

FlyCode For Tello User Guide



FlyCode brings manual flight, block coding and a classroom simulator to Tello. This updated guide covers connection, missions, media, calibration and the app's new features.

Introduction

System Requirements

Supported drones

- DJI Tello
- Tello EDU
- RoboMaster TT: see page 14

Current development targets

- iOS 15 or later
- 64-bit Android 10 or later
- 2.4 GHz Wi-Fi

App Installation

Install the FlyCode release or test build supplied for your device. Accept the required agreements and permissions.

On iOS, allow Local Network access. Public-release device requirements may differ from the development targets.

Tutorial

In-App Tutorial



Gimbal introduces the controls when you first open FlyCode. Controls are inactive during the tour. Follow the network, battery and power-on guidance, then connect to your Tello.

New in this guide: Block Lab, Simulator, Save / Share, IMU calibration, video modes and Drone Wi-Fi.



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Connect

Powering on and Connecting to Tello

1. Power on Tello on a level surface and wait for startup to finish.
2. Open your device's Wi-Fi settings and select TELLO-XXXXXX, or the name assigned to your drone.
3. Stay connected if your device says the network has no internet. You are connecting directly to Tello.
4. On cellular devices, Airplane Mode with Wi-Fi turned back on can help prevent unwanted network changes.
5. Open FlyCode. If it does not connect automatically, open the upper-left menu, choose Flight Mode, then Connect to Drone.
6. Wait for current flight readings. A live camera image alone does not prove commands are working.
7. Clear the flight area. Tap Takeoff and complete the on-screen slider when you are ready to launch.

Fly

Quick Connection Check

Confirm the phone or tablet is on the intended drone network.

On iOS, check Local Network permission.

Keep the drone level with motors off before takeoff. Use a charged battery and keep the drone in view.

Troubleshooting

Once safely landed, restart Tello and FlyCode if connection fails.

For IMU calibration, use Settings > Drone calibration in FlyCode (page 12).

Support:
flycodesupport@dronelegends.com.

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Flight

Manual Flight Controls

1. Connect in Flight Mode. Follow Gimbal's tutorial and the Control Style selected in Settings.
 2. Pitch moves forward and back. Roll moves sideways. Yaw turns the nose. Altitude moves up and down. Directions follow the drone's orientation, not where you stand.
 3. Watch battery, altitude, flight time and other displayed readings. Status can become unavailable after a disconnect.
 4. Use Land for a normal finish. Wait for touchdown and motors off before changing screens or networks.
- Flip mode provides directional flips when available. Follow the app's battery checks and allow generous clearance.

Media

Photos and Recording

Short-press the capture control for a photo. Hold to start recording; press/release again to stop.

Watch the saved-message feedback. Leaving Flight Mode stops recording.

A fresh camera frame is required.

Gallery

Open Gallery to browse photos and videos, play/pause video, save media to the device photo library, or delete items. Multi-select supports deletion.

Mission photos also appear here as JPG images. They capture the video frame; Simulator creates no real photos.

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Settings

Settings and Video Modes

Control Style, Edge Snap and Center Snap adjust manual joystick behavior.

Flight Speed changes manual speed. Unit Type changes display units; block distances have their own units.

Show Velocity controls its display. Flight Timer Max changes the timer scale; it is not an automatic landing command.

Battery, Altitude and Temperature Warning set warning thresholds. These are not physical flight boundaries.

Limited FPS controls the app frame-rate limit. Tap a setting for Gimbal's hint. Reset To Defaults restores normal settings and Video Auto.

Video

Auto / Classroom

Auto is the default video mode.

Classroom mode requests a lower-bandwidth stream, about 1 Mbps. Actual rate can vary.

The choice is saved and reapplied on reconnect and between Flight Mode and Block Lab.

Status and Links

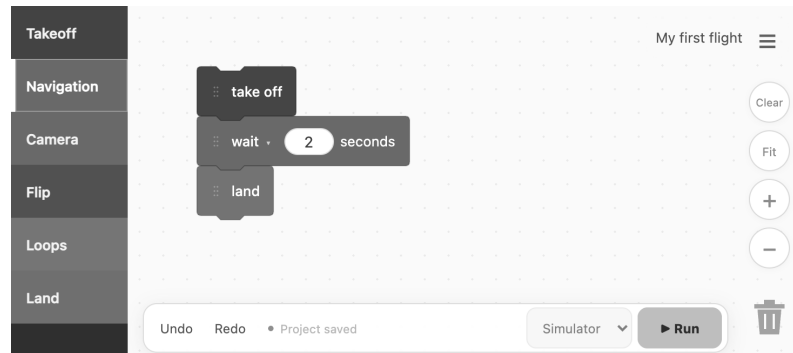
Setting accepted means the request was acknowledged; it does not guarantee an exact bitrate. There is no Video Off option.

Settings also offers Website, Contact, Terms of Service and Privacy. Open external links after landing.

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Code Blocks

Build a Mission in Block Lab



Open Code Blocks from the menu. Landscape gives more room.

Choose a category or + Blocks. Swipe to browse; drag a block onto the canvas. Snap actions into one connected stack, starting with Take off for a flight mission.

Tap numbers and dropdowns to edit. Move blocks by their label or dotted grip. Nearby connection targets highlight before release.

Edit

Canvas Tools

Undo / Redo reverses edits.

Select a block for Copy / Delete, or drag a stack to the trash. Clear removes the canvas; Undo restores it.

Use + / -, pinch and Fit to see the program. Snaps can give sound and haptic feedback.

Keep Blocks Connected

The visible categories are Takeoff, Navigation, Camera, Flip, Loops and Land.

A Start mission block is not needed. Stray blocks can prevent validation.

Place final Land after a loop. Editing is locked during live preparation, flight and recovery.

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Blocks

Flight Block Reference

Take off: request automatic launch. Land: request normal landing and end the mission; later blocks do not run.

Pitch / Roll / Altitude: move a relative distance in cm, m, in or ft. Converted distance must be 20-500 cm. Up 50 cm means rise by 50 cm, not reach an absolute height.

Yaw: turn right or left by 1-360 degrees. Later moves follow the new heading.

Set speed: 10-100 cm/s for ordinary distance moves.

Wait: pause 0-120 seconds. In the air, the drone holds position as conditions allow.

Flip: forward, back, left or right; live Block Lab requires at least 50% battery.

Reference

Go to and Curve

Go to uses relative XYZ coordinates, each -500 to 500 cm; at least one magnitude must be 20 or more. Speed: 10-100 cm/s.

Curve uses two XYZ points and speed 10-60 cm/s. Points cannot be collinear; radius must be 50-1000 cm.

Camera Blocks

Take photo saves a current video-frame image. Missing or stale frames are skipped with a log entry.

Photo sequence repeats capture with a wait after each photo, including the last. Count uses Repeat limits; interval uses Wait limits.

Go to is not GPS navigation.

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Loops

Loops and Existing Projects

Repeat: run the body a fixed number of times, from 0 to 10,000. Fractional counts round down. Keep Land after the loop.

Loop WHILE / UNTIL: WHILE repeats while true; UNTIL repeats while false. The condition is checked first. Make sure it can change.

Count: assign a variable through an inclusive From / To range. By must be nonzero; descending ranges count down.

For each: run once per list item, assigning it to the named variable.

Loop control: BREAK exits the nearest loop. CONTINUE skips the rest of its current repetition. Neither means land.

More Blocks

Imported Block Families

Older saved/imported projects can retain Logic, Math, Variables, Functions, Sensing, Text and lists.

They include conditions, calculations, functions, telemetry, list operations and Log message.

These categories are not shown in the current palette.

Tello EDU Projects

Existing EDU projects can retain mission-pad detection, camera direction, pad-relative movement and pad readings.

Use compatible EDU hardware and saved model data. These are not simulated.

New work defaults to Tello; there is no current model selector.

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Save, Open and Share Missions

Tap the mission title / menu to open Your workspace.

Mission name + Save: name the project, tap Save and wait for confirmation. Editing or running does not save automatically.

Saved projects: choose a locally saved mission to reopen it.

Delete: remove the selected saved project. Share a backup first if you may need it again.

Import: load a compatible FlyCode JSON file. Review all blocks and values before running.

Share: export a mission file using the device sharing controls. Another compatible installation can import it.

Unsaved Changes

If you leave, switch projects or import over edits, Your work is not saved offers Save or Don't Save. Tap X to keep editing.

Save failures keep the workspace open.

Unsaved edits may be lost after a force quit or device shutdown.

Mission Data

Mission Data shows the validated instructions behind the blocks. Use its close button to return.

Projects are stored on this device. Share files to move them between devices.

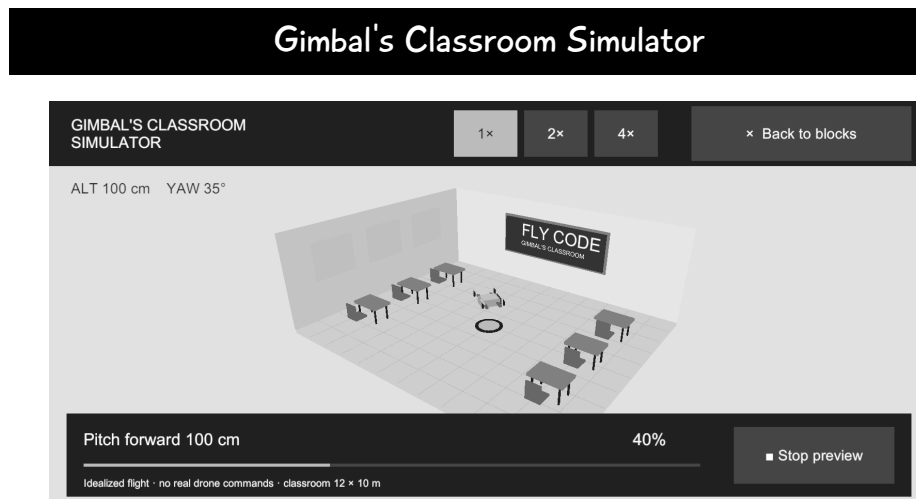
Sharing does not provide cloud sync or update another person's copy.

Workspace

Save

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Simulator



Choose Simulator, then Run. The mobile app shows Gimbal, a launch pad and the flight trail. No real drone commands are sent.

Watch the current block, altitude, heading and progress. The preview animates takeoff, land, movement, yaw, speed, flips, Go to, Curve, waits and photo feedback.

Preview

Playback Controls

Choose 1x, 2x or 4x, even during a block.

Stop preview cancels. Replay starts again from the launch pad and keeps the selected speed.

Back to blocks returns to editing.
Reopening Simulator starts at 1x.

Preview Limits

The classroom is 12 x 10 m with desks and a 3.6 m ceiling. Routes outside the flight area, through low furniture or too near the floor can give errors.

This is an idealized preview, not real physics or sensors. EDU pads are unsupported; real-flight recovery blocks preview.

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Practice

Try Your First Missions

Mission 1: Take off and land

Take off > Wait 2 seconds > Land

Connect one stack, save it as **My first flight**, then choose **Simulator** and **Run**. Watch launch, pause and touchdown.

Mission 2: Fly a one-meter square

Take off > Set speed 30 cm/s > Wait 2 seconds

Repeat 4: Pitch forward 100 cm, then Yaw right 90 degrees

Land after the Repeat

Nest the movement and turn inside Repeat. Save as **Classroom square**. Preview at 1x before trying faster playback.

Learn

Predict and Observe

Predict the final position and heading before running.

Change one value, such as distance or turn angle, and compare the result.

Use **Simulator** to see how each instruction changes the path.

Before Real Flight

A successful preview does not guarantee a safe real path. Real drones can drift; leave room around every segment.

Keep the aircraft in view. Check the entire flight area, then use the live-flight steps on page 11.

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Live Flight

Run a Live Block Mission

1. Save and preview the mission. Connect to the intended drone, level and landed with motors off. Keep the app visible.
2. Select Live flight and tap Run. The app automatically checks the program, connection, fresh readings, grounded state, command reply and battery. Motors remain off during checks.
3. Block Lab needs at least 30% battery; flips need at least 50%. There is no separate Check link action.
4. Watch highlighted blocks and progress. Tap status to open mission activity. Dynamic programs may show activity without a known percentage.
5. Wait for landing confirmation. Required landing must complete before 100%. Use bottom Stop if recovery remains unresolved.

Stop

Normal and Emergency

Land block: normal landing, then end the mission.

Bottom Stop: cancel preparation or execution and request landing when needed.

Abort Mission: hold 1 second for emergency motor cutoff. An airborne drone can fall. Releasing cancels the hold.

Camera and Recovery

Camera shows a movable, expandable preview. Delayed images alone do not stop flight; photos need fresh frames.

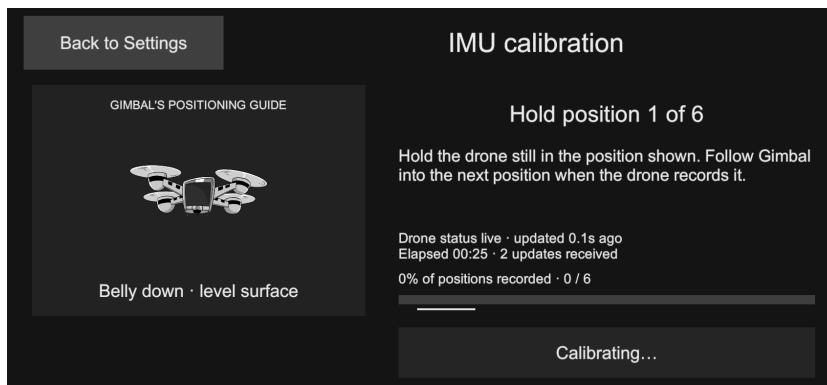
Lost readings, low battery or failed commands can stop progress.

Motor cutoff may be unavailable. Sent does not prove received; lost Wi-Fi can prevent landing.

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Calibration

IMU Calibration in FlyCode



1. Connect in manual Flight Mode with motors off. Leave Block Lab. Open Settings > Drone calibration > Start IMU calibration.
2. Follow Gimbal: belly down, one side, opposite side, camera down, camera up, then belly up. Hold still on a firm surface. The count advances when the drone records each position, not when the illustration moves.

Restart

Watch the Progress

The screen shows position count, percentage, elapsed time and status freshness.

Wait for all six positions and final confirmation. A waiting message is not completion.

This is IMU calibration; center-of-gravity calibration is not included.

Restart and Reconnect

Power the drone off and on when requested. Rejoin its Wi-Fi and keep it flat with motors off.

Tap I've restarted - reconnect and wait for IMU calibration complete.

An interruption also requires restart/recovery. Flight stays locked until recovery finishes.

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Advanced

Advanced Settings and Drone Wi-Fi

Open Advanced Settings by tapping the version/build text in Settings five times, no more than two seconds apart. Repeat to return later. Options include full-speed unlock, flight logging, advanced status and white-balance controls.

To change the drone's network:

1. Connect in manual flight, landed with motors off. Finish missions and calibration. Open Advanced Settings > Drone Wi-Fi.
2. Enter an SSID of 1-32 characters and a password of 8-63 characters, then confirm it. Use printable ASCII without spaces. Record the new credentials.
3. Tap Review change, then Apply Wi-Fi change.
4. Join the new network in device Wi-Fi settings. Restart Tello if the network does not appear, then reconnect in FlyCode.

Network

Check the Result

Accepted means acknowledged, not that your device has rejoined.

If confirmation is missing, look for the new network before submitting again. There is no automatic retry.

This changes the broadcast SSID, not just a name in the startup list.

Support Logs

When support requests it, use Send Log and copy the support ID into your email.

Uploading needs internet. Land and finish the drone session before switching networks.

Passwords are cleared from Wi-Fi fields after an attempt or closing. Keep your own record.

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Help

Troubleshooting and Support

Preflight fails: read the exact message. Check level/landed state, fresh readings, 30% battery and cleared calibration recovery.

Landing unconfirmed: keep the app open, check mission activity and use bottom Stop. Resolve recovery before another run.

Camera delayed: check Wi-Fi and camera status. Try Classroom video for constrained bandwidth. Keep visual contact; photos may be skipped.

Blocks will not run: connect one main stack, remove stray blocks, complete inputs and read Details. Check imported EDU compatibility.

Missing work or media: check Saved projects or Gallery. Saving is explicit; import a shared backup if needed. Simulator photos do not create images.

Reference

Flight Warnings

Low ambient light and Wireless interference are amber advisories in Flight Mode and Block Lab.

They can alternate when both apply. Improve conditions; no warning is not proof of good conditions.

For connection steps, see page 2.

Contact Support

flycodesupport@dronelegends.com

Include device/OS, app version/build, drone model, exact message and steps. Share mission JSON and activity details for coding issues.

Based on current 1.2.0 development features, September 2026. New-feature coverage on RoboMaster TT is not verified.