

## GoolRC 43234-1623

# GoolRC B6 Mini Multi-Functional Balance Charger/Discharger

Model: 43234-1623

Brand: GoolRC

## 1. INTRODUCTION

The GoolRC B6 Mini is a versatile and high-performance balance charger/discharger designed for various types of rechargeable batteries used in RC hobbies. It features a built-in microprocessor and specialized operating software, allowing for intelligent and safe management of battery charging and discharging processes. This manual provides essential information for the safe and efficient operation of your charger.

## 2. SAFETY PRECAUTIONS

**Failure to follow these safety instructions may result in fire, property damage, or personal injury.**

- Always connect the charger to a stable DC power source (11-18V).
- Never leave the charger unattended during operation.
- Ensure proper ventilation around the charger to prevent overheating.
- Verify the battery type, cell count, voltage, and charging current settings match your battery specifications before starting any process. Incorrect settings can cause severe damage to the battery and charger.
- Do not charge damaged, swollen, or leaking batteries.
- Keep the charger and batteries away from flammable materials.
- Use only the provided or recommended charging cables and adapters.
- Avoid short-circuiting the output terminals.
- This device is not a toy. Keep out of reach of children.

## 3. PRODUCT OVERVIEW

The GoolRC B6 Mini is a compact and powerful charging solution. Its robust design and intuitive interface make it suitable for both beginners and experienced users.



Figure 3.1: Front view of the GoolRC B6 Mini Balance Charger, showcasing its LCD screen and control buttons.

## Key Features:

- **Multi-Battery Compatibility:** Supports Li-ion, Li-Poly, Li-Fe, NiCD, NiMh, and Pb battery types.
- **Integrated Balancer:** Built-in polymer lithium battery balancer for 2-6S LiPo batteries, ensuring balanced charging.
- **LCD Display:** Dot matrix LCD with backlight for clear display of operation menus and charging status.
- **Multiple Functions:** Includes normal charge, balance charge, fast charge, discharge, storage, and cycle charging modes.
- **Safety Protections:** Features short circuit protection, overcharge protection, overcurrent protection, and overheating protection.
- **Data Storage:** Ability to store and load program data for frequently used battery settings.

## 4. PACKAGE CONTENTS

Upon opening the package, please verify that all items are present and in good condition.



Figure 4.1: The GoolRC B6 Mini Balance Charger shown with its various connection cables and adapters.

- GoolRC B6 Mini Balance Charger/Discharger Unit
- DC Input Power Cable (often with alligator clips for connecting to a 12V power source)
- Various Output Charging Cables (e.g., T-plug/Deans, JST, Futaba, XT60 adapters)
- Instruction Manual (this document)

*Note: An external DC 11-18V power supply is required and sold separately.*

## 5. PRODUCT LAYOUT AND CONNECTIONS

Familiarize yourself with the various ports and controls on the charger for correct operation.



Figure 5.1: Detailed view of the GoolRC B6 Mini, highlighting the LCD screen, control buttons, input, output, and balance ports.

- **Input Power Cable (10-20V DC):** Located on the left side, this port connects the charger to an external DC power source.
- **Temperature Sensor Port:** Adjacent to the input power port, for connecting an optional temperature probe (not included) to monitor battery temperature during charging.
- **LCD Screen:** Displays operational menus, battery information, and charging status.
- **Control Buttons:**
  - **Batt.Type/Stop:** Scrolls through main menus or stops a charging process.
  - **Dec/Status:** Decreases values or views individual cell status in balance mode.
  - **Inc:** Increases values.
  - **Start/Enter:** Confirms selections or starts a charging process.
- **Output Charge Lead (4mm banana plug):** Main output ports (+ and -) for connecting the battery to be charged/discharged.
- **Balance Lead Sockets (JST-XH ports):** Located on the right side, these ports are for connecting the balance

lead of LiPo/LiFe/Li-ion batteries (2-6S) for balanced charging.

## 6. SPECIFICATIONS

Detailed technical specifications of the GoolRC B6 Mini Balance Charger/Discharger.



Figure 6.1: Dimensions of the GoolRC B6 Mini Balance Charger, showing length, width, and height.

Feature	Value
Input Voltage	DC 11-18V
Charge Power	Max 50W
Discharge Power	Max 5W
Charge Current Range	0.1-5.0A
Discharge Current Range	0.1-1.0A
LiPo/LiFe/Li-ion Cells	1-6S
NiMH/NiCd Cells	1-15S
Pb Battery Voltage	2-20V
Dimensions (L x W x H)	132 x 85 x 26 mm (5.2 x 3.3 x 1.0 inches)
Weight	212g (7.5 oz)

Feature	Value
Safety Certifications	UL, CE, FCC

## 7. SETUP

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Follow these steps to prepare your GoolRC B6 Mini for operation:

1. **Connect Power Supply:** Connect your DC 11-18V power supply to the input power port on the left side of the charger using the provided DC input cable. Ensure correct polarity.
2. **Power On:** Once connected, the charger's LCD screen should light up, indicating it is powered on and ready for use.
3. **Connect Battery:**
  - For LiPo/LiFe/Li-ion batteries, connect the main discharge lead to the output banana plug ports and the balance lead to the appropriate balance socket (e.g., 2S, 3S, etc.) on the right side.
  - For NiMH/NiCd/Pb batteries, only connect the main discharge lead to the output banana plug ports.

## 8. OPERATING INSTRUCTIONS

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### 8.1 Navigating the Menu

The charger's functions are accessed via the four control buttons and displayed on the LCD screen. Use the 'Batt.Type/Stop' button to scroll through the main menu options. Use 'Dec/Status' and 'Inc' to adjust values or select sub-options. 'Start/Enter' confirms selections or initiates a process.

### 8.2 Charging Modes Overview

The GoolRC B6 Mini supports various charging and discharging modes for different battery chemistries.

# GOOLRC

5 AMP/50Watt

## GOOLRC B6

### Professional Balance Charger/Discharger



Figure 8.1: Overview of available charging modes for NiMH/NiCd, Pb, and LiPo/Li-ion/LiFe batteries.

## 8.3 Common Operations

### 1. Selecting Battery Type:

- From the main menu, press 'Batt.Type/Stop' until the desired battery type (e.g., LiPo, NiMH) is displayed.
- Press 'Start/Enter' to select.

### 2. LiPo/LiFe/Li-ion Battery Charging (Balance Charge Recommended):

- Select 'LiPo BATT' (or LiFe/Li-ion).
- Choose 'BALANCE CHARGE'.
- Adjust the charging current using 'Dec/Status' and 'Inc' buttons. The recommended charge rate is 1C (e.g., for a 3000mAh battery, set to 3.0A).
- Adjust the cell count (e.g., 3S for a 3-cell LiPo) to match your battery.
- Press and hold 'Start/Enter' for 3 seconds to confirm settings. The charger will perform a battery check.
- Press 'Start/Enter' again to begin charging.
- To stop charging, press 'Batt.Type/Stop'.

### 3. NiMH/NiCd Battery Charging (AUTO CHARGE):

- Select 'NiMH BATT' (or NiCd).
- Choose 'AUTO CHARGE'.
- Set the maximum charging current. The charger will automatically adjust the current during the charge cycle.
- Press and hold 'Start/Enter' for 3 seconds to confirm and start charging.

### 4. Discharging Batteries:

- Select the appropriate battery type.

- Choose 'DISCHARGE'.
- Set the discharge current and the final discharge voltage.
- Press and hold 'Start/Enter' to confirm and begin discharging.

#### 5. Data Storage/Load:

- The charger allows you to save and recall up to 10 battery profiles.
- Navigate to 'USER SET PROGRAM' and then 'DATA STORE' or 'DATA LOAD' to manage profiles.

## 9. MAINTENANCE

- Keep the charger clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Store the charger in a cool, dry place when not in use.
- Regularly inspect all cables and connectors for signs of wear or damage. Replace any damaged components immediately.
- Do not attempt to open the charger casing, as this will void the warranty and may expose you to electrical hazards.

## 10. TROUBLESHOOTING

If you encounter issues with your GoolRC B6 Mini, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger does not power on	No power input or incorrect voltage	Check power supply connection and ensure it provides 11-18V DC. Verify polarity.
"CONNECTION BREAK" error	Battery not properly connected	Ensure main and balance leads (if applicable) are securely connected to the charger and battery.
"CELL ERROR" or "VOLTAGE ERROR"	Incorrect cell count setting or battery voltage mismatch	Verify the cell count setting on the charger matches the actual battery cell count. Check battery voltage.
Charger gets excessively hot	Poor ventilation or high ambient temperature	Ensure adequate airflow around the charger. Reduce charging current if necessary.
Charging process stops prematurely	Safety cutoff triggered (e.g., capacity limit, temperature limit)	Check charger settings for capacity cut-off or temperature limits. Allow battery to cool if hot.

The charger is equipped with various error codes to indicate specific issues. Refer to the on-screen messages for guidance. If the problem persists, discontinue use and contact customer support.

## 11. WARRANTY AND SUPPORT

GoolRC products are manufactured to high-quality standards. For warranty information and technical support, please refer to the retailer where the product was purchased or visit the official GoolRC website. Keep your proof of purchase for warranty claims.

