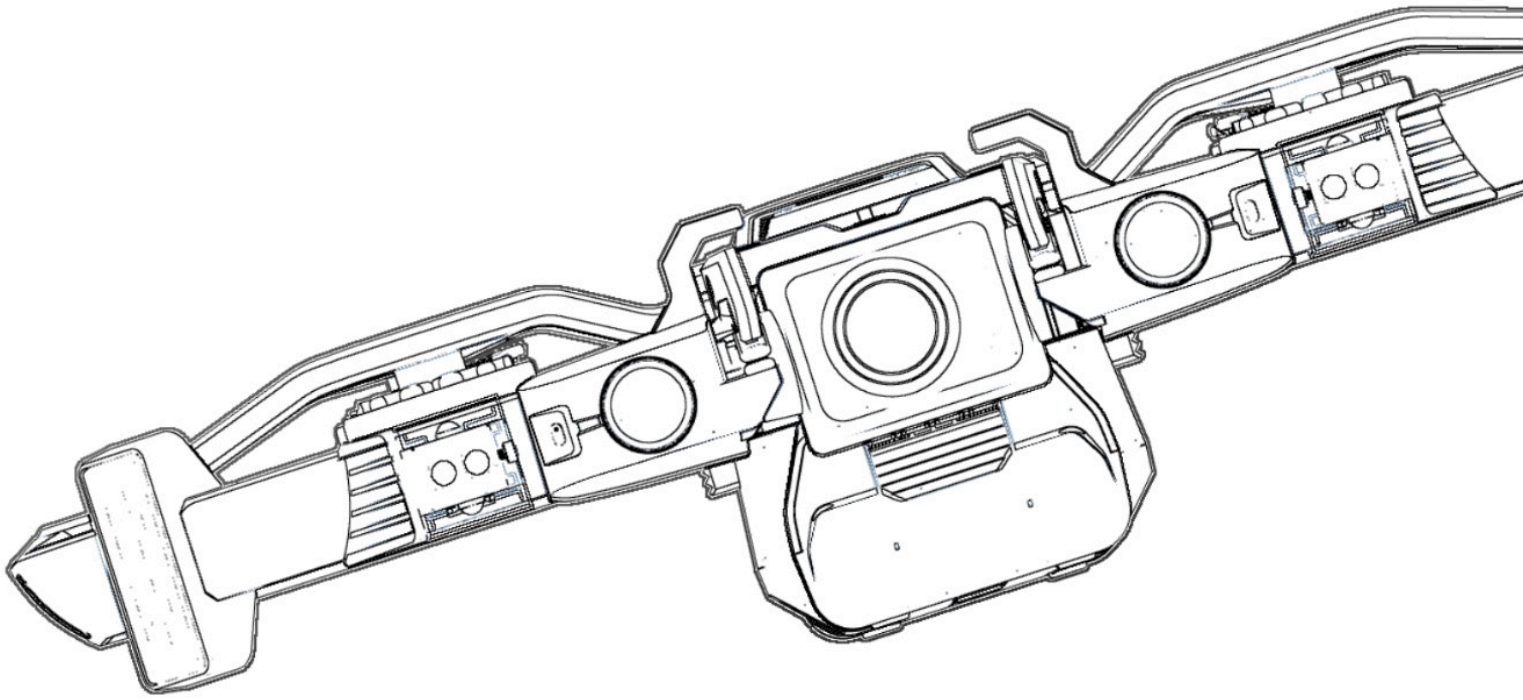
Skydio

Skydio R10

Operator Manual



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Revision History

Revision	Software Version and Description	Date
1	**v43.303** ● Initial Release	May 7, 2026
1.1	Updated Skydio R10 Specifications and Sustainment Plan	May 19, 2026

How to Use this Manual

The Skydio R10 Flight System is designed for operational use in commercial, industrial, and safety-critical environments, including remote and distributed operations. System readiness, operability, and reliability are achieved and maintained through the best practices outlined in this manual.

This manual can be used as a reference at any time by navigating directly to the relevant section. It is a living, controlled document and is regularly updated as new features, system updates, and operational guidance become available.

Printed copies of this manual are considered uncontrolled. Refer to the title page for the most recent version and publication date. The latest version is available through Skydio Support.

Phases of Operation

This manual is organized into five primary phases of operation:

1. **Initialization:** Completed during initial setup and when adding or modifying system components, Initialization ensures that all parts of the flight system are configured correctly and ready for operation. This includes system setup, account configuration, software updates, and preparing the system for use in the intended operating environment.

2. **Operations Planning:** Operations Planning defines how the mission will be executed. During this phase, the Pilot or Remote Pilot coordinates with operational teams to establish objectives, communication protocols, system configuration, and contingency plans. Planning may include preparing for remote operations, continuous observation, or deployment in complex or high-risk environments.

3. **Preflight:** Preflight ensures the system, environment, and Pilot/Remote Pilot are ready for safe operation immediately prior to launch. This includes system checks, environmental awareness, connectivity validation, and confirmation that all settings align with mission requirements. Preflight may be conducted using the Skydio Controller or Remote Flight Deck (RFD).

4. **Inflight Operations:** Inflight Operations include launch, flight, landing, and all system interactions while the drone is active. This phase emphasizes safe piloting, situational awareness, navigation system monitoring (VIO/GPS), and effective use of system features such as Flight Modes, Perch Mode, and Turtle Mode.

5. **Postflight:** Postflight begins once the drone has landed and exited the flight screen. This phase includes reviewing system status, managing media and telemetry, completing reporting or evidentiary workflows, and preparing the system for subsequent operations. In remote workflows, this may also include cloud-based data validation and integration checks.

Additional details for each phase of operation can be found in the corresponding sections of this manual.

Prior to and during all operations, follow the Skydio R10 Safety Guidelines and your organization's standard operating procedures (SOPs) to support safe, compliant, and effective use of the flight system.

Warnings and Advisories

Throughout this manual, warnings and advisories highlight important information and potential hazards related to operational use of the flight system.

Each safety-related Warning reflects a corresponding level of criticality:

Danger

Indicates an immediate and unavoidable threat of death or serious injury.

Examples include: Exposed high-voltage equipment or unguarded machinery with moving parts.

Warning

Indicates a potentially dangerous situation where death or serious injury could occur if precautions are not taken.

Examples include: falling objects or entering an active landing zone during an autonomous return.

Caution

Indicates a potentially hazardous situation where minor or moderate injury could occur if precautions are not taken. Also used to highlight actions that could result in hardware damage, flight performance issues, or non-compliance with operational standards.

Examples include: Pinch and crush points, handling hot batteries.

Note

Information advisories are indicated by Notes and may include information related to effective use of the flight system or special considerations.

Notes provide additional context, clarification, or detail that supports understanding of a feature, setting, or behavior. Notes do not indicate risk or required action.

Examples include: Linking to related sections, reminders of unsupported configurations, or clarifying system behavior in specific conditions.

Flight Crew Roles

This manual focuses primarily on the responsibilities of Organization Admins, Pilots in Command (PICs), and Remote Pilots in Command (RPICs). However, all personnel involved in flight operations, including Cloud Users, are responsible for understanding how the system functions to support safe, compliant, and effective operations.

Role Responsibilities

Organization Admins

Organization Admins manage system-level configuration and fleet readiness in Skydio Cloud.

Responsibilities include:

- Managing users, roles, and permissions
- Claiming and maintaining flight system hardware
- Configuring organization-wide settings and integrations
- Monitoring fleet health and system readiness
- Ensuring compliance with regulatory and organizational requirements

Pilots (Controller-Based Operations)

Pilots operate Skydio R10 using the Skydio Controller in local or on-site workflows.

Responsibilities include:

- Conducting preflight inspections and environmental assessments
- Launching, piloting, and landing the drone
- Maintaining situational awareness during flight
- Monitoring system health, battery status, and navigation performance
- Executing safe flight maneuvers and responding to in-flight conditions

Pilots may operate independently or in coordination with a broader operational or tactical team.

Remote Pilots

Remote Pilots (RPICs) operate Skydio R10 through Remote Flight Deck (RFD) using a browser-based interface.

Responsibilities include:

- Conducting missions remotely via Skydio Cloud
- Monitoring live video feeds, telemetry, and system health
- Managing autonomous or assisted flight operations
- Maintaining situational awareness without direct line-of-sight
- Coordinating with on-site personnel or operational teams

The RPIC is solely responsible for the safe operation of the drone during remote operations.

Cloud User

Cloud Users access and manage flight data in Skydio Cloud but do not actively pilot the drone.

Responsibilities may include:

- Viewing and managing media and flight data
- Reviewing flight reports and system activity
- Supporting mission analysis, documentation, or evidence workflows

Key Concepts

The following foundational concepts are mentioned throughout this manual:

Early Access Program (EAP)

Early Access Programs provide select customers with the opportunity to try out upcoming features or products, which can help inform early development. These programs help customers prepare for new capabilities early on and allow Skydio to gather user feedback regarding feature utilization and implementation. Skydio representatives may be contacted to provide additional information.

Beta / Closed Beta

Prior to making a product generally available, certain products may go through a Beta program. Features or products that are labeled Beta may have known limitations. Beta features may be new, experimental, or in active/late stage development.

Open Beta features are indicated by the 'Beta' tag; Closed Beta features require special authorization to access via Skydio's services teams. Skydio representatives may be contacted to provide additional information.

Flight System Updates: Software, and Cloud Releases

Skydio regularly releases updates across the entire flight system. These updates may deliver new features, improve performance, or resolve known issues. A single release may include a variety of updates across different parts of the system:

- **Software** updates apply to the physical components of the flight system that control how the drone operates (e.g., updated autonomous behavior). Organization Administrators may use Skydio Cloud to update the software, or software updates can be initiated directly on the Skydio Controller.

- **Skydio Cloud** release updates will be delivered directly to the Skydio Cloud platform, which could include minor interface improvements or new features to the Cloud platform or Remote Flight Deck. Skydio Cloud release updates are delivered automatically.

Releases are accompanied by release notes, which explain both new and improved features as well as known limitations and bug fixes. Release notes provide important details about how the updates will affect operations.

When a new release is published, customers will receive an email notification as well as in-Cloud alerts. It is the RPIC's responsibility to read the release notes and keep the flight system updated to ensure safe and effective operations.

System Readiness and Safe Use

Skydio Support

Visit Skydio Support support.skydio.com to view additional support resources for all Skydio products and Flight Systems. View Safety Guidelines, Help Articles, Release Notes, Notices to Operators (NTOs), and much more.

- Notices to Operators (NTOs)
- Release Notes

Notices to Operators

Skydio may issue a Notice to Operators (NTO) when we identify new safety or compliance risks, often as the result of newly-discovered software issues or unexpected edge cases. Read each NTO carefully to determine which parts of the flight system may be affected.

NTOs are designed to help RPICs avoid safety-critical issues that could affect flight safety and operations. The notice offers background information about the issue along with actionable, temporary mitigation guidance while long-term solutions are in progress.

Skydio updates NTOs whenever new information becomes available or a fix is released to ensure that RPICs are provided with timely information for mission planning.

NTOs are published on Skydio Support, and all Skydio Cloud users are notified via email and in-Cloud alerts when a new notice is issued or updated. It is the responsibility of the RPIC and the flight crew to review NTOs during mission planning and preflight operations to help maintain safe use of the flight system.

View the list of current NTOs on our Support Site.

Notice Regarding Printed Copies

This manual is subject to updates. For the most current procedures, safety information, and operational guidance, refer to the online version of the manual on our Support site. Printed or locally stored copies may become outdated and should not be relied upon as the sole source of truth.

It is the responsibility of the operator to ensure they are referencing the most recent version available online.

Modifications and derivative works of this manual are not authorized without written permission from Skydio. Please contact support@skydio.com for inquiries.

Safety Guidelines

⚠ WARNING

To avoid injury or damage to your drone, read the Skydio R10 Safety Guidelines in the Safety and Operating Guide. Deviation from the guidance outlined in this resource may increase the likelihood of unsafe operation, including the risk of crash or damage.

Keep your fingers away from moving propellers at all times. While grounded, the propellers on R10 will rotate at low, idle speeds. Although the rotation speed is significantly lower than inflight, contact with spinning propellers may cause minor injury. Keep hands, clothing, and objects clear of the propellers at all times.

Reflective surfaces greater than 10 in (25 cm) wide (e.g., still water, mirrored windows) and textured surfaces (e.g., white walls) pose risk of interference with flight system Visual-Inertial Odometry (VIO) and increase the likelihood of entering Attitude Mode. Thin obstacles (thin branches, chain link fencing, wires, etc.) may also be difficult for the drone to detect. Pilots should exercise caution when flying the drone near reflective surfaces and near small or thin obstacles.

Obstacle avoidance only applies to stationary objects. The drone should not be piloted in proximity to moving objects, including but not limited to other aerial vehicles, cars, and/or animals. The Pilot must yield to all crewed aircraft and perform a Safe State Maneuver if they encounter air traffic or moving obstacles that conflict with their flight path.

Before flying over water, ensure your drone has a strong GPS signal. Launch and land over a dry surface.

Clean all of the cameras before each flight so Skydio R10 can see clearly.

Check your propeller blades for damage before each flight. Replace propellers if signs of damage or wear are present.

Do not fly with any batteries with enclosures that are cracked, swollen, gouged, dented, or otherwise substantially physically deformed.

Follow all civil aviation authority regulations, as well as all local, state, and federal laws.

After prolonged use of NightSense, the LED pod may be hot to the touch and could present a serious burn risk. After landing, wait for the LED pod to cool down before handling.

After prolonged use of the LED pod during flight or while using Perch Mode, it may be hot to the touch and could present a serious burn risk. After landing, wait for your system to cool down before handling.

Do not touch the black heatsink next to the lenses. After landing, wait for your system to cool down before handling.

Do not stare directly into NightSense at any distance range for any period of time as it may cause serious eye injuries.

The use of the Speaker and Microphone on Skydio R10 for two-way communication and broadcast audio is subject to various international, federal, state, and local laws and regulations regarding privacy and consent. It is your responsibility to ensure compliance with all applicable laws and regulations when using this product to broadcast audio.

Failure to comply with these laws and regulations may result in civil or criminal penalties, including fines or imprisonment. Skydio is not responsible for any misuse of this product or any legal consequences resulting from the improper use of the audio recording and broadcasting functions.

You must maintain a distance of at least 10 ft. between the R10 drone and emitters (including cell towers) to reduce the risk of electromagnetic interference (EMI). EMI may lead to camera failures, potentially impacting situational awareness of the remote pilot during operation. Disruptions to both controlled and autonomous flight may lead to a total loss of the vehicle and pose a risk of serious bodily injury.

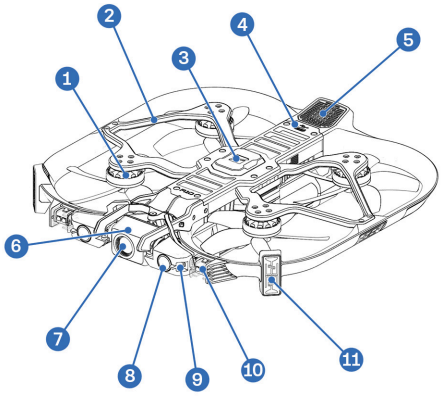
Skydio R10 Flight System Overview

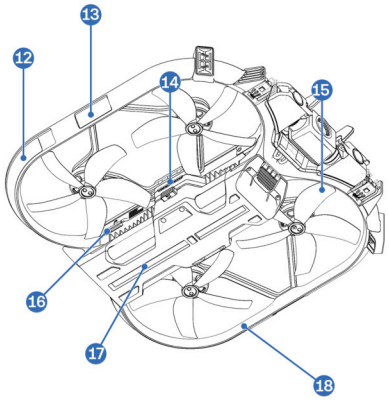
The Flight System Overview details all components of the Skydio R10 Flight System. Each component is subject to continual updates over the lifespan of the flight system.

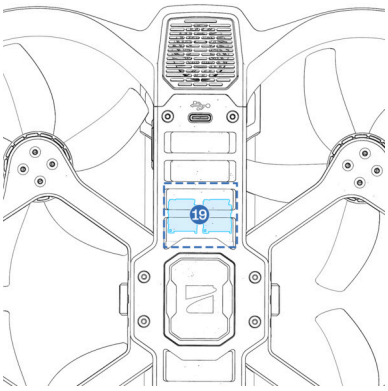
This section includes information about the following system components:

1. Skydio R10 Drone Hardware
2. Skydio Controller Hardware
3. Skydio R10 Case Layout
4. Connectivity
5. Specifications

R10 Drone Hardware







1. Motor
2. Arm
3. GPS
4. USB-C
5. Speaker
6. 180° Pitch Gimbal
7. 4k Low Light Camera
8. Navigation/Nightsense Camera
9. Microphone
10. NightSense
11. Vertical Skydio Connect SL Antenna
12. Cellular Antenna
13. Horizontal Skydio Connect SL Antenna
14. RGB Public Safety Lights
15. Propeller
16. SD Card Slot
17. Battery
18. Propeller Guards
19. 2x SIM Card Slots

R10 LED Behavior

Function	Color and Pattern
Initial boot sequence	Blue solid
Grounded not connected to a controller	Blue breathing
Grounded connected to a controller	Blue solid
Launching	Blue blinking
Inflight front orientation	Red solid
Inflight rear orientation	Green solid
Inflight obstacle avoidance reduced or off	Yellow solid
Returning not connected to a controller	Yellow blinking
Landing obstacle avoidance on	Blue blinking
Landing obstacle avoidance off	Yellow blinking
Emergency landing obstacle avoidance disabled	Red blinking

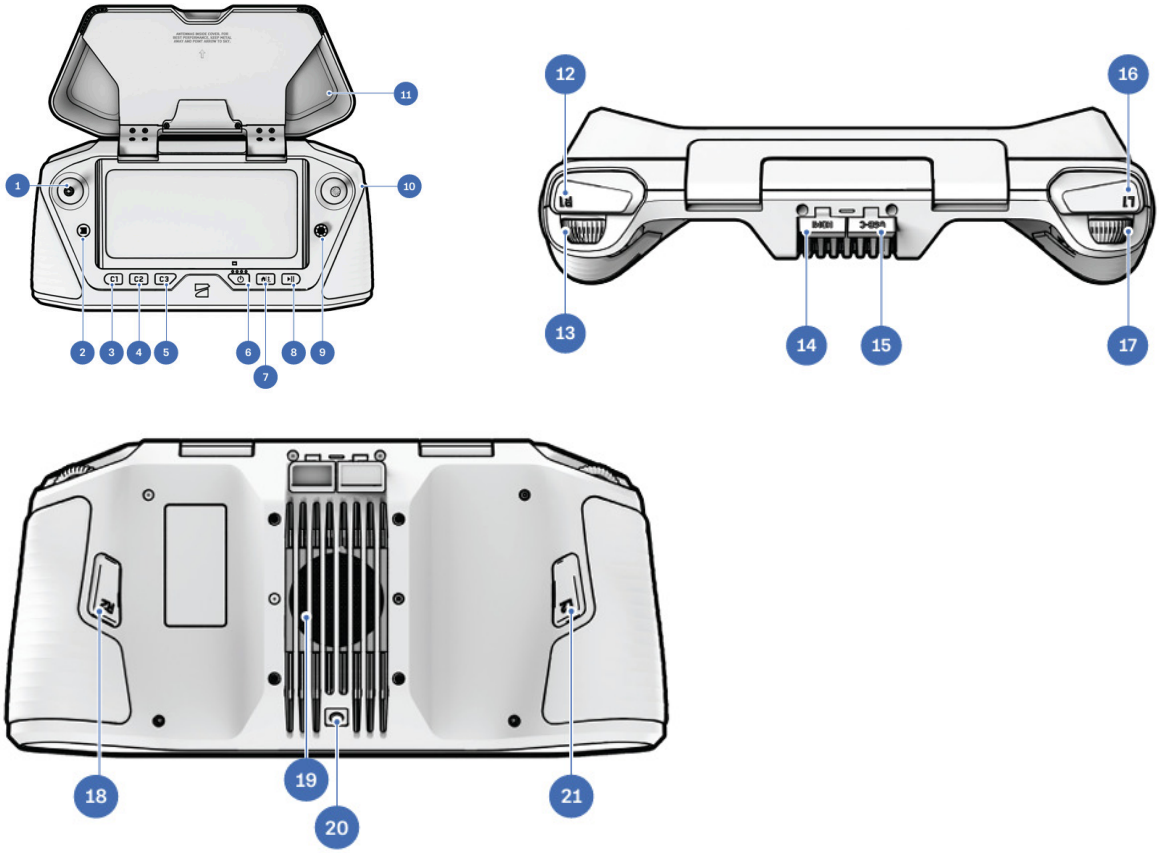
Error occurred during the software update • Wait 10-20 minutes, and then restart the drone if the error state persists.	Flashing red

R10 LED Behavior during Media Sync

NOTE: *If the drone is connected to an Ethernet cable instead of a power cable, the drone will upload media to Skydio Cloud, but the lights will not change to green. Visit the Fleet page in Skydio cloud to confirm that media is uploading.*

Function	Color and Pattern
Media Sync triggered	Blue changes to green (this will happen once, then the lights will stay green)
Searching for a wireless network and connecting to Skydio Cloud (this should take ~1 minute)	Green breathing pattern
Connected to a wireless network	Green solid
Media is uploading	Green chasing pattern
Media sync complete	Green solid

Skydio Controller Hardware



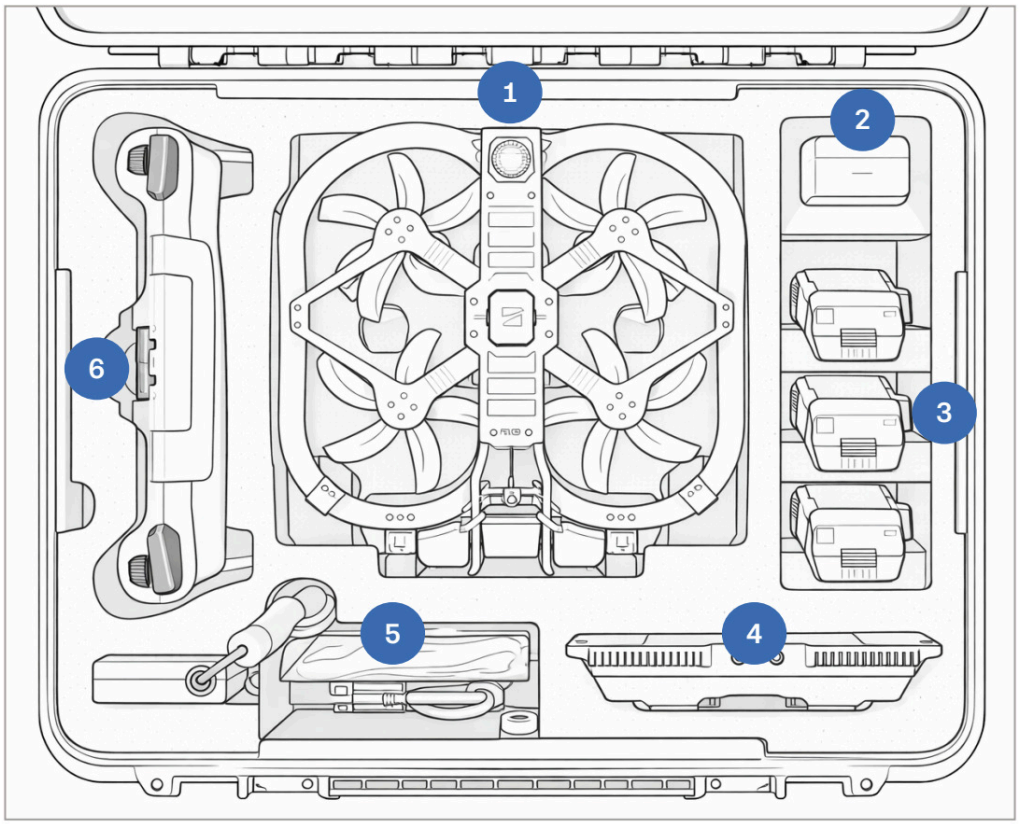
1. Left joystick
2. Menu/Back button
3. C1 button[1]
4. C1 button[2]
5. C1 button[3]
6. Power button
7. Launch/Return/Land button
8. Pause button
9. Directional pad (D-pad)
10. Right joystick
11. Controller cover/antennas
12. R1 button (Shutter)
13. Right wheel
14. HDMI port
15. USB-C charge port

[1] Customizable
[2] Customizable
[3] Customizable

16. L1 button (Boost)
17. Left wheel[4]
18. R2 button[5]
19. Cooling fan
20. Neck strap[6] and tripod mount
21. L2 button[7]

[4] Customizable
[5] Customizable
[6] Neck strap sold separately
[7] Customizable

R10 Team Kit Layout and Components



1. Skydio R10 drones (2) stacked in center compartment with foam insert; spare propellers stored below
2. 65W USB-C Power Supply
3. Skydio R10 Batteries (4, one installed in R10)
4. Skydio R10 Dual Charger
5. 230W Power Supply, USB-C to USB-C Cable, Lens Wipe, T6 Driver
6. Skydio Controller

NOTE: *The Patrol Kit contains one drone and three batteries.*

Connectivity

Skydio Connect

Skydio Connect includes various radio connectivity options between Skydio R10, the Skydio Controller, and Flight Deck controls, whether you're flying with the controller or via browser.

There are two Skydio Connect options when purchasing your Skydio R10:

Skydio Connect SL provides a proprietary, optimized point-to-point wireless link between R10 and the controller. With line-of-sight distances up to 4 miles (~7 km), SL offers robust performance for most autonomous flight missions.*

- Operating frequency: 5GHz
- Range in ideal conditions: 4 miles (7 km)

**Always monitor battery life*.

Skydio Connect 5G allows you to fly Skydio R10 anywhere with a stable cellular connection. With the addition of Skydio Remote Flight Deck you can also operate your Skydio drones through an internet browser via Skydio Cloud. You will also be able to remotely operate your drones from any Skydio Controller that is connected to your 5G network.

Skydio Connect Fusion

If you purchased Skydio Connect 5G, you will have access to Connect SL along with **Skydio Fusion**.

Skydio Connect Fusion is a feature that manages Connect SL and Connect 5G to maintain a reliable video and control link. When both SL and 5G are available, the system monitors link quality and uses a bonded connection to maintain stable connectivity.

Fusion is built into the flight system and does not require manual configuration. It ensures continuity of operations even in environments with fluctuating signal strength.

- Fusion is set as the default **Flight Connection** within the **Radio** menu
- Select FUS in the telemetry bar to view detailed connection health status

Specifications

Skydio R10 Drone

Startup time	Under 30 seconds
Vehicle dimensions	Height: 61.5mm/ 2.4” Width: 260.5mm/ 10.3” Length: 263.0mm/ 10.4”
Propeller dimensions (diagonal tip-to-tip of propeller)	4"
Weight (incl. battery)	785g / 1.73 lbs
Operation frequency	Connect SL: 5 GHz IEEE 802.11, 5180 MHz (Channel 36) - 5825 MHz (Channel 165) Connect 5G: 600-960MHz, 1700-2200MHz
Transmitter power (EIRP)	Connect SL: <35dBm (5GHz) Connect 5G: <20dBm
Max angular velocity	Yaw: 150 deg/s Roll / pitch: 240 deg/s
Max tilt angle	45 degrees
Max ascent/descent speed	Ascent: About 7 mph (3 m/s) Descent: About 5 mph (2 m/s)
Max horizontal speed (at sea level)	About 27 mph (12 m/s)
Max service ceiling above sea level	10,000 ft density altitude
Max gust tolerance	About 22 mph (10 m/s)
Flight Time	20 minutes
Max perch time	3 hours
Processor	Qualcomm Snapdragon 865 SoC
Ingress protection rating	Not rated for sustained water exposure. In case of exposure, dry unit as soon as

	possible.
Operational temperature range	-4°F to 122°F / -20°C to +50°C
Wireless networking (media offload)	Connect SL: WiFi6 Connect 5G: Cellular LTE/5G
Obstacle avoidance coverage	Forward facing 180°

Gimbal

User controllable range	±90 deg
Mechanical range	±119 deg

1” camera

Sensor	1" 12.5MP sensor
Diagonal field of view	93°
Focal length	8 mm (20 mm equivalent)
Aperture	f/1.95
Focus	100% focus pixel, 1 m to ∞
Exposure compensation	+-3
Electronic shutter speed	1/30 to 1/8000
ISO range	100 to 16000

Vision systems / navigation cameras

Configuration	2x forward facing stereo
Sensor	Samsung 1/2.8” 32MP color CMOS

Light sensitivity	Visible light
Aperture	f/1.8
Diagonal field of view	200°
Obstacle sensing range	20 meters
Environment coverage	Forward 180°

Flight battery

Capacity	4900 mAh
Voltage	14.4v
Battery type	Rechargeable lithium ion
Energy	70 Wh
Chemical system	Lithium ion

System security

Wireless encryption	Connect SL: AES-256 Connect 5G: AES-128
NDAA compliance	NDAA compliant
Internal disk storage	Encrypted
Pairing	Secure wired pairing

Skydio Controller

Controller Dimensions	10” x 5” x 3”
Dimensions	10.5” x 5” x 3”

Screen	6.6” Dynamic AMOLED touchscreen 120Hz Adaptive Refresh Rate Resolution: 2340 x 1080 pixels Brightness: 1750 nits (outdoor peak) 392ppi`
Weight	1135 grams
Max Range	4 miles (~7 km)
Operating Frequencies	Connect SL: 5 GHz IEEE 802.11, 5180 MHz (Channel 36) - 5825 MHz (Channel 165) Connect 5: 5150-5850MHz
Transmitter Power (EIRP)	Connect SL: 35.9dBmi (5GHz)
Ingress Protection Rating	IP54
Operating Time	Approx. 5 hours
Battery	9600mAH
GNSS	GPS + Galileo + GLONASS + BeiDou
Operational Temperature Range	-4°F to 113°F / -20°C to +45°C
Wired Outputs	HDMI & USB-C
Wireless Networking	WiFi, Cellular LTE/5G 1
Security	NDAA compliant AES-256 encrypted data link Encrypted internal disk storage Password protected Root of trust Trusted boot Secure update

Dual Charger

Charge time at 230W	35 minutes per battery (0-100%)
Charge time at 100W	1 hour per battery (0-100%)

NightSense (built into R10)

Illumination	Visible light
Location	Front of propeller guards, forward facing

System Limitations

Understanding system limitations helps teams plan effectively, recognize degraded performance, and respond appropriately during flight. Environmental conditions, operator inputs, and mission complexity can all impact system behavior.

Lighting and Visibility

- Airborne particulates such as dust, smoke, or debris may reduce visibility and degrade Visual-Inertial Odometry (VIO), potentially affecting obstacle avoidance and position hold.
- Fog-like environments (e.g., gas, fine particulates) may obscure camera input and lead to navigation instability or transition to Attitude Mode.
- Reflective, transparent, or low-texture environments (e.g., glass, mirrors, glossy walls, or uniform surfaces) may be difficult for the system to detect and avoid.
    - Bright, uniform lighting on plain walls can wash out contrast, making it harder for the drone to detect features it needs for navigation.
    - Mirrors, glossy floors, or metal surfaces can create confusing visual signals.
- Repeating patterns (e.g., chain-link fencing) and very thin objects may not be reliably detected.
- In rare edge cases, extremely bright lighting in confined spaces may introduce visual artifacts (e.g., banding or strobing), which could impact navigation.
- Sensor saturation: If a light source is very bright (e.g., direct sunlight through a window, strong LEDs, or reflective surfaces), parts of the camera image can get blown out. That reduces usable visual detail for tracking.
- Flicker from artificial lighting: Some LEDs and fluorescent lights flicker at high frequencies. While humans don't notice it, cameras may pick it up as banding or strobing, especially depending on shutter speed.

TIP: *To have the best chance of recovering VIO, fly to a more open area with clear visibility and out of dusty or obscured environments, then operate within sight of visual features.*

Navigation and Positioning

- Visual navigation (VIO) may degrade in environments with poor visibility, low texture, or after sudden, uncommanded motion (e.g., unexpected collisions)
- Loss of reliable navigation may result in a transition to Attitude Mode, where the drone no longer holds position and must be actively piloted.

- In Attitude Mode, if no control input is detected, the system may initiate an automatic emergency landing after a short delay. Review the *Contingency Behaviors* for detailed Attitude Mode functionality.
- Backtracking returns may be affected by drift in large or feature-poor environments (e.g., large indoor spaces) which may lead to incomplete or unsuccessful returns.

TIP: *Monitor navigation health and control responsiveness. If movement becomes unpredictable, stabilize the drone and allow navigation to recover before continuing operations.*

Connectivity and Signal

- High-noise environments and potential sources of electromagnetic interference (EMI) may affect communication and situational awareness. These risks should be evaluated in advance, and contingency plans should be established to address them if encountered during the mission.
- Signal strength and maximum control range may be affected when flying in areas with electromagnetic interference.
- Wireless performance depends on proper controller orientation. The controller uses a directional antenna with an approximate 120° coverage cone and performs best when pointed toward the drone or its general direction (e.g., toward an entry point or opening when operating indoors). Pointing the controller away from the drone may result in reduced signal strength or loss of connection.

TIP: *When possible, maintain line-of-sign between the controller and drone. Orient the controller toward the drone or entry point to improve connection stability.*

Environment

- Skydio R10 is not rated for sustained water exposure. In case of exposure, dry unit as soon as possible.
- Do not operate the flight system in winds greater than 22 mph (10 m/s).
- Dust or debris may accumulate on navigation cameras, preventing proper operation until cleaned.
- Contaminants such as dust or chemical residue can degrade performance but do not typically damage the system if properly cleaned.
- Follow maintenance guidelines for optimal system performance (e.g., use a microfiber cloth or damp cloth to clean surfaces and cameras, use light compressed air to remove debris, avoid excessive moisture or submersion).

- Skydio R10 operational temperature range is -4°F to 122°F (-20°C to 50°C).
- Battery charging is not supported below 32°F (0°C) or above 122°F (50°C). Battery performance may degrade in extreme temperatures, and storage behavior (e.g., self-discharge) may vary based on conditions. See the *Maintenance* section for more information.

Turtle Mode

- Ensure the surrounding area is clear prior to initiating a recovery.
- Low-friction surfaces (e.g., polished concrete, smooth tile) may cause the drone to slide before completing rotation.
- Leaning or obstructed positions may require an intermediate rotation before achieving an upright orientation.
- Repeated unsuccessful recovery attempts may indicate physical obstruction.

Perch Mode

- While perched, Skydio R10 relies on propeller movement for cooling. If propellers are blocked or airflow is restricted, the drone may overheat and eventually power down.
- If cooling is impaired, the drone may become hot to the touch.
- Loss of connection while perched will not initiate a return. The drone will remain in place until the battery is depleted. Battery depletion while perched will end the mission without repositioning the drone.
- Audio and video performance may be affected by connection quality, including latency or reduced signal strength.
- Environmental conditions (e.g., confined spaces, debris, or obstructions) may impact system performance while perched.

TIP: *Monitor battery level, connection quality, and physical obstructions while perched. Avoid placing the drone in positions where airflow may be restricted. For improved audio clarity when using Two-Way Audio, Skydio recommends using USB-C headphones.*

Operations Planning

Relevant Flight Crew Role(s): *Organization Admins, Pilot in Command (PIC)*

Operations Planning prepares the flight crew to execute flights safely, efficiently, and predictably before arriving onsite.

During this phase, Pilots or Remote Pilots define operational objectives, configure autonomous flight parameters, and ensure required data and mission files are available on the Skydio Controller. Proper planning reduces field setup time, minimizes configuration errors, and enables repeatable flight execution.

Operations Planning should be completed prior to entering the Preflight phase.

This section outlines the following key objectives:

1. Preparation
2. Planning Considerations
3. Contingency Planning
4. Downloading Maps
5. How to Import and View Custom Map Layers

Preparation

Effective use of Skydio R10 in high-risk or time-sensitive operations requires coordination between the Pilot (PIC) or Remote Pilot (RPIC) and the operational or tactical teams.

In many deployments, the Pilot is responsible for operating the drone but may be taking direction from a separate tactical lead.

Airspace Check

If the operation requires flight inside of controlled airspace then the pilot/admin should initiate any additional waiver processes that may be required as soon as possible, for example a Low Altitude Authorization and Notification Capability waiver (LAANC).

- For Part 107 Visual Line of Sight operations, Instant Authorization is available through FAA approved LAANC service provider applications found here: https://www.faa.gov/uas/getting_started/laanc
- For Part 107 Visual Line of Sight operations: If the operation calls for indoor flight but the pilot still needs to take off from an outdoor location, airspace regulations still apply. Therefore:
    - Pilots should verify the launch area is not inside controlled airspace, and if any additional waivers are required then those should be handled early in the Operations Planning process.
    - Check for controlled/restricted airspace, temporary flight restrictions
    - Seek additional waivers if needed
- For Beyond Visual Line of Sight operations under a Certificate of Authorization: Check for controlled airspace, temporary flight restrictions, or other boundaries in your operating area such as geofences.
    - Follow steps for Site Familiarization found in the Downloadable Reference Cards

Equipment Readiness

- Verify sufficient batteries are charged and available to support the planned operation, including contingency or extended flight time
- Confirm a plan for in-field battery replacement or on-station relief if continuous observation is required
- Ensure the controller is fully charged and configured for the mission
- If using Remote Flight Deck, ensure all of the computer system requirements are met for piloting from RFD

- If replacing batteries in the field is required, keep a suitable external power source available as part of mission preparation
    - Minimum external power requirement: 27 W
- If required, test video output or streaming setups
    - HDMI output from the Skydio Controller to an external monitor
    - Sharing via ReadyLink: Ensure Skydio Cloud configurations are complete (e.g., Groups are set up for distribution, Alerts are configured)

Personnel and Roles

The flight system requires an actively engaged operator (it is not designed for unattended operation). Situational awareness, including battery level, connectivity, and environment, must be continually monitored.

Identify the Pilot or Remote Pilot and confirm they understand their role in supporting the operation.

- Identify tactical leads or decision-makers responsible for directing the mission
- Establish how instructions will be communicated to the PIC/RPIC during the operation

Data and/or evidence handling requirements are the responsibility of the agency.

Communications Planning

Clear communication protocols must be established between the PIC/RPIC and the operational team(s) before flight.

- Audio captured during operations is stored locally and will not automatically sync to Skydio Cloud (review the *Perch Mode* section for more information)

At a minimum, the PIC/RPIC should communicate:

- Launch
- Entering or exiting a structure
- Repositioning or perching
    - Communicate all major drone movements to the operational team before executing
- Current or estimated flight time remaining
- Potential limitations or inability to safely execute a requested action

Operational teams should provide clear direction to the PIC/RPIC, including:

- Entry points (e.g., doors, windows, breach locations)
- Priority areas to observe or clear
- Order of operations for search or inspection

Planning Considerations

Positioning and Deployment

Pilot and Remote Pilot positioning during the operation should be coordinated with the operational team prior to launch. The PIC/RPIC may be directed to operate from a specific location that provides adequate visibility while maintaining a safe location for the PIC/RPIC (e.g., cover and concealment).

Launch location should be selected based on both safety and mission needs, including proximity to entry points and the ability to maintain a stable connection. The PIC/RPIC should be prepared to adapt positioning based on changing conditions or direction from the tactical lead.

- For maximum wireless performance when flying over a direct link with the Skydio Controller, point the controller cover toward the drone

Signal strength and maximum control range may be affected when flying in areas with electromagnetic interference.

Flight Duration and Continuity

Flight duration should be actively managed throughout the mission, especially in scenarios requiring continuous observation.

The PIC/RPIC should monitor remaining flight time and communicate updates to the operational or tactical team early and often. This allows the team to plan for battery replacement, redeployment, or on-station relief to another drone without losing visibility at critical moments.

Failure to plan for flight duration can result in gaps in coverage during key phases of the operation, which may adversely impact situational awareness.

Flight System Capability, Operational Risks, and Limitations

Before and during the mission, the PIC/RPIC should continuously assess whether the drone can safely perform requested actions. This includes evaluating the feasibility of entering confined spaces, perching in specific locations, or interacting with the environment. The operational team should consider factors such as confined spaces,

obstructions, and layouts that may limit maneuverability or create the risk of the drone becoming trapped.

The PIC/RPIC is responsible for communicating clearly with the operational team if a maneuver cannot be safely executed, and should provide alternative approaches when possible.

Operational decisions should account for the drone's capabilities and limitations to avoid unnecessary risk or loss of the system.

Review *Flight System Overview > System Limitations* for details.

- Airborne particulates such as dust, smoke, or debris may reduce visibility or degrade performance.
- High-noise environments and potential sources of electromagnetic interference (EMI) may affect communication and situational awareness. These risks should be evaluated in advance, and contingency plans should be established to address them if encountered during the mission.
- Skydio R10 is not rated for sustained water exposure. In case of exposure, dry unit as soon as possible.

Contingency Planning

Loss of Drone Access

Operations should account for scenarios where the drone is no longer able to safely continue in or exit the environment. This may occur if the drone becomes trapped in a confined space, is unable to relaunch from a perch location, or encounters an obstruction that prevents recovery.

Prior to deployment, the operational team should determine whether recovery of the drone is required and, if so, how it will be accomplished. In some cases, it may be necessary to abandon the drone to avoid introducing additional risk to personnel.

Battery and Mission Interruptions

Battery limitations should be treated as a critical factor in mission continuity. The PIC/RPIC should communicate battery status early enough to allow the operational team to adjust plans or prepare a replacement drone.

For operations requiring persistent observation, teams should establish a plan for on-station relief, such as staging additional batteries or deploying a second drone.

Without a defined plan, low battery conditions may interrupt visibility at key moments and impact operational effectiveness.

System Settings and Behavior Awareness

The operational team should understand how the drone will behave in automated or semi-automated scenarios, particularly when executing return actions.

For example, Backtrack return behavior will follow the general path of travel rather than precisely retracing every movement, which may impact how the drone exits complex environments. Teams should anticipate how these behaviors will interact with the mission environment and ensure that fallback options are available if automated behaviors do not align with operational needs.

The operational team should also consider how return behavior may expose sensitive locations. If the return path of the drone could reveal the position of the pilot or operational personnel, ensure an appropriate Home Point is set prior to flight.

On-Scene Battery Replacement

> ***NOTE:*** *For detailed battery removal and installation steps, refer to the Maintenance section.*

During controller or remote operations requiring continuous flight or extended observation, the battery can be replaced in the field to support rapid redeployment.

- Plan for battery replacement in advance if continuous observation is required.
- Maintain charged batteries on hand and ready for rapid swap.
- Confirm replacement batteries meet minimum power requirements for charging (minimum 27 W when using external power sources).
- The included wall charger may be used for external power.

Step 1 - Land Skydio R10 in a safe location

Step 2 - Using the USB-C port on the top of the drone, connect to an external power source

Step 3 - Remove the battery

Squeeze the 2x Battery release clips located on either side to disengage the battery.

Step 4 - Install the charged battery

Press the battery firmly into R10 and ensure the 2x battery release clips “click” into place.

Step 5 - Disconnect from external power

After the replacement battery is installed and seated, disconnect the external power source.

Step 6 - Relaunch and continue operations

How to Import and View Custom Map Layers

NOTE: *Base maps and layers are limited to 15 files to prevent excessive storage usage on the controller.*

Adding a custom map layer enables you to display critical information, such as mission boundaries, wildfire zones, or asset locations, as visual overlays on the Skydio Skydio Controller. Use custom map layers in-flight to improve situational awareness and stay aligned with operational requirements.

Supported map formats include:

- KML/KMZ
- GeoJSON
- GeoTIFF
- GeoPDF
- MBTiles

In the Map Library, you will see Base Maps and Map Layers:

- **Base Maps -** Displays the maps that were downloaded via Information > Download Maps (e.g., Mapbox tiles)
- **Map Layers -** Displays imported map files that will be used as custom layers

Operational Considerations

- Map layers are visual only and do not affect flight paths or mission logic.
- Newer imports are listed above previously imported layers. Layers cannot be reordered.
- Layers dynamically hide or display depending on the zoom level to maintain optimal rendering and readability (i.e., layers disappear at lower zoom levels).
- Large or vector-heavy files may cause short lag when enabling or disabling.
- Unsupported or corrupt files will display an import error.
- The name of the map file is the name that will display on the Skydio Controller and cannot be changed.
- KML/KMZ styling (color, shading) may not always be preserved.
- Deleting old layers frees storage and improves performance.
- For best visibility, import opaque layers first, followed by transparent ones.
- After importing, map layers persist between flights, reboots, and users.

Tips and best practices

- Press and hold on the name of a layer to automatically center and zoom the map to that layer's boundaries (the map will center even if the layer is currently not visible)
- Upload opaque map layers before transparent ones to maintain layer visibility

Map file details and transparency

Map layers are **visual references only**. They do not modify flight paths, mission logic, or geofence boundaries.

- **Layer order:** Newer layers display on top of previously imported layers. Reordering is not currently supported.
- **Transparency:**
    - **Vector formats** (KML, KMZ, GeoJSON) support transparency and can stack visually.
    - **Raster formats** (GeoTIFF, GeoPDF) are opaque and may obscure layers beneath them.
    - For best results, import large raster layers first, then overlay transparent vector layers.
- **MBTiles:** May contain either raster or vector tiles. Transparency depends on how the file was created.
    - Vector tiles → transparent
    - Raster tiles → opaque
- **Zoom-dependent visibility:** Some layers will automatically hide when zoomed too far in or out. This is expected behavior to maintain map readability.
- **Persistence:** Layers remain available between reboots and user sessions, as long as they are not manually deleted.
- **Performance:** Rapidly toggling multiple large layers may cause short UI lag or slower rendering.

How to import map layers

Step 1 - Save map files to a USB-C drive

For example, you can find official wildfire map files from the U.S. Wildland Fire Data FTP site, managed by the National Interagency Fire Center (NIFC)

Step 2 - Insert the USB-C drive into the back of the controller

Step 3 - Navigate to Info > Map Library

Step 4 - Under Map Layers, select Add New Map Layer (+) to load supported files

- The name of the map file is the name that will display on the Skydio Controller
- Upload opaque map layers before transparent ones

NOTE: *Large files (e.g., GeoPDF or GeoTIFF) may take several minutes to upload depending on file size. As a general guideline, allow about one minute per 10 MB of file size during import.*

Viewing and managing map layers

During flight, select the **Map Settings Icon > Layers** to view a list of your layers. Use the eye icon to enable or disable markers.

- Toggle, preview, or remove map layers at any time

Disabling a map layer inflight

Step 1 - Select the Map Settings Icon

Step 2 - Select Layers

- A list of imported layers will appear
- Use the eye icon to show or hide layers

Deleting a Map Layer

Navigate to the **Map Library**, select the layer, and select **Delete**.

- Removing unused layers frees up storage space

Downloading Maps

Download maps when operating in offline environments. Downloaded maps will be 3.5 x 3.5 square miles, centered around the target point even if you are zoomed in. Your map will appear in the Map Library once the download is complete.

Step 1 - Select the blue + icon under Add New Maps and a satellite view of your current location will display.

Step 2 - Drag and pinch-to-zoom on the map until your desired location is centered on the screen

Step 3 - Use the search bar to enter coordinates or type a location

Step 4 - Select Download Map to save

Initialization

Relevant Flight Crew Role(s): *Organization Admins, Pilot in Command (PIC)*

Flight system initialization ensures that all components of the Skydio R10 Flight System are properly configured and functional for safe and effective flight.

Initialization includes all activities that prepare the sUAS for a live flight within a predetermined geographic area. This includes powering on the flight system, performing system diagnostics, conducting any relevant repairs or maintenance, preparing mission-specific information and mapping waypoints, and ensuring all components are ready for operation.

This section outlines the following key objectives:

1. Overview
2. Registering with the Federal Aviation Administration (FAA)
3. Skydio Cloud Setup
4. Skydio R10 Setup
5. Skydio Controller Setup
6. Updating the Skydio Controller
7. Updating Skydio R10
8. Charging Skydio R10
9. Charging Skydio R10 Batteries with the Dual Charger

Welcome to Skydio R10

Skydio R10 is an autonomous aerial system designed for operation in **confined, complex, and GPS-denied environments**. Built for ease of operation, the system uses onboard autonomy and real-time perception to provide stable, predictable flight behavior in dynamic conditions.

The system uses visual-internal odometry (VIO) for GPS-optional navigation and adapts its launch and flight behavior based on the available space.

- Designed with a compact, robust airframe and integrated propeller guards to support operation in close proximity to obstacles
- Maintains reliable connectivity and streams real-time video for situational awareness

Skydio R10 **includes recovery and operational features** such as **Turtle Mode for self-righting**, **Perch Mode for landing while maintaining camera feed and control**, and inte**grated two-way audio for communication between Pilot and personnel near the drone**.

Registering with the Federal Aviation Administration (FAA)

Skydio R10 is Remote ID (RID) compliant. With the battery removed, you will see a label signifying RID compliance on the bottom of the drone. United States federal law requires all drones operated under 14 CFR Part 107 to be registered.

1. **Create an account or log** in to FAA DroneZone
2. Navigate to Manage Device Inventory and **Add Device**
3. **Visibly display** your FAA registration number on your drone

Carry your registration card with you whenever you fly.

Skydio Cloud Setup

NOTE: *Skydio R10 and the Skydio Controller must be claimed in Skydio Cloud to receive software updates and fly with Connect 5G.*

An Organization Admin role is required to set up your Skydio Cloud organization.

Before flying, an Organization Admin will need to configure your Skydio Cloud account in order to manage your fleet or sync your media. This includes configuring organization settings, adding users, claiming your Skydio R10 and controller, and connecting to wireless networks.

Logging in and configuring default flight settings

Step 1 - Log in

Visit cloud.skydio.com and enter your email address. Enter the verification code sent to your email address.

Step 2 - Select Settings > General

Upload a logo for your organization to replace the Skydio logo in the upper left corner (optional).

Data Capture (enabled by default) allows GPS and telemetry data to automatically upload to the cloud after each flight.

If Data Capture is toggled off, the flight path and other telemetry data will not display on the flight screen.

Step 3 - Configure organizational default flight settings

Navigate to **Settings > Flight Settings > R10** and configure default settings that will be applied to all systems within the organization.

Adding Users

NOTE: *Only Organization Admin level accounts can add users. A member email address can only be associated with one organization at a time. Use the Login Methods tab to configure settings such as Single Sign-On (SSO).*

To enable remote operations, fleet management, and media access, each pilot or team member must have a user account in Skydio Cloud.

Adding users ensures that flight activity, settings, and media are properly attributed and accessible based on role and permissions.

Organization Admin	Has full access to organization settings in Skydio Cloud (e.g., Site creation, adding users and assigning roles, claiming devices, etc.)
Remote Pilot	Can plan and run missions (Remote Ops flown with Remote Flight Deck only)
Pilot	User is assigned to a drone, but has no Cloud dashboard access
Cloud User	Can view dashboard, download flight data, and sync, manage and view media (with the purchase of Media Sync)

Step 1 - Select Settings

Step 2 - Select Users

Step 3 - Add members

Select Invite a Member or import a CSV or text file. Add an email address for the user and assign a role.

This is a crucial step to ensure pilots in your organization can access Skydio Flight Deck on their Skydio Controller.

Troubleshooting

If technical assistance from Skydio Support is needed, Organization Admins can invite support personnel into their organization with time-limited, controlled access.

Two user roles, **Skydio Read-Only** and **Skydio Superuser**, let Administrators decide the level of access and duration, giving Administrators control during troubleshooting.

- **Skydio Read-Only** – Only provides viewing access to the organization for light troubleshooting; including incident markers, Axon device locations, flight history, media playback, and scan data
- **Skydio Superuser** – Provides Organization Admin-level access to the organization for in-depth debugging and configuration support

Claiming Devices

You will need to claim your drone and controller in Skydio Cloud to receive software updates. Claiming your drone, controller,, and batteries also enables you to track usage metrics and assign additional software licenses.

Skydio R10 is not automatically associated with an organization, meaning you will need to claim the devices that you want in your fleet.

Step 1 - Select Settings

Step 2 - Select Devices

Step 3 - Select Claim Device

Step 4 - Depending on the device you are claiming, enter either the UAV name, serial number, or and battery serial number

Finding Drone Name, Controller Serial Number, and Battery Serial Number

Skydio R10 UAV Name
This begins with **SkydioR10-** and can be found on the label under the battery.

Skydio Controller Serial Number
This begins with **X10CTRL-** and can be found on the label located on the back of the controller.

Skydio R10 Battery Serial Number
This 16-character number begins with **S213440** and can be found on the battery label below the QR code.

Media Sync

If you have purchased Media Sync for your organization, you will need to add a wireless network and configure your media upload preferences. Media Sync can also be configured over an Ethernet connection using a compatible dongle, which may provide faster upload speeds than WiFi.

> ***INFO:*** *For more information about setting up Media Sync, visit How to use Media Sync in Skydio Cloud. You also have the ability to enable watermarks on your photos and videos. For more information, visit How to enable watermark overlays in Skydio Cloud.*

DFR Command Remote Operations: Remote ID for Single Operations Center

If all Remote Pilots in an organization operate from a single, physical operations center, Organization Admins have the option to set a fixed location in Skydio Cloud. This location is then included in the Remote ID message that the drone broadcasts during flight.

If **Single Operations Center toggle** is enabled, Remote Pilots will not need to use the Skydio Enterprise app to share their location.

> ***NOTE:*** *The Single Operations Center toggle is only accessible to an Organization Admin.*

Organization Admins are responsible for:

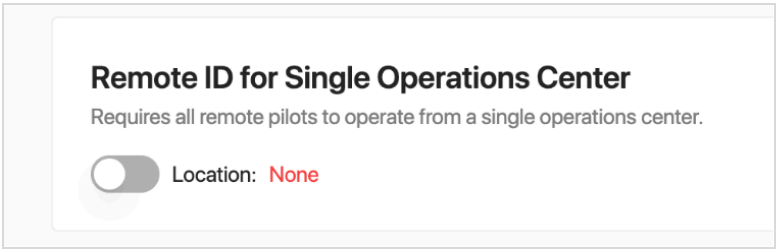
- Enabling this setting if required
- Ensuring access permissions are limited to Organizational Administrators
- Entering and saving the correct location for the organization's center of operations
- Verifying that the selected location is defined accurately, in accordance with FAA Remote ID compliance (14 CFR Part 89)
- Ensuring that all Remote Pilots understand they must operate from this designated location.

The address entered will be associated with the Remote ID broadcasts and is necessary for compliance with Federal Regulation 14 CFR Part 89.

Setting the Single Operations Center Address

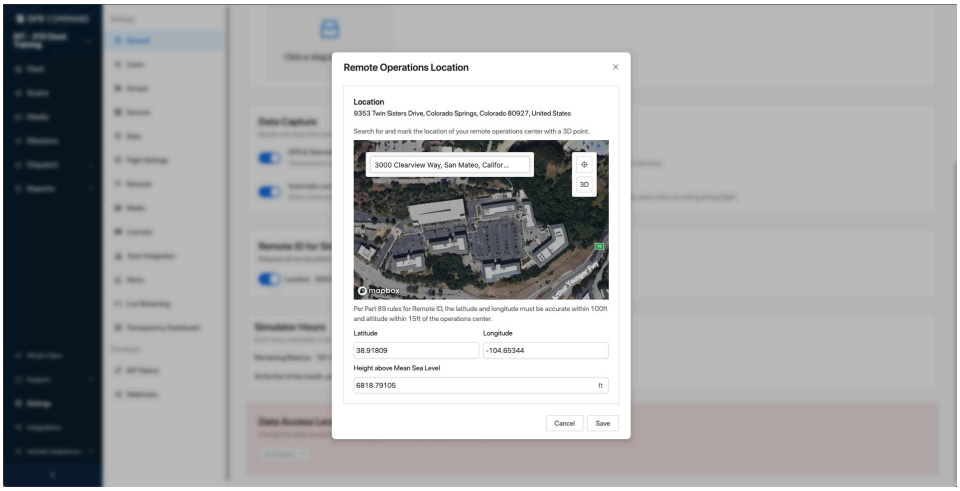
To set the Single Operations Center Address, Organization Admins should follow the steps below:

Step 1 - Enable the Remote ID for Single Operations Center toggle



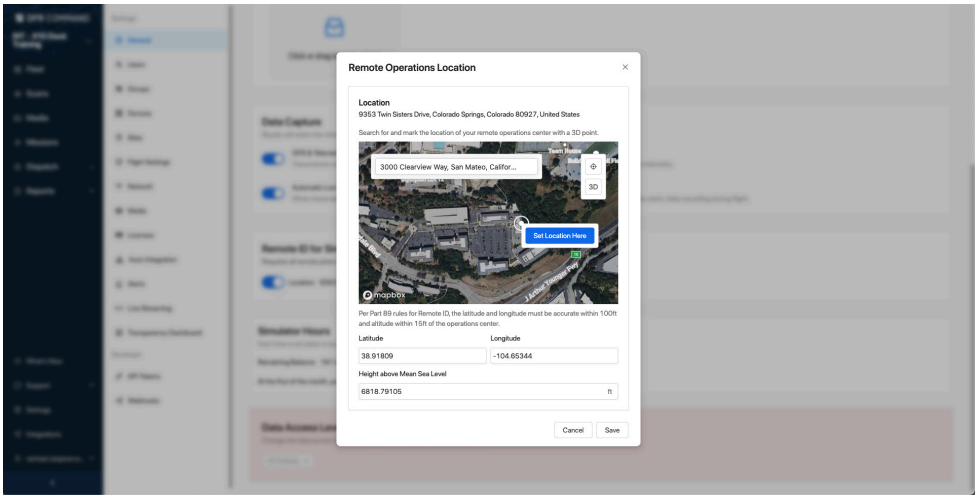
Step 2 - Select Edit

Step 3 - Use the search bar or Map View to locate the address of the operations center

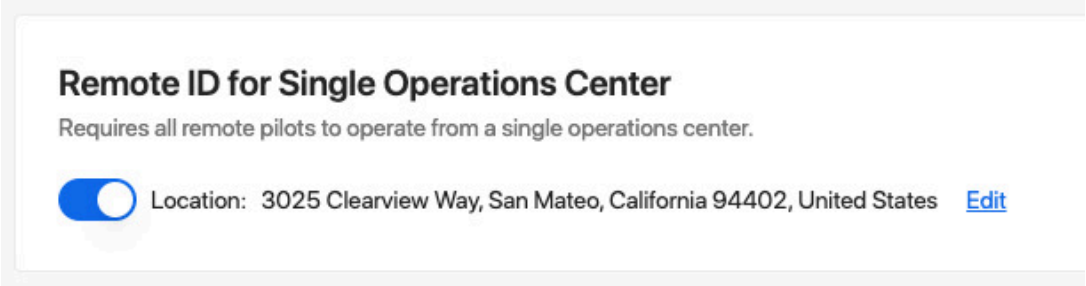


Step 4 - Click on the location of the operations center to set the pin

Step 5 - Select Set Location Here



Step 6 - Save



Remote Operations: Sharing Remote Operator Location using the Skydio Enterprise App

Remote Pilots can take the following steps:

1. Download the Skydio Enterprise app from Google Play or the App Store onto a mobile device
2. **Log in to the Skydio Enterprise app** using the same email address that is used in Skydio Cloud
3. When entering Remote Flight Deck, Remote Pilots will automatically be prompted to approve Remote ID
4. Approve Remote ID

More information about Remote ID can be found at www.skydio.com/regulatory.

Remote Operations: Gamepad Controller Setup (Optional)

Remote Flight Deck offers the flexibility to pilot the drone using a standard gamepad controller, providing an intuitive alternative to traditional keyboard control methods.

- If a controller is paired, Remote Pilots can still fly using keyboard inputs
- If the keyboard and controller are used simultaneously, RFD will respect the controller input over the keyboard

Supported Controllers

While many controllers with standard mapping are compatible, the following have been tested and confirmed to work seamlessly:

- Xbox Wireless Core Controller
- Xbox Wireless Controller
- Logitech F310

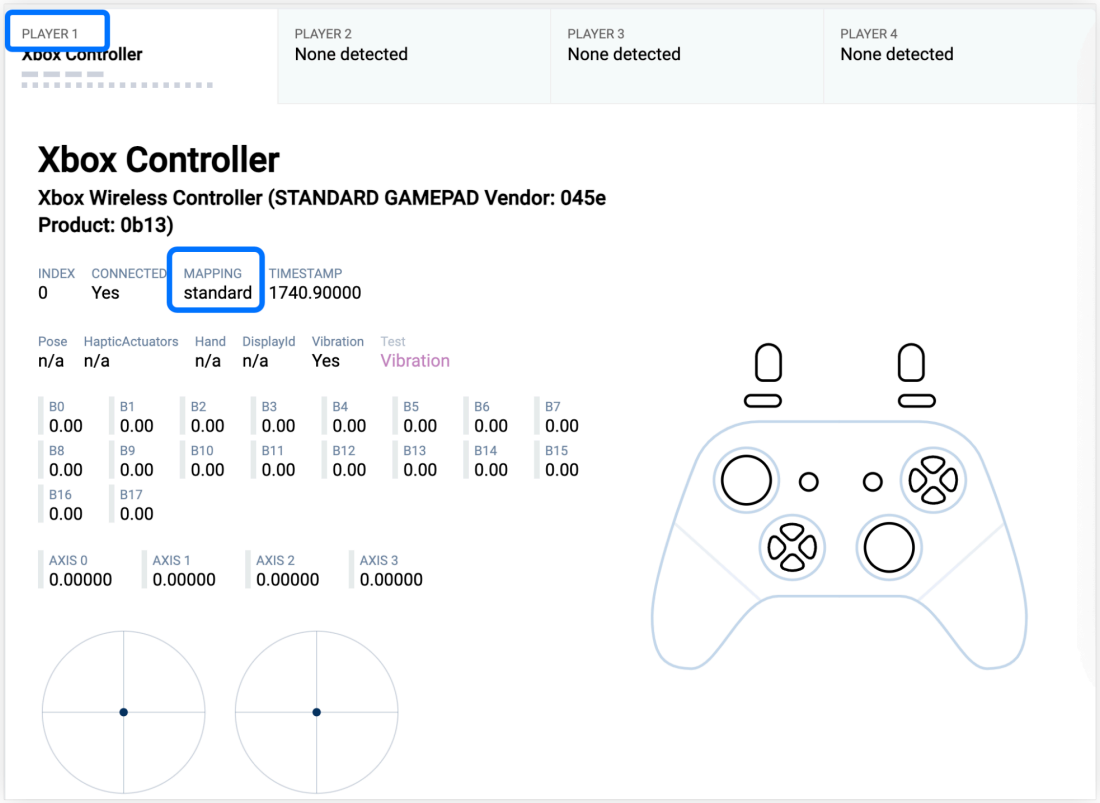
NOTE: *For the Logitech F310 controller, pressing the* ***Mode*** *button swaps the D-Pad with the left joystick. When connecting to a Mac, users should ensure the switch on the back is set to D (not X).*

Controller Setup

To set up a controller, users should:

Step 1 - Connect the gamepad to the computer using a USB cable (or pair to via Bluetooth)

Skydio Cloud will automatically recognize the controller and the gamepad will appear as **Player 1**. Mapping is "standard" by default.



Example image of hardwaretester.com showing a connected Xbox controller

Step 2 - Configure settings in Remote Flight Deck

Open Remote Flight Deck Settings and select **Flight Controls**.

Settings only persist through the current browser tab session.

Setting up Encryption without Physical Encryption Hardware

***CAUTION*:** *Skydio cannot recover lost passphrases. Losing a passphrase may make encrypted media unrecoverable. Always securely store your passphrase.*

Cloud-managed SD card encryption uses organization-level asymmetric encryption keys (AEK) provisioned through Skydio Cloud.

This eliminates the need for physical encryption hardware (e.g., Yubikeys) while maintaining secure, identity-based access control. FIPS 140-3 validated encryption simplifies key management for large fleets.

If an SD card or drone is lost, stolen, or handled outside of authorized workflows, the encrypted media remains unreadable without the organization's encryption credentials.

- Private key material is securely provisioned to the drone
- Media is encrypted automatically; files are encrypted at capture (write time) on the SD card.
- The drone must be unlocked before each flight to provision temporary key material required for operation.
- Browser-based decryption workflows allow authorized users to decrypt media client-side
- Encryption does not affect Media Sync configuration

Additionally, Organization Admins and Pilots can remotely unlock an encrypted drone from its Device Page in Skydio Cloud (the drone must have an active network connection).

Flight Crew Roles

Organization Admin

Only Organization Admins can perform this setup in Skydio Cloud. Organization Admins are responsible for:

- Enabling **Encrypt Drone Media** for the fleet (steps below)
- Creating and managing the organization's active encryption key, plus factory resetting the flight system if an encryption key is changed
    - Includes setting and rotating the passphrase that protects access to the private key material

- If required, decrypt media via approved workflows by providing the passphrase in Skydio Cloud

Pilots

Pilots are responsible for unlocking encrypted drones before flight and following approved workflows when accessing encrypted media or logs.

- Unlock encrypted drones before flight
- Unlock media or Support Logs on-device when prompted

Enable Encryption via Skydio Controllers

Step 1 - Navigate to Global Settings > Information

Step 2 - Select the name of your drone

Located under Devices.

Step 3 - Select Encryption

Step 4 - Select the Enabled option

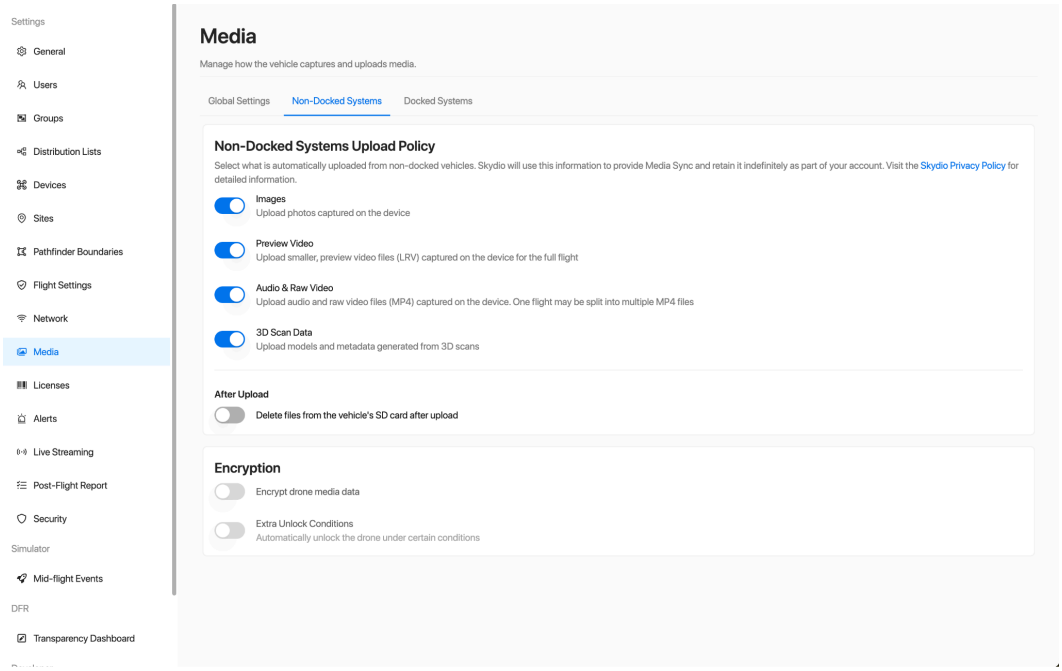
Enable Media Encryption via Skydio Cloud

To enable Media encryption on Non-Docked systems, Organization Admins should:

Step 1 - Navigate to Settings > Media

Step 2 - Select the Non-Docked Systems tab

Step 3 - Enable the toggle Encrypt Drone Media



Provision Encryption Keys in Skydio Cloud

> ***NOTE:*** *If an Organization Admin changes encryption keys, the drone must be factory reset. Rotating the passphrase does not change the active encryption key used by drones.*

The Skydio Cloud passphrase is required to decrypt media in edge cases where the drone is unavailable but the SD card has been recovered, allowing authorized users to decrypt files through the approved browser-based workflow.

Only one active Cloud-managed encryption key can be used at a time.

Step 1 - Navigate to Settings > Security

Step 2 - Locate the Key Management tab at the top of the page

Step 3 - Select Create a New Encryption Key

Step 4 - Enter a secure passphrase for the encryption key

- This passphrase is required to unlock encrypted data.
- **Securely store your passphrase** as Skydio cannot recover lost passphrases.
- Only share the passphrase with approved personnel.

Step 5 - Select Create Key

- Once created, the key appears in the Key Management table with a status of **Active**
- A **Key ID** and **Key Fingerprint** are listed.
- Only one active cloud-managed encryption key is used at a time.

Rotating or Changing Passphrases

CAUTION: *After rotation, the previous key will no longer work. Ensure all authorized users have access to the updated passphrase.*

If the Organization Admin needs to change the encryption key:

Step 1 - Select Rotate Active Passphrase

Step 2 - Enter a new secure passphrase

Step 3 - Select Rotate Passphrase

Unlocking Skydio R10

When encryption is enabled, Skydio R10 must be unlocked before flight operations can begin. After power cycles or postflight, the drone returns to a locked state and must be unlocked again.

Unlocking the system provisions temporary key material required for normal system operation. While the drone is locked, certain functionality, such as flight operations, media access, and Flight Skills, will be unavailable.

Selecting Unlock and Fly Now enables flight and system processes but does **not** decrypt the SD card. All files written to the SD card, including photos, videos, scan data, and support logs, remain encrypted at rest.

Locked Skydio R10
• The drone cannot decrypt encrypted SD media. • Files are visible when connected via USB-C, but unreadable. • Media does not appear in the controller Media menu. • On-drone processes that require plaintext cannot run.
Unlocked Skydio R10
• Drone can decrypt media encrypted with the currently provisioned key. • Media menu works. • Media Sync works. • USB-C/MTP access works (plaintext visible).

Media Sync and Upload Behavior

When Media Sync is enabled:

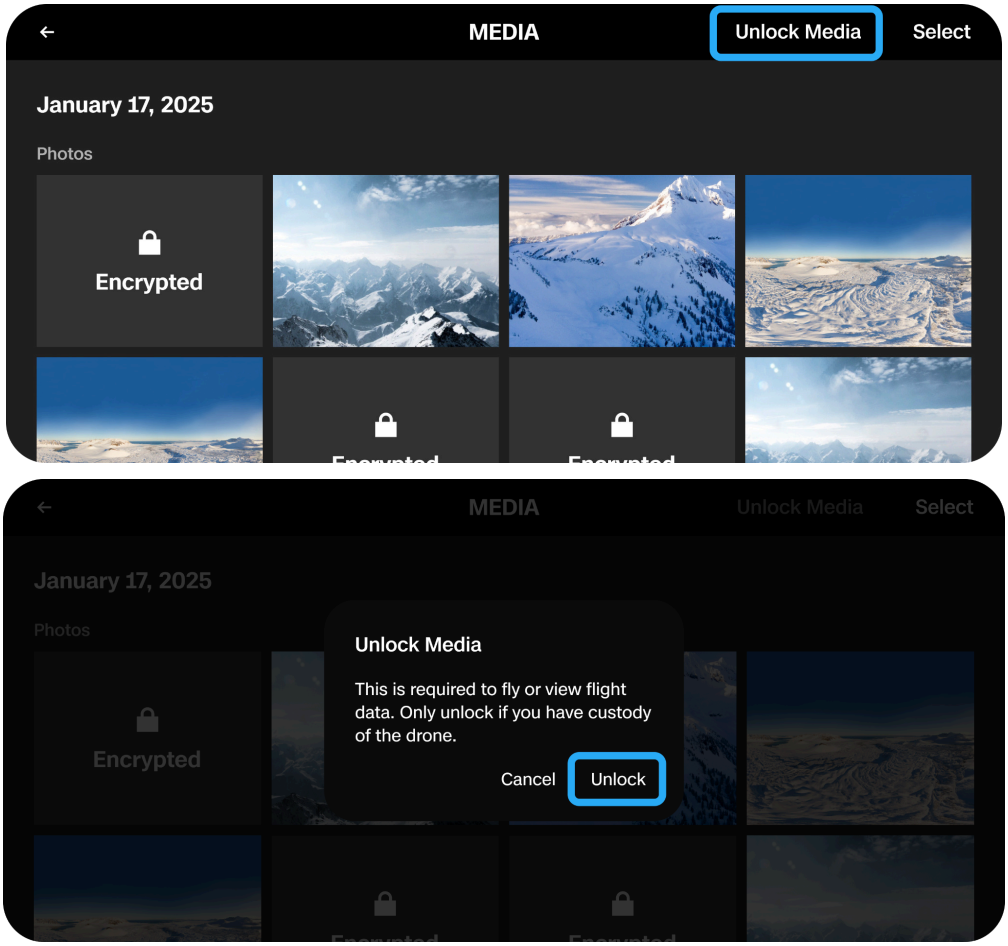
1. The drone is unlocked
2. Media is transferred from the SD card
3. Files are uploaded to Skydio Cloud in encrypted form

Encrypted files remain encrypted during upload. Data in transit is protected using industry-standard transport security (TLS 1.3).

Decryption of media files only occurs when explicitly initiated through an approved workflow (for example, the browser-based client-side decryption process using an authorized passphrase).

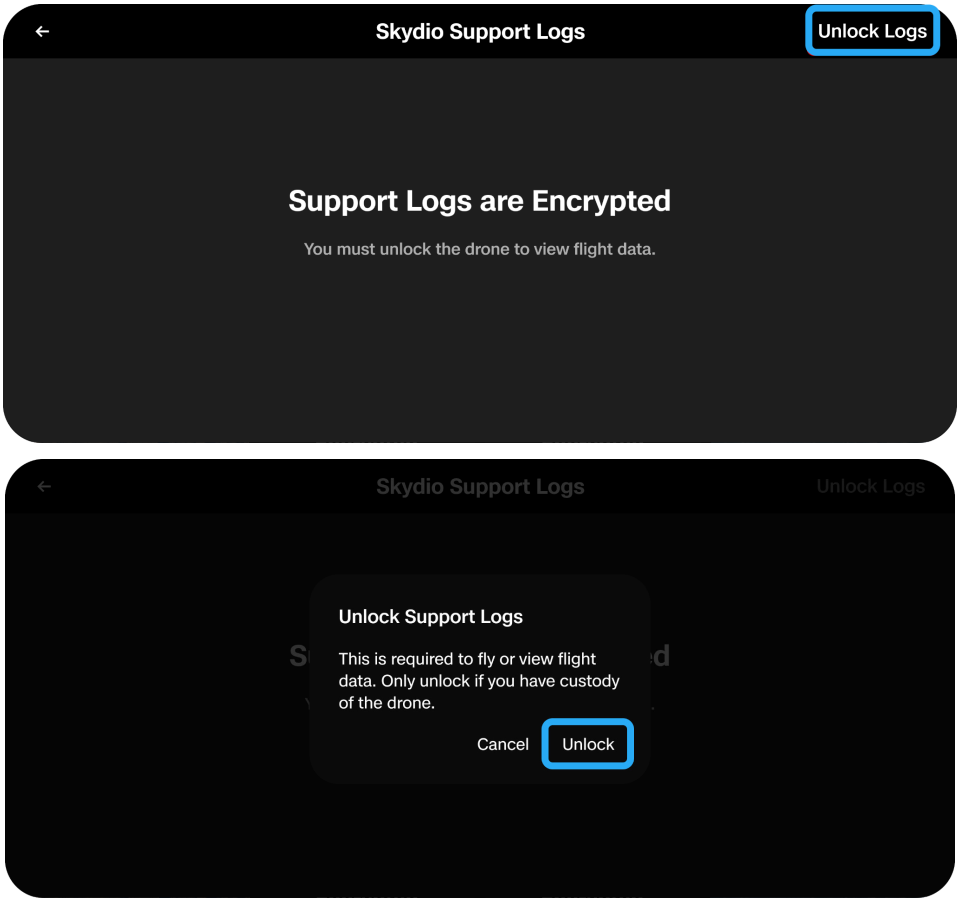
Media

Navigate to **Global Settings > Media > Unlock Media > Unlock**.



Support Logs

Navigate to **Global Settings > Information > Skydio Support Logs > Unlock Logs > Unlock**



Decrypting Files in Skydio Cloud

> ***NOTE:*** *Files encrypted using hardware-based key material cannot be decrypted using this workflow.*

If the drone is unavailable (for example, damaged or unrecoverable) but the SD card has been recovered, Organization Admins can decrypt encrypted files using Skydio Cloud.

Files are encrypted at capture (write time) on the SD card. Skydio Cloud stores only encrypted media. When decryption is initiated, files are decrypted locally in your browser using the organization's passphrase.

This workflow allows you to access encrypted media even when Media Sync or standard upload processes are not available.

Organization Admins must:

- Know the organization's passphrase
- Have access to the recovered SD card files

Step 1 - Navigate to Settings > Security

Step 2 - Select the File Decryption tab

Step 3 - Enter the organization's encryption passphrase

Step 4 - Select Unlock Keys

Step 5 - Decrypt files

Under Step 2: Decrypt Files, click Select Files. Drag and drop encrypted files from the recovered SD card (or browse to select them).

The files are decrypted client-side in your browser.

Step 6 - Download the decrypted files for use

Configuring a Transparency Dashboard (Optional)

The **Transparency Dashboard** allows users to share selected drone mission data through a publicly accessible, intuitive dashboard.

Only Organization Admins can configure and manage Transparency Dashboard settings. Editing, reviewing, and publishing flights can be done by Cloud Users, Remote Pilots, and Org Admins.

Dashboard Setup

To set up a Transparency Dashboard, users can follow these steps:

Step 1 - Select Settings > Transparency Dashboard

Step 2 - Select Manage Settings (located at the top of the page)

Step 3 - Configure dashboard settings

Toggle **Transparency Dashboard** ON to enable the public-facing dashboard. No flights will be visible on the public dashboard until flights are selected to publish.

If an Organization Admin **uploads the organization's logo**, this will be displayed in the top left corner of the public dashboard.

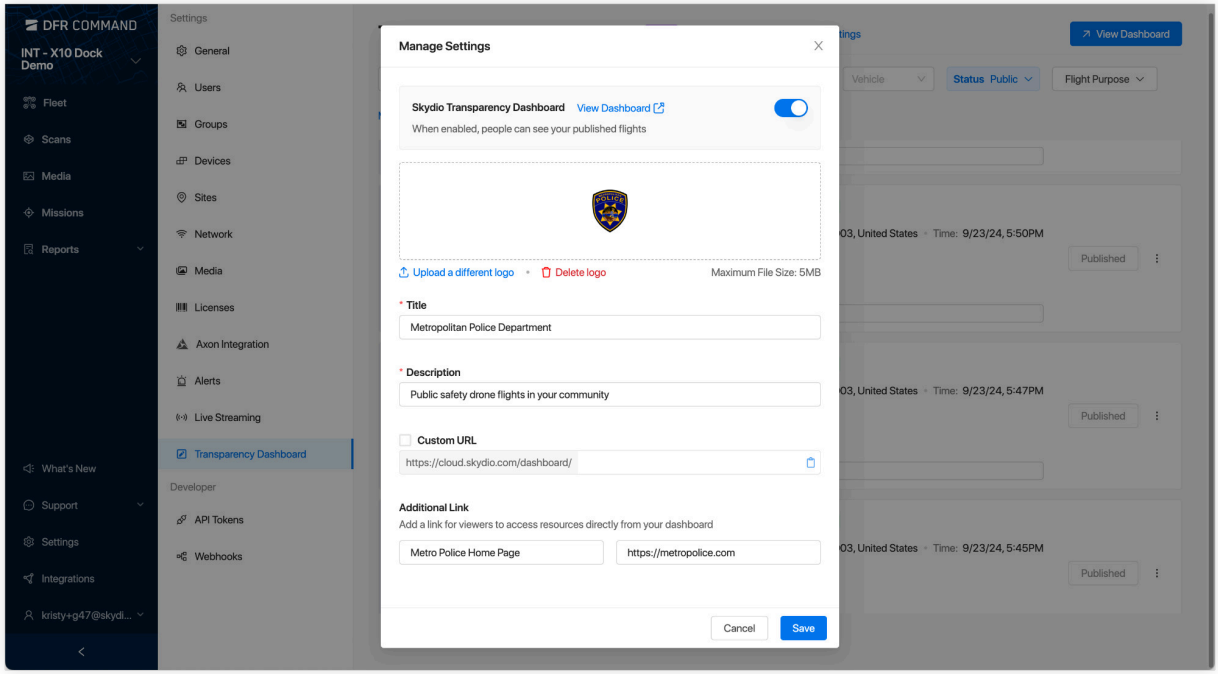
- Maximum file size is 5 MB

Create an **external-facing title and description** for the dashboard.

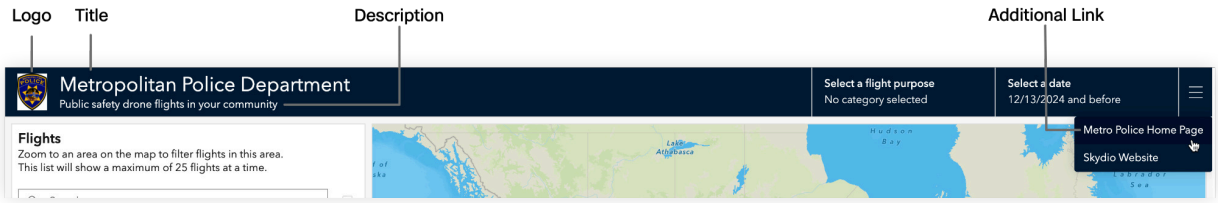
Organization Admins have the option to **create a custom URL** for the dashboard. The URL format will be cloud.skydio.com/dashboard/[custom name].

- If no custom URL is defined, the dashboard URL will end in a Skydio-assigned organization ID number

Additional Link will add an external link to the top-right dropdown menu of the dashboard (e.g., link to the agency's home page, link to the agency drone policies).



External View:



Step 4 - Save

The Transparency Dashboard is now viewable by anyone who has the dashboard link.

Flight data will not be visible on the dashboard until flights are selected to publish. Flights will default to the **In Review** status.

Categorizing and Labeling Flights

Organization Admins have the option to label each flight with a **flight purpose**, which will enable users to sort their flights and easily search within both Skydio Cloud and the public dashboard.

The Flight Purpose will be visible on the public-facing Transparency Dashboard when a flight is published.

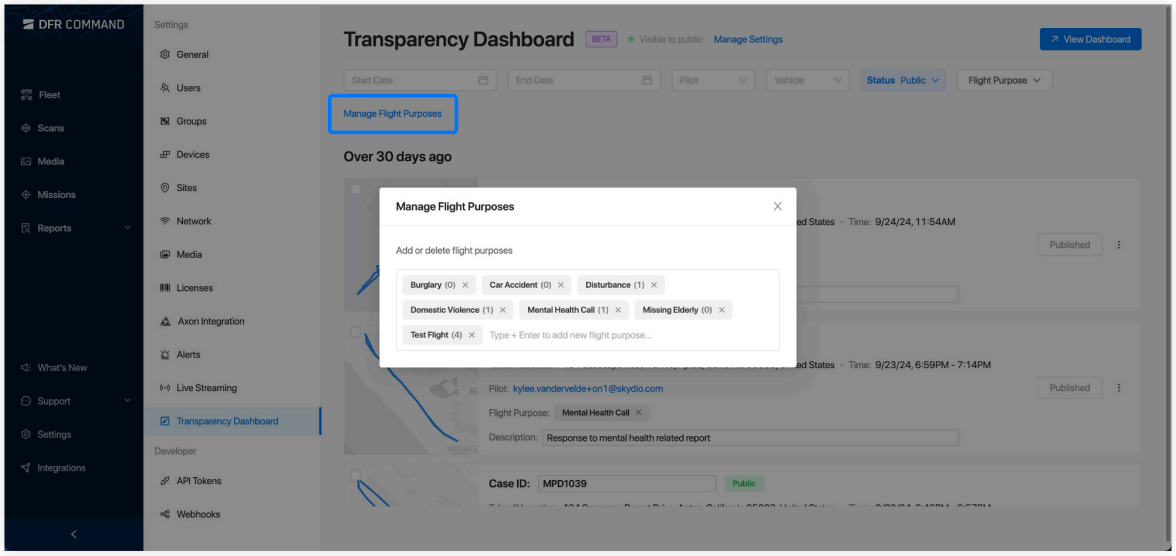
To categorize and label flights, users can follow these steps:

Step 1 - Navigate to Settings > Transparency Dashboard

Step 2 - Select Manage Flight Purposes

Begin typing to add a new category. Use this menu to add to or delete from the list of Flight Purposes.

After a Flight Purpose is created, Cloud Users, Remote Pilots, and Org Admins can assign the appropriate purpose to a flight.



Fleet Management in Skydio Cloud

The **Fleet Page** in Skydio Cloud provides a centralized view of the flight systems in the organization. This includes their connection status, location, and system health.

This page is the Organization Admin's primary tool to confirm that all hardware is properly claimed, equipped, and ready for operation.

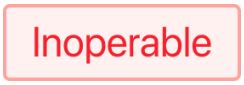
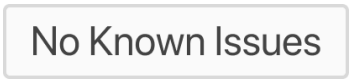
Effective fleet management supports reliable operations and smooth coordination between various phases of operation.

Verify Accessories and System Health

The Fleet Page can be used to confirm that drones, controllers, and batteries are functioning properly and prepared for their intended operations.

There are icons below each Flight System that represent its current health status. Hovering over a health status provides more information:

Health States

 *Limited Operation (yellow)*	Refers to device health Some functionality is restricted (e.g., a battery is nearing end of life); depending on the issue, the system may still be airworthy, but maintenance is needed soon
 *Inoperable (red)*	Refers to device health A critical issue is preventing flight; immediate action required
 *No Known Issues (gray)*	Refers to device health Functioning nominally

Connectivity Status

 *Online*	Refers to network connectivity health, appears on the Flight System page (Fleet > Select the name of the drone)

	Connected; system is ready for flight
 *Offline (gray)*	Refers to network connectivity health System is disconnected

If a device is in **Limited Operation** or **Inoperable**, the Issues Card will provide:

- Issue descriptions detailing what is wrong with the device
- Severity assessments based on how it affects operations
- Recommended resolutions to fix the issue

Hovering over a **Limited Operation** or **Inoperable** status displays details about the issue (e.g., Front Camera Failure).

Device Pages

CAUTION: Risk of reduced flight safety or equipment failure. *The Remote Pilot and their organization/agency are responsible for proactively tracking, examining, and replacing Skydio R10 drone propellers and batteries, as well as monitoring system faults to maintain optimal flight safety and reliability based on flight system maintenance guidelines.*

Individual **Device Pages** may be used for general fleet management, including system monitoring, updating information or diagnosing and troubleshooting issues.

Device Pages streamline issue remediation by highlighting problems, offering resolution recommendations, and providing a centralized view of connectivity, settings, and overall system health.

Each Device Page provides:

- Connectivity Status
- Health Overview
- Outstanding Issues
- Suggested Resolutions
- Other information relevant to the specific device type

How to access Device Pages

There are two ways to access a Device Page:

Option 1 (Drones only)

Users can:

1. Log in to Skydio Cloud
2. Navigate to the Fleet page
3. Select a specific R10
4. Click the gear icon next to the device's name to view its Device Page

Option 2

Users can:

1. Log in to Skydio Cloud
2. Navigate to Settings > Devices
3. Select the type of device from the top menus
4. Select a specific device to view its Device Page

Propeller Hour Counter

Skydio Cloud counts the drone propeller hours to help track when they have reached their maximum flight hours and are in need of replacement.

If there is a dash “—” in this field (within the Vehicle Device Page), it means that the date of the most recent propeller replacement must be added.

Propeller hours are a tracking tool, not a substitute for regular inspections. For optimal performance, we recommend replacing propellers after 150 hours of flight time or if there is damage.

The propeller hour tracking tool is enabled by default, however an opt-out setting gives administrators the ability to suppress these alerts organization-wide if they choose to opt out.

To begin tracking, users should:

Step 1 - Login to Skydio Cloud

Step 2 - Navigate to the drone Device Page

Step 3 - In the Overview tab, find Propeller Hours and select Mark Replaced

Step 4 - Enter the date and time of the last replacement

Step 5 - Select Update

Once completed, Skydio Cloud will begin tracking the propeller flight hours.

Skydio Cloud Developer Tools

More information regarding Developer Tools can be found here: Skydio Cloud API Documentation.

API Tokens

Organization Admins can generate API tokens to support integrations with Skydio Cloud. These tokens grant programmatic access to the organization's data through the Skydio API.

How to generate an API Token

To generate an API Token, users should follow these steps:

Step 1 - Select Settings

Step 2 - Select API Tokens (located under the **Developer** heading)

Step 3 - Select Generate New Token

Step 4 - Name the token

The personal access token is only available during the active login session or until the page is refreshed.

Step 5 - Copy token

Edit the token name by selecting the edit icon.

Webhooks

Webhooks let Organization Admins automatically send data from Skydio Cloud to an external system via Skydio alerts. When a specific event occurs, such as completing a mission or uploading a flight log, Skydio Cloud can send a notification to a URL that the Organization Admin provides.

The receiving system must be set up to accept and process the webhook payloads. If the Organization Admin is unsure what to enter, they should meet with the IT or development team of the organization.

Creating a Webhook

Administrators can follow these steps to create a webhook:

Step 1 - Select Settings

Step 2 - Select Webhooks (located under the **Developer** heading)

Step 3 - Select Create Webhook

Step 4 - Enter the webhook name and the destination URL where Skydio should send event data

Charging Skydio R10 Batteries

Skydio R10 batteries are shipped in a state of hibernation and will not power on R10 out of the box. Batteries will automatically exit this state once they begin charging for the first time.

Using the R10 Dual Charger

The Skydio R10 Dual Charger sequentially charges two batteries. The Dual Charger will prioritize fully charging the battery with the highest charge level.

The Dual Charger may be attached to a fixture with 4x fasteners.

Step 1 - Insert the 230W Power Supply and plug into a power source

Charging both batteries via the Dual Charger will take roughly one hour.

LED Color and Behavior	**Charge State**
Breathing/pulsing blue	Actively charging
Solid blue	Waiting to charge
Solid green	Charge complete

Step 2 - Insert batteries into the Dual Charger

Press firmly until two clicks are heard from the latches engaging.

Using Skydio R10

Step 1 - Insert the battery

Review the Maintenance section for detailed installation instructions.

Flip R10 upside down with the battery connector facing up. Align the battery to the R10 so that the alignment features match.

Press firmly until two clicks are heard from the latches engaging.

- Verify the battery is fully installed and secured by completing a push-pull-push test without squeezing the latches

Step 2 - Locate the USB-C charging port on the top of the drone

Step 3 - Insert the 65W USB-C Power Supply and plug into a power source

Charging batteries via the R10 will take under 2 hours.

Charging the Skydio Controller

Step 1 - Locate the USB-C port on the back of the controller

- The right port is used to charge
- The left port is used for HDMI output

Step 2 - Insert the USB-C Power Supply and plug into a power source

The lights on the front of the controller will turn on and indicate the level of charge.

Skydio R10 Setup

Step 1 - Ensure R10 batteries are fully charged

Step 2 - Ensure the Skydio Controller is fully charged

Step 3 - Remove Skydio R10 from the case

Step 4 - Attach charged battery to Skydio R10
Review the Maintenance section for detailed installation instructions.

Flip R10 upside down with the battery connector facing up. Align the battery to the R10 so that the alignment features match.

Press firmly until two clicks are heard from the latches engaging.

- Verify the battery is fully installed and secured by completing a push-pull-push test without squeezing the latches

Skydio Controller Setup

CAUTION: *To maintain operational security and prevent conflicts with controller functionality, never sign in to personal or third-party accounts (such as Google Drive, Gmail, OneDrive, or other cloud services) on the Skydio Controller. If you need to import maps or export logs, use the supported workflows provided by Skydio.*

CAUTION: *The password cannot be recovered or reset. Ensure that your password is entered correctly and is written down and stored in a safe location. If the password is lost, the controller will need to be replaced.*

Step 1 - Power on the Skydio Controller

Open the controller lid and hold the Power button for five seconds. The lights on the front of the controller will turn on and indicate the level of charge.

NOTE: *While powered off, you can check the level of charge by pressing the Power button once.*

Step 2 - Set up Skydio Flight Deck

Skydio Flight Deck is the dedicated flight software on your controller. Follow the on-screen prompts to begin setup.

- Connect to a WiFi network
- Provide the email address associated with your Skydio Cloud account and enter the activation code sent to your email
- If your Organization Admin has configured Single Sign-On (SSO) via Skydio Cloud, you have the ability to log in using your organization's Identity Provider (IdP)
- Enable Shared Controller to let multiple accounts sign in to the same controller (optional)
- Set a password for your controller (optional)

Step 3 - Power on Skydio R10

Press and hold the Power button on the battery for three seconds. The lights on the drone body arms will turn blue as R10 powers on.

Step 4 - Pair the drone and controller

Use the USB-C pairing cable to connect your devices. Wait as pairing completes. The lights on the drone will turn solid blue and the name of your drone will appear on the screen when pairing is successful.

Once paired, the drone and controller will automatically connect before future flights.

Updating the Skydio Controller

NOTE: *Check for available updates before flying. You must update the Skydio Controller first before updating Skydio R10.*

Step 1 - Power on the Skydio Controller

Open the controller lid and hold the Power button for five seconds. The lights on the front of the controller will turn on and indicate the level of charge.

Step 2 - Navigate to the Information menu

Located within Global Settings.

Step 3 - Select Controller Update under Settings

Step 4 - Select Check for Update

Step 5 - Select Update

Follow the on-screen prompts to update your controller.

Updating Skydio R10

Skydio will not force an update for your system, however, for optimal performance, we recommend that you keep your Skydio system up-to-date. If an update is available, you will see a red notification icon in the **Information** menu.

Step 1 - Power on Skydio R10

Press and hold the Power button on the battery for three seconds.

Step 2 - Power on the Skydio Controller

Open the controller lid and hold the Power button for five seconds. The lights on the front of the controller will turn on and indicate the level of charge.

Step 3 - Navigate to the Information menu

Located within Global Settings.

Step 4 - Select your Skydio R10 under Devices

Step 5 - Select Update

Follow the on-screen prompts to update your drone.

Select **Check for Updates** anytime to look for available updates.

Preflight | Skydio Controller

Relevant Flight Crew Role(s): *Pilot in Command (PIC)*

Prior to conducting operations using Skydio R10 and the Skydio Controller, the PIC must complete a series of preflight checks to ensure the system is safe for flight, the environment is safe, and the flight system's configuration reflects operational requirements.

Some tasks only need to be completed once at the beginning of the operational shift, while others must be performed before each individual flight. Separating these two phases streamlines workflows and helps maintain a high standard of safety and situational awareness.

Start of Shift Checklist	A set of tasks intended to confirm that the overall system is ready for operations. This includes verifying logins, inspecting the physical condition of the drone, and confirming the site is safe to launch from.
Preflight Checklist	This is a set of tasks focused on confirming real-time conditions and mission-specific details. This includes factors that change throughout the day, such as reviewing connectivity, weather, and airspace status.

Start of Shift Checklist

Review Controller Settings

Navigate to Global Settings to review items such as Return settings, Lost Connection behavior, and streaming options such as ReadyLink.

Log in to Skydio Cloud

At the start of their shift, if a Pilot has **Cloud User** access they can follow these steps:

A Pilot with Cloud User access should visit cloud.skydio.com, enter the email address associated with their organization, retrieve the verification code sent to that email, and enter it into Skydio Cloud.

Pilots should confirm that they are signed in with the proper credentials for their organization and that the features needed for the shift can be accessed.

The Pilot's current **Organization** is listed in the top left corner

- If they have access to multiple organizations, Pilots should select the drop-down arrow to view a list of their organizations
- They can easily switch organizations by selecting one from the list and entering the email verification code

The email address of the logged-in user is shown in the bottom left corner

- The drop-down arrow allows Pilots to view the organization that is associated with this email

Check Flight Settings and Verify Health Status of Flight Systems

Before conducting operations, Pilots must verify that the flight systems they intend to use during the shift are fully operational.

- In addition to reviewing health statuses on the Skydio Controller, **Organization Admins** and **Cloud User** roles can monitor fleet health via Skydio Cloud
    - If a device is in **Limited Operation** or **Inoperable**, the system may need maintenance

Check Weather Conditions

Pilots should check current and forecasted weather conditions from an Aviation Weather Source such as the Aviation Weather Center. Weather conditions must be within the operating limits of the drone.

Pilots should check weather conditions in all potential flight areas and maintain awareness of upcoming weather throughout the operation.

Complete Internal Processes

Pilots should complete any additional preflight workflows or documentation required by their organization's standard operating procedures (SOPs).

These requirements may vary depending on agency policies, waiver compliance, or mission type.

Preflight Checklist

Physical Inspection

WARNING: *Do NOT fly with damaged propellers. Carefully inspect your drone and environment before launching to ensure a safe flight.*

- **Inspect the chassis** to ensure it is free of damage.
- **Inspect the battery** and confirm it is fully seated and securely latched prior to launching. Verify the battery clicks into place and ensure the connector pins are free of debris or damage.
- **Clean the camera lenses** with a clean microfiber cloth. Cameras should be dust and smudge-free before flight.
- **Inspect propellers** to verify they are firmly attached and properly seated in the motors and spin freely. Propellers should be free of cracks or damage. Do NOT fly with damaged propellers.
- **Inspect the gimbal** before powering on and ensure it moves freely and is not damaged.
- **Ensure all microSD card seals are secured** over the ports.
- **Check your surroundings** before launching to ensure a safe environment for flight.
- **Verify batteries and the controller are fully charged** before flying.

Confirm Devices are Paired

Skydio R10 and the controller are paired during setup, but it is good practice to confirm they remain successfully paired before flight.

Step 1 - Power on Skydio R10 and the Skydio controller

Step 2 - Wait for devices to connect

A drone and controller that were previously paired will automatically connect.

If devices are not paired, use the USB-C pairing cable to connect your devices.

- The lights on the drone will turn solid blue and the name of your drone will appear on the screen when pairing is successful.

Preflight | Remote Flight Deck (RFD)

Relevant Flight Crew Role(s): *Remote Pilot in Command (RPIC)*

Prior to conducting operations using Skydio R10 and Remote Flight Deck, the RPIC must complete a series of preflight checks to ensure the system is airworthy, the environment is safe, and the flight system's configuration reflects operational requirements.

Some tasks only need to be completed once at the beginning of the operational shift, while others must be performed before each individual flight. Separating these two phases streamlines workflows and helps maintain a high standard of safety and situational awareness.

Start of Shift Checklist	A set of tasks intended to confirm that the overall system is ready for operations. This includes verifying logins, inspecting the physical condition of the drone, and confirming the site is safe to launch from.
Preflight Checklist	This is a set of tasks focused on confirming real-time conditions and mission-specific details. This includes factors that change throughout the day, such as reviewing connectivity, weather, and airspace status.

Start of Shift Checklist

At the start of their shift, Remote Pilots should follow these steps:

Log in to Skydio Cloud

Remote Pilots should visit cloud.skydio.com, enter the email address associated with their organization, retrieve the verification code sent to that email, and enter it into Skydio Cloud.

Remote Pilots should confirm that they are signed in with the proper credentials for their organization and that the features needed for the shift can be accessed.

The Remote Pilot's current **Organization** is listed in the top left corner

- If they have access to multiple organizations, Remote Pilots should select the drop-down arrow to view a list of their organizations
- They can easily switch organizations by selecting one from the list and entering the email verification code

The email address of the logged-in user is shown in the bottom left corner

- The drop-down arrow allows Remote Pilots to view the organization that is associated with this email

Verify Health Status of Fleet (Fleet Page)

Before conducting operations, Remote Pilots must verify that the flight systems they intend to use during the shift are fully operational.

If a device is in **Limited Operation** or **Inoperable**, the system may need maintenance.

To verify the health status of the fleet:

Step 1 - Navigate to the Fleet page (located in the left sidebar)

Step 2 - Review Fleet health status

The Fleet Page provides a snapshot view of the flight systems, allowing users to quickly identify overall system health.

Status levels include:

- **Online -** No known issues; system is ready for flight
- **Offline -** System is disconnected
- **Limited Operation (yellow) -** Some functionality is restricted (e.g., a battery is nearing end of life); the system can fly, but maintenance may be needed soon
- **Inoperable (red) -** A critical issue is preventing flight; immediate action required

Hovering over a **Limited Operation** or **Inoperable** status displays details about the issue (e.g., Front Camera Failure).

Step 3 - Device: Review detailed system information

Here, more detailed information about the flight system can be viewed. If any indicators were shown that communicated limited or poor health for the flight system, then more information can be found by selecting the gear icon for the drone.

Device Settings for the drone can also be configured here (such as enabling Remote Operations).

Check for Temporary Flight Restrictions (TFRs) in the Flight Area

In special circumstances, the FAA may temporarily restrict access to certain designated areas of your airspace.

These airspace restrictions are called Temporary Flight Restrictions (TFRs) and are communicated to pilots through Notices to Airmen (NOTAMs).

They restrict aircraft (including drones) from operating without permission in a certain area for a limited time. **Pilots must always check NOTAMs prior to their flight**.

- Remote Pilots can check NOTAMs at: https://notams.aim.faa.gov/notamSearch/nsapp.html#/
- Remote Pilots can check for TFRs at: https://tfr.faa.gov/

Check Current and Forecast Weather Conditions from an Aviation Weather Source

Remote Pilots must check current and forecasted weather conditions from an Aviation Weather Source such as the Aviation Weather Center. Weather conditions must be within the operating limits of the drone.

Remote Pilots should check weather conditions in all potential flight areas and maintain awareness of upcoming weather throughout their shift.

Complete Internal Processes

Remote Pilots should complete any additional preflight workflows or documentation required by their organization's standard operating procedures (SOPs).

These requirements may vary depending on agency policies, waiver compliance, or mission type.

Preflight Checklist

Remote Pilots should take the following preflight steps:

Select Flight System (Fleet Page)

Before entering Remote Flight Deck, Remote Pilots must select the flight system and verify that it is fully operational.

To select their flight system, Remote Pilots can:

Step 1 - Navigate to the Fleet page (located in the left sidebar)

Step 2 - Select the R10 flight system they wish to use

Remote Pilots should ensure the system status is **Online** and fully operational.

If a device is in **Limited Operation** or **Inoperable**, the system may need maintenance. Users should refer to the Maintenance section or contact their Fleet Manager/Organization Admin if their flight system is Inoperable/Limited Operation.

> ***NOTE:*** *Users can also use the Map View to select a flight system.*

Step 3 - Open the Flight System Page

The Flight System Page provides Remote Pilots with key system information and can be used to check the environment and weather for the flight.

Check Health of Connections and Navigation Health

System Connection

The icon displayed in the telemetry bar will show the drone's connection status. Selecting this icon will show additional connection details.

Positioning System: Navigation Health Indicator

The Navigation Health Indicator provides insight into the navigation source of the drone and its reliability. Visual Inertial Odometry (VIO) and GPS Health will display in the Telemetry bar.

- The source with a **light gray background** is the primary navigation source.
- **White status bars** show whether or not VIO/GPS is stable or degraded. One white bar indicates a degraded state that may be close to failure, meaning Remote Pilots must fly with caution and ensure the other navigation source is in a healthy state.
- **Zero bars** means the navigation source has failed and is relying completely on the backup source.
- **Yellow compass** indicates GPS is awaiting heading. If GPS heading hasn't converged yet, Remote Pilots will receive a notification prompting them to move the drone laterally to establish heading.
- **Yellow highlight** means the active navigation source is weak and the backup source is unavailable. If the highlighted source fails, the drone will enter Attitude Mode and automatically initiate an emergency landing.

Verify Remote Flight Deck Settings

Prior to flight, Remote Pilots should verify that the following settings are appropriately configured for the flight environment and that the settings are in line with the Organization's SOPs:

Flight Controls > Height Ceiling

Sets the maximum allowed altitude. Ensure it's high enough for mission objectives but still within FAA limits.

Return > Return Speed

Sets how fast the drone returns in the event of a mission end or interruption.

Return > Return Path Strategy (Backtrack default)

Backtrack (default)
Backtrack means the drone attempts to return along the previously traveled path. Skydio R10 will retrace the outbound path to return, but will not retrace every individual movement.

- The drone may simplify its path and will not repeat detailed maneuvers performed during the outbound flight (e.g., search rooms or inspecting specific areas)
- In more linear or continuous paths (e.g., flying around the perimeter of a structure) the drone will follow the return path more exactly

This method of return allows Skydio R10 to efficiently exit complex environments without repeating exploratory actions.

If backtracking is not possible, the drone will stop attempting to return. If Backtrack was unsuccessful, attempt the return again.

Use the **Speed** slider to set the speed at which Skydio R10 returns.

- 1 - 26 mph (0.5 - 12 m/s)

Obstacle Avoidance during Backtrack

During flight, the drone retains awareness of the obstacle avoidance (OA) settings used along the route. These settings are applied dynamically during Backtrack to support safe returns through previously traveserved areas.

If reduced obstacle avoidance margins are used to enter a confined space and then changed during flight (for example, switching from confined to indoor), R10 will apply the corresponding settings at the appropriate points when exiting the space

Other Return Options
If the Backtrack toggle is **disabled**, the following Return options appear:

Absolute means your drone will ascend to the specified Return Height above the Launch Point before returning

- For example, if the Return Height is 32 ft and the drone is at 20 ft at the time the return is commanded, Skydio will ascend 12 ft before returning

Relative means your drone will ascend to the specified Return Height above the current position before returning

- For example, if the Return Height is 32 ft and the drone is at 20 ft at the time the return is commanded, Skydio will ascend 32 ft and then return at a height of 52 ft

While returning, the drone will face forward.

Return > Lost Connection

This defines how the drone responds if it loses connection. Set the amount of time you want the drone to hover (and regain connection) before it returns.

Lighting

Allows Remote Pilots to select the light pattern on the drone that suits their mission (Navigation, Police, Emergency, etc.)

Approve Remote ID Using the Skydio Enterprise App (Remote Flight Deck)

> ***NOTE:*** *Remote ID approval depends on GPS availability. Skydio R10 is often operated in low or no GPS environments, meaning this step may not apply in all operations.*

Remote Pilots must **login to the Skydio Enterprise App** using the same email address that they are using in Skydio Cloud.

When Pilots enter Remote Flight Deck, they will automatically be prompted to approve Remote ID. **Approve Remote ID.** This step is not required if the Organization has Single Operations Center enabled.

Ensure That All Persons Directly Participating in the Flight are Informed About Flight Operations

The Remote Pilot must “ensure that all persons directly participating in the small unmanned aircraft operation are informed about the operating conditions, emergency procedures, contingency procedures, roles and responsibilities, and potential hazards.” (Part 107.49 part B)

RPICs must inform Flight Crew about **operating conditions**, for example;

- Weather Conditions (wind, precipitation, temperature)
- Location of persons or property on the surface

RPICs must inform Flight Crew about **emergency procedures**, for example;

- If the drone is performing an emergency landing
- The expected behavior of the drone during an emergency landing

RPICs must inform Flight Crew about **contingency procedures**, for example;

- Land in Place Procedures
- Lost Connection Behavior
- Low Battery Behavior

RPICs must inform Flight Crew their **roles and responsibilities**, for example;

- The RPIC is solely responsible for safe operation of the flight system during all phases of operation.
- Visual Observers **(if applicable)** may assist the RPIC with maintaining situational awareness in their operating area and communicate back to the Remote Pilot any potential hazards in the operating area.
- Any other personnel involved in the flight operations **(if applicable)** must be informed of their roles and responsibilities. Depending on the organization’s policy, Skydio Cloud Users and Administrators may be assisting in flight operations.

RPICs must inform Flight Crew about **any potential hazards** in the flight environment, for example;

- Wires, branches, or other objects less than ½” in diameter
- Reflective surfaces greater than 10 inches (25 cm) wide and textureless surfaces

In addition, the Remote Pilot is responsible for notifying anyone inside the operational area that a flight is launching and to keep the area clear. Remote Pilots

should use their organization’s communication protocol to notify personnel in the launch/land area prior to flying.

Remote Pilots must ensure the area around the drone is clear before launching and should only launch when they have determined it is safe.

Inflight | Skydio Controller

Relevant Flight Crew Role(s): *Pilot in Command (PIC), Remote Pilot in Command (RPIC) if commandeering*

This section is for flights conducted with Skydio R10 and the Skydio Controller.

1. Navigating Skydio Flight Deck
2. Camera Settings
3. Launching
4. Flight Screen
5. Environmental Considerations
6. Flight Skills
7. Flying at Night
8. Returning and Landing
9. Low Battery
10. Lost Connection
11. Lost GPS
12. Flying Skydio R10 with Remote Flight Deck
13. Contingency Behaviors

Navigating Skydio Flight Deck

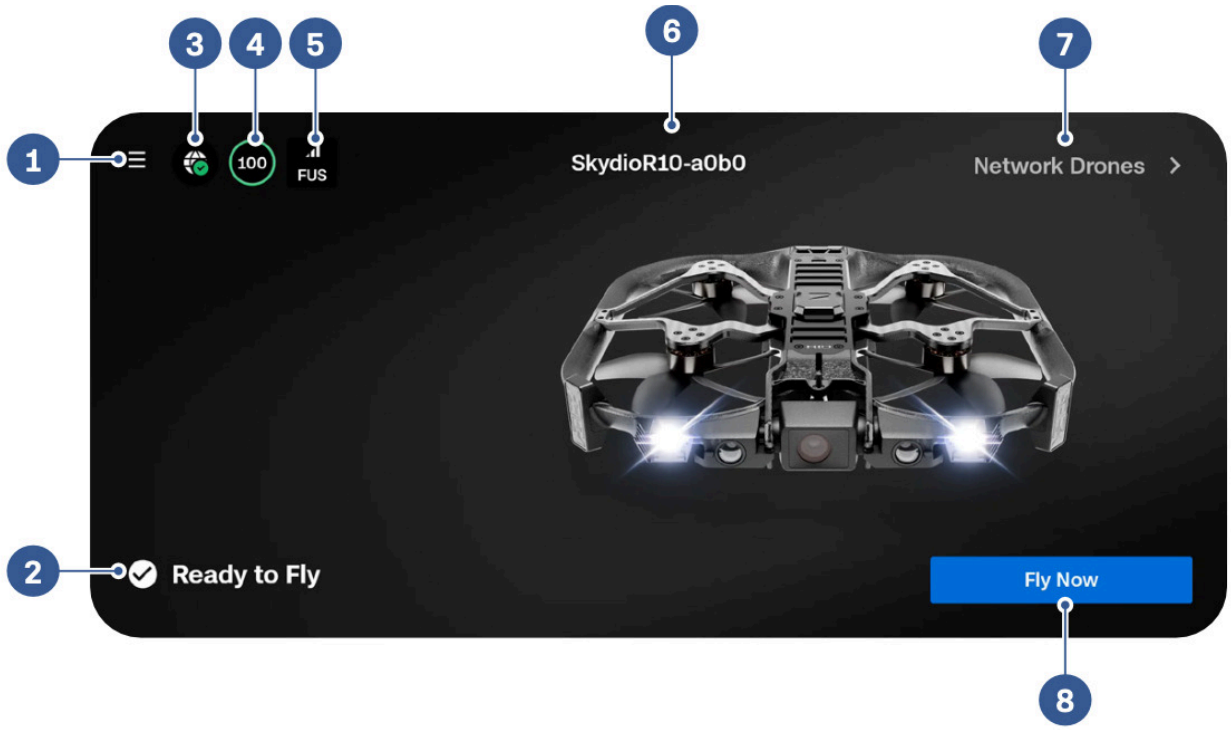
Skydio Flight Deck is the dedicated flight software on your controller. In this section you will learn about core menu locations and setting customizations.

Pilots must understand:

- Gate Screen
- Global Settings
- Flight Controls
- Return Behaviors
- Sensing (Obstacle Avoidance)
- Display
- System Status
- Quick Actions

Gate Screen

After powering on and connecting to your drone, the first screen you will see is the **Gate Screen**. This screen is the first step to starting your flight or configuring settings.



1. Global Settings
2. Flight Status
3. Controller Network Status
4. Drone Battery
5. Signal Strength (Connect Fusion, SL, or 5G)
6. Drone Name
7. Network Drones (displays active drones in your organization)
8. Fly Now (opens Flight Screen)

Global Settings

The Global Settings menu is accessible before and during flight. You will use this menu to navigate to a variety of settings, such as low battery behaviors, stream layouts, and obstacle avoidance behavior.

Select the Global Settings icon in the top left of the screen to access the following menus:

- Media
- Information
- Flight Controls
- Sensing
- Return
- Lighting
- Display
- Sound
- System Status

Media

> ***NOTE:*** *Media is not accessible inflight.*

Use this menu to view photos, videos, and scans from your recent flights.

- Select an image or video to view
- Press and hold on a thumbnail to select multiple or delete

If you capture photos using **Interval**, all photos captured will appear as a single stack. Selecting the stack will allow you to scroll through individual images one by one.

Only standard color JPGs will display in the Media menu. To access your DNG files, you must transfer the files from your drone.

Information

While you are connected to Skydio R10, the Information menu provides access to settings such as drone and controller updates, radio frequency selections, the map library, and more.

Devices

Lists the name of the drone that is currently connected, as well as other R10 drones that have previously paired to the controller.

Check for drone updates and verify software versions by selecting the name of a drone.

Manage Data

Select to format the Log and Media cards or Factory Reset your drone.

Locate Skydio R10

In the event that your Skydio R10 is lost, you may view its last known location. If the Coordinate setting is enabled, the latitude and longitude of the current or last known location will be displayed.

View Last Flights

Displays the feed that was last viewed from the Flight Screen, even if the drone is not connected. Designed to assist you with locating your drone in the event of a crash, emergency landing, or low battery landing in an unintended location.

Cloud Settings

Provides visibility into the licenses you have assigned to your drone, features, and the networks you have added in Skydio Cloud.

Upload Files

Monitor the progress of file uploads from the Skydio Controller to the Cloud, including flight telemetry.

Overwrite Media

Manage your media storage by automatically deleting old media to ensure you always have enough storage space to start a new flight. Select Delete Oldest Media to automatically delete the oldest media stored on the microSD memory card.

Maps

> ***NOTE:*** *The map library is able to store 10 maps at a time. Delete unused maps to make room for new maps.*

View Map
View your current location, search, and configure map settings.

The location of Skydio R10 (if connected), the controller, Launch Point, and Home Point (if set) are all indicated on the map. You will also be able to view alerts for nearby crewed aircraft via ADS-B alerts.

Download Maps

- Select the blue + icon under Add New Maps and a satellite view of your current location will display.
- Drag and pinch-to-zoom on the map until your desired location is centered on the screen
- Use the search bar to enter coordinates or type a location
- Select Download Map to save

The map will be 3.5 x 3.5 square miles, centered around the target point even if you are zoomed in. Your map will appear in this menu once the download is complete.

Settings

Controller Update
Use this menu to view the current software version of your controller and to check for or initiate updates.

Create/Change Password

CAUTION: *The password cannot be recovered or reset. Ensure that your password is entered correctly and is written down and stored in a safe location. If the password is lost, the controller will need to be replaced.*

Optionally add a password for your controller.

Support

About
View the current software version of the Skydio Controller, the email associated with your account, and your organization.

Skydio Support Logs
To assist the support team and better troubleshoot any issues or questions you may have, we may require you to upload logs or other data from your drone to help us determine the root cause of any issues. Refer to the Sending Support Logs section for step-by-step instructions on uploading logs.

If you have any objection to this, please let the support team know. We will never review your videos or data without your permission. Do not reformat or factory reset your Skydio drone prior to contacting our support team.

Single Flight Log
Includes all logs from a specified flight. This option will show you the history of all flights, organized by date and time. Select which individual flight you wish to upload.

All Logs
Exports all logs saved on the controller from all flight history. This option allows you to sync logs whether you are connected to the drone or not.

Legal
View legal documentation such as the Skydio Safety and Operating Guide.

Flight Controls

Use this menu to customize your joystick controls, input mapping, and altitude limits.

Moving the joysticks allows you to adjust the roll, pitch, yaw, and throttle of the drone.

Roll - Controls left and right movement
Pitch - Controls forward and backward movement
Yaw - Changes rotation around the vertical axis
Throttle - Controls altitude

Sensitivity

Gimbal Pitch
Controls how quickly the camera sensor package moves up and down.

- Default - 65%

Flight
Allows you to customize the maximum allowed speed for roll, pitch, yaw, and throttle.

Default sensitivity:

- Roll - 50%
- Pitch - 50%
- Yaw - 50%
- Throttle - 50%

Controls

Battery
Displays Skydio Controller battery level.

Control Mode
Determines how your controller joysticks will maneuver R10. Select between Mode 1, 2 (default), and 3.

Input Mapping
Allows you to customize buttons and wheels with the following options:

- Obstacle Avoidance (Outdoor, Indoor, Confined)
- Cycle Display Layout
- Cycle Full Screen View
- Toggle RGB Lights
- Exposure Compensation (+/-)

- Quick Pitch and Yaw
- No Function

Customizable buttons include: C1, C2, C3, L2, R2, Back/Menu button.

You can also invert your wheel directions, assign Exposure Compensation to your Right Wheel (instead of Zoom), or assign No Function to your wheels.

Quick Gimbal Pitch and **Quick Yaw** shortcuts help Pilots reposition the camera and drone more quickly during inspection workflows. Make large, repeatable pitch and yaw adjustments with a single action, reducing the need for manual fine-tuning when capturing consistent views.

These features reduce the time pilots spend using fine adjustments with the gimbal wheel or manual yaw adjustments, enabling faster, more consistent inspection imagery.

Select the **Global Settings Menu** > **Flight Controls** > **Controls** > **Input Mapping**.

- Incrementally move the gimbal through preset angles (`[-90°, -45°, 0°, 45°, 90°]`) with dedicated buttons for up/down
- Each button press adjusts pitch or yaw by a set angle increment; repeated presses continue stepping in the same direction

NOTE: *Quick Pitch and Yaw is available in Manual Flight only and does not apply to Flight Skills, including Subject Track and Waypoints.*

TIP: *Assign opposite pitch or yaw increments to two buttons to quickly toggle between repeatable angles.*

Camera Dragging
Drag your finger on the screen to pitch the sensor package and yaw the drone to look around.

Joystick/Roller Input

WARNING: *Disabling the Joystick/Roller Input toggle turns off joystick functionality, which may result in serious bodily injury and/or damage. You may only disable this toggle if you experience errors with the joystick controls and proceed with extreme caution. Any injury and/or damage resulting from disabling this toggle is not covered under Skydio's Limited Warranty.*

Only disable this toggle if you experience errors with the joystick controls.

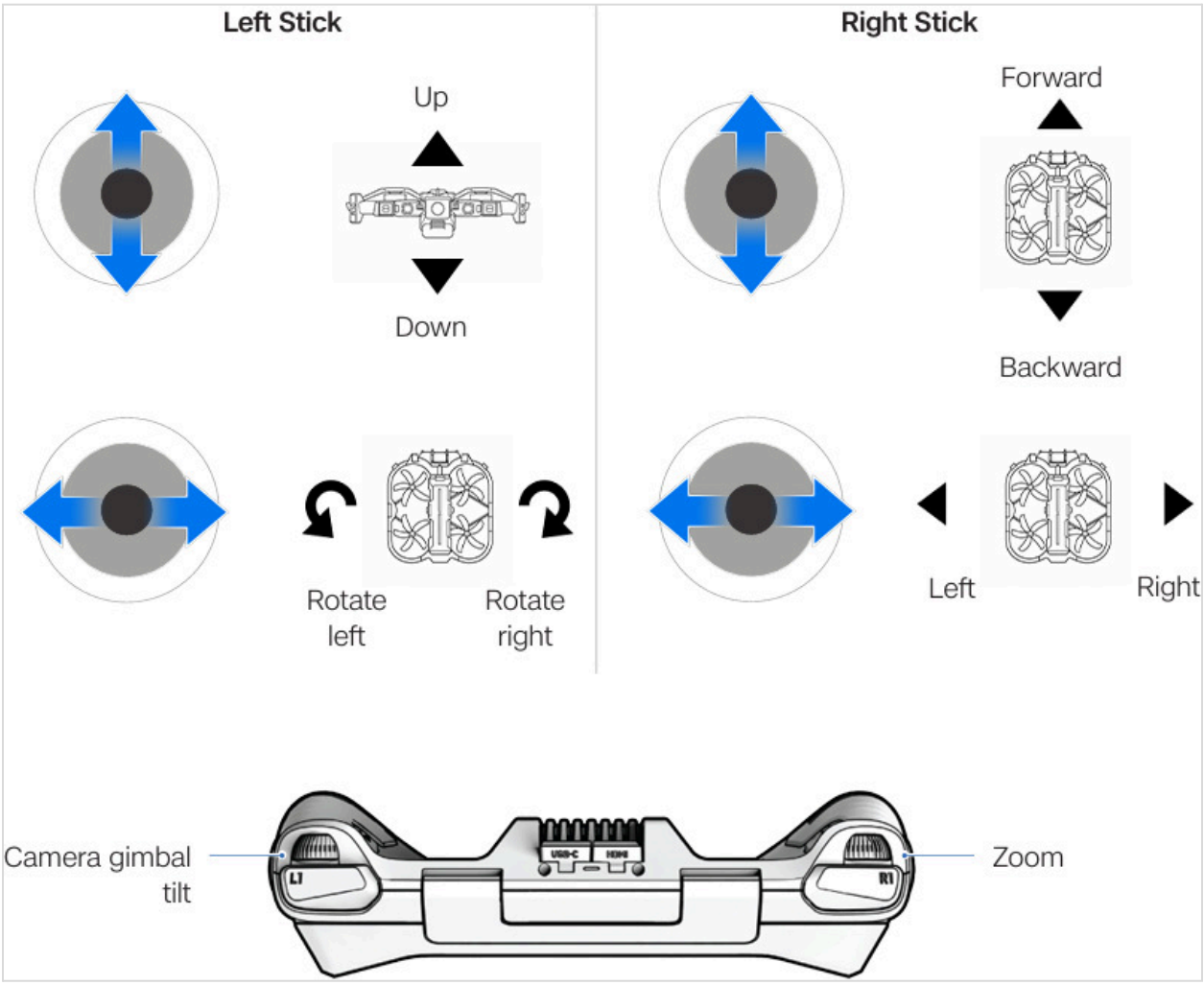
Enabled by default. This toggle functions as a safety precaution in the event that you experience a hardware issue with the joysticks.

When disabled, you will still have the ability to use touchscreen inputs and buttons on the controller.

Control Mode

By default, flight controls are set to Mode 2.

In Mode 2, the left joystick controls the elevation and horizontal rotation of the drone, and the right joystick controls the forward, backward, and lateral movements of the drone.



Flight Modes (Obstacle Avoidance)

WARNING: *Obstacle avoidance is most reliable in the forward-facing (180°) field of view. The drone uses current and recently-observed environment data to determine where it can safely fly. If sufficient obstacle data is not available in a given direction, the Skydio R10 will restrict movement rather than proceed unsafely. Obstacle avoidance is disabled when landing is initiated. Exercise extreme care to avoid injury or damage. Do not touch spinning propellers.*

CAUTION: *Disabled obstacle avoidance greatly increases the risk of collision and should only be used if you are an experienced pilot. Skydio recommends turning down controller throttle, roll, and pitch sensitivity to a lower setting and proceeding at a maximum speed of 2 mph (1 m/s).*

Obstacle Memory

Skydio R10 maintains a coarse obstacle map (~12 m × 12 m × 6 m) based on recently observed surroundings. This allows the drone to safely move in directions that are not currently within the camera's field of view, such as reversing along a previously observed path.

Obstacle data decays after approximately 30 seconds. If an area has not been observed within that time, it is no longer considered safe for autonomous movement.

Flight Modes

Use the Flight Mode button to adjust autonomous flight behaviors. When flying near obstacles, Skydio R10 follows the selected distance setting and automatically adjusts input sensitivities.

Choose between Outdoor, Indoor (default), and Confined:

Indoor (default) - Drone stays 8 in (20 cm) away from obstacles

- Top air speed: ~11 mph (5 m/s)

Outdoor - Drone stays 28 in (71 cm) away from obstacles

- Top air speed: ~27 mph (12 m/s)

Confined - Drone stays 2 in (5 cm) from obstacles

Top air speed: ~27 mph (12 m/s). This mode can be used to navigate tight spaces, but increases the risk of collision. The drone will provide slight course corrections, but primarily relies on the Pilot to avoid collisions.

- Top air speed: ~7 mph (3 m/s)

Disabled (toggle off) - Skydio R10 will not avoid obstacles and there is a high risk of collision

- Top air speed: ~27 mph (12 m/s)

Variable Margins

Skydio R10 uses AI and visual navigation to dynamically, and temporarily, reduce obstacle avoidance margins when moving through narrow spaces. Margins will also dynamically expand if the drone detects environmental dangers, such as wind.

Enabled by default. Disable to turn off the dynamic margin behavior.

Stop at Structure

Perform finer, more controlled inspections on structures such as bridges or building facades.

When enabled, your drone will not deviate from its course when it is within 8 ft (2.5 m) of a structure.

The drone will reduce speed and maintain position, allowing for more precise maneuvering in the immediate vicinity of the structure.

- Adjust the maximum speed using the Speed Near Obstacles slider
- Maximum controller speed settings apply when no structure is present

Return Menu

WARNING: *Before flying, ensure you have set your Lost Connection Return Behaviors. This is a critical step that ensures your drone returns safely and lands in an accessible location.*

Return Settings

Backtrack (default)

Backtrack means the drone attempts to return along the previously traveled path. Skydio R10 will retrace the outbound path to return, but will not retrace every individual movement.

- The drone may simplify its path and will not repeat detailed maneuvers performed during the outbound flight (e.g., search rooms or inspecting specific areas)
- In more linear or continuous paths (e.g., flying around the perimeter of a structure) the drone will follow the return path more exactly

This method of return allows Skydio R10 to efficiently exit complex environments without repeating exploratory actions.

If backtracking is not possible, the drone will stop attempting to return. If Backtrack was unsuccessful, attempt the return again.

Use the **Speed** slider to set the speed at which Skydio R10 returns.

- 1 - 26 mph (0.5 - 12 m/s)

Obstacle Avoidance during Backtrack

During flight, the drone retains awareness of the obstacle avoidance (OA) settings used along the route. These settings are applied dynamically during Backtrack to support safe returns through previously traveserved areas.

If reduced obstacle avoidance margins are used to enter a confined space and then changed during flight (for example, switching from confined to indoor), R10 will apply the corresponding settings at the appropriate points when exiting the space

Other Return Options

If the Backtrack toggle is disabled, the following Return options appear:

Absolute means your drone will ascend to the specified Return Height above the Launch Point before returning

- For example, if the Return Height is 32 ft and the drone is at 20 ft at the time the return is commanded, Skydio will ascend 12 ft before returning

Relative means your drone will ascend to the specified Return Height above the current position before returning

- For example, if the Return Height is 32 ft and the drone is at 20 ft at the time the return is commanded, Skydio will ascend 32 ft and then return at a height of 52 ft

While returning, the drone will face forward.

Lost Connection Settings

If connection is lost, Skydio R10 will default to the **Lost Connection** settings. Select between **Return** and **Hover** upon lost connection.

RETURN

Wait Before Return - set the amount of time you want Skydio R10 to wait before it initiates a return flight, allowing time to reconnect

Land After Return - when enabled, your drone will return, hover for a specified amount of time, then land.

Wait Before Land - the amount of time between 0 to 300 seconds (default is 240 seconds) that you want your drone to wait above the landing location before landing. This setting is only enabled when Land After Return is toggled on.

HOVER

Land After Hover - when enabled, Skydio R10 will hover for a specified amount of time, then use visual navigation to find a safe area to land.

Wait Before Land - the amount of time between 0 to 300 seconds (default is 240 seconds) that you want your drone to wait before landing. This setting is only enabled when Land After Hover is toggled on.

Skydio R10 will continue hovering as it tries to regain connection. If it fails to reconnect and reaches low battery:

- If you have an automatic return set, your drone will return to either the Launch Point or Home Point (if set)
- If you do not have an automatic return set, your drone will use visual navigation to find a safe area to land

Lighting

CAUTION: *Police and Emergency lights option is only for strict use by authorized users comprising public safety first responders and emergency personnel performing a public safety mission.*

Customize the inflight behavior of the RGB lights on the drone.

RGB

Choose between Navigation, Police, or Emergency lights.

- **Navigation (default) -** When enabled, the lights on the body will appear red and green while flying. When the drone is powered on and grounded, the lights will appear blue.
- **Police -** When enabled, the front and back RGB lights will flash red and blue and alternate colors between the right and left sides of the body.
- **Emergency -** When enabled, the front and back RGB lights will flash red and white and alternate colors between the right and left sides of the body.

Sharing

Use this menu to share a live stream of your flight or configure an ATAK or RTSP stream.

Sharing a Live Stream with ReadyLink

ReadyLink allows you to share a live stream of your flight with others via a QR Code.

- **Connect SL -** You will see the ReadyLink option appear in the Sharing menu after launching
- **Connect Fusion or Connect 5G -** A ReadyLink will automatically generate after launching

Use the ReadyLink Quick Action in the Flight Screen to access the QR Code at any time.

NOTE: *Skydio Live Streaming is an optional software add-on available for purchase. You must have Live Streaming to use ReadyLink. When flying over Connect 5G or Fusion, Skydio R10 will live stream automatically.*

Step 1 - Launch and open the ReadyLink menu

Navigate to Global Settings > Sharing > ReadyLink

Step 2 - Select Start ReadyLink

Wait a moment as the QR Code is generated.

Select the QR Code to share your stream. While streaming, you will be able to see how many viewers are watching your flight.

Use the ReadyLink Quick Action in the Flight Screen to access the QR Code at any time.

ATAK

The integration of the Skydio Controller and the Android Team Awareness Kit (ATAK) app allows you to seamlessly monitor your Skydio fleet. ATAK provides geospatial information about your drones and controllers for increased situational awareness in the field.

RTSP

RTSP enables live video streaming from your Skydio drone directly to any compatible media player or system. This protocol allows for flexible, real-time monitoring of video feeds, whether you are using it for surveillance, situational awareness, or integrating with third-party systems.

DroneSense Integration: Missions and Call Signs

Skydio's integration with DroneSense allows pilots to link flights to active missions directly from the Skydio Controller. This streamlines mission tracking and removes the need for the DroneSense CoPilot app.

If your organization has DroneSense enabled, a DroneSense option will appear under Global Settings > Sharing on the controller. From there, pilots can log in using their

DroneSense credentials and select or update an active mission either before launch or mid-flight.

Assigning a mission ensures that each flight is properly categorized in DroneSense, improving mission documentation and real-time awareness across your team. This is especially useful for DFR operations, training sessions, or incident-based response, where mission coordination and call sign accuracy are critical.

> ***NOTE:*** *This integration must be enabled by an Organization Admin in Skydio Cloud before it will appear on the controller. For more information, visit the Integrations section of our Support Site.*

Display

Customize your Flight Screen display, including telemetry metrics, unit type, and depth style.

Telemetry

Customize the telemetry metrics you want to display while flying. Select the blue checkmark to enable or disable the corresponding telemetry information. Up to 6 telemetry metrics may be displayed while flying.

Altitude is required.

Gridlines

Choose from **Centerpoint (default, recommended)**, **Grid**, or **Diagonal** to enable on-screen framing guides. Assists with centering and framing subjects.

Each tool adjusts for day and night visibility. Available in **Photo** and **Video** modes.

Use the toggles to enable one, two, or all three overlays. When enabled, they display on-screen only, without appearing in captured media.

- Centerpoint (defaulted on, recommended) - Displays a crosshair in the center of the screen to align subjects
- Gridlines - Adds a rule of thirds overlay for balanced framing
- Diagonals - Displays two intersecting diagonal lines from opposite corners, aiding in angular alignment

Display Brightness

Adjust the brightness of your Skydio Controller screen.

Units

Choose between Imperial or Metric units.

Depth Style

Only applies if you have enabled Depth View within the AR Quick Actions (located on the left side of the Flight Screen).

Select **Solid** or **Outline** when displaying visual information about what obstacles the drone sees.

- Solid displays boxes filled with color
- Outline displays wireframed or unfilled boxes

The AR Quick Actions button on the Flight Screen cycles between the distances from objects at which the visual information will start showing on screen.

- Off
- 6 ft (2 m)
- 13 ft (4 m)

Display Layouts

While flying, you have the option to use a Single, Split or Grid layout to set the number of streams that appear while flying. Available feeds include:

- Color
- Map

Single Layout

Displays one stream at a time.

In this layout, you will see a Picture-in-Picture (PiP) in the bottom left of the screen.

- Minimize using the two arrows in the top right
- Use the buttons on the bottom to select whether the Color or Map feed displays in the PiP

Split Layout

Choose two streams to display. Drag the middle handlebar to resize streams.

The primary feed displays on the right.

Customizing Display Layout

Step 1 - Select the Display Layout icon in the left sidebar

Use this button to cycle through the various layout options. The icon reflects the next layout in the queue rather than the layout you are currently using.

Step 2 - Use the View Selector to select which feeds display

A menu will appear with the stream options. Drag the middle handlebar to resize streams.

Radio

Use this menu to configure your radio settings.

Flight Connection
Set the connection R10 operates on. Displays the current link quality between the drone and controller, including signal strength (in dBm) and bitrate.

- **Fusion (default) -** Optimizes inflight connectivity by automatically selecting the strongest signal between Connect SL and Connect 5G, eliminating the need for manual switching
- **SL -** The drone will only use Connect SL (point-to-point)
- **5G -** The drone will only use Connect 5G (cellular)

Band (Connect SL)
Select your radio bandwidth:

- 5 GHz
- DFS (Dynamic Frequency Selection)

Channel
Select your radio frequency channel to avoid congestion from other signals.

Set to **Auto** by default.

Drone Connect 5G
Enables 5G cellular connection to the drone.

Low Data Mode
Helps reduce instances of lost connection or high video latency when flying in locations with poor cellular coverage. Enable this toggle if you're experiencing frequent lost connections or high video latency when Drone Connect 5G is enabled.

Skydio Connect SL Frequencies

5 GHz	Auto 36: 5170–5190 MHz 40: 5190–5210 MHz 44: 5210–5230 MHz 48: 5230–5250 MHz 149: 5735–5755 MHz 153: 5755–5775 MHz 157: 5775–5795 MHz 161: 5795–5815 MHz 165: 5815–5835 MHz
DFS (Dynamic Frequency Selection)	Auto 52: 5250–5270 MHz 56: 5270–5290 MHz 60: 5290–5310 MHz 64: 5310–5330 MHz 100: 5490–5510 MHz 104: 5510–5530 MHz 108: 5530–5550 MHz 112: 5550–5570 MHz 116: 5570–5590 MHz 132: 5650–5670 MHz 136: 5670–5690 MHz 140: 5690–5710 MHz 144: 5710–5730 MHz

Sound

Allows you to control the Two-Way Audio settings and the notification volume that plays through the Skydio Controller speakers. Set the slider to zero to mute all sounds.

> ***NOTE:*** *This slider does not affect audible Shutter Sounds (located within Photo Settings).*

System Status

Provides a comprehensive overview of the system at a glance.

Displays:

- Drone connection quality
- GPS signal quality and position accuracy
- Live Stream status
- Remote ID broadcast status

Drone Connection

Skydio Connect SL
Refers to the connection quality between the drone and controller.

Skydio Connect 5G*
Refers to the cellular connection quality of the drone to cellular towers.

**You must have purchased a Skydio Controller with Connect 5G on it*

GPS

Satellites
Represents the count of GPS satellites that the drone is currently receiving signals from. A greater number of satellites results in a more accurate position as well as greater safety and reliability during flight.

It is important to establish a strong GPS connection, especially before flying over water.

- Connection to 13 or more satellites is considered a Good connection
- We recommend 18 or more satellites before flying over water

Horizontal Accuracy
Quantifies the position of Skydio R10 on a two-dimensional plane. Especially useful when mapping or surveying.

Remote ID

Displays the status of Remote ID broadcasts.

Remote ID requires drones operating in U.S. airspace to identify themselves by broadcasting information that will enable the authorities to identify pilots who are not following the rules. Only authorized individuals from public safety organizations may request the identity of the owner of the drone from the FAA.

Remote ID broadcast includes:

- Launch location
- Drone ID - your Skydio ANSI serial number
- Drone location and altitude
- Drone velocity
- Control station location and elevation
- Time of operation
- Emergency status

Quick Actions

The left sidebar of your Flight Screen contains a variety of Quick Action menus. With Quick Actions, you have the ability to quickly **toggle** a setting or **cycle** through setting options.

Toggle
Full green bar indicates a setting is ON.

Cycle
A menu will pop out and label the current setting. The green bars indicate the number of available settings.

Skylens (Augmented Reality)

Enable to visually display where Skydio R10 detects obstacles in the environment. Appears as either solid or outlined augmented reality (AR) boxes, depending on your selection within the Display menu.

Use the Skylens Quick Action button to cycle between the distances from which obstacles are rendered on the screen. Objects that are closer appear red.

Obstacle Avoidance Quick Actions

Quickly cycle through the three obstacle avoidance settings, available in the **Sensing** menu.

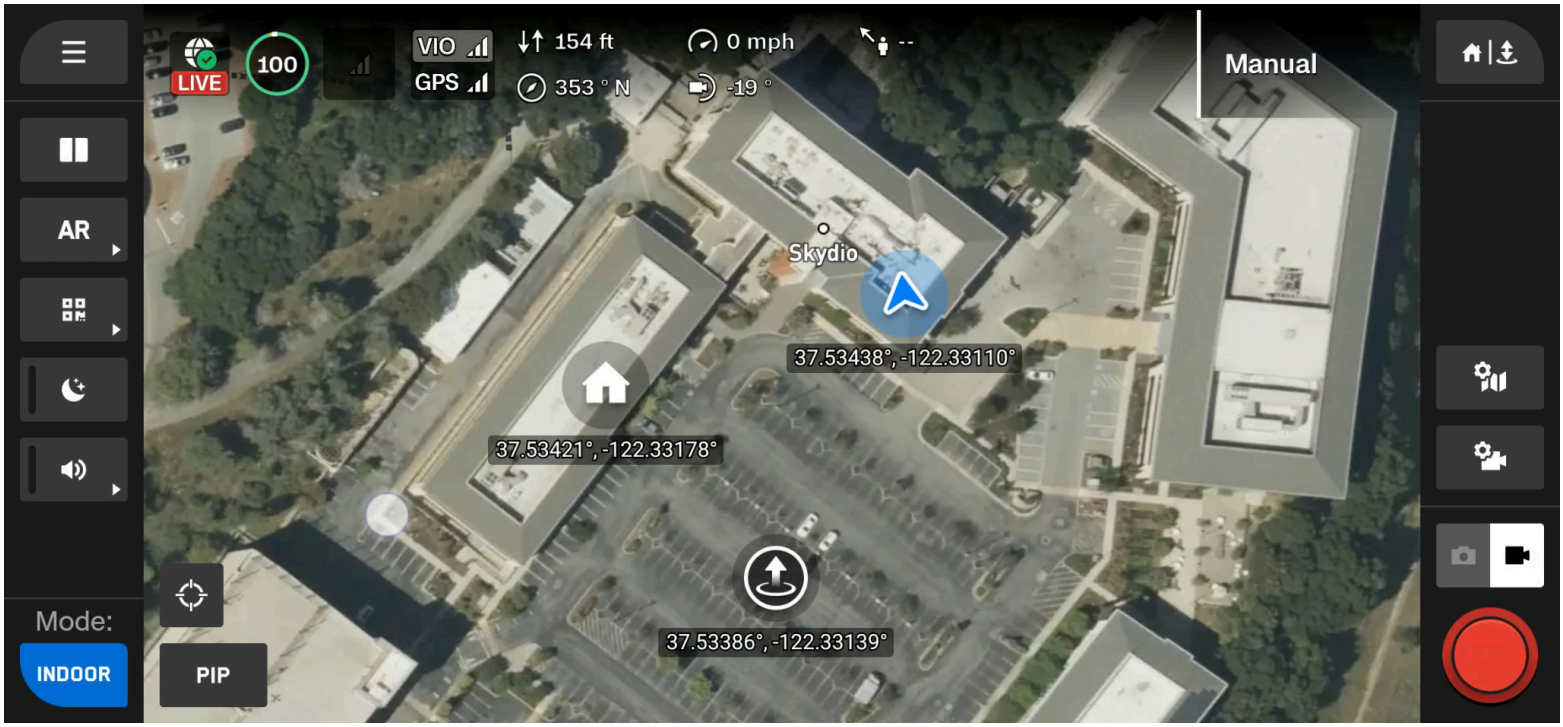
A yellow border appears when in Close or Minimal obstacle avoidance mode.

Inflight Map

View your current location, search, set a Home Point, and configure map settings.

- The location of Skydio R10, the controller, Launch Point, and Home Point (if set) are indicated on the map
- Press and hold on a location to set a Home Point or command a **Look Here**
    - Look Here will orient the drone towards the selected location (GPS required)

Adjust your map settings during flight using the **Map Settings** icon.



Camera Settings

Learn how to adjust photo and video settings such as zoom, exposure, ISO, and resolution.

Pilots must understand:

- Capture Settings (Photo and Video)
- Focus and Exposure
- Zoom Settings (Photo and Video)
- Shutter Indicators
- Photo Settings
- Video Settings

Overview

NOTE: *Photo and Video mode settings are independent of each other and persist through mode changes, but not power cycles.*

When your drone captures a photo or video, it will save one image file with the color camera. Two files will save if you have JPG and DNG enabled.

Use **Camera Mode** on the right sidebar to switch between photo or video. Skydio R10 can capture photos or videos but not both at the same time.

Access your photos and videos using the **Media** menu located in **Global Settings**.

Capture Settings (Photo and Video)

Brightness Exposure Value (EV)
Refers to the amount of light the camera allows in.

Negative numbers result in darker images (less exposure) while positive numbers result in brighter images (more exposure).

- Brightness is set to Auto by default

White Balance
Balances the color temperature in your photo. If the whites in your picture are too orange, for example, adding the opposite color (blue) will balance them out.

Lower values result in a cooler (blues) image while higher values result in a warmer (yellows) image.

- Auto (default) means Skydio R10 will automatically adjust the White Balance for its environment

ISO
Brightens or darkens your photo. When in low-light conditions, raising the ISO value will brighten the image, however you may see some graininess.

- Auto means Skydio R10 will automatically adjust the ISO for its environment

Shutter
Refers to the length of time a photo is exposed.

Slower shutter speed means greater exposure, while faster shutter speed means less exposure.

- Auto means Skydio R10 will automatically adjust the Shutter speed based on the available light

Zoom Settings (Photo and Video)

> ***NOTE:*** *Images and videos taken while zoomed in will be saved at that zoom level.*

To zoom in digitally, place your finger on the right controller wheel and push it to the left. Customize this using Input Mapping (Flight Controls > Controls).

Quickly snap to a zoom level using the Zoom buttons on the right side of the screen.

Focus and Exposure

To view the various focus options, select the Focus Control button on the right side of the Flight Screen.

AutoFocus (AF)
By default, your camera will be set to automatically adjust focus and exposure. In this focus mode, focus will generally prioritize objects in the center of the screen.

Manual Focus (MF)
After selecting the Manual Focus icon, a focus slider will appear:

- Drag the slider to adjust the plane of focus
- Select outside the slider to return to the full parameter view
- To go back to Auto focus, select the Focus, Manual box again

Shutter Indicators

> ***NOTE:*** *You have the ability to enable Shutter Sounds when capturing photos within Photo Settings.*

The Shutter is located in the bottom right of the Flight Screen and indicates the current state of Photo or Video mode.

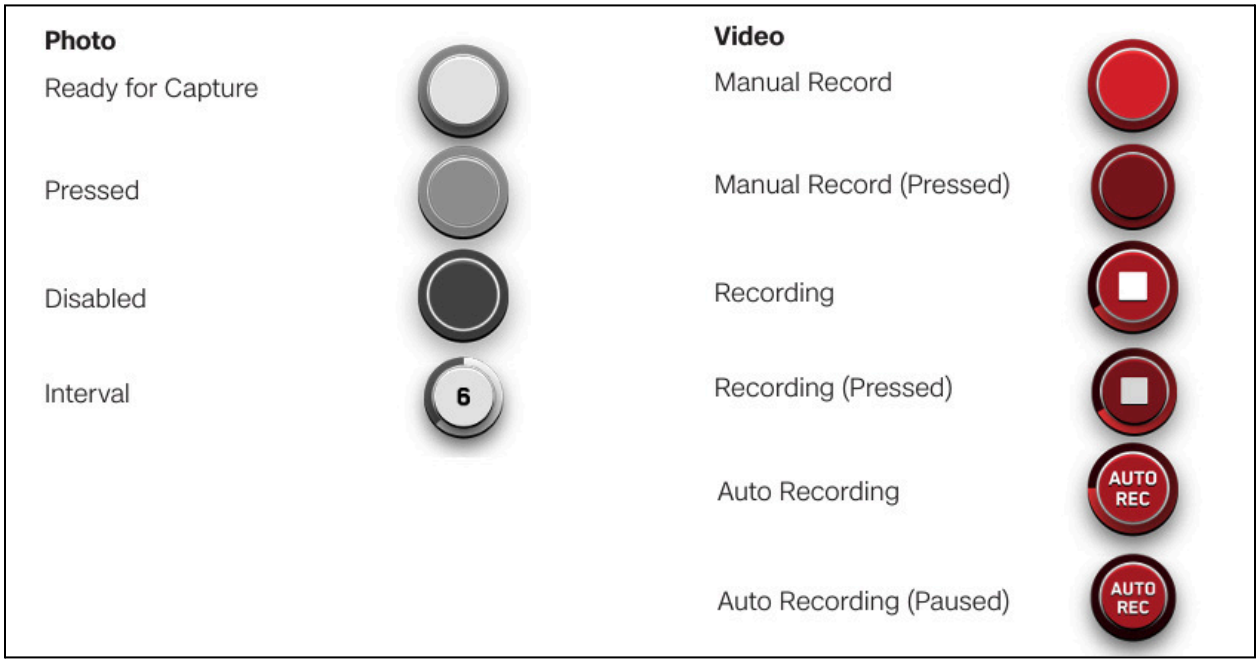


Photo Settings

Save to Custom Folder
You have the ability to create a custom folder preflight or inflight. This folder will be saved on the Media card under DCIM > [Custom Folder Name].

All photos and videos captured after creating a custom folder will automatically save to the new folder. To revert to default, select **Revert to Media**.

- If you do not enter a custom folder name, media will be saved in DCIM > 100XSKYDO
- Does not apply to photos captured in 3D Scan

File Type
Choose whether you want Skydio to capture JPG images only, or both JPG and DNG files.

- **JPG -** Digital image format containing compressed image data.
- **DNG -** RAW image format file, meaning it is not compressed and retains all original photo data. A DNG file is larger than a JPG file since it stores image data.

Resolution
Refers to the amount of detail in your video. Measured in megapixels.

- 1/4 - Images are captured at one-fourth of the full resolution, resulting in smaller file sizes. Best for conserving storage space or transmitting images faster.

Camera Mode

- **Standard -** Designed for typical, everyday lighting conditions. Provides a balanced, standard level of exposure, image processing, and contrast.
- **Low Light -** Designed for environments with dim lighting, such as indoors or evening. Settings are adjusted to capture more light, reduce noise, and improve visibility. Only available with 1/4 Resolution.
- **HDR -** Designed to capture environments with a wide range of brightness levels. Only available with 1/4 Resolution.

Interval
When enabled, Skydio R10 will continuously capture photos at the specified time interval until the setting is disabled or the flight ends.

Shutter Sound

When enabled, you will hear a shutter sound when capturing photos, providing instant confirmation that an image has been taken.

- Enabled by default
- Sound only plays through the controller speakers, not through connected headsets

Video Settings

Save to Custom Folder
When enabled, you have the ability to create a custom folder preflight or inflight. This folder will be saved on the Media card under DCIM > [Custom Folder Name].

All photos and videos captured after creating a custom folder will automatically save to the new folder.

- Disabled by default
- If you do not enter a custom folder name, media will be saved in DCIM > 100XSKYDO
- Does not apply to photos captured in 3D Scan
- Toggle state persists through power cycles

Auto Start Recording
When enabled, Skydio R10 will record video automatically.

When disabled, tap the on-screen Shutter button or on the controller (R1 button) to start/stop video recording.

Horizon Lock
When enabled, Horizon Lock stabilizes the camera view by keeping the image level with the horizon, even when the drone rolls during flight.

- Reduces visible tilting in the live view and recorded video, resulting in a steadier image
- In some cases, minor image distortion may be visible during rapid roll movements as the system stabilizes the image (electronic image stabilization)

Video Encoding
Select between H.264 and H.265 compression formats, depending on your preferences for video quality, file size, and playback compatibility.

- H.264 - Provides manageable file sizes without sacrificing video quality. Recommended for standard video recording, and compatible with most devices and video editing software.
- H.265 - Ideal for high-quality video capture and maintains efficient compression.

Resolution
Select between 4K and Full HD, which refers to the amount of detail in your video. Measured in pixels.

- More pixels result in a high-resolution video

- Fewer pixels result in a lower resolution video

Camera Mode

- **Standard -** Designed for typical, everyday lighting conditions. Provides a balanced, standard level of exposure, image processing, and contrast.
- **Low Light -** Designed for environments with dim lighting, such as indoors or evening. Settings are adjusted to capture more light, reduce noise, and improve visibility.
- **HDR -** Designed to capture environments with a wide range of brightness levels.

Aspect Ratio

Sets the shape and framing of your video.

- 16:9 - Provides a wider, broader field of view.
- 4:3 - Provides greater FOV in the vertical axis, resulting in more square-shaped framing. Images are taller, as opposed to wider.

Propeller Behavior while Grounded

While grounded, the propellers on R10 will rotate at low, idle speeds. Although the rotation speed is significantly lower than inflight, contact with spinning propellers may cause minor injury. Keep hands, clothing, and objects clear of the propellers at all times.

The propellers will stop if the drone is moved. Before handling, lightly tap the propeller guards to stop propeller motion.

Avoid prolonged periods of moving the drone while it is in a powered, idle state, especially in high-temperature environments, as this may reduce cooling effectiveness and lead to increased system temperatures.

Launching

WARNING: *Before your first flight, read and follow all of the safety guidelines in the Skydio Safety and Operating Guide and configure your Return and Lost Connection Behaviors (Global Settings > Return).*

Obstacle avoidance is used to evaluate the surrounding environment prior to launching, but is not fully active at liftoff. Obstacle avoidance becomes active as the drone ascends. Exercise extreme care to avoid injury or damage. Do not touch spinning propellers.

Step 1 - Always conduct a Preflight Inspection before launching

Step 2 - Find a clear, safe area to launch, place your drone on a stable surface, and select Fly Now

Step 3 - Launch

When launching, the drone will ascend vertically and hover at a low altitude.

Skydio R10 automatically adjusts its launch height based on the available space. The maximum altitude is approximately 2 ft (0.6 m).

GPS is not required to launch or fly. When GPS is available, the drone's position is displayed on the map. If GPS is not available at launch, the map will update once GPS is acquired during flight.

Option 1 - Drag the on-screen slider
The drone will initiate launching when you lift your finger away from the screen.

Option 2 - Press and hold the Launch/Land button on the controller
The drone will initiate launching when you see the on-screen check mark.

Hand Launching

WARNING: *Obstacle avoidance is used to evaluate the surrounding environment prior to launching, but is not fully active at liftoff. Obstacle avoidance becomes active as the drone ascends. Exercise extreme care to avoid injury or damage. Do not hand launch during windy days or extreme environmental conditions as serious injury and/or damage may occur. Do not touch spinning propellers.*

Launching Skydio R10 from your hand is a quick and convenient way to start or end your flight, particularly if you are not in a clear, level area. For your safety, always use caution when hand launching. This maneuver is dangerous and should not be attempted in unstable environments.

Step 1 - Ensure you have clearance above and in front of you

Step 2 - Hold the drone away from you (sensor package facing away from your body)

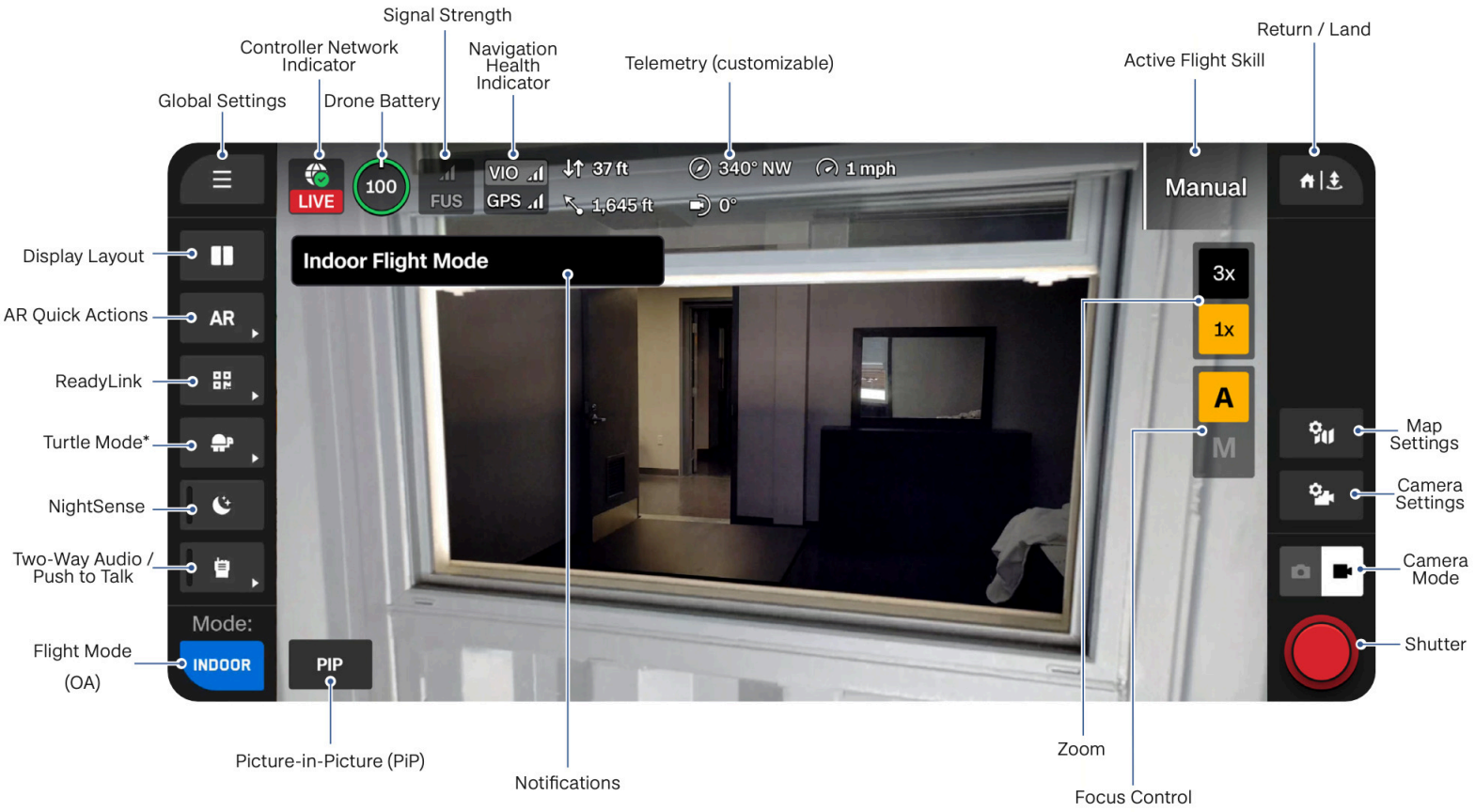
- Lightly grip the battery
- Keep the drone level, still, and at arm's length from your body
- Your fingers should be below the Skydio R10 chassis and away from the propellers at all times
- Ensure your hand is steady

Step 3 - Press the battery button four times to launch

Slowly relax your grip as Skydio R10 launches.

- Do not push or throw the drone up in the air
- Keep your hand still - the drone will slide off your palm and take flight on its own

Flight Screen



*Only present while grounded

Controller Network Indicator

This icon at the top of the screen indicates whether or not the Skydio Controller has network connection (WiFi, cellular, or ethernet).

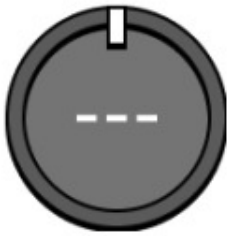
Green check with a LIVE status indicates a healthy network connection and an active stream with ReadyLink **Green** check indicates a healthy network connection **Red X** indicates no network connection	  

Battery Indicator

The Battery Indicator **dynamically updates** during flight based on your altitude and distance from the return location. Monitor the indicator to understand how much battery is:

- Available for flight
- Required to return
- Required to land

Green indicates the battery capacity for nominal flight before the time limit required to safely return and land. • Decreases as battery capacity diminishes • Adapts based on your altitude and distance from the return location	
Yellow indicates how much battery is required to safely return. • Adapts based on your altitude and distance from the return location	 
Red indicates how much battery is required to land. • Adapts based on your altitude and distance from the return location	

The **lightning bolt** indicates the battery is connected and charging.	
Three **dashes** indicate the battery is disconnected.	

Navigation Health Indicator

CAUTION: *Monitor your VIO health in the telemetry bar. If VIO becomes unreliable, your drone will enter Attitude Mode.*

The Navigation Health Indicator (previously called VIO/GPS Indicator) provides insight into the:

- Navigation source of the drone
- Health of the drone positioning systems
- Reliability of the navigation source
- Current positioning system that is actively being used (highlighted)

This indicator helps you quickly assess whether the drone is relying on Visual Navigation (VIO) or GPS and take action if navigation quality degrades.

- **VIO -** Visual Inertial Odometry. This is the visual navigation system of the drone.
- **GPS -** Global Positioning System

If GPS is lost, Skydio R10 maintains continuous navigation using VIO, which operates alongside GPS and can fully take over all navigation functions.

The drone can maintain stable VIO at altitudes up to 984 ft (300 m).

The source with a light gray background is the primary navigation source. **White status bars** show whether or not VIO/GPS is stable or degraded. • **One white bar** indicates a degraded state that may be close to failure, meaning you must fly with caution and ensure the other navigation source is in a healthy state • Zero bars means the navigation source has failed and is relying completely on the backup source **Yellow compass** indicates GPS is awaiting heading. • If GPS heading hasn't converged yet, you will receive a notification prompting you to move the drone laterally to establish heading **Yellow highlight** means your active navigation source is weak and your backup source is unavailable. • If the highlighted source fails, the drone will enter **Attitude Mode and you will have to manually fly**	

Turtle Mode

Turtle Mode is a recovery function designed to restore the drone to an upright orientation when it is unable to launch due to excessive tilt.

When initiated by a Pilot, the system commands controlled propeller rotation to generate thrust sufficient enough to rotate the drone to a stable, upright position.

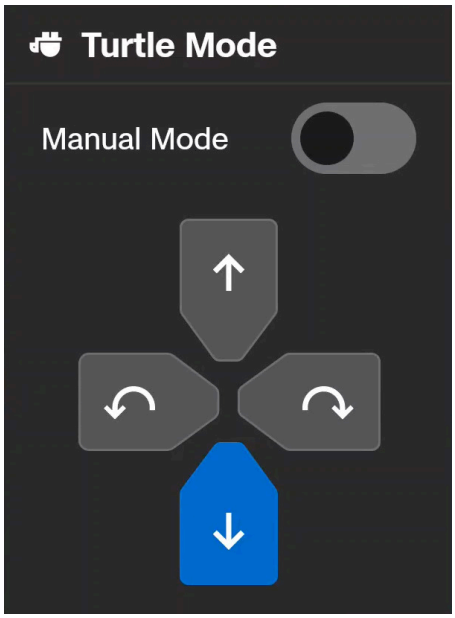
This mode is intended to restore the aircraft to an upright, level orientation so that normal launch procedures can resume.

Turtle Mode may be used when the drone:

- Has landed upside down
- Is resting on its side
- Is leaning against an obstacle
- Is upright but positioned too close to an obstacle to safely launch (e.g., against a wall)
- Is otherwise unable to launch due to excessive tilt

Activation and Pilot Interface

If the drone is powered on and determined to be significantly tilted, approximately 15° or greater from level, Skydio Flight Deck will automatically display the Turtle Mode menu.



The drone will not initiate recovery until a direction is selected by the Pilot. The interface displays four autonomous directional recovery options:

- Forward
- Backward
- Left
- Right

The system may indicate a recommended recovery direction by flashing the corresponding directional button. Following the recommended flip direction is advised, as it is optimized for the drone's current orientation and recovery conditions. Recommendations are based on the system's orientation assessment.

Once selected, the drone executes the recovery autonomously. The propeller motors disarm upon detecting a stable, upright position.

Depending on the detected orientation, the system may:

- Reverse selected propellers to flip the drone from an inverted position
- Drive propellers forward to displace the drone away from an obstacle

When displacement is required, the maneuver is executed as two discrete, pilot-initiated actions. The first input commands the drone to move away from the obstacle using forward propeller rotation, based on the Pilot's choice. Once repositioned, a second input is required to initiate the righting maneuver.

Motor direction and output are determined automatically based on real-time orientation sensing.

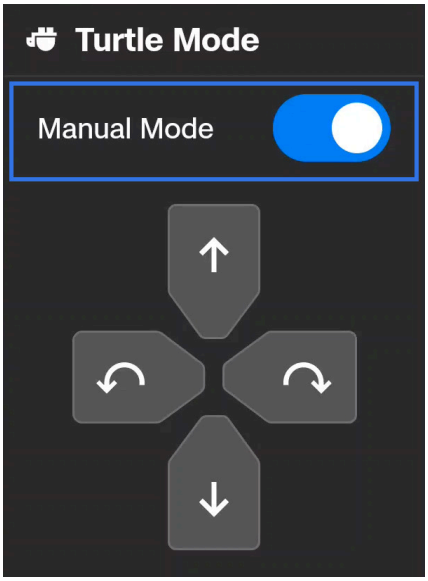
Manual Recovery Control

WARNING: *Manual Recovery mode allows direct motor control to free the drone from obstructed positions. Manual recovery increases the risk of propeller damage or unintended surface contact. Improper or aggressive inputs may result in propeller damage or additional impact with surrounding surfaces. The Pilot is responsible for ensuring controlled and deliberate inputs.*

Turtle Mode includes an optional Manual Recovery setting.

When enabled:

- The right joystick controls motor output
- The Pilot may apply controlled inputs to free the drone from confined or obstructed positions
- The Pilot maintains the ability to use the directional arrows



Operational Conditions

Ensure the surrounding area is clear prior to initiating a recovery.

Recovery performance is influenced by the surface on which R10 is resting.

- **Level, non-slip surfaces –** designed to reliably self-right
- **Low-friction surfaces (e.g., polished concrete, smooth tile) –** the drone may slide before completing rotation
- **Leaning or obstructed positions –** the drone may require an intermediate rotation before achieving an upright orientation

Review *System Limitations* for more details.

Perch Mode

Perch Mode allows the drone to remain powered on and connected after landing, enabling continued situational awareness and camera operation without ending the flight session.

With Perch Mode enabled, the Pilot can:

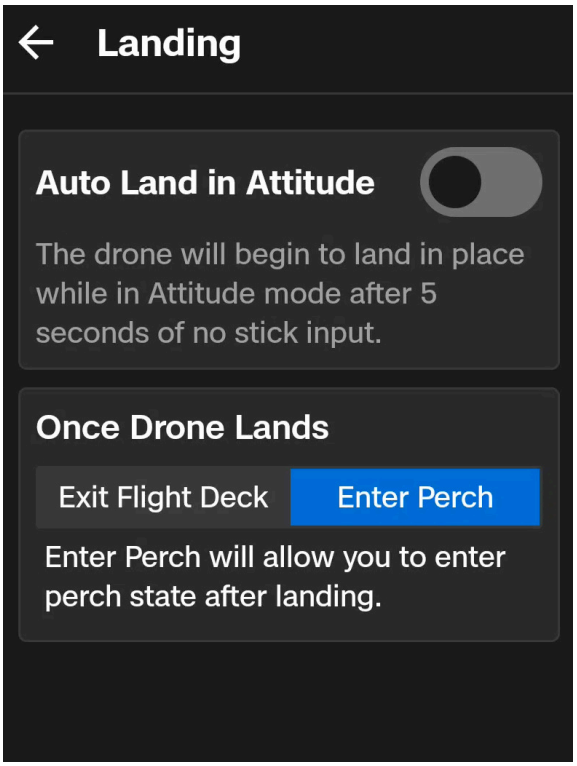
- View the live camera feed
- Broadcast/record two-way audio
- Capture photos and record video
- Turn NightSense lights on and off
- Control the gimbal and camera settings
- Relaunch the drone
- End the flight manually

The drone remains in Flight Deck until the Pilot either exits or relaunches.

Activation and Pilot Interface

Perch Mode is controlled through the Landing settings via **Global Settings** > **Flight Controls** > **Landing**.

- **Enter Perch is enabled by default**, meaning you will enter Perch Mode upon landing.
- Select **Exit Flight Deck** to disable the default, meaning Flight Deck will close and the Gate Screen will open after landing.
- Landing settings can be changed while grounded or inflight, and selections persist across flights and power cycles.



Before landing in the selected perch location, tilt the gimbal down to view the area and ensure it is clear.

General Behavior

When R10 lands with Perch Mode enabled, the flight session remains active and the Pilot continues to operate within the Flight Screen. The drone stays powered on and maintains its connection to the controller, allowing continued access to both camera and control functionality without exiting Flight Deck.

If video recording is in progress at the time of landing, recording continues uninterrupted after touchdown.

The live camera feed remains available on the controller and continues streaming at up to 1080p at 30 frames per second. The live streamed video feed is saved to the controller in the same manner as inflight feeds. This preview can be reviewed postflight from the controller, including when the controller is no longer connected to the drone.

- This preview is separate from full-resolution media stored on the drone and reflects the live video feed viewed during operation.

Operational Considerations

Lost Connection

If R10 loses communication with the controller while in Perch Mode the drone will:

- Remain in place
- Stay powered on until the battery is depleted

Loss of connection while perched will not initiate a return. Battery depletion while perched will end the mission without repositioning the drone.

Low Battery

If R10 enters a low battery state while in Perch Mode, a warning notification will appear on the controller. This notification is dismissible and follows the same behavior, messaging, and alert protocol as low battery notifications displayed during flight.

- Pilots should monitor battery status and take appropriate action when prompted

Vehicle Overheating
While perched, R10 monitors its internal temperature and provides a series of escalating notifications as temperature increases.

These notifications are intended to prompt the Pilot to take corrective action.

- The drone will continue operating while warnings are displayed
- If no action is taken and temperature continues to rise, R10 will eventually reach a state where it must power down

Overheating Alerts	**Messaging**
Caution-level alert	**Vehicle is Heating Up** *Move to a cooler area.* Can be dismissed
Warning-level alert	**Vehicle Too Hot to Operate** *Vehicle will power down in place unless launched immediately.* Can be dismissed
Critical Temperature	If the drone reaches a critical temperature threshold (206°F / 97°C) it will power down in place

Low Power Mode
While in Perch Mode, the drone may enter a low power state.

In this state, the drone reduces power consumption by disabling systems such as the navigation cameras and flight functionality. Relaunching may experience a delayed transition.

Core viewing and control capabilities remain available, including:

- Gimbal pitch and yaw control
- Focus controls
- Basic camera functionality

Available Controls while Perched

Two-Way Audio and Push to Talk

Two-Way Audio enables real-time communication between the controller and the area surrounding the drone while in Perch Mode.

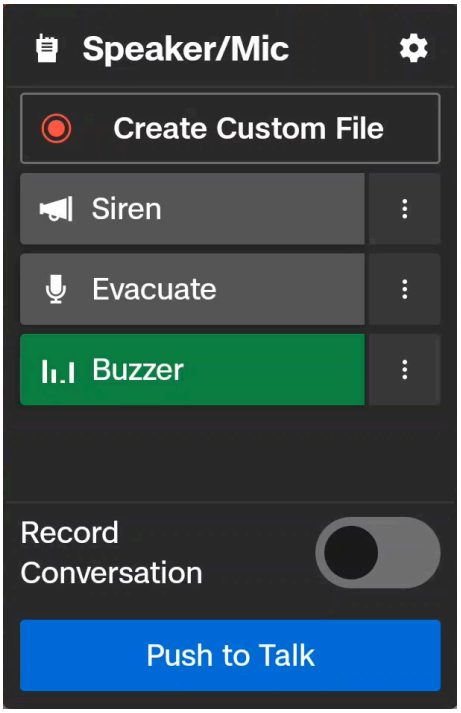
This functionality is only available when the drone is grounded and perched. The onboard microphone does not transmit audio while the drone is in flight.

During two-way operation, the Pilot can continue using controls such as adjusting the gimbal and configuring camera settings.

> ***TIP:*** *For improved audio clarity when using Two-Way Audio, Skydio recommends using USB-C headphones.*

Communication Behavior

Two-Way Audio is enabled manually from the controller. There is no listen-only mode. Two-way audio is either fully enabled (hear + respond) or limited to one-way broadcast only.



By default, the microphone on R10 is muted. Enabling the **Record Conversation** toggle activates the microphone on the drone. When enabled, audio from the environment is transmitted to the controller. Both audio from the drone and audio sent via Push to Talk is automatically recorded to the drone's SD card.

- Audio recording cannot be disabled while the microphone is active

The Pilot can transmit audio from the controller to the drone using the on-screen **Push to Talk** button.

To transmit audio:

- Press and hold the **Push to Talk** button to broadcast
- The blue button will display "*Broadcasting*" while the Pilot is actively talking
- Release the button to stop broadcasting and resume receiving audio
- Only one participant can speak at a time

Additionally, Pilots can utilize the pre-recorded audio files (e.g., Siren, Evacuate, Buzzer).

Audio Recording and Storage

All Two-Way Audio activity is recorded to the SD card in the drone. This includes:

- Audio transmitted from the controller (Push to Talk broadcasts)
- Audio captured by the drone's microphone

Audio recordings are stored on the drone's SD card and do not currently sync to Skydio Cloud when using Media Sync.

Enabling Record Conversation activates the microphone on the drone. When enabled, all audio received and transmitted is recorded to the drone's SD card.

Record Conversation Toggle Behavior			
Record Conversation	**Drone Microphone**	**Hear audio from the drone environment?**	**Audio recorded?**
ON	Enabled	Yes	Yes
OFF	Disabled	No	No

Operational Considerations

- Two-Way Audio performance depends on connection quality. If video latency or signal strength degrades, audio performance may also be impacted.
- Telemetry indicators should be monitored to assess link quality
- The drone may generate background noise while perched (e.g., propellers spinning to cool the drone), which may affect audio clarity

Camera and Capture

While in Perch, the following functions remain available:

- Capture photos
- Start/stop video recording
- Adjusting camera settings using on-screen controls

Focus behavior:

- Defaults to AutoFocus (AF) upon landing
- Pilots can change focus mode at any time
- Once relaunched, focus resets to AF

Zoom options:

- Available via controller wheel (if configured through button mapping)
- Available via on-screen pinch/spread gestures

- Camera stream selection remains available via on-screen controls

NightSense:
- Can be enabled or disabled using on-screen controls

Gimbal

While Perched, moving the **left gimbal wheel** allows the Pilot to change the gimbal pitch up to the available maximum limits of the gimbal.

Relaunching and Flight Completion after Perching

To end the flight without relaunching, select **Exit Flight Deck** to return to the Gate Screen and initiate postflight processes.

After using Perch, the Pilot can relaunch following the standard workflow:

Step 1 - Select the blue Prep for Flight button

Step 2 - Use one of the following options to initiate launch

- Option 1 - Drag the on-screen slider
- Option 2 - Press and hold the Launch/Land button on the controller

Skydio R10 automatically adjusts its launch height based on the available space. The maximum altitude is approximately 2 ft (0.6 m).

Upon relaunch the gimbal resets to centered pitch (horizon) and the drone can be relaunched in any available Flight Skill.

Step 3 - Continue operations, then return and land as normal

Flying in Dark Environments with NightSense

WARNING: *Do not use artificial lighting to brighten the launch or landing zone during night flights. Enhancing illumination in a localized area, such as using vehicle headlights, can cause the drone to misinterpret ambient lighting conditions. This may result in a sudden transition to Attitude Mode after launching, increasing the risk of drift and loss of control. For safe night operations, follow best practices for low-light flight and ensure the drone is prepared for consistent lighting conditions throughout the mission.*

NOTE: *Maximum flight speed is determined by the selected Flight Mode (obstacle avoidance). Refer to the Flight Modes section for details.*

NightSense allows operators to leverage Skydio R10 visual navigation and obstacle avoidance capabilities even when flying at night. This functionality is built into Skydio R10 and is used to maintain visual positioning (VIO) when ambient lighting is insufficient.

Operation and Controls

By default, NightSense will automatically turn on when entering low light environments. While flying, use the NightSense button on the left sidebar to subsequently turn NightSense on or off. The visible lights will illuminate the area around the drone.

If NightSense lighting is required for positioning:

- The drone may override manual input and turn the lights back on automatically
- Manual attempts to turn the lights off may only disable them momentarily before they are re-enabled

Operational Considerations

- Skydio R10 will prioritize maintaining sufficient visual data for navigation over manual lighting preferences
- NightSense lighting is critical for maintaining stable flight in low-light conditions
- Disabling lighting in these conditions may reduce the drone’s ability to safely navigate

Returning and Landing

WARNING: *Obstacle avoidance is disabled as soon as landing is initiated. The drone will descend straight down and the lights will turn yellow to indicate that obstacle avoidance is OFF. Exercise extreme care to avoid injury or damage. Do not touch spinning propellers.*

Step 1 - Select the Return/Land button in the top right of your screen or on the controller

Step 2 - Select your return location or land in place

Home*   Returns to a Home Point previously set on the map (GPS required)
Launch   Returns to the Launch Point
Pilot*   Returns to the location of the Skydio Controller
***Not supported when Backtrack (default) is selected. Backtrack is only compatible with returning to the Launch Point.*

You have three options when landing in place:

Option 1 - Select and drag the on-screen slider
Landing begins when you lift your finger away from the screen.

Option 2 - Press and hold the Return/Land button on the controller
Landing begins when you see the on-screen check mark.

Option 3 - Press and hold the Return/Land button on-screen
Landing begins when you see the on-screen check mark.

Hand Landing

***WARNING*:** *Obstacle avoidance is disabled as soon as landing is initiated. The drone will descend straight down and the lights will turn yellow to indicate that obstacle avoidance is OFF. Do not attempt to grab or catch Skydio R10 without initiating a landing, the motors will continue to spin at full speed and may cause severe injury. Do not attempt to hand land until the lights turn yellow. Attempting to hand land while obstacle avoidance is active will cause it to attempt to avoid your hand and may result in Skydio impacting yourself or another nearby object.*

Do not hand land during windy days or extreme environmental conditions. While hand landing at night is supported, Skydio does not recommend it. Reduced visibility increases the risk of injury or damage. Exercise extreme caution and ensure clear visibility of the drone at all times.

Do not touch spinning propellers.

Landing Skydio R10 in your hand is a quick and convenient way to end your flight, particularly if you are not in a clear, level area. For your safety, always use caution when hand landing.

DO NOT ATTEMPT A HAND LANDING IF:

- There are high winds present.
- Skydio R10 is not stable in flight for any reason.
- Skydio R10 is performing an emergency landing after an accident or crash.
- You are in an area where you do not have stable footing.
- You are on a moving vehicle or boat.

Step 1 - Position Skydio R10 at approximately eye level and within arm's reach, with the drone facing away from you.

Extend your arm away from your body.

- The sensor package should face away from your body
- The back of the chassis and the battery are closest to you

Step 2 - Initiate landing

Obstacle avoidance is disabled when landing is initiated.

The drone will vertically descend down, and the lights on the drone turn yellow to indicate obstacle avoidance is disabled for the remainder of the landing.

Step 3 - Lightly grab the drone by the battery from underneath as it touches down on your open palm

Once the battery has made contact with your palm, keep your hand steady until the propellers completely stop spinning.

Low Battery

WARNING: *You may choose to cancel an automated landing or delay your return when the Return Battery capacity has been reached at your own risk – you are solely responsible for the potential loss of the drone and/or any serious bodily harm and property damage that may result.*

The Battery Indicator dynamically updates during flight based on your altitude and distance from the return location. Monitor the indicator while flying to understand how much battery is:

- Available for flight
- Required for return
- Required to land

Skydio R10 will assess the altitude and distance from the Launch or Home Point and alert you when it is time to return and land. **It is strongly recommended you initiate a return or land at this time.**

Skydio R10

You will receive a series of notifications alerting you about the current status of the drone battery:

Return Battery Capacity Reached
The drone only has enough battery to return and land. **If you delay your return, you may not have sufficient battery power to reach the return point.**

- An audible beep will play over the controller
- If the drone is within 32 ft (10 m) of the return location, it will begin returning without displaying this notification
- If you selected **Ask to Return (default)** in your **Return** settings, you will be prompted to choose Return or Keep Flying
- If you selected **Auto Return on Low Battery** in your **Return** settings, the drone will begin returning automatically when this notification appears; if you select **OK**, it dismisses the notification but does **not** cancel the return
- If no Home Point is set, the drone will return to the Launch Point

Land Soon

The drone will continue flying, but this notification alerts you one minute before the drone will begin to land in place. **You may choose to continue flying, however, it is strongly recommended that you fly to a safe location and land soon.**

Drone Battery Low
The battery level is too low to continue flying and the drone will begin looking for a clear and flat landing surface. The drone will land in place and may make minor adjustments to land in the flattest spot. You have the ability to make small, nudging adjustments. **It will not return to any designated return location.**

- An audible beep will play over the controller
- Mute this using the sound icon within the notification, or turn down all notifications using the Sound menu (Global Settings > Sound)

Land Immediately

WARNING: *Continuing to fly at this point greatly increases the risk of a crash, loss of the drone, or serious bodily harm or injury.*

The battery level is critically low and the drone may power off mid-flight without warning. This warning appears if you chose to cancel the earlier **Drone Battery Low** automatic landing and continue flying.

If the drone is descending toward an unsafe area (e.g., water, traffic), you may cancel the landing, move to a safer location, and then resume the landing process.

- A series of audible beeps will play over the controller
- Mute this using the sound icon within the notification, or turn down all notifications using the Sound menu (Global Settings > Sound)

Skydio Controller

To help ensure a safe and uninterrupted flight, always launch with sufficient controller battery. If your battery drops below 20%, you will be notified on the Gate screen.

You will receive a series of notifications alerting you about the current status of the controller battery:

Controller Battery Low
When the controller battery reaches 10%, a Controller Battery Low notification will appear.

Controller Battery Critical
When the controller battery reaches 5%, a Controller Battery Critical notification will appear.

- If the controller powers off, the drone will follow the **Lost Connection** behaviors you have configured
- An audible beep will play over the controller
- Mute this using the sound icon within the notification, or turn down all notifications using the Sound menu (Global Settings > Sound)

Contingency Behaviors

Lost Connection

WARNING: *Before flying, ensure you have set your Lost Connection Return Behaviors. This is a critical step that ensures your drone returns safely and lands in an accessible location.*

If connection is lost, Skydio R10 will default to the **Lost Connection settings**. Select between **Return (Backtrack or Up and Over)** and **Hover**. Backtrack is the default Return option.

Return (Backtrack default)

Wait Before Return - set the amount of time you want Skydio R10 to wait before it initiates a return flight, allowing time to reconnect

Land After Return - when enabled, your drone will return, hover for a specified amount of time, then land.

Wait Before Land - the amount of time between 0 to 300 seconds (default is 240 seconds) that you want your drone to wait above the landing location before landing. This setting is only enabled when Land After Return is toggled on.

Hover

Land After Hover - when enabled, Skydio R10 will hover for a specified amount of time, then use visual navigation to find a safe area to land.

Wait Before Land - the amount of time between 0 to 300 seconds (default is 240 seconds) that you want your drone to wait before landing. This setting is only enabled when Land After Hover is toggled on

Skydio R10 will continue hovering as it tries to regain connection. If it fails to reconnect and reaches low battery:

- If you have an automatic return set, your drone will return to either the Launch Point or Home Point (if set)
- If you do not have an automatic return set, your drone will use visual navigation to find a safe area to land

- If you do not have strong VIO, your drone will be unable to use visual navigation and will descend vertically and land

Lost GPS or Visual Navigation (VIO)

Skydio R10 may use both visual navigation (VIO) and GPS when available. The drone will automatically use whichever navigation source is healthy.

- If **GPS is unavailable**, the drone will continue flying using VIO
- If **VIO is unavailable**, the drone will continue flying using GPS (if available)
- If **both VIO and GPS are unavailable**, the drone will enter **Attitude Mode**

Emergency Landing and Attitude Mode

CAUTION: *Obstacle Avoidance is not available in Attitude Mode.*

CAUTION: *Monitor the VIO health in the telemetry bar. If VIO fails, your drone will enter Attitude Mode.*

In this mode, the drone will use internal barometer readings to maintain altitude when the throttle joystick is centered.

- The drone will **not hold position** and will drift
- Pilots will need to adjust roll and pitch movements to maintain position
- The drone will not automatically brake when the joysticks are centered

Recovery from Attitude Mode

If the drone regains either VIO or GPS, it will automatically exit Attitude Mode and resume normal navigation using the available system.

- To have the best chance of recovering VIO, fly to a more open area with clear visibility and out of dusty or obscured environments, then operate within sight of visual features.
- When GPS becomes available again, a prompt will be displayed. Fly the drone horizontally (either left and right, or back and forth) to regain GPS heading and resume GPS navigation.

Navigate to **Global Settings > Flight Controls > Landing** to configure landing behavior while in Attitude Mode.

Auto Land in Attitude

Toggled ON (default) - After 5 seconds of inactivity in Attitude Mode (i.e. the joysticks are centered and not touched), Skydio R10 will automatically initiate an emergency landing.

Toggled OFF - The drone will remain in Attitude Mode under joystick command until GPS/VIO navigation systems are healthy or you land.

After 5 seconds of inactivity in Attitude Mode (i.e. the joysticks are centered and not touched in a neutral position and not engaged), Skydio R10 will automatically initiate an emergency landing and descend autonomously. An alert notification will display that Skydio R10 is initiating an emergency landing.

If you input any joystick command while the drone is emergency landing, it will stop descending and you can continue to fly in Attitude Mode.

Low Battery in Attitude Mode

The drone will not automatically initiate a return or force landing at low battery while flying in Attitude Mode, but may descend if the Pilot is not actively applying throttle. It is your responsibility to monitor battery level and manually fly the drone to a safe landing location and land the drone when the battery is low. When the battery is low and the throttle stick is centered, the drone will descend to remind you that it is time to land.

Lost Connection in Attitude Mode

If you lose connection with the drone while flying in Attitude Mode, the drone will descend and emergency land in place.

Landing in Attitude Mode

To land the drone in Attitude Mode, you can press or hold the Land button to autonomously descend and touch down, or you can manually descend and touch down. The drone will automatically disarm and spin down the propellers after a few seconds when it detects that the drone is safely on the ground and the throttle joystick is held in a full down position.

Controller Overheating

If the Skydio Controller reaches critical temperatures and overheats in flight, it will shut down and lose connection to the drone, triggering the R10 Lost Connection behavior.

To mitigate overheating and reduce the risk of lost connection during flight, the controller will issue two alerts and provide guidance to the operator.

Alert	**Operator Action**
Controller is Heating Up	Take mitigation actions: ● Move the controller screen out of direct sunlight ● Move to a shaded or cooler area if possible ● Continue flight - this alert is cancellable
Controller Too Hot to Operate	Take immediate action to land: ● Launch will be prevented ● If the drone is in flight the signal between the controller and the R10 will be lost and your drone will default to the operator-defined lost connection settings ● This alert is non-cancellable

Flight Termination

WARNING: *Terminating a flight will cause your drone to crash. Damage resulting from Flight Termination is not covered under warranty and may result in injury or damage. Use only in extreme situations.*

In the event of an extreme emergency, you have the option to immediately terminate your flight. **Simultaneously press and hold the C3 button and Launch/Return/Land button for three seconds** while in flight to immediately stop the motors.

Inflight | Remote Flight Deck (RFD)

Relevant Flight Crew Role(s): *Pilot in Command (PIC), Remote Pilot in Command (RPIC) if commandeering*

This section is for flights conducted with Skydio R10 and Remote Flight Deck (via Skydio Cloud).

1. Navigating Skydio Remote Flight Deck
2. Camera Settings
3. Launching
4. Flight Screen
5. Environmental Considerations
6. Flight Skills
7. Returning and Landing
8. Low Battery
9. Lost Connection
10. Lost GPS
11. Contingency Behaviors

Understanding FAA Regulations for BVLOS / Flying Over People

Organizations are responsible for ensuring that operations are in accordance with FAA regulations, BVLOS Waivers, Remote ID requirements, and the terms of any applicable waivers.

Throughout this manual, users will find reminders to follow their organization's standard operating procedures and FAA regulations, including:

- Notifying individuals within or near the operational area before a flight
- Operating under approved conditions for BVLOS or flights over people

Connectivity

When using Remote Flight Deck, R10 supports multiple connectivity paths between the drone and the cloud. In addition to the onboard cellular connection, the system can utilize the controller's internet connection as a relay when available.

If the controller is powered on, paired to Skydio R10, and has an active, healthy connection to the cloud, it may provide an alternate communication path to the cloud. This can improve connection reliability in environments where the drone's direct cellular connection is degraded or unavailable, such as indoor operations.

Flight Screen

1. Return to Skydio Cloud (exit Remote Flight Deck)
2. Information Panel - Devices
3. Information Panel - Incidents
4. Information Panel - Personnel
5. Information Panel - Missions*
6. Map Search (address/location)
7. Incident Marker
8. Home Point (if set)
9. Launch Location
10. Custom Marker
11. Body Camera (via Axon Integration; visible in Information Panel - Personnel)
12. Drone location and orientation
13. Drone name
14. Map Layers
15. 2D/3D Map View

16. Lock view to drone (center)
17. RFD Settings
18. Share ReadyLink
19. View Controls (`)
20. Configure Flight Modes (R)
21. Enter Pointer Lock (C)
22. Turtle Mode
23. Speaker
24. NightSense
25. Battery Level
26. Connection Health
27. Positioning System Health Indicator
28. Telemetry: Height Above Launch (HAL) and Height Above Ground Level (AGL)
29. Vehicle Speed
30. Wind Speed and Direction Relative to Vehicle
31. Heading Angle
32. Monitor Activity (Enter FlightCast)
33. Display Layout
34. Enter Fullscreen
35. Heads-Up Display (HUD): Compass
36. Heads-Up Display (HUD): Airspeed
37. Heads up Display: Altitude (HAL/AGL/MSL)
38. Crosshair
39. Gimbal Angle
40. Zoom Controls
41. Focus Controls (AutoFocus or Manual Focus)
42. Shutter/Record
43. Video/Photo Settings
44. Video Mode/Photo Mode
45. Return (Launch Point or Home Point if set)
46. Land Now (Land in place)
47. Toggle Camera Settings

*Autonomous missions are not compatible with Skydio R10

Launching

Before launching, the Remote Pilot is responsible for notifying everyone in the operational area, and those involved in the operation, that a flight is about to begin.

When **Launch** is selected:

1. The drone will automatically launch
2. Level the gimbal pitch
3. Hover in place

At this point the Remote Pilot is in control of the drone and can begin flight.

Manual Flight Controls

Flying Manually (Keyboard)

WARNING: Risk of collision or serious injury due to unintended flight commands. *Before flight, disable Sticky Keys on the computer keyboard. Sticky Keys can interfere with the pilot's ability to operate the drone safely and may cause unintentional flight commands, potentially resulting in a collision or serious injury. Refer to the computer's operating system manual for instructions on disabling Sticky Keys. Before each flight, ensure Sticky Keys are turned off if the setting cannot be disabled permanently.*

Remote Pilots can use the W-A-S-D keys on the keyboard to control the flight of the drone.

These shortcuts can be viewed any time by selecting the **keyboard icon** in the Action Bar (center of the screen).

Pitch Forward	**W**
Strafe Left	**A**
Strafe Right	**D**
Pitch Backward	**S**
Ascend	Press and hold the **Spacebar**
Descend	Press and hold **Shift**
Gimbal Pitch	**Up and down** arrows
Yaw	**Left and right** arrows
Gimbal Pitch and Yaw	Press **(C) to enter Pointer Lock** and have your mouse control the gimbal pitch and yaw. Press (C) again to exit.
Toggle Flight Control keyboard menu open and closed	**Backtick** (`)
Toggle Flight Modes (obstacle avoidance)	**R**
Toggle Pointer Lock	**C**

Increase Speed	**]**
Decrease Speed	**[**
Zoom In	**=**
Zoom Out	**-**
Increase Exposure	**.**
Decrease Exposure	**,**
Reset Exposure	**/**
Take Photo	**P**
Toggle Flight Controls Menu	**`**
Auto Focus Center	**F**
Clear Focus Center	**V**
Toggle Strobe Lights	**I**
Toggle Thermal Video	**T**
Boost	**Q**
Crawl	**E**
Set Camera Pitch Forward/Downward	**Z**
Toggle RGB Lights	**L**
Toggle Markers AR	**M**
Toggle / Resume Mission	**X**
Toggle Streets AR	**O**
Zoom 1x	**1**
Zoom 1.5x	**2**
Zoom 2x	**3**
Zoom 2.5x	**4**
Zoom 3x	**5**

Flying Manually (Gamepad Controller)

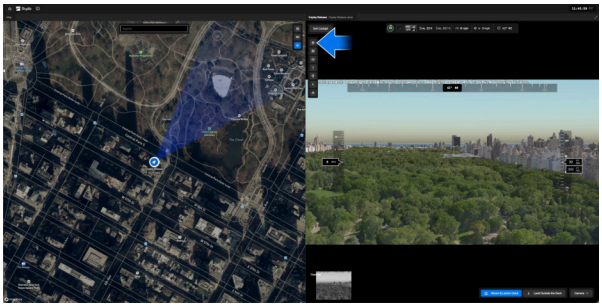
WARNING: Risk of collision or serious injury from uncommanded drone movement. *If the gamepad controller has loose or uncentered joysticks, fails to recenter properly, or exhibits stick drift, it may cause unintended drone movement during flight. While the drone is grounded, follow the controller manufacturer's instructions to calibrate the joysticks if supported. To verify proper operation, hover the drone in a safe area without applying input. If the drone drifts consistently without input, land immediately and recalibrate or replace the controller before resuming flight.*

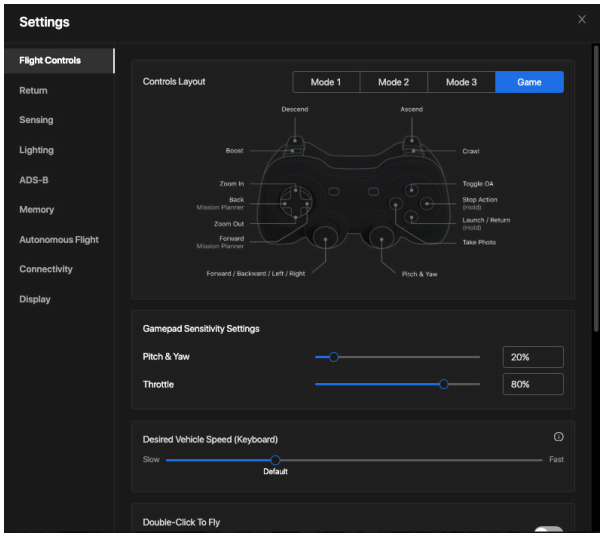
NOTE: *Settings only persist through the current browser tab session.*

Remote Flight Deck offers the flexibility to pilot the drone using a standard gamepad controller, providing an intuitive alternative to traditional keyboard control methods.

Setup instructions can be viewed in the **Initialization** section.

To change flight control settings, such as Control Mode, Remote Pilots can select **Settings** > **Flight Controls** to edit.





Double-click to Fly

To use this feature, Double-click to Fly must be toggled on within *Settings > Flight Controls > Double-click to Fly*.

Double-clicking anywhere on the video feed will command the drone to fly to that point in space.

- An AR destination marker target will appear on-screen
- Scrolling up will move the destination further away
- Scrolling down will move the destination closer

Flight Modes (Obstacle Avoidance)

WARNING: *Obstacle avoidance is most reliable in the forward-facing (180°) field of view. The drone uses current and recently-observed environment data to determine where it can safely fly. If sufficient obstacle data is not available in a given direction, the Skydio R10 will restrict movement rather than proceed unsafely. Obstacle avoidance is disabled when landing is initiated. Exercise extreme care to avoid injury or damage. Do not touch spinning propellers.*

CAUTION: *Disabled obstacle avoidance greatly increases the risk of collision and should only be used if you are an experienced pilot. Skydio recommends turning down controller throttle, roll, and pitch sensitivity to a lower setting and proceeding at a maximum speed of 2 mph (1 m/s).*

Obstacle Memory

Skydio R10 maintains a coarse obstacle map (~12 m × 12 m × 6 m) based on recently observed surroundings. This allows the drone to safely move in directions that are not currently within the camera's field of view, such as reversing along a previously observed path.

Obstacle data decays after approximately 30 seconds. If an area has not been observed within that time, it is no longer considered safe for autonomous movement.

Flight Modes

Use the Flight Mode button to adjust autonomous flight behaviors. When flying near obstacles, Skydio R10 follows the selected distance setting and automatically adjusts input sensitivities.

Choose between Outdoor, Indoor (default), and Confined:

Indoor (default) - Drone stays 8 in (20 cm) away from obstacles

- Top air speed: ~11 mph (5 m/s)

Outdoor - Drone stays 28 in (71 cm) away from obstacles

- Top air speed: ~27 mph (12 m/s)

Confined - Drone stays 2 in (5 cm) from obstacles. This mode can be used to navigate tight spaces, but increases the risk of collision. The drone will provide slight course corrections, but primarily relies on the Pilot to avoid collisions.

- Top air speed: ~7 mph (3 m/s)

Disabled (toggle off) - Skydio R10 will not avoid obstacles and there is a high risk of collision

- Top air speed: ~27 mph (12 m/s)

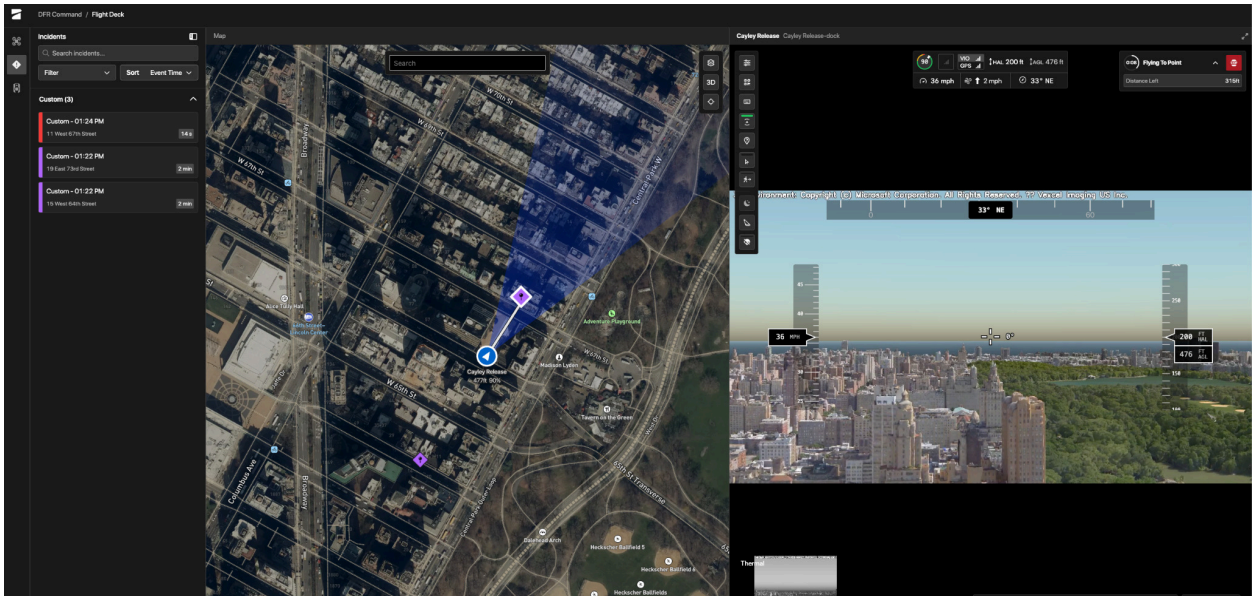
Viewing Custom Markers

> ***NOTE:*** *Responding to markers is not currently supported, but they remain visible on the Map View.*

Creating a Custom Marker

Right-clicking on the Map View and selecting Create Custom Marker will allow pilots to create a Custom Marker. Custom Markers allow Remote Pilots to set Flight Points on the Map that the drone can fly to. Unlike a Fly to Point, the drone will not immediately begin flying to a custom marker. When a custom marker is created, the marker will appear on the Map. Clicking the custom marker will display details such as:

- Description (optional)
- Who created the marker
- The time the marker was created
- The address of the marker
- And coordinates of the marker



Editing or Deleting a Custom Marker

Remote Pilots can select a Custom Marker from the Map View or the Incident Panel and select Edit to edit the name of the marker or add an optional description.

To delete a Customer Marker, Remote Pilots can select a Custom Marker from the Map View or the Incident Panel and select Delete.

Using the Incident Panel

Remote Pilots can view the Incident Panel by clicking on a Marker or by selecting the panel icon next to the Settings near the top left corner of Remote Flight Deck. The Incident Panel allows Remote Pilots to look at the Markers in a list view. Selecting a Customer Marker will display more information also allowing Remote Pilots to edit or delete the marker.

Commandeering a Flight

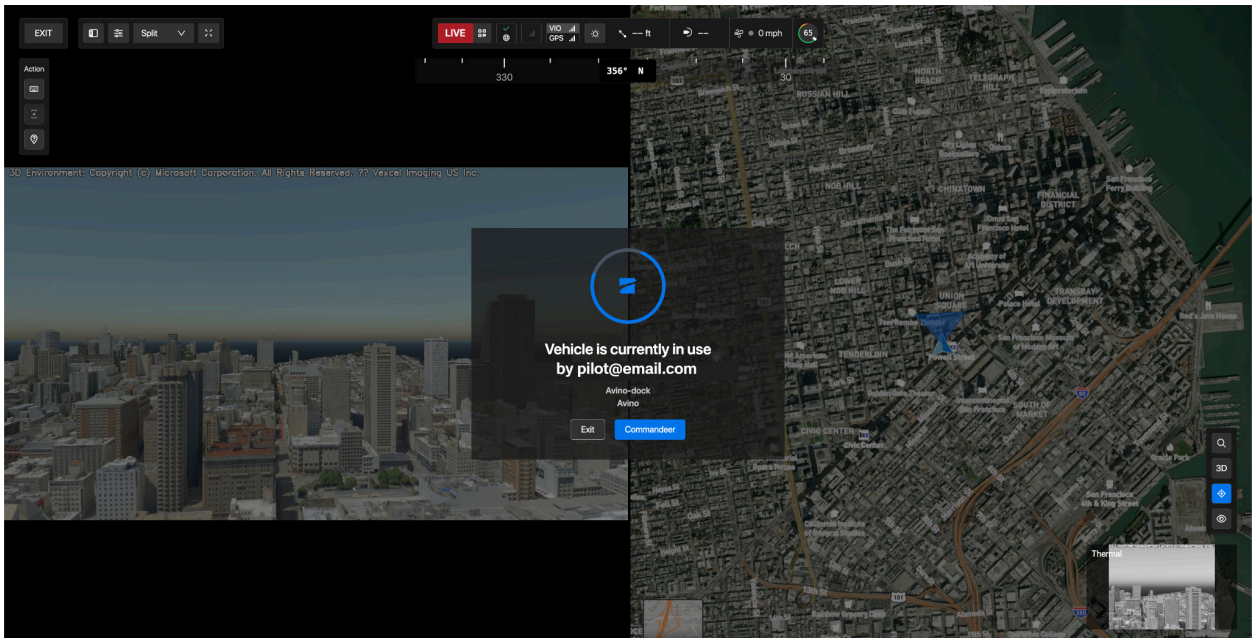
Remote Pilots can commandeer (take control) of drones that are actively flying within their organization. If Remote Pilots are not currently operating another flight system, they can take control from a livestream or take control from the Flight System page in Skydio Cloud.

Taking Control from a Livestream

While viewing a Livestream, Remote Pilots can select “Take Control” to commandeer this drone. If they have not yet approved Remote ID they will be prompted to do so before taking over.

Taking Control from the Flight System page in Skydio Cloud

From the Flight System Page Remote Pilots can select “Fly Now” to Commandeer a Drone already in flight. When they enter Remote Flight Deck you will be prompted to Take Control. If they have not yet approved Remote ID they will be prompted to do so before taking over.



Perch Mode

Perch Mode allows the drone to remain powered on and connected after landing, enabling continued situational awareness and camera operation without ending the flight session.

With Perch Mode enabled, the Pilot can:

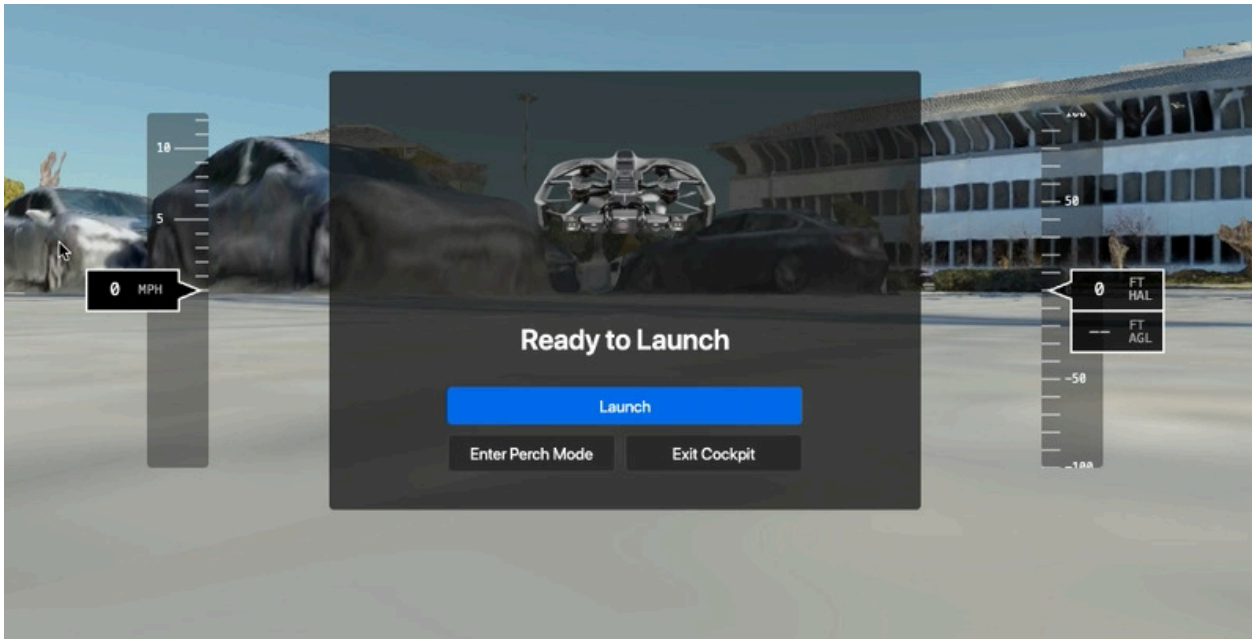
- View the live camera feed
- Capture photos and record video
- Turn NightSense lights on and off
- Control the gimbal and camera settings
- Relaunch the drone
- End the flight manually

The drone remains in Remote Flight Deck until the Remote Pilot either exits or relaunches.

Activation and Pilot Interface

Perch Mode is enabled by default, meaning you will enter Perch Mode upon landing.

Before launching, you will see the option to enter Perch Mode.



General Behavior

When R10 lands with Perch Mode enabled, the flight session remains active and the Remote Pilot continues to operate within the Flight Screen. The drone stays powered on and maintains its connection, allowing continued access to both camera and control functionality without exiting Remote Flight Deck.

If video recording is in progress at the time of landing, recording continues uninterrupted after touchdown.

The live camera feed remains available and continues streaming at up to 1080p at 30 frames per second. The live streamed video feed is saved in the same manner as inflight feeds.

Operational Considerations

Lost Connection
If R10 loses communication with the controller while in Perch Mode the drone will:

- Remain in place
- Stay powered on until the battery is depleted

Low Battery
If R10 enters a low battery state while in Perch Mode, a warning notification will appear. This notification is dismissible and follows the same behavior, messaging, and alert protocol as low battery notifications displayed during flight.

- Pilots should monitor battery status and take appropriate action when prompted

Vehicle Overheating
While perched, R10 monitors its internal temperature and provides a series of escalating notifications as temperature increases.

These notifications are intended to prompt the Pilot to take corrective action.

- The drone will continue operating while warnings are displayed
- If no action is taken and temperature continues to rise, R10 will eventually reach a state where it must power down

Overheating Alerts	Messaging
Caution-level alert	**Vehicle is Heating Up** *Move to a cooler area.* Can be dismissed
Warning-level alert	**Vehicle Too Hot to Operate** *Vehicle will power down in place unless launched immediately.* Can be dismissed
Critical Temperature	If the drone reaches a critical temperature threshold it will power down in place

Low Power

While in Perch Mode, the drone may enter a reduced functionality state referred to as Low Power Mode.

In this state, core viewing and control capabilities remain available, including:

- Gimbal pitch and yaw control
- Focus controls
- Basic camera functionality

When operating in Low Power Mode, the following limitations apply:

- Digital zoom is not available
- The video stream is reduced in resolution
- Subject tracking is not available
- Relaunch may experience a delayed transition to takeoff

Available Controls while Perched

> ***NOTE:*** *Two-Way Audio while perched is not yet supported for Skydio R10 and Remote Flight Deck.*

Camera and Capture

While in Perch, the following functions remain available:

- Capture photos
- Start/stop video recording
- Adjusting camera settings using on-screen controls

Focus behavior:

- Defaults to AutoFocus (AF) upon landing
- Pilots can change focus mode at any time
- Once relaunched, focus resets to AF

Zoom options:

- Available via controller wheel (if configured through button mapping)
- Available via on-screen pinch/spread gestures
- Camera stream selection remains available via on-screen controls

NightSense:

- Can be enabled or disabled using on-screen controls

Gimbal

While Perched, moving the **arrows** allows the Pilot to change the gimbal pitch up to the available maximum limits of the gimbal.

Relaunching and Flight Completion after Perching

To end the flight without relaunching, exit Remote Flight Deck as normal to end the flight and initiate postflight processes.

After using Perch, the Remote Pilot can relaunch by selecting the blue **Return to Flight Mode button**.

Skydio R10 automatically adjusts its launch height based on the available space. The maximum altitude is approximately 2 ft (0.6 m).

Upon relaunch the gimbal resets to centered pitch (horizon) and the drone can be relaunched in any available Flight Skill.

Continue operations and return or land as normal.

Turtle Mode

Turtle Mode is a recovery function designed to restore the drone to an upright orientation when it is unable to launch due to excessive tilt.

When initiated by a Remote Pilot, the system commands controlled propeller rotation to generate thrust sufficient enough to rotate the drone to a stable, upright position.

This mode is intended to restore the drone to an upright, level orientation so that normal launch procedures can resume.

Turtle Mode may be used when the drone:

- Has landed upside down
- Is resting on its side
- Is leaning against an obstacle
- Is upright but positioned too close to an obstacle to safely launch (e.g., against a wall)
- Is otherwise unable to launch due to excessive tilt

Activation and Pilot Interface

If the drone is powered on and determined to be significantly tilted, approximately 15° or greater from level, Remote Flight Deck will automatically display the Turtle Mode menu.

The drone will not initiate recovery until a direction is selected by the Remote Pilot. The interface displays four autonomous directional recovery options:

- Forward
- Backward
- Left
- Right

The system may indicate a recommended recovery direction by flashing the corresponding directional button. Following the recommended flip direction is advised, as it is optimized for the drone's current orientation and recovery

conditions. Recommendations are based on the system's orientation assessment. Once selected, the drone executes the recovery autonomously. The propeller motors disarm upon detecting a stable, upright position.

Depending on the detected orientation, the system may:

- Reverse selected propellers to flip the drone from an inverted position
- Drive propellers forward to displace the drone away from an obstacle

When displacement is required, the maneuver is executed as two discrete, pilot-initiated actions. The first input commands the drone to move away from the obstacle using forward propeller rotation, based on the Remote Pilot's choice. Once repositioned, a second input is required to initiate the righting maneuver.

Motor direction and output are determined automatically based on real-time orientation sensing.

Manual Recovery Control

WARNING: *Manual Recovery mode allows direct motor control to free the drone from obstructed positions. Manual recovery increases the risk of propeller damage or unintended surface contact. Improper or aggressive inputs may result in propeller damage or additional impact with surrounding surfaces. The Pilot is responsible for ensuring controlled and deliberate inputs.*

Turtle Mode includes an optional Manual Recovery setting.

When enabled:

- Use WASD to control motor output
- The Remote Pilot may apply controlled inputs to free the drone from confined or obstructed positions
- The Remote Pilot maintains the ability to use the directional arrows

Manual Mode must be disabled before relaunching.

Operational Conditions

Ensure the surrounding area is clear prior to initiating a recovery.

Recovery performance is influenced by the surface on which R10 is resting.

- **Level, non-slip surfaces –** designed to reliably self-right
- **Low-friction surfaces (e.g., polished concrete, smooth tile) –** the drone may slide before completing rotation
- **Leaning or obstructed positions –** the drone may require an intermediate rotation before achieving an upright orientation

Review *System Limitations* for more details.

Returning and Landing

Land in Place (Pilot Initiated)

- Commanding R10 to **Land in Place** will result in R10 descending without any lateral movement.
- When Landing in Place, the drone will travel straight down and land in place without any lateral movement.

Canceling a Landing

- To cancel a Landing, Remote Pilots can select “Cancel Landing”.

Low Battery Behavior

WARNING: Risk of serious injury, property damage, or loss of aircraft.

The Remote Pilot may choose to cancel an automated landing or delay the return when the Return Battery capacity has been reached at their own risk. The Remote Pilot is solely responsible for the potential loss of the drone and/or any serious bodily harm and property damage that may result. For more information, see Inflight > Low Battery Behavior.

NOTE: *While flying, Remote Pilots should always monitor Remote Flight Deck for alerts relating to battery levels, signal quality, and other in-flight notifications.*

The Battery Indicator **dynamically updates** during flight based on the drone's altitude and distance from the return location. Remote Pilots should monitor the indicator to understand how much battery is:

- Available for flight
- Required for return (yellow portion)
- Required to land (red portion)

Skydio R10 will assess the altitude and distance from the Launch Point and begin returning there when it only has enough battery remaining to return and land. **It is strongly recommended that Remote Pilots return to the Launch Point at this time.**

However, if necessary, Remote Pilots can cancel the return and re-initiate it later.

- Waiting too long to re-initiate may result in the drone landing before it reaches the Launch Point due to low battery

Critical Battery

WARNING: Risk of serious injury or aircraft loss.

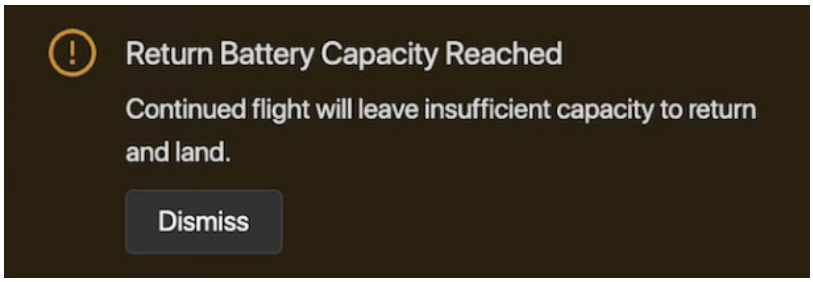
Operating the drone with a critical low battery may cause an in-flight power loss, leading to uncontrolled descent and serious bodily injury.

If Remote Pilots chose to cancel the earlier **Drone Battery Low** automatic landing and continued flying, they will receive a series of notifications alerting them about the current status of the drone battery:

1. Return Battery Capacity Reached
2. Landing Soon
3. Landing

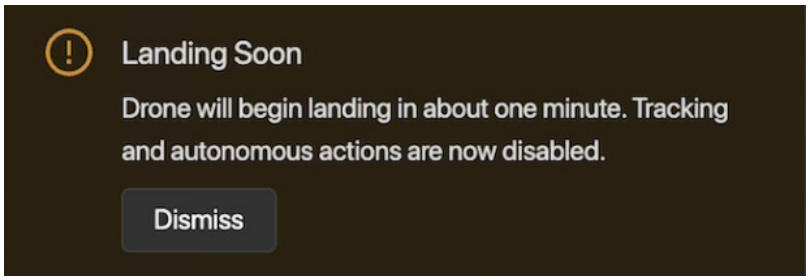
Return Battery Capacity Reached

The drone only has enough battery to return and land based on current conditions. **If return is delayed beyond this point, the drone may not have sufficient battery power to reach the Launch Point.**



Landing Soon

The drone will continue flying, but this notification alerts Remote Pilots approximately one minute before the drone will begin to land in place. Autonomous actions, such as Fly to Point or Return to Launch are disabled. Remote Pilots may choose to continue flying, however, **it is strongly recommended that Remote Pilots fly the drone to a safe location and land soon.**

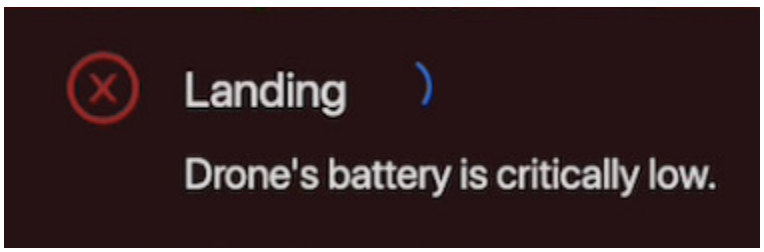


Landing

WARNING: Risk of collision or equipment damage.
When obstacle avoidance is disabled, the drone will descend and land without detecting or identifying a flat landing surface.

The battery level is too low to continue flying and the drone will begin looking for a clear and flat landing surface. The drone will land in place and may make minor adjustments to land in the flattest spot. The Remote Pilot has the ability to make small, nudging adjustments. **The drone will not return to any designated return location.**

If the drone is descending toward an unsafe area (e.g., water, traffic), the Remote Pilot may cancel the landing, quickly reposition the drone to a safer location, and then resume the landing process.



Remote Operations: Contingency Behaviors

While flying, Remote Pilots should always monitor Remote Flight Deck for alerts relating to battery levels, signal quality, and other in-flight notifications.

Lost Connection

CAUTION: Risk of uncontrolled landing or aircraft loss. *Before flight, ensure Lost Connection Return Behaviors are properly set. This critical step allows the drone to return safely and land in an accessible location if the connection is lost.*

If Skydio R10 loses both SL and 5G connections during a mission, it will automatically return to the Launch Point.

Remote Pilots should navigate to **Remote Flight Deck Settings > Return > Lost Connection** or **Cloud > Settings > Flight Settings > Lost Connection** to set the amount of time that the drone will hover in place before returning

- The slider is used to set a delay between 0 and 300 seconds (default is 30 seconds)
- This delay allows time to re-establish connection before the drone begins returning

After returning:

- By default, Skydio R10 will hover and attempt to reconnect for up to 30 seconds before landing
- If connection is restored during this time, the drone will resume flight
- If connection is **not** restored, the drone will follow the configured Lost Connection settings

If the controller is powered on, paired to Skydio R10, and has an active, healthy connection to the cloud, it may provide an alternate communication path to the

cloud. This can improve connection reliability in environments where the drone's direct cellular connection is degraded or unavailable, such as indoor operations.

If the RPIC Loses Connection to the Drone

If the RPIC loses connection to the drone (e.g., experiences a computer crash, Browser failure, Internet outage, power outage, System freeze, or other failure) that prevents the operation of the drone, the drone will follow the Lost Connection behavior that was set in **Remote Flight Deck > Settings > Return/Lost Connection.**

Emergency Landing and Attitude Mode

CAUTION: *Obstacle Avoidance is not available in Attitude Mode.*

CAUTION: *Monitor the VIO health in the telemetry bar. If VIO fails, your drone will enter Attitude Mode.*

Lost VIO and GPS

If the drone loses both VIO and GPS, it will enter Attitude Mode and immediately begin an Emergency Landing.

When the drone enters Attitude Mode, it is unable to hold position and will only maintain attitude (will drift with the wind). The drone will start to descend slowly until landed.

From Remote Flight Deck, the Remote Pilot is not able to control the drone while in this state. However, if a parachute is attached, it is able to be manually deployed during an Emergency Landing due to Lost VIO and GPS.

If VIO or GPS is recovered, the drone will recover from Attitude mode and control of the drone will return back to the pilot.

Postflight | Skydio Controller

Relevant Flight Crew Role(s): *Pilot in Command (PIC), Organization Admins*

When a flight is complete, the system automatically transitions into its postflight sequence. This phase focuses on verifying a successful landing, confirming that data and media are uploaded, and viewing or sharing key information.

Whether Pilots are preparing for another launch or wrapping up the day's operations, postflight tasks help ensure the system is healthy, that data is stored, and the organization remains mission-ready.

This section covers the following tasks:

1. Postflight Inspection
2. FAA Accident Reporting Requirements
3. Offloading Media
4. Logging out of the Skydio Controller
5. Uploading Skydio Support Logs
6. Stowing Skydio R10

Postflight Inspection

Landing

By default after landing, the drone will be in Perch Mode. Select **Exit Flight Deck** to return to the Gate Screen and initiate postflight processes.

While grounded, the propellers on R10 may rotate at low, idle speeds to cool the system. Although the rotation speed is significantly lower than inflight, contact with spinning propellers may cause minor injury. Keep hands, clothing, and objects clear of the propellers at all times.

Pilots should notify all flight crew members on location. Conduct a physical inspection of the drone to ensure all components, such as propellers, lenses, NightSense and speaker modules are free of damage.

More details on the types of landings can be found in *Inflight > Returning and Landing*.

LED Pod Temperature (NightSense Lights)

***WARNING*:** *After prolonged use of the LED pod during flight or while using Perch Mode, it may be hot to the touch and could present a serious burn risk. Do not touch the black heatsink next to the lenses. After landing, wait for your system to cool down before handling.*

During operation, the LED pod may generate heat, particularly during extended use or in high ambient temperatures. The system will display a notification if the NightSense LEDs approach an overheating condition (212°F / 100°C inside the LED pod casing).

After landing, Skydio R10 automatically reduces NightSense power output.

FAA Accident Reporting Requirements

If an accident occurs during a drone flight, the RPIC is required to report it to the Federal Aviation Administration (FAA) within 10 days if any of the following are met:

- The accident results in serious injury to any person or any loss of consciousness
- The accident causes damage to any property (excluding the drone) exceeding $500 to repair or replace

More detailed information can be found in the FAA's guidance for Accident Reporting.

Offloading Media

Select the Media menu within Global Settings to view photos, videos and scans from your recent flights.

- Select an image or video to view
- Press and hold on a thumbnail to select multiple or delete

If you capture photos using Interval, all photos captured will appear as a single stack. Selecting the stack will allow you to scroll through individual images one by one.

Only standard color JPGs will display in the Media menu. To access your DNG or RJPG files, you must transfer the files from your drone.

> ***NOTE:*** *Media is not accessible inflight.*

Transferring Media

Step 1 - Power on Skydio R10

Step 2 - Connect R10 to your computer

Insert the provided USB-C cable into the USB-C charging port on the top of your drone.

Step 3 - Import your media

If you are using an Apple product, use the Photos app or the Image Capture app to transfer your files.

Logging Out of the Controller

Easily log out and switch between users of the same organization without factory resetting the controller. Your Skydio R10 and Skydio Controller will stay paired between sign-ins.

The following are shared and persist between user accounts and logouts:

- Media and Logs
- All controller settings (e.g., Return Behaviors, Display, Telemetry, etc.)
- Offline Maps

Navigate to **Global Settings** and select the profile icon in the top left to view the current account that is signed in, and select Sign Out to switch users.

> ***NOTE:*** *Always review your settings when logging into a shared controller.*

Stowing Skydio R10

- Return R10, batteries, controller, charger, and accessories to their designated positions in the case before transport or storage.
- Store R10 in a temperature-controlled environment, and avoid exposing the system to temperatures outside the operating range (−4 °F to 122 °F / −20 °C to +50 °C).

Postflight | Remote Flight Deck (RFD)

Relevant Flight Crew Role(s): *Remote Pilot in Command (RPIC), Organization Admins*

When a flight is complete, the system automatically transitions into its postflight sequence. This phase focuses on verifying a successful landing, confirming that data and media are uploaded, and viewing or sharing key information.

Whether Remote Pilots are preparing for another launch or wrapping up the day's operations, postflight tasks help ensure the system is healthy, that data is stored, and the organization remains mission-ready.

This section covers the following tasks:

1. Postflight Inspection
2. Reviewing System Status
3. Accessing Flight Data (Media and Flight Reports)
4. Publishing to the Transparency Dashboard (Optional)

Postflight Inspection

Landing

After landing, Remote Pilots should notify all flight crew members on location.

Once the drone lands, the system will begin uploading flight telemetry and metadata if a valid connection is available. If the organization has Media Sync, media will upload when the system is connected through infrastructure WiFi or Ethernet (via dongle).

If Perch Mode is enabled, the drone will enter this mode once grounded.

- To launch another flight, wait for the drone to complete postflight tasks
- If another flight is initiated prior to media sync completion, the system will **pause the upload** and **resume automatically** after the next landing

More details on the types of landings can be found in *Inflight > Returning and Landing*.

System Status Check

Remote Pilots can use the **Flight Systems Page** as well as **Device Pages** to ensure the flight system is healthy and functioning nominally. Connectivity issues, hardware failures, or other errors that may have occurred during the flight can be found during the system status check.

Any issues should be reported via the organization's standard reporting procedure.

FAA Accident Reporting Requirements

If an accident occurs during a drone flight, the RPIC is required to report it to the Federal Aviation Administration (FAA) within 10 days if any of the following are met:

- The accident results in serious injury to any person or any loss of consciousness
- The accident causes damage to any property (excluding the drone) exceeding $500 to repair or replace

More detailed information can be found in the FAA's guidance for Accident Reporting.

Verify Integration Uploads

Administrations can use the **Flight Reports** page to determine the current status of data uploads to an integration, such as Axon Evidence.

Organization Admins can validate integration health by refreshing the Axon Credential card in Axon Settings to check which features are enabled and confirm system status.

Complete Internal Processes

Remote Pilots should complete any additional postflight workflows or documentation required by their organization's standard operating procedures (SOPs).

These requirements may vary depending on agency policies, waiver compliance, or mission type.

Accessing Flight Data

Cloud Users, Remote Pilots, and Org Admins can access synced media and flight logs in Skydio Cloud under the **Media** and **Reports** menus in the left sidebar.

Media

Provides a snapshot of the images and videos captured during flights.

Users can **search for media** and filter by date, vehicles, pilots, or Sites.

The **Share** button allows users to generate a public link. Once the link is generated, the expiration date can be changed.

- By default, all media from the selected flight is viewable for 24 hours

From here, the link can also be revoked if needed.

Users can select the **checkbox** to **download** or **delete** the selected media.

Selecting **View Flight** allows users to view:

- Video of the flight
- Telemetry and flight details (speed, battery level, latitude and longitude)

- Flight System Page (time and flight duration, pilot, flight system details)

Reports

Cloud Users, Remote Pilots, and Org Admins have the ability to view **Reports**. Within the drop-down menu, users can view:

- Summary
- Activity
- Flights
- Alerts

Summary

The **Summary** menu shows a dashboard view of flight activity across the organization. The dates at the top allow users to search for statistics during a specific time period.

Includes key performance metrics such as:

- Total flights and cumulative flight time
- Number of active pilots and drones
- Average flights per day, average flight time, and average time flown per pilot
- A daily flight distribution chart that visualizes trends and peak usage days

This view can help users quickly assess usage patterns, pilot engagement, and overall operational tempo.

Activity

The **Activity** menu provides a detailed breakdown of flight time and usage, organized by either drone or pilot. This view helps track operational trends, individual engagement, and asset utilization over time.

- **Vehicle tab –** Lists all active drones during the selected date range, including number of flights, total flight time, and a link to each drone's flight history
- **Pilot tab –** Displays usage by pilot, showing flight counts, total time flown, and direct access to their flight history

Flights

The **Flights** menu shows a flight-by-flight log for all operations during the selected date range. Each row represents an individual flight and includes key metadata to help with performance tracking, audit readiness, or postflight investigation.

For each flight, users can view:

- Pilot and drone ID
- Launch time and flight duration
- Integration details (e.g., Axon evidence upload status)
- A link to view full flight details

Flights can be filtered by pilot or drone.

Users can select **Export CSV** to export the displayed list into a CSV document.

Alerts

The **Alerts** menu provides a historical log of alert events that occurred during a flight. This page can be used to audit remote operations or investigate issues. Filtering can be set by alert type or drone.

For each alert, users can view:

- Alert name and type
- Time the alert occurred
- Associated drone or Mission
- Details

Publishing to the Transparency Dashboard (Optional)

NOTE: *Only Organization Admins can set up and configure Transparency Dashboards. Instructions can be found in the Initialization section.*

Cloud Users, Remote Pilots, and Organization Admins have the ability to edit, review, and publish flight information to the Transparency Dashboard.

After a flight completes, it will have a default **In Review** status. This means it is not yet public or viewable on the dashboard.

Selecting **Publish** will post it to the external dashboard.

- Once published, the flights will display a green **Public** tag
- If Administrators do not want a flight to be viewable on the dashboard, they should select **Mark Private**

When a flight is published to the dashboard, the following information is displayed publicly:

- Date and time of the flight
- Case ID
- Description
- Flight Purpose

If needed, Administrators can **add a Case ID** and a **description** to each flight. Both of these will display on the dashboard when a flight is published.

Administrators can **bulk-update flights with the same case information** (Case ID, Flight Purpose, and Description) by selecting the checkmark box in the flight thumbnail.

To un-publish a flight, Administrators can select the ellipsis (three dots) and then select **Mark Private** or **Send to In Review**.

Maintenance

Relevant Flight Crew Role(s): *Organization Admins, Pilot in Command (PIC)*

Learn how to replace your propellers and best practices for battery and equipment storage.

This section outlines the following key objectives:

1. Maintenance and Troubleshooting in Skydio Cloud
2. Updating the Skydio Controller
3. Updating Skydio R10
4. Battery Maintenance
5. Replacing R10 Propellers
6. Cleaning Your System
7. How to Clean Skydio R10
8. Skydio R10 Sustainment Plan

Maintenance and Troubleshooting

Sending Support Logs from the Controller

WARNING: *Powering off the drone immediately after a landing or a crash will result in missing data in the flight logs. Always allow your drone to complete postflight operations before powering off. Removing, swapping, or altering file names on the media card will impact the availability of the flight logs.*

CAUTION: *To maintain operational security and prevent conflicts with controller functionality, never sign in to personal or third-party accounts (such as Google Drive, Gmail, OneDrive, or other cloud services) on the Skydio Controller. If you need to import maps or export logs, use the supported workflows provided by Skydio*

Uploading your flight logs allows our support team to troubleshoot any issues or questions you may have.

Do not reformat or factory reset your Skydio drone prior to contacting our support team. Skydio will never review your videos or data without your permission.

When uploading to Skydio Support, monitor the upload progress of an individual flight directly from the Skydio Support Logs menu:

Individual Flight Log Status

- **Not Started –** Log has not been uploaded
- **Partial –** Some data was uploaded, but the log is incomplete; when you retry, only the missing data will upload
- **Complete –** The log has been fully uploaded

Individual File Status

- **Green –** Upload successful
- **White –** Upload failed; select the error icon (triangle) in the top right to view the files

Uploading Support Logs

NOTE: *The transport of large support logs are not supported over 5G cellular.*

Step 1 - Power on Skydio R10 and the controller

Ensure your controller is fully charged.

Step 2 - Navigate to Global Settings > Information

Step 3 - Select Skydio Support Logs

Step 4 - Select Upload to Skydio Support

Step 5 - Choose between a flight or controller logs

Select Flight to Upload includes all logs from a specified flight. This option will show you the history of all flights, organized by date and time. Select the individual flight you wish to upload.

Send Controller Logs uploads all flights saved on the controller from all flight history. This option allows you to sync logs whether or not you are connected to the drone.

Step 6 - Upload Flight Logs

If you selected Select Flight to Upload in the previous step, select which flight you wish to send to support.

Wait as your upload completes. You will see a summary after the upload finishes.

Uploading Debug Logs

Depending on the issue, Skydio Support may ask you to upload debug logs.

Step 1 - Power on Skydio R10 and the controller

Ensure your controller is fully charged.

Step 2 - Navigate to Global Settings > Information

Step 3 - Select the name of your R10 under Devices

Step 4 - Select Upload debug logs

It may take a few minutes for debug logs to upload to Skydio.

Uploading Support Logs in Skydio Cloud

To optimize the performance of the flight system, it's important that the organization keeps the system updated, monitors fleet health, and replaces propellers and batteries as-needed.

Uploading Logs

When reaching out to Skydio Support for troubleshooting help, users may be required to upload logs to assist in diagnosing issues.

There are two different types of logs that can be uploaded:

Flight Support Logs contain data from a specific flight. If operators experience an issue during flight, such as a failed return, they would upload a Flight Support Log.

Device Support Logs include debugging data from outside of a flight, such as failures to launch or device-specific issues. These logs help address issues that occur before or after flight.

How to upload a Flight Support Log

To upload a Flight Support Log, users should:

1. Navigate to the **Flight Systems Page** (Fleet > Select the device)
2. Select the **Flight History** tab
3. Select the ellipsis (three dots)
4. Select **Upload Skydio Flight Support Log**

How to upload a Device Support Log

To upload a Flight Support Log, users should:

1. Open the **Device Page** (Settings > Devices *or* select the device from the Fleet page and the gear icon)
2. From the Device Page, select the Settings tab (under the name of the Device)
3. Within the Tools section, select the **Upload** button next to *Upload Skydio Device Support Log*

Updating the Skydio Controller

NOTE: *You must update the Skydio Controller first before updating Skydio R10. Check for available updates before flying.*

Step 1 - Power on the Skydio Controller

Open the controller lid and hold the Power button for five seconds. The lights on the front of the controller will turn on and indicate the level of charge.

Step 2 - Open Global Settings and navigate to the Information menu

Step 3 - Select Controller Update under Settings

Step 4 - Select Check for Update

Step 5 - Select Update

Follow the on-screen prompts to update your controller.

Updating Skydio R10

Skydio will not force an update for your system, however, for optimal performance, we recommend that you keep your Skydio system up-to-date. If an update is available, you will see a red notification icon in the **Information** menu.

Step 1 - Power on Skydio R10

Press and hold the Power button on the battery for three seconds.

Step 2 - Power on the Skydio Controller

Step 3 - Open Global Settings and navigate to the Information menu

Step 4 - Select your Skydio R10 under Devices

Step 5 - Select Update

Follow the on-screen prompts to update your drone.

Select **Check for Updates** anytime to look for available updates.

Updating the Flight System in Skydio Cloud

Organization Admins can update all supported devices within a single flight system with a single click. Skydio Cloud automatically sequences updates in the correct order and shows progress at the flight system level.

Step 1 - Navigate to the Device Page

Step 2 - Select the Software tab

Step 3 - Select Update All

Battery Maintenance

Storage

- Battery charging is not supported below 32°F (0°C) or above 122°F (50°C).
- Battery performance may degrade in extreme temperatures.
- Batteries may self-discharge after extended time in high-temperature environments (above approximately 86°F / 30°C), reducing charge to approximately 75%.

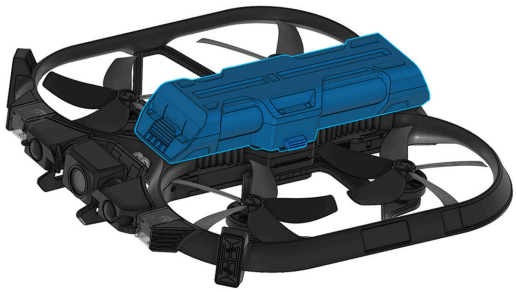
How to Replace an R10 Battery

Safety Information

WARNING: *Before servicing the system, turn off the R10. Spinning propellers can cause serious injury.*

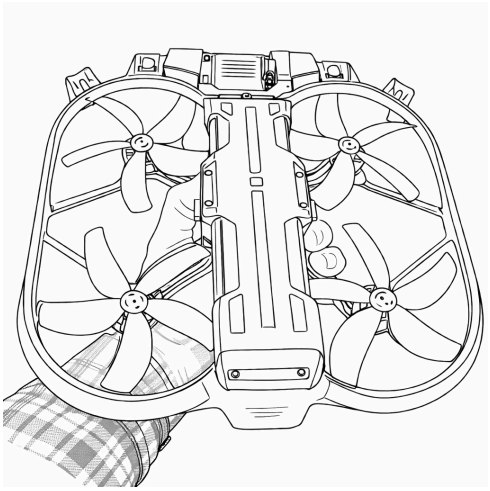
Preparation

1. Turn the R10 **OFF**.
2. Flip the R10 upside down with the Battery facing up.



Battery Removal Steps

1. Hold the R10 as shown.



2. Squeeze the 2x Battery release clips located on either side to disengage the Battery.

3. Pull the Battery off of the R10.

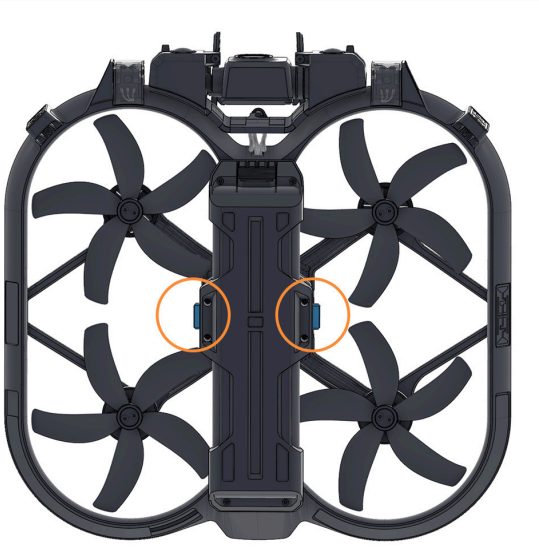
Battery Installation Steps

1. Flip the R10 upside down with the Battery connector facing up.
2. Align the Battery to the R10 so that the alignment features match.

3. Lock the Battery into place.

    a. Press the Battery firmly into the R10.

    b. Ensure the 2x Battery release clips “click” into place



c. Verify the Battery is fully installed and secured by completing a push-pull-push test without squeezing the Battery release clips
d. If there is any Battery movement, remove and re-install until there is no movement.

Function Check

Verify the R10 powers **ON**.

Replacing a SIM Card

Use this procedure to remove or install SIM cards in Skydio R10.

Preparation

1. Power off the drone
2. Remove the battery
3. Place the drone upside down on a flat, stable surface

Removing a SIM Card

Step 1 - Use the provided driver tool to remove the eight screws

- Start with the front and rear pairs of screws, then remove the four center screws

Step 2 - Lift the top cover straight up from the drone

Step 3 - To eject, gently press the installed SIM card inward until you feel a click

- Release and allow the card to partially eject

Step 4 - Remove the SIM card

- Slide the SIM card out of the slot

Installing a SIM Card

Step 1 - To insert, align the SIM card in the correct orientation and gently press inward until you feel a click

Step 2 - (Optional) Install a second SIM card

- If needed, repeat this process for Slot 2

Step 3 - Reassemble Skydio R10

- Align the top cover with the drone body and lower it straight down into place

Step 4 - Secure the screws

- Reinstall all screws in the reverse order of removal and tighten until secure

Removing and Installing SD Cards

Step 1 - Power off Skydio R10

Step 2 - Remove the battery

Step 3 - Place the drone upside down on a flat surface

Step 4 - Open the card slot cover

Step 5 - Gently press the card inward until it clicks

- Release and remove

Step 6 - To install, gently press inward until it clicks into place

Step 7 - Close the card slot cover

Replacing R10 Propellers

This procedure explains how to remove and replace R10 propellers.

Required Items

This section contains information for required components, consumables, and tools.

Parts

Qty	Name	Part number/ SKU	Notes
2x	Propeller, Clockwise (CW), 5 Blade	TBD	Blue
2x	Propeller, Counter-Clockwise (CCW), 5 Blade	TBD	Grey

Fasteners and Consumables

Qty	Name	Part number/SKU	Torque (Nm)
8x	M2-0.4-08, Cap-3.8-1, T6, Patch, Steel, Black	N/A	N/A

Tools

Name
T6

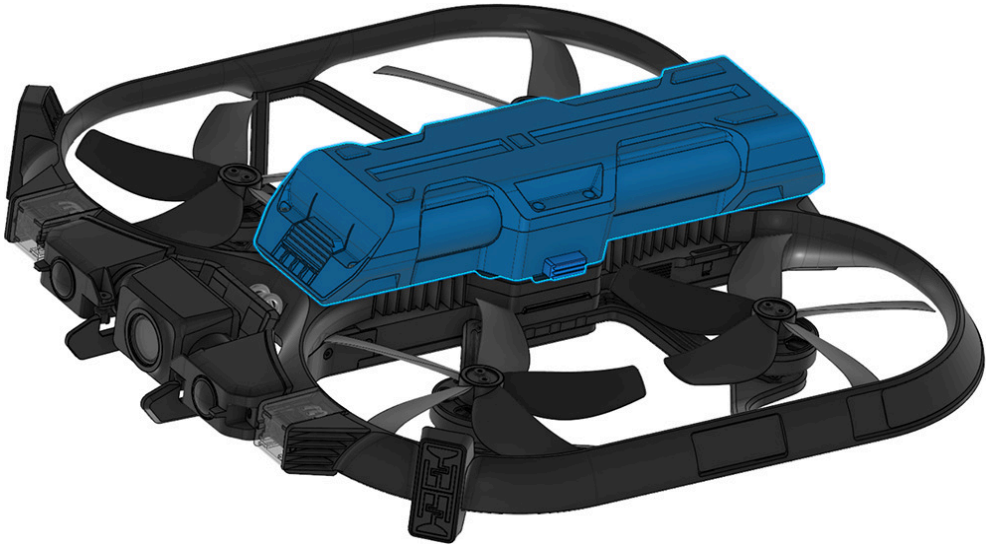
Safety Information

WARNING: Risk of serious injury from rotating propellers.
Propeller blades are sharp and can cause severe injuries.
Keep fingers, hands, and all body parts away from moving propellers at all times.
Handle propellers with extreme caution and care.

Preparation

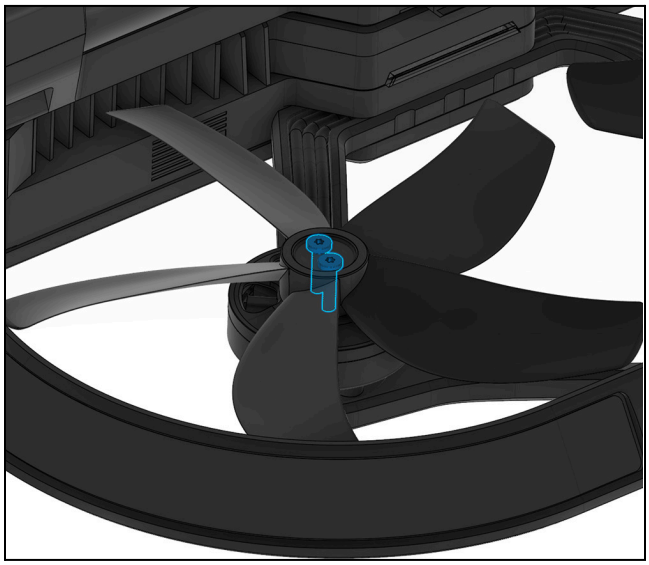
Step 1 - Power OFF Skydio R10

Step 2 - Flip the R10 upside down with the battery facing up



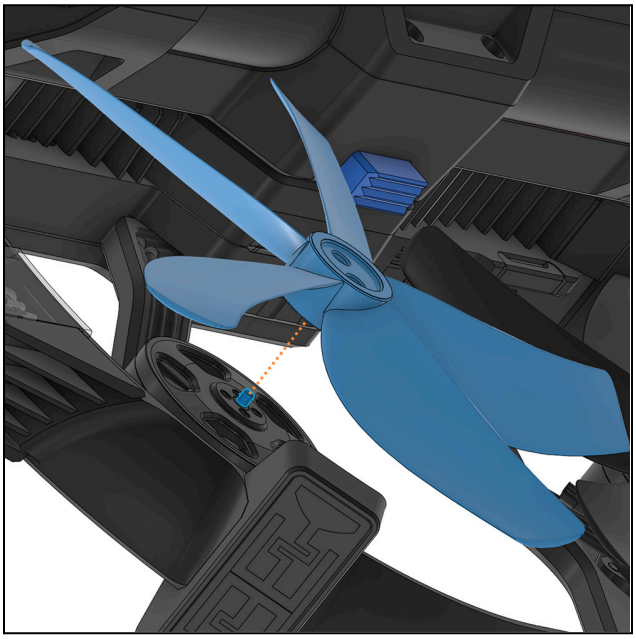
Propeller Removal

Step 1 - Remove 2x T6 Propeller fasteners with a T6 bit.

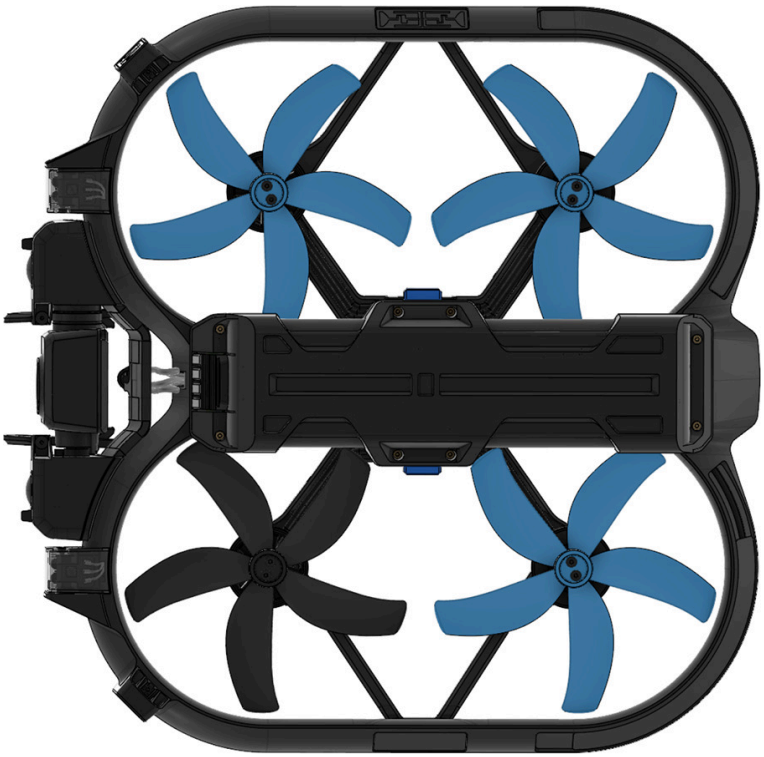


Step 2 - Remove 1x 5-Blade Propeller.

Slide the Propeller off of the shaft on the Motor.



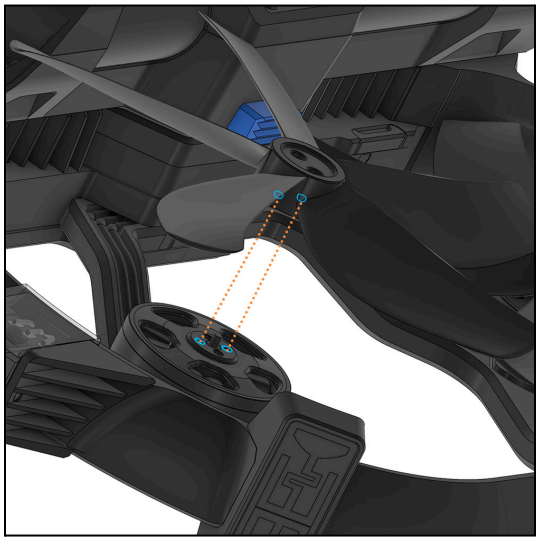
Step 3 - Repeat the above process for the remaining 3x Propellers.



Propeller Installation

Step 1 - Align 1x 5-Blade Propeller to the Motor.

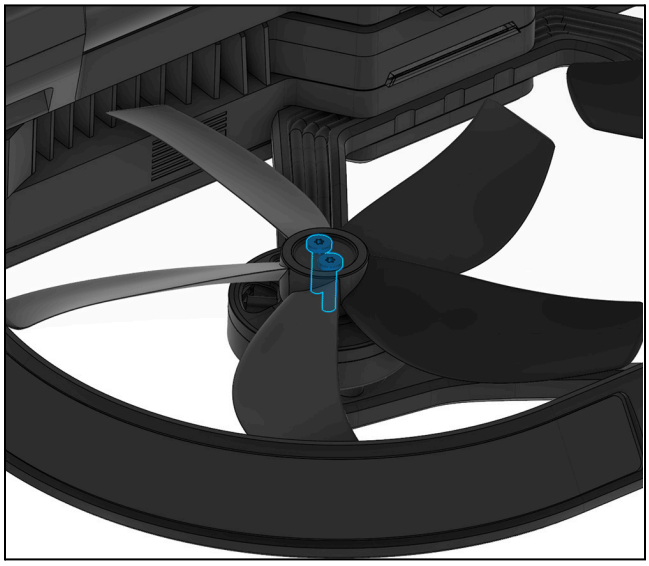
- Match the Propellers to the appropriate Motor by color and rotation direction. ***NOTE:*** *There are 2x CW Propellers (blue) and 2x CCW Propellers (gray).*
- Verify the Propeller and Motor are free of excess dust and debris.
- Align the 2x datums on the Propeller underside to 2x fastener holes on the motor.



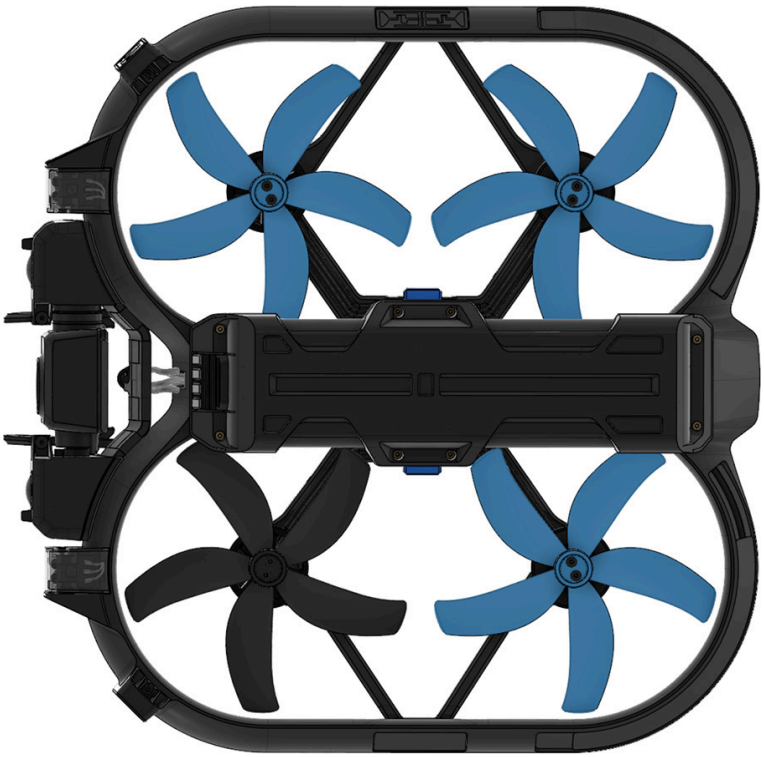
- Slide the Propeller on to the Motor shaft.
- If necessary, rotate the Propeller to fully seat the 2x datums to 2x fastener holes.

Step 2 - Install 2x M2 Propeller fasteners with a T6 driver.

Ensure 2x fasteners are fully tightened and secured.



Step 3 - Repeat the above process for the remaining 3x Propellers.



Functional Verification

Step 1 - Power ON Skydio R10

Step 2 - Wait ~1-2 minutes for the Propellers to automatically spin. Ensure the Propellers spin freely.

Step 3 - Update Propeller Hours in Skydio Cloud.

1. Login to Skydio Cloud
2. Navigate to the drone **Device Page**
3. In the **Overview tab**, find **Propeller Hours** and select **Mark Replaced**
4. Enter the date and time of the last replacement
5. Select **Update**

Once completed, Skydio Cloud will begin tracking the propeller flight hours.

How to Clean a Skydio R10

WARNING: Water Ingress Hazard
Submerging the Drone or Batteries, or exposing them to running water, can cause component damage or sensor failure.
Do not submerge the drone or batteries or place them under running water.

It is recommended to wipe down the R10 drone after flights in environments with significant dust or debris.

1. Turn the R10 OFF.

2. Wipe down the R10 with a dry or water-damp microfiber cleaning cloth. Ensure the following:

    - Only use lens cleaner on Cameras.
- To remove any dust and debris in difficult to reach areas, use a compressed air canister.
    - If needed, mild soap and water may be used to remove heavier dirt or debris.

Skydio R10 Sustainment Plan

NOTE: *The Skydio Care Plan is NOT applicable to the R10 Flight System.*

Sustainment coverage for Skydio R10 is provided through the R10 Plan.

If coverage under the R10 Sustainment Plan is purchased:

- Each kit includes one (1) covered repair or replacement for the duration of the plan
- Additional repairs or replacements are available at a discounted rate of $500 per event
- Additional repairs or replacements are unlimited and may be used throughout the plan term (up to three years)

Plans are sold on a per-kit, annual basis and are subject to applicable terms and conditions.

Legal

Skydio One (1) Year Limited Warranty

Skydio may warrant the included hardware product against defects in materials and workmanship in hardware under normal use in accordance with published guidelines including but not limited to the Terms of Use, Skydio R10 Operator Manual, and the Skydio Safety and Operating Guide for one year from the date of delivery (the “Limited Warranty”). The Limited Warranty does not warrant against normal wear and tear or damage caused by accident or abuse and is not applicable to any software provided with the hardware product.

The Limited Warranty is subject to the full terms and detailed information about how to obtain service available at: www.skydio.com/legal/limited-warranty. If you submit a valid claim under this Limited Warranty, Skydio will either repair, replace, or refund your hardware product at its sole discretion. You may be required to furnish proof of purchase details when making a claim under this Limited Warranty.

California Prop 65 Warnings

Skydio R10 uses lithium-ion batteries which contain 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 visit: www.P65Warnings.ca.gov

Skydio Controller contains chemicals including cadmium, which are known to the State of California to cause cancer and birth defects, or other reproductive harm. For more information visit: www.P65Warnings.ca.gov

Skydio R10 Dual Charger contains chemicals including BPA (Bisphenol A), nickel, and lead which are known to the State of California to cause cancer and birth defects, or other reproductive harm. For more information visit: www.P65Warnings.ca.gov

Skydio R10 contains chemicals including BPA (Bisphenol A), nickel, and lead which are known to the State of California to cause cancer and birth defects, or other reproductive harm. For more information visit: www.P65Warnings.ca.gov

FCC & ISED Canada Compliance Statements

USA (FCC)

Any changes or modifications to this equipment not expressly approved by Skydio 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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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 23 cm. 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.

Canada (ISED)

This Class B digital apparatus complies with Canadian ICES-003.

This equipment complies with ISED RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 23 cm between the radiator and any part of the user's body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. Cet équipement est conforme aux limites d'exposition aux rayonnements RF établies par ISED pour un environnement non contrôlé.Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et toute partie du corps de l'utilisateur. Cet émetteur ne doit pas être co-localisé ni fonctionner en conjonction avec une autre antenne ou un autre émetteur.

FCC ID and ISED ID E-Labeling Information

To view regulatory information, including the FCC ID and ISED Certification Numbers, navigate to www.skydio.com/regulatory.

Pour consulter les informations réglementaires, y compris l'ID FCC et les numéros de certification ISED, rendez-vous sur www.skydio.com/regulatory.

FAA Compliance Statement

Skydio drones sold in the United States are Standard Remote ID-compliant. Unless specifically exempt, this product complies with 14 CFR Part 89 regulations on Remote Identification per RID-ASTM-F3586-22-NOA-23-01 (ASTM F3411-22a-RID-B and ASTM F3586−22 with corrections).

The Skydio R10 DOC will be available in a revised version of this document.

See DOC list here: https://uasdoc.faa.gov/listDocs.

Environmental Compliance

Skydio R10 Flight System hardware, including the drone, controller, and charger, is compliant with applicable Restriction of Hazardous Substances (RoHS) requirements.

End User License Agreement

The Skydio End-User License Agreement available at www.skydio.com/legal/terms-and-conditions-enterprise applies to executable software embedded in or preinstalled on Hardware and any related updates

("Onboard Software"). "Hardware" means Skydio drones and other unmanned systems, controllers, docks, attachments, and related physical products.

Additional Resources

For all the latest information about Skydio and our products visit: www.skydio.com.

For legal information and product terms and conditions visit: www.skydio.com/legal.

Skydio products are protected by patents and trademarks, registered in the United States and other countries. For Skydio intellectual property information visit: www.skydio.com/legal/ip