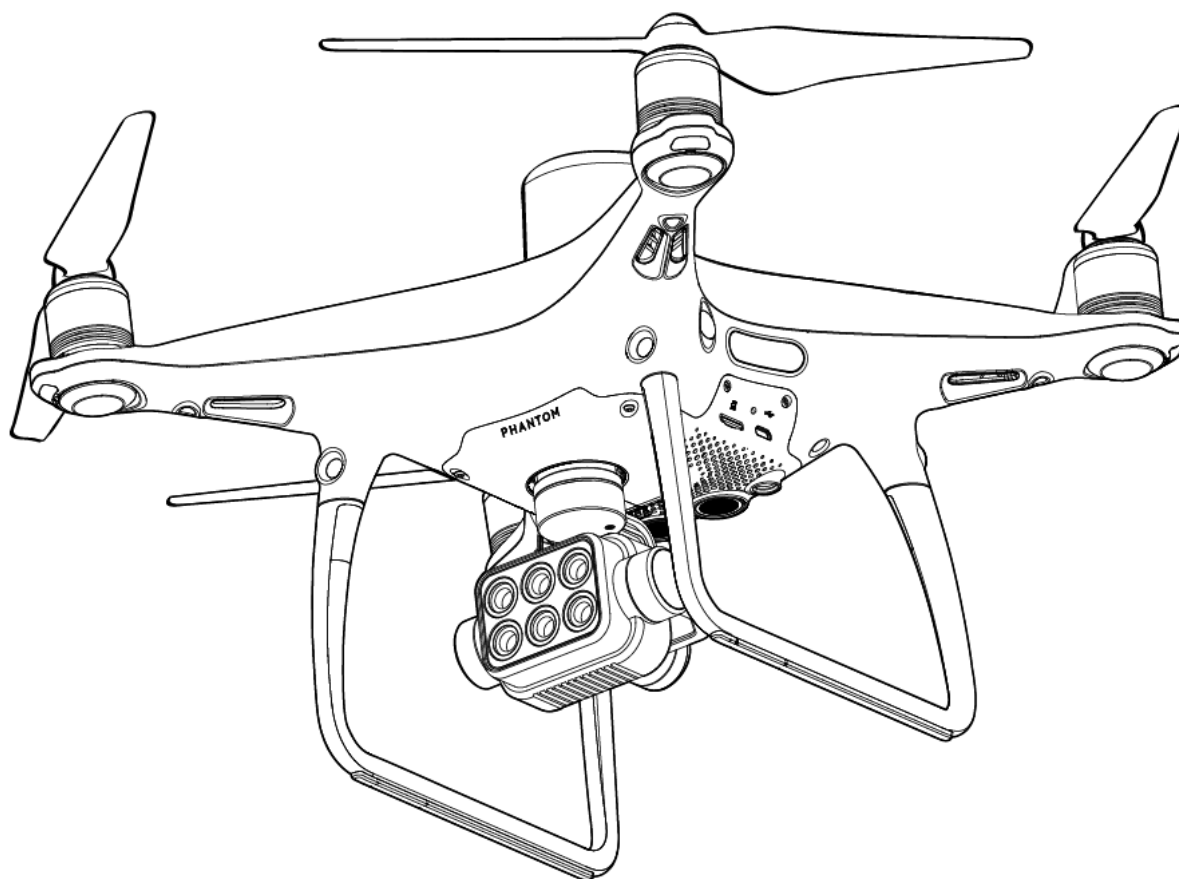


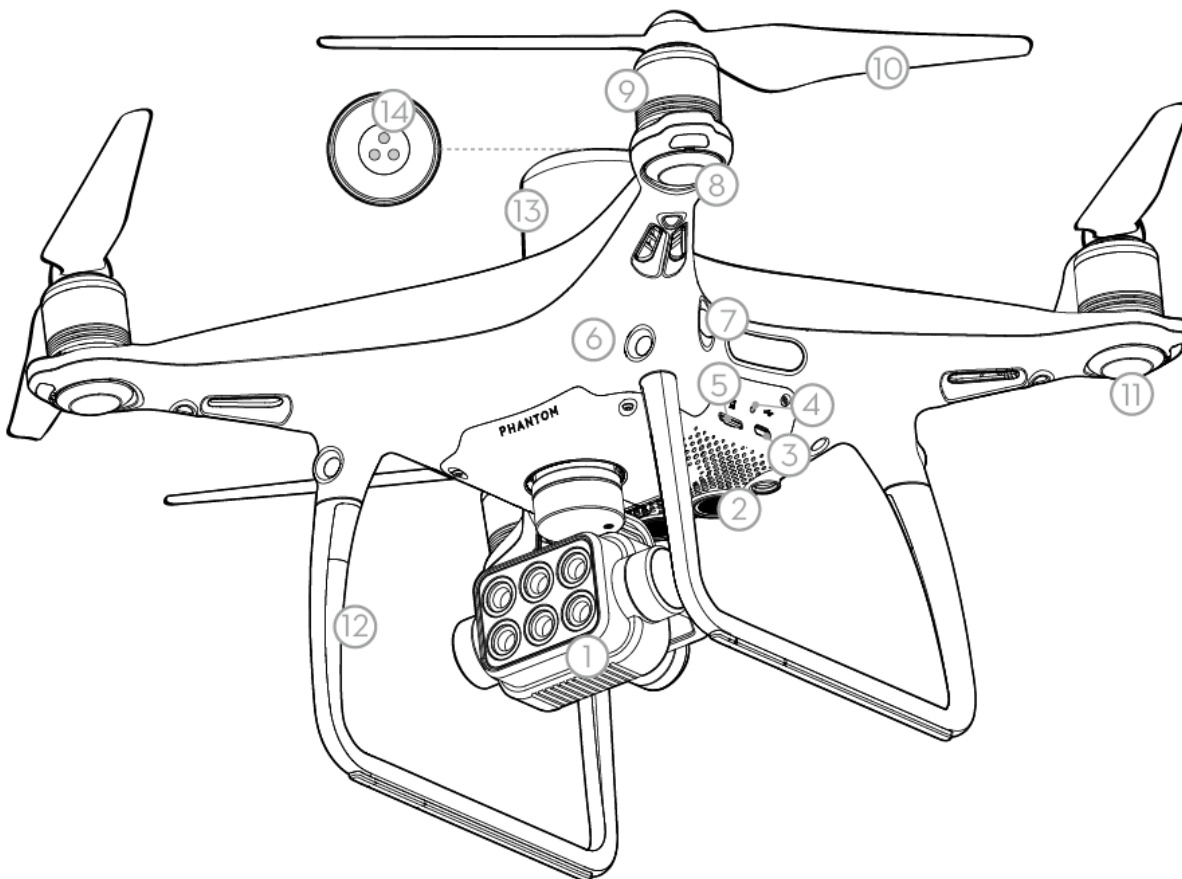
PHANTOM 4 M-SPECTRAL

Quick Start Guide
v1.0

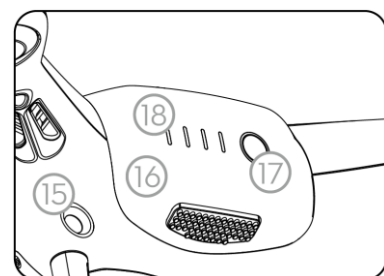


Phantom 4 M-Spectral

The PHANTOM™ 4 M-Spectral is an aerial photography drone capable of multi-spectral imaging functions. Its camera features six 1/2.9-inch CMOS sensors housed within a high stability gimbal to simultaneously capture RGB images and multi-spectral images in five wave bands. The electronic global shutter further ensures aerial imaging. The aircraft has a built-in DJI™ Onboard D-RTK™, which provides precision data for centimeter-level accuracy*. Image data can be used to generate a multi-spectral map for analysis of crops and soil status, providing reference information for precision agriculture. In addition, multi-directional obstacle sensing is enabled by forward, rear, and downward vision and infrared sensors*.



- | | |
|--|--------------------------------|
| 1. Gimbal and Camera | 10. Propellers |
| 2. Downward Vision System | 11. Aircraft Status Indicators |
| 3. Micro USB Port | 12. Ocusync™ Antennas |
| 4. Camera/Linking Status Indicator and Link Button | 13. Onboard D-RTK Antenna |
| 5. Camera microSD Card Slot | 14. DJI Sunshine Sensor (DSS) |
| 6. Forward Vision System | 15. Rear Vision System |
| 7. Infrared Sensing System | 16. Intelligent Flight Battery |
| 8. Front LEDs | 17. Power Button |
| 9. Motors | 18. Battery Level Indicators |

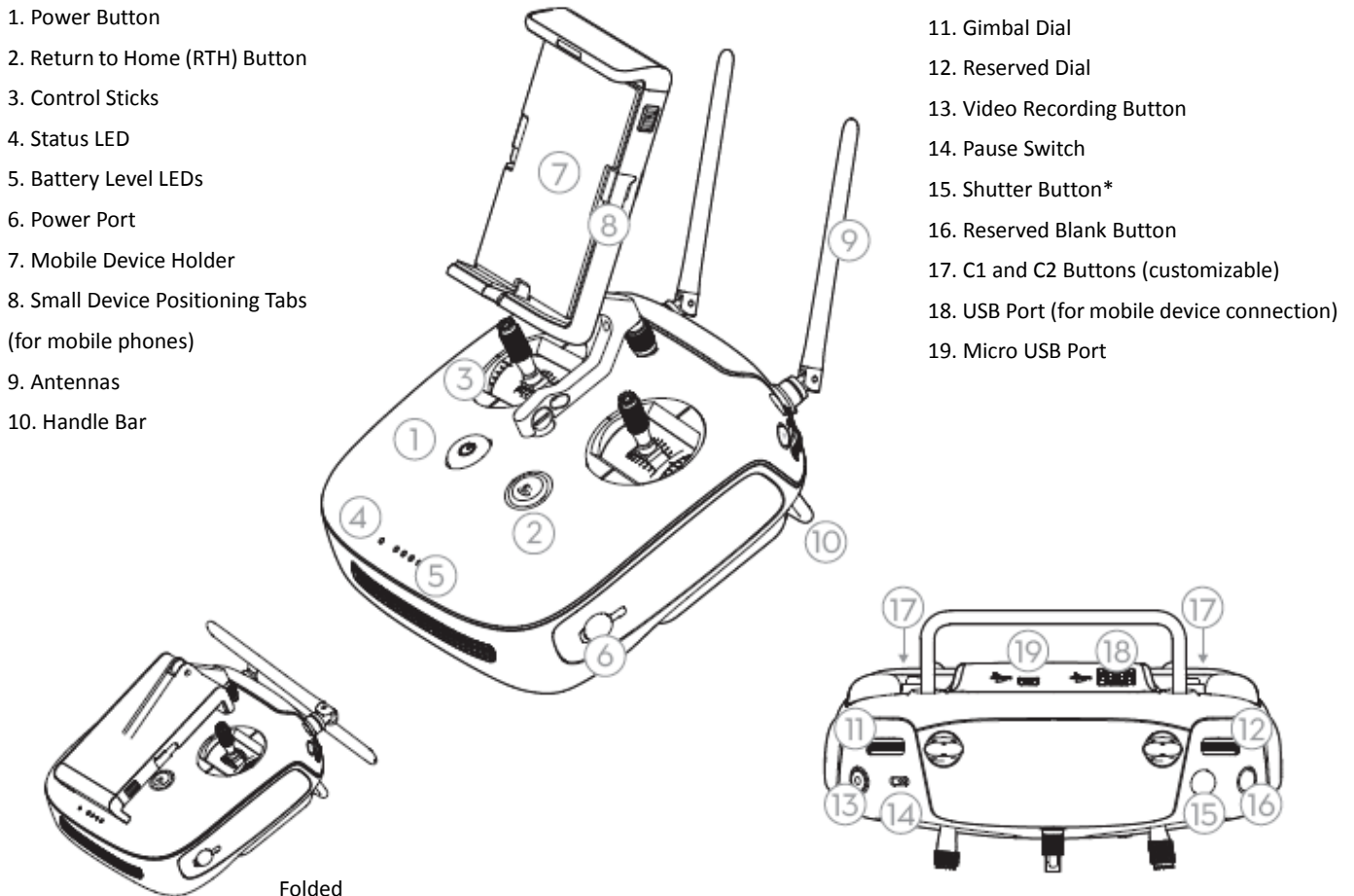


* This should be used with a DJI D-RTK 2 High Precision GNSS Mobile Station (purchased additionally), Network RTK service or post-processed kinematic (PPK) data (recommended when RTK signal is weak during operation).

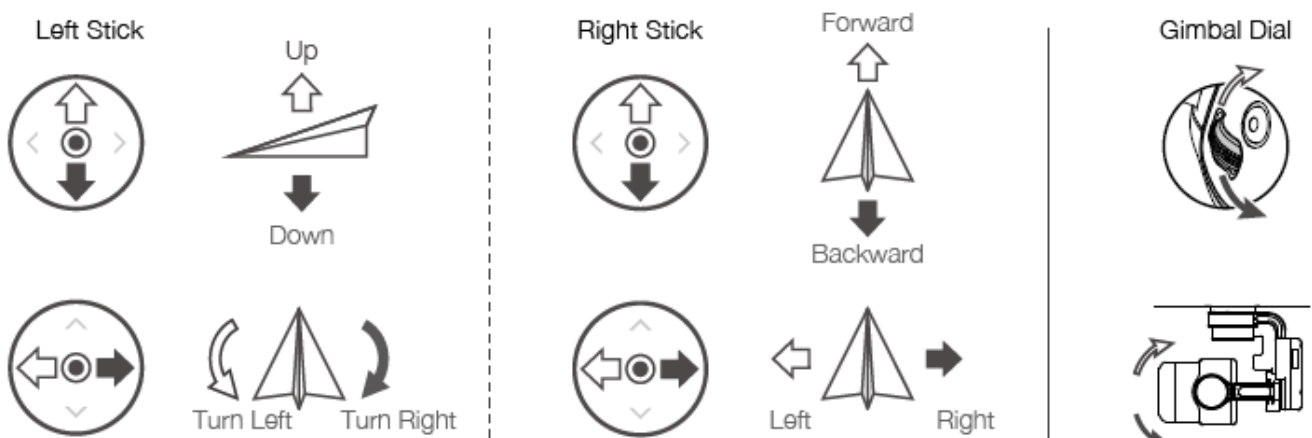
The Vision and Infrared Sensing Systems are affected by surrounding conditions. Read the User Manual to learn more.

Remote Controller

The remote controller features DJI's long-range transmission technology OCUSYNC™ that is capable of controlling the aircraft and the gimbal camera at a maximum transmission range of 4.3 mi (7 km)*. An iPad can be connected to the remote controller via the USB port to use the DJI GS Pro app. In the app, users can create and execute missions and view the observation results. These can also be achieved in DJI Terra by connecting the remote controller to a computer based on Windows. The maximum remote controller battery life is approximately 6 hours*.



The figure below shows the function that each control stick movement performs, using Mode 2 as an example. The left stick controls the aircraft's altitude and heading, while the right stick controls its forward, backward, left and right movements. The gimbal dial controls the camera's tilt.



* The remote controller is able to reach its maximum transmission distance (FCC) in a wide open area with no Electro-Magnetic Interference, and at an altitude of about 400 feet (120 meters).

The maximum runtime is tested under laboratory environment, only for your reference.

Pictures will only be taken when the shutter button is fully pressed.

Using the Phantom 4 M-Spectral

1. Download the DJI GS Pro App

Search for DJI GS Pro* in App Store or scan the QR code to download the app on your iPad.



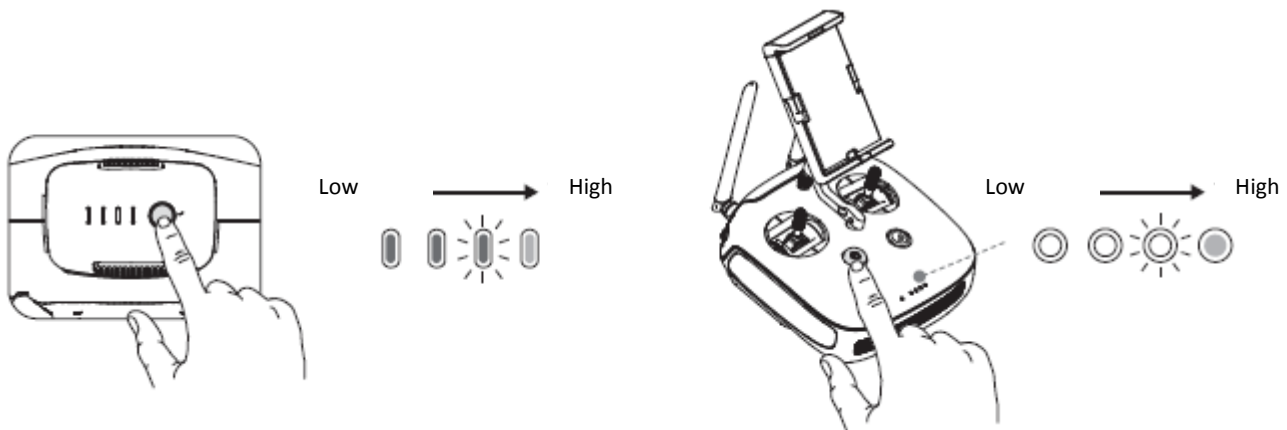
DJI GS Pro



When using the aircraft for the first time, activate it using the DJI GS Pro app.

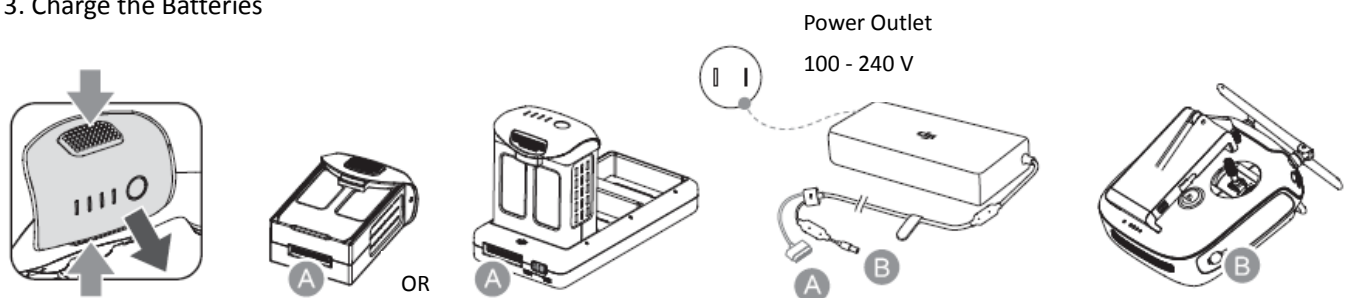
* Visit the official DJI website for more information about DJI GS Pro. <https://www.dji.com/ground-station-pro>

2. Check Battery Levels



Press once to check the battery level. Press once, then again and hold to turn on/off.

3. Charge the Batteries

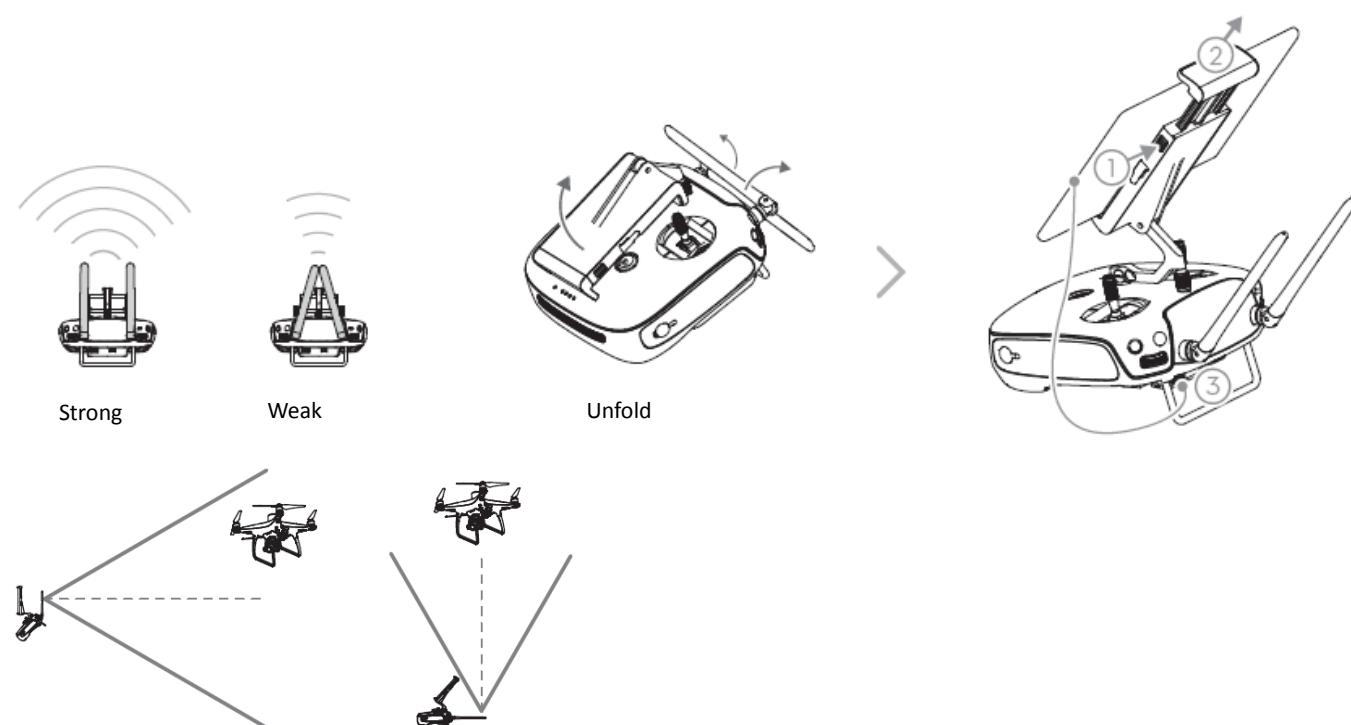


Fully charge the batteries before first-time use.

Ensure to connect the Intelligent Flight Batteries to the charging hub as shown in the figure above.

Ensure that the Mode Switch of the Intelligent Flight Battery charging hub is set to the Charging Mode position.

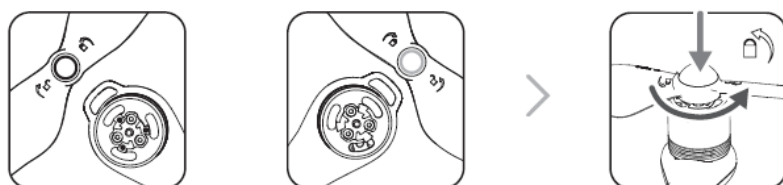
4. Prepare the Remote Controller



Optimal Transmission Zone

Try to keep the aircraft inside the optimal transmission zone. If the signal is weak, adjust the antennas or fly the aircraft closer.

5. Prepare for Takeoff



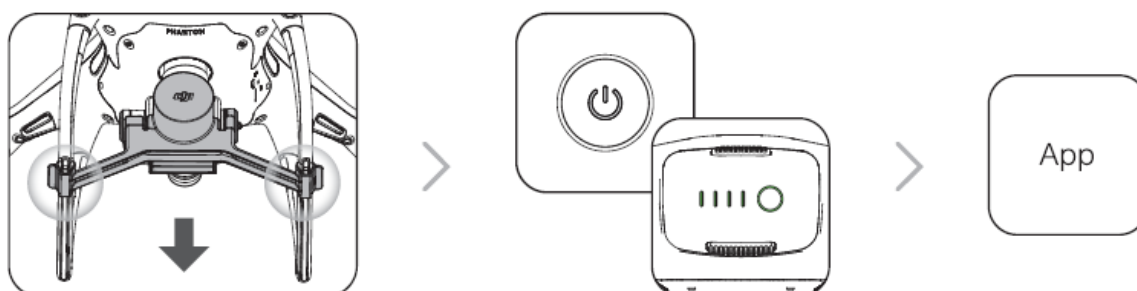
Black propeller rings go on motors with black dots.

Silver propeller rings go on motors without black dots.

Press the propeller down onto the mounting plate and rotate in the lock direction  until secure.



Check that the propellers are secure before each flight.



Remove the gimbal clamp from the camera.

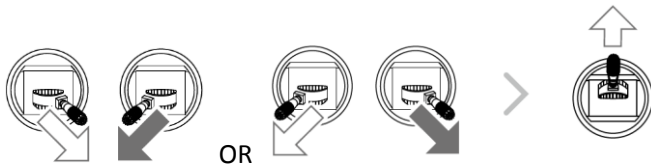
Power on the remote controller and the aircraft.

Launch the app.

6. Flight

For a safe take-off, make sure that the Aircraft Status Indicators blink green slowly (using RTK* or GNSS for positioning).

Takeoff



Combination Stick Command to start/stop the motors

Left stick (in Mode 2) up slowly to take off

Landing



Left stick down slowly until you touch the ground
Hold for three seconds to stop the motors



Spinning propellers can be dangerous. Stay away from spinning propellers and motors. DO NOT start the motors in confined spaces or when there are people nearby.

Always keep your hands on the remote controller when the motors are spinning.

Stopping motors mid-flight: Perform the CSC to stop the motors. This feature can be enabled in DJI GS Pro.

Only stop motors mid-flight in emergency situations when doing so can reduce the risk of damage or injury.

* RTK positioning is recommended. If using the DJI Pilot app, go to Camera View > ●●● > RTK to enable Aircraft RTK and select a method for receiving RTK signals. If using the Mobile SDK, refer to SDK documents on RTK configuration.

7. Start Operations



Create a 3D Map mission



Perform the mission



Import photos



Composite a map

Specifications

● Aircraft

Max Service Ceiling Above Sea Level	19685 ft (6000 m)
Max Ascent Speed	6 m/s (automatic flight); 5 m/s (manual control)
Max Descent Speed	3 m/s
Max Speed	31 mph (50 kph) (P-mode); 36 mph (58 kph) (A-mode)

Operating Temperature	0° to 40° C (32° to 104° F)
Operating Frequency	2.4000 GHz to 2.4835 GHz (Europe, Japan, Korea) 5.725 GHz to 5.850 GHz (Other countries/regions)
Transmitter Power (EIRP)	2.4 GHz CE / MIC / KCC: < 20 dBm 5.8 GHz FCC / SRRC / NCC: < 26 dBm
Hover Accuracy Range	RTK enabled and functioning properly: Vertical: ±0.1 m; Horizontal: ±0.1 m RTK disabled: Vertical: ±0.1 m (with vision positioning); ±0.5 m (with GNSS positioning) Horizontal: ±0.3 m (with vision positioning); ±1.5 m (with GNSS positioning)
Image Position Offset	The position of the camera center is relative to the phase center of the onboard D-RTK antenna under the aircraft body's axis: (36, 0, and 192 mm) already applied to the image coordinates in Exif data. The positive x, y, and z axes of the aircraft body point to the forward, rightward, and downward of the aircraft, respectively.
● GNSS	
Single-Frequency High-Sensitivity GNSS	GPS + BeiDou + Galileo* (Asia); GPS + GLONASS + Galileo* (other regions)
Multi-Frequency Multi-System High-Precision RTK GNSS	Frequency Used GPS: L1/L2; GLONASS: L1/L2; BeiDou: B1/B2; Galileo*: E1/E5 First-Fixed Time: < 50 s Positioning Accuracy: Vertical 1.5 cm + 1 ppm (RMS); Horizontal 1 cm + 1 ppm (RMS). 1 ppm indicates error with a 1 mm increase over 1 km of movement. Velocity Accuracy: 0.03 m/s
● Gimbal	
Controllable	-90° to +30°
● Vision System	
Velocity Range	≤ 31 mph (50 kph) at 6.6 ft (2 m) above ground
Altitude Range	0 - 33 ft (0 - 10 m)
Operating Range	0 - 33 ft (0 - 10 m)
Obstacle Sensory Range	2 - 98 ft (0.7 - 30 m)
Operating Environment	Surfaces with clear patterns and adequate lighting (> 15 lux)
● Infrared Sensing System	
Obstacle Sensory Range	0.6 - 23 ft (0.2 - 7 m)
Operating Environment	Surface with diffuse reflection material, and reflectivity > 8% (such as wall, trees, humans, etc.)
● Camera	
Sensor	Six 1/2.9" CMOS sensors; for a single sensor: 20.8 M effective pixels (21.2 M in total)
Lens	FOV (Field of View) 62.7°, 5.74 / 24 mm (35 mm format equivalent) f/2.2, fixed focal length of ∞
ISO Range	200 - 3200

Electronic Global Shutter	1/100 - 1/10000 s
Max Image Size	1600×1300 (4:3.25)
Photo	JPEG × 1 (RGB), TIFF × 5 (Narrow Band)
Supported File Systems	FAT32 (≤ 32 GB); exFAT (> 32 GB)
Supported SD Cards	microSD, Max Capacity: 128 GB. Class 10 or UHS-1 rating required
Operating Temperature	0° to 40° C (32° to 104° F)
● Remote Controller	
Operating Frequency	2.4000 GHz to 2.4835 GHz (Europe, Japan, Korea) 5.725 GHz to 5.850 GHz (Other countries/regions)
Transmitter Power (EIRP)	2.4 GHz CE / MIC / KCC: < 20 dBm 5.8 GHz FCC / SRRC / NCC: < 26 dBm
Max Transmission Distance	FCC / NCC: 4.3 mi (7 km); CE / MIC / KCC / SRRC: 3.1 mi (5 km) (Unobstructed, free of interference)
Built-in Battery	6000 mAh LiPo 2S
Operating Voltage	1.2 A @ 7.4 V
Mobile Device Holder	Tablets and smartphones
Operating Temperature	0° to 40° C (32° to 104° F)
● Intelligent Flight Battery (PH4-5870mAh-15.2V)	
Capacity	5870 mAh
Voltage	15.2 V
Battery Type	LiPo 4S
Energy	89.2 Wh
Net Weight	468 g
Charging Temperature Range	-10° to 40° C (14° to 104° F)
Max Charging Power	160 W
● Intelligent Flight Battery Charging Hub (PHANTOM 4 CHARGING HUB)	
Voltage	17.5 V
Operating Temperature	5° to 40° C (41° to 104° F)
● AC Power Adapter (PH4C160)	
Voltage	17.4 V
Rated Power	160 W

* Supported later.

Compliance Information

FCC Compliance Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.

ISED Warning

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) L'appareil ne doit pas produire de brouillage; (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The portable device is designed to meet the requirements for exposure to radio waves established by the ISED.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. L'utilisateur final doit suivre les instructions spécifiques pour satisfaire les normes. Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur. Le dispositif portable est conçu pour répondre aux exigences d'exposition aux ondes radio établie par le développement énergétique DURABLE.

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations CNR-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

KCC Warning Message

“해당무선설비는 운용 중 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.”

“해당 무선설비는 운용 중 전파혼신 가능성이 있음”

NCC Warning Message

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

EU Compliance Statement: SZ DJI TECHNOLOGY CO., LTD. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the Directive 2014/53/EU.

A copy of the EU Declaration of Conformity is available online at www.dji.com/euro-compliance

EU contact address: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

Declaración de cumplimiento UE: SZ DJI TECHNOLOGY CO., LTD. por la presente declara que este dispositivo cumple los requisitos básicos y el resto de provisiones relevantes de la Directiva 2014/53/EU.

Hay disponible online una copia de la Declaración de conformidad UE en www.dji.com/euro-compliance

Dirección de contacto de la UE: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

EU-verklaring van overeenstemming: SZ DJI TECHNOLOGY CO., LTD. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU.

De EU-verklaring van overeenstemming is online beschikbaar op www.dji.com/euro-compliance

Contactadres EU: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

Declaração de conformidade da UE: A SZ DJI TECHNOLOGY CO., LTD. declara, através deste documento, que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes da Diretiva 2014/53/EU.

Existe uma cópia da Declaração de conformidade da UE disponível online em www.dji.com/euro-compliance

Endereço de contacto na UE: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

Dichiarazione di conformità UE: SZ DJI TECHNOLOGY CO., LTD. dichiara che il presente dispositivo è conforme ai requisiti essenziali e alle altre disposizioni rilevanti della direttiva 2014/53/EU.

Una copia della dichiarazione di conformità UE è disponibile online all'indirizzo Web www.dji.com/euro-compliance

Indirizzo di contatto UE: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

Déclaration de conformité UE : Par la présente, SZ DJI TECHNOLOGY CO., LTD déclare que cet appareil est conforme aux principales exigences et autres clauses pertinentes de la directive européenne 2014/53/EU.

Une copie de la déclaration de conformité UE est disponible sur le site www.dji.com/euro-compliance

Adresse de contact pour l'UE : DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

EU-Compliance: Hiermit erklärt SZ DJI TECHNOLOGY CO., LTD., dass dieses Gerät den wesentlichen Anforderungen und anderen einschlägigen Bestimmungen der EU-Richtlinie 2014/53/EU entspricht.

Eine Kopie der EU-Konformitätserklärung finden Sie online auf www.dji.com/euro-compliance.

Kontaktadresse innerhalb der EU: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany



CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

Umweltfreundliche Entsorgung

Elektro-Altgeräte dürfen nicht mit gewöhnlichem Abfall entsorgt werden und müssen separat entsorgt werden. Die Entsorgung an kommunalen Sammelstellen ist für Privatpersonen kostenlos. Die Eigentümer der Altgeräte sind für den Transport zu den Sammelstellen verantwortlich. Durch diesen geringen Aufwand können Sie zur Wiederverwertung von wertvollen Rohmaterialien beitragen und dafür sorgen, dass umweltschädliche und giftige Substanzen ordnungsgemäß unschädlich gemacht werden.

Tratamiento de residuos responsable con el medio ambiente

Los aparatos eléctricos viejos no pueden desecharse junto con los residuos orgánicos, sino que deben ser desechados por separado. Existen puntos limpios donde los ciudadanos pueden dejar estos aparatos gratis. El propietario de los aparatos viejos es responsable de llevarlos a estos puntos limpios o similares puntos de recogida. Con este pequeño esfuerzo estás contribuyendo a reciclar valiosas materias primas y al tratamiento de residuos tóxicos.

Mise au rebut écologique

Les appareils électriques usagés ne doivent pas être éliminés avec les déchets résiduels. Ils doivent être éliminés séparément. La mise au rebut au point de collecte municipal par l'intermédiaire de particuliers est gratuite. Il incombe au propriétaire des appareils usagés de les apporter à ces points de collecte ou à des points de collecte similaires. Avec ce petit effort personnel, vous contribuez au recyclage de matières premières précieuses et au traitement des substances toxiques.

Smaltimento ecologico

I vecchi dispositivi elettrici non devono essere smaltiti insieme ai rifiuti residui, ma devono essere smaltiti separatamente. Lo smaltimento da parte di soggetti privati presso i punti di raccolta pubblici è gratis. È responsabilità del proprietario dei vecchi dispositivi portarli presso tali punti di raccolta o punti di raccolta analoghi. Grazie a questo piccolo impegno personale contribuirete al riciclo di materie prime preziose e al corretto trattamento di sostanze tossiche.

Milieuvriendelijk afvoeren

Oude elektrische apparaten mogen niet worden weggegooid samen met het restafval, maar moeten afzonderlijk worden afgevoerd. Afvoeren via het gemeentelijke inzamelpunt is gratis voor particulieren. De eigenaar van oude toestellen is verantwoordelijk voor het inleveren van de apparaten op deze of vergelijkbare inzamelpunten. Met deze kleine persoonlijke inspanning lever je een bijdrage aan de recycling van waardevolle grondstoffen en de verwerking van giftige stoffen.

Eliminação ecológica

Os aparelhos elétricos antigos não podem ser eliminados juntamente com os materiais residuais. Têm de ser eliminados separadamente. A eliminação no ponto de recolha público através de entidades particulares é gratuita. É da responsabilidade do proprietário de aparelhos antigos levá-los a estes pontos de recolha ou a pontos de recolha semelhantes. Com este pequeno esforço pessoal, contribui para a reciclagem de matérias-primas úteis e para o tratamento de substâncias tóxicas.

Безопасная для окружающей среды утилизация

Старые электрические приборы нельзя выбрасывать вместе с бытовыми отходами, их утилизация производится отдельно. Частные лица могут сдавать приборы в специальные пункты приема бесплатно. Владельцы старой техники несут ответственность за ее сдачу в специальный пункт приема или аналогичную службу. Чтобы внести свой вклад в переработку ценного сырья и ядовитых веществ, от вас требуется совсем небольшое усилие.