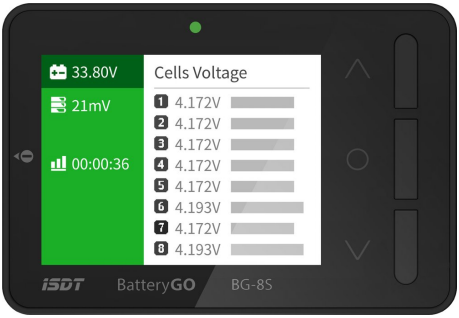
iSDT BG-8S

Battery checker and balancer 1–8S · BatteryGO
User manual



The product is intended for persons aged 14 and over. Read the safety instructions in Chapter 1 before use and keep this manual for future reference.

www.rotorama.com

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1. Safety instructions

- The BG-8S is designed specifically for RC use and for persons **aged 14 and over**. Do not use it for any other purpose.
- We strongly recommend that you read this user manual before using the BG-8S.
- When connecting the balance port of the battery to the battery checker, the negative electrode of the balance port must always start from **BAT−** (Chapter 3.1). A reverse protection circuit is built into the BG-8S, so no damage will be caused to the BG-8S if it is connected reversely.
- When connecting a 1S battery, the input voltage from the XT60i must be more than 5 V.
- If the BG-8S is not used for a long time, disconnect it from your battery to avoid over-discharging the battery.
- Protect the device from moisture, dust, impacts and high temperatures.

2. Product description

2.1 Intended use

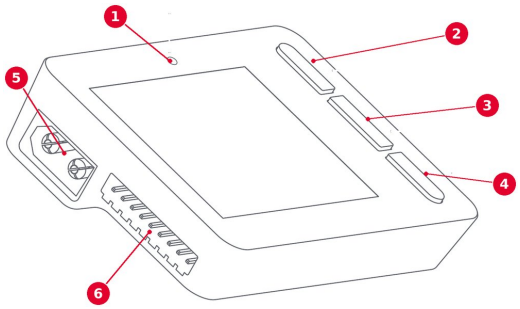
The iSDT BG-8S (BatteryGO) is a multifunctional battery checker. It measures the total battery voltage, the voltage of each cell and the difference between the cells with the highest and lowest voltage, it can balance cells, test receiver signals (PWM and S.Bus) and read data from BattGo smart batteries, and it also serves as a USB charger powered by the connected battery.

This battery checker is suitable for **LiHV, LiPo, LiFe and Li-ion 1–8S** and **NiMH/NiCd 1–10 cell** batteries.

2.2 Package contents

- 1× iSDT BG-8S battery checker
- 1× display protective film
- 1× user manual

2.3 Controls and ports



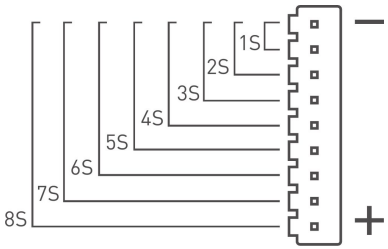
①	breath light (status indicator)
②	**Up** button – moves up in the menu
③	**Menu** button – short press: system function menu; press and hold: smart battery settings
④	**Down** button – moves down in the menu, switches screens
⑤	**XT60i** input – for connecting the battery power connector or a power supply
⑥	**XH 2.54** balance port – for connecting the battery balance connector

2.4 Specifications

Working voltage	5.0–36 V
Input voltage 1S	0.8–15 V
Input voltage 2–8S (per cell)	0.8–4.8 V
Battery cells	1–8S
Voltage measurement accuracy	±0.005 V @ 4.2 V
Cell balancing accuracy	< 0.005 V
USB charging	QC3.0, BC1.2, maximum output 12 V / 2 A
Smart battery support	charging and discharging settings, reading battery info and usage history
Dimensions	80 × 55 × 19 mm
Weight	59 g

3. Battery connection and measurement

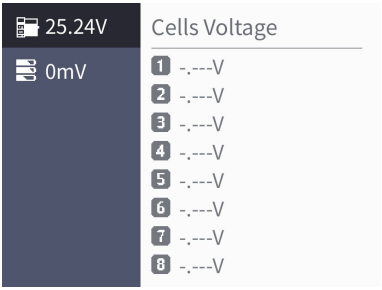
3.1 Balance port



Balance port connection for 1S–8S batteries

This product is suitable for lithium batteries with the **XH 2.54** balance port. Connect the balance port aligned from **BAT−** as shown in the figure. When connecting a 1S battery, the input voltage from the XT60i must be more than 5 V.

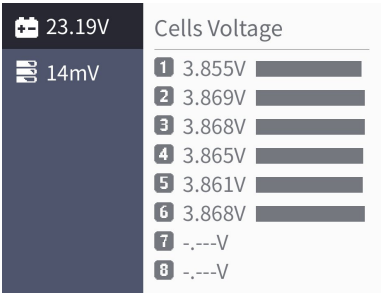
3.2 Battery connected to the XT60i



When the XT60i is connected to a normal battery, the BG-8S only shows the total voltage. The balance port needs to be connected to check each cell voltage.

※ When only the XT60i is connected, short press the Menu button twice to start USB charging.

3.3 Battery connected to the balance port

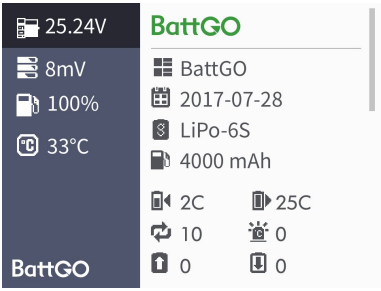


When the battery is connected to the balance port, the BG-8S shows the total battery voltage, the maximum voltage difference between cells and the voltage of each cell.

※ When only the balance port is connected, short press the Menu button twice to start cell balancing.

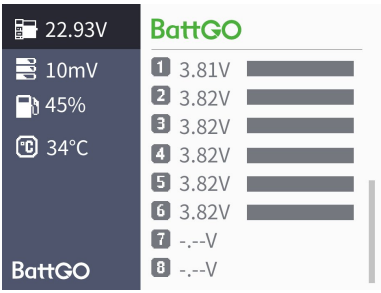
3.4 BattGo smart battery

In this mode, the BG-8S can read smart battery info. After the BattGo smart battery is plugged into the XT60i, the default display is screen 01; press the Down button to go to screen 02 to read the cell voltages.



Screen 01 – smart battery info

Left side of the screen	Right side of the screen
XT60i input voltage	battery brand
cell voltage difference	production date
remaining capacity	battery type
battery temperature	battery capacity
max. charging C	max. discharging C
battery cycles	over-temperature (count)
battery overcharging (count)	battery over-discharging (count)

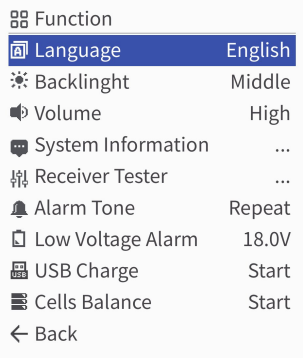


Screen 02 – cell voltages; the histogram shows the voltage differences

4. Function settings

4.1 System function menu

Short press the Menu button to see the system function menu. Use the Up and Down buttons to select items.



Item	Function
Language	supports up to 7 languages
Backlight	backlight adjustment; the backlight automatically turns off after 2 minutes without operation (20 seconds during balancing)
Volume	supports high, middle, low and 0 volume; the alarm sound cannot be turned off
System Information	shows the firmware version
Receiver Tester	multiple protocol testing, PWM and S.Bus (Chapter 5)
Alarm Tone	the low voltage alarm can be set to beep once or beep every minute
Low Voltage Alarm	low voltage alarm threshold: with the XT60i port connected 5–30 V; with the balance port connected 2.5–3.9 V per cell; with a BattGo smart battery connected, the BG-8S automatically selects the battery's lowest discharging voltage as the alarm voltage
USB Charge	starts USB charging (when a battery is connected to the XT60i)
Cells Balance	starts cell balancing (when the balance port is connected)
Back	exits the function menu

4.2 BattGo smart battery settings

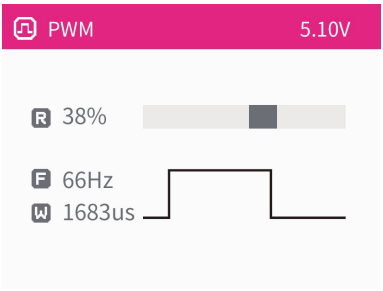
When a BattGo smart battery is connected, press and hold the Menu button in standby to go into the battery settings.

Item	Function
Auto Storage	selects after how many hours the BattGo smart battery initiates the auto storage function
Storage Voltage	sets the storage voltage
Charge Current	sets the charge current
Charge Voltage	sets the full voltage
Exception Record	checks exception records of overcharging, over-discharging and over-temperature
Back	exits the function menu

5. Receiver signal testing

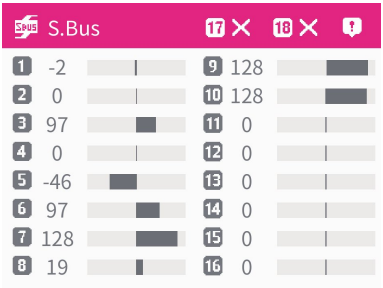
Connect the tester to the appropriate output (channel) or to the S.Bus port of the receiver with a three-wire servo cable so that the negative wire is connected to the (−) contact of the tester port. Select *Receiver Tester* in the menu. If the receiver supply voltage is lower than 5.0 V, connect an external power source of at least 5 V to the XT60i input.

5.1 PWM testing



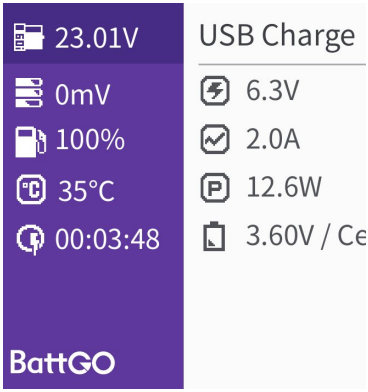
RC control signal PWM protocol analysis: connected to the servo signal output of the receiver, the BG-8S detects the receiver supply voltage, the deflection in percent, the PWM output period (frequency) and the pulse width.

5.2 S.Bus testing



S.Bus protocol analysis: supports servo control data analysis of up to 18 channels and testing of the receiver failure protection (failsafe).

6. USB charging



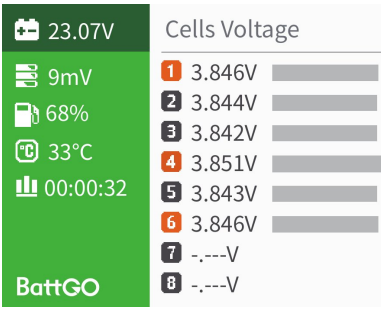
Left side of the screen	Right side of the screen
XT60i input voltage	output voltage
max. voltage difference between cells	output current
remaining battery capacity	output power
battery temperature	alarm voltage (per cell)
charging time	–

- When a battery is connected to the XT60i, the BG-8S can perform the USB charging function. It supports QC3.0 and BC1.2 fast charging, maximum output 12 V / 2 A.
- In USB charging, after 2 minutes without operation the display turns off and the breath light slowly flashes purple.
- If the current is more than 3 A or the power is more than 26 W, USB charging is turned off.

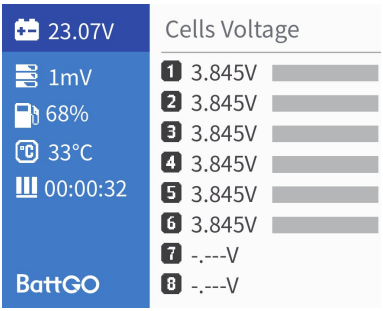
- If the temperature is more than 60 °C, charging stops until the temperature is lower than the warning level, and then resumes automatically.
- Battery capacity and the BattGo mark appear only when a smart battery is connected.
- Lowest input voltage: for a normal battery with the balance port connected, the single cell protection voltage is displayed as the lowest input voltage; without the balance port connected, the total battery protection voltage is displayed. For a smart battery, the single cell protection voltage is always displayed. This protects the battery from over-discharging.

7. Cell balancing

When the balance port is connected, you can initiate the cell balancing task (*Cells Balance* menu). The tester discharges the cells to the level of the cell with the lowest voltage. During the task, the display turns off and the breath light turns on if no operation is detected within 20 s. Battery capacity, temperature and the BattGo mark only appear when a smart battery is connected.



During balancing, the cells being balanced are shown in yellow and the breath light is green.



After balancing is completed, the left side of the screen turns blue and the breath light turns blue.

8. Information for the EU and Czech Market

European Union regulations apply in all Member States, but national regulations differ from country to country. The information in Chapters 8 and 9 describes the situation in the Czech Republic. If you use the product in another country, follow the regulations of the country in which you use it.

8.1 Manufacturer, importer and seller

Manufacturer	**SHENZHEN ISD TECHNOLOGY CO., LTD.**
Address	Room 17F1703, Building 2, Runzhi R&D; Center, No. 5, Runfang Road, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China
Website	www.isdt.co

Importer / responsible person in the EU	**KAVAN Europe s.r.o.**
Company ID (IČO)	178 33 914
VAT ID (DIČ)	CZ17833914
Registered office	Doubravice 110, 533 53 Pardubice, Czech Republic
E-mail	info@kavanrc.com
Phone	+420 463 358 712
Website	www.kavanrc.com

Seller	**Rotorama, s.r.o.**
Company ID (IČO)	051 57 692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

8.2 Product conformity

CE

- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the e-mail address info@kavanrc.com.
- **Product identification:** the type designation BG-8S is given on the device; the firmware version is shown in the *System Information* menu. EAN 6971337050362.

8.3 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.

9. 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 contact details of the manufacturer, importer and seller are given in Chapter 8.1.
- 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.