

ion-drive™   
made in sweden  
owners manual v 2.2

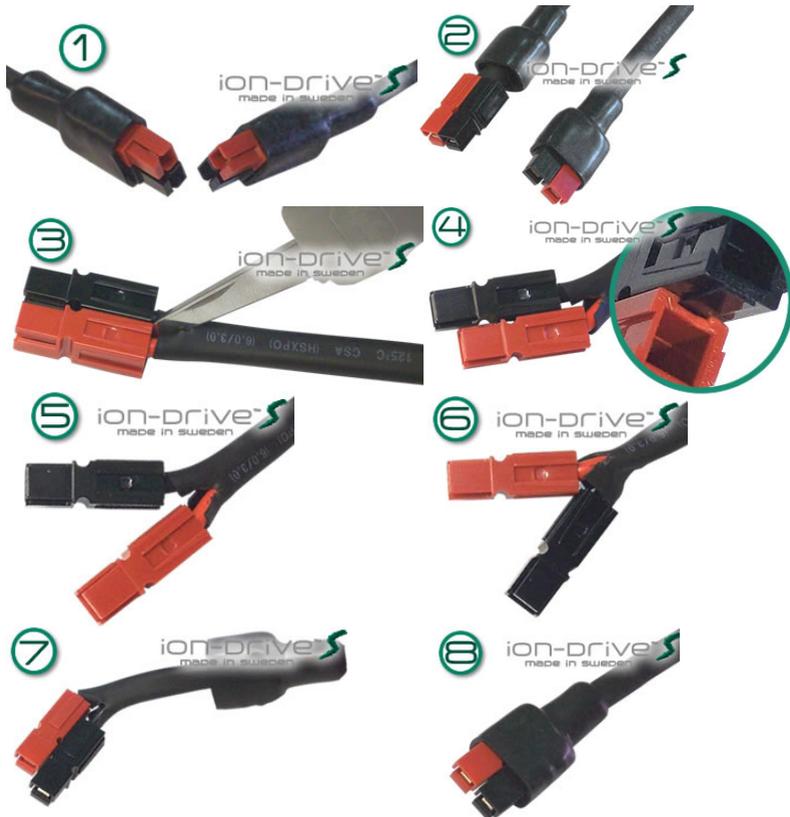
LITHIUM  
[iondrivebatteries.com](http://iondrivebatteries.com)

## WELCOME

Thanks for buying the Swedish made Lithium battery iON-Drive. This battery is made from the best available environmentally friendly LiFePO4 Lithium cells. The iON-Drive battery is made for 12 volt motors up to 230w, and has a capacity that will cover a round of 18 holes with margins.

## BEFORE FIRST USE

Your battery is delivered fully charged and in a transport secure mode. Before use, the battery has to be activated and given a full 24 hrs. charge. This first charge, despite that the battery already was fully charged from factory, is necessary to wake up the battery and give it a good cell balancing sequence for optimum capacity. The battery will reach maximum capacity after some 25 rounds. Before connecting to the trolley, make sure that the positive (+ red) and negative (- black) connectors match the trolley-connection. Always connect red to red and black to black. If needed, change positions for red and black on the trolley (see below for an illustrated guide). If changed on the battery, which is considerably more risky as the battery leads are live, you will also have to change the connections on the charger.



## CHARGING

- The charger cable (from charger to battery) shall be straightened out and NOT kept in a roll.
- Always charge the battery in a dry tempered environment
- Always charge Your battery before first use and after every round of golf.
- Never leave a discharged (empty) battery for more than 4-5 days before put on charge.
- First connect the charger to main supplies and thereafter to the battery.
- Only the supplied iON-Drive charger is allowed.

The best all-over performance will be reached by always keeping the battery on charge between rounds. When the battery is fully charged there is only negligible electrical consumption from the main current supply.

- A standard charging sequence of 8-10 hrs. is recommended, in indoor temperature.
- At least once every month the battery shall be kept on continuous charge for at least 16 hrs.
- Never cover the battery or its charger during charging
- If You prefer to disconnect the battery after the full charge, it is recommended that You, if not playing within a couple of days, give the battery a 4 hrs. charge before use.
- Never leave a battery connected to the charger unless the charger is connected to main supply.

## ON THE TROLLEY

- The battery is equipped with an 80 cm long cable, the intention being that the battery during use should be kept inside a bag pocket, protecting it from damages, water and theft. Please ensure the same applies when using an alternate placement.
- To ensure that the battery always retains a good power-overhead, please use the trolley's On/Off button when stopping instead of the potentiometer. (Trolleys with electronic braking systems engages the parking-brake if not turned off, which if not needed consumes unnecessary power)

## AFTER ANY USE

- Always bring the battery indoors to dry up, thus preventing corrosion due to condensation or humidity exposure.
- After any use the battery shall be put back on charge within 4-5 days.
- Best performance is always reached if the battery is connected to the charger when not in use.

## WINTER STORAGE

- Before storing the battery should be given a full 24 hrs. charge.
- Never leave an empty battery for more than 4-5 days without charging.
- Preferred storing temperature is +10 C up to +30 C in dry conditions.
- After given a full charge the battery can be stored for 2 years.
- After storage give the battery a full 24 hrs. charge before use.

## LED:S

Green	Red	Yellow	Green	Green	Green	Green
<b>ON</b>	<b>5%</b>	<b>15%</b>	<b>30%</b>	<b>50%</b>	<b>75%</b>	<b>100%</b>
Charge/Cell Balancing (Flashing)						

## POWER SAVING MODES

As all our products are as power saving and environmental friendly as possible, the battery assumes standby mode 30 sec after last activation. After another 90 minutes the battery assumes “sleep mode”, resulting in a slight delay (max 4 sec) until the indication lights are lit after reactivating. For long time storage the battery enters “deep sleep” 30 days after last activation, allowing an unsupervised storage time of 24 months. To reactivate the battery from “deep sleep”-mode, just connect it to the charger and the battery will be ready for use for another 30 days.

## CAUTION

- Never use other charger than the supplied iON-Drive charger
- Never expose a battery to excessive heat
- When in contact with water, wipe off and always let the battery dry up in room temperature.
- Treat the battery with care, don't throw it and don't put heavy equipment on the battery pack.



## OTHER TECHNICAL INFORMATION

- The iON-Drive Lithium Battery has a capacity of 16,5 Ah and is guaranteed for 2000 cycles/ rounds of golf.
- The iON-Drive battery is tested and approved by us for most brands of electrical trollys using motors up to 230W (see [www.iondrivebatteries.com](http://www.iondrivebatteries.com) for currently approved vedors/models).
- Maximum discharge current 30 Amp
- Maximum charge and continuous discharge current 17 Amp
- Standard charging current 2,5 Amp
- Surrounding conditions: Full performance between +5C up to +45C.
- If the battery is dead and charging doesn't give effect, the fuse might be burnt. The fuse (30 Amp) is positioned under the zipper and can easily be replaced.
- In normal conditions the zipper on the battery bag should never be opened.