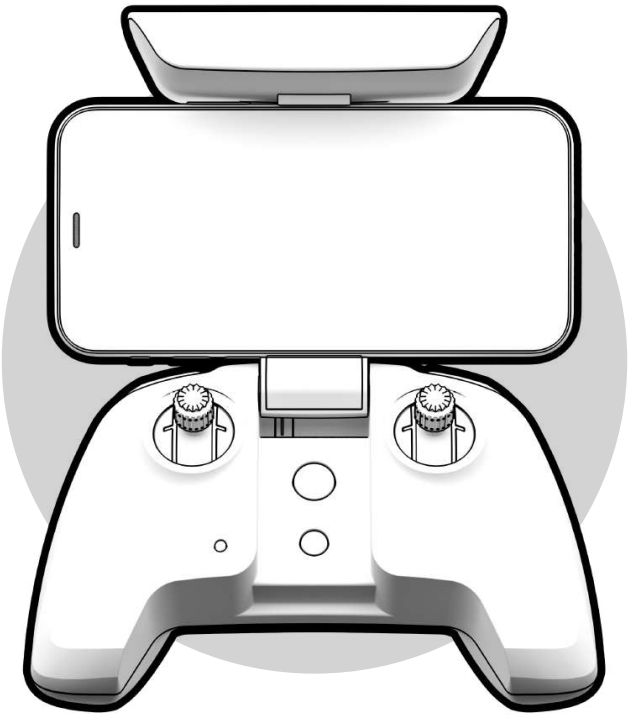
User Guide
Controller



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Total Control in Your Hands

This guide will go over everything you need to get going with the Controller accessory for Skydio 2, the world's most intelligent drone. Using 45 megapixels of visual sensing from six 200 degree cameras, Skydio 2 creates the highest resolution real-time maps of its environment unlike any other drone. With the Controller, enjoy a worry-free, high-speed experience with full obstacle avoidance.

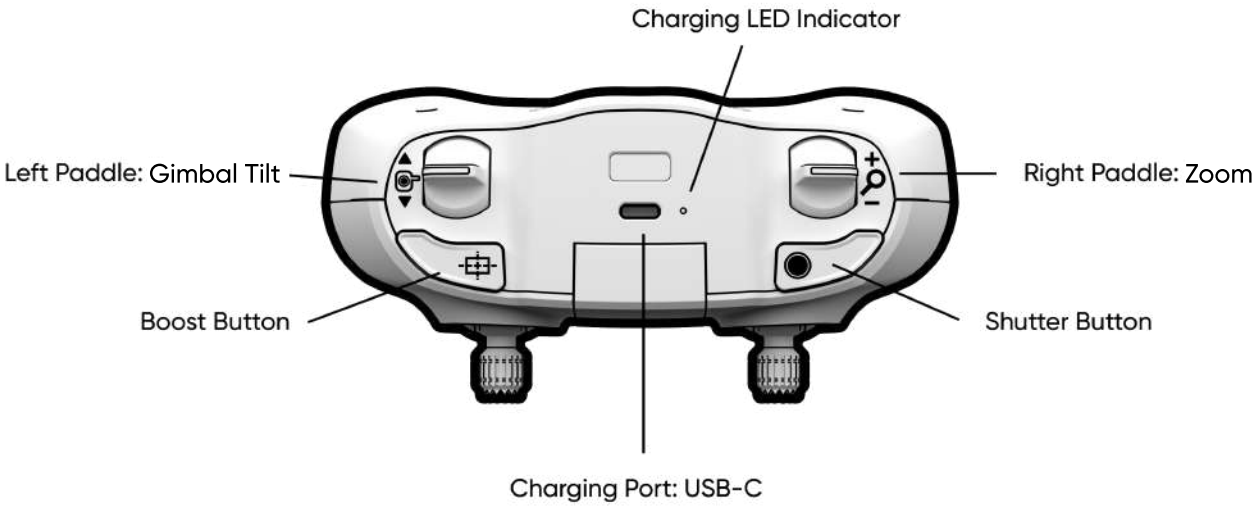
What's in the Box?

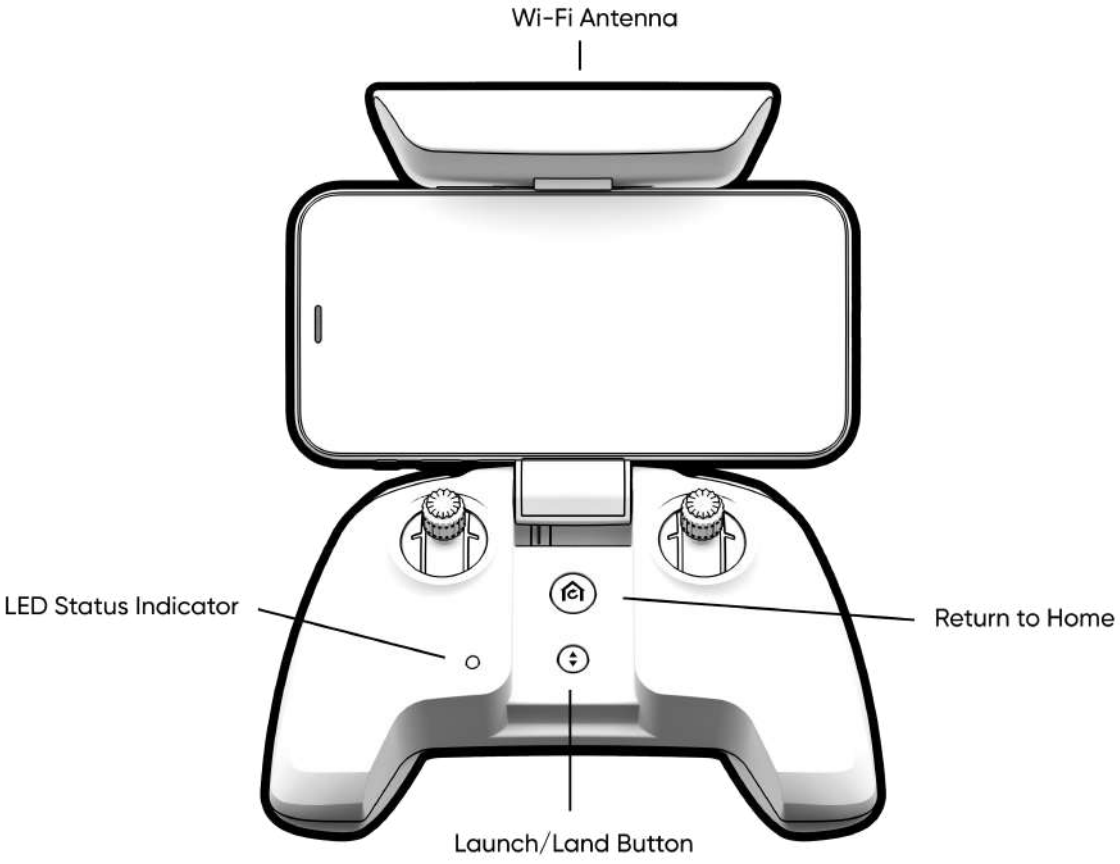
Here's what's included in the case alongside your Skydio 2:

1. Controller
2. 12" Cable for iOS (USB-C to Lightning)
3. 12" Cable for Android (USB-C to USB-C)
4. Quick Start Guide

Overview

The controller has two control sticks, four buttons, two paddles, an LED status indicator, a charging LED, and a USB-C connection port.





Foldable Arm

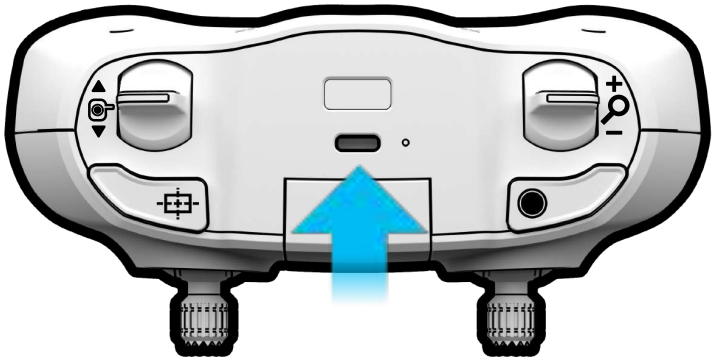
There is no power button or switch on the controller. Instead, when the foldable arm is opened, the Controller powers on. When the **foldable arm** is closed, the Controller powers off. The Wi-Fi antenna is inside of the arm which connects the Controller to Skydio 2, so make sure to keep the Controller's **foldable arm** open while flying to maintain a connection.

Placing your phone in the **foldable arm** works best when your phone is not in a case.

Charging the Controller

USB-C Charging Port

The **USB-C charging port** allows you to both charge your Controller and also connect it to your mobile phone.



To charge your Controller, begin by connecting one end of the **USB-C cable** into the **Skydio 2 power adapter.** Then plug the opposite end of the USB-C cable into the **USB-C charging port** of the Controller.

You can confirm that your Controller is either charging or is fully charged by looking at the **charging light** next to the **USB-C charging port.**

The Controller is off and not being charged.

The Controller is plugged into a power source and charging.

The Controller is plugged into a power source and is fully charged.

Pairing the Controller to Skydio 2

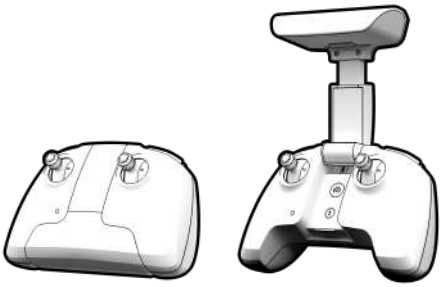
To fly with the Controller, you must first pair the Controller with Skydio 2. Each Controller may only be paired to a single Skydio 2 at one time. Once a Controller is paired to Skydio 2, they will automatically connect every time both Skydio 2 and the Controller are powered on.

Step 1

Connect a Skydio battery to Skydio 2; to turn on, **press** and **hold** the power button for **5 seconds.**

Step 2

Open the Controller's arm.



Step 3

Connect one end of the **USB-C to USB-C cable** to Skydio 2 and the other end of the cable to the **USB-C charging port** on the Controller.

Step 4

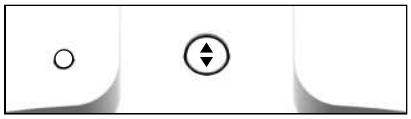
When the front **LED status indicator** appears solid blue, you have successfully paired the Controller with Skydio 2 and can disconnect both ends of the cable.

Updating Controller Software

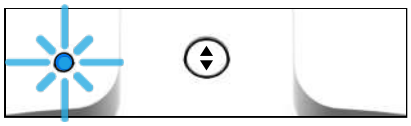
The Controller will automatically check for a software update every time it connects to Skydio 2. If an update is available, the front LED on the controller will begin to blink green. The Controller will automatically install the new software update, the LED will turn solid blue once the update is complete and reconnect to the Skydio 2 when the update has finished. Do not turn off vehicle or controller when updating.

LED Status Indicator

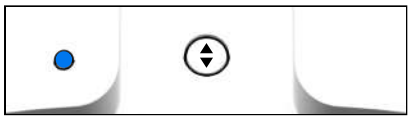
When you first open your Controller, the **LED status indicator** will display as white while booting and remain white until it is paired with Skydio 2.



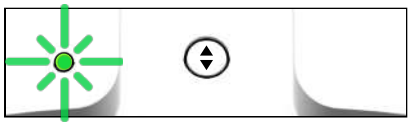
The Controller is off.



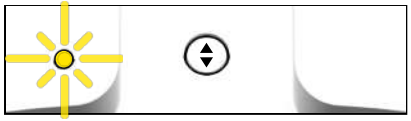
***BLINKING:** The Controller is trying to connect to Skydio 2.*



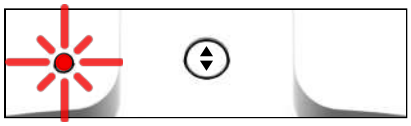
***SOLID:** The Controller has successfully connected to Skydio 2 wirelessly.*



***BLINKING:** The Controller is performing a software update.*



***BLINKING:** The Controller has lost connection to Skydio 2 during flight.*



***BLINKING:** Skydio 2 is encountering an emergency situation during flight. Skydio 2 has a critically low battery. The Controller has a critically low battery.*

Skydio 2 App

A connected device running the Skydio app for iOS or Android is required to fly. Download and launch the Skydio app from the App Store or Google Play Store.

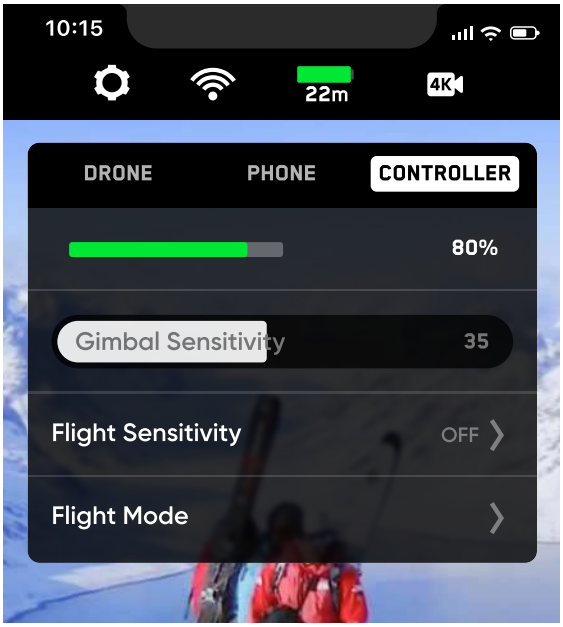
Download on the App Store

GET IT ON Google Play

Settings Before Flight

It's useful to understand the Controller settings prior to launching Skydio 2. Tap the **Device Settings** icon to view the settings for all of your Skydio accessories.

Then tap on the Controller tab to view the Controller's settings.



Battery Indicator

- The battery indicator shows the battery level of your Controller. If the battery level on the Controller is too low to complete a flight on a full Skydio 2 battery, you will be prevented from launching Skydio 2 with the Controller.

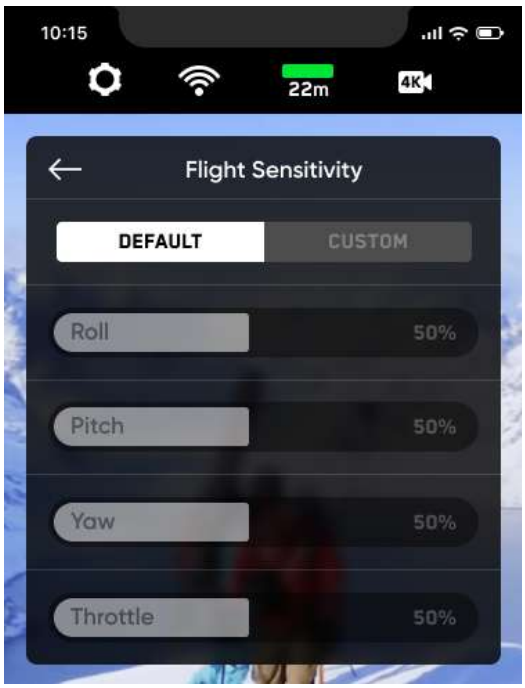
Gimbal Sensitivity

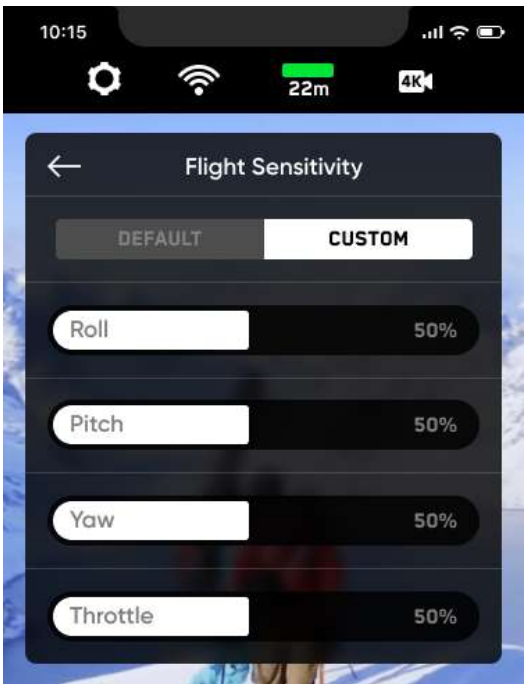
- The gimbal sensitivity controls how quickly the camera gimbal pitches up and down in response to using the right paddle.

Flight Sensitivity

- You can switch between default and custom to adjust the sensitivity for the roll, pitch, yaw and throttle inputs.
- The default settings are fixed and cannot be changed.

- The custom setting allows you to adjust the flight characteristics to a specific sensitivity.





- Tap on **Custom** to customize the sensitivity of **roll, pitch, yaw,** and **throttle** individually.

> ***Note:*** *All Controller settings are saved on your Skydio 2 and are only available when your Controller is connected to your drone.*

Flight Mode

- You may switch between Mode 1, Mode 2 (default), and Mode 3 style flight controls.

Learn to Fly

If you have not done so, Skydio highly recommends you perform your first Skydio 2 flight without the Controller in order to complete the Learn to Fly experience. See the Your First Flight section of the Skydio 2 User Guide for more details.

Preparing for Flight

Step 1

Once your Controller has connected to Skydio 2, you can then connect the Controller to your mobile device. If you are using the Skydio app for iOS, you will need the 12" **USB-C to Lightning** cable. If you are using the Skydio app for Android, you will need the 12" **USB-C to USB-C** cable. Plug one end of the cable into the **USB-C** port on the Controller and the other end of the cable into your mobile device. The Controller will not work without a hardwired connection to the phone.

> ***Note:*** *Always use the cables included with your Controller to connect with your mobile device. Cables from 3rd party suppliers may not work.*

Step 2

When using the Controller, it is best to turn off the Wifi on your mobile device. This ensures the Skydio app only communicates to the drone through the Controller and reduces electromagnetic interference during flight.

Step 3

Launch the Skydio 2 app.

Step 4

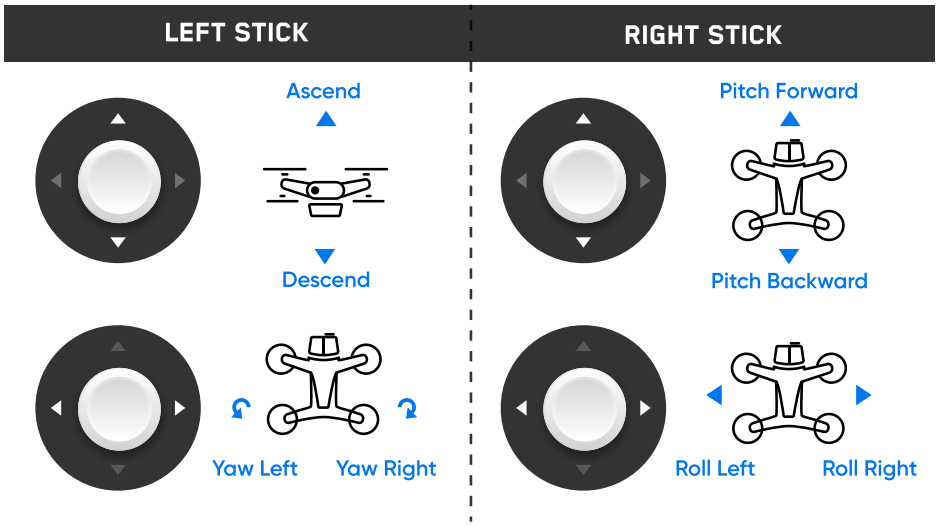
In the Skydio 2 app, enter the flight screen and press on the **Hold to Launch** button. Skydio 2 will launch off of the ground and hover in place. You can now control Skydio 2 with your Controller.

Flying Skydio 2 with the Controller

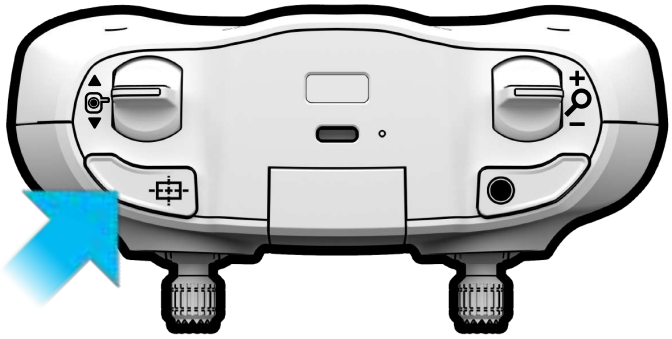
While flying Skydio 2 with the Controller, you have access to all of the same cinematic skills and autonomous abilities as you would while flying with just your mobile device. When following a subject, normal autonomous controls are still displayed in the app. When a subject is not selected and Skydio 2 is being manually controlled, the left and right sticks allow you to manually maneuver Skydio 2. Moving these sticks allows you to adjust roll, pitch, yaw, and throttle.

Move the right stick around to get a feel for how Skydio 2 flies on a flat plane. Use the left stick to adjust the height or rotation of Skydio 2. For beginners, it's easier to fly with the Controller by keeping the camera facing away from you. Roll controls your left and right movement, while pitch changes your forward and backward movement. Adjusting yaw changes your rotation, and throttle changes your height.

By default, the Controller is set to fly using "Mode 2" controls, detailed below. If you wish, you may change this default in the Controller settings to use a different control style.



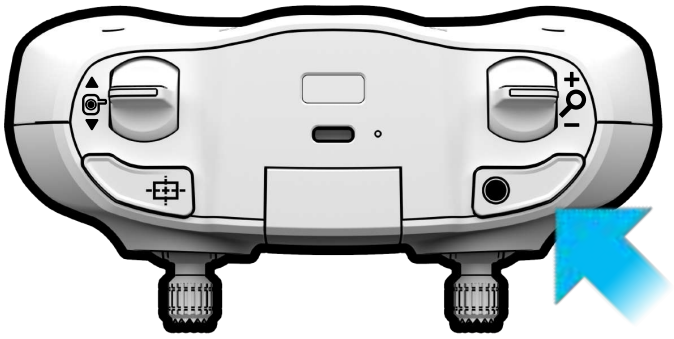
Left Shoulder Button



The **left shoulder button** activates the **Boost** feature. **Boost** allows you to instantly increase the speed of your movement while holding down the **left shoulder button**. To stop using **Boost**, release the **left shoulder button**. Use **Boost** to quickly fly between points of interest without having to manually increase the control sensitivity in the Skydio app settings.

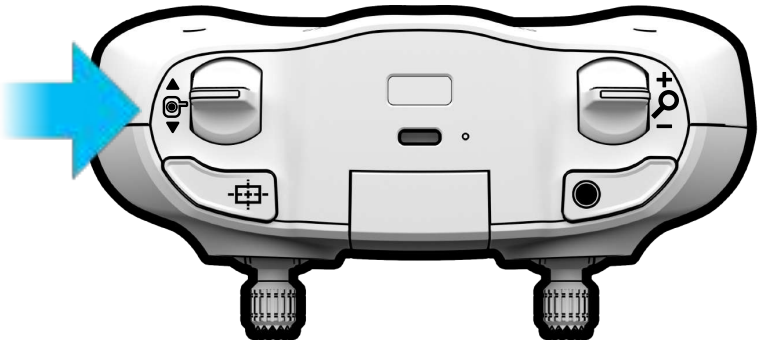
> ***Note:*** *Boost mode has similar flight characteristics as having all Controller sensitivities set to their max. If you are flying with custom Controller sensitivities all set to max, Boost mode may have no discernible effect.*

Right Shoulder Button



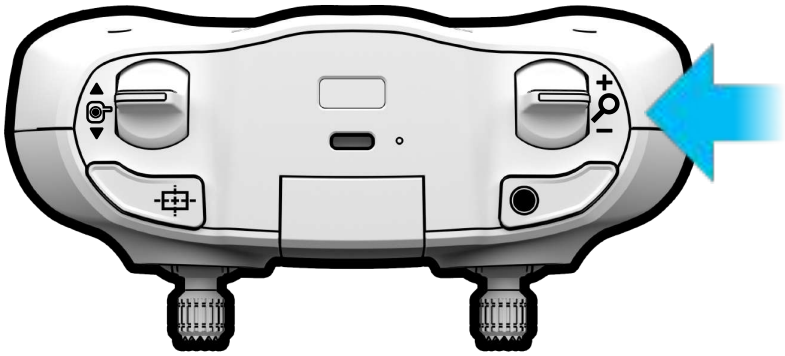
The **right shoulder button** acts as your shutter. The shutter button allows you to capture a photo while in photo capture mode or start and stop recording when in manual video capture mode. The right shoulder button does not have any effect while in auto video capture mode.

Left Paddle



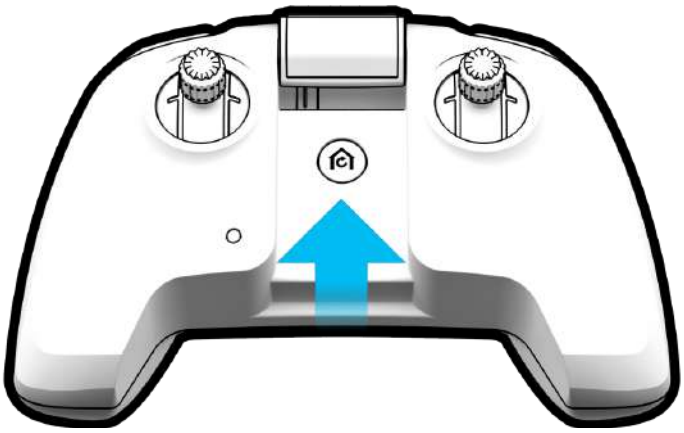
Adjust the tilt angle of the Skydio 2 camera gimbal by holding up or down on the **left paddle**. Pressing downward on the **left paddle** will tilt the camera down toward the ground, while pressing upward on the **left paddle** will tilt the camera up toward the sky. The range of the camera gimbal angle allows you to aim the camera 45 degrees above the horizon or directly down at the ground for dramatic bird's-eye views.

Right Paddle



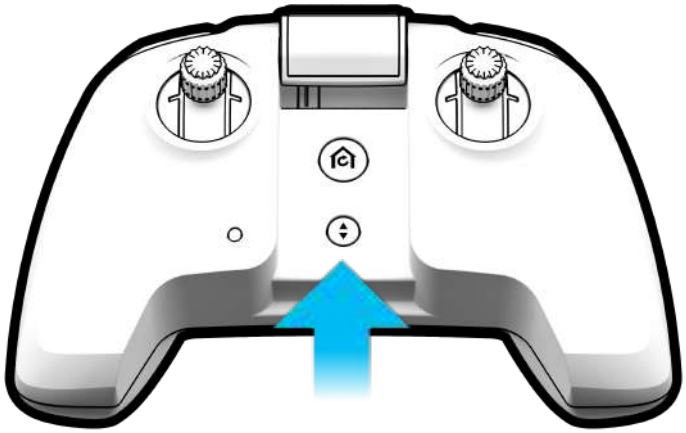
The **right paddle** allows you to zoom in and out of the current view by commanding Skydio 2 to fly directly forwards or backwards in relation to the current camera pitch. When used in combination with the gimbal control and **Boost** feature, this allows for dramatic FPV style flying.

Return Button



When Skydio 2 is in flight, tapping on the **Return Button** commands Skydio 2 to return to its launch location. If you have set a home point on the map, pressing the **Return Button** will command Skydio 2 to return to the Home Point instead of the launch location. You may press the **Return Button** again to stop returning.

Land Button



You may end your flight by using the **Land button**. When landing Skydio 2, ensure the drone is situated over a safe landing spot that is flat, clear of debris and not overhead of any people or animals. When you are ready to start landing, hold the **Land button**.

When a landing is initiated, Skydio 2 will descend with full obstacle avoidance until it is 3m (10 ft) above the ground. Once Skydio 2 is less than 3m from the ground its LEDs will turn yellow and all obstacle avoidance will be disabled for the remainder of the landing.

> ***Warning:*** *Do not attempt to hand catch Skydio 2 before the LEDs turn yellow. Attempting to hand catch Skydio 2 while obstacle avoidance is active will cause it to attempt to avoid your hand and may result in Skydio 2 impacting yourself or another nearby object.*

Canceling Landing

You may cancel a landing by:

- Pressing the **STOP button** in the Skydio 2 app.
- Tapping the **Launch & Land button** on the Controller.
- Commanding Skydio 2 to ascend in the app.
- Commanding throttle up via the Controller at full stick. Throttling up at less than full stick will slow down landing speed, allowing you more time to maneuver.

Best Practices

- Unplug the cable when the Controller is not in use. Leaving the cable plugged in when storing or traveling with the Controller can easily lead to the cable becoming bent or the USB port becoming damaged.
- Check the Controller's battery level in the Skydio 2 app before every flight. You can expect around 2 hours of flight time on a full charge.
- Disable your mobile device's WiFi when using the Controller with Skydio 2. This will reduce electromagnetic interference and improve flight range and video quality.
- The Controller's radio antenna is located at the top of its folding arm. For best flight results, ensure the Skydio 2 remains in visual line of sight and the controller is pointing towards the drone at all times.
- The USB-C to Lightning cable included with the Controller is for data use only. It cannot be used to charge or sync your iOS device.

Need More Help?

Check out **https://skydio.com/safety** and **https://skydio.com/support** for helpful tips, videos, and articles. Contact us at **help@skydio.com** to speak with our support team if you need any help.

Compliance Information

FCC

Any changes or modifications to this equipment not expressly approved by Skydio for compliance will void the user's authorization to operate this 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 experienced radio/TV technician for help.

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The distance between user and products should be no less than 20cm. The end user must follow the specific operating instruction for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

California Prop 65 Warning

Lithium-ion Batteries and/or products that contain Lithium- ion Batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to **www.P65Warnings.ca.gov**

IC

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:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- L' appareil ne doit pas produire de brouillage.
- L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.