STARTRC GDF-1116632-01

STARTRC Drone Airdrop System User Manual

Model: GDF-1116632-01

1. Introduction

The STARTRC Drone Airdrop System is a lightweight and efficient accessory designed to enable your DJI Mini series drone to carry and release small payloads. This device is ideal for various applications such as delivering small gifts, casting fishing bait, or dropping lightweight items during recreational flights.

Compatibility: This system is specifically designed for the DJI Mini Drone series, including DJI Mini 3 Pro, Mini 3, Mini SE, Mini 2, and Mini 2 SE.

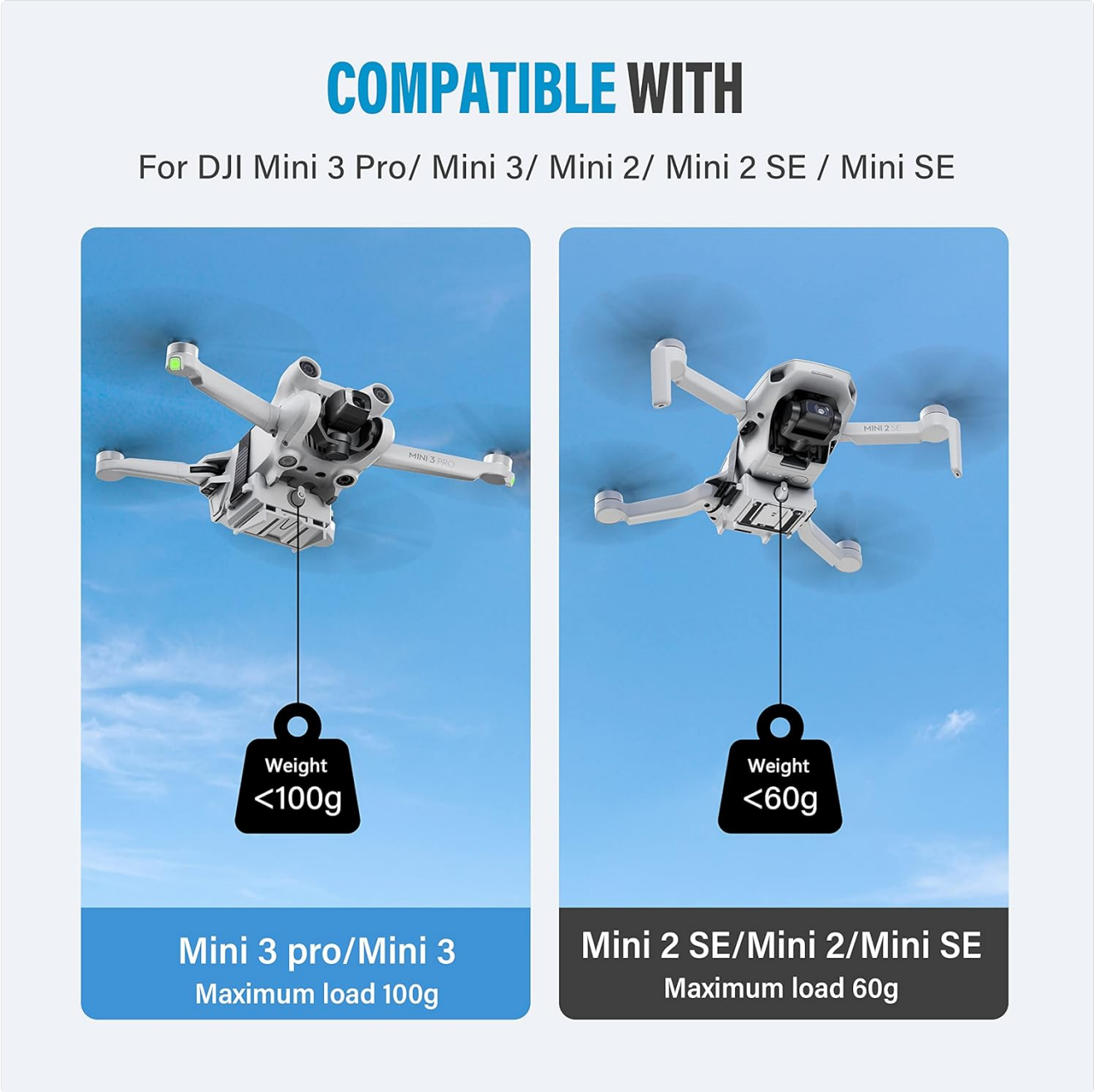


Figure 1: Compatibility and Maximum Load. The system supports DJI Mini 3 Pro/Mini 3 with a maximum load of 100g (80g with Intelligent Flight Battery, 100g with Intelligent Flight Battery Plus) and DJI Mini 2 SE/Mini 2/Mini SE with a maximum load of 60g.

2. Package Contents

Before proceeding with installation, please ensure all components are present in your package:

- Air-dropping system unit
- Base
- Magic tie (Velcro strap)
- Release line
- Charging Cable

Figure 2: Product Components. This image displays all items included in the package, ensuring you have everything needed for setup and operation.

3. Setup and Installation

The STARTRC Airdrop System offers two primary installation methods depending on your DJI Mini drone model. Please follow the instructions carefully for your specific drone.

Figure 3: Two Installation Methods. This diagram illustrates the step-by-step process for attaching the airdrop system to both DJI Mini 3 Pro/Mini 3 and DJI Mini 2/Mini 2 SE/Mini SE drones.

3.1. For DJI Mini 3 Pro / Mini 3 Installation

1. Attach the base unit to the bottom of your drone, ensuring it clicks securely into place.
2. Align the air-dropping system unit with the installed base and gently push it down until it locks.
3. Ensure the unit is firmly attached and does not obstruct any sensors or propellers.

3.2. For DJI Mini 2 / Mini 2 SE / Mini SE Installation

1. Position the air-dropping system unit on the belly of your drone.
2. Use the provided magic tie (Velcro strap) to securely fasten the unit to the drone's body. Ensure it is tight enough to prevent movement during flight but does not compress the drone's components.
3. Verify that the unit is stable and does not interfere with the drone's sensors or propeller rotation.

After installation, attach the release line to the payload you wish to drop and then connect it to the airdrop system's hook.

4. Operating Instructions

The STARTRC Drone Airdrop System operates without an additional remote control, utilizing the drone's existing flight capabilities for payload release.

4.1. Payload Attachment and Weight Limits

- Attach your desired payload to the release line.
- Connect the release line to the hook on the airdrop system.
- **Maximum Load Capacity:**
  - For DJI Mini 3 Pro / Mini 3: Less than 100g (up to 80g with Intelligent Flight Battery, up to 100g with Intelligent Flight Battery Plus).
  - For DJI Mini 2 SE / Mini 2 / Mini SE: Less than 60g.
- Exceeding these limits can compromise flight stability and drone performance.

4.2. Releasing the Payload

The release mechanism is activated by a specific drone maneuver:

- Fly your drone to the desired drop location.
- To activate the release, rotate the drone on its axis (yaw) for approximately 7 to 10 seconds. The system's built-in high-sensitivity sensor chip detects this rotation.
- After the rotation, the hook will open, and the payload will be released by gravity.

Figure 4: Payload Release Mechanism. The drone's rotation for approximately 10 seconds triggers the release of the attached payload.

4.3. Flight Considerations During Operation

- It is recommended to fly at a**low speed** when carrying a payload.
- When deploying the payload, descend slowly and use the drone's**"N" (Normal) gear**/**mode** for optimal control and stability.
- Avoid operating in strong winds, as this can affect drone stability and the reliability of the release mechanism.

Figure 5: Versatile Applications. The airdrop system can be used for various fun and practical purposes, from special occasions to recreational activities.

Figure 6: Drone with Airdrop System in Flight. This image shows the system in action, demonstrating its ability to carry and release items.

5. Maintenance

To ensure the longevity and optimal performance of your STARTRC Drone Airdrop System, follow these simple maintenance guidelines:

- **Cleaning:** Wipe the unit with a soft, dry cloth after each use to remove dust or debris. Avoid using harsh chemicals or abrasive materials.

- **Storage:** Store the system in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Inspection:** Periodically inspect the release mechanism and attachment points for any signs of wear or damage. Ensure the magic tie (Velcro) maintains its grip.
- **Charging:** Recharge the unit as needed using the provided charging cable. Do not overcharge.

6. Troubleshooting

If you encounter issues while using the STARTRC Drone Airdrop System, refer to the following common problems and their solutions:

Problem	Possible Cause	Solution
Payload not releasing after rotation.	Insufficient rotation duration or speed; mechanism obstruction; low battery.	Ensure drone rotates consistently for 7-10 seconds. Check for any debris obstructing the hook. Recharge the airdrop system.
Drone becomes unstable during flight with payload.	Payload exceeds maximum weight limit; improper attachment; strong winds.	Verify payload weight is within specified limits. Ensure the system is securely attached. Avoid flying in windy conditions. Fly at low speed and use "N" gear.
Payload string interferes with drone's height sensor.	String length or thickness.	Use a thinner string if possible. Adjust the length of the string to prevent it from swinging into the sensor's path.
Airdrop system detaches during flight.	Improper installation; loose magic tie (Velcro).	Re-install the system, ensuring all connections are secure. For Mini 2 series, tighten the magic tie firmly.

Figure 7: Stable Flight and Landing Protection. The lightweight design of the airdrop system is engineered to minimize impact on drone dynamics, contributing to stable flight.

7. Specifications

- **Model:** GDF-1116632-01
- **Brand:** STARTRC
- **Compatibility:** DJI Mini 3 Pro, Mini 3, Mini SE, Mini 2, Mini 2 SE
- **Product Dimensions (L x W x H):** 5.5 x 4 x 3 cm (approximately)
- **Item Weight:** 30 grams
- **Max Payload (Mini 3 Pro/Mini 3):** < 100g (80g with Intelligent Flight Battery, 100g with Intelligent Flight Battery Plus)
- **Max Payload (Mini 2 SE/Mini 2/Mini SE):** < 60g
- **Release Mechanism:** Drone rotation (7-10 seconds)

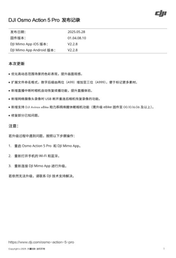
- **Special Feature:** Payload drop system

8. Warranty and Support

Information regarding product warranty and customer support is not provided in this manual. Please refer to the product packaging or the manufacturer's official website for details on warranty coverage and how to contact customer support for further assistance.

Related Documents - GDF-1116632-01

	STARTRC Charging Hub for DJI Mini 3 Pro - User Guide and Specifications Official user guide and technical specifications for the STARTRC Charging Hub designed for DJI Mini 3 Pro intelligent flight batteries. Learn about features, instructions, charging times, safety precautions, and more.
	FPV Drone Simulator Setup Guide: UNCRASHED, DRL, DCL, and More Comprehensive guide to setting up and calibrating various FPV drone simulators including UNCRASHED, DRL, DCL, TRYP FPV, AIDroneSim, FPV LOGIC, Liftoff, Freerider, SkyDive, FPV Worldwide, and FPV Battleground. Learn controller configuration for realistic drone flight simulation.
	STARTRC ST012 GPS STARTRC ST012 GPS FCC
	DJI Mavic 3M User Manual: Features, Operation, and Safety Guide Get detailed insights into the DJI Mavic 3M multispectral drone. This user manual covers its advanced imaging capabilities, flight operations, safety protocols, and enterprise applications for agriculture and surveying.
	DJI Mini 3 User Manual: Setup, Flight, and Features Guide Comprehensive user manual for the DJI Mini 3 drone. Covers setup, flight operations, remote controller usage, camera features, safety guidelines, and technical specifications for optimal drone performance.

	[DJI Osmo Action 5 Pro Release Notes - Firmware and App Updates] Comprehensive release notes for the DJI Osmo Action 5 Pro, detailing firmware and DJI Mimo app updates, new features, performance enhancements, and bug fixes across multiple versions from September 2024 to May 2025.