



dji v1.0 Transmission Vision Beyond Boundaries User Guide

[Home](#) » [DJI](#) » dji v1.0 Transmission Vision Beyond Boundaries User Guide 

Contents

- 1 [dji v1.0 Transmission Vision Beyond Boundaries](#)
- 2 [Product Information](#)
- 3 [Introduction](#)
- 4 [Installation and Connection](#)
- 5 [Control Mode](#)
- 6 [Broadcast Mode](#)
- 7 [Linking Status Indicator](#)
- 8 [Display Screen Operations](#)
- 9 [Appendix](#)
 - 9.1 [Firmware Update](#)
 - 9.2 [Specifications](#)
 - 9.3 [Using Other Control Devices](#)
- 10 [Compliance Information](#)
- 11 [Documents / Resources](#)
 - 11.1 [References](#)
- 12 [Related Posts](#)



dji v1.0 Transmission Vision Beyond Boundaries



Product Information

The DJI Video Receiver is a device that allows users to receive video signals wirelessly. It has detachable antennas for transmitting the wireless signal and is identified by red color marks. The receiver has various ports including SDI Output Ports, HDMI Port (Type A), USB-C Port, DC-in Port, and Power Output Port. It also features a display screen, menu dial, power button, and back button for easy operation. The receiver requires a voltage of 6-18V and a maximum current of 2A for power supply.

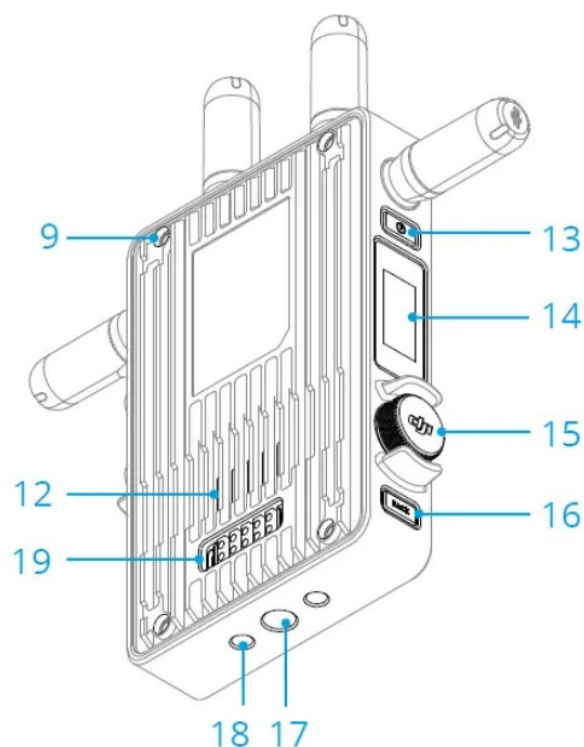
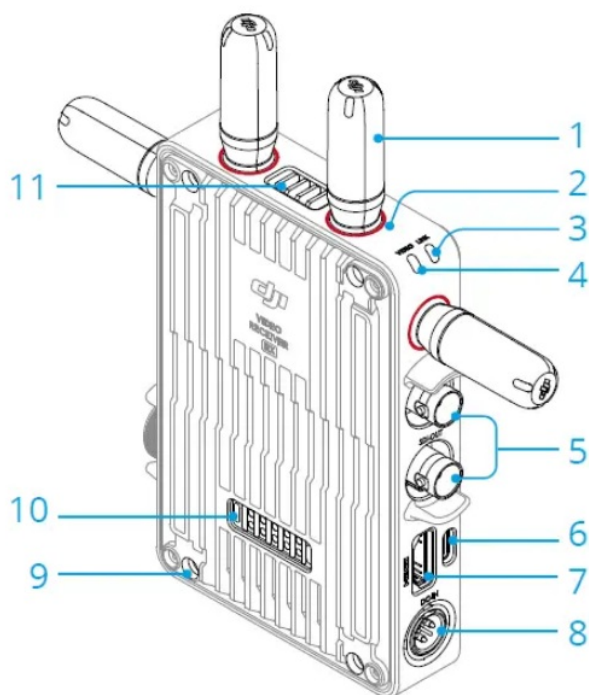
Disclaimer and Warning

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

Introduction

The DJI Video Receiver features DJI O3 Pro video transmission and receives video signals from the transmitter. In an environment without interference or obstruction, the video receiver provides video transmission with a maximum transmission range of 6 km*, a bitrate of up to 40 Mbps, and a minimum end-to-end latency of 70 ms. It supports multiple frequency bands in both Control and Broadcast modes and simultaneously outputs multiple video signals to display devices for remote monitoring. When used with the DJI Video Transmitter or DJI Ronin 4D Video Transmitter, the video receiver can meet the filming requirements of mediums such as movies, TV series, advertisements, and documentaries.

- Measured with the video transmission control system in Control mode (Broadcast mode in the transmitter device disabled) in an unobstructed environment free of interference with FCC compliance.



1. Detachable Antennas

Transmit the wireless signal.

2. Color Marks

Used to identify the receiver and transmitter. The receiver is identified by the red color marks. Users can also place the different colored stickers included in the package on the devices for identification.

3. Linking Status Indicator

Shows the connection status between the receiver and transmitter. Refer to the Linking section for more information on blinking patterns.

4. Video Status Indicator

Indicates if there is a video signal transmitted from the transmitter to the receiver. Solid green indicates there is a video signal transmission, while solid red indicates no video signal transmission.

5. SDI Output Ports

Output the video signal.

6. USB-C Port

Connect to the DJI Assistant 2 (Ronin Series) software using a USB-C cable for device activation and firmware updates. Connect headphones with a built-in mic for voice calls. It is required to set the Type-C function on the receiver before use. Refer to the Menu section for more information.

7. HDMI Port (Type A)

Outputs the video signal.

8. DC-in Port

Supplies power to the video receiver using the provided power cable. Voltage 6-18 V and max current 2 A.

9. M4 Screw Holes

Mount the battery adapter or other adapters for expansion.

10. Power Output Port

Supplies power to an external device.

11. Air Vent

12. Air Intake

- DO NOT cover the air vent, air intake, or both sides of the battery adapter if mounted. Otherwise, the performance of the device may be affected due to overheating.

13. Power Button

Press once to power on. Press and hold to power off.

14. Display Screen

Displays the device status and menu.

15. Menu Dial

Turn or press the dial to select or confirm settings in the menu. See details below.

- **Press once:** enter the menu from the home screen, or confirm settings in the menu.
- **Turn:** switch between options.
- **Press and hold:** enter linking status (Control mode) or search for devices (Broadcast mode).
- **Press twice:** in the home screen, select the channel (Control mode) or device number (Broadcast mode).

16. Back Button

Press to return to the previous screen of the menu.

17. 3/8"-16 Screw Hole

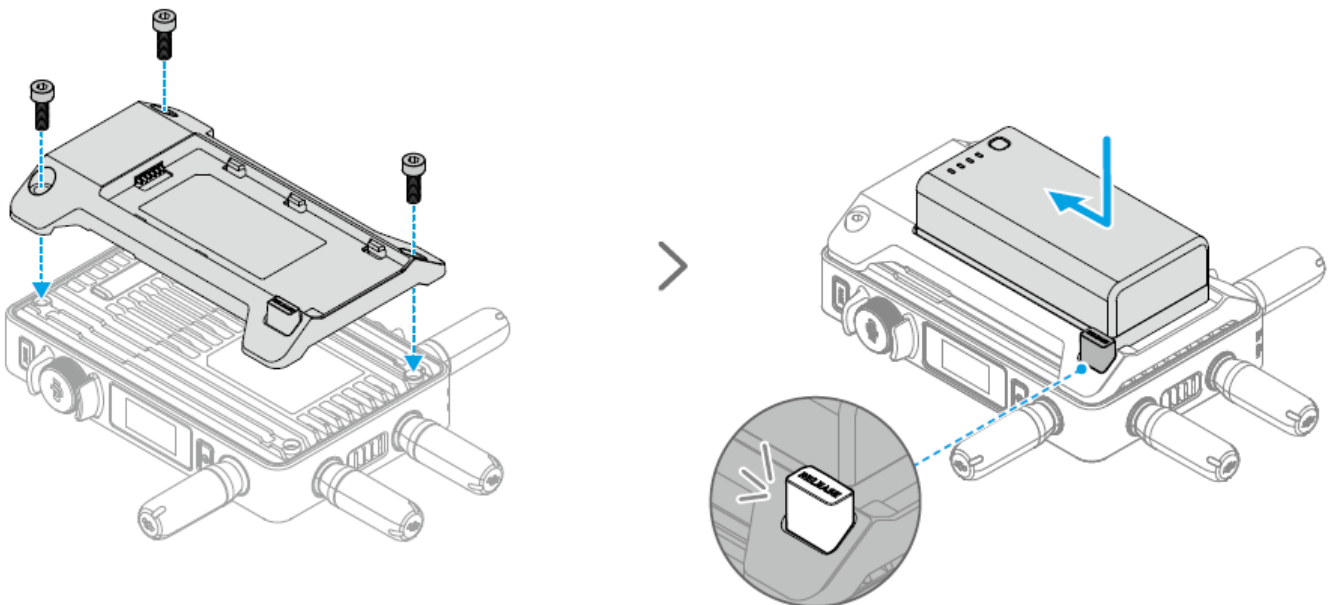
18. 1/4"-20 Screw Holes

19. External Power Input Port

Mount the battery adapter and compatible battery to supply power to the video receiver.

Installation and Connection

Mounting the WB37 Intelligent Battery



Before first use, activate the WB37 battery by charging with the WB37 Battery Charging Hub (USB-C). Refer to the WB37 Battery Charging Hub (USB-C) User Guide for more information.

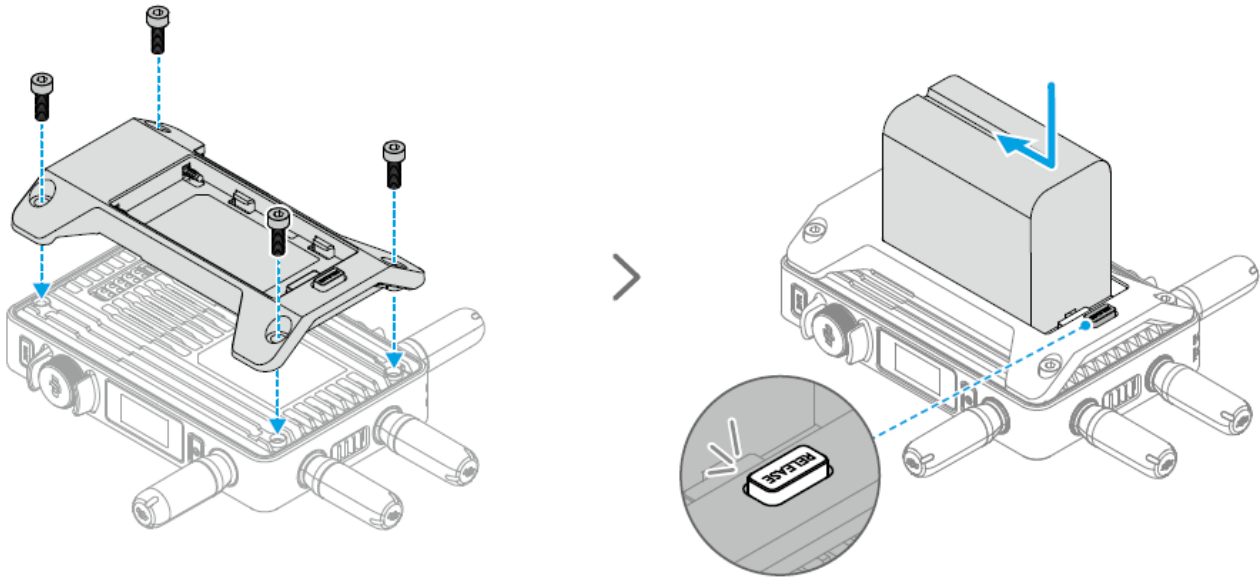
1. Mount the WB37 battery adapter to the back of the video receiver and tighten the three M4×12 screws.
2. Insert the WB37 battery into the battery compartment of the video receiver. Make sure that the battery release

button pops up and the battery clicks into place.

- Make sure to use the WB37 battery within the operating temperature range. DO NOT disassemble or pierce the battery in any way. Otherwise, the battery may leak, catch fire, or explode. Refer to the WB37 Intelligent Battery Safety Guidelines for more information.

Press and hold the release button and push the battery in the opposite direction to remove it.

Mounting the NP-F Series Battery

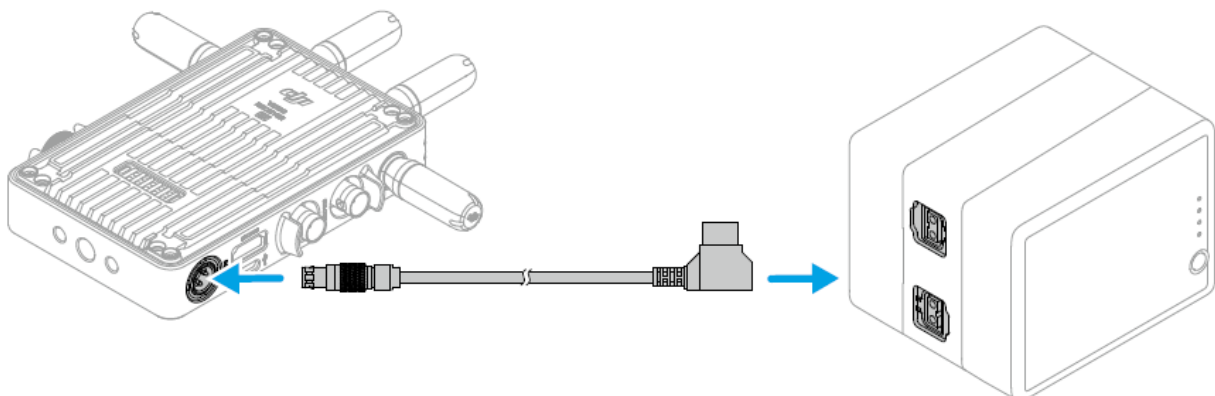


1. Mount the NP-F battery adapter to the back of the video receiver and tighten the four M4×12 screws.
2. Insert the NP-F series battery into the battery compartment of the video receiver. Make sure that the battery release button pops up and the battery clicks into place.

Press and hold the release button and push the battery in the opposite direction to remove it.

Connecting the DC to P-Tap Power Cable

A battery with a P-Tap port can be used to provide power to the video receiver. Use the provided DC to P-Tap power cable to connect the P-Tap port of the battery and the DC-in port of the video receiver.



Activation

Activation is required when using the video receiver for the first time. Power on the video receiver and connect it to a computer using a USB-C cable. Launch DJI Assistant 2 (Ronin Series), click the corresponding device icon, and follow the on-screen instructions to activate the device.

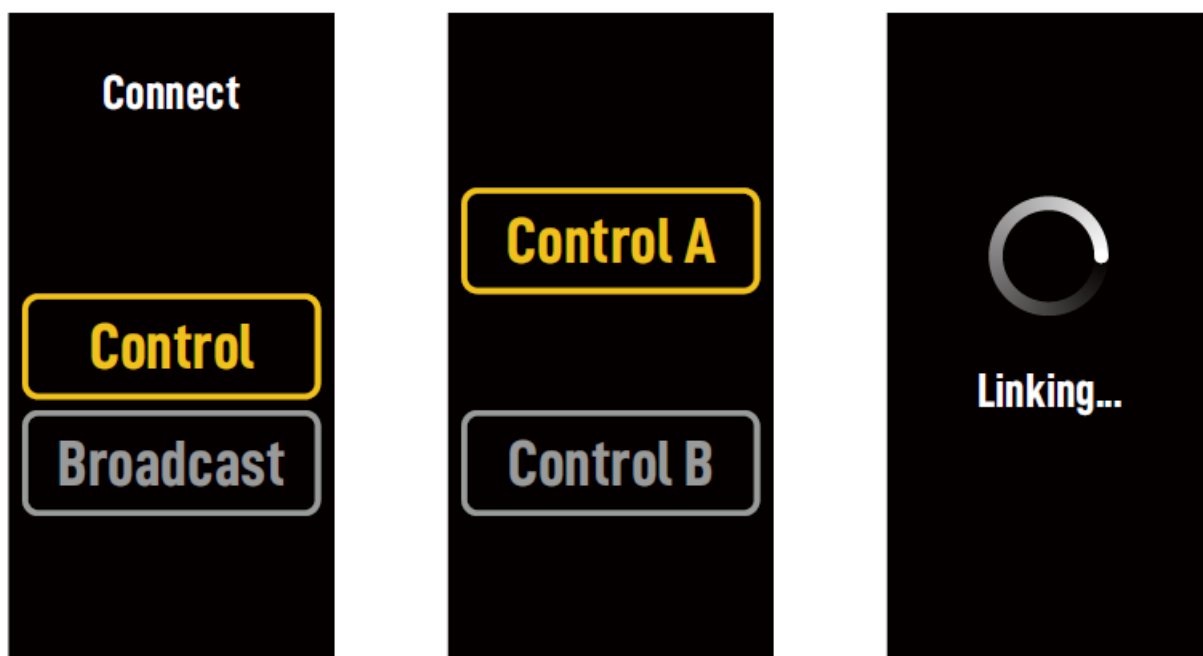
Download the software from: <https://www.dji.com/transmission/downloads>.

Linking

The video receiver must be linked to the transmitter device before use. The video transmission system of the video receiver offers Control mode and Broadcast mode for connection between the video receiver and transmitter device, which use different linking methods. Refer to the following section for instructions and linking status indicator descriptions.

Control Mode

In Control mode (with Broadcast mode in the transmitter device disabled), the video transmission system has a longer transmission distance, stronger anti-interference, and more selectable channels. The transmitter device can also receive the control signal from the video receiver when connecting a DJI Pro accessory, such as the DJI Master Wheels to the video receiver for remote control.



1. Power on the video receiver. Press the menu dial on the video receiver to enter the menu.
2. Press the dial to enter the Connect menu, turn the dial to select Control in the menu, and press the dial to confirm. Select to set the video receiver to Control A or Control B and press the dial again to confirm. The display screen shows Linking and the linking status indicator blinks red and green alternately, indicating the device is linking.
 - If the video receiver is in Control mode and is set to the desired Control A or Control B, press and hold the menu dial directly to enter linking.
 - If two video receivers will be connected to the same transmitter device, link with the Control A video receiver first and then link with the Control B video receiver.
3. **Using DJI Video Transmitter:**
 1. Power on the DJI Video Transmitter. Press and hold the menu dial on the video transmitter to enter the linking status. The linking status indicator on the video transmitter blinks red and green alternately,

indicating the device is linking.

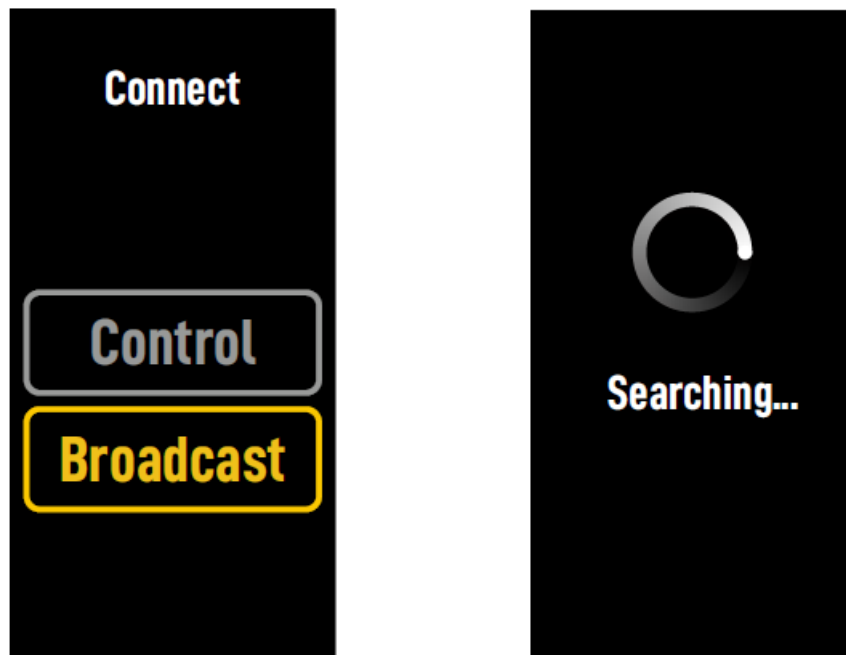
Using DJI Ronin 4D Video Transmitter:

To start linking, hold the link button on the Ronin 4D Video Transmitter or go to the menu on the Ronin 4D High-Bright Main Monitor, tap Transmission, and then Link Device. The linking status indicator on the video transmitter blinks red and green alternately, indicating the device is linking.

4. When linking is complete, the linking status indicator on the video receiver turns solid green and the video receiver can communicate with the transmitter device.

Broadcast Mode

In Broadcast mode, an unlimited number of video receivers used as monitoring devices can connect to the transmitter device. In scenarios using multiple transmitter devices, video receivers in Broadcast mode can select the desired transmitter device quickly to achieve multi-channel monitoring.



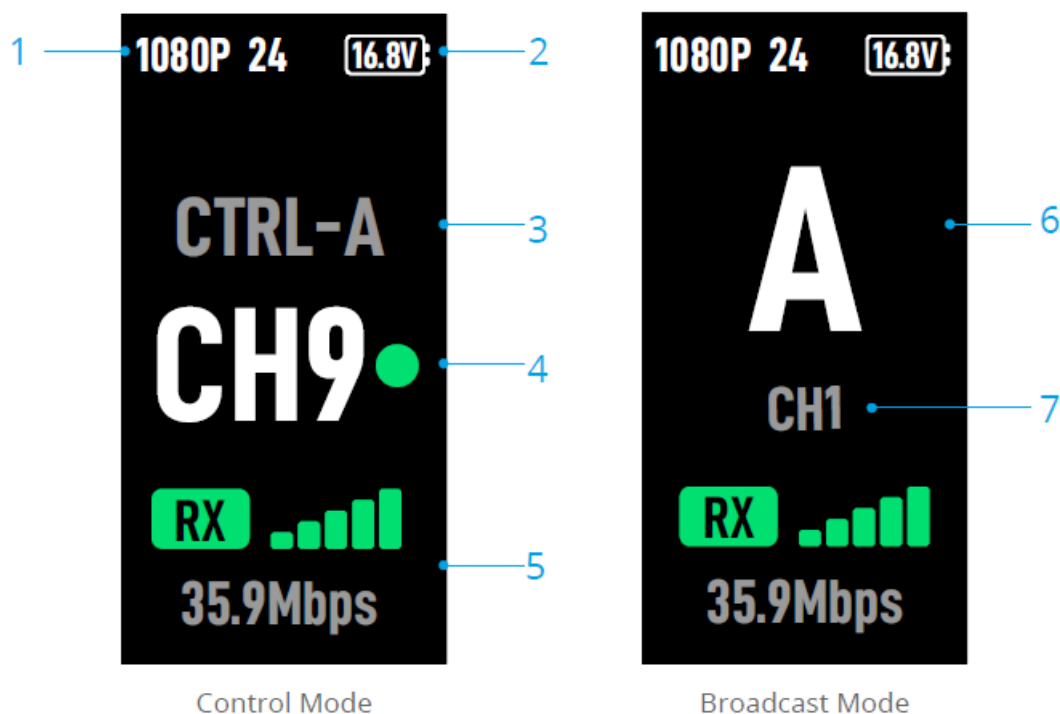
1. Power on the video receiver. Press the menu dial on the video receiver to enter the menu.
2. Press the dial to enter the Connect menu, turn the dial to select Broadcast in the menu, and then press the dial to confirm.
3. Wait for the search results to be complete and select a device to connect.
 - In Broadcast mode, press and hold the dial to refresh the search results.

Linking Status Indicator

Linking Status Indicator	Description
Solid red	Device started, not connected.
Blinks red and green alternately	Linking.
Solid green	Successfully linked in Control mode. Wireless video transmission is normal. Broadcast mode enabled.
Blinks red	Device malfunction. Contact DJI Support.

Display Screen Operations

Home Screen



1. Video Specifications

Displays the resolution and frame rate of the input from the transmitter device.

2. Power Supply Voltage

Displays the voltage of the battery or the DC-in power input.

3. Control Device

In Control mode, displays whether the video receiver is set to Control A or Control B.

4. Channel (Control Mode)

Displays the current channel in use and its signal quality. There are two statuses, including strong (green) and weak (red). Press the menu dial twice for quick channel switch.

5. Video Transmission Signal Strength and Bitrate

Displays the video transmission signal strength and bitrate. There are three statuses for the video transmission signal strength, including strong (green), moderate (orange), and weak (red).

6. Device Number



In Broadcast mode, displays the device number of the transmitter device. Press the menu dial twice to view the last recorded search results in Broadcast mode, and then switch between devices or refresh the search results.

7. Channel (Broadcast Mode)

Displays the channel in use. View the signal quality of each channel in the menu.

Menu

On the home screen, press the menu dial on the video receiver to enter the menu and perform the following configuration and operations. Turn or press the dial to select or confirm settings in the menu. Press the back button to return to the previous screen.

Connect	Select Control mode or Broadcast mode. When Control mode is selected, it is required to set the device in use to Control A or Control B.
Channel	In Control mode, view the signal quality of each channel and select the channel. In Broadcast mode, view the signal quality of each channel only to assist channel selection in the transmitter device.
Device Number	This menu will appear only in Broadcast mode. The last search results in Broadcast mode will be displayed after entering the menu. Switch between devices or refresh the search results.
Fan Mode	Set the fan mode to Standard or Low Noise.  If Low Noise is selected, the fan mode will switch to Standard automatically when the temperature of the device is too high.
Type-C Function	Select USB when using the USB-C port for the firmware update in DJI Assistant 2. In Control mode, set the Type-C function on both the transmitter and receiver to Voice Call and connect headphones with a built-in mic to the USB-C ports to enable voice calls between the transmitter and receiver. Use the volume buttons on the headphones to adjust the volume for voice calls.  View the compatible headphones on the FAQ page of the product page on the official DJI website. Other 48kHz/16bit digital headphones are also supported.
Low Latency	When enabled, the frame rate is converted to 60fps.
Language	Select the system language in the language list.
Device Info	View information such as the device SN and firmware version.

Appendix

Firmware Update

Update the video receiver using the DJI Assistant 2 (Ronin Series) software.

1. Power on the device. Make sure the Type-C function is set to USB on the menu. Connect the device to a computer with a USB-C cable.
2. Launch DJI Assistant 2 (Ronin Series) and log in with a DJI account.

3. Select the device and click Firmware Update on the left side of the screen.
4. Select the firmware version.
5. The firmware will download and update automatically.
6. The device will restart automatically after the firmware update is complete.

Specifications

Weight	Approx. 350 g (receiver only, excl. antennas)
Dimensions	127×87×26 mm (excl. antennas)
Operating Frequency[1]	2.4000-2.4835 GHz, 5.150-5.250 GHz, 5.250-5.350 GHz, 5.470-5.725 GHz, 5.725-5.850 GHz
Transmitter Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (SRRRC/CE/MIC) 5.8 GHz: <33 dBm (FCC), <14 dBm (CE), <23 dBm (SRRRC)
Power Consumption	9 W
Power Supply Voltage	6-18 V
Output Voltage	6-18 V
Battery Life[2]	3 hours 50 minutes
Output Video Format	<ul style="list-style-type: none"> When used with the DJI Video Transmitter: 1080p: 23.98/24/25/29.97/30/50/59.94/60fps 720p: 50/59.94/60fps When used with Ronin 4D: 1080p: 24/25/30/50/60fps
Output Audio Format	SDI embedded, HDMI embedded
Video Transmission System	O3 Pro
Max Bitrate	40 Mbps
Latency	70 ms (1080p 60fps)
Video Coding Format	H.264
Max Transmission Distance	6 km (FCC), 4 km (CE/SRRRC/MIC) (Unobstructed, free of interference)
Max Bandwidth	40 MHz
Operating Temperature[3]	-10° to 45° C (14° to 113° F)

1. Due to local regulations, the 5.1/5.2/5.8 GHz frequencies are prohibited in some countries and the 5.1/5.2 GHz frequencies are only allowed for use indoors in some countries. 5.600-5.650 GHz is not used.
2. Tested in a room temperature of 25° C (77° F) when powered by a fully charged WB37 Intelligent Battery and

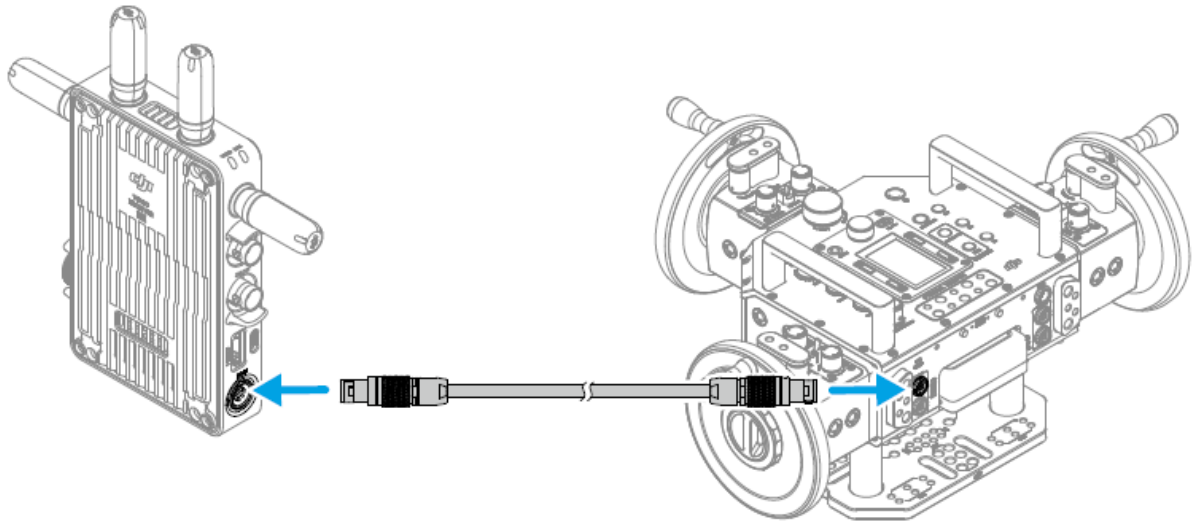
used with the DJI Video Transmitter.

3. When using the WB37 Intelligent Battery, it is recommended to operate the device in a temperature above 0° C. Take measures to keep the battery warm when using in a temperature below 0° C.

Using Other Control Devices

Connect the DJI Master Wheels to the video receiver to control the transmitter device remotely.

- **Connection:** connect the DC-OUT port on the DJI Master Wheels to the DC-IN port on the video receiver using the DJI High-Bright Remote Monitor Controller Cable.



Compliance Information

FCC Compliance Notice

Supplier's Declaration of Conformity

- **Product Name:** DJI Video Receiver
- **Model Number:** RX3
- **Responsible Party:** DJI Research LLC
- **Responsible Party Address:** 435 Portage Ave, Palo Alto, CA 94306
- **Website:** www.dji.com.

We, DJI Research LLC, 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

- The portable device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA).
- These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body.
- These requirements set a SAR limit of 4 W/kg averaged over ten gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the limbs.

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. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The portable device is designed to meet the requirements for exposure to radio waves established by the CNR-102.
- These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body.
- These requirements set a SAR limit of 4W/kg averaged over ten grams of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the limbs.
- No operation is permitted for the frequency "5600-5650 MHz"
- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.
- 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.
- Where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

EU Compliance Statement: SZ DJI Osmo Technology Co., Ltd. hereby declares that this device (DJI Video Receiver) 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 Osmo Technology Co., Ltd. hereby declares that this device (DJI Video Receiver) is in compliance with the essential requirements and other relevant provisions of Radio Equipment Regulations 2017.
- A copy of the GB Declaration of Conformity is available online at www.dji.com/euro-compliance.


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.

MIC Compliance Notice

W52/W53: In case of AP, “only indoor use”

					
BE	BG	CZ	DK	DE	EE
IE	EL	ES	FR	HR	IT
CY	LV	LT	LU	HU	MT
NL	AT	PL	PT	RO	SI
SK	FI	SE	UK (NI)	TR	NO
CH	IS	LI			


 UK

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Contact

DJI SUPPORT



<https://www.dji.com/transmission/downloads>



- This content is subject to change without prior notice.
- If you have any questions about this document, please contact DJI by sending a message to DocSupport@dji.com.

Copyright © 2023 DJI All Rights Reserved.

- User Manual

Manuals+,