

# A3-AG/N3-AG

## Agriculture Kit

User Manual V2.0

2017.08

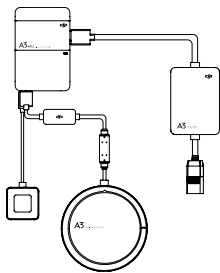


# Contents

<b>A3-AG Introduction</b>	3
<b>N3-AG Introduction</b>	6
<b>Agriculture Management Unit (AMU) Introduction</b>	9
<b>Installation</b>	10
Overview	10
Start the Installation	13
<b>System Functions</b>	23
Flight Modes	23
Operation Modes	23
Operation Resumption	29
Empty Tank Warning	32
Return to Home (RTH)	33
Attitude Control When One Motor Output Fails	35
Propulsion System Protection	35
System Data Protection	35
Altitude Stabilization System	36
Redundancy System	37
<b>Flight</b>	39
Operation Environment	39
Flight Limits and No-Fly Zones	39
Pre-Flight Checklist	41
Compass Calibration	41
Flight Control	43
<b>DJI Assistant 2</b>	44
Installation and Launching	44
Using DJI Assistant 2	44
<b>Appendix</b>	46
Specifications	46
Flight Status LED Indicator Descriptions	48
FAQ	49

# A3-AG Introduction

The A3-AG Agriculture Flight Control System, based on the DJI A3 flight control system, is designed for agriculture applications. It consists of flight controller, GPS-Compass Pro, PMU (Power Management Unit) and LED module. The A3-AG can be upgraded to the A3-AG Pro triple modular redundancy system by installing two upgrade kits.

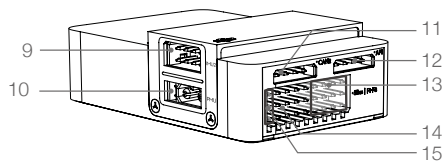
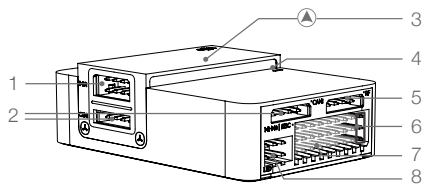


## A3-AG and A3-AG Pro Parts

### Flight Controller

#### Feature Highlights

- 1. Built-in inertial sensors for the measurement of aircraft attitude and built-in pressure sensor for the detection of aircraft altitude.
- 2. Support for multiple receiver types. If used with the DJI Datalink 3, the A3-AG has direct access to features in the DJI MG app such as intelligent planning and operation.
- 3. M1 to M8 are used to connect the ESCs of the aircraft and iESC for DJI Intelligent ESC communication.



1. IMU1 Port  
Communicates with the IMU Pro module.
2. CAN1 Port  
Dedicated DJI CAN-Bus port.  
Communicates with the A3 GPS-Compass Pro or other DJI devices (e.g. Agriculture Management Unit (AMU) or Real Time Kinematic (RTK) GPS system).
3. Orientation Arrow  
The FC module should be mounted with the arrow pointing in the specified direction (Orientation can be set in the DJI Assistant 2).
4. Status Indicator  
Indicates the status of the flight controller and triple modular redundancy system.
5. RF Port  
Communicates with the DJI Datalink 3 Air System.
6. iESC Port  
Communicates with the DJI Smart ESC using the Smart ESC Communication Cable.
7. M1-M8 Pins  
Connects to the corresponding ESC PWM port for each motor.
8. LED Port  
Communicates with the LED module.
9. IMU2 Port  
Communicates with the IMU Pro module.
10. PMU Port  
Derives power from the PMU.
11. CAN2  
Reserved port.
12. API Port  
Reserved port.
13. F5-F8 Pins  
Multifunction PWM I / O ports.
14. F1-F4 Pins  
Multifunction PWM output ports.
15. S-Bus Port  
Communicates with a DJI DR16 or S-Bus receiver.

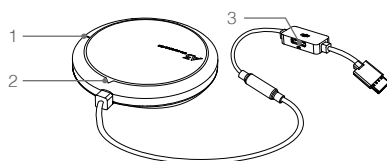
### GPS-Compass Pro Module

The GPS-Compass Pro module has a built-in GPS and compass. The compass is used for geomagnetic field measurements. Compass calibration is required before use. DO NOT use or store the compass in environments with ferromagnetic materials.

Note that the GPS-Compass Pro module in the Upgrade Kit is the same as the one in the A3-AG package.

1. Status Indicator  
Indicates the status of the GPS-Compass Pro module and triple modular redundancy system.
2. Orientation Arrow  
The GPS-Compass Pro module should be mounted with the arrow pointing to the aircraft's nose.

3. Extended CAN1 Port  
Dedicated DJI CAN-Bus port. Communicates with DJI devices (e.g. Agriculture Management Unit (AMU) or Real Time Kinematic (RTK) GPS system).





## PMU Module

Supported the LiPo batteries. with built-in PMU providing power for the whole Flight Control System and low voltage protection function.

### 1. Power Port (9V 3A)

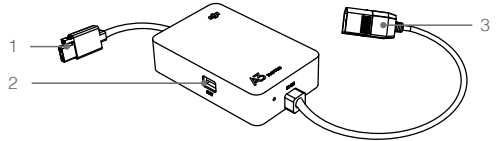
Connected to the Flight Controller for power supply.

### 2. iBAT

Reserved.

### 3. 3S-12S

Derives power from the LiPo batteries.



## LED Module

The LED Module has an integrated LED Indicator and Micro USB port.

A. The LED is mainly for flight control system status indication during flight (e.g. Flight Mode).

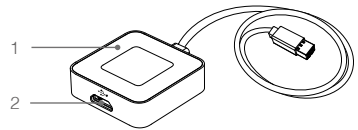
B. In addition, there is a Micro USB port for firmware upgrades via DJI Assistant 2.

### 1. Flight Status Indicator

Indicates the status of the flight control system.

### 2. Micro USB Port

Used to configure and upgrade the A3 or A3 Pro via DJI Assistant 2.



## IMU Pro Module (included in the upgrade kit)

Includes built-in inertial sensors for the measurement of aircraft attitude and a built-in pressure sensor for detecting aircraft altitude. The IMU Pro has been calibrated before delivery and should be used under the specified temperature range. Using the IMU Pro outside the specified temperature range may have a negative effect on the IMU's performance.

### 1. Orientation Arrow

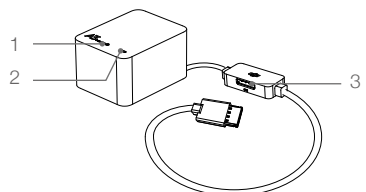
The IMU Pro module should be mounted with the arrow pointing to the specified orientation (Orientation can be set in the DJI Assistant 2).

### 2. Status Indicator

Indicates the status of the IMU Pro module and triple modular redundancy system.

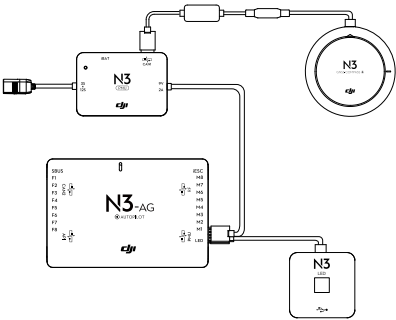
### 3. CAN1 GPS Port

Communicates with the GPS-Compass Pro module.



# N3-AG Introduction

The N3-AG Agriculture Flight Control System, based on the DJI N3 flight control system, is designed for agriculture applications. It consists of flight controller, GNSS-Compass Pro, PMU (Power Management Unit) and LED module. The N3-AG can be upgraded to the N3-AG Pro redundancy system by installing an upgrade kit.

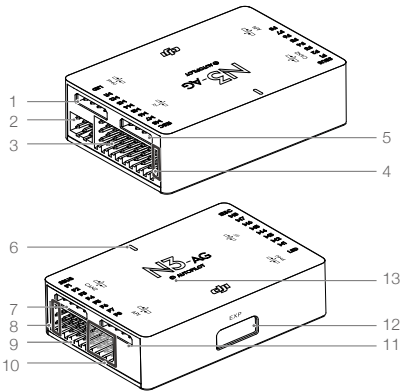


## N3-AG Parts

### Flight Controller

#### Feature Highlights

1. Built-in inertial sensors for the measurement of aircraft attitude and built-in pressure sensor for the detection of aircraft altitude.
2. Support for multiple receiver types. If used with the DJI Datalink 3, the A3-AG has direct access to features in the DJI MG app such as intelligent planning and operation.
3. M1 to M8 are used to connect the ESCs of the aircraft and iESC for DJI Intelligent ESC communication.



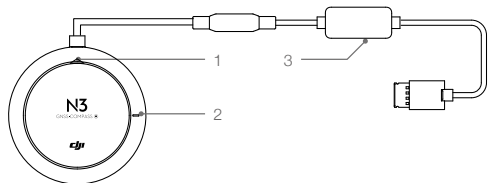
## Flight Controller

1. PMU Port  
Derives power from the PMU module.
2. LED Port  
Communicates with the LED module.
3. M1-M8 Pins  
Connects to the corresponding ESC PWM port for each motor.
4. iESC Port  
Communicates with the DJI Smart ESC using the Smart ESC Communication Cable.
5. RF Port  
Communicates with the DJI Datalink 3 Air System.
6. Status Indicator  
Indicates the status of the flight controller.
7. CAN2 Port  
CAN Bus port (Reserved port).
8. S-Bus Port  
Communicates with a DJI DR16 or S-Bus receiver.
9. F1-F4 Pins  
Multifunction PWM output ports.
10. F5-F8 Pins  
Multifunction PWM I / O ports.
11. API Port  
Reserved port.
12. EXP Port  
Extended port (Communicates with the A3 upgrade kit).
13. Orientation Arrow  
The flight controller orientation arrow.

## GNSS-Compass Module

The GNSS-Compass module has a built-in GPS/GLONASS and compass. The compass is used for geomagnetic field measurements. Compass calibration is required before use. DO NOT use or store the compass in environments with ferromagnetic materials.

1. Orientation Arrow  
The GNSS-Compass module should be mounted with the arrow pointing toward the aircraft nose.
2. GNSS-Compass Status Indicator  
Indicates the status of the GNSS-Compass Module.
3. Extended CAN1 Port  
Dedicated DJI CAN-Bus port. Communicates with a DJI device.



### PMU Module

Supported the LiPo batteries. with built-in PMU providing power for the whole Flight Control System and low voltage protection function.

#### 1. iBAT

Reserved.

#### 2. Power Status Indicator

Indicates the power status of the flight control system.

#### 3. 3S-12S

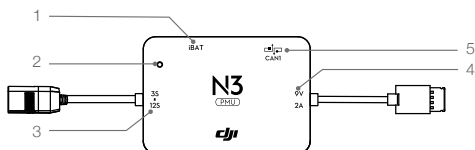
Derives power from LiPo battery.

#### 4. Power Port (9V 2A)

Connected to the Flight Controller for power supply.

#### 5. CAN1 Port

Connected to the GNSS-Compass module.



### LED Module

The LED Module has an integrated LED Indicator and Micro USB port.

A. The LED is mainly for flight control system status indication during flight (e.g. Flight Mode).

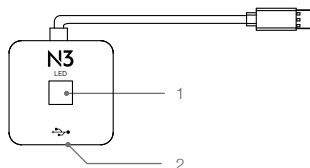
B. In addition, there is a Micro USB port for firmware upgrades via DJI Assistant 2.

#### 1. Flight Status Indicator

Indicates the status of the flight control system.

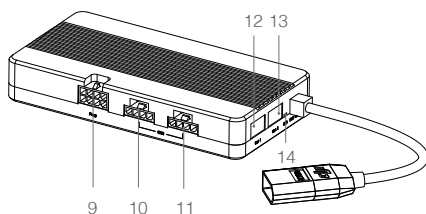
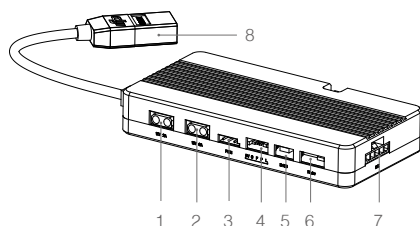
#### 2. Micro USB Port

Used to configure and upgrade the N3 via DJI Assistant 2.



# Agriculture Management Unit (AMU) Introduction

The Agriculture Management Unit (AMU) is equipped with essential expansion ports to support DJI modules such as Altitude Stabilization System, delivery pump, RTK.



1. 12V 2A  
Reserved power port, max operating voltage / current: 12V@2A
2. 15V 6A  
Reserved power port, max operating voltage/current: 15V@6A. Users can connect a DJI data protection module to this port for power supply.
3. PWM  
Reserved port.
4. Level Meter & Flow Meter Port  
Reserved port.
5. D485  
Reserved port.
6. Radar  
Connected the DJI Altitude Stabilization System.
7. RTK  
Connected to the DJI D-RTK device.
8. Power Port  
XT60 port. Connected to an external power supply (6S - 12S).
9. Pump  
Connected to the DJI integrated pump.
10. CAN  
CAN Bus port. Connected to the CAN1 port on the flight controller.
11. CAN  
Same as the 10th port.
12. UART I  
Battery data communication port (reserved).
13. UART II  
Battery data communication port (reserved).
14. Working Status Indicator  
It will glow solid green when the device is working normally. It will be solid red when the device is abnormal or during firmware update.

# Installation

Installation steps are similar for both the N3-AG and A3-AG. The descriptions in this chapter use the N3-AG as an example. Unless specified, the following context can also be applied to the A3-AG installation.

## Overview

### Installation Procedure

Read this section carefully and follow the procedures below to install your flight control system, otherwise the flight control system may not normally work.

- ① Ensure all parts are in good condition.
- ② Mount the parts to your airframe and connect them properly.
- ③ Launch the DJI Assistant 2 and configure the parameters.
- ④ Ensure the motor, remote controller channels and Failsafe settings are correct.
- ⑤ Ensure the devices connected to the flight controller are working normally and correctly set in DJI Assistant 2.

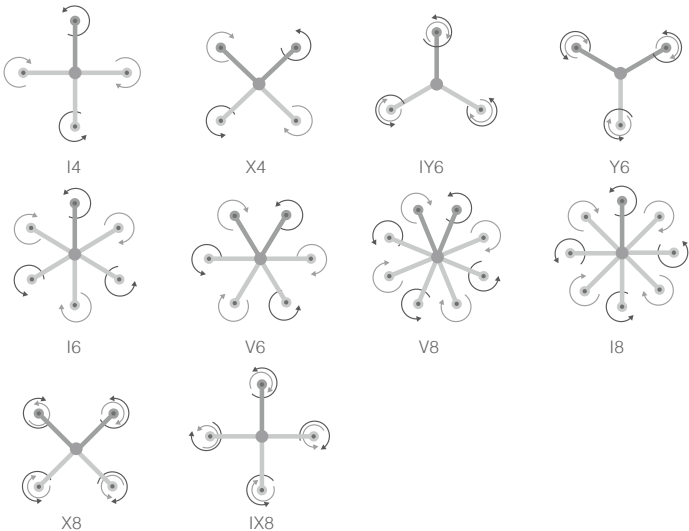
### Preparation

#### Equipment

Ensure you have a suitable airframe, remote controller system, ESCs and battery to use with the flight control system. Below is a list of compatible equipment.

#### A. Airframes

The following airframes are supported. Choose an airframe and assemble it properly. Remember to select the corresponding airframe type in DJI Assistant 2 after assembling the airframe and connecting the cables.





- The arrow directions in the above diagram indicate the rotation direction of the motor/propeller. Dark colored arm (s) indicate the direction of the aircraft's nose.
- For coaxial propellers, dark colored propellers are at the top and gray colored propellers are at the bottom. Otherwise, all propellers are at the top.

## B. Remote Controller System

The following remote controller systems are supported. Whatever type of receiver is used, please make sure that the receiver and remote controller are linked properly before use. Be sure to link the receiver and remote controller according by following all the procedures in the remote controller and receiver user manual, and according to the configurations in DJI Assistant 2.

### DJI Datalink 3

DJI Datalink 3 lets you use DJI MG app to configure the flight control system parameters and utilize intelligent agricultural operation.

### DR16

The DR16 receiver does not support DJI MG app.

### S-Bus

The S-BUS receiver does not support DJI MG app.



There is no need to enable the Failsafe function on the remote controller. Once the receiver loses signal from the remote controller, the controller unit will enter Failsafe mode automatically, and the aircraft will hover or return-to-home & land according to the Failsafe configurations in DJI Assistant 2.

## C. Propulsion System

### ESC

ESC output should be 400Hz. DJI Propulsion systems are recommended.

The iESC port can connect to the DJI Smart ESC Communication Cable if using the DJI Intelligent ESC.

### Propeller and Motor

It is required to use with Propeller and Motor of more than 2400rpm.

## D. Battery

If using a LiPo battery (3S - 12S), only the voltage information and low voltage protection are available.

### Preparing DJI Assistant 2

#### Download DJI Assistant 2

DJI Assistant 2 is used to configure the flight control system.

<http://www.dji.com/agriculture-solution/info#downloads>

---

 Supports Windows 7 (or later) or Mac OS X 10.11 (or later).

---

#### Installing DJI Assistant 2

DJI Assistant 2 will guide you through setting the Flight Control System's parameters. Carefully follow the on-screen prompts to configure the Flight Control System.

##### Installing and Running on Windows

Supports Windows 7, Windows 8, Windows 10 (32 or 64 bit).


1. Connect the Micro USB port on the LED module to a PC via a Micro USB cable.
2. Run the software assistant installer and follow the prompts to finish installation.
3. Double click the software assistant icon on your Windows desktop to launch the software.

##### Installing and Running on Mac OS X

Supports Mac OS X 10.11 (or later).

1. Run the DMG installer and follow the prompts to finish installation.
2. If using Launchpad to run DJI Assistant 2 for the first time, Launchpad will not allow access because the software has not been reviewed by the Mac App Store.
3. Locate the DJI Assistant 2 icon in the Finder, press the Control key and then click the DJI Assistant 2 icon (or right-click the DJI Assistant 2 icon using a mouse). Choose Open from the shortcut menu, click Open in the dialog box and the software will launch.
4. After the first successful launch, direct launching of the software can be achieved by double-clicking the DJI Assistant 2 icon in the Finder or using Launchpad.

- 
- DJI Assistant 2 works exactly the same way on Mac OS X and Windows. The DJI Assistant 2 screenshots that appear in this manual are taken from the Windows version.

 • For safety reasons, do not use the power battery for power supply or remove the propellers from the motors before connecting to the Assistant Software. he Windows version.

---



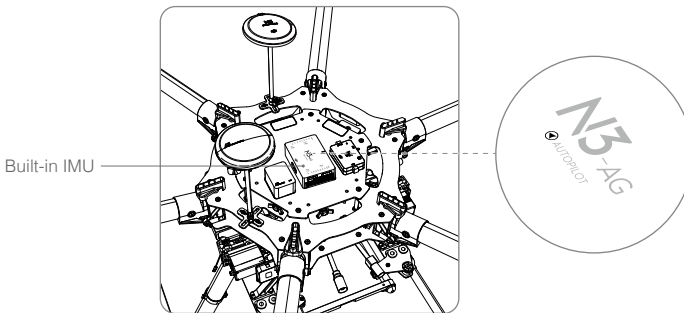
## Start the Installation

**Important:** Strictly follow the provided guidelines. Failure to do so may lead to unexpected flight behavior or serious accidents.

### Flight Control System Installation

#### Mounting the Flight Controller

Mount the Flight Controller with the Orientation Arrow pointing to the front, back, left or right. Make sure the module is parallel to the aircraft and then fix it onto the aircraft with double-faced adhesive tape. Configure the parameters in DJI Assistant 2 and select the direction in which you mounted the Flight Controller. We recommend mounting the Flight Controller with the Orientation Arrow pointing forward.



- The top side should be facing up. DO NOT mount upside-down.
- Remember to warm up the battery if operating in cold weather.



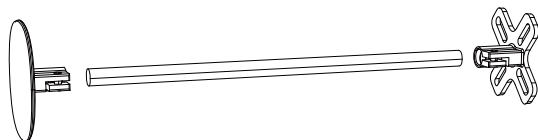
- Mount the flight controller at a low vibration position. The sides of the flight controller should be precisely parallel to the aircraft body. Based on our experience, there is less vibration near the aircraft's center of gravity.
- The flight controller is NOT water-proof or oil-proof.
- Check the double-faced adhesive tape regularly to ensure the IMU is fixed firmly in place.

#### Mounting the GNSS-Compass Module\*

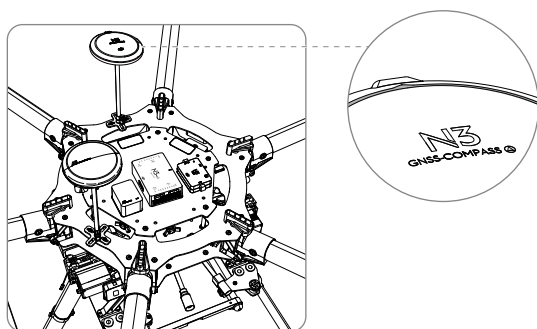
Follow the procedures below to mount the GNSS-Compass bracket and the GNSS-Compass module. The GNSS-Compass module included in the Upgrade Kits is the same as the one in the N3 package.

\* For the A3-AG, it is GPS-Compass Pro module.

1. Use the M2.0×4 screws to assemble the GNSS-Compass bracket with the Ball End Hex Key assistant. The longest one is recommended.
2. With the M2.5×7 screws and M2.5×3.4 nuts, mount the bracket on the aircraft.



3. Ensure the GNSS-Compass arrow is pointing to the aircraft nose and then fix it onto the top of the GNSS-Compass bracket. Try to keep it parallel to the aircraft.

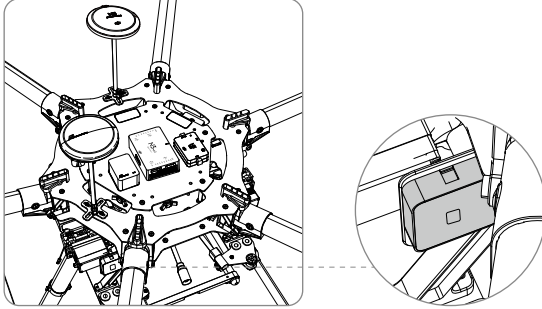


### Usage Requirements

1. The DJI logo should be facing the sky, with the orientation arrow pointing directly to the nose direction; otherwise you may experience take off failure.
2. Fly the aircraft in an open space without buildings or trees; otherwise the GPS satellite number may be affected.
3. The compass is sensitive to magnetic interference. Always keep the compass module away from magnetic fields. Otherwise, the compass module may become damaged and lead the aircraft to work abnormally or even lose control.
4. Select a bracket of appropriate length for you aircraft to avoid interference with the compass. The length is based on the airframe type and the mounting position and so on. Ensure that there will not any compass warning when the aircraft is flying with maximum load and can normally fly.

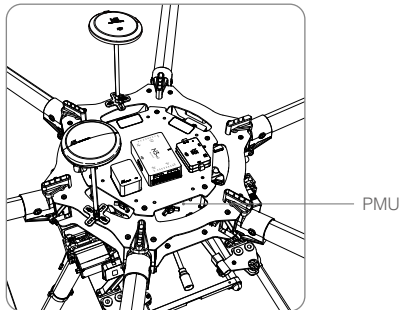
### Mounting the LED Module

Mount the LED module in a position to ensure it remains visible during flight. The LED bracket included can be used to fix the LED module onto the aircraft.



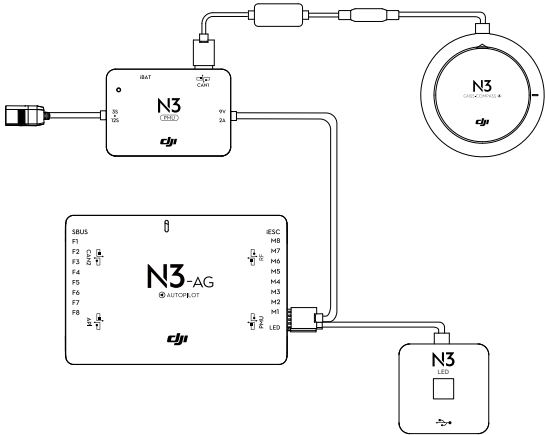
### Mounting the PUM Module

Mount the PMU module to an unobstructed position on the bottom of the aircraft's upper plate for heat dissipation.



Flight Control System Connection

Follow the below diagram to connect the flight control system, and use the cable ties to tidy the cables.



⚠ The flight control system's shell is connected to the whole system's ground.

Connecting to the Airframe and its Equipment

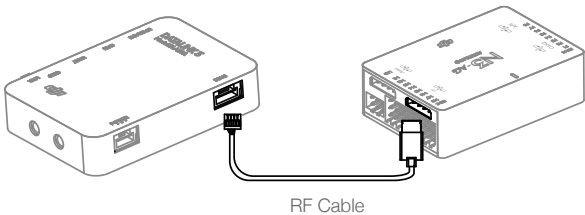
Ensure you have a suitable airframe, remote controller system, ESCs and battery to use with the flight control system. Strictly follow the provided guidelines. Failure to do so may lead to unexpected flight behavior or serious accidents.

Connecting to a Receiver

Select the RF port or the S-Bus port for different types of receivers.

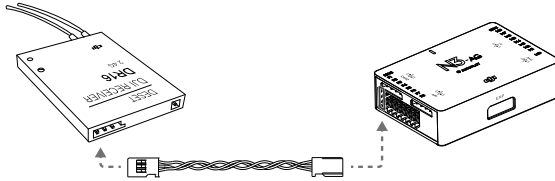
DJI Datalink 3

Connect the DJI Datalink 3 receiver DBUS port to the Flight Controller RF Port with included RF Cable.



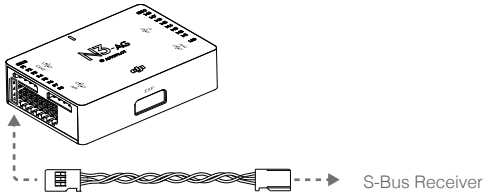
### DR16 Receiver

Connect the DR16 receiver DBUS port to the Flight Controller S-Bus Port with a servo cable.



### S-BUS Receiver

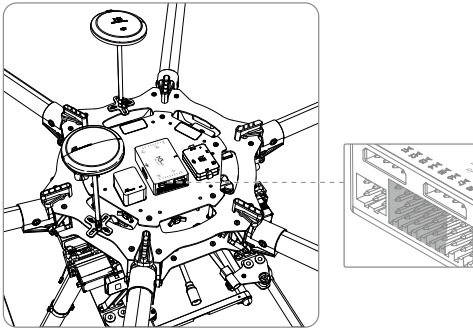
Connect the S-BUS receiver to the Flight Controller S-Bus Port with a servo cable.



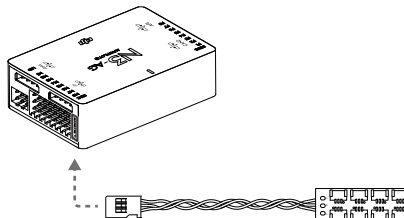
## Connecting to the ESCs

### S900 Connection Diagram

1. Connect the M1-M6 ports on the bottom board of the S900 to the M1-M6 ports on the Flight Controller in order.



2. The iESC port can connect to the DJI Smart ESC Communication Cable if using the DJI Intelligent ESC.



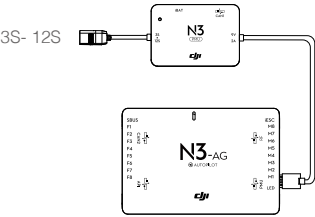


• Other Airframe Type Connection Diagram

Connect the ESC ports to the ESC ports on the Flight Controller. The diagram below uses type V6 for example.

Connecting to a Battery

Connect the PMU to the Flight Controller PMU port, and then connect the battery (3S - 12S, 11.1V - 51V) to the PMU.



Ensure the 3S battery voltage is higher than 11.1V, as low battery level may effect the battery life and decrease the PMU stability.

AMU Installation

Installation

Mount the AMU to an appropriate position on the aircraft for heat dissipation.

Connection

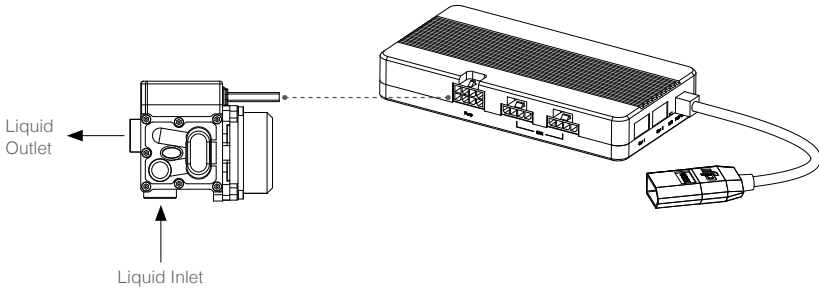
1. Connect the CAN Bus port on the AMU to the CAN1 port on the flight controller or extended CAN1 port on the GNSS-Compass / GPS-Compass Pro module via the included CAN-Gimbal cable.
2. Connect the power port on the AMU to the power supply of the aircraft via an appropriate cable.

Connect to Expansion Devices

Delivery Pump

DJI delivery pump: used with the AMU. Mount the DJI delivery pump to the desired position, and then connect the power cable of the pump to the Pump port on the AMU.

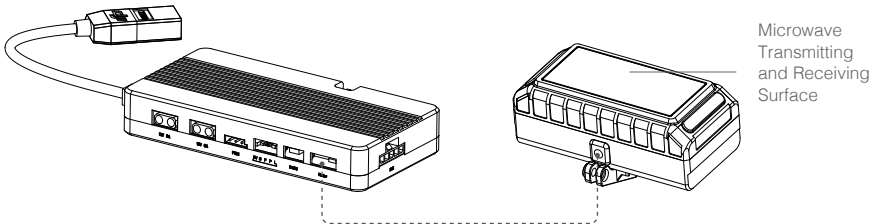
Other pumps: Connect the ESC signal cables of the pump to the F1 and F2 ports on the flight controller. The F1 or F2 port cannot supply power for the pump. Users should connect the pump to an extra power supply.



### DJI Altitude Stabilization System

To ensure that the spray is evenly dispensed, a DJI Altitude Stabilization System which uses microwave radar module can be mounted to the aircraft to maintain the same distance above the crops at all times. It should be used with the AMU.

Mount the Altitude Stabilization System to the aircraft. Note that the microwave transmitting and receiving surface should be horizontal and facing to the ground. Then connect the module to the Radar port on the AMU.



- 
- ⚠** Make sure that the microwave transmitting and receiving surface of the Altitude Stabilization System is horizontally facing down and unobstructed.
- 

### DJI Data Protection Module

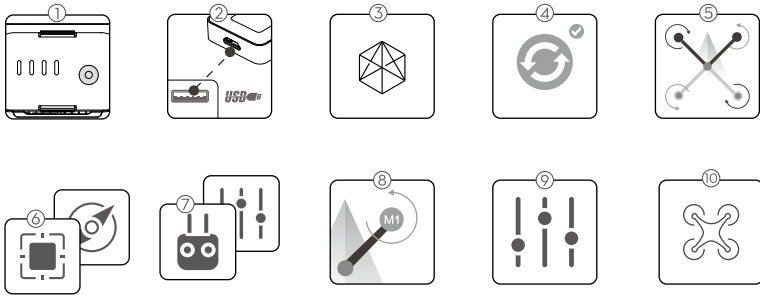
The DJI Data Protection Module enables the aircraft to retain vital system data (e.g. Point A, Point B, breakpoint) for about 30 seconds after the aircraft is powered off. This function allows you to refill the spray, change battery, etc. The recorded Point A, Point B and breakpoint are still available if you power on the aircraft within the working time (30 seconds) of the data protection function.

For the N3-AG: Connect the CAN cable of the module to the extended CAN1 port on the GNSS-Compass module. If using the AMU, connect it to the extended CAN1 port on the CAN-gimbal cable.

For the A3-AG: Connect the CAN cable of the module to the CAN1 port on the flight controller or the extended CAN1 port on the GPS-Compass Pro.

## Parameter Configuration

Launch DJI Assistant 2 and follow the prompts to complete configuration.



- ① Ensure the flight control system is properly powered on.
- ② Connect the Micro USB port on the LED module to a PC via a Micro USB cable.
- ③ Run DJI Assistant 2. Note that you may be asked to register for first time use.
- ④ Follow the prompts to upgrade the firmware to the latest version\*.
- ⑤ Select the airframe type.
- ⑥ Configure the Flight Controller, IMU and GNSS-Compass / GPS-Compass Promounting parameters.
- ⑦ Select the receiver type and configure the channel mapping.
- ⑧ Make sure the motors are rotating in correct direction. If not, change the rotating direction.
- ⑨ Configure the function channels.
- ⑩ Fly in the simulator to check that all functions is working normally.



- Ensure to connect all modules before power on.
- Ensure to power cycle the battery after firmware upgrade.

## Remote Controller Channel Mapping

Complete remote controller channel mapping to the default flight controller channels of A\_B Button, Spray Switch, C1 and C2 Function Switch to perform tasks remotely. Basic agricultural functions can be achieved through at least high channels (five switches). 12 channels (8 switches) are required for all functions.

Remote controller type is SBUS by default. See the table below for the recommended type of switch for each of the remote controller channels. If using Datalink 3, choose “Datalink 3” for remote controller type in DJI Assistant 2. Refer to Datalink 3 User Manual for channel settings.



No.	Name	SBUS Mapping Channel by Default	Type of Switch	Functions
1	A_B Button	Channel 5	3 position	To record Point A and B.
2	RTH Switch	Channel 6	2 or 3 position	For RTH.
3	Flight Mode Switch	Channel 7	2 or 3 position	To switch the flight mode. When using a 3 position switch, the three positions are F-mode, A-mode and P-mode by default. When using a 2 position switch, the two positions are F-mode and P-mode by default. And the F-mode position can be set to A-mode in DJI Assistant 2.
4	Operation Mode Switch	Channel 8	2 or 3 position	To switch the operation mode. When using a 3 position switch, the three positions are S, M and M+ by default. When using a 2 position switch, M+ function should be disabled in DJI Assistant 2, and then the two positions will be S and M.
5	Spray Switch	Channel 9	2 or 3 position	To start or stop spraying.
6	Spray Rate Dial	Channel 10	Knob	To adjust the maximum spray rate.
7	C1 Function Switch	Channel 11	2 or 3 position	In S mode: to adjust flying speed to the lower one. In M+ mode: to fly the aircraft left.
8	C2 Function Switch	Channel 12	2 or 3 position	In S mode: to adjust flying speed to the faster one. In M+ mode: to fly the aircraft right.

#### 1. A\_B Button

The 3 positions of the switch should be set as A, null, B.

Toggle the switch to A from any other position to record Point A of the operation route.

Toggle the switch to B from any other position to record Point B of the operation route.

#### 2. RTH Switch

Toggle the switch to the valid position to enter Smart RTH, while toggle it to the invalid position to cancel the RTH.

#### 3. Flight Mode Switch

The flight controllers features F-mode, A-mode and P-mode (refer to [System Functions](#) for details). Toggle this switch to select a flight mode.

3-position switch: F-mode, A-mode, P-mode

2-position switch: P-mode and F-mode are by default. F-mode can be changed to A-mode in DJI Assistant 2.

### 4. Operation Mode Switch

The flight controller features S, M and M+ operation modes (refer to [System Functions](#) for details). Toggle this switch to select an operation mode.

3-position switch: S, M, M+.

2-position switch: disable M+ mode and enable S and M mode in DJI Assistant 2.

### 5. Spray Switch

In Manual Operation mode, F-mode or A-mode, toggle the switch to the valid position to spray liquid, and toggle to the invalid position to stop spraying. In Smart Operation mode and Manual Plus Operation mode, spraying will start and stop automatically. It cannot be controlled by users.

F1 and F2 channels are for the pump control by default. The will output standard ESC control signal. Connect the ESC to F1 or F2 channel to control the pump. Mapping F3 to F8 channels for pump control in DJI Assistant 2 if you can more pumps.

### 6. Spray Rate Dial

Mapping is not necessary if the function is not used.

Turn the dial to adjust spray rate, and the pump motor rotating speed from F1 or F2 will be changed. The value of the dial is from -1000 to 1000. The motor will stop when the value is -1000, while the motor will rotate at full throttle when it is 1000.

The value of the dial will be saved in the flight controller, which will not be lost after powered off. It will keep the last value when powering the flight controller on next time.

### 7. C1 Function Switch

Mapping is not necessary if the function is not used.

In S mode: to adjust flying speed to the lower one.

In M+ mode: to fly the aircraft left for one line spacing.

### 8. C2 Function Switch

Mapping is not necessary if the function is not used.

In S mode: to adjust flying speed to the faster one.

In M+ mode: to fly the aircraft right for one line spacing.

# System Functions

## Flight Modes


The flight control system includes three flight modes: P-mode (Positioning), A-mode (Attitude), and F-mode (Functions). Toggle the Flight Mode switch on the remote controller to one of the three modes.

**P-mode (Positioning):** The aircraft uses GNSS for positioning and it can only maintain attitude stabilization when GNSS signal is weak. In P-mode, users can start the motors, record Point A and B, and enter Smart operation mode (A-B Route) when the GNSS signal is strong. If using the D-RTK\*, it can provide centimeter-level positioning accuracy.


**A-mode (Attitude):** GNSS is not used for positioning, and aircraft can only maintain altitude using the barometer. Aircraft can still record its position and return to the Home Point if a GNSS signal is present.

**F-mode (Function):** The aircraft uses GNSS for positioning and it can only maintain attitude stabilization when GNSS signal is weak. If using the D-RTK\*, it can provide centimeter-level positioning accuracy. If using Datalink 3, plan tasks in advance in the DJI MG app and the aircraft will automatically perform the selected task after entering F-mode with a strong GNSS signal. The DJI MG app will display "Route". Refer to Datalink 3 User Manual for details.

---

 The aircraft will always fly in P-mode by default after powering on regardless of the Flight Mode switch position. If the Flight Mode switch is at A or F when powered off, set the switch to any other position and then to A or F after powering on the aircraft to use A-mode or F-mode.

---

 If using the D-RTK\*, ensure to start the motors and take off after waiting for RTK ready (the ground system indicator blinks green). When the D-RTK is working normally, the flight status indicator will alternately show the current flight mode and the D-RTK status (blue).

---

## Operation Modes

When the Flight Mode Switch is set to P, the system provides Smart, Manual, and Manual Plus operation modes. Switch to one of the three modes via the Operation Mode switch on the remote controller.

**Smart operation mode (S):** When the aircraft is in P-mode and the GNSS signal is strong, set the switch to this mode after recording Points A and B. The aircraft will fly and spray liquid along the specified route. If using the Datalink 3, the DJI MG app will display "A-B Route."

**Manual operation mode (M):** Users can control all the movements of the aircraft and spray liquid manually. If using the Datalink 3, the DJI MG app will display "Manual Route."

\* Only A3-AG supports the D-RTK.

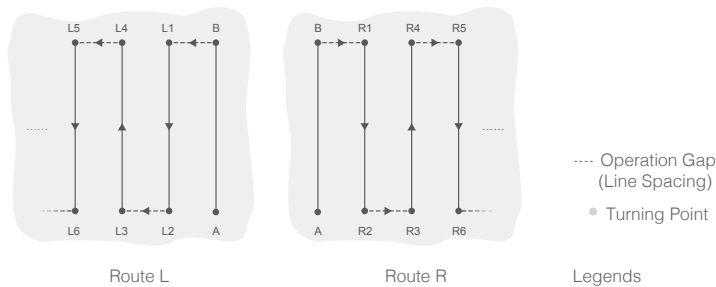
**Manual Plus operation mode (M+):** Users can control the movement of the aircraft, but flying speed is restricted and heading is locked. Use the C1 or C2 buttons on the remote controller to steer the aircraft left/right for one line spacing. If using the Datalink 3, the DJI MG app will display “M+ Route.”

### Smart Operation Mode

In Smart operation mode, the aircraft will travel along a pre-planned route. Operation resumption, data protection, and the Altitude Stabilization System are available in this mode. Use the C1 and C2 buttons on the remote controller to adjust flying speed. The spray rate will be adjusted automatically according to the flying speed. Smart operation mode is recommended for large, rectangular spray areas.

### Operation Route

The aircraft will travel along a pre-designated square zig-zag route after recording turning points A and B. Under optimal working conditions for the Altitude Stabilization System, the aircraft maintains distance from the vegetation. The length of the dotted lines, called Operation Gap (Line Spacing), can be adjusted in DJI Assistant 2 or the DJI MG app.



### Operation Procedure

- ⚠️ • Maintain line of sight of the aircraft at all times.
- Set the Flight Mode switch to P when GNSS signal is strong. Otherwise, Smart operation mode may be unreliable.

💡 Always inspect operating environments before flying.

Set the remote controller's Flight Mode Switch to P when a strong GNSS signal is present. In addition, set the Operation Mode switch to M. Instructions vary according to the type of your remote controller (SBUS or Datalink 3). Follow the steps for the corresponding remote controller.

## SBus

### 1. Record Points A and B in Order

Users cannot set the Operation Mode switch to Smart operation mode until they have recorded points A and B.

Fly the aircraft to the starting point, depicted as Point A/B, hover, and then toggle the A\_ B switch on the remote controller from any other position to position A/B. The Flight Status Indicator will blink red/green after recording the starting points.

- 
- ⚠ • Points A and B can only be recorded when the aircraft is hovering in Manual operation mode.
  - Update Point B by flying the aircraft to a new position to record. Note that if you update Point A, you must also update Point B.
  - It is recommended to keep the direction of Point A to B parallel to one side of the rectangular spray area for optimal effect.
- 

### 2. Configuring Aircraft Altitude

If using the Altitude Stabilization System, configure the desired altitude in the DJI MG app and adjust the aircraft altitude to a value within the working range of the Altitude Stabilization System (2-3.5 m) by using the throttle stick before entering Smart operation mode. The Altitude Stabilization System will start working automatically and maintain the spraying distance between aircraft and vegetation. Refer to the [Altitude Stabilization System](#) for details.

### 3. Using Smart Operation Mode

Set the remote controller's Flight Mode switch to P and ensure that a strong GNSS signal is present (the Flight Status Indicator blink purple slowly), then set the Operation Mode switch to S to enable Smart operation mode.

- 
- ⚠ • If, after recording Points A and B, you fly the aircraft more than five meters away from Point B and then set the Operation Mode switch to S, the recorded Point B will be erased. Toggle the Operation Mode switch to enter Manual operation mode and record Point B again.
  - If, after recording Points A and B, you fly the aircraft within five meters away from Point B and then set the Operation Mode switch to S, the aircraft will automatically fly back to Point B and hover.
- 

### 4. Select the Route

Push the Roll stick left or right to select the operating pattern. Push it left for Route L and right for Route R.


- 
- ⚠ Users can select the route only in Smart operation mode when the aircraft is within five meters away from Point B.
-

### 5. Starting the Operation


- a. The aircraft will be at Point B and align with the line between Points A and B with its heading pointing toward Point B. Then it will fly along Route L/R continuously.
- b. Pause the operation temporarily through one of the following methods: Set the Operation Mode switch out of Smart operation mode, initialize the RTH procedure, set the Flight Mode switch out of P-mode, or push the Pitch or Roll stick in any direction on the remote controller. If you want to continue the operation, follow the instructions under Operation Resumption.
- c. Adjust the flying speed through the remote controller if the C1 and C2 switches have been mapped.

Toggle the C1 switch to its valid position and then the flying speed will be reduced to the next gear. Toggle the C2 switch to its valid position and then the flying speed will be increased to the next gear. The four speed gears are set to 1, 3, 5, 7 m/s by default. Set them from 1 to 7 m/s and the defaulted speed gear when powered on in DJI Assistant 2.

---

 If GNSS signal is weak during operation, the aircraft will automatically switch to Attitude mode. Exit Smart operation mode and control the aircraft manually. If the aircraft is still in Smart operation mode, when the aircraft regains a strong GNSS signal, it will automatically fly to the next turning point.

---

-  • The line spacing can be customized from 3-10 m in DJI Assistant 2. It is set to a length of 5 m by default.
- Even though the heading of the aircraft cannot be adjusted, use the throttle stick to adjust the altitude of the aircraft to avoid obstacles in the vertical direction.
  - If using the control sticks to control the aircraft forward, backward, left and right during operation, the aircraft will switch to Manual operation mode automatically. Users can avoid obstacles manually. Refer to [Manual Obstacle Avoidance](#) for details.
  - The aircraft automatically sprays liquid when flying forwards or backwards, and does not spray when flying left or right or when hovering. The spray rate will be adjusted automatically.
- 

Datalink 3 (DJI MG app required)

#### 1. Record Points A and B in Order

Users cannot set the Operation Mode switch to Smart operation mode until they have recorded points A and B.

Fly the aircraft to the starting point, depicted as Point A/B, hover, and then press Button A/B on the remote controller or tap Point A/B onscreen. The icon for Point A/B will change from gray to purple and the Aircraft Status Indicator will blink red/green after recording the starting points.

- 
- ⚠ • Points A and B can only be recorded when the aircraft is hovering in Manual operation mode.
  - Update Point B by flying the aircraft to a new position to record. Note that if you update Point A, you must also update Point B.
  - It is recommended to keep the direction of Point A to B parallel to one side of the rectangular spray area for optimal effect.
- 
- ☀ • After recording Point A, there will be a menu prompt for work type settings. Set the amount of pesticide per acre and work type. Use the slider to adjust work efficiency. During the task, tap the icon at the top of the screen to adjust parameters. You can also adjust work efficiency via the Settings dial on the remote controller.
  - The DJI MG app will display an icon of line spacing. Tap to adjust the value. The line spacing cannot be adjusted during operation. Switch to Manual or Manual Plus operation mode to adjust the value, then go back to Smart operation mode.
- 

## 2. Select the Route

Press the C1 or C2 buttons on the remote controller to select the operating pattern. Press C1 for Route L and C2 for Route R. The default route pattern is Route R if no selection has been made.

- 
- ⚠ Users can select the route in Manual operation mode only. If the aircraft is in Smart operation mode, select the route after switching to Manual operation mode.
- 

## 3. Configuring Aircraft Altitude

Configure the desired altitude in the DJI MG app and adjust the aircraft altitude to a value within the working range of the Altitude Stabilization System (2-3.5 m) by using the throttle stick before entering Smart operation mode. The Altitude Stabilization System will start working automatically and maintain the spraying distance between aircraft and vegetation. Refer to the Altitude Stabilization System for details.

## 4. Using Smart Operation Mode

Set the remote controller's Flight Mode switch to P and ensure that a strong GNSS signal is present, then set the Operation Mode switch to S to enable Smart operation mode.





- If, after recording Points A and B, you fly the aircraft more than five meters away from Point B and the Operation Mode switch is not set to S, Resume will appear on the lower right corner of the screen when you enter Smart operation mode. Tap Resume, and the aircraft will automatically fly to Point B to re-enter Smart operation mode.
  - When using the control sticks to control the aircraft in Smart operation mode, the aircraft will automatically switch to Manual operation mode, complete corresponding flight behavior, and then hover. To resume the task, set the Operation Mode switch to S, then tap Resume onscreen. The aircraft will return to Smart operation mode, then resume flying along the operation route. Refer to [Operation Resumption](#) for details.
- 

### 5. Starting the Operation

- a. Press the remote controller's C1 and C2 buttons simultaneously. The aircraft will align with the line between Points A and B with its heading pointing toward Point B. Fly laterally from Point B to L1/R1, then hover at Point L1/R1 and wait for further instructions.
  - b. Repeat the previous step and the aircraft will fly to the next turning point along Route L/R and hover.
  - c. Enable Continuous Smart operation mode by pressing and holding the C1 and C2 buttons simultaneously for 2-4 seconds when the aircraft is hovering at any given turning point. The Aircraft Status Indicator will turn solid purple for one second. The aircraft will then fly along Route L/R continuously. The DJI MG app will display the A-B Route.
  - d. To exit Continuous Smart operation mode, press and hold the C1 and C2 buttons simultaneously for 2-4 seconds. The aircraft will fly to the next turning point and hover.
- 



- The nose of the aircraft will always point from Point A to Point B regardless of flight direction. Heading cannot be adjusted.
  - You will only be able to press and hold the C1 and C2 buttons for steps a to c when the aircraft is hovering at a turning point.
  - If GNSS signal is weak during operation, the aircraft will automatically switch to Attitude mode. Exit Smart operation mode and control the aircraft manually. When the aircraft regains a strong GNSS signal, it will automatically fly to the next turning point.
  - If you press the A or B buttons during operation, the data for Points A and B of the current route will be erased and the aircraft will hover in place.
- 



- The line spacing can be customized from 3-10 m in DJI MG. It is set to a length of 5 m by default.
  - Even though the heading of the aircraft cannot be adjusted, use the control sticks to avoid obstacles. Refer to [Manual Obstacle Avoidance](#) for details.
  - The aircraft automatically sprays liquid when flying forwards or backwards, and does not spray when flying left or right or when hovering.
-



## Manual Operation Mode

Set the Operation Mode switch to M to enter Manual operation mode. You can control all the movements of the aircraft, spray liquid via the remote controller's Spray switch/button, and adjust the spray rate via the remote controller's Spray Rate knob/dial. Manual operation mode is ideal when the operating area is small.

## Manual Plus Operation Mode

Set the Operation Mode switch to M+ to enter Manual Plus operation mode. The aircraft's Maximum flying speed is limited (customizable in DJI Assistant 2 or the DJI MG app), the heading is locked, and all other movement can be manually controlled in this mode. Press the C1 or C2 buttons on the remote controller to steer the aircraft left or right. The aircraft sprays liquid automatically when flying forward or backward, and does not spray when flying left and right. Manual Plus operation is ideal for irregularly-shaped operating areas.

1. If using the Altitude Stabilization System, elevate the aircraft to the desired altitude within the working range of the Altitude Stabilization System (2-3.5 m) before entering Manual Plus operation mode. The Altitude Stabilization System starts working automatically by maintaining the spraying distance between the aircraft and the vegetation below. Refer to [Altitude Stabilization System](#) for details.
2. Set the Operation Mode switch to M+ to activate Manual Plus operation mode.



- Note that the Operation Gap value is identical to the one that has been set in Smart Operation mode, i.e. the value set in DJI Assistant 2 or the DJI MG app.
- Spray rate will be adjusted automatically according to the flying speed.
- Maximum spray rate, maximum flying speed, line spacing, and height above the crop can be adjusted in the DJI MG app, if using the Datalink 3.
- The aircraft cannot be controlled when using the C1 or C2 switches/buttons to steer the aircraft to the left or right. Switch to Manual operation mode in case of emergency, and the aircraft will stop flying.
- Commands from the C1 or C2 switches/buttons can only be performed when the aircraft is hovering.

## Operation Resumption

When exiting Smart Operation Mode or a route task (i.e. the F-mode of the Datalink 3, the F-mode or route task mentioned below means situations when using with the Datalink 3), the aircraft will record a breakpoint. The Operation Resumption function allows you to pause an operation temporarily (e.g., to refill the spray, change battery, and avoid obstacles manually) and then resume operation at the breakpoint.

## Instructions

### Recording a Breakpoint

Exit Smart operation mode or F-mode through one of the following methods and the aircraft will record its location as a breakpoint if GNSS signal is strong:

1. Set the Operation Mode switch out of Smart operation mode.
2. Initialize the RTH procedure.
3. Set the Flight Mode switch out of P-mode or F-mode.
4. Push the Pitch or Roll stick in any direction on the remote controller.



- Ensure that GNSS signal is strong when using the Operation Resumption function. Otherwise, the aircraft cannot record and return to the break point.
  - The breakpoint will be updated as long as you set the Operation Mode switch to any other mode besides Smart operation mode, the Flight Mode switch to any other mode besides P-mode or F-mode, and you trigger RTH during Smart operation mode or F-mode.
- 

### Resume Operation

1. Exit Smart operation mode or F-mode through one of the four above methods. The current location of the aircraft will be recorded as the breakpoint.
2. Fly the aircraft to a safe location before resuming operation. If the Altitude Stabilization System is enabled, adjust the spraying distance between the aircraft and the vegetation to be within working range (2-3.5 m).

#### 3. Resume

##### Using SBUS

- a. If exiting Smart operation mode through toggling the Operation Mode switch: After setting the switch to S, if the aircraft is in the operating area, it will return to the operating route along a path vertical to the operating route. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume operation.
- b. If exiting Smart operation mode through entering RTH procedure, the aircraft will hover after RTH is cancelled. Then toggle the switch back and forth to enter the Smart operation mode again, and the aircraft will return to the break point at the RTH altitude and resume operation.
- c. If exiting Smart operation mode through toggling the Flight Mode switch: After setting the switch to P, you should also toggle the Operation Mode switch back and forth to enter the Smart operation mode again, and the aircraft will return to the break point and resume operation.
- d. If Exiting Smart operation mode through pushing the Pitch or Roll stick, the aircraft will automatically switch to Manual operation mode, complete the corresponding flight behavior and hover. Then toggle the Operation Mode switch back and forth to enter the Smart operation mode again. If the aircraft is in the operating area, it will return to the operating route along a path vertical to the operating route. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume operation.

Using the Datalink 3 (DJI MG app required)

Smart operation mode — Set the Flight Mode switch to P and the Operation Mode switch to S.

F-mode — Set the Flight Mode switch to F.

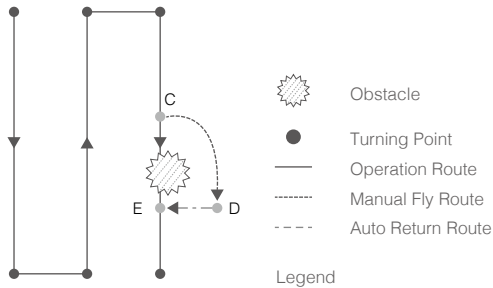
Then Tap Resume on the lower right corner of the DJI MG app.

4. If obstacle avoidance is required during the return procedure, users can control the aircraft forwards, backwards, left, and right. Refer to Manual Obstacle Avoidance for details.

## Typical Applications

In Smart operation mode or F-mode, users can control the aircraft forward, backward, left, and right, avoiding obstacles along the operation route, or in an emergency (e.g., abnormal aircraft behavior). The following instructions describe how to avoid obstacles manually:

### Manual Obstacle Avoidance



#### 1. Exit Smart Operation Mode or F-mode

In the two modes, when using the control sticks to control the aircraft forward, backward, left or right (i.e., push the pitch or roll stick), the aircraft will automatically exit the current mode, pause the task and record the current position as a breakpoint (Point C), then complete the corresponding flight behavior and hover.

- ⚠** When pushing the control sticks to exit Smart Operation mode, the aircraft will need a braking distance. Ensure that there is a safe distance between the aircraft and any obstacles.

#### 2. Avoid an Obstacle

After switching to Manual operation mode, users can control the aircraft to avoid the obstacle from Point C to D.

#### 3. Resume Operation

Using SBUS:

Toggle the Operation Mode switch back and forth to enter the Smart operation mode again. If the aircraft is in the operating area, it will return to the operating route along a path vertical to the operating route. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume operation.

Using the Datalink 3 (DJI MG app required):

Enter the corresponding mode, and then tap Resume in the DJI MG app. If the aircraft is in the operating area, there will be a prompt in the DJI MG app. Select Fly to Project Point. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume the operation.



- To avoid risk, ensure that the aircraft has completely avoided the obstacle before resuming operation.
- In the event of an emergency, ensure that the aircraft is in normal status and then fly the aircraft manually to a safe area to resume operation.



Repeat the instructions above to exit and resume operation in the event of an emergency (i.e., whenever obstacle avoidance is required) during the return procedure.

---

## Empty Tank Warning

### Profile

If using the DJI Delivery Pump, when the spray tank is empty, the aircraft will move according to the current operation or flight mode and will ascend 3 m\* and hover (Smart or Manual Plus operation mode), or hover in place (Manual operation mode or F-mode).

\* The feature for hovering at 3 m must be enabled in DJI Assistant 2 or the DJI MG app. If not enabled, the aircraft will hover in place at its current altitude and position until you manually control it.

### Using the Empty Tank Warning

1. In Manual operation mode or F-mode, toggle/press the Spray switch/button on the remote controller when the empty tank warning is triggered to turn off the sprinklers. Failure to do so may cause the tank motor pump to idle, causing damage. In Smart or Manual Plus operation mode, the sprinklers will automatically turn off.
2. Ensure that the aircraft is in Manual operation mode, land, and stop the motors. Refill the spray tank and tighten the lid.
3. Toggle/press the Spray switch/button on the remote controller to discharge the remaining air in the pump until spraying is steady. Toggle/press the Spray switch/button again to stop discharging.
4. Ensure the aircraft is in Manual operation mode, and then take off.
5. Elevate the aircraft to a desired altitude in F-mode, Smart, or Manual Plus operation mode. Adjust the spraying distance between the aircraft and the vegetation to be within the working range (2-3.5 m). Refer to the [Altitude Stabilization System](#) for details. Then enter the desired mode.

## Return to Home (RTH)

- **Home Point:** The default Home Point is the first location where your aircraft received strong GNSS signals that are required for positioning. The Aircraft Status Indicator will blink several times after the Home Point has been recorded.
  - **RTH:** The Return to Home (RTH) function brings the aircraft back to the last recorded Home Point.
- ☀: When using System Data Protection, the Home Point will not be updated if you restart the aircraft after changing the battery.

There are three events that will trigger RTH procedure: Smart RTH, Failsafe RTH and Low Battery RTH.

### Smart RTH







Press and hold the RTH button on the remote controller when GNSS is available to enable Smart RTH. Both Smart and Failsafe RTH use the same RTH procedure. With Smart RTH, you may control the aircraft's speed and altitude to avoid collisions when returning to the Home Point. The Aircraft Status Indicator will show the current flight mode during RTH. Press the Smart RTH button once to exit Smart RTH and regain control of the aircraft.

### Failsafe RTH

- ☀: Failsafe RTH must be enabled in the DJI Assistant 2 or DJI MG app. If Failsafe RTH is not enabled, the aircraft will hover in place when the remote controller signal is lost.


Failsafe RTH activates automatically if the remote controller signal is lost for more than three seconds, provided that the Home Point has been successfully recorded, the GNSS signal is strong (white GNSS icon), and the compass is working normally. Users can interrupt the Return to Home procedure and regain control of the aircraft if the remote controller signal is recovered. Press the RTH button or toggle the RTH switch on the remote controller once to cancel RTH.

### RTH Illustrator

<p>1. Record Home Point (HP)</p>  <p>Blinks green or purple</p>	<p>2. Confirm Home Point</p>  <p>Blinks green six times</p>	<p>3. Remote Controller Signal Lost</p>  <p>Blinks yellow</p>
<p>4. Signal Lost &gt; 3 sec</p>  <p>Blinks yellow</p>	<p>5. Initiate RTH</p>  <p>Blinks yellow</p>	<p>6. Land After Hovering 5 sec</p>  <p>Blinks yellow</p>

Low Battery RTH




The low battery RTH or critical low battery landing is triggered when the LiPo battery voltage is low.

- 
- The Low Battery RTH is disabled by default. The Flight Status Indicator will blink red slowly when battery voltage is low. RTH or landing can be set in the DJI Assistant 2 or the DJI MG app.
  - Control the aircraft through the remote controller during RTH or landing if the remote controller signal is strong.
  - Users can set the threshold of both low battery and critical low battery levels in the DJI Assistant 2.


When battery voltage is low, motor output may be not enough for flight. Users are advised to land the aircraft immediately. Otherwise the aircraft will crash leading to damage or other dangers. The flight control system will automatically determine whether the battery voltage is adequate based on the current aircraft altitude and its distance from the Home Point. (Refer to the Figure 5 and 6 in “Failsafe Illustration” for RTH action.)

1. The Flight Status Indicator slowly blinks red if the battery voltage is low. The low battery RTH will be triggered. Users can change the settings to LED blinking only or hovering in the DJI Assistant 2.
2. The Flight Status Indicator quickly blinks red if the battery voltage is critical low. The critical low battery land will be triggered. The aircraft will begin to descend and land automatically which cannot be cancelled. Users can change the settings in the DJI Assistant 2 so that the aircraft will not automatically descend and land when the Flight Status Indicator LED blinks red.

RTH Safety Notices

	The aircraft cannot avoid obstacles during RTH. Users can only control the speed and altitude of the aircraft. If the aircraft is in risk of collision, exit RTH immediately. Before each flight, it is important to set an RTH altitude that is appropriate for the given environment. Go to DJI Assistant 2, or DJI MG > Operation View > ●●● > ⌘ , to set Return to Home Altitude.
	If the aircraft is flying under 15 meters and RTH (including Smart and Failsafe RTH) is triggered, the aircraft will first automatically ascend to 15 meters from the current altitude. You cannot control the aircraft during this ascent. In Smart RTH, you can exit RTH to cancel automatic ascent by pressing the RTH button once.
	The aircraft automatically descends and lands if RTH is triggered when the aircraft flies within a 20 m radius of the Home Point.



The aircraft cannot return to the Home Point when GNSS signal is weak  or is unavailable.



When the RTH altitude is set to more than 15 m and the aircraft is ascending between 15 m and the preset RTH altitude, the aircraft will stop ascending and immediately return to the Home Point if you push the throttle stick.

## Attitude Control When One Motor Output Fails

For 6-rotor and 8-rotor, the flight control system can control the aircraft's attitude when one motor fails:

1. During flight, the aircraft with this flight control system is attitude controllable when one motor output fails.
2. The motor will not start before take-off. (DJI Intelligent ESCs are required for communication.)

## Propulsion System Protection

Low voltage and overweight aircraft warnings are provided.

## System Data Protection

If using the Data Protection module, the System Data Protection feature enables the aircraft to retain vital system data (e.g., Point A, Point B, breakpoint) for about 30 seconds after the aircraft is powered off. Retaining vital system data allows the aircraft to resume operation after a short, temporary pause. Follow the instructions below to use this feature:

1. Exit Smart operation mode or F-mode (if using the Datalink 3). The current location of the aircraft will be recorded as the breakpoint.
2. Land the aircraft and stop the motors.
3. Once the aircraft is powered off, System Data Protection is automatically triggered, indicated by The Aircraft Status Indicator glowing solid green.
4. Replace the battery within the 30-second window
5. Restart the aircraft and enter Manual operation mode.
6. Ensure that the GNSS signal is strong, then start the motors.
7. Follow the instructions in Operation Resumption to resume the operation.



System data can only be retained for 30 seconds. DO NOT power off the aircraft for more than 30 seconds if you want to resume operation, as system data will be lost.

## Altitude Stabilization System

### Profile

To ensure that the spray is evenly dispensed, the aircraft uses the radar module on the Altitude Stabilization System to maintain the same distance above the crops at all times. The radar module is enabled by default, and can be disabled in DJI Assistant 2. If it is enabled, the aircraft will fly above the crops at a constant spraying distance in Smart Operation Mode and Manual Plus Operation Mode. The system can also measure the spraying distance above the crops or other surfaces, but the aircraft will not be able to fly at a constant spraying distance when performing this function.

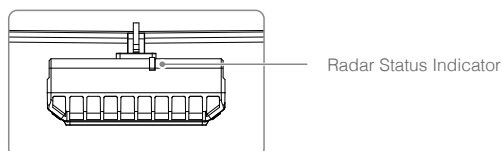
### How to Use

1. Ensure that the Flight Mode Switch is toggled to the P-mode and the Operation Mode Switch is toggled to the Manual Operation Mode. Fly the aircraft above the vegetation and adjust the spraying distance between the aircraft and the vegetation. Ideal spraying distance should fall within the working range (2 - 3.5 m) for altitude stabilization. DO NOT operate the aircraft beyond this range, otherwise the system will become unstable.
2. Toggle the Operation Mode Switch to enter Smart Operation Mode or Manual Plus Operation Mode; or toggle the Flight Mode Switch to enter F-mode. If operating environment is ideal, the aircraft will fly above the vegetation at the pre-set height.






- The Altitude Stabilization System will only maintain a fixed distance from vegetation within its working range (2-3.5 m).
- The aircraft's pitch and roll angles must not exceed 20°.
- Observe the aircraft's distance from the vegetation at all times.
- Operate with extra caution in any of the following situations:
  - a. There are large height differences (> 1m) in vegetation (i.e. nearby ditches or ponds, above sparse trees or shrubs, terraced fields).
  - b. Flying at high speeds (> 5m/s).
  - c. Flying over surfaces that can absorb sound waves (e.g. dense vegetation comprised of small leaves such as well-maintained grass lawns).
  - d. Flying over inclined surfaces (depending on aircraft speed). Recommended maximum inclination at different speeds: 15° at 1 m/s, 6° at 3 m/s and 3° at 5 m/s.
- Obey local radio transmission laws and regulations.

### Radar Status Indicator





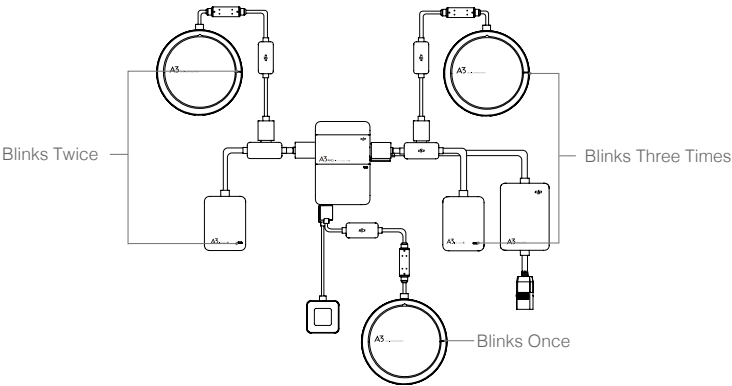
The Radar Status Indicator shows the current status of the Altitude Stabilization System. See the table below:

Blinking Patter	Description
 — Solid Green	Warming up.
 ..... Blinking Green	Working.
 Off	Disconnected.

Redundancy System

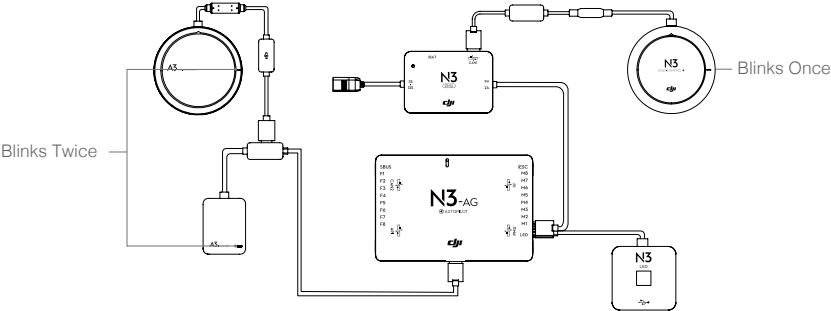
A3-AG with A3 Upgrade Kit

With two additional IMU Pro and GPS-Compass Pro modules, the A3-AG Pro provides triple modular redundancy, improving the system’s anti-risk performance. System status is indicated by LEDs on the GPS-Compass Pro, IMU Pro and Flight Controller modules.






N3-AG with A3 Upgrade Kit

With the A3 upgrade kit (IMU Pro and GPS-Compass Pro modules), the N3-AG Pro provides modular redundancy, improving the system’s anti-risk performance. System status is indicated by LEDs on the GNSS-Compass/GPS-Compass Pro, IMU Pro and Flight Controller modules.



Redundancy System Indicators

LED Indicator	Status
 Green	The module is functioning normally and working as a part of the system When the LED is blinking green.
 Red	The module is functioning abnormally When the LED is blinking red.
 Blue	The module is functioning normally but not working as a part of the system When the LED is blinking blue.

# Flight

## Operation Environment

- 1. DO NOT use the aircraft in adverse weather conditions, such as heavy rain, high winds, fog, snow, lightning, tornadoes, or hurricanes.
- 2. Only fly in open areas. Tall buildings and steel structures may affect the accuracy of the compass and the GNSS signal.
- 3. Maintain line of sight of the aircraft at all times, and avoid flying near obstacles, crowds, animals, trees, and bodies of water.
- 4. Avoid flying in areas with high levels of electromagnetism, including mobile phone base stations and radio transmission towers.
- 5. Ensure that there is a strong GNSS signal in the Smart or Manual Plus operation mode or F-mode.
- 6. DO NOT operate the aircraft indoors.
- 7. The system cannot operate in P or F-mode within the earth's polar regions.

## Flight Limits and No-Fly Zones

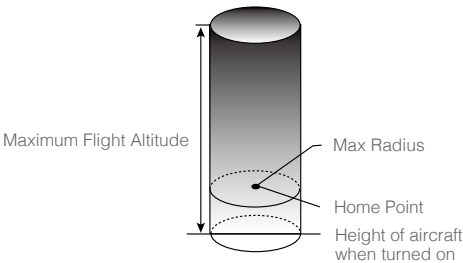
Users can set flight limits on height and distance.

Unmanned aerial vehicle (UAV) operators should abide by the regulations from self-regulatory organizations such as the International Civil Aviation Organization, the Federal Aviation Administration, and their local aviation authorities. For safety reasons, flight limits are enabled by default to help users operate this aircraft safely and legally.

When operating in P or F-mode, the height and distance limits and no-fly zones work together to monitor flight. In A-mode, only the height limit prevents the aircraft from going above 50 meters.

### Maximum Height and Radius Limits

Users can change the maximum height and radius limits in DJI Assistant 2 or the DJI MG app. Once complete, your aircraft will fly in a restricted cylinder that is determined by these settings. The tables below show the details of these limits.



P-mode or F-mode (with strong GNSS signal)	
Flight Limits	
Max Height	Flight altitude must be below the preset height.
Max Radius	Flight distance must be within the max radius.

A-mode or other modes (with weak GNSS signal)

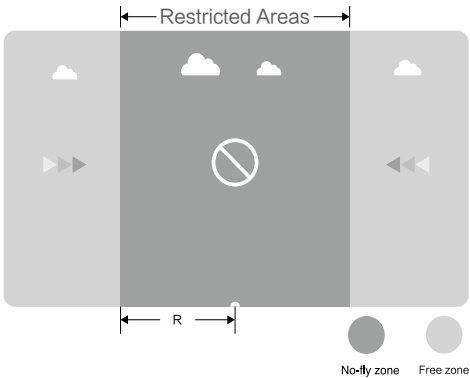
	Flight Limits
Max Height	Flight altitude must be below the preset height.
Max Radius	No limits.

- ⚠


- If you fly into a no-fly zone, you can still control the aircraft, but cannot fly it further.
  - If the aircraft loses GNSS signal or is in A-mode and flies out of the max radius but regains GNSS signal or the flight mode is switched from A-mode to other modes (with strong GNSS signal) afterwards, it will fly back within range automatically.

No-Fly Zones

Detailed no-fly zones are listed on the DJI official website at <http://flysafe.dji.com/no-fly>. No-fly zones are divided into airports and restricted areas. Airports include major airports and flying fields where manned aircraft operate at low altitudes. Restricted areas include borders between countries or sensitive sites. The details of the no-fly zones are explained below (GNSS required): R mi around the restricted area (depending on the regulation) is a no-fly zone, inside which takeoff and flight are prohibited.



P-mode or F-mode (with strong GNSS signal)

Zone	Restriction	Aircraft Status Indicator
No-Fly Zone	Motors will not start. If the aircraft loses GNSS signal or is in A-mode and enters the restricted area but regains GNSS signal or the flight mode is switched from A-mode to other modes (with strong GNSS signal) afterwards, the aircraft will enter semi-automatic descent and land.	Blinking Red  .....
Free Zone	No flight restrictions.	None.



**Semi-Automatic Descent:** All stick commands except the throttle stick command are available during descent and landing. Motors will automatically stop after landing.



- When operating in no-fly zones, the Aircraft Status Indicator will blink red slowly and continue for 5 seconds, then switch to indicate the current flying status and continue for 12 seconds, at which point it will switch back to blinking red slowly.
- For safety reasons, DO NOT fly near airports, highways, railway stations, railway lines, city centers, or other busy areas. Ensure the aircraft is visible at all times.

## Pre-Flight Checklist

### Mounting and Components Checklist

1. Ensure that all parts are mounted correctly and firmly.
2. Ensure that the ESCs and receiver are connected correctly and firmly.
3. Ensure that the spraying hoses are without any blockage.
4. Test if the nozzles work normally.

### LED Status Checklist

1. Ensure that the mode switch corresponds to the flight status LED.
2. System status LEDs on the GNSS-Compass / GPS-Compass Pro are normal.
3. Ensure that all the sensor parameters are correct and the IMUs are calibrated correctly.

### DJI Assistant 2 Checklist

1. Ensure that the aircraft mounting parameters are correct.
2. Ensure that the flight controller parameters are correct.
3. Low voltage level protection and Failsafe protection are set correctly.

## Compass Calibration

Ensure the compass is calibrated before every flight. Failure to calibrate may lead to poor flight performance or a crash.

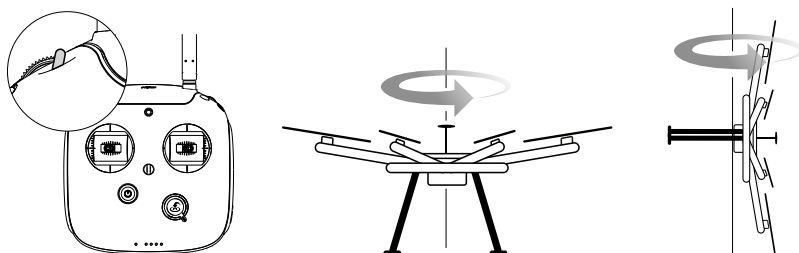
1. DO NOT attempt to calibrate your compass where there is a chance of strong magnetic interference. This includes areas where there are massive metal objects, parking structures, steel reinforcements underground, or under bridges.
2. DO NOT carry ferromagnetic materials with you during calibration, such as keys or mobile phones.
3. The compass should always be calibrated when moving from indoor spaces to outdoor spaces.
4. After successful calibration, the compass may become abnormal when you place the aircraft on the ground. This may be because of underground magnetic interference. Move the aircraft to another location and try again.

### Calibration Procedures

Choose an open space to carry out the following procedures.

Using the remote controller (SBUS RC system is used here as an example):


1. Quickly flip the Flight Mode switch from position 1 to position 2, and then back to position 1 three times, and the Flight Status Indicator will display a solid yellow light.
2. Hold and rotate the aircraft horizontally 360 degrees, and the Flight Status Indicator will display a solid green light.
3. Hold the aircraft vertically with nose pointing downward, and rotate it 360 degrees around the center axis.
4. The Flight Status Indicator shows the current flight mode when calibration is complete. If the Flight Status Indicator blinks red, repeat the steps above to recalibrate the compass.



Using DJI MG (Datalink 3 is required):

Tap the Aircraft Status Bar in the Operation View of the DJI MG app and select Calibrate in the Aircraft Status List, then follow the on-screen instructions.

---

 The DJI MG app will prompt you to calibrate the compass if needed. The prompts will disappear after successful calibration.

---

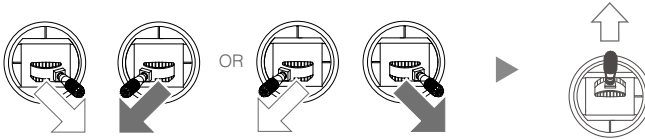
### When to Recalibrate

1. When compass data is abnormal, and the Aircraft Status Indicator is blinking red and yellow.
2. When flying in a new location, or a location that is different from your last flight.
3. When the mechanical structure of the system has changed, i.e. the mounting position of the compass has changed.
4. When severe drifting occurs in flight, i.e. the aircraft does not fly in a straight line.

## Flight Control

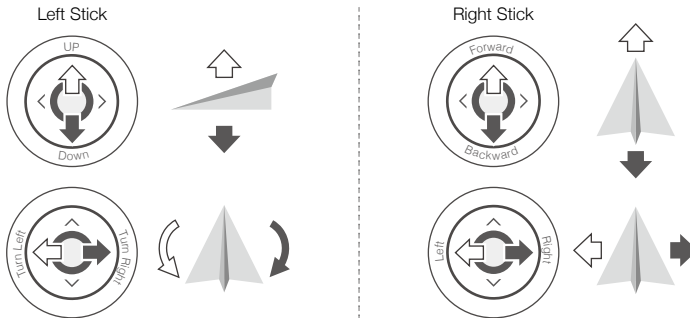
### Manual Take-off

Start the motors by pulling both control sticks to the bottom inside (or outside) corners. Release the sticks once the motors start. Slowly push the left stick (throttle stick) up to takeoff.



### Remote Controller Operation

Here are the default flight controls (Mode 2). The left stick controls altitude and rotation, while the right stick controls the forward, backward, left or right movements.



• You can customize or change these controls through the DJI MG app.

### Manual Landing

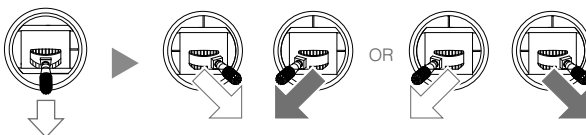
Use the below method to stop the motors:

When the aircraft has landed, push the throttle down and hold. The motors will stop after 3 seconds.



You can use the below method to stop the motors in the event of an emergency.

When the aircraft has landed, push the throttle down, then perform the CSC (Control Stick Combination). The motors will stop immediately. Release both sticks once the motors have stopped.



# DJI Assistant 2

Configure settings of the remote controller and flying parameters, copy flight records, use the flight simulator, and update aircraft firmware in the DJI Assistant 2.

## Installation and Launching

1. Download the DJI Assistant 2 installation file from the MG-1S download page:  
<http://www.dji.com/agriculture-solution/info#downloads>
2. Install the software.
3. Launch DJI Assistant 2.

## Using DJI Assistant 2

Connect the Micro USB port of the LED module to your computer with a Micro USB cable.



Be sure to remove the propellers before using DJI Assistant 2.

## Dashboard

Check all basic settings on this page. Click the blue hyperlinks for detailed settings.

### Basic Settings

#### Airframes

Select the type of your airframe.

#### Mounting

Set IMU direction and GPS position. Please note the positive direction of the axis and the unit (mm).

#### Remote Controller

Set the type of your receiver (SBUS by default), adjust dead zone, control EXP, and calibrate the remote controller, etc. Click “Channel” for channel mapping and test.

#### ESC Settings

Choose ESC type, test motors and calibrate ESC. The motor will rotate at full throttle during ESC calibration. Make sure to remove the propellers before ESC calibration.

### Flight Settings

#### Propulsion Configuration

Set basic gain and propulsion system bandwidth.

#### Gain

Set advanced gain, horizontal velocity gain and sensitivity gain.

#### Failsafe Settings



Select the Failsafe action of the aircraft between hover and RTH, set RTH altitude (not beyond the maximum altitude) and the aircraft's heading during RTH.

If not using foldable propellers, you can disable the Propeller Action in this page.

### **Battery**

Configure the threshold and the aircraft actions of low battery warnings.

### **Flight Restriction**

Set the maximum altitude (up to 50 m). Enable or disable distance limit and set the value (up to 8000 m).

### **Agras Application**

Set the Operation Interval (Line Spacing) from 3 to 10 m. It is set to 5 m by default.

Set four speed gears for Smart Operation Mode from 1 to 8 m/s. The four speed gears are set to 1, 3, 5, 7 m/s by default.

Enable or disable altitude stabilization and no-pesticide protection features in Smart, Manual Plus or Manual Operation mode and F-mode (if using the Datalink 3).

### **Tools**

#### **Topology**

View system status and error information. Click the flight controller icon to enter IMU calibration.

View and calibrate IMU status.

#### **Function Channels**

To map F channels in this page.

#### **Backup**

Flight controller parameters backup and recovery. Only parameters in products of the same type and firmware can be supported for backup and recovery.

#### **Spraying**

Set PWM pulse width and frequency of F channel output to be compatible with the third party pump ESC.

#### **Simulator**

Click Open to enter flight simulation and practice flight. Click Start Simulation and aircraft attitude data (e.g., roll, pitch, yaw) will be shown on the right of the screen.

#### **Firmware Update**

A DJI account is required for firmware updates. Login with your DJI account or register for one.

#### **Flight Data**

You can use Data Viewer to view flight data, or enter SD card mode to copy it.

Data Viewer is used to view and analyze the flight data files of the aircraft for performance analysis and troubleshooting.
















# Appendix

## Specifications

Built-in Functions	N3-AG	A3-NG
Flight Modes	P-mode (Positioning) A-mode (Attitude) F-mode (Function)	
Operation Modes	Smart Operation mode (S) Manual Operation mode (M) Manual Plus Operation mode (M+)	
Return-to-Home Modes	Smart RTH Low voltage RTH Failsafe RTH	
Safety Features	Failsafe mode Low battery voltage warning Custom flight altitude and radius limits No Fly Zones Motor redundancy (for 6 and 8 rotor platforms) Motor overload detection Multi modular redundancy (with the A3 upgrade kit)	
App Functions (DJI MG App required)	Intelligent Operation Planning System	
Supported DJI Equipment	DJI aerial platforms (e.g. S900, S1000, S1000+) DJI iOSD Mark II, DJI iOSD mini	
<b>Peripheral</b>		
Supported Airframes	4-rotor: I4, X4 6-rotor: I6, V6, Y6, IY6 8-rotor: X8, I8, V8, IX8	
Supported ESC output	400 Hz refresh frequency	
Supported Receivers	DJI Datalink 3 DJI DR16 S-Bus	
Recommended Batteries	3S-12S LiPo battery	
Required Operation System	Windows 7, 8 or later Mac OS X 10.11 or later	
Expansion Ports	F1-F4 ports for output F5-F8 ports for I/O (coming soon)	

Electrical & Mechanical		
Rated Power	3.3 W	5 W
Rated Peak Power	5 W	8 W
Input Voltage Range	10.5 – 52 V	
Static Electricity	AD: ±8 kV CD: ±4 kV	
Operating Temperature	14° to 131° F (-10° to 55° C)	
Weight	Flight Controller: 46 g	Flight Controller: 66 g
	GNSS-Compass: 37 g	GPS-Compass Pro: 60 g
	LED Module: 13 g	LED Module: 15 g
	PMU: 33 g	PMU: 45 g IMU Pro: 40 g
Dimensions		Flight Controller: 64 mm × 42 mm × 19.5 mm
	Flight Controller: 58.1 mm × 39 mm × 17.05 mm	GPS-Compass Pro: 61 mm (diameter) × 13 mm
	GNSS-Compass: 50 mm (diameter) × 12.2 mm	LED Module: 27 mm × 27 mm × 8 mm
	LED Module: 25 mm × 25 mm × 6.3 mm	IMU Pro: 34 mm × 26.5 mm × 20 mm
	PMU: 40 mm × 28.5 mm × 11.2 mm	PMU: 51 mm × 34 mm × 13.5 mm
Agriculture Management Unit (AMU)		
Dimensions	102.3 mm × 52.3 mm × 16.8 mm	
Input Voltage	6S - 12S (25 - 50 V)	
Input Current	5 A	
Operating Temperature	32° to 104° F (0° to 40° C)	
Altitude Stabilization System		
Detection Range	1.5 - 7 m (Varies when flying above different kinds of vegetation)	
Working Range	2 - 3.5 m	
Detection Accuracy	< 10 cm	

## Flight Status LED Indicator Descriptions

LED	Description
 ..... Blinking Red, Green and Yellow Alternatively	The system is running a diagnostic test.
 × 4 ..... Blinking Yellow Four Times	The system is warming up.
 ..... Blinking Green Slowly	F-mode (Function)
 ..... Blinking Yellow Slowly	A-mode (Attitude)
 ..... Blinking Purple Slowly	P-mode (Positioning)
 ..... Blinking Blue (Alternates with other flight mode patterns)	Using D-RTK (with A3-AG)
 ..... Blinking Blue Rapidly for 1.5 seconds	Switching devices (IMU or GNSS/GPS modules) for the modular redundancy system
 ..... Blinking Green Rapidly for 1.5 seconds	Home Point is set successfully
 ..... Blinking Yellow Rapidly	Remote controller signal lost
 × 3 ..... Blinking Yellow Three Times	Airframe vibration is abnormal, or yaw axis control is abnormal (for example, the motor is not properly installed, etc.), or the center of gravity offset is too large (roll / pitch axis offset is large)
 ..... Blinking Red Slowly	Low voltage warning
 ..... Blinking Red Rapidly	Critically low voltage warning
 ..... Blinking Red Very Slowly for 5 seconds	The aircraft is in a no-fly zone.
 ..... Blinking Red Rapidly for 0.6 second when performing CSC	Large IMU bias or IMU initialization
 — Solid Red	Critical error, refer to the 11th question under FAQ chapter. Please contact with DJI Support if the problem is not solved.
 ..... Blinking Red and Yellow Alternatively	Compass calibration required

## FAQ

### Comparisons

1. What's the difference between A3/N3 and A3-AG/N3-AG?  
The A3/N3 is used for aerial photography, while the A3-AG/N3-AG is used for agriculture. They use the same hardware basic.
2. What's the biggest difference between A3-AG and N3-AG?  
The A3-AG supports RTK, while the N3-AG doesn't.

### Usage

1. What operation modes are supported by the A3-AG/N3-AG?  
Route Operation mode (the DJI Datalink 3 and DJI MG App are required),  
Smart Operation mode (A-B mode),  
Manual Plus Operation mode,  
Manual Operation mode.
2. What receiver types are supported by the A3-AG/N3-AG for agriculture functions?
  - a. SBUS: a remote controller with at least 9 channels and one 3-position switch,
  - b. DJI Datalink 3 remote controller: DJI MG app is supported for automatic route operation.
3. Remote controller calibration failed in DJI Assistant 2
  - a. Make sure that both sticks are in the mid-position. It will go to the next step for calibration after mid-position is detected. Then pull both sticks to the max position in each direction in proper order and click to complete.
  - b. During calibration, if moving the sticks when a message says to keep the sticks in the mid-position, the calibration will fail, and the stick value can only reach its max value and min value.
  - c. Taking the Futaba T14SG/T8FG as an example, make sure that the stick TRIM value is 0 before calibration.
4. Motor cannot start in motor test.
  - a. Increase the rotating speed of motor test (the default value is 5%). The max value is 15%.
  - b. Check if the ESC throttle range is wrong.  
Notice: The ESC throttle range of the E2000 propulsion system has already been set before delivery. DO NOT calibrate it. If the system cannot be used after you calibrate it by yourself, update the ESC firmware to the latest version (v1.4), and make sure that the firmware of all ESCs used on the aircraft is the same.
5. "Channel" in remote controller settings in DJI Assistant 2 is disappeared.  
Make sure that the firmware version matches the DJI Assistant 2.
6. Pump cannot work properly.  
Check if
  - a. Check if the Spray switch is on.

- b. Check if the Spray Rate Dial is in a state of the min value.
  - c. Check if the pump ESC signal cable is connected to the F1-F2 channels (for the third party pumps).
  - d. Check if the Spray switch and Spray Rate Dial are wrongly mapped (for the SBUS receivers).
  - e. An ESC must be used with a third party pump. The pump should output PWM signals. Electronic switch cannot be used.
7. The aircraft rolls over after takeoff.
- Check if:
- a. the flight controller installation direction is correct.
  - b. the IUM installation direction is correct.
  - c. the Compass installation direction is correct.
  - d. the motors and propellers rotating direction are correct.
  - e. the connection between the ESC signal cables and the flight controller are correct.
  - f. the airframe type is correctly chosen.
8. The applications of the option “Propeller Action” under “Flight Settings > Failsafe Settings” in the DJI Assistant 2.
- If using foldable propellers, it is recommended to enable this function to avoid large airframe vibration when powering on.
9. How to copy the flight data?
- A data recorder is built-in the A3-AG/N3-AG. To copy the flight data, go to DJI Assistant 2 > Flight Data > Enter SD Card Mode.
10. In Dashboard page in the DJI Assistant 2, there are yellow exclamation points for IMU or GPS.
- The yellow exclamation points are only hints for users. Click Topology and then hover over the rectangle (MC) and circle (GPS).
- If MC and GPS icons are not red, the flight controller is working properly. Just ignore the yellow exclamation points.
- If the MC or GPS icon is red and over range is shown, ignore the yellow exclamation points.
- If the MC or GPS icon is red and some error messages are shown, please check the errors according to the hints.
11. Flight Status Indicator glows solid red.
- Connect the flight controller to DJI Assistant 2 > Tools > Topology to view the error messages:
- a. Flight controller is locked.  
Solution: Click the unlock button in the lower left corner of the main page.
  - b. Battery is abnormal.  
Solution: Go to DJI Assistant 2 > Flight Settings > Battery to check if intelligent battery is selected while a normal battery is used.

c. Barometer - not connected

Solution: Contact with DJI After-sales service to repair it.

d. GPS - illegal floating-point number / GPS is not connected.

Solution: It is mostly caused by crashing which will damage the GPS. Contact with DJI After-sales service to repair it.

e. IMU - sudden change of altitude

Solution: Restart the flight controller.

f. Compass - Noise is abnormal.

Solution: Calibrate the compass. If the problem is not solved, contact with DJI After-sales service to repair it.

g. ESC abnormal

Solutions:

i. Go to DJI Assistant 2 > Basic Settings > ESC Settings to check if smart ESC is selected while a normal ESC is used (only Takyon Z14120 and E5000 is supported as a smart ESC).

ii. Smart ESC communication cable is not connected or the cable is not working properly when using smart ESCs.

iii. Settings and connections are in good status, but the flight controller and the ESCs are not powered on at the same time, which causes the ESC addressing failure. (After installation for the first time or changing some of the ESCs, the flight controller and ESCs should be powered on at the same time for ESC addressing.)

iv. Check if the ESC is damaged.

## 12. The aircraft cannot be unlocked.

a. Check if the remote controller receiver type (SBUS/DATALINK3/LB2) are configured correctly.

b. Check if the directions of channel mapping are correct: push both sticks to the upper right corner, then go to DJI Assistant 2 > Basic Settings > Remote Controller. A/E/T/R will display 10000.

c. Go DJI Assistant 2 > Flight Settings > Battery to set the battery voltage correctly. The Flight Status Indicator will blink red rapidly if voltage is low.

d. Check if the Flight Status Indicator indicates errors:

Slide red (refer to "11. Flight Status Indicator glows solid red." for details)

Blinking red and yellow alternatively (compass interference)


e. Check if ESC throttle range is wrong.

f. Check if the Flight Mode switch (F/A/P) and Operation Mode switch (S/M/M+) are in correct position. When the Flight Mode switch is in P position, make sure that the Operation Mode switch is in M position.

g. To unlock, it is required to disconnect the flight controller from the computer. Otherwise the DJI Assistant 2 protection function will forbid the flight controller to be unlocked.

13. The Flight Status Indicator blinks yellow three times during flight:
  - a. Airframe vibration abnormal;
  - b. Yaw axis control abnormal (e.g., the motor is not properly installed, etc.);
  - c. The center of gravity offset is too large (roll / pitch axis offset is large).
14. The aircraft cannot be controlled: flying forwards all the way, or flying directly to the sky.

This is mostly caused by propulsion saturation. Data analyzing is required. The v1.0.2.0 flight controller firmware has added propulsion protection. The flight controller will reduce the gain value to land the aircraft, and the Flight Status Indicator will alert. Connect the flight controller to DJI Assistant 2 > Tools > Topology to view the error messages which will remind users to check the propulsion system.
15. When powering on the DJI Datalink 3 remote controller, the Status LED blinks red and a beeping alerts.

The stick is not in the center position. Follow the instructions below to calibrate the remote controller: Connect the remote controller to DJI MG app, enter Operation View > ●●● >  for calibration.
16. DJI Data Protection Module cannot work properly.

Make sure that the output terminal of the module is connected to the CAN1 port on the flight controller. If it is connected to CAN2 port or any other ports, it will be disabled.



DJI Support

**<http://www.dji.com/support>**

This content is subject to change.

**Download the latest version from**

**<http://www.dji.com/agriculture-solution>**

If you have any questions about this document, please contact DJI by sending a message to **[DocSupport@dji.com](mailto:DocSupport@dji.com)**.

Copyright © 2017 DJI All Rights Reserved.