only.
- Batteries must not get damp or wet.
- Never damage the exterior of a battery. There is a risk of fire and explosion!
- Never charge/discharge rechargeable batteries unattended.
- Never charge/discharge a battery directly in the model. First remove the battery from the model, disconnect it totally from speed or flight controller.
- When connecting the battery to the charger or model (e.g. model aircraft), observe the correct polarity (plus/+ and minus/-). Should you connect the battery incorrectly, not only will the model be damaged but also the battery. There is a risk of fire and explosion!
- Do not charge any battery that is still hot (e.g. due to high charge current from the model). Allow the battery to cool down to room temperature before attempting to charge it again.
- Never charge/discharge damaged, leaking or deformed batteries. This can result in a fire or explosion! Dispose of the unusable battery in an ecologically sound fashion.
- Never use a LiPo battery composed of different types of cells.
- Charge the batteries about every 3 months; otherwise self-discharge can lead to a so-called deep discharge, which causes the batteries to become unusable.
- Disconnect the battery from the charger when the battery is fully charged.
- When used incorrectly (i.e. through an excessive charging current or incorrect polarity), the rechargeable battery can be overcharged or destroyed. In the worst case, the rechargeable battery can explode and thereby cause serious damage.
- Never damage the battery, never let the battery fall, do not pierce the battery with any objects! Avoid applying any mechanical loads to the battery, never pull on the battery's connector cables! There is a risk of fire and explosion!

  These guidelines must also be observed when the battery is inserted into the model (if the model is removed, for example).
- Ensure that the battery does not overheat during usage, recharging, discharging, transport or storage. Do not place the battery adjacent to sources of heat (e.g. cruise control, motor), keep the battery away from direct sunlight. There is a risk of fire and explosion if the battery overheats!
- The battery must not reach a temperature of more than +60 °C (any additional manufacturer warnings with other limitations must also be heeded as applicable!).
- If the battery is visually damaged do not use it any longer. Do not recharge it. There is a risk of fire and explosion!

  Only touch the battery with care, use suitable protective gloves.

  Dispose of the battery in an ecologically sound fashion.
- If the battery manufacturer provides no information as to maximum permissible charge current, charge the LiPo battery with the maximum current of 1C. This means that the charging current may not exceed the capacity value imprinted on the accumulator (e.g. accumulator capacity 3000 mAh, max. charge current 3000 mA = 3 A).
- Follow any additional safety guidelines of the manufacturer of the used rechargeable battery/battery pack.

CONNECTIONS AND CONTROL ELEMENTS

1 Mains socket

2 Four LEDs to indicate battery status

3 XH sockets for connection of a LiPo battery

➔ The charger "V-CHARGE ECO LiPo 2000" is equipped with two XH sockets (for a 2-cell or 3-cell LiPo battery).

The charger "V-CHARGE ECO LiPo 3000" (see picture) is equipped with three XH sockets (for a 2-cell, 3-cell or 4-cell LiPo battery).

Only connect a single battery to the charger at a time. Always use only one of the XH sockets at a time.

If more than one battery is connected to the charger, both the charger and battery can be damaged!

PUTTING INTO OPERATION AND USE

- Connect the power socket (1) with an appropriate mains socket via the supplied power cable. After a few seconds the LEDs 25%/75% and 50%/100% are flashing alternately. This indicates that no rechargeable battery is connected and that the charger is ready.
- Connect the jack socket (1) with a mains outlet via the supplied power cord.
- Place the charger on a level, flat, stable surface. Protect valuable furniture surfaces by using a suitable mat to prevent scratches, pressure points or discolourations.

  The housing of the charger heats up during operation. Make sure that the charger is always adequately ventilated; never cover it while in operation.
- Disconnect the LiPo battery from the speed or flight controller.
- Connect the battery to be charged via its XH balancer plug with the relevant socket (3) of the charger. At that, observe the correct polarity of the XH plug. When connecting, do not use excessive force; always use a socket matching the plug.

➔ Assignment of the XH sockets is imprinted on the charger upper side. As a rule, one of the cables of the XH plug is marked at the battery with colour (or is black). Besides, the XH plug fits into matching socket of the charger only in one position.

If your battery has a balancer connector with other plug type than XH, there will be a matching adapter in the accessories trade.

Only connect a single battery to the charger at a time. Always use only one of the XH sockets at a time.

Please note that only a LiPo battery of serial configuration can be charged (marked e.g. as 2S, 3S, 4S).

Special batteries with e.g. connectors of both cells led out separately cannot be charged by this charger.

- The charger starts the charging process and charges the LiPo battery via its balancer connector. Adaptation of the cell voltages occurs at the same time, so that all cells have the same voltage after the charging process is completed (insignificant deviations depend on technical factors).

  The charging current or capacity of the charger (see chapter “Technical data”) is divided to cells depending on their number. The more cells the connected battery has, the longer is the charging process.
- Four LEDs on the charger indicate the charging status (25%, 50%, 75% and 100%).

➔ Once the LED “100%” lights up, the battery is fully charged. Disconnect the battery from the charger.

- Now, either connect another battery for charging, or disconnect the charger from the mains voltage. Pull the mains plug out of the mains socket.

Keep the product in a cool, dry, dust-free place out of the reach of children.

CLEANING AND MAINTENANCE

The product does not require any maintenance and should never be disassembled for any reason.

Unplug the connected battery from the charger before cleaning. Disconnect then the charger from the mains voltage. Pull the mains plug out of the mains socket.

Only clean the product with a soft, clean, dry cloth. Dust can be easily removed using a clean, soft brush and a vacuum cleaner.

Never use aggressive cleaning agents or chemicals for cleaning; these can lead not only to discolouration, but can also damage the product.

DISPOSAL

a) General

Electronic devices are recyclable material and do not belong in the household waste.

Please dispose of the device, when it is no longer of use, according to current statutory requirements.

b) Batteries and rechargeable batteries

As the end user, you are required by law (Battery Ordinance) to return all used batteries/rechargeable batteries; disposal of them in the household waste is prohibited!

Batteries/rechargeable batteries contain harmful materials and are labelled with the symbol shown to indicate that disposal in the household waste is forbidden. The symbols of the relevant heavy metals are: Cd=Cadmium, Hg=Mercury, Pb=Lead (name written on the battery/rechargeable battery, e.g., under the rubbish bin symbol on the left).

You can return your used batteries/rechargeable batteries free of charge at the official collection points of your community, in our stores, or at places where batteries or rechargeable batteries are sold.

You thereby fulfil your statutory obligations and contribute to the protection of the environment.

TECHNICAL DATA

Charger type	V-CHARGE ECO LiPo 2000	V-CHARGE ECO LiPo 3000
Item no.	1409523	1409525
Operating voltage	100 - 240 V/AC, 50/60 Hz	
Protection class	II	
Charging sockets	XH balancer connector	
Appropriate battery type	LiPo (with rated voltage per cell 3.7 V)	
Number of cells	2 - 3	2 - 4
Battery capacity	800 - 5000 mAh	800 - 8000 mAh
Charging current	max. 2 A ±10%	max. 3 A ±10%
Charging capacity	25 W	35 W
Cut-off voltage	4.24 V (per cell)	
Balancer current	400 mA	
Short-circuit protection	yes	
Overload protection	yes	
Ambient conditions	Temperature +10 °C to +40 °C, air humidity 0% to 90% relative, not condensing	
Dimensions (W x L x H)	70 x 110 x 40 mm	72 x 117 x 40 mm
Weight	161 g	178 g