ETHIX Heated Deluxe Lipo Bag V2

Heated bag for Li-Po batteries
User manual



The bag is not intended for charging batteries. Never leave the heated bag unattended while a supply battery is connected.

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1. Product description

1.1 What it is for

The **ETHIX Heated Deluxe Lipo Bag V2** is a thermally insulated bag for FPV drone Li-Po batteries, designed by the well-known FPV pilot Mr Steele. The built-in heater warms the stored batteries to a target temperature of **50 °C**, the display shows the voltage of the connected supply battery and the USB output lets you charge a phone or an action camera.

A cold battery has a higher internal resistance, its voltage sags faster under load and it delivers a smaller part of its capacity. That is why batteries are pre-heated before flying in cold weather. The bag closes with a zipper that keeps the heat in and the dirt out, the interior is lined with synthetic suede and the outer pocket holds your phone.



Bag interior with dividers

1.2 Specifications and package contents

Product designation	ETHIX Heated Deluxe Lipo Bag V2
Dimensions (H × W × D)	165 × 240 × 140 mm
Weight	440 g
Heater target temperature	50 °C
Power supply	3S–6S Li-Po battery (10.5–25.5 V), XT60 connector
Low-voltage cutoff	3S: 10.5 V · 4S: 14 V · 5S: 17.5 V · 6S: 21 V
USB output	up to 2 A
Capacity	up to 30 × 4S 1300 mAh or 20 × 6S 1300 mAh batteries
Package contents	1 × ETHIX Heated Deluxe Lipo Bag V2
Not included	supply battery, batteries to be stored, USB cable, charger

1.3 Parts overview



Bag with the lid open

① Voltage display

② Button (voltage measurement recalibration, see Chapter 2.6)

③ XT60 power connector

④ Storage compartment dividers

⑤ Mesh pocket in the lid

There is also an outer phone pocket on the front of the bag (picture in Chapter 2.5).

2. Use

2.1 Safety instructions

- The bag is intended for storing, carrying and pre-heating batteries. The manufacturer does not state that it is fireproof – **do not charge batteries in it** and do not use it as a protective bag while charging.
- Do not store damaged, swollen, punctured or overheated batteries in it.
- **Never leave the heated bag unattended** while a supply battery is connected, and do not place it on a flammable surface or near other heat sources.
- Do not exceed the maximum input voltage of **25.5 V**. A fully charged 6S Li-Po battery has 25.2 V; a 6S LiHV battery charged to 4.35 V/cell (26.1 V) exceeds the maximum and must not be connected.
- Observe the correct polarity, do not short-circuit the connector and do not use damaged cables or connectors.
- Protect the bag and its electronics from water and moisture. Do not disassemble or modify the electronics.
- This product is not a toy. Keep it out of the reach of children.

2.2 Storing batteries

The bag holds up to 30 × 4S 1300 mAh or 20 × 6S 1300 mAh batteries. Separate the batteries with the dividers ④ so that the connectors and leads do not rub against each other. Always close the bag with the zipper – it keeps the heat in and the dirt out.

2.3 Power supply and heating

The heater and the USB output are powered from an external **3S–6S** Li-Po battery (10.5–25.5 V). The heating element runs off a 12 V regulator built into the bag and warms the interior to a target temperature of 50 °C.

① Put the batteries into the bag.

② Connect the supply battery to the XT60 connector. The display shows the voltage of the connected battery.

③ Close the bag with the zipper to keep the heat inside.

④ Before each flight, take out only the battery you are about to use and close the bag again.

※ The manufacturer does not describe a separate heater switch or the heating time. Disconnect the supply battery when you have finished heating.

2.4 Low-voltage protection

Heating discharges the supply battery. The bag's electronics therefore cut off the load when the voltage drops to the cutoff value (3.5 V/cell):

3S: **10.5 V** · 4S: **14 V** · 5S: **17.5 V** · 6S: **21 V**

Once the electronics have cut off the load, disconnect the battery from the bag and recharge it as soon as possible. Do not leave the supply battery permanently connected.

2.5 USB charging

The bag's USB output supplies up to **2 A** and is powered from the same 3S–6S battery as the heater. You can use it to charge a phone or an action camera; keep the phone in the outer pocket while charging. A USB cable is not included.



Outer pocket of the bag

2.6 Voltage measurement recalibration

Recalibration improves the accuracy of the voltage measurement (it is done at the factory or after long-term use). You need a source that supplies a stable voltage of **25.50 V** and **10.50 V**, e.g. a laboratory power supply; apply the voltage to the power input of the bag.

① Press and hold the button for about 2 seconds. The display shows “CAL” and then a flashing “Hi”.

② Apply a stable voltage of 25.50 V and briefly press the button.

③ Wait for a flashing “Lo”. Apply a stable voltage of 10.50 V and briefly press the button.

④ Wait for the recalibration to finish.

If the applied voltage differs too much from the reference value, the display shows “Err”. Check the settings of the power supply and repeat the procedure.

2.7 Care and storage

- Clean the bag with a dry or slightly damp cloth. Do not get the electronics wet.

- Store it in a dry place with the supply battery disconnected.
- Do not heat batteries during long-term storage and store them at a storage voltage of 3.8 V/cell (3S 11.4 V, 4S 15.2 V, 6S 22.8 V).
- Regularly check the cable and the XT60 connector. Do not use a damaged product.

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

3.2 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

4. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 3.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.