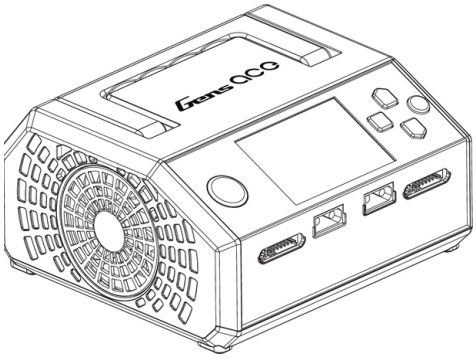
iMars D1000

Gens ace – dual-channel smart balance charger
2× 500 W
User manual



Before first use, read this entire manual carefully, especially the safety instructions, and keep it for future reference.

Rotorama, s.r.o. · www.rotorama.com

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1. Safety instructions

To ensure your safety and a good user experience, please read this manual carefully before using the charger for the first time and keep it for future reference. This product is intended for persons aged 14 and over.

WARNING: Always check the charging parameters before starting the charging process. Charging a battery with incorrect settings may result in property damage or fire. If you notice any abnormality (such as a swollen battery) during charging, stop charging immediately or disconnect the charger from the power source.

1.1 Manufacturer's safety tips

- Keep the charger connectors clean and avoid contact with metal objects.
- If there is liquid or foreign matter on the charging port, wipe it clean in time and keep it clean. Otherwise it may cause poor contact, resulting in a short circuit or failure to charge the battery.
- Before daily use, regularly check the charging port, plug and other components. Do not use alcohol or other flammable agents to clean the charging device.
- Use plugs, sockets and a power supply cable that match the power of the device. Exceeding the rated power of the device may cause it to catch fire or burn.
- If an abnormality or warning occurs during charging, cut off the power immediately. Continue using the product only after it has been tested and confirmed to be functioning normally.
- Keep a distance of at least **30 cm** between the battery and the charger, and between batteries, during charging. Concentrated heat may otherwise cause charger or battery failure, or even fire.
- Charge on a flat, cool and stable surface. It is strictly prohibited to charge in a closed space, at high temperature or on an unstable surface.
- Disconnect the battery from the charger after use and store both in a safe, clean and cool place.
- Keep the charger away from heat sources, both when idle and when working.
- Do not leave the charger outdoors exposed to sun or rain.
- Do not use AC power beyond the rated voltage range. Keep the charger away from flammable and explosive items and make sure someone is on duty throughout the charging process.
- The user bears responsibility for the consequences of modifying or disassembling the charger without permission.
- Do not place heavy objects or pile up debris on the charger, and do not sit on it.

- Do not use damaged charging equipment. If repair or replacement is required, contact your dealer in time.

1.2 Safe battery charging

- Charge only the battery types listed in chapter 2.3. Never charge non-rechargeable (primary) cells.
- Set the charge voltage according to the battery manufacturer's specification. A fully charged Li-Po cell has **4.20 V**, a LiHV cell **4.35 V**. A voltage of about **3.8 V** per cell is suitable for storage.
- Always charge Li-Po, LiHV, LiFe and Li-Ion batteries with the balance connector plugged in.
- Do not charge a battery that is mechanically damaged, swollen, overheated or has suffered a hard impact.
- Let the battery cool down to room temperature after a flight before charging it.
- Charge on a non-flammable surface, ideally in a fire-resistant Li-Po bag, and keep a suitable extinguishing agent at hand.
- Keep the charger and batteries out of the reach of children and pets.

2. Product overview

2.1 Overview

The iMars D1000 is a dual-channel smart balance charger with a multilingual menu (including Chinese, English, German and French). Thanks to **G-Tech** technology, it automatically recognises the information of a connected G-Tech smart battery, starts smart charging without manual setup and stops automatically when the battery is fully charged. Non-G-Tech batteries can be charged as well, but their parameters must be set manually.

The charger features over-temperature, over-current and over-charge protection and other protection functions to ensure safe charging.

2.2 Technical specifications

Parameter	Value
Model	iMars D1000
Input voltage	AC 100–240 V, 50/60 Hz
Output voltage	DC 0–32 V
Output power (charge)	2× 500 W
Charging current	0.1–25 A
Discharge power	max. 2× 70 W
Discharge current	0.1–8 A
Balance current	max. 2 A × 3 / cell
Operating modes	charge, discharge, storage, balance, cycle, digital power
Battery types	LiPo / LiFe / LiHV / Li-Ion: 1–7S NiMH: 1–18S supports G-Tech plug
Operating temperature	0–60 °C
Storage temperature	−20 °C to 60 °C
Output connector	XT90
Dimensions	186 × 174 × 95 mm
Weight	approx. 1.7 kg
Package contents	charger, AC input cable, USB cable

2.3 Supported battery types and task parameters

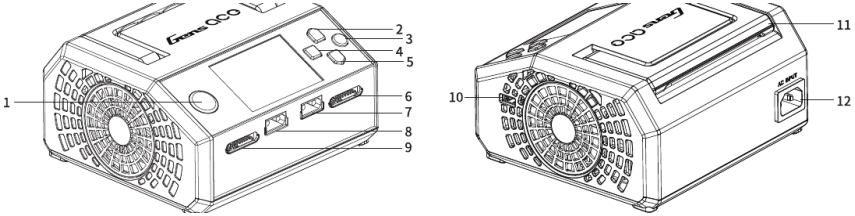
The default value is shown in bold, with the adjustable range below it. All voltages are per cell.

Parameter	LiHV	LiPo	Li-Ion	LiFe	NiMH
Rated voltage	3.8 V	3.7 V	3.6 V	3.2 V	1.2 V
Full charge	**4.35 V** 4.1–4.4 V	**4.2 V** 4.0–4.25 V	**4.1 V** 3.9–4.15 V	**3.65 V** 3.4–3.7 V	1.5 V
Discharge	**3.7 V** 3.6–4.15 V	**3.6 V** 3.5–4.0 V	**3.5 V** 3.4–3.9 V	**3.2 V** 2.9–3.4 V	**0.9 V** 0.3–1.3 V
Storage	**3.85 V** 3.75–3.95 V	**3.8 V** 3.7–3.9 V	**3.7 V** 3.6–3.8 V	**3.3 V** 3.2–3.4 V	unsupported
Balance	**3.8 V** 3.6–4.4 V	**3.8 V** 3.5–4.25 V	**3.8 V** 3.4–4.15 V	**3.7 V** 2.9–3.7 V	unsupported
Cycle	**3.85 V** 3.8–4.4 V	**3.8 V** 3.7–4.25 V	**3.7 V** 3.6–4.15 V	**3.3 V** 3.2–3.7 V	unsupported
Cell count	1–7S	1–7S	1–7S	1–7S	automatic detection
Max. charging current	25 A	25 A	25 A	25 A	25 A
Digital power	target voltage 5–29 V, target current 0.1–25 A				

※ The adjustable full-charge range for Li-Po reaches 4.25 V. Unless the battery manufacturer states otherwise, charge Li-Po cells to 4.20 V and LiHV cells to 4.35 V.

3. Structure

3.1 Controls and connectors

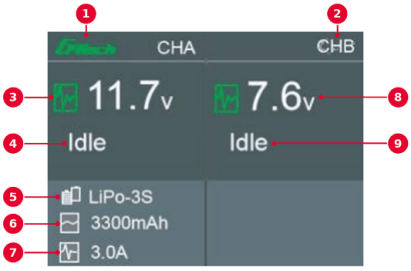


Front view (left) and rear view (right)

No.	Description	No.	Description
1	Power switch	2	Up button
3	*Enter/Setting* button	4	*Channel/Return* button
5	Down button	6	Balance port B
7	Channel B output	8	Channel A output
9	Balance port A	10	USB upgrade port
11	Handle	12	AC input port

3.2 Display

In the main interface, short press the Up or Down button to switch between the views of the real-time cell voltages and the output voltage / power. When a G-Tech smart battery is connected, you can also view the smart battery interface.



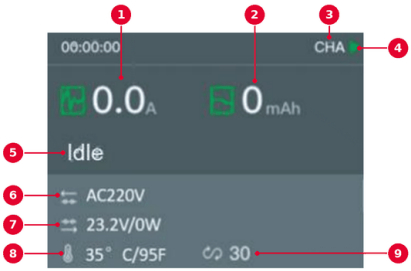
Split screen – a different battery type on each channel

① G-Tech battery connected ② Standard battery connected

③ Channel A battery voltage ④ Channel A status

⑤ Battery type and number of cells ⑥ Capacity ⑦ Recommended charging current

⑧ Channel B battery voltage ⑨ Channel B status



Single-channel screen

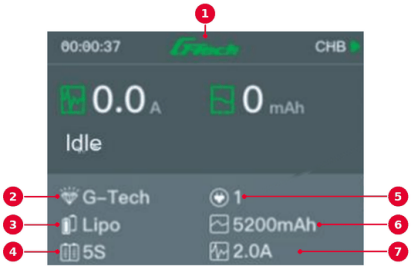
① Output current ② Capacity completed ③ Selected channel

④ Status light of the other channel: green = standby, grey = working

⑤ Working status ⑥ Input power type and voltage (AC/DC)

⑦ Output voltage / output power ⑧ Charger temperature

⑨ Total number of charges



Single-channel screen with a G-Tech battery

① G-Tech battery connected ② G-Tech battery series
③ Battery type ④ Number of cells
⑤ Total charging cycles of the smart battery
⑥ G-Tech battery capacity ⑦ Recommended charging current

4. How to use

4.1 Switching on and off

Connect the 100–240 V AC power cord to the AC input port (12) of the iMars D1000 charger and short press the power switch (1). The display shows the power-on screen. After power-on, the internal self-test is displayed for about 5 seconds and the charger then automatically switches to the main interface.

To switch off, press and hold the power switch for about 3 seconds; the charger enters the shutdown screen.

※ Do not connect a battery during the power-on self-test, otherwise the self-test reports an error.

4.2 Button operation

Situation and press	Function
Main interface – short press *Channel/Return*	switch to the channel interface
Main interface – long press *Enter/Setting*	enter the device settings (chapter 6.1)
During charging – short press *Enter/Setting*	adjust the current
During charging – long press *Enter/Setting*	enter standby mode
Channel interface – short press *Enter/Setting*	enter the function settings (chapter 5)
Main interface – short press Up / Down	switch views

4.3 Charging a G-Tech smart battery

When a G-Tech smart battery is connected, the charger automatically reads the battery parameters. If the conditions for automatic charging are met, smart charging starts after a 7-second countdown. Short press the Up or Down button to view the battery voltage, internal resistance, smart battery information, output voltage and power and other screens.

4.4 Charging other batteries

For non-G-Tech batteries, the parameters must be set manually. In the channel interface, short press *Enter/Setting* to open the function settings. Select the working mode, battery type, termination voltage, current and other parameters according to the battery, and then start the task (chapter 5).

5. Function settings

In the main interface, short press *Enter/Setting* to enter the channel interface, then short press *Enter/Setting* again to open the function settings. The following items are available:

Item	Meaning
Function selection	charge, discharge, storage, balance, cycle, digital power
Battery selection	LiHV, LiPo, Li-Ion, LiFe, NiMH
Battery voltage	voltage at which the task is completed
Cell count	number of cells in series
Target current	maximum operating current
Start task	starts the work once the parameters are set

5.1 Charging

The charger can charge batteries of various chemistries. Before charging, check that the battery cables are correctly connected to the charger – if they are not, the charger may not be able to charge. LiPo, LiHV, LiFe and Li-Ion batteries must have the balance connector plugged into the charger before charging. If the voltage of any cell in the pack is lower than **1.5 V**, the charger will not start charging.

After connecting the battery, select the corresponding channel and make the settings. You can set the battery type, charge cut-off voltage, charging current and other parameters. Once set, the charger charges the battery to the preset voltage and balances it.

5.2 Discharging

The charger can discharge batteries of various chemistries. Before discharging, check that the battery cables are correctly connected. LiPo, LiHV, LiFe and Li-Ion batteries must have the balance connector plugged in. If the voltage of any cell is lower than the set cut-off voltage, the charger will not start discharging.

After connecting the battery, select the channel and set the battery type, discharge cut-off voltage, discharging current and other parameters. Once set, the charger discharges the battery to the preset voltage and balances it.

5.3 Balance

The balance function equalises the voltage between the cells. It is suitable for packs with a cell voltage difference greater than 10 mV. If any cell is below 1.5 V, balancing cannot be performed. Select the end voltage in the balance interface. Cells below this voltage are charged to it, cells above it are discharged to it, and the cells are equalised.

5.4 Storage

The storage function charges or discharges the battery with the selected current to a voltage suitable for storage. The current can be set from 0.1 to 25.0 A. With G-Tech batteries, the charger sets the battery type, cell count and storage current automatically from the battery information; the storage cut-off voltage is adjusted manually by the user. For other batteries, set the battery type, cell count, current and cut-off voltage manually.

5.5 Charge-discharge cycling

The cycle function is designed to activate optimal battery performance and to monitor battery status. It enables a thorough check of battery performance as well as a quick check of a battery that has not been used for a long time.

Connect the battery main connector and balance connector to either channel of the charger (channel A in the example below). In the first screen, set the number of cycles, charging current, discharging current, end voltage, rest time before charging or discharging, battery type and number of cells.

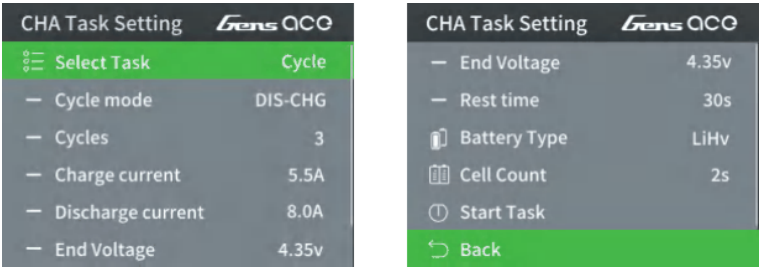
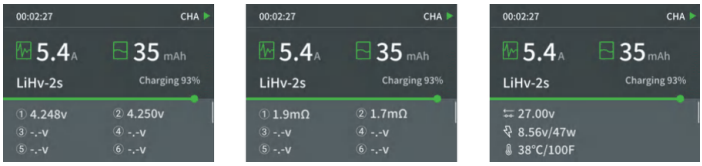


Figure 1 – cycle settings (CHA Task Setting)

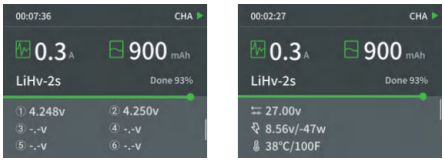
Item on the display	Meaning
Select Task	task selection – *Cycle*
Cycle mode	order of steps in the cycle (e.g. *DIS-CHG*)
Cycles	number of cycles
Charge current / *Discharge current*	charging / discharging current
End Voltage	end voltage per cell
Rest time	rest time between steps
Battery Type / *Cell Count*	battery type / number of cells
Start Task / *Back*	start the task / return



Charging screens – cell voltages ①–⑥, cell internal resistance, output voltage / power and temperature



Discharging screens – current and capacity are shown with a negative sign



Completion screens (status Done)

Short press the Up or Down button to switch between the screens.

5.6 Digital power

When the digital power function is selected, the whole charger works as an adjustable power supply whose output voltage and current can be set. The output voltage can be set between **5–29 V** and the current between **0.1–25 A**.

The output must not be short-circuited or overloaded, otherwise the product will burn out.

After starting, the display shows the screen in Figure 5. Press *Enter/Setting* to enter the screen in Figure 6, where you set the voltage (*TargetVoltage*) and current (*Adjust Current*) of the power supply. *Stop* switches the supply off, *Back* returns.



Figure 5 – digital power in operation (left), Figure 6 – voltage and current setting (right)

6. Device settings and maintenance

6.1 Device settings

Long press *Enter/Setting* in the main interface to enter the device settings with the following items:

Item	Function
Equipment parameters	language, volume, end sound, parameter restoration
Functional parameters	task timing, capacity limit
CHA / CHB Battery History Information	battery history on channel A / B (G-Tech smart batteries only)
CHA / CHB Calibration	calibration of the accuracy of voltage, current and other data measured by channel A / B
Equipment self-test	device self-test – no battery may be connected during it
About the equipment	device information (hardware version, software version, MAC number)
Back	return to the main screen

6.2 Voltage calibration

Due to the tolerances of electronic components, the cell voltages measured by the charger may differ slightly. You can verify the readings with a high-precision multimeter. If the cell voltages on the charger differ from the multimeter readings, adjust them with the channel calibration function in the device settings. For a more accurate calibration, it is recommended to charge the battery so that each cell is above 4.1 V before measuring and comparing.

① Connect a battery with cell voltages above 4.1 V to the balance port of the charger.

② In the dual-channel interface, long press *Enter/Setting* to open the device settings and select the channel calibration (*CHA* or *CHB Calibration*).

③ A random code appears. Enter it with the buttons to confirm the operation.

④ In the calibration screen, enter the voltage according to the multimeter readings.

After completing these steps, the charger automatically calibrates the voltage measurement according to the values entered.

6.3 Firmware upgrade

① To upgrade the firmware, connect the USB port (10) of the charger to a computer using the USB cable supplied. An Internet connection may be required to install the USB driver automatically.

② Press and hold the *Channel/Return* button (4), then connect the USB cable to the computer. Release the button when the charger beeps. Double-click to open the upgrade software and click *Upgrade*. The charger shows a black screen until the upgrade is completed.

③ If the USB cable is unplugged or the power is cut during the upgrade, the upgrade may fail (the original software may already have been erased). In that case, repeat steps ① and ②.

※ The upgrade software supports Windows 7 and Windows 10 only.

7. Troubleshooting

Problem	Solution
Error during power-on self-test	The charger runs a self-test automatically after power-on. If a battery is connected at that time, the self-test reports an error. Connect the battery only after the main interface appears.
Battery connection error	Unplug and re-insert the battery and make sure all connections are reliable. If the error message appears repeatedly, check whether the metal parts of the battery connectors are oxidised or burnt, which can affect the contact.
The charger displays an error	Follow the on-screen prompts. If necessary, disconnect the battery from the output and balance ports, disconnect the power and restart the charger.

8. Information for the EU and Czech Market

8.1 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.cz

Manufacturer: Shenzhen Grepow Battery Co., Ltd. (Gens ace brand), Huarong Road, Gaofeng Community, Dalang Street, Longhua District, Guangdong, China, info@grepow.com, www.grepow.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 address stated above or at the e-mail address info@rotorama.cz.
- **Product identification:** the type designation (iMars D1000) and the serial number are given on the rating label of the device; the hardware and software versions can be found under *About the equipment* in the device settings (chapter 6.1).

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

9.1 Rights of the buyer under Czech law

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 manufacturer's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- 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 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.

9.2 Manufacturer's warranty terms

❊ The following text is the manufacturer's original warranty statement.

- Gens ace products carry a manufacturer's warranty of **one year** from the original date of purchase. A valid proof of purchase is required for all manufacturer warranty claims.
- If a Gens ace product is outside the warranty period, the manufacturer may at its sole discretion offer a discount towards the purchase of a new similar item.

The manufacturer's warranty does not cover:

- failure to use the correct input voltage,
- failure to follow the instruction manual,
- mechanical damage due to external causes,
- disassembly or modification by the user (modifying original connectors, wires, components, etc.),
- use in improper conditions (damage or rust from rain, humidity, etc.),
- normal wear and tear, dents and scratches.

The manufacturer is not responsible for misuse of this product; the user bears all consequences of its use and operation.