



DROP SYSTEM USER GUIDE

MAVIC 2 & MAVIC AIR 2

Oct 2020

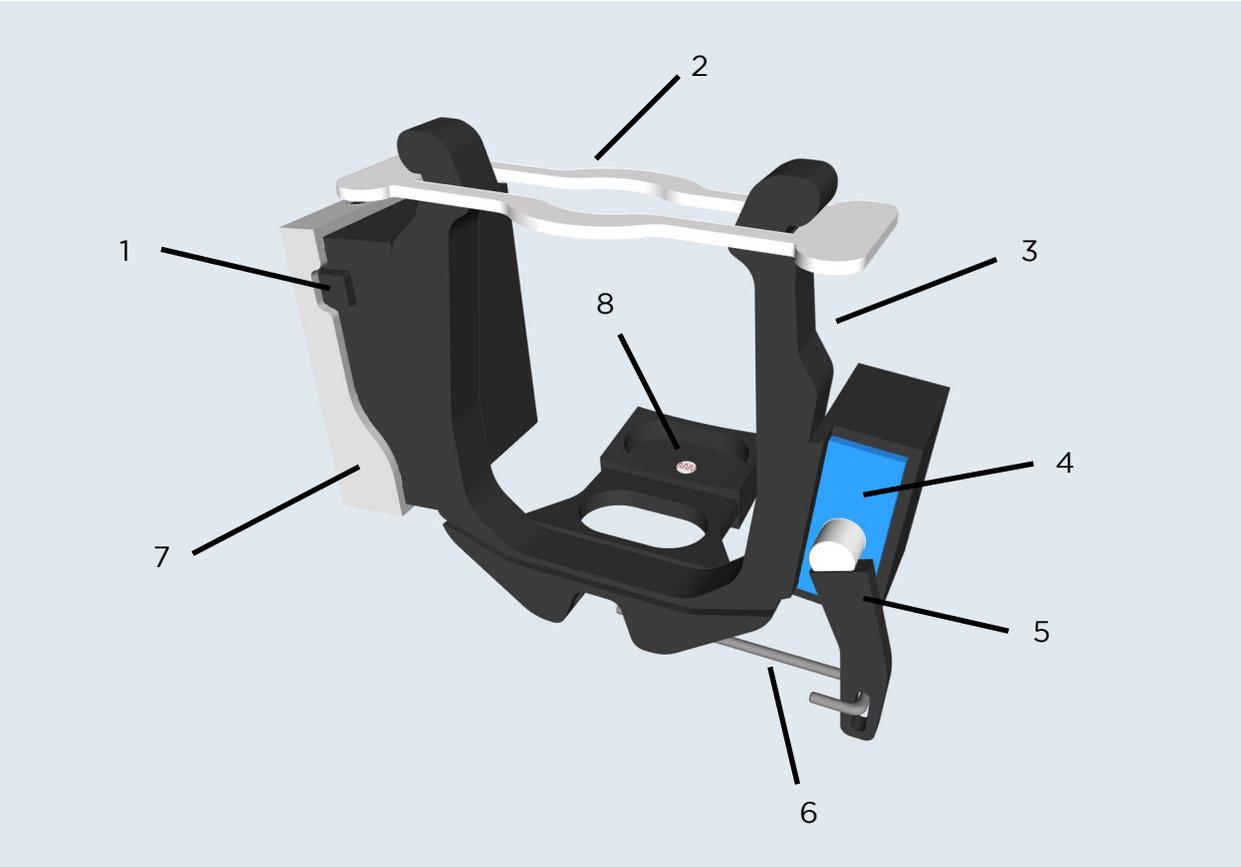
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Parts and Components

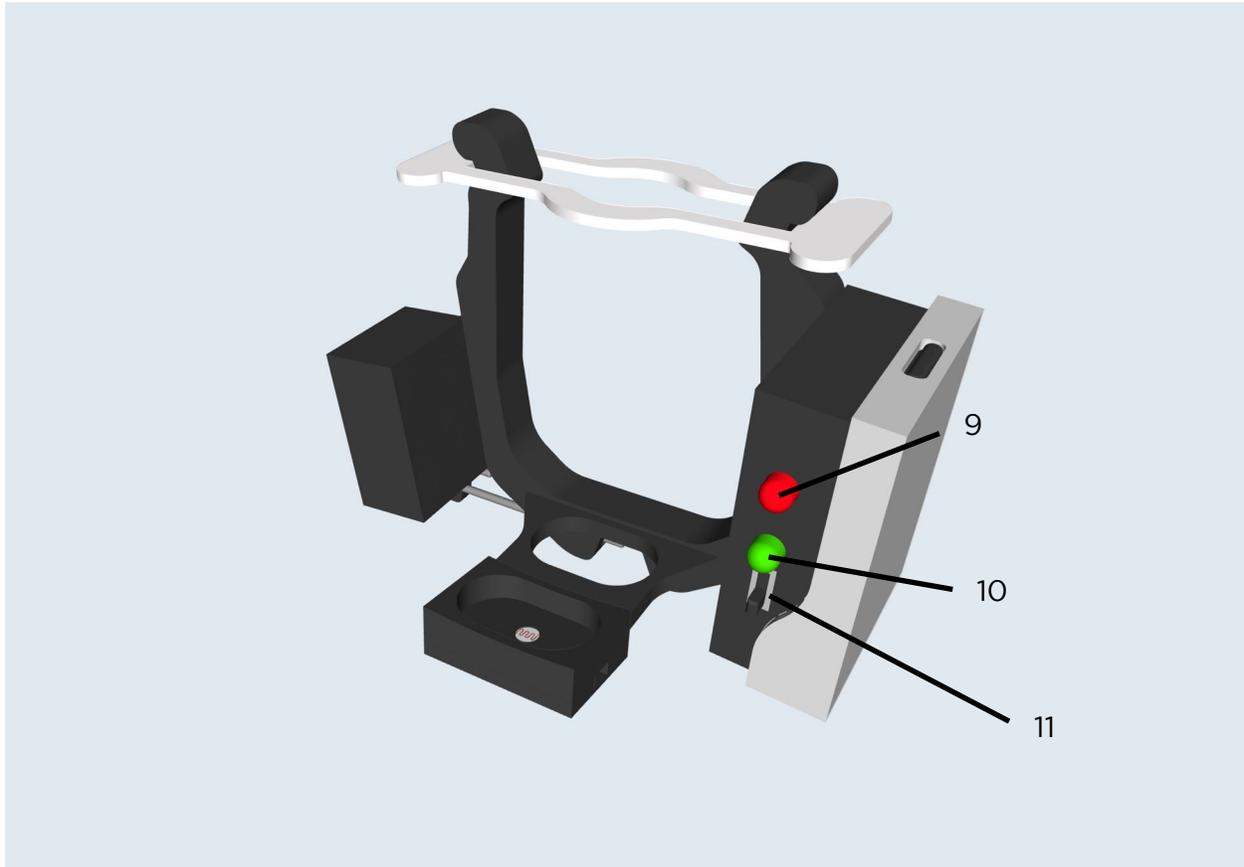
Your Drop System is designed and assembled entirely by DJI Shop Canada staff in-house. All major components, with the exception of a few parts, are 3D printed and assembled by hand to ensure a sturdy and reliable build. A breakdown of the parts and components are indicated in the illustrations below.



Your unit may differ slightly from the depicted illustrations in this user guide

- 1. Manual Pin Release Button
- 2. Security Lock
- 3. Main Clip Assembly
- 4. Servo and Servo Protector Box
- 5. Servo Arm
- 6. Payload Pin
- 7. Electronics Box and Cover
- 8. Light Sensor

Parts and Components (cont...)



9. Payload Drop Indicator (Lit when pin is in the open position)

10. Power Indicator (Lit when powered on)

11. Power Switch (Down = ON, Up = OFF)

In the Box

1x Drop System Assembly

1x Security Lock

1x Electronics Box Cover

1x Payload Pin

1x 150mAh Li-Po Battery

1x Battery USB Charger

2x Carabiner Clips

Installation and Usage

To ensure that your Drop System functions correctly, we recommend following the installation and usage guidelines detailed below. Should a part or component not function as explained, please contact DJI Shop Canada for support.

Step 1

It is recommended to pre-install your landing gear risers of choice (not included) to ensure adequate clearance between the lower portion of the Drop System and the ground below it.



Step 2

Hold the aircraft upright with one hand while using the other hand to gently press the main clip assembly upwards from the belly of the aircraft. The electronics box must be on the right side of the aircraft.



Installation and Usage (cont...)

Step 3

The clip will snap into place when fully installed. Ensure that the downward vision and IR sensors are not obstructed and that the light sensor of the Drop System fully covers the downward LEDs of the aircraft.



Installation and Usage (cont...)

Step 4

Ensure that the clip reaches the top of the battery. Install the clip security lock by inserting into one side of the clip, then stretching to meet the other side of the clip.

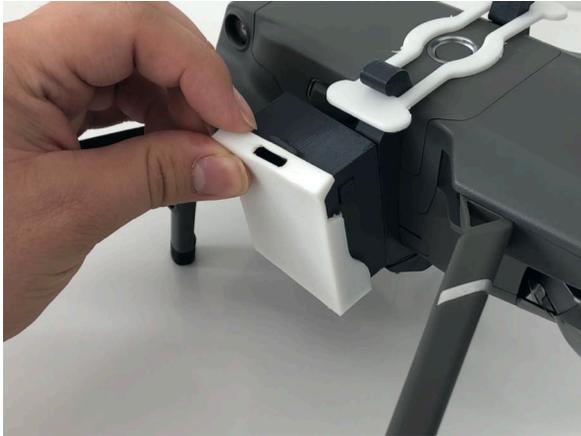
This will require some force, as the lock is designed to keep tension on the clip, ensuring it cannot detach itself from the aircraft body.



Installation and Usage (cont...)

Step 5

Remove the electronics box cover by pulling the upper part towards you, then rotating downward to free the lower latch.



Step 6

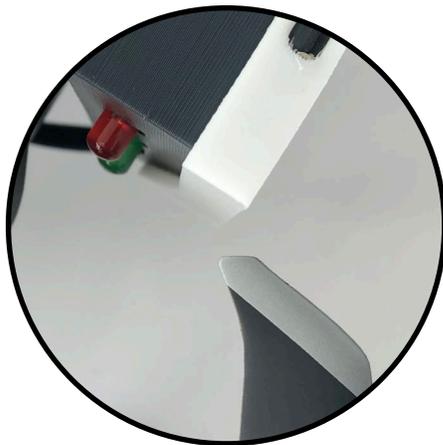
Connect the battery to the battery connector inside the electronics box and tuck the battery inside. Be sure to connect the battery in the proper orientation. Do not force the connector.



Installation and Usage (cont...)

Step 7

Reinstall the electronics box cover after connecting the battery. At this point, ensure that the drop system assembly is installed correctly and does not obstruct the propellers.



The drop system is designed with tight tolerances. Ensure that the propellers are not obstructed by the drop system.

The drop system is now installed and you may attach a payload. To learn how, see page 11.

Installation and Usage (cont...)

To power the unit on, please move the switch towards the downward position. The green LED will illuminate confirming the unit is powered on. If installed correctly and without any technical faults, the unit will automatically close the pin.



The drop system relies on the auxiliary light of your aircraft, which is located on the belly, to know when to engage. When the auxiliary light is on, the drop system will engage, dropping the payload. As long as the auxiliary light remains off, the drop system will keep the pin closed, preventing the payload from dropping. The auxiliary light can be controlled via your RC or directly from the DJI Go 4 or DJI Fly application on your phone.



When the drop system is in the engaged/open position, the red LED will illuminate.

Attaching a Payload

When you're ready to attach your payload, ensure you have considered the following:

- The payload does not exceed 1lb/0.45kg.
- The payload does not contain any dangerous contents.
- The payload is not too large which may obstruct the downward vision system.
- The payload is not too light which can be blown upward into the propellers of the aircraft.
- The payload is suspended at least 1m/~3ft away from the aircraft.

Please be sure to exercise caution and good judgement when attaching a payload. Do not attach a payload which can cause serious damage or injury when dropped. If your payload satisfies the recommendations above, you may continue.

To attach a payload, the payload pin must be in the engaged/open position. To open the pin, simply press and hold the manual pin release button. Once the button is released, the servo will close the pin.

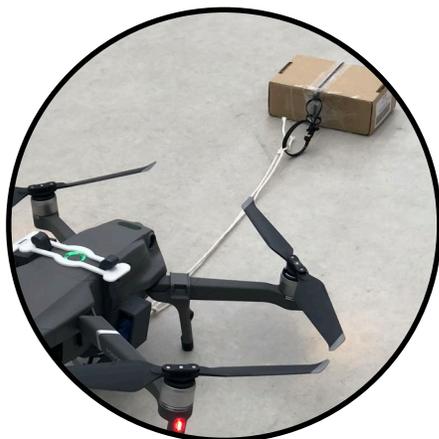


Attaching a Payload (cont...)

With the payload pin open, insert the included carabiner clip into the cavity underneath the drop system where the payload pin is. Once the clip is inserted, you may release the manual pin release button to close the payload pin. At this point, you may connect your payload to the carabiner clip.



When attaching a payload, you must keep at least 1m/~3ft of clearance between the belly of the aircraft and the top of your payload. If this distance is shortened, your aircraft's downward vision system may detect an object that is too close and will attempt to hover upward which can lead to a crash.



It is important to ensure that the payload remains at least 1m/~3ft away from the aircraft when connected.

Attaching a Payload (cont...)

Once your payload is connected, it must be positioned behind the aircraft to ensure takeoff is unobstructed. Please see the images below for reference.



Important things to consider:

- The line you use to connect your payload must be strong and not frayed.
- Ensure any knots you tie are strong and will not unravel.
- DO NOT use any open hooks such as “S” hooks when connecting your payload. Always use closed hooks, loops or connectors such as the included carabiner clip.
- Attaching a payload to your aircraft will alter its flight characteristics and overall performance. Exercise additional caution when flying with a payload.

Your payload is now connected and you may begin your flight.

Troubleshooting

Should your Drop System encounter a problem which prevents normal use, this guide may assist you in finding a solution. If the suggested solutions do not work, or you are encountering an issue not listed here, please contact DJI Shop Canada for support or to arrange for a repair/replacement.

PROBLEM	POSSIBLE SOLUTION
Unit does not power on.	<ul style="list-style-type: none">- Check that the power switch is fully engaged.- Check that the battery is connected properly.- Check that the battery is fully charged.
The red/green LEDs are flickering when the unit is powered on.	<ul style="list-style-type: none">- Charge the battery.
The servo is twitching when the unit is powered on.	<ul style="list-style-type: none">- Charge the battery.
The servo cannot fully extend or retract.	<ul style="list-style-type: none">- Check that the payload pin is not obstructed.- Check that the servo arm is not obstructed.- Check that the battery is fully charged.- Ensure your payload is not too heavy for the servo to move the payload pin (max recommended weight: 1 lb/0.45 kg.)
The servo does not move.	<ul style="list-style-type: none">- Check that the servo arm is not obstructed.- Check that the unit is powered on.- Check that the servo power and data cables are not pinched or damaged.

PROBLEM	POSSIBLE SOLUTION
The servo does not open.	<ul style="list-style-type: none"> - Check that the unit is powered on. - Ensure that the LED on the bottom of your aircraft is functioning. The LED must be on for the servo to open. - Check that there is no debris covering the light sensor in the light sensor cavity.
The servo does not close.	<ul style="list-style-type: none"> - Check that the unit is powered on. - Ensure that the LED on the bottom of your aircraft is functioning. The LED must be off for the servo to close. - Check that there is no light leaking into the light sensor cavity.
The servo extends and retracts at random.	<ul style="list-style-type: none"> - Check that there is no light leaking into the light sensor cavity. - Only power the unit on when attached to the aircraft.
The aircraft begins hovering upwards after attaching a payload.	<ul style="list-style-type: none"> - Check that there are no objects in close proximity to the downward vision system. - Ensure that you have at least 1 metre/~3 feet of clearance between the aircraft's downward vision system and the payload.
The manual pin release button does not trigger the servo to open.	<ul style="list-style-type: none"> - Check that the unit is powered on.
The manual pin release button or switch is physically stuck.	<ul style="list-style-type: none"> - Contact DJI Shop Canada to arrange for repair/replacement.
The red/green LED does not illuminate.	<ul style="list-style-type: none"> - Contact DJI Shop Canada to arrange for repair/replacement.
The battery will not hold a charge.	<ul style="list-style-type: none"> - Replace the battery with an equivalent 1S 3.7V 150mAh battery with a JST-PH 2.0 connector.

PROBLEM	POSSIBLE SOLUTION
The battery is not charging.	<ul style="list-style-type: none"> - Check that the charger you are using is functioning correctly. - Try moving the charger to a different outlet. - Replace the charger if it is found not to be functional. - Replace the battery if it is found not to be functional.
The battery is swollen.	<ul style="list-style-type: none"> - Responsibly recycle the battery immediately and DO NOT attempt to charge it. - Replace the battery with an equivalent 1S 3.7V 150mAh battery with a JST-PH 2.0 connector.

If you require assistance, please call

(905) 605-8030

Warranty and Service

Your drop system is covered by a 1 (one) year warranty by DJI Shop Canada (not to be confused with DJI.)

Should your unit experience a manufacturing defect or fail unexpectedly during normal use, we will, at our option, repair or replace the unit with new or equivalent to new parts and components in terms of performance and reliability.

We will cover inbound and outbound shipping costs if required to have your unit shipped to and from our facility.

Information such as customer name, phone, email, and shipping address will be requested when processing a warranty claim. Further, an original bill of sale along with an image of the unit must be submitted to us prior to receiving warranty service.

What is not covered; Damage to the unit due to careless handling, damage due to a crash (including crashes as the result of an aircraft malfunction), damage to the unit due to improper use, and malfunctions that are the direct result of not following the proper instructions outlined in this user guide. Modifications made to the unit by the end-user will automatically void any warranty offered by DJI Shop Canada. We reserve the right to deny warranty service to any customer if we feel that the warranty benefit is being abused or the unit does not meet the criteria required to be considered warranty eligible.

Consumable parts; The included Li-Po battery used to power the drop system is covered by our 1 (one) year manufacturer warranty, however, there are some exceptions. We will replace the battery if it no longer powers on or accepts a charge from a known-working charger within the warranty period. The battery must be undamaged and must not be swollen. Swollen and/or damaged batteries are not covered by our warranty. Further, batteries are considered a consumable part. With use and over time, the effectiveness of the battery's ability to hold a charge will deplete, causing the overall battery life per charge to reduce. This is normal behaviour of a battery of any kind. If the battery performance depletes to the point in which the charge life is too short, it is recommended to recycle the battery and replace it with a new one. A shortened battery charge is not considered a defect and will therefore not be covered by our warranty.

Terms of Use

By using the drop system product, you agree to the following terms of use. If you do not agree, please return your drop system to the original seller and request a refund where applicable.

- (1) The drop system is designed and assembled by DJI Shop Canada staff in Toronto, Ontario. Should you experience a product malfunction during the first year of ownership, please contact DJI Shop Canada for service and support. Warranty details are outlined on page 17 of this user guide.
- (2) When operating the aircraft with the drop system attached to it, it is the full responsibility of the pilot in command to ensure the safety of the crew, bystanders, and other individuals or property that remains in the path of flight is not compromised in any way.
- (3) The drop system is not to be used for illegal activities such as the transportation of hazardous goods.
- (4) It is the responsibility of the pilot in command to ensure that the drop system is correctly installed and charged and the payload is correctly attached. Failure to do so may cause undesired operation of the drop system and/or the aircraft which can result in injury.
- (5) It is the responsibility of the pilot to ensure that the aircraft does not fly over individuals or property in which the aircraft or payload can cause serious damage or injury to what's below it. **DJI SHOP CANADA ASSUMES NO RESPONSIBILITY FOR DAMAGE OR INJURY CAUSED BY A PAYLOAD THAT HAS DROPPED PREMATURELY OR ON-COMMAND. WE DO NOT GUARANTEE THAT A PREMATURE ENGAGEMENT OF THE DROP SYSTEM CAN BE FULLY PREVENTED, SO PLEASE BE FULLY AWARE OF YOUR SURROUNDINGS AND DO NOT OPERATE YOUR AIRCRAFT OVER PERSONS OR PROPERTY THAT CAN BE SERIOUSLY INJURED OR DAMAGED SHOULD SUCH AN EVENT OCCUR.**
- (6) Always familiarize yourself with the local laws and regulations before operating your aircraft, with or without the drop system. Ensure that you have adequate permission from local authorities to fly with the drop system if required.
- (7) Should you have any questions or require clarification on any of the information in this guide, please contact DJI Shop Canada directly.