ROCKET DRONES

ALTITUDE CONTROL

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

Activity Type	Basic Control
Activity Time	5-10 Mins
Student Groups of	1-6
Difficulty	Easy
Supplies	Safety Gear, Drone, Controller, Batteries, FPV Goggles (optional)
Designated Flight Area	Clear area free of obstructions and moving air. Recommend atleast 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.

SWITCH C

SWITCH UP: HIGH SPEED

SWITCH MIDDLE: MEDIUM SPEED

SWITCH DOWN: LOW SPEED

SWITCH A

SWITCH UP: MANUAL MODE

SWITCH MIDDLE: SPORT MODE

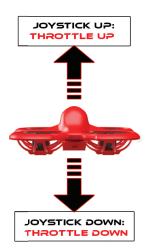SWITCH DOWN: NORMAL MODE

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

Utilize the left joystick (throttle) to maintain elevation and hover in place for 5 seconds.

JOYSTICK UP:
THROTTLE UP

JOYSTICK DOWN:
THROTTLE DOWN

JOYSTICK UP:
THROTTLE UP

JOYSTICK DOWN:
THROTTLE DOWN

Use gentle pressure and fine movements to adjust the altitude.

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.

Post Flight Checklist			
● Remove batteries and allow a cooldown (3 mins)	☐	● Ensure batteries are stored properly	☐
● Power down controller and FPV goggles	☐	● Store controllers with each designated drone	☐
● Inspect drone for any damage	☐	● _____	☐

Power Up Mode: FPV Experience	Students who have mastered this skill in Normal and Sport Mode may attempt the Power Up Mode and complete this activity with FPV Goggles. Ensure channel frequencies are set properly. Refer to FPV Channel Settings.

ROCKET DRONES CHALLENGE

ALTITUDE CONTROL

STUDENT COMPLETION CHECKLIST

Student's Name	Normal Mode		Sport Mode	
	LOS	FPV	LOS	FPV
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐
11.	☐	☐	☐	☐
12.	☐	☐	☐	☐
13.	☐	☐	☐	☐
14.	☐	☐	☐	☐
15.	☐	☐	☐	☐
16.	☐	☐	☐	☐
17.	☐	☐	☐	☐
18.	☐	☐	☐	☐

Please print additional completion checklist pages as needed.