codrone EDU

Updates, FAQs, and Best Practices

Aerial Drone Competition 2025 Summit

robolink.com

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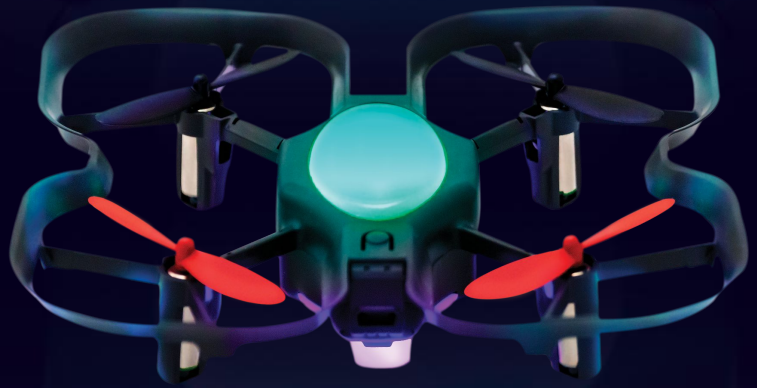

Approved for the AERIAL DRONE COMPETITION

REC FOUNDATION

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1 CoDrone EDU Overview

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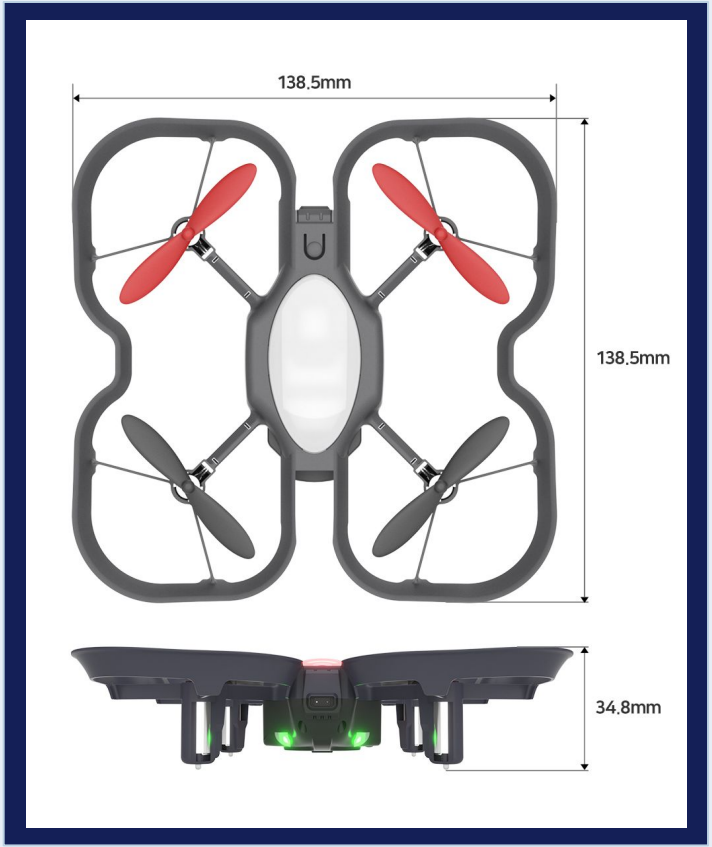
CoDrone EDU Specifications



Weight	54.8 grams
Max. payload	5 grams
Drone battery	3.7V 530mAh
Flight time	7-8 minutes
Charge time	60 minutes
Maximum velocity	2.5m/s (9km/h)
Communication Protocol	Radio Frequency 2.4GHz
Range	Up to 50 meters

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Accelerometer

For sensing acceleration

Gyroscope

For sensing rotation

Barometer

For sensing height and pressure

Front range

For sensing obstacles ahead

Bottom range

For sensing distance to the ground

Color

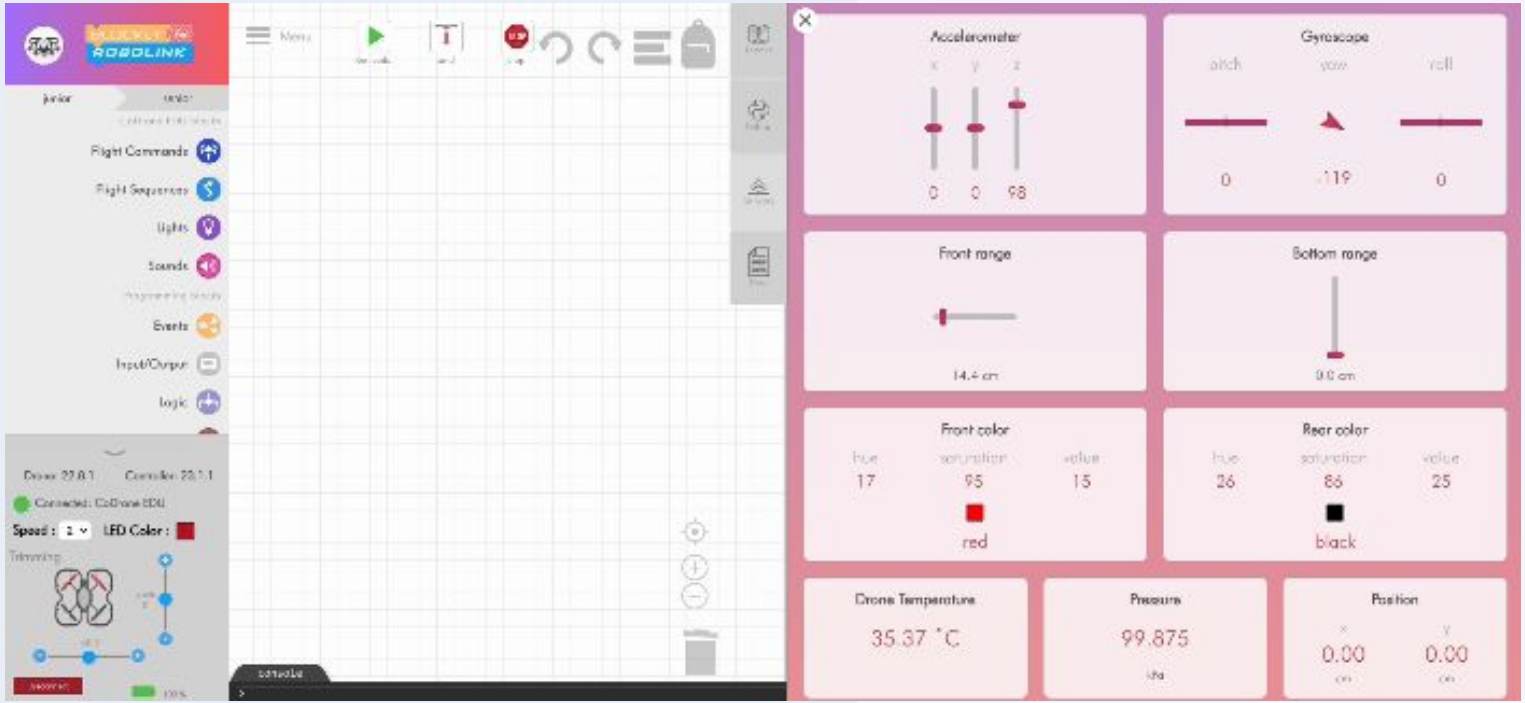
For sensing surface colors

Optical flow

For sensing relative position

Sensor Dashboard

See live sensor feedback directly from the browser!



Available in both **Blockly and Python!**

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Package Contents

- User Guide
- CoDrone EDU
- Smart Controller
- 2 x drone batteries
- 1 x battery dual-charger
- 1 x Micro USB data cable
- 8 x color cards
- 4 x extra propellers
- 1 x propeller remover
- Set of labels for drone/controller
- Screwdriver
- 1 x Spare Controller Bolt

** Extra batteries, propellers, and motors are available on our website!

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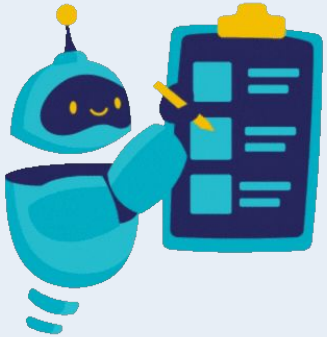
Package Contents (JROTC ed.)

- User Guide
- CoDrone EDU (JROTC ed.)
- Smart Controller (JROTC ed.)
- 3 x drone batteries
- 1 x battery dual-charger
- 1 x USB-C cable
- 8 x color cards (* Calibration required)
- 4 x extra propellers (blue and red)
- 1 x propeller remover
- Set of labels for drone/controller
- Screwdriver
- 1 x Spare Controller Bolt

** Extra batteries, propellers, and motors are available on our website!

Device Compatibility

If you are using a laptop from your school or organization, please check with IT that you have access to:



- Serial communication over USB ports
- Robolink sites are whitelisted
- Optional: Ability to download and install Python/Pycharm

Not compatible with iPads, Tablets, or Cell Phones

Compatible with Chromebooks, Macs, and PCs

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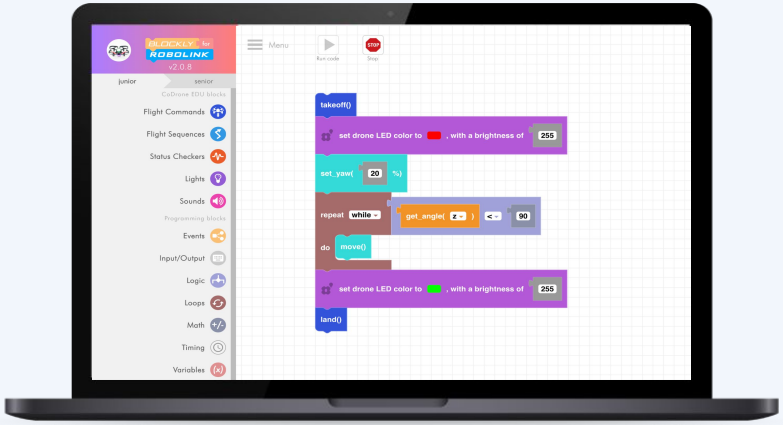
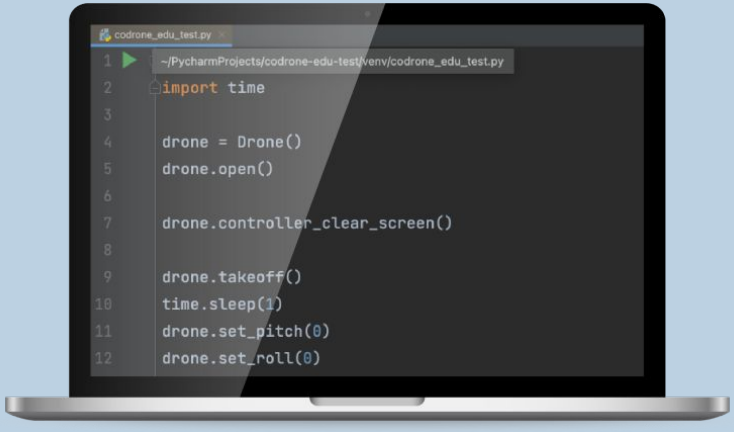
Languages





BLOCKLY for ROBOLINK

- **Mac, Windows, Chromebook**
- Visual programming
- Elementary/middle school or first-time coders
- No installation required, runs in web browser

python™

- **Mac, Windows, Chromebook**
- Text-based language
- Suitable for 6th grade and above
- Desktop PyCharm and web Based Python for Robolink

2 Where to Start

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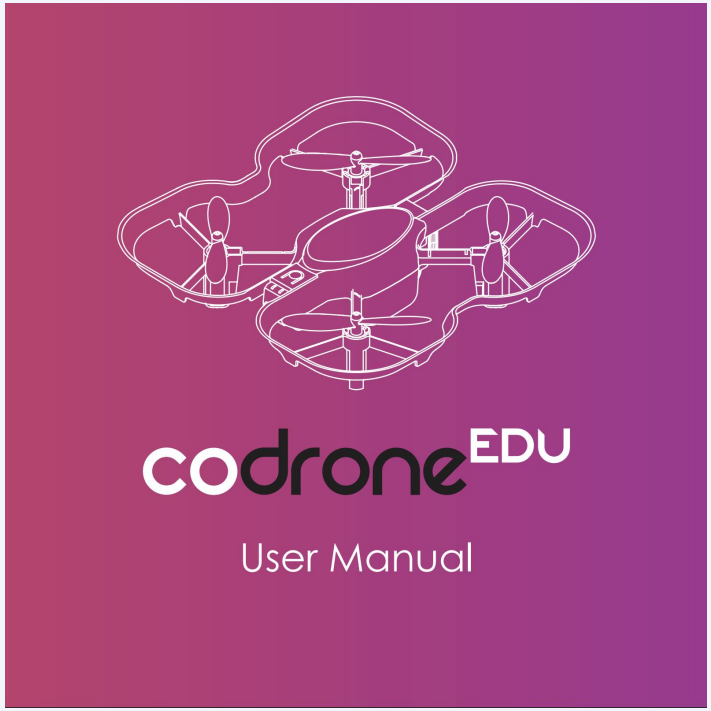
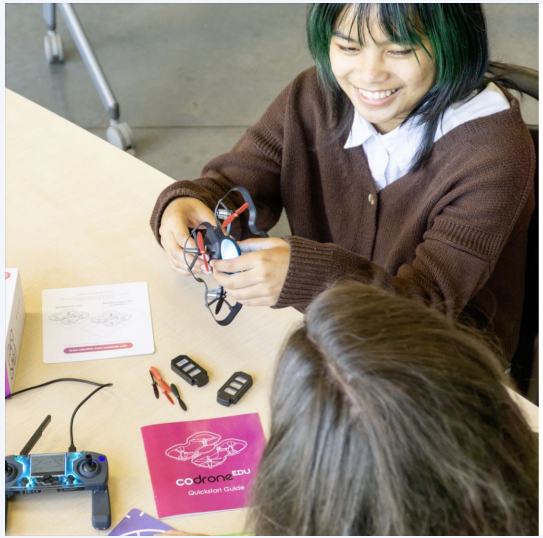
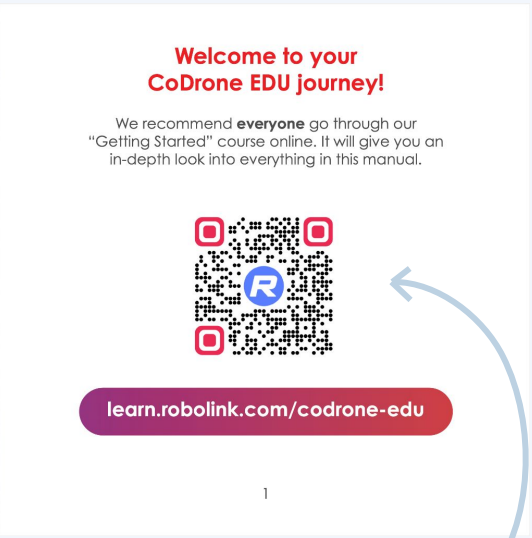
User Manual



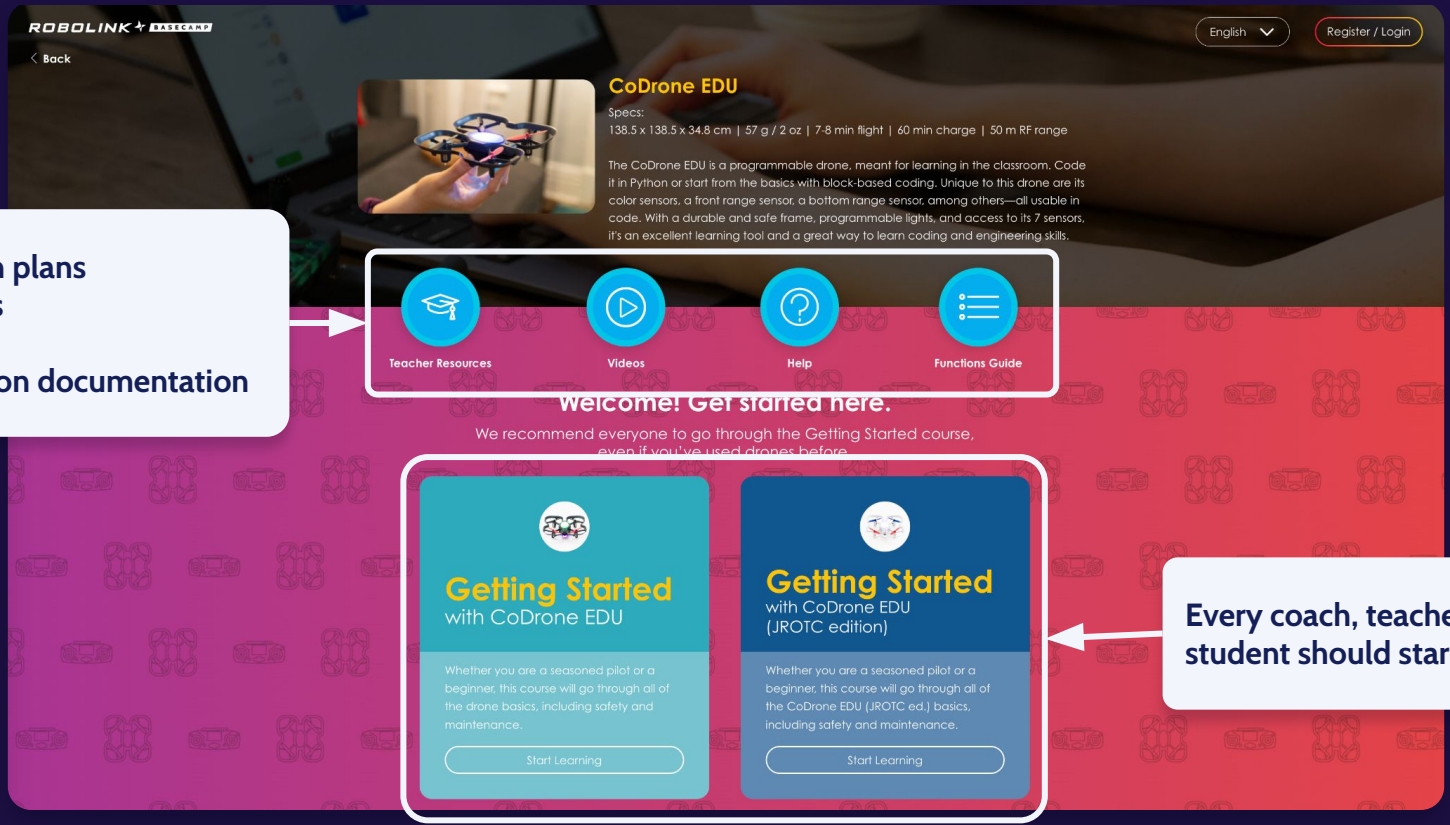




We recommend keeping the manual as a quick reference, but information on our Basecamp will be the most up-to-date information.

Getting Started

learn.robolink.com/product/codrone-edu/



- Lesson plans
- Videos
- FAQ
- Function documentation

Every coach, teacher, and student should start here.

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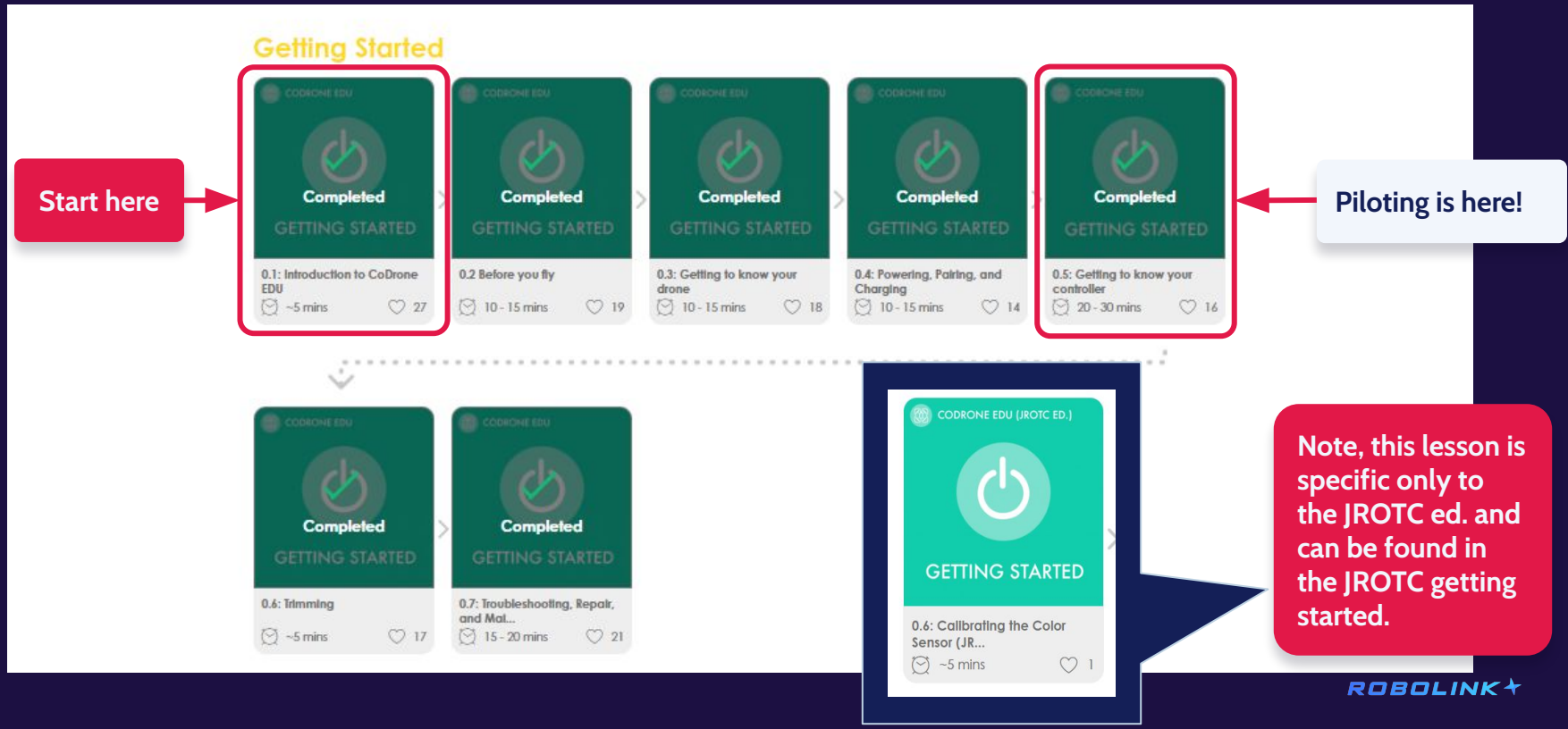
Getting Started Course

learn.robolink.com/product/codrone-edu/



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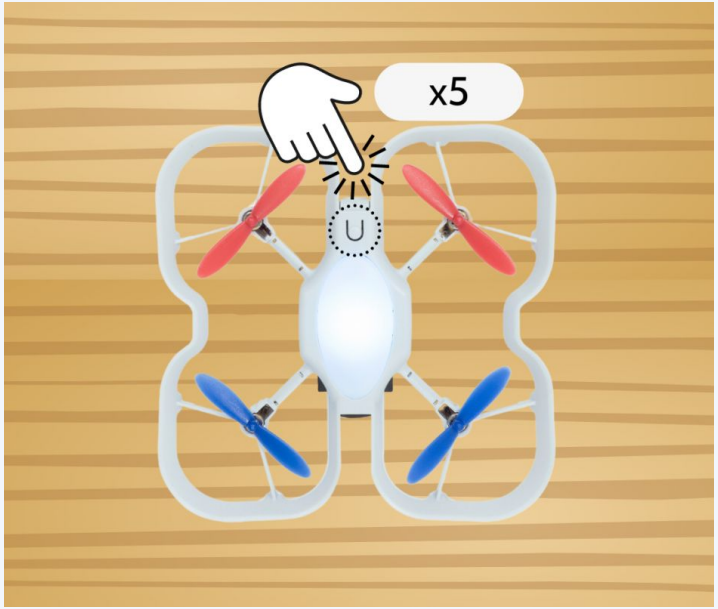
Color Calibration for CoDrone EDU (JROTC ed.)



Note: Calibration is a separate process from adding a color data set in Blockly.

Steps for success

1. Complete the Getting Started course on Basecamp.
2. Complete pre-flight checks. Cleaning propellers is a must!
3. Follow all safety and flight rules outlined in the manual and Basecamp
4. Watch all videos in our CoDrone EDU playlist
5. Treat hardware with care and store it properly.

3 New updates for Season ‘24-’25

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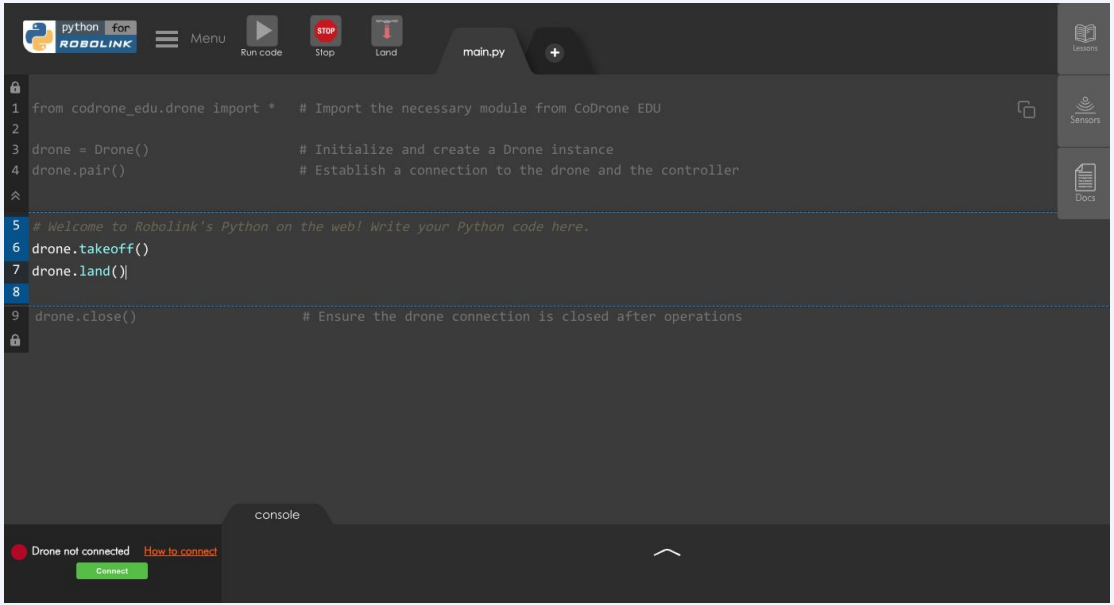
Python for Robolink

Go beyond Blockly and teach students text-based coding for CoDrone EDU!

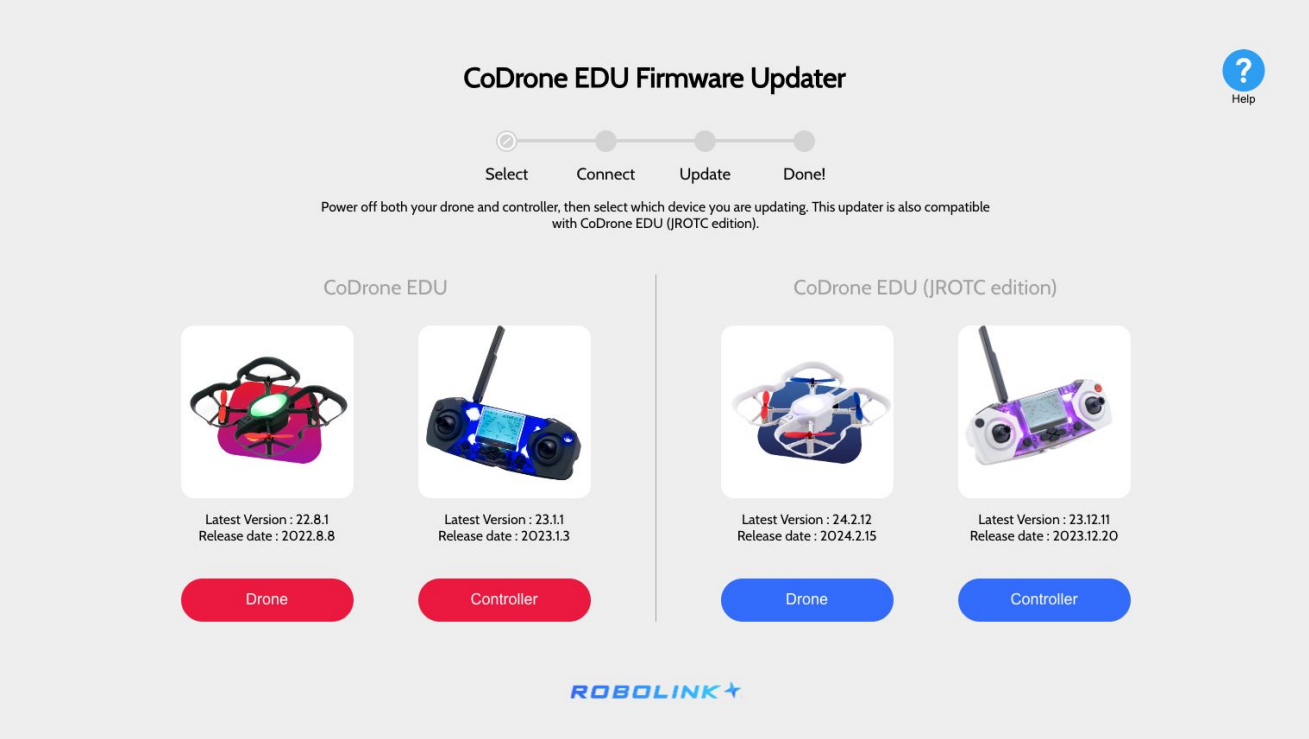
- Expands access to Python with CoDrone EDU to Chromebook users 🎉
- Runs in the browser (Chrome recommended)
- Start learning on Basecamp Lesson | Getting Started with Python for Robolink
- Adding new color data sets (for autonomous skills missions) will be release late October



Link: https://codrone.robolink.com/edu/python/

Online firmware updater

Update your firmware directly from the browser. You can also check for the latest firmware release here!



Link: https://codrone.robolink.com/edu/updater/

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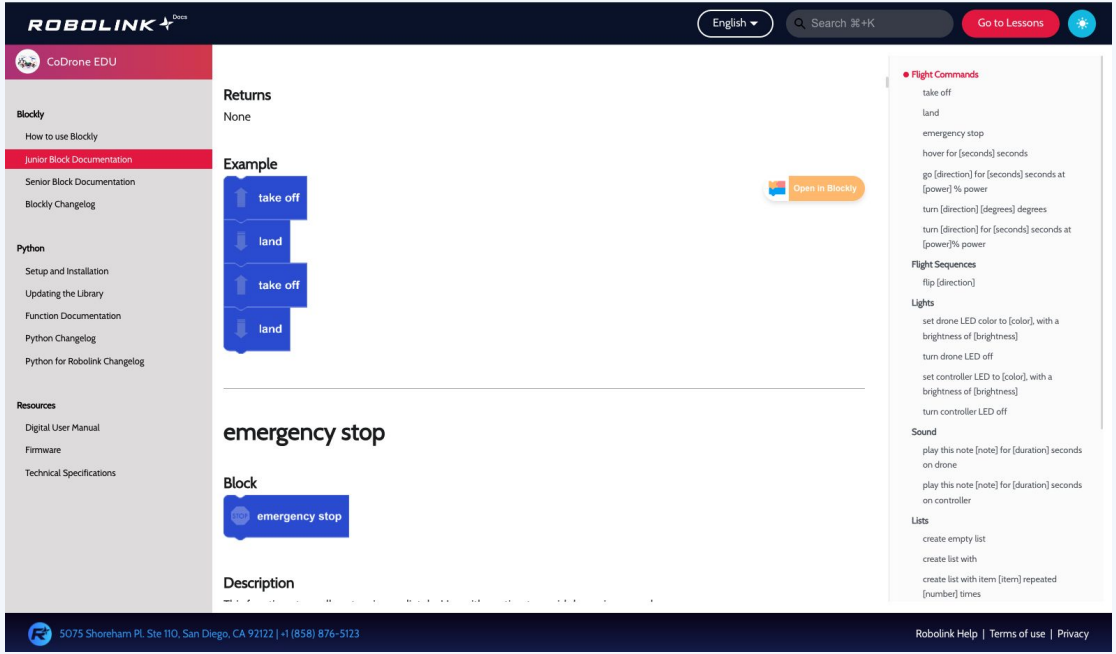
New documentation site

- Find resources on “How to use Blockly” or “How to use *Python for Robolink*”
- See function documentation on both Blockly and Python
- View version changelogs and release notes
- Find the user manuals, firmware information, and technical specifications
- **Open examples directly from the documentation site!**

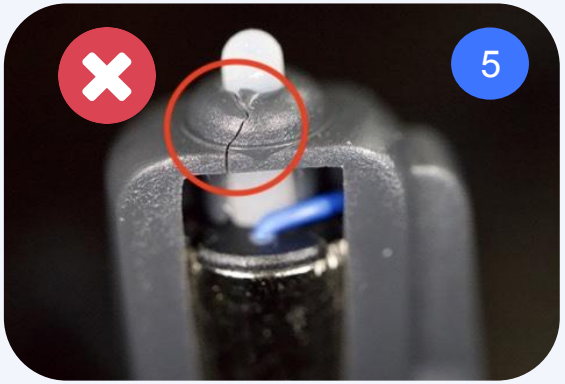


Link: https://docs.robolink.com

Motor care updates

We've updated our help article on motor care to keep your drones flying! Here are some reasons your motors may fail.

1. Severe impact or crash (accidents happen!)
2. Motor overheating without a cooldown period
3. Motor stalling or not spinning
4. Missing silicone bumpers
5. Cracked frame
6. Pinched motor wires



Help article: How to take care of your motors

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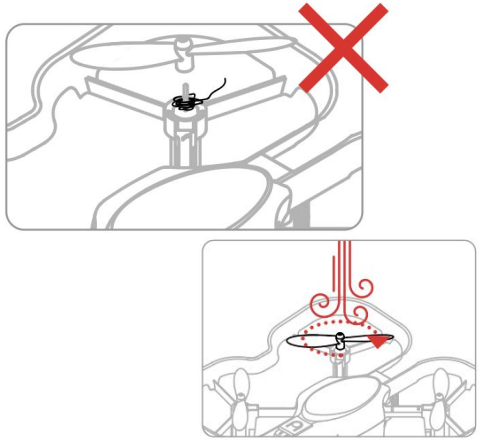
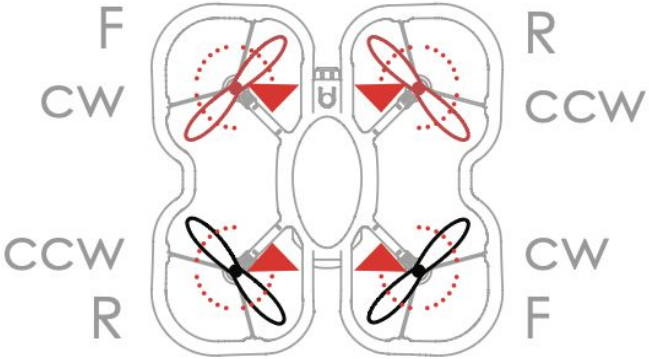
CoDrone EDU Care

Propellers

Propellers with debris or damaged propellers will affect flight. It can even prevent takeoff!

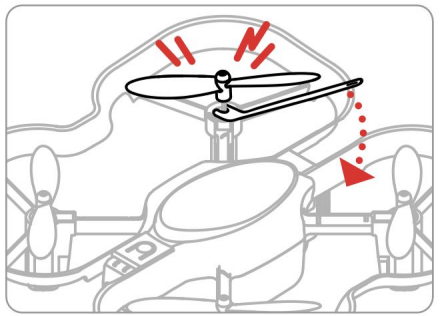


Clean and inspect propellers before each class or after a crash.



Propellers must be in the proper orientation to fly.

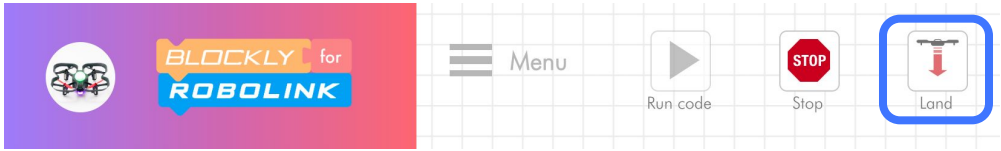
**Color is not an indicator of propeller direction.



Replace any propeller that is bent, chipped, or hitting the guards

Drone care tips

1. Use the “land” and avoid using emergency stops unless necessary.

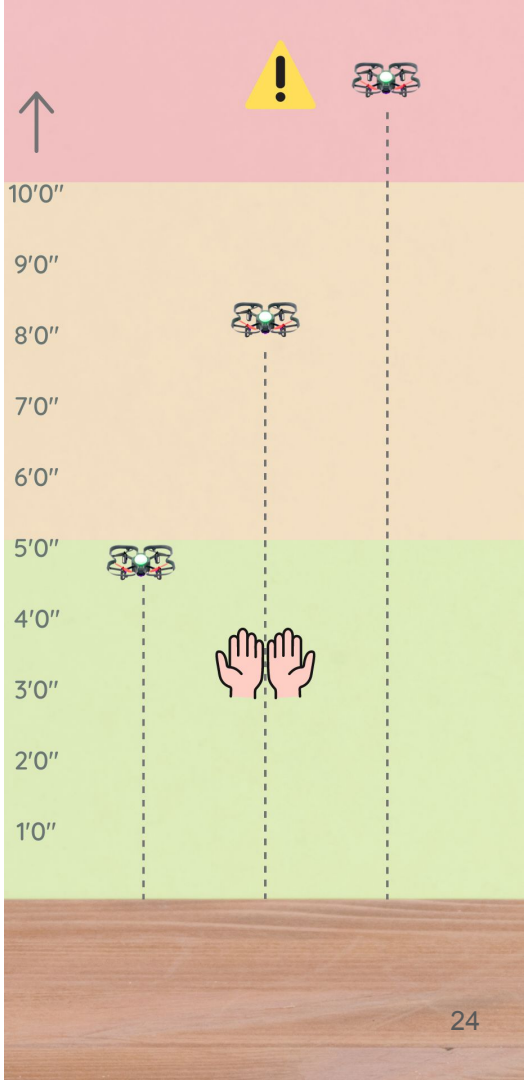


2. Try to catch a drone whenever possible.

3. Fly over mats or a light, patterned carpet and avoid hard surfaces.

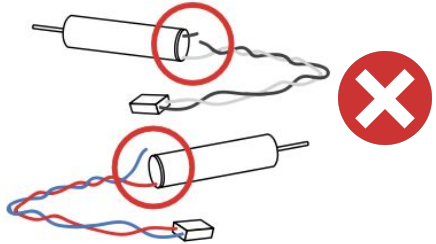
4. Build a [DIY drone cage]

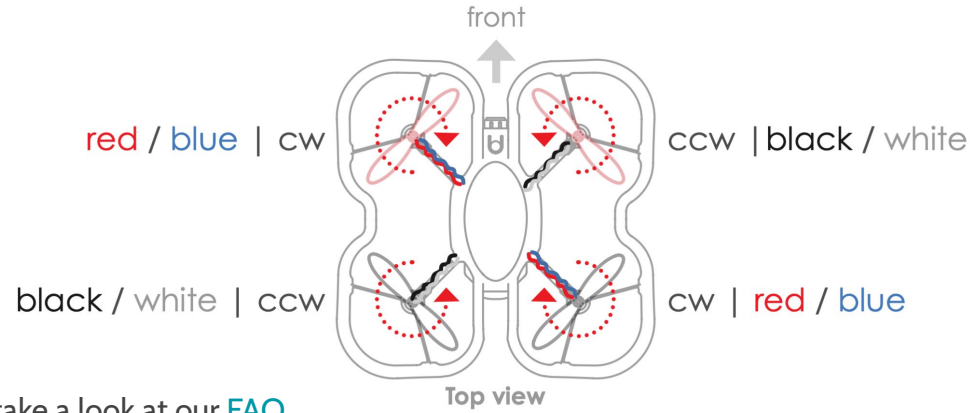
5. Use caution when flying in auditoriums or gymnasiums with high ceilings.



Motor care tips

1. **Inspect** motors before each class or after a crash.
2. When replacing a motor, replace the motor with the **correct orientation.**
3. Be careful when disconnecting a motor. The wires are delicate!
4. If your drone gets stuck, shut off motors immediately.





! If you have a broken or cracked motor base, please take a look at our FAQ article and reach out to our support team.

Controller care

1. Fold the antenna and arms when not in use.
2. Disconnect any cables when storing the controller.
3. Pull the USB cable (gently) straight out when disconnecting.
4. Carry the controller in your hand (not by the cable!)

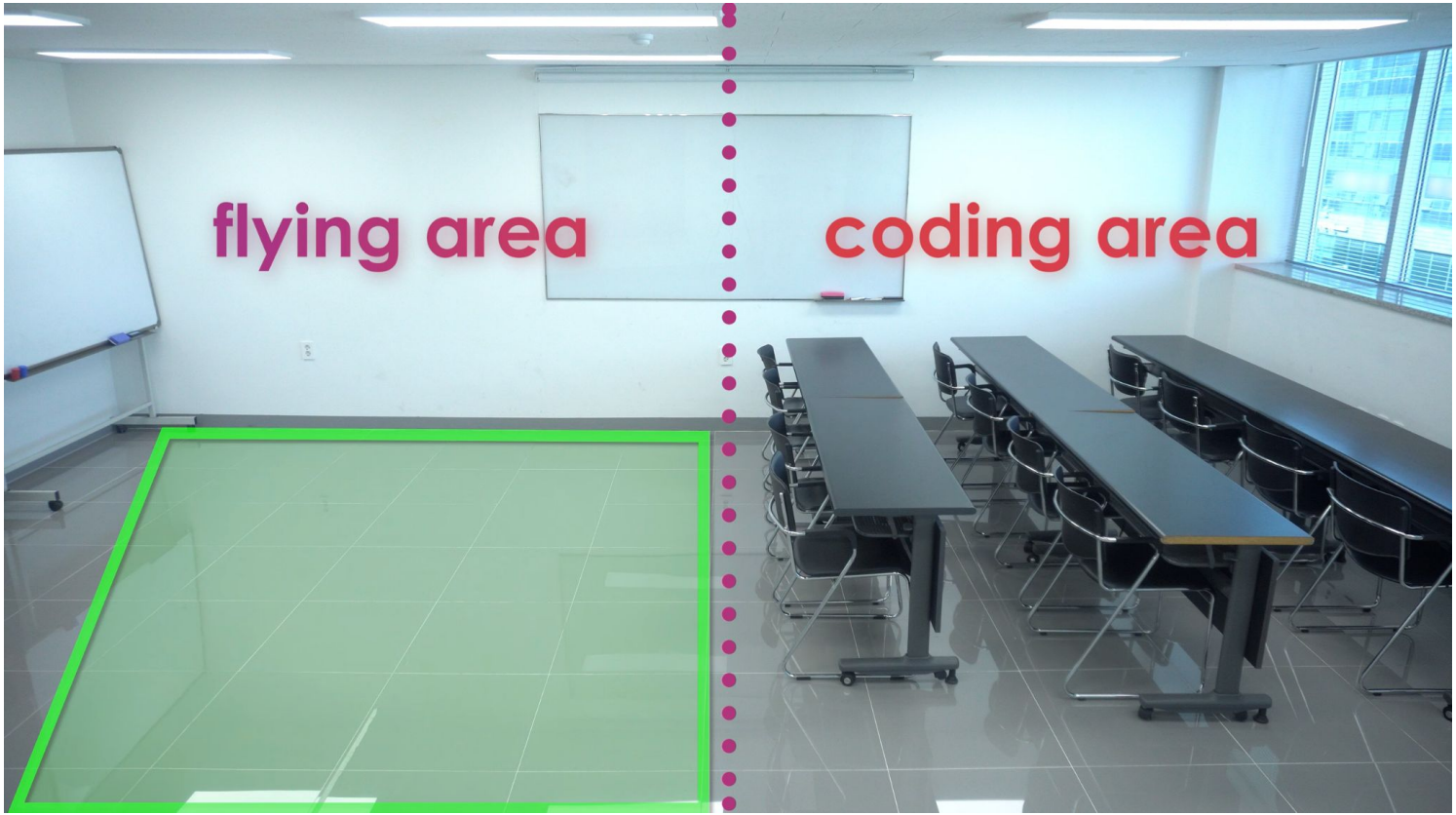
Need more help?

Most common issues can be avoided with proper care and maintenance. Here are some resources if you get stuck.

1. Reference the Getting Started Course or User Manual
2. Did you perform the pre-flight checks (Lesson 0.2) ? It doesn't hurt to check again.
3. Do any motor, prop, or frame replacements if necessary.
4. Search your question in our Helpdocs FAQ.
5. If you can't find the answer, email support@robolink.com

Classroom Tips

How do I setup my classroom?



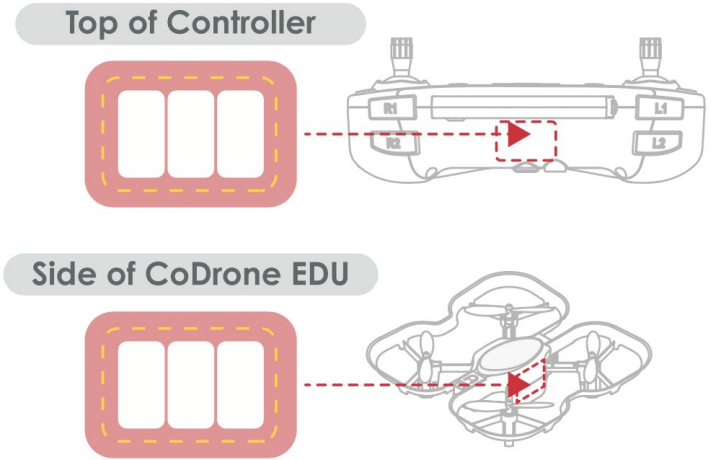
Battery management

Set up a charging station!

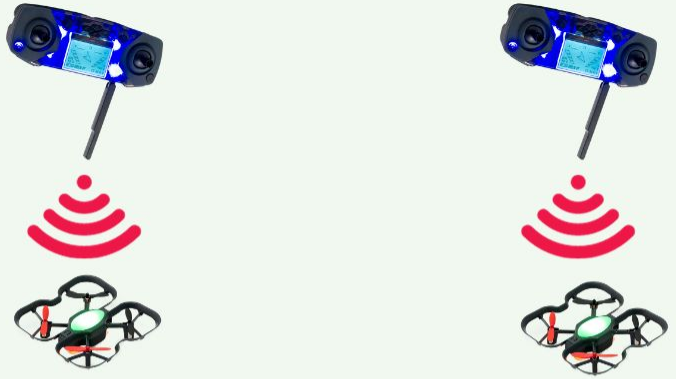
- Invest in a **USB power strip** to connect batteries (Example, pictured right).
- **~2 Amp per port for each multi-charger**

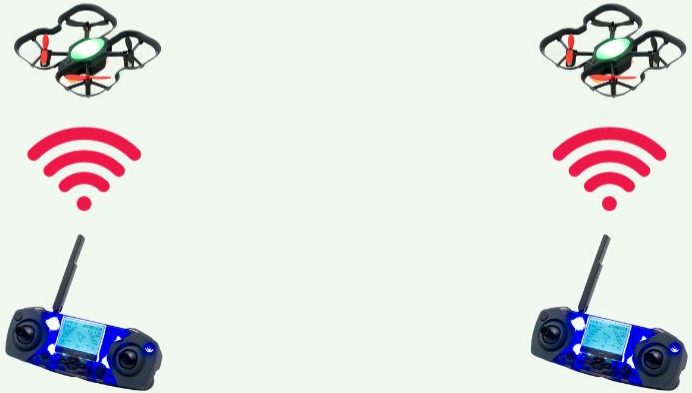
Labeling

Keep your controller and drone together with these labels



- Keep drone and controller pairs together for easy pairing next class
- **Tip:** Keep a “check-out” log
- Be creative! Give names to all the drones based on a theme.
- Other suggestions include using colorful stickers (smiley faces, stars, etc)
- Keep any stickers or labels away from the bottom sensors.





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x2

"Intermediate"
4-hour PD course

2-year
extended warranty


Approved for the
AERIAL DRONE COMPETITION
x20
codrone EDU
Quickstart Guide
x20
x2
x2
x2
"Intermediate"
4-hour PD course
2-year
extended warranty

4 Resources

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Resources

User Manual
Find getting started info and troubleshooting guides
User Manual

Basecamp
Free, online lessons for Blockly and Python with resources for teachers
https://learn.robolink.com/

Web Updater
Update your drone and controller using a web browser
https://codrone.robolink.com/edu/updater/

Blockly
Program using block-based programming
https://codrone.robolink.com/edu/blockly/

Python for Robolink
A web-based solution for programming in Python
https://codrone.robolink.com/edu/python/

Documentation
Functions guide for Python and Blockly
https://docs.robolink.com/

Help Docs FAQs
Visit https://help.robolink.com/

Need help?
Email us at support@robolink.com

5 Questions

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