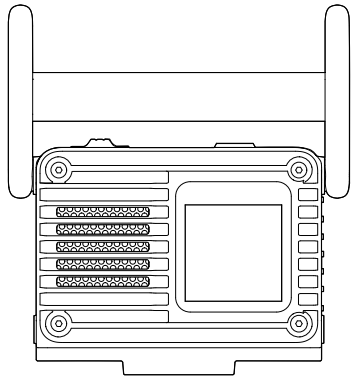
SDR TRANSMISSION 2

User Manual

v1.0 2026.09



Disclaimer and Warning

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

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Contents

1 Overview 4

2 Power Supply 6

2.1 Power Supply via NP-F Battery 6
2.2 Power Supply via USB-C 6
2.3 Power Supply via Gimbal 7

3 Using for the First Time 8

3.1 Activation 8
3.2 RX and TX Connection 8

4 Touchscreen 10

4.1 Home Screen 10
4.2 Control Center 12

5 Ecosystem Interconnectivity 14

5.1 Connecting Osmo Cameras 14
5.2 Connecting Ronin Stabilizers 14
5.3 Monitoring and Control 17

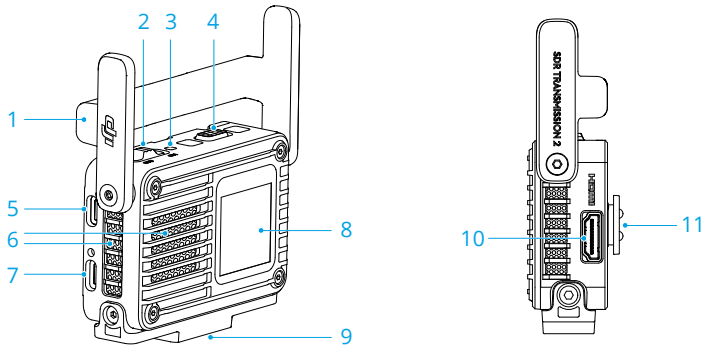
6 DJI Ronin App 19

6.1 Connecting to the Transceiver 19
6.2 Camera View 19
6.3 Firmware Update 23

7 Specifications 24

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1 Overview



1. **Foldable Antenna**

   Unfold before use. DO NOT obstruct the antenna during use.

   ⚠ The antenna is not detachable.

2. **Power Switch**
3. **Status LED**

   A solid green light indicates the power supply is normal.

   A blinking red light indicates low voltage. Use a PD power adapter with an output of 65 W or higher, or a fully charged battery.

4. **RX/TX Switch**

   Toggle to switch the device mode between receiver (RX) and transmitter (TX).

5. **USB-C Power Port**

   For power supply only, no communication functions. Connect to an adapter for power supply via a USB-C cable.

6. **Air Inlet and Outlet**

   ⚠ DO NOT cover the air vent. Overheating may cause burns or affect device performance.

7. **USB/DP Port**

   TX: Supports gimbal connection and DP input.

   RX: Supports DP output and mobile device connection for monitoring and control in the DJI Ronin app.

8. **Touchscreen**

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Displays the device status and menu settings.

9. **1/4" Screw Hole**
10. **HDMI Port**

    TX: For receiving the video signal output from the camera.

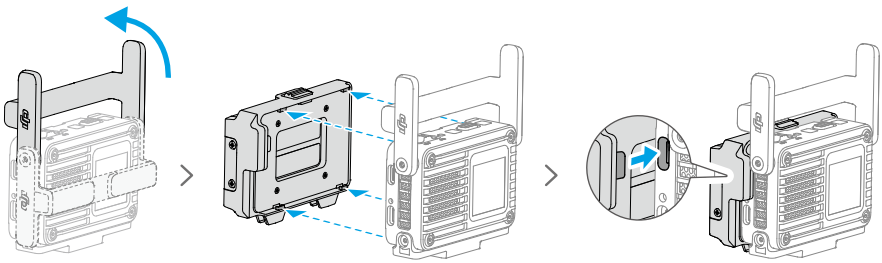
    RX: For outputting the received video signal to the monitor.
11. **Cold Shoe**

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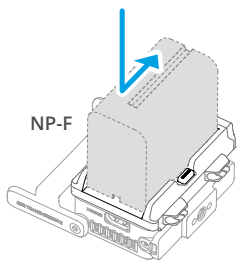
2 Power Supply

2.1 Power Supply via NP-F Battery

1. Unfold the transceiver antenna. Align the USB-C connector on the NP-F Battery Adapter with the USB-C power port on the transceiver. Press and push the adapter onto the back of the transceiver until it clicks into place.



2. Insert the NP-F battery into the battery slot and push it to the end. Make sure that the battery release button pops up, indicating the battery is firmly in place.

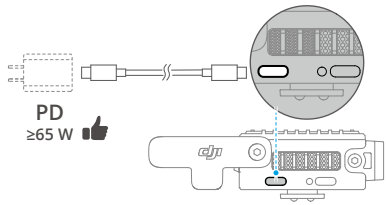


Press and hold the release button and push the battery in the opposite direction to remove it.

2.2 Power Supply via USB-C

The transceiver also supports a USB-C power supply. Connect the PD power adapter to the USB-C power port on the transceiver using a USB-C cable to power the device.

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- Refer to the PD Adapter Compatibility List to select an appropriate adapter.

2.3 Power Supply via Gimbal

When the transceiver (TX) is connected to the gimbal, it can be powered directly by the gimbal. Refer to the Connecting Ronin Stabilizers section for connection instructions.

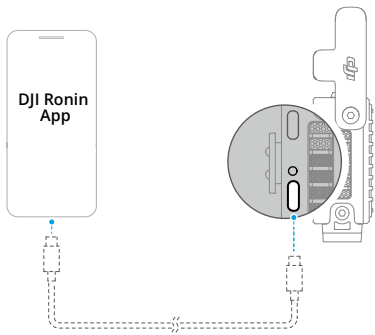
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3 Using for the First Time

3.1 Activation

The device must be activated in the DJI Ronin app before use.

1. After the device is powered, toggle the power switch to turn on the device.
2. Follow the instructions on the touchscreen of the device to complete the setup, and install the DJI Ronin app on your smartphone.
3. Connect the USB/DP port of the transceiver to the smartphone using a data cable.

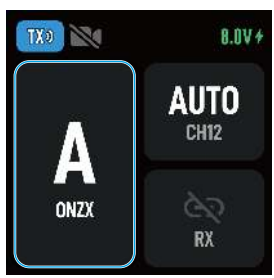


4. Keep your smartphone connected to the internet and launch the DJI Ronin app. Follow the prompts in the app to update the firmware and activate the device.

⚠ DO NOT power off or disconnect the device during the update.

3.2 RX and TX Connection

TX Settings



1. Toggle the RX/TX switch of the transceiver to TX.

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2. On the home screen of the touchscreen, tap the device information and set the device number.
3. If password protection is required, enable **Password Lock** and set a password. Once set, a lock icon will appear in the device information, and the password must be entered on the RX to connect.

RX Access



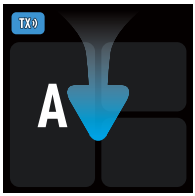
1. Toggle the RX/TX switch of the transceiver to RX.
2. On the home screen of the touchscreen, tap **Search Devices** and the RX will automatically scan for nearby TX devices.
3. Select the device from the list for connection. If the selected TX has a password set, obtain the password on the TX and enter it to complete the connection.

One transmitter can be connected to up to 8 receivers.

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4 Touchscreen

The transceiver touchscreen supports the following gesture controls.



Swipe down on the home screen to enter the control center.



Swipe up on the control center to return to the home screen.

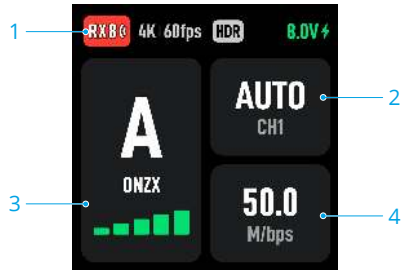


Swipe right from the left edge of the screen in any settings page to return to the previous screen.

4.1 Home Screen



TX



RX

1. **Status Bar**

   Displays the TX or RX icon, video resolution and frame rate, and power supply information. The HDR icon is displayed when transmitting HDR video.

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The power supply information displayed varies depending on the power supply method.

- The voltage is displayed when powered by a battery. Green indicates the power supply is normal, yellow indicates a low battery level, and red indicates a critically low battery level, meaning the device is about to power off.
- The PD power supply icon is displayed when a PD power adapter is used. If a red icon appears, check the adapter and reconnect it after resolving the issue.

2. **Channel Information**

Displays the current channel mode and channel in use. Tap to enter channel settings.



Tap the icon to open the channel dashboard. The dashboard displays the signal quality of each channel. The TX device currently using the channel is shown below the corresponding channel.

The channel mode can be set to **Auto** or **Manual**. In Manual mode, you can select a channel from the channel list or switch to the recommended channel.

a. Select **Manual** channel mode.

b. Tap **Channel Selection** to open the list.

c. View the signal quality of each channel in the list, and manually select a channel.

Tap the icon in the upper right corner to switch to the channel with the optimal quality detected by the system.

Refer to the Channel and Frequency Table for channels supported in different countries.

3. **Device Information**

TX: Displays the device number. Tap to enter device settings and configure the device number and password.

RX: Displays the connected TX device number and video transmission signal quality. Green indicates a strong signal, yellow indicates a moderate signal, and red indicates a weak signal. Tap to select another TX from the search results list.

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4. **Encoding Bitrate (RX)**

   Connected Device Information (TX)

   On the TX side, it displays the connected RX count. Tap to open the connected devices list and view detailed device information. You can also enable remote control, allowing the control device connected to the RX to operate the camera and gimbal connected to the TX. To disconnect from the selected RX, tap **Disconnect** at the bottom of the screen.

4.2 Control Center

Swipe down on the home screen to enter the control center.



1. **Input/Output Direction**

   Displays the current input and output direction of each video port.

   - TX: Both the DP and HDMI 2.0 ports function as input. If the DJI SDR Transmission 2 Expansion Plate is connected, the SDI and HDMI ports on the expansion plate can be set to input or output. If the input source is HDR, enable HDR here so that the TX can recognize the HDR video input.
   - RX: You can only check the status of each video port, and all ports function as output.

2. **Video Transmission Diagnostics**

   The video transmission diagnostics function automatically analyzes video transmission configuration and wireless interference. Perform diagnostics only after the TX and RX are connected. Tap **Start**, wait for the diagnostics to complete, and adjust settings according to the recommendations in the report.

3. **Display Settings**

   Set the auto-lock duration and screen brightness. Tap the icon in the upper right corner to rotate the screen display 90 degrees counterclockwise.

4. **General Settings**

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Fan Mode: Set to **Auto** or **Mute**.

⚠
- Setting the fan mode to **Mute** may cause overheating, which can affect performance.
- When the device is overheated, the fan speed will still increase to ensure normal operation even in Mute mode. To ensure optimal performance, operate the device within the working temperature range to prevent overheating.

Color Bars: When enabled, color bars will be displayed on the camera view when there is no video signal input.

Low Latency: Applicable to the RX only. When enabled, the output frame rate will be converted to 60 fps to help reduce the latency on the RX side. When disabled, the output frame rate will follow the camera's output frame rate.

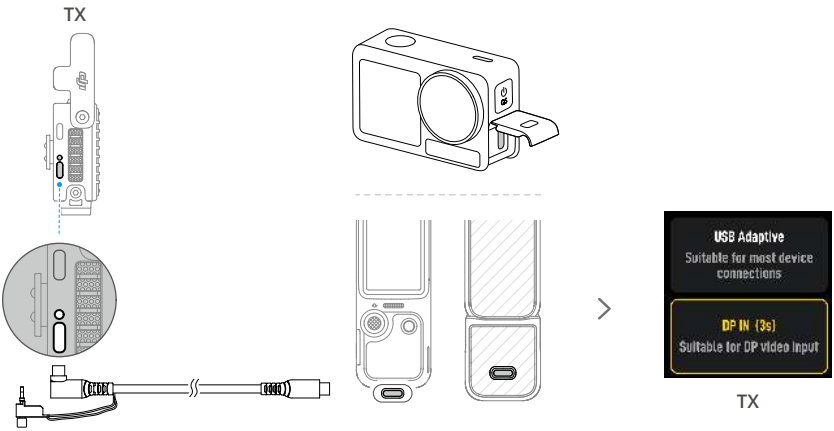
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5 Ecosystem Interconnectivity

5.1 Connecting Osmo Cameras

Osmo cameras can connect to the transceiver (TX) as a video source, allowing remote control and monitoring on the RX.

Visit the official website for supported Osmo devices. Update the device to the latest firmware.



1. Use the DJI SDR Transmission 2 L-Shaped USB-C Video Cable to connect the camera to the USB/DP port on the TX. Tighten the cable screw into the screw hole on the TX.
2. Select **DP IN** on the TX screen.
3. Select the streaming format on the camera screen.

The cable is sold separately.

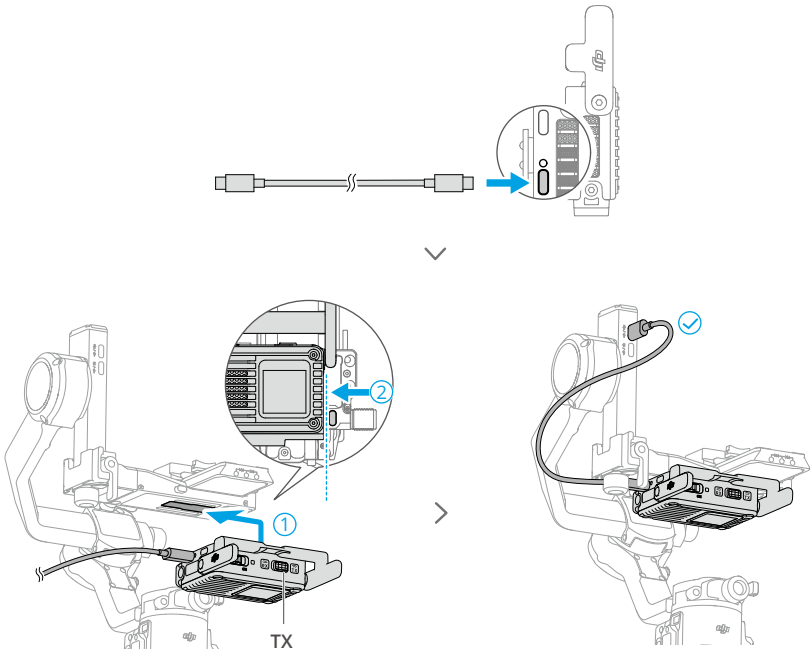
5.2 Connecting Ronin Stabilizers

The transceiver can be used with various Ronin stabilizers. Once connected, the gimbal can power to the TX, while the gimbal and camera can be controlled on the RX side. The following instructions use only the transceiver as an example. For usage with the expansion plate, refer to the tutorial video.

When the transceiver is connected to a stabilizer via the Quick-Release Plate, native vertical mounting is not supported.

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Connecting RS 5

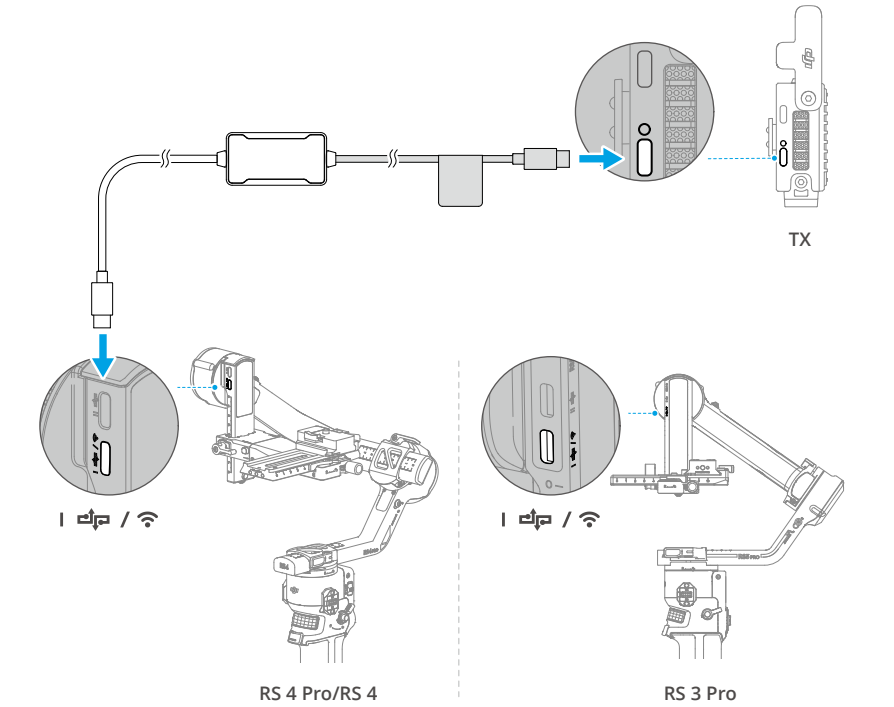


1. Connect the Firmware Update Cable (USB-C to USB-C) included in the package to the TX.
2. Attach the TX to the cold shoe mount on the gimbal and push it to the end.
3. Connect the other end of the cable to the gimbal for gimbal movement control. Once the gimbal is powered on, it will supply power to the TX and establish communication.

When using the expansion plate, the gimbal can also be connected to the USB-C port on the right side of the expansion plate.

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Connecting RS 4 Pro/RS 4/RS 3 Pro

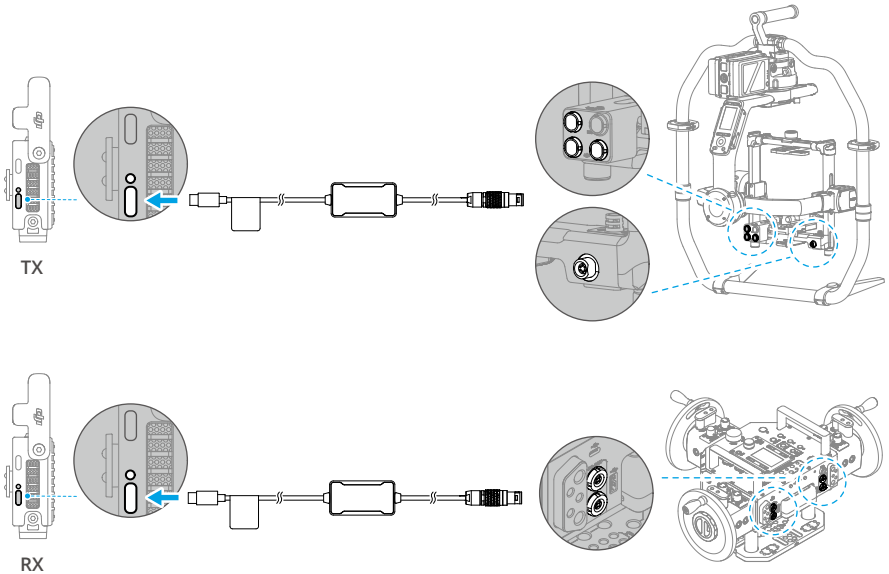


Connect the labeled end of the DJI SDR Transmission 2 Gimbal Control Cable (USB-C to CAN) to the TX and the other end to the gimbal for gimbal movement control. Make sure the cable connection is not reversed. Once the gimbal is powered on, it will supply power to the TX and establish communication.

- The cable is sold separately.
- When using the expansion plate, the gimbal can also be connected to any USB-C port on the bottom of the expansion plate.

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Connecting Ronin 2 and Master Wheels



TX

Use the DJI SDR Transmission 2 Gimbal Control Cable (USB-C to 4-pin) to connect the TX to the gimbal for gimbal movement control. Once the gimbal is powered on, it will supply power to the TX and establish communication.

RX

Use the DJI SDR Transmission 2 Gimbal Control Cable (USB-C to 4-pin) to connect the RX to the Master Wheels. Once the Master Wheels are powered on, they will supply power to the RX and establish communication. In the settings of Master Wheels, switch the controlled gimbal to Ronin 4D, and then you can control gimbal movement and camera recording.

- The cable is sold separately.
- When using the expansion plate, the gimbal or Master Wheels can also be connected to any USB-C port on the bottom of the expansion plate.

5.3 Monitoring and Control

1. Use a data cable to connect your smartphone to the USB/DP port of the RX.

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2. Select **USB Adaptive** on the RX screen.
3. Open the DJI Ronin app to monitor the camera view and control the camera to take photos or record videos.
   - When connected to an Osmo Pocket series device, you can also use the app to recenter the gimbal and operate the virtual joystick.
   - When connected to a Ronin stabilizer, you can use all functions in the app.

- Supported functions vary depending on the camera and stabilizer. Refer to the actual device.
- When used with the expansion plate, the USB-C port on the expansion plate does not support the output of the camera view.

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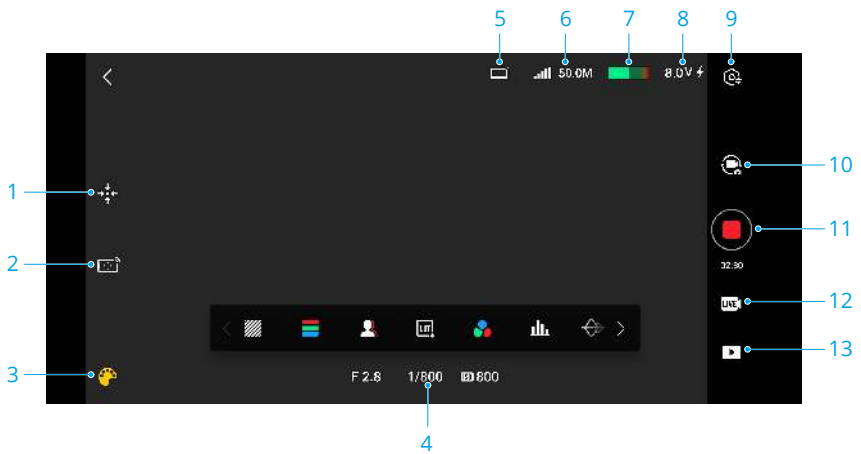
6 DJI Ronin App

Using the Ronin app, you can experience monitoring assistance tools and functions such as gimbal control and camera control on smartphones or tablets, enjoying a more convenient and intuitive operation experience. You can log in to your accounts to sync the footage to the Filming app. This section takes DJI RS 5 as an example to show you how to use it and describe precautions.

6.1 Connecting to the Transceiver

1. Ensure that the TX and RX are connected. Use a data cable to connect your smartphone or tablet to the USB/DP port of the RX.
2. Select **USB Adaptive** on the RX screen.
3. Open the Ronin app to monitor the camera view.

6.2 Camera View



Tap the screen to enter Clear mode and tap again to exit.

1. **Gimbal Recenter**
2. **Virtual Joystick/Force Mobile**

   Enable or disable the virtual joystick/force mobile and adjust the settings.

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Virtual Joystick: Tap to enable or disable the virtual joystick. Control the speed and smoothness of the gimbal by adjusting the control bar. When the virtual joystick is enabled, a joystick for the pan and tilt axes will appear in the bottom left corner of the camera view. By default, move the joystick left and right to control the pan axis, and up and down to control the tilt axis. A joystick for the roll axis will appear in the bottom right corner of the screen. Move the joystick left and right to control the roll axis.

Force Mobile: Tap to enable or disable force mobile. When enabled, the gimbal movement can be controlled by tilting and rotating your phone or tablet. The gimbal movement cannot be controlled by rolling the mobile phone by default.

3. **Assistant**

   Tap to choose assistance tools, including zebra stripes, false color and others.

   Zebra Stripes: When enabled, the overexposed areas in the image will be displayed in black and white stripes.

   False Color: When enabled, colors representing exposure values of different objects will be added to the image.

   Focus Peaking: Enable the peaking display to assist focus.

   LUT: Tap to enable or disable the LUT display. When enabled, users can apply preset LUT effects directly to the image. LUT files can be shared with the Ronin app via a file manager or a third-party app, after which you can tap **Custom** to select the desired LUT.

   Single Color: Select a color and display the transmission screen in that color, with all color information represented in contrast.

   Histogram: When enabled, the brightness distribution of the camera view will be displayed. Histogram helps determine the exposure of the image.

   Waveform: When enabled, the waveform representing the current image brightness and darkness relationship is displayed in a floating window. Move the waveform to avoid obstructing the view.

   Widescreen: Tap to set the widescreen de-squeeze factor.

   Frame Markers: Set the aspect ratio marker and its transparency, as well as the safety zone marker.

   Screenshot: Tap to capture the current camera view and save it to the album.

   Freeze Frame: Select an image to overlay it on the camera view and then drag the slider to adjust the transparency. Disable this feature if the image is not needed.

4. **Aperture, Shutter, and ISO**

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When the transmitter is connected to a camera supporting PTP control and the camera is configured, the shutter, aperture, and ISO parameters can be adjusted here.

For example, with a Sony FX3, follow the steps below: In the camera menu, select **Setup** > **USB** > **USB Connection Mode** > **Remote Shooting**.

These steps are for reference only. Refer to the actual interface for instructions.

5. **Device Number Switching**

   Tap the device number icon at the top of the screen to view the device number list. Tap the bottom of the list to expand detailed information. Tap a device number in the list to switch to the corresponding device.

6. **Channel Switching**

   Tap to open the channel dashboard. Set the channel mode to **Auto** or **Manual**, and view the quality of each channel as well as the TX currently using it.

7. **Volume**

   Displays the volume of the current input source video.

8. **Power Supply**

   Displays the power supply information of the TX.

9. **Video Transmission Settings**

   Assistant: Enable or disable the transmission assistance tools.

   Zebra Level: Adjust the brightness threshold for displaying zebra stripes to fine-tune the exposure.

   Peaking Level: Adjust the focus peaking threshold to confirm the clearest focus area in the image.

   Composition: Adjust the type of guide frames, center marker style, marker color, and marker width.

   General:

Item	Description
Channel Settings	Tap to switch channel or view channel information.

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Item	Description
Camera Control Button	Tap to enter the camera control interface and operate the camera menu via the Ronin app. Ensure the camera is pre-configured with the correct HDMI output settings and CEC enabled. For example, with a Sony FX3, follow the steps below: a. Enter the camera menu of Sony FX3 and select **Setup > External Output** to configure the HDMI output parameters, such as resolution. b. Select **HDMI Control** and enable it. These steps are for reference only. Refer to the actual interface for instructions.
Cache Settings	Set the shutter options. • Shoot: Tap the shutter button and the camera will start shooting. • Cache: The mobile device starts caching footage after tapping the shutter button. No footage is saved on the camera memory card. • Shoot + Cache: The camera and mobile device start shooting and caching footage simultaneously.
Filming App	After logging into the Filming app, you can input shooting projects and switch camera positions. After enabling **Auto Sync Cache Files**, new cache files in the Ronin app will be synchronized to the Filming app. Tap **Upload History** to manage synchronized footage. In **Network Setting**, **Sync over Cellular Data** can be enabled or disabled.
About	Displays the serial number and the firmware version.

10. **Photo/Video**

    Tap to switch between photo and video modes.

11. **Shutter/Record Button**

    Tap to take photos in photo mode and tap to start recording in video mode.

12. **Livestream**

    Tap the livestream icon to configure livestream or the Filming app.

13. **Playback**

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6.3 Firmware Update

After connecting the device to the DJI Ronin app, a notification will appear on the app home screen if new firmware is available. Tap to enter the update page and follow the on-screen instructions to update the firmware.

⚠
- DO NOT power off or disconnect the device during the update.
- Update all devices to ensure firmware consistency.

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7 Specifications

Visit the following website for specifications.

https://www.dji.com/sdr-transmission-2/specs

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