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Hobby King XT60

Turnigy Nano-Tech 2200mAh 3S 25C LiPo Battery Pack with XT60 Connector User Manual

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Turnigy Nano-Tech 2200mAh 3S 25C LiPo Battery Pack. Please read this manual thoroughly before using the battery to ensure proper handling, charging, and storage procedures. Adhering to these guidelines will help maximize battery performance and lifespan while minimizing risks.



This image displays the Turnigy Nano-Tech 2200mAh 3S 25C LiPo battery pack. The battery is dark blue with a green label indicating 'Turnigy Nano-Tech 2200mAh 3S-50C DISCHARGE 84.48 Wh' and '2.2 VOLTAGE 3S cell 11.1V'. It features red and black main power wires terminating in a yellow XT60 connector, and a white JST-XH balance plug with multiple thin wires (red, white, blue, black).

2. SAFETY INFORMATION

Lithium Polymer (LiPo) batteries are powerful and require careful handling. Failure to follow safety instructions can result in fire, personal injury, and property damage.

- **Charging:** Always use a LiPo-compatible charger with a balance function. Never charge unattended.

Charge on a non-flammable surface away from combustible materials.

- **Discharging:** Do not over-discharge the battery. Stop use if the voltage drops below 3.0V per cell (9.0V for a 3S pack). Over-discharging can permanently damage the battery.
- **Physical Damage:** Do not puncture, drop, or expose the battery to impact. If the battery is damaged, swollen, or leaking, discontinue use immediately and dispose of it safely.
- **Temperature:** Do not expose the battery to extreme temperatures (above 60°C / 140°F or below 0°C / 32°F). Avoid direct sunlight.
- **Storage:** Store LiPo batteries at room temperature (15-25°C / 59-77°F) and at a storage voltage of approximately 3.8V per cell.
- **Disposal:** Dispose of damaged or old LiPo batteries responsibly at a designated battery recycling facility. Never put them in household waste.
- **Short Circuit:** Prevent short circuits by ensuring connectors are properly insulated and never allowing battery terminals to touch.

3. SETUP

3.1 Initial Inspection

Upon receiving your Turnigy Nano-Tech LiPo battery, carefully inspect it for any signs of damage, such as swelling, punctures, or frayed wires. If any damage is observed, do not use the battery and contact your retailer.

3.2 Connecting the Battery

The battery is equipped with an XT60 discharge connector for power output and a JST-XH balance plug for balance charging and monitoring.

- **Power Connection:** Connect the yellow XT60 connector to your device's XT60 input. Ensure the polarity is correct (red wire to positive, black wire to negative).
- **Balance Connection:** For charging, connect the white JST-XH balance plug to the corresponding port on your LiPo balance charger. This is crucial for cell balancing and safety during charging.

4. OPERATING INSTRUCTIONS

4.1 Charging

Always use a dedicated LiPo balance charger. Set the charger to the correct cell count (3S) and capacity (2200mAh). The recommended charge rate is 1C (2.2 Amps for this 2200mAh battery). Some Nano-Tech batteries may support faster charging, but 1C is generally safest for longevity.

- Connect the main XT60 discharge plug to the charger's output.
- Connect the JST-XH balance plug to the charger's balance port.
- Select 'LiPo Balance Charge' mode on your charger.
- Set the charge current to 2.2A (1C).
- Start the charging process and monitor the battery.

4.2 Discharging and Usage

This battery is designed for applications requiring a continuous discharge of 25C and burst discharge of 50C. Ensure your application's current draw does not exceed these limits.

- Connect the battery to your RC model or device via the XT60 connector.
- Monitor the battery voltage during use. Stop operation if the voltage approaches 3.0V per cell (9.0V

total for 3S) to prevent over-discharge.

- Avoid continuous high-current draw that causes excessive heat buildup in the battery.

5. MAINTENANCE

5.1 Storage

For long-term storage, charge or discharge the battery to a storage voltage of 3.8V per cell (11.4V for a 3S pack). Store the battery in a cool, dry place, ideally in a fire-resistant LiPo bag or container, away from direct sunlight and flammable materials.

5.2 General Care

- Regularly inspect the battery for any signs of damage or swelling.
- Keep connectors clean and free from corrosion.
- Avoid bending or stressing the wires where they connect to the battery pack.
- Do not disassemble the battery pack.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Battery not charging	Incorrect charger settings, faulty charger, damaged battery, poor connection.	Verify charger settings (LiPo, 3S, 2.2A). Check all connections. Try a different charger if available. If battery is damaged, discontinue use.
Battery swells during use/charge	Overcharging, over-discharging, excessive current draw, physical damage, internal cell failure.	Immediately disconnect the battery. Move to a safe, non-flammable area. Do not use the battery again. Dispose of safely.
Short run time	Battery not fully charged, aging battery, high current draw from device, cold temperature.	Ensure full balance charge. Check battery age and cycle count. Reduce load on device if possible. Operate in warmer conditions.
Battery gets hot during use	Excessive current draw, internal resistance increase, poor ventilation.	Reduce current draw. Ensure adequate airflow around the battery. If overheating persists, discontinue use.

7. SPECIFICATIONS

Feature	Specification
Capacity	2200mAh
Voltage	3S1P / 3 Cell / 11.1V
Discharge Rate (Constant)	25C
Discharge Rate (Burst)	50C
Weight	168g (including wire, plug & case) / 4.8 ounces
Dimensions	103 x 35 x 23.4mm / 4.06 x 1.38 x 0.92 inches
Balance Plug	JST-XH
Discharge Plug	XT60
Battery Cell Composition	Lithium Polymer
Manufacturer	Turnigy

8. WARRANTY AND SUPPORT

Specific warranty details for the Turnigy Nano-Tech 2200mAh 3S 25C LiPo Battery Pack are not provided in the product information. For warranty claims, technical support, or further assistance, please contact your original retailer or the manufacturer, Hobby King, directly. Always retain your proof of purchase.