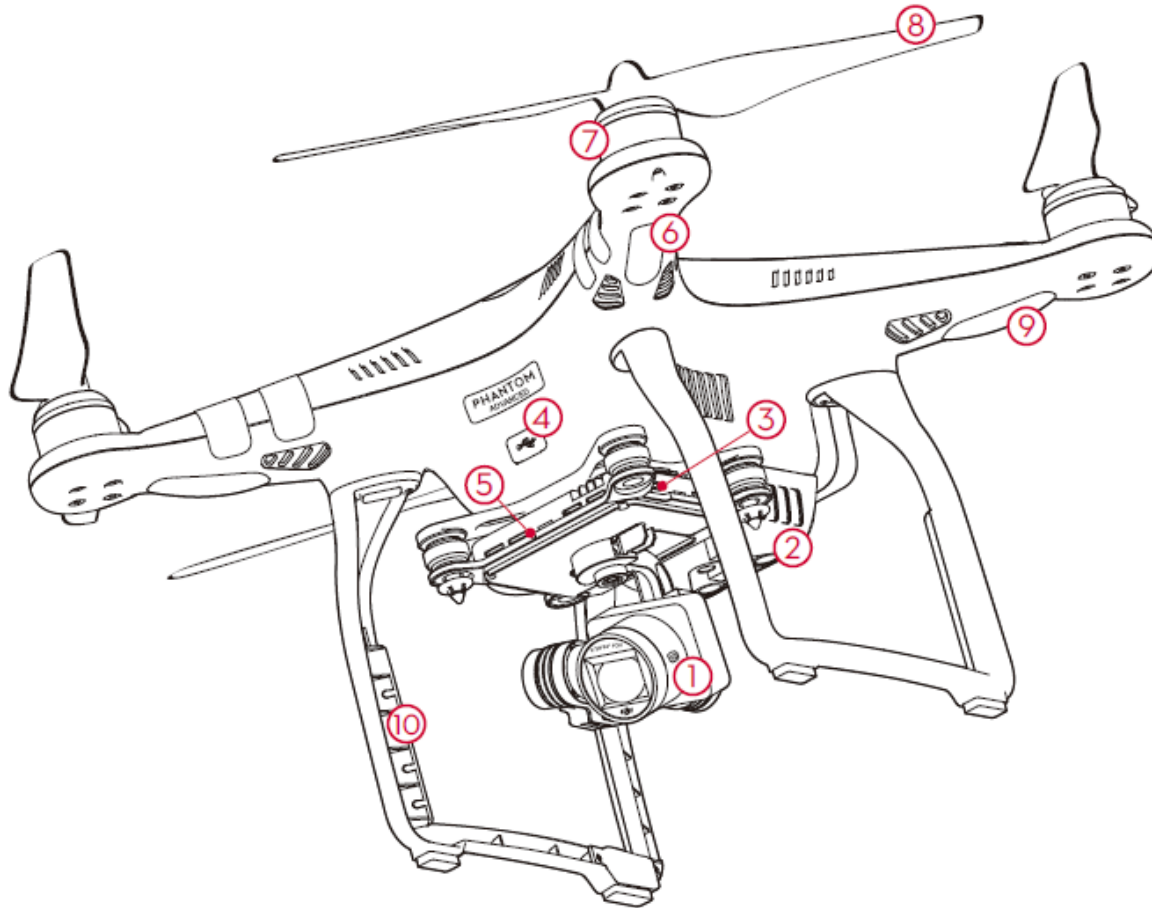# Unmanned Aircraft System (UAS)
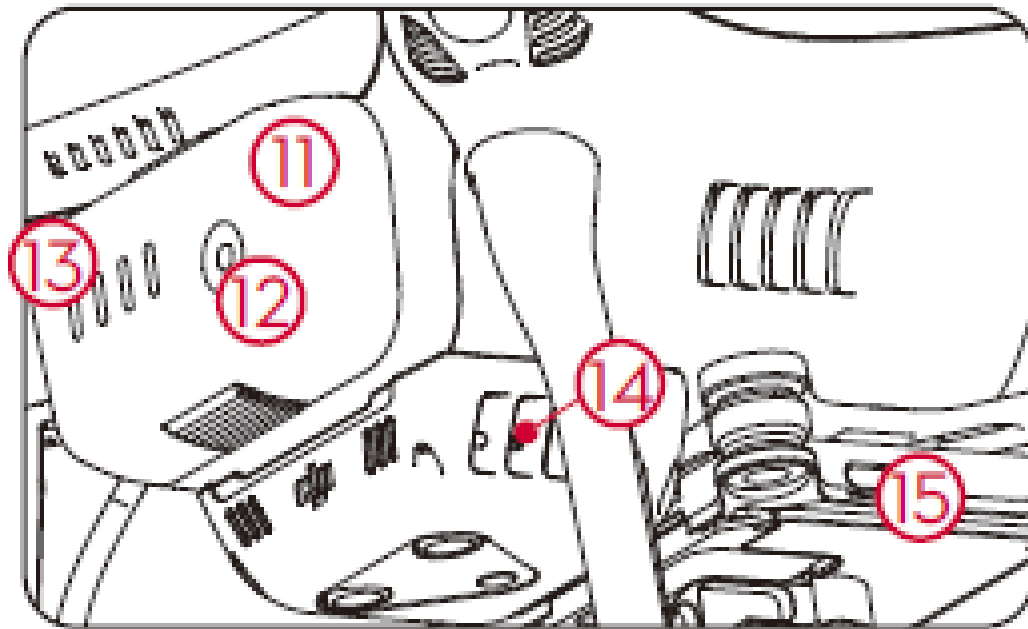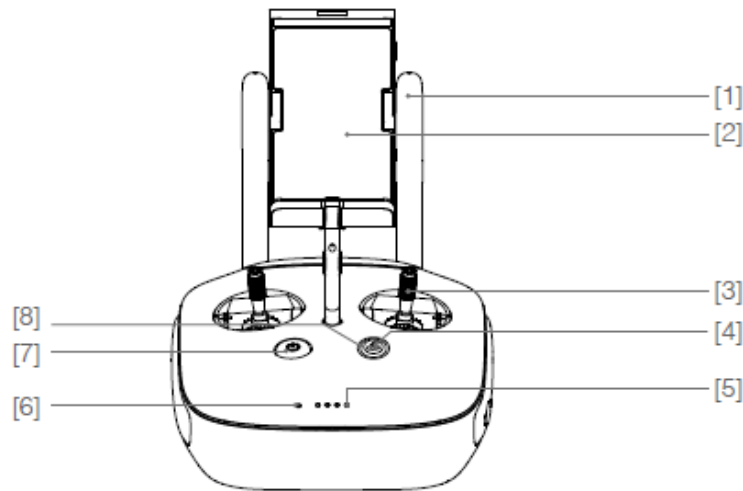
Aircraft Components

1. Gimbal & Camera
2. Vision Positioning System
3. Camera SD Card Slot
4. UAS Micro USB port
5. Camera Status Indicator
6. Front LEDs
7. Motors
8. Propellers
9. Aircraft Status Indicators
10. Antennas

Aircraft Components

11. Intelligent Flight Battery

12. Power Button

13. Battery Level Indicators

14. Link Button

15. Camera USB Port

Remote Controller

[1] Antennas

Relays aircraft control and video signal.

[2] Mobile Device Holder

Securely mounts your mobile device to the remote controller.

[3] Control Stick

Controls the orientation and movement of the aircraft.

[4] Return Home (RTH) Button

Press and hold the button to initiate Return to Home (RTH).

[5] Battery Level LEDs

Displays the battery level of the remote controller.

[6] Status LED

Displays the remote controller's system status.

[7] Power Button

Used to turn the remote controller on and off.

[8] RTH LED

Circular LED around the RTH button displays RTH status.

Remote Controller

[9] Camera Settings Dial

Turn the dial to adjust camera settings. (Only functions when the remote controller is connected to a mobile device running the DJI GO app.)

[10] Playback Button

Playback the captured images or videos. (Only functions when the remote controller is connected to a mobile device running the DJI GO app.)
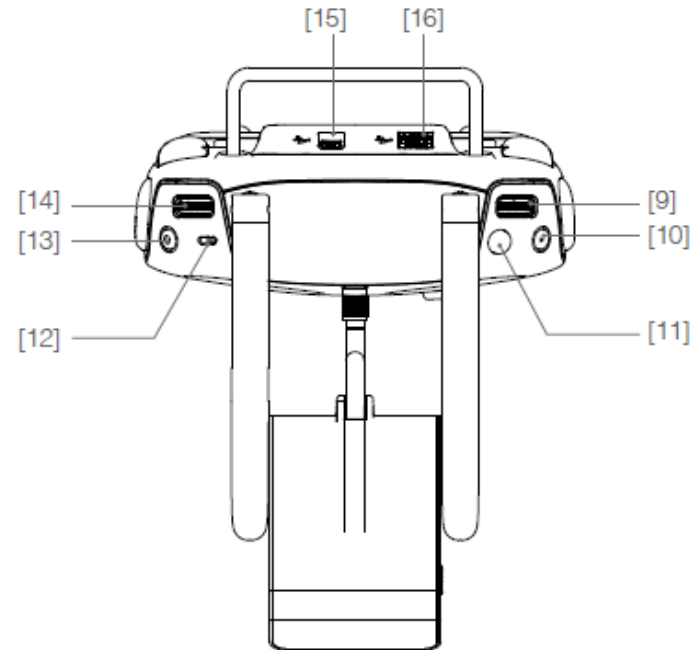
[11] Shutter Button

Press to take a photo. If burst mode is selected, the set number of photos will be taken with one press.

[12] Flight Mode Switch

Switch between P-mode, A-mode, and F-mode.

[13] Video Recording Button

Press to start recording video. Press again to stop recording.

[14] Gimbal Dial

Use this dial to control the tilt of the gimbal.

[15] Micro USB Port

Reserved port.

[16] USB Port

Connect to mobile device or to a USB port for firmware upgrade.
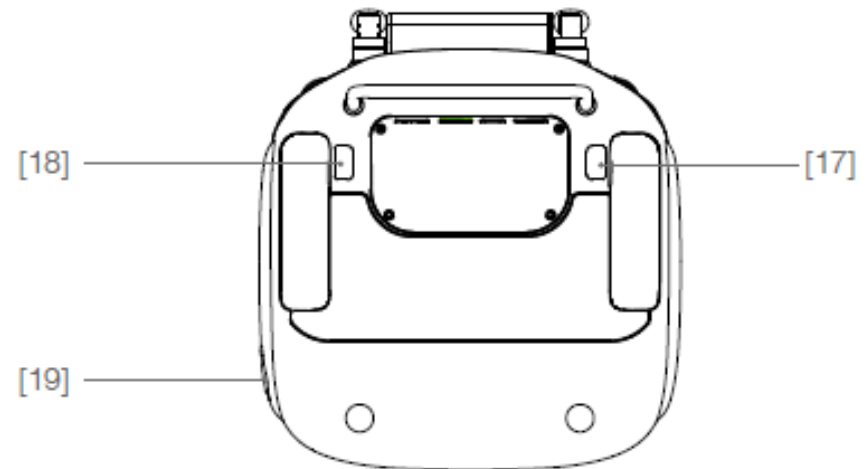
Remote Controller

[17] C1 Button

Customizable through the DJI GO app.

[18] C2 Button

Customizable through the DJI GO app.

[19] Power Port

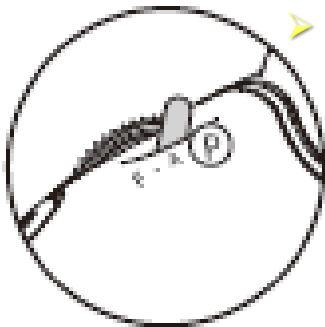Connect to the DJI Phantom 3 Charger to charge the battery of the remote controller.

[18]   [17]

[19]

Fly Safe

➢ Maintain Control at All Times – even when using autopilot functions

➢ Maintain Line of Sight – avoid obstacles that block your view

➢ Monitor Your Altitude – always fly less than 400 feet

➢ Calibrate the Compass – when prompted by DJI GO app

➢ Environmental Considerations

  ➢ Do not fly in severe weather – winds > 20 mph, snow, rain or fog

  ➢ Only fly in open areas – tall structures may affect the GPS

  ➢ Avoid obstacles, crowds, high-power lines, trees, & bodies of water

  ➢ Minimize electromagnetic interference – cell towers, Wi-Fi hotspots

  ➢ Monitor battery performance

P Mode (Positioning)

- Uses GPS and the Vision Positioning System (VPS)
  - Allows UAS to hover in position indoors and out
  - Home Point is locked so UAS can RTH if controller signal is lost
- To enable P Mode, toggle Flight Mode Switch to P Position
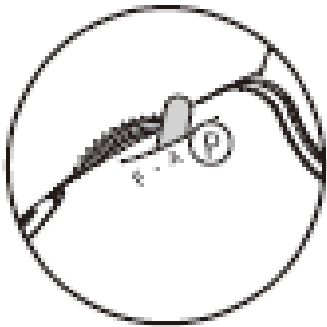

- Three states in P mode:
  - P-GPS: works best outdoors; uses GPS to hover in place
  - P-OPTI: when GPS unavailable, uses VPS to hover
  - P-ATTI: uses barometer for altitude and other sensors to stabilize

- Note: Vision Positioning may not work properly when flying over water, over surfaces without a clear pattern, or in low-light conditions

A-Mode (Attitude)

➢ GPS and the Vision Positioning system are not used for stabilization

➢ Aircraft only uses its barometer

➢ Can still RTH automatically if Home Point was recorded

➢ Enters A-mode in the following instances:

    ➢ Passively: weak GPS or compass interference when VPS is unavailable

    ➢ Active: users toggles mode switch to A-mode

➢ Note: In A-mode, VPS is disabled. Aircraft cannot position or auto-brake and is easily affected by its surroundings which may result in horizontal shifting. Maneuvering in A-mode can be VERY difficult.

Return to Home (RTH)

- When GPS signal is strong, UAS can record a Home Point and return to that point when required
  - Home Point is recorded when GPS signal icon is yellow or green
- Aircraft will automatically return to Home Point in the following scenarios:
  - Smart RTH: RTH button on the controller or in the DJI GO app is pressed
  - Low-Battery RTH: DJI GO app notifies when the battery falls under a certain level – requests pilot to take action
  - Failsafe RTH: engages when remote controller signal is lost
- CAUTION: the aircraft's altitude can be adjusted to avoid obstacles. The Failsafe RTH will be triggered if signal is lost. Be sure obstacle altitude is set appropriately