



BOX FLIGHTS

Learn basic controller functions and flight characteristics of the drone. Maintain altitude control while flying in a box shape with and without sensors in Line of Sight (LOS). Students should be able to maintain steady altitude control and fly in a box shape to complete this activity.

Activity Type	Basic Control
Activity Time	10-20 Mins
Student Groups of	1-6
Difficulty	Medium
Supplies	Safety Gear, Drone, Controller, Batteries, Landing Pads
Designated Flight Area	Clear area free of obstructions and moving air. Recommend at least 10x10 ft.

PREFLIGHT CHECKLIST

Site Safety Inspection

- ✓ Designate flight area
- ✓ Place signage and ensure area remains clear

Preflight Inspections

- ✓ Inspect drone for any damage
- ✓ Debris or hair in the motors
- ✓ Inspect battery and verify voltage
- ✓ Insert battery until fully seated
- ✓ Connect and verify battery
- ✓ Apply safety gear

STEP #1

Power on your launch controller and drone.



STEP #2

Ensure the drone is in low speed and Normal Mode by flipping both switch A & C fully down.



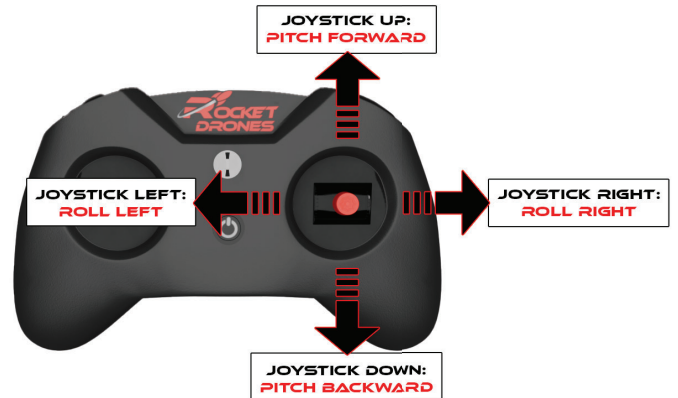
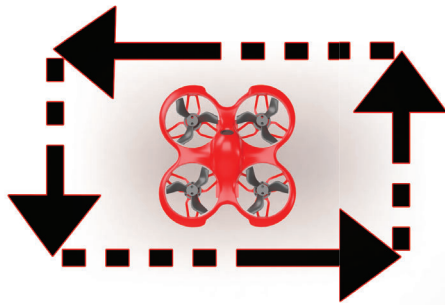
Do not change flight modes during flight!

STEP #3

Ensure the left joystick (throttle) is in the down position on startup then bring your drone up to shoulder level at a safe distance.

STEP #4

Once drones are at shoulder level, each pilot should use the right stick (pitch/roll) to apply input up/down and left/right to move the drone in a box shape about 3 feet in each direction.



Use gentle pressure and fine movements to adjust the joysticks.

STEP #5

Land and repeat this challenge 5 times.

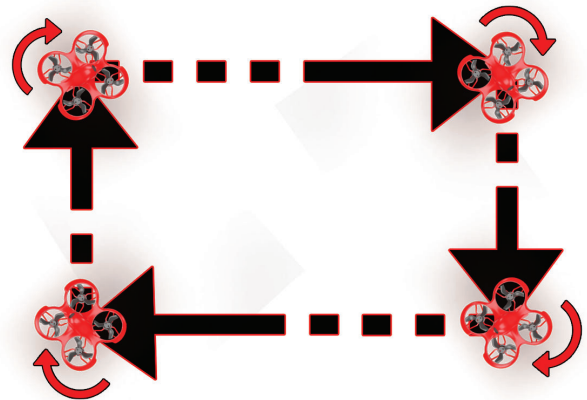
STEP #6

Land and change to Sport mode by flipping switch A to the mid position. Then repeat steps 3-5.

STEP #7

Complete Post Flight Checklist.

Power Up Mode:
Advanced



Post Flight Checklist

- | | |
|---|---|
| • Remove batteries and allow a cooldown (3 mins) <input type="checkbox"/> | • Ensure batteries are stored properly <input type="checkbox"/> |
| • Power down controller and FPV goggles <input type="checkbox"/> | • Store controllers with each designated drone <input type="checkbox"/> |
| • Inspect drone for any damage <input type="checkbox"/> | • _____ <input type="checkbox"/> |

Power Up Mode: Advanced

Students who have mastered this skill in Normal and Sport Mode may attempt the Power Up Mode and change the orientation of the drone at each corner by 90 degrees left or right.

ROCKET DRONES CHALLENGE

BOX FLIGHTS

STUDENT COMPLETION CHECKLIST

Student's Name	Normal Mode		Sport Mode	
	LOS	Power Up	LOS	Power Up
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>