

OPERATING INSTRUCTIONS



2S (7.4V) LiPo 5000 Battery

Thank you very much for your trust in our products. Please read this instruction manual carefully to avoid mistakes in the usage of the product. Because Lithium Polymer (LiPo) batteries are very powerful they need careful handling and maintenance. So please follow the instructions in this manual carefully because mistakes can destroy the battery in an irreparable way.

LP2S5000

⚠ WARNING

- **IMPORTANT:** Do not leave your model unsupervised while a battery is connected. The model could come out of control and can cause damage or fire.
- Do not leave your battery unattended while charging.
- Always use special chargers which are able to handle LiPo batteries. Do not use chargers for NiCd/NiMH batteries as they would overcharge the battery.
- While charging the battery must be placed on a hard, not flammable mat. Do not cover the battery. Keep flammable materials away from the battery.
- Always make sure that the right cell value or the maximum charging voltage is set properly. A wrong setting could damage the battery or cause fire.
- Do not exceed the maximum charging/discharging currents which are quoted in this manual.
- Do not go below the discharge cut-off voltage. Deep discharge below this value will damage the battery permanently.
- Do not open the battery pack or single cells from the pack.
- Please avoid short circuits, reverse polarity and overcharging of the battery.
- The battery is not a toy. Children under 14 years are only allowed to use the battery under adult supervision. Parents are responsible for their children.
- The casing of the cells is an aluminium laminate film. This film is mechanical not so stable as for example NiMH cells with a steel housing. The film could get damaged with sharp objects very easy. If the film is damaged the battery is not usable any more. So please take care off your battery and mount it in a way inside your model so that a crash cannot deform your battery mechanically.

CHARGE

The Robitronic LiPo 5000 battery can handle a charging current of 1C (=typical capacity). Always use special chargers which are specially designed for charging LiPo batteries. These chargers work with the constant current / constant voltage (CC-CV) charging method. The battery is first charged with the full current as long as the maximum charging voltage is reached. Then the charger reduces the current as long as the battery is fully charged. The battery is fully charged when the charging current is below about 0,1°C.

LiPo batteries have no memory-effect and a very little self-discharge. So you can recharge the battery at any time. It is not necessary to discharge the battery before charging it. Please also note that the battery normally do not get very warm while charging.

The maximum charging voltage is 4,20V per cell. As this pack has 2 cells in series the maximum charging voltage of this pack is 8,40V. This voltage must not be exceeded.

We strongly recommend the usage of a balancer while charging. The balancer matches the voltages of the single cells inside the pack and so makes sure that each single cell in the pack is not overcharged.

This battery can be used multiple times a day. You only have to make sure that the battery is cooled down to ambient temperature before charging it again.

Following settings are strongly recommended:

- max. charging current: 5A
- max. charging voltage: 8,40V
- min. discharge cut-off voltage: 5,60V

CONNECTORS

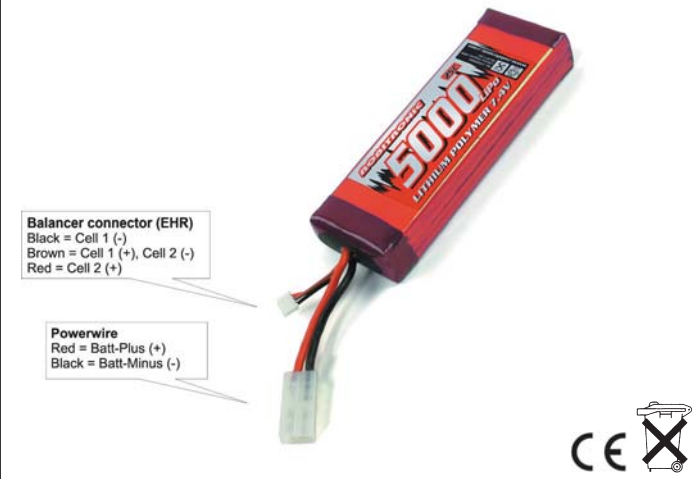
The Robitronic LiPo 5000 battery is already delivered with the right power cables as well as an power plug and an balancer port.

For normal charging and discharging the power cables have to be used. It is not allowed to do this over the balancing port because the width of the cables is much thinner.

The balancing port must only be used with a special designed balancer. Please check the instruction manual of your balancer to avoid reverse polarity before you connect the battery to the balancer.

For normal operation inside the model the balancing port is not used. Even so it is not allowed to remove it.

If you want to change the power plug you have to do that direct on the cable. Do not open the battery pack and solder direct to the cells. Furthermore you have to use a high amp reverse polarity protected connection system.



DISCHARGE

The Robitronic LiPo 5000 battery can handle a peak current of 25C. The maximum continous discharge current should not exceed 15C. You should take care that the battery do not get warmer than 60°C (140°F) while discharging.

The minimum cut-off voltage of this battery pack is 5,60V. If the voltage of the pack gets below this value or if the voltage of a single cell gets below 2,80V the pack or the cell is damaged permanently. Thus we recommend strongly to use a electronic speed controller with LiPo function because these speedos protect the battery from deep discharging. Please also stop your model immediatly if you notice a loss in power.

Please also make shure to let the battery pack enough time to cool down to ambient temperature before charging it again.

STORAGE

LiPo batteries can be stored over a longer period without problems. Because of the very low self-discharge the cells will not suffer from that. However you should make sure that the charge state of the battery is around 20% or higher.

If you want to store the battery about half a year or longer you should charge the battery to about 50% of the nominal capacity. Then such a long storage period is also no problem for the battery.

If you store the battery when it is fully discharged the voltage of the cells will fall below the minimum cut-off voltage and the battery gets damaged.

Please also make sure that the battery has some capacity remaining when you use it periodically. If you are not sure simply charge it a little bit.

Please store the battery at a dry, cold place.

WARRANTY

Robitronic guarantees this product to be free from defects in materials or workmanship for 90 days from the original date of purchase. This limited warranty does not cover defects which are a result of normal wear, misuse or improper maintenance.

Because we are not able to control the correct installation or operation of this product we can't accept any liability for any damages resulting from using this product. Any operation of this product is at your own risk.

By installing or operating this product the user accepts all resulting liability.