dji RL01-65 Relay Module User Guide

DJI RELAY
User Guide

Contents

Disclaimer

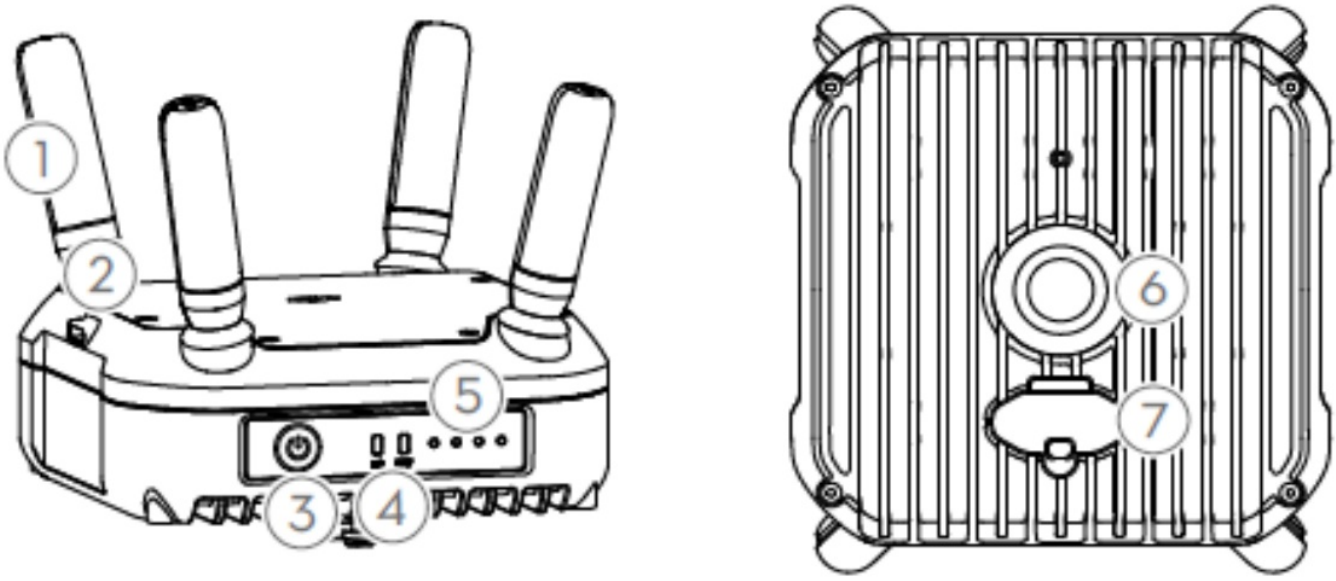
Carefully read this entire document and all safe and lawful practices provided before use.

Introduction

DJI ™

Relay works at 2.4 GHz and 5.8 GHz, which can transmit signals with a supported DJI remote controller and aircraft, respectively. [1] The stable signal transmission can avoid signal being blocked in complex environments. The total working time of the relay is up to 4 hours and can be extended using a mobile power supply. With the mount, the relay can be set up using extension rods of different heights.

Overview

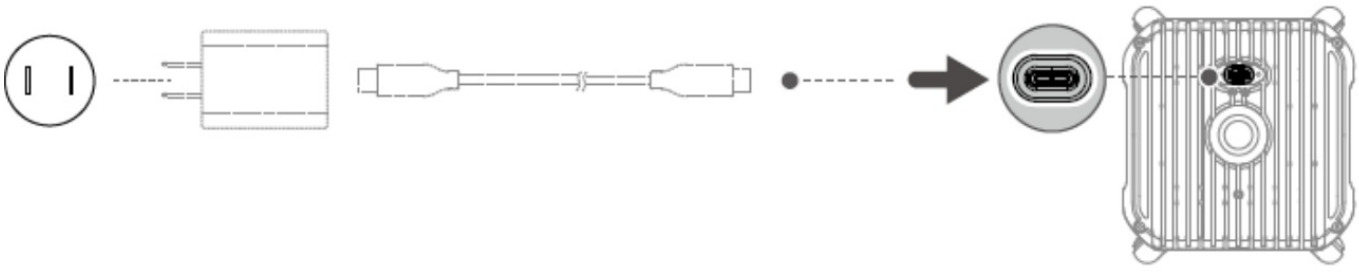


1. Detachable Antennas Transmit wireless signals.
2. Water Vent
3. Power Button Press once to check the battery level. Press, then press and hold to power on/off.
4. Status LEDs Indicate the linking status between the remote controller (RC) or aircraft (UAV) with the relay.
5. Battery Level LEDs Indicate the battery level.
6. 5/8″ Screw Hole For installing the mount.
7. USB-C Port For charging, connecting a mobile power supply [2] or firmware updates.

Getting Started

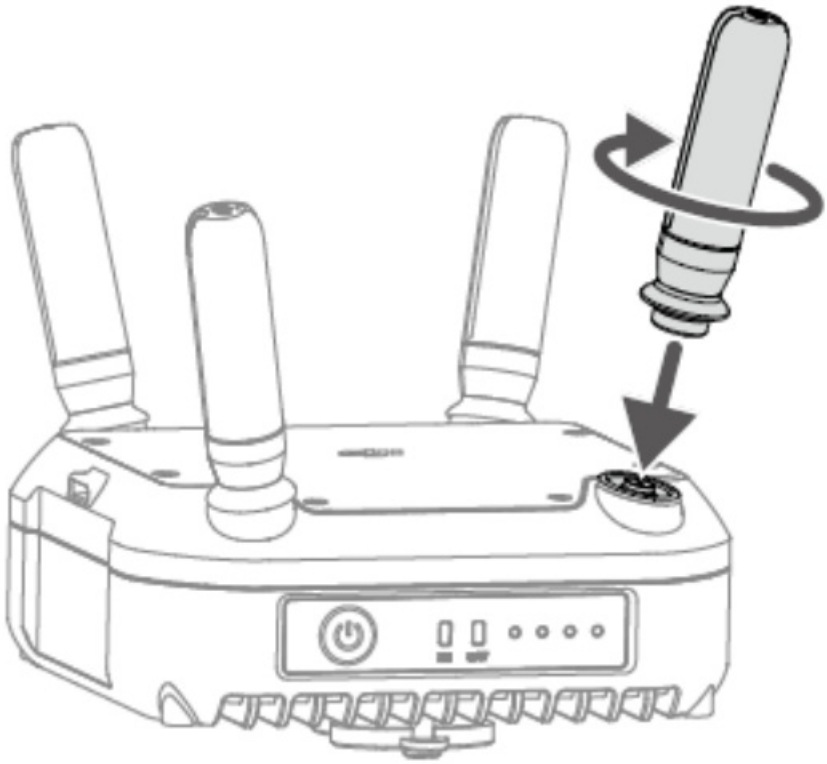
Charging the battery

Charge the relay through the USB-C port using the charging cable (included) and a USB charger (not included). The battery is fully charged when all the battery level LEDs are on, which takes approximately 2 hours and 20 minutes. It is recommended to fully charge the battery before using it for the first time.



Installation

Mount the detachable antennas onto the relay.



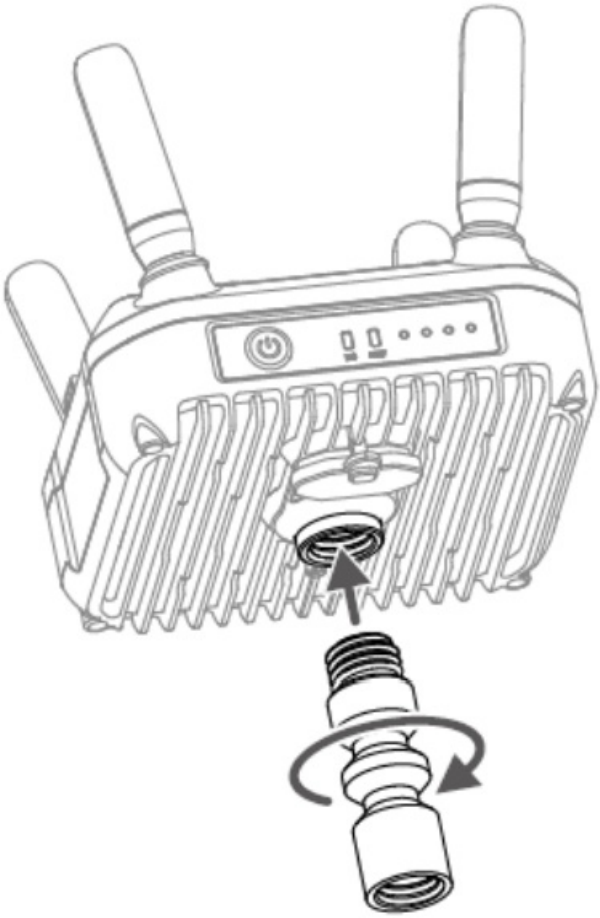
Linking
Follow the steps below to link before using it for the first time.

1. Power on the remote controller and aircraft, and make sure the two devices are linked.
2. Power on the relay. After the status LEDs turn solid red, press and hold relay power button to prepare for linking.
3. Open the DJI Agras app and tap Device Management, then tap Relay > Link to start linking.
   After linking successfully, the status LED (RC) of the relay will glow solid green.
4. After connecting with the remote controller, the relay will link with the aircraft automatically.
   The linking is successful when the status LED (UAV) becomes solid green.

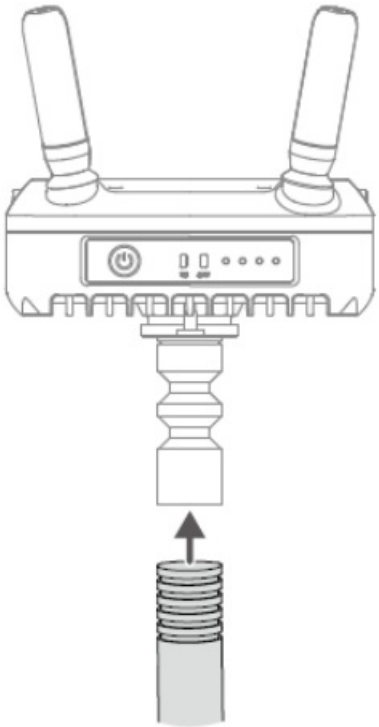
- ⚠ Make sure the remote controller and aircraft is within 0.5 m of the relay during linking.
- If linking fails, try again after checking the operation and the firmware version. Contact DJI Support if the issue persists.

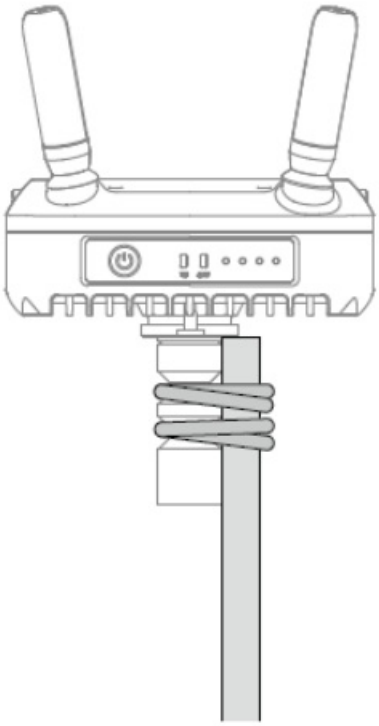
Activation
Activation is required before using it for the first time. Follow the instructions on DJI Agras to activate the relay after linking.
Using the Relay
During usage, it is recommended to set up the relay in high places (such as roofs and high hills) to solve the problem of signal blockage in orchards or fields with tall crops. Follow the instructions below to set up.

1. Install the mount to the relay via the 5/8″ screw hole.



2. Insert the extension rod into the mount via the screw hole, or attach the extension rod by rope. Users can select extension rods of different heights according to their requirements.





- To ensure the signal transmission, it is recommended to set up the relay at least 2 m higher than the crops.
- DO NOT obstruct the antennas during use.
- DO NOT set up the relay outdoors during thunderstorms to avoid lightning strikes.
- The relay should be used in the temperature range of 0° to 40° C (32° to 104° F).
  High temperatures can lead to fire or an explosion. Low temperatures can negatively affect the performance of

the battery.

- The battery temperature will be high after use. Charge the relay until it cools down to room temperature. Otherwise, charging may be disabled. Charge at a temperature range of 5° to 40° C (41° to 104° F). The ideal charging temperature range is 22° to 28° C (72° to 82° F). Charging within the ideal temperature range can prolong battery life.
- Extinguish any battery fire using water, sand, or a dry powder fire extinguisher.
- The electrolytes in the battery are highly corrosive. If any electrolytes make contact with your skin or eyes, wash the affected area with water and see a doctor immediately.

Specifications

Operating Temperature	0° to 40° C
Operating Frequency [1]	2.4000-2.4835 GHz, 5.725-5.850 GHz
Transmitter Power (EIRP)	2.4 GHz: <33 dBm (FFC), <20 dBm (SRRC/CE/MIC) 5.8 GHz: <33 dBm (FCC/SRRC), <14 dBm (CE)
Max Transmission Distance	5 km (SRRC), 4 km (MIC/KCC/CE), 7 km (FCC) (aircraft altitude at 2.5 m in an unobstructed environment with no interference)
Power Consumption	9 W (SRRC), 12 W (FCC)
Battery Type	Li-ion
Capacity	6500 mAh

[1] 5.8 GHz frequency is unavailable in some contries. Check local regulations for more information.

FCC Compliance Notice

Supplier’s Declaration of Conformity
Product name: DJI Relay
Model Number: RL01-65
Responsible Party: DJI Technology, Inc.
Responsible Party Address: 201 S. Victory Blvd., Burbank, CA 91502
Website: **www.dji.com**
We, DJI Technology, Inc., being the responsible party, declares that the above mentioned model was tested to demonstrate complying with all applicable FCC rules and regulations. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Information

The aircraft complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

ISED Compliance Notice

CAN ICES-003 (B) / NMB-003(B)

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

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

For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate;

This radio transmitter [11805A-RL016523] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antennas that may be used with this device:

) 50 ohm Dipole Antennas with gain not exceeding 3.5dBi for 2.4G SRD band & 4.5dBi for 5.8G SRD band.

) Should be installed so that the end user cannot modify the antenna;

) Feed line should be designed in 50ohm

Fine tuning of return loss etc. can be performed using a matching network.

EU Compliance Statement: SZ DJI TECHNOLOGY CO., LTD. hereby declares that this device (RL01-65) is in compliance with the essential requirements and other relevant provisions of the Directive 2014/53/EU.

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

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

GB Compliance Statement: SZ DJI TECHNOLOGY CO., LTD. hereby declares that this device (RL01-65) is in compliance with the essential requirements and other relevant provisions of adio Equipment Regulations 2017. A copy of the GB Declaration of Conformity is available online at **www.dji.com/euro-compliance**

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

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free.

The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

Documents / Resources

	dji RL01-65 Relay Module [pdf] User Guide RL016523, SS3-RL016523, SS3RL016523, rl016523, RL01-65, RL01-65 Relay Module, Relay Module, Module

References

- Anatel — Agência Nacional de Telecomunicações
- DJI - Official Website
- EU Declaration of Conformity - DJI