$C\epsilon$

THE HUBSAN X4

## 2.4GHZ RC SERIES 4 CHANNEL

ITEM NO.: H107C
FLIP TIPS SEE PAGE 15-17

IMPORTANT NOTICE

CALIBRATE THE ACCELEROMETER!

Before doing the accelerometer calibration, please make sure that the propellers,motors and X4 body are in good condition with the battery fully charged. Ensure that the battery and the cables are inserted into the battery compartment correrctly.(See the picture on P11 7.1.4 in the manual). **Please don't move any other joystick or trim before matching the code, please enter into expert mode to do this calibration.**

1. After turning on the TX and X4 and they bind, set the aileron and elevator trim to the middle and the LCD display 50.

(MODE 1)   (MODE 2)
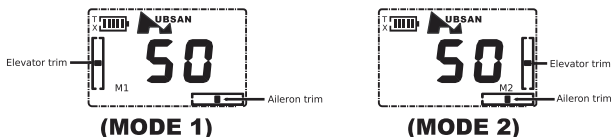
2. Hold the throttle stick to the full down position and hold the rudder stick to the lower right position (see the picture). Then move the aileron stick quickly left-right-left-right until the two head lights blink. The blinking of the lights signal a successful recalibration. This calibration will fix any drifting off in a random direction when doing level yaw turns.

P.S. If the X4 still drifts to one side, you can set it on a level surface and shim the side that it drifts to with a few sheets of paper (the number of sheets will vary depending on the amount of drift), so it can calibrate the accelerometers with a level offset angle.(See the picture on P22 , FAQ12 on the manaul)
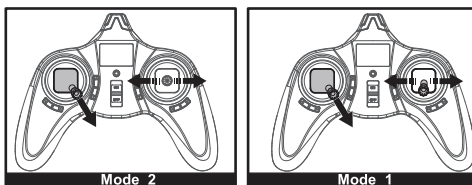
TRANSMITTER STICK CALIBRATION

Mode 2：put the two sticks to the upper left position and hold, then power on the transmitter. Then rotate both sticks a couple of times in full circles. Then hold down any trim until the LED on the TX blinks red, signaling a successful calibration.(see the picture below)

Mode 1：put the left stick to the upper left position and right stick to the upper right position and hold, then power on the transmitter. Rotate both sticks a couple of times in full circles. Then hold down any trim until the LED on the TX blinks red, signaling a successful calibration.(see the picture below)
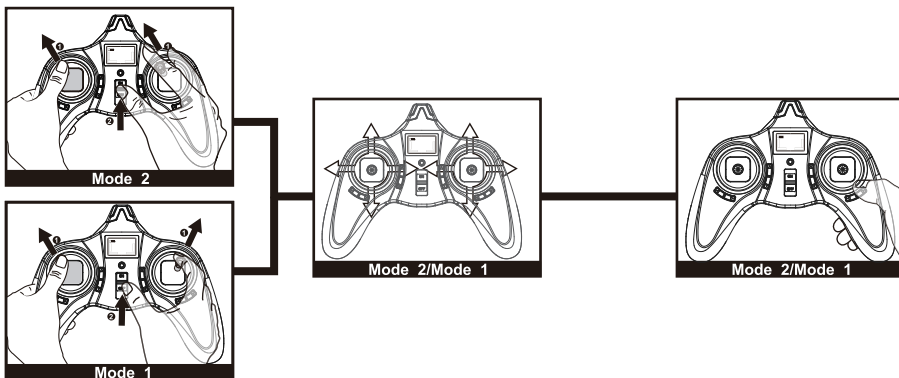
CAMERA RECORDING FUNCTION:

When connecting the battery cables, the blue light will be on. When it is initializing, the red light will be on, which will be off after the initialization. Press the button beside the SD card slot, the red light will blink, indicating the record start. When the recording is finished, please press the button again to save it, and the red light will be off. If you don't want to save it please power off the quadcopter. (When you want to take out the SD card, please power off the quadcopter first)

Please use brand HD SD card, don't use any copycat SD card, or it will affect the quality of the video and the stablization of recording. If the SD card cannot be used for recording, please format it on the computer and avoid quick formatting.

After crashing into wall or other obstacles,the X4 will automatically power off to protect the X4 and the recording can't be saved, so please try to aviod crashing.

CATALOG

1 INTRODUCTION

Thank you for buying HUBSAN products. The X4 quadcopter is designed as an easy-to-use, full-featured RC model capable of hovering, fast forward, and aerobatic flight maneuvers. Please read the manual carefully and follow all instructions in it. Be sure to retain the manual for future reference, routine maintenance, and tuning.

2 SAFETY NOTES

2.1 Important Notes

This RC quadcopter is not a toy.

Any improper use of this product will result in serious injury. Be aware of your personal safety, safety of others and your surrounding environment.

We recommend beginners learn to fly with more experienced pilots playing nearby before attempting to fly the X4 for the first time.

2.2 Caution

The X4 quadcopter has parts that move at high speed, which poses a certain degree of danger.

Choose a wide open space without obstacles. Do not operate the X4 near buildings, crowds of people, high voltage cables, or trees to ensure the safety of yourself, others and your model.

Improper operation may cause damage to people and property.

2.3 LiPo Battery Safety Notes

The X4 is powered by a Lithium-Polymer (LiPo) battery.

To avoid risk of fire or damage, never recharge your battery while it is inserted in the X4.

If you do not plan to fly the X4 for a week or more, store the battery approximately 50% charged to maintain battery performance and life.

⚠ SAFETY ADVISORY NOTICE
Lithium-Polymer (LiPo) Batteries

LiPo batteries are different from conventional batteries in that their chemical contents are encased in a relatively lightweight foil packaging. This has the advantage of significantly reducing their weight, but does make them more susceptible to damage if roughly or inappropriately handled. As with all batteries, there is a risk of fire or explosion if safety practices are ignored:

☑ Charge and store LiPo batteries in a location where a battery fire or explosion (including smoke hazard) will not endanger life or property.

☑ Keep LiPo batteries away from children and animals.

☑ Never charge the LiPo battery that has ballooned or swelled .

☑ Never charge the LiPo battery that has been punctured or damaged.

☑ After a crash, inspect the battery pack for the sign of damage. Discard in accordance with your country's recycling laws.

☑ Never charge the LiPo battery in a moving vehicle.

☑ Never overcharge the LiPo battery.

☑ Never leave the LiPo battery unattended during recharging.

☑ Do not charge LiPo batteries near flammable materials or liquids.

☑ Ensure that charging leads are connected correctly. Reverse polarity charging can lead to battery damage or a fire or explosion.

☑ Have a suitable fire extinguisher (electrical type) OR a large bucket of dry sand near the charging area . Do not try to extinguish electrical (LiPo) battery fires with water.

☑ Reduce risks from fire/explosion by storing and charging LiPo batteries inside a suitable container.

☑ Protect your LiPo battery from accidental damage during storage and transportation. (Do not put battery packs in pockets or bags where they can short circuit or can come into contact with sharp or metallic objects.).

☑ If your LiPo battery is subjected to a shock (such as a crash), place it in a metal container and observe for signs of swelling or heating for at least 30 minutes.

☑ Do not attempt to disassemble or modify or repair the LiPo battery.

2.4 Prevent Moisture

The X4 contains many precision electrical components.

Store the battery and the X4 in a dry area at room temperature. Exposure to water or moisture may cause malfunction resulting in loss of responsiveness, or a crash.

2.5 Proper Operation

For safety only use the included HUBSAN spare parts for replacement.

2.6 Always Be Aware of the Rotating Blades

When in operation, the main and tail rotor blades will be spinning at high speed. The blades are capable of inflicting serious body injury or property damage.

Be careful to keep your body and loose clothing away from the blades. Never take your eyes off the X4 or leave it unattended while it is turned on. Stop operating immediately if the X4 flies out of your view. Once landed, immediately turn off the X4 and transmitter.

2.7 Avoid Flying Alone

Beginners should avoid flying alone when learning flight skills. We recommend flying with an experienced pilot nearby in case you need help.

3 SAFETY CHECK BEFORE FLYING

CAREFULLY INSPECT THE X4 BEFORE EVERY FLIGHT

• Before operation, check the batteries of the transmitter and X4 are charged for the flight.

• Before turning on the transmitter, check that the throttle stick is pulled completely backward (down position).

• Carefully check rotor blades and rotor holders. Broken parts will pose risk of injury and hazard.

• Check the battery and power plug are securely fastened. Severe vibration during flight may detach the plug and result in loss of control.

• When turning on the unit, always turn on the transmitter first, and then turn on the X4. To power off, always turn off the X4 first and then the transmitter. Improper procedure may cause loss of control of the quadcopter .
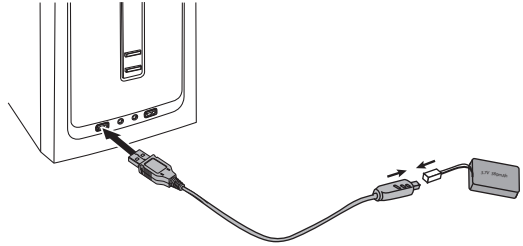
4 CHARGING THE LI-PO BATTERY

4.1 3.7V 380mAh LiPo Battery

4.1.1 Take out the battery from the bottom of the X4.
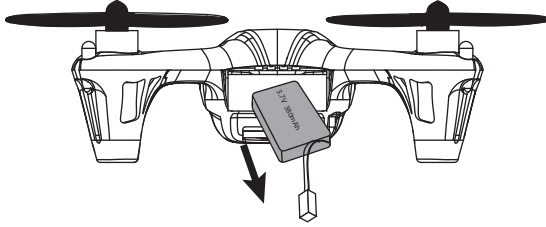
4.1.2 Connect the battery with USB charger, then connect the USB charger to a computer or other USB connector, such as a smartphone charger. The LED lights up while charging and turns off when charging is complete. The voltage of the USB is +5±0.5V.

4.2 Safety Advisory Notice

Always partially charge your LiPo battery before storage. LiPo batteries retain the power over a reasonable period; It is not normally necessary to recharge stored LiPo batteries unless stored for periods longer than 3-6 months.

If your LiPo battery has been over-discharged, it will not be possible to recharge it again.
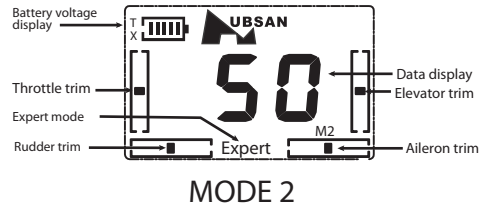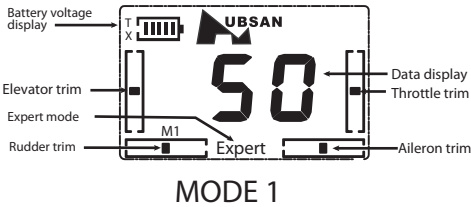
LiPo Battery Disposal & Recycling

Lithium-Polymer(LiPo) batteries must not be placed in with household trash. Please contact your environmental or waste agency or the supplier of your model for local regulations and the location of your nearest LiPo battery recycling center.
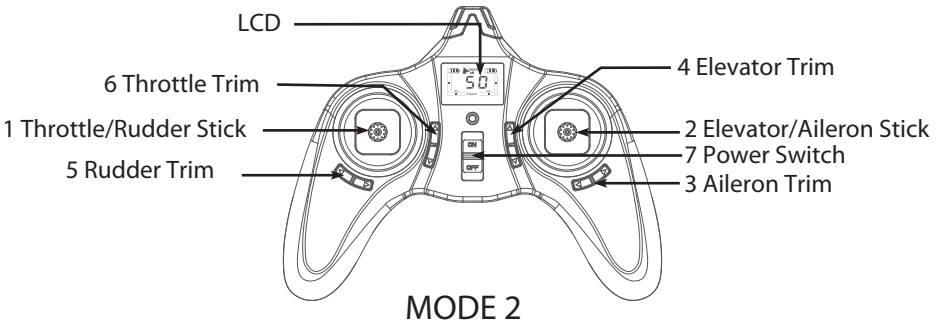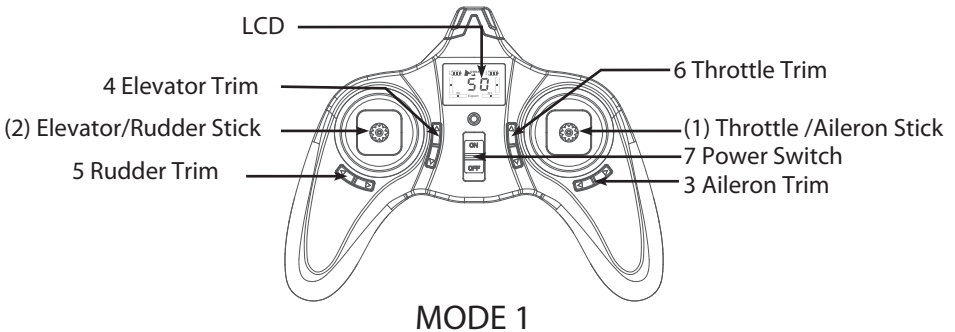
5 TRANSMITTER

5.1 Identification and Functions of the Main Menu

Main Menu

Battery voltage display
Elevator trim
Expert mode
Rudder trim
M1
Expert
Data display
Throttle trim
Aileron trim

MODE 1

Battery voltage display
Throttle trim
Expert mode
Rudder trim
M2
Expert
Data display
Elevator trim
Aileron trim

MODE 2

TRANSMITTER

LCD
4 Elevator Trim
(2) Elevator/Rudder Stick
5 Rudder Trim
6 Throttle Trim
(1) Throttle /Aileron Stick
7 Power Switch
3 Aileron Trim

MODE 1

LCD
6 Throttle Trim
1 Throttle/Rudder Stick
5 Rudder Trim
4 Elevator Trim
2 Elevator/Aileron Stick
7 Power Switch
3 Aileron Trim

MODE 2

Input Key Function

S/N	Mode/ Control	Function
(1)	**MODE 1** Throttle /Aileron Stick	Move the stick forward or backward to increase or decrease speed . Move the stick left or right to make the quadcopter roll left or right to initiate a banked turn.
(2)	**MODE 1** Elevator/Rudder Stick	Move the stick forward or backward to make the quadcopter nose point up or down. Move the stick left or right to make the quadcopter yaw left or right.
1	**MODE 2** Throttle/Rudder Stick	Move the stick forward or backward to make the quadcopter ascend or descend. Move the stick left or right to rotate the quadcopter's fuselage left or right.
2	**MODE 2** Elevator/Aileron Stick	Move the stick forward or backward to make the quadcopter move forward or backward. Move the stick left or right to make the quadcopter drift sideways left or right.
3	Aileron Trim	Aileron trim adjusts for left and right drift.
4	Elevator Trim	Elevator trim adjusts for forward and backward drift.
5	Rudder Trim	Rudder trim adjusts for drift of left and right rotation or yaw.
6	Throttle Trim	Throttle trim normally left at neutral. The lower trim turns LEDs on and off.
7	Power Switch	Push to ON to turn on the transmitter. Push to OFF to turn off.

Electrical and electronic equipment that are supplied with batteries (including internal batteries)

WEEE Directive & Product Disposal

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

internal / Supplied Batteries.

This symbol on the battery indicates that the battery is to be collected separately.

This battery is designed for separate collection at an appropriate collection point.

5.2 Transmitter Stick Calibration

Mode 2: Push both sticks to the upper left position and hold, then power on the transmitter. Rotate both sticks twice. Hold down any trim until the LED on the transmitter blinks red, indicating successful calibration.
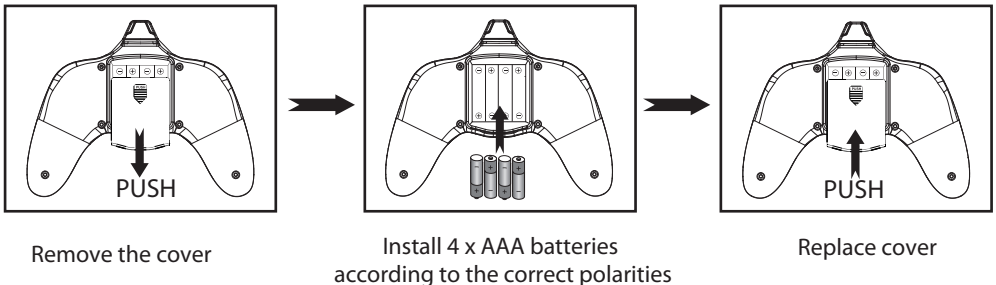
Mode 1: Push the left stick to the upper left position and right stick to the upper right position and hold, then power on the transmitter. Rotate both sticks twice. Hold down any trim until the LED on the transmitter blinks red, indicating successful calibration.

Mode 2

Mode 1

Mode 2/Mode 1

Mode 2/Mode 1
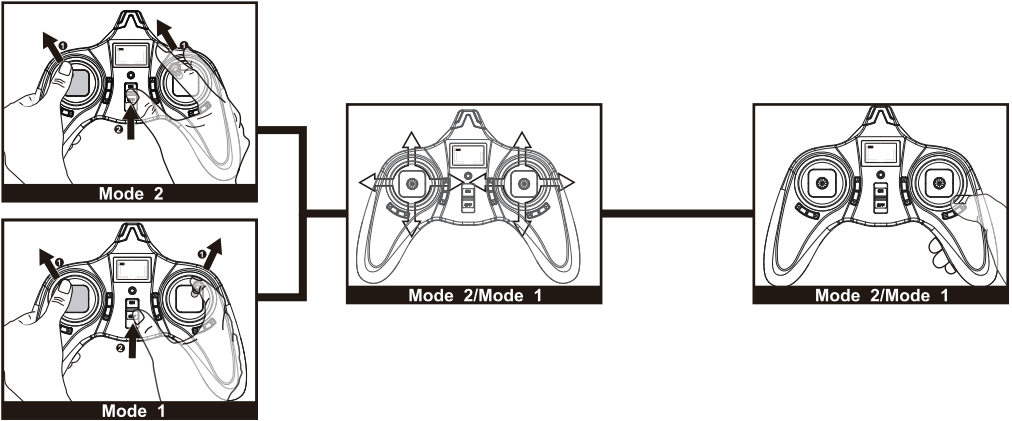
5.3 Transmitter Battery Installation

Notice: Do not mix old and new batteries.

Do not mix different types of batteries.

Do not charge non-rechargeable batteries.

PUSH

PUSH

Remove the cover

Install 4 x AAA batteries
according to the correct polarities

Replace cover

6 CAMERA RECORDING

Power off both the transmitter and the X4 before inserting or removing the SD card.

This camera quadcopter has two version: standard camera(resolution: 480P) version, and HD camera(resolution: 720P) version.

6.1 480P camera module recording steps:

6.1.1 When the transmitter and X4 are paired, the blue lights situated inside the SD card slot will stay on.

6.1.2 Press the button on the side of the quadcopter (near the SD card slot) to start recording. A red light inside the SD card slot will blink when recording is in progress.

6.1.3 Press the button again to stop recording. The red light will stop blinking and the video will be saved.

6.2 720P camera module recording steps:

6.2.1 When the transmitter and X4 are paired, the red and blue lights situated inside the SD card slot will both come on. The camera may take several seconds to recognise the SD card. When the red light goes off, the X4 is ready to record.

6.2.2 Press the button on the side of the quadcopter (near the SD card slot) to start recording. A red light inside the SD card slot will blink when recording is in progress.

6.2.3 Press the button again to stop recording. The red light will stop blinking and the video will be saved.
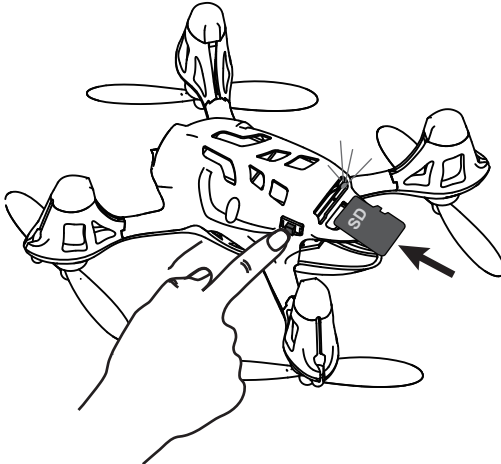
 If you don't want to save the video, just power off the quad copter before you press the button again.
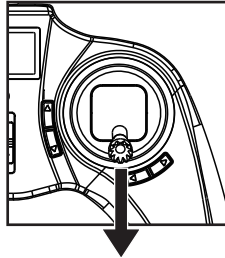
7 FLY THE X4

7.1 Power-On Safety Mode

Your X4's flight contoller is designed with a Power-On safety feature that ensures that the X4's motor will not start unless it detects a suitable control signal when the LiPo battery is connected.

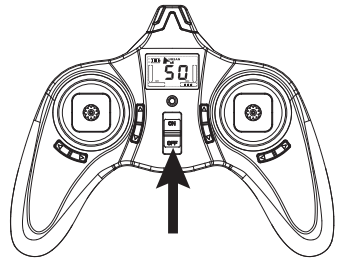7.1.1 Make sure the throttle stick is in the full down position.
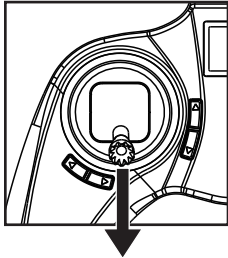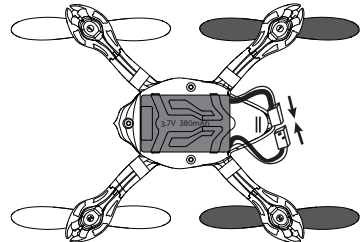
MODE 2   MODE 1

7.1.2 Power on the transmitter and the red LED will blink. Do not move any other stick or trim before the transmitter and X4 finish pairing, or the X4 will drift. The transmitter LED will turn green after pairing is successfully completed.

7.1.3 Connect the battery plug with correct polarity.

7.1.4 Insert the battery into the bottom of your X4. Make sure the battery and wires are pushed into the end of the battery compartment, so they will not negatively affect the center of gravity and cause unstable flight. Twist the wires and squeeze them into the notched holder as shown, to prevent shaking when flying.
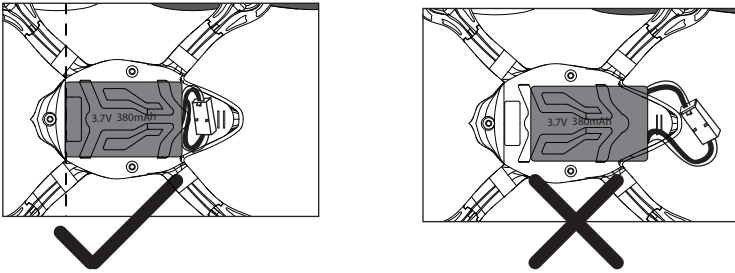

Always disconnect the X4 battery plug after turning off the transmitter when you stop flying.

7.1.5 LED Indications

After a "beep", the red LED on the transmitter turns green, and the 6 lights on the X4 light steadily, indicating successful pairing. Press the lower throttle trim for about 2 seconds to turn the LEDs on or off. NOTE: The LEDs will automatically blink when the quadcopter battery power is low or the pairing has failed.


(MODE 2)   (MODE 1)
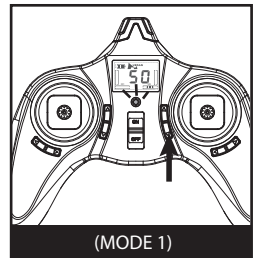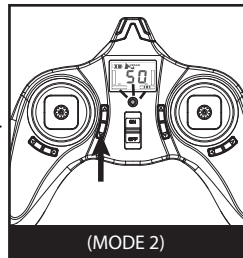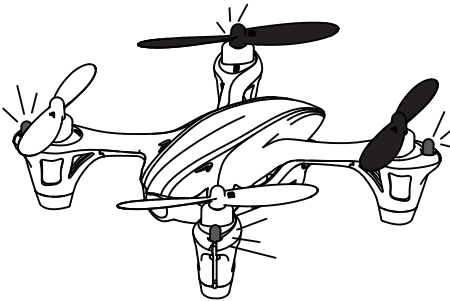
Tip: You do not need to adjust the rudder trim if the X4 keeps yawing left or right during flight. The X4 will find the rudder central point automatically in 3 seconds after the quadcopter lands on a level ground with throttle full down.
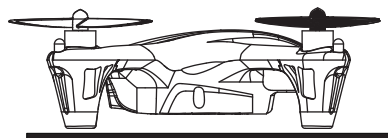

Landing on a level ground

## 7.2 Transmitter Sticks And X4 Control Responses

CAUTION: To avoid loss of control, always move the transmitter sticks slowly. Be aware that control inputs will reduce available lift. Be ready to use a little extra throttle to maintain height during maneuvers.
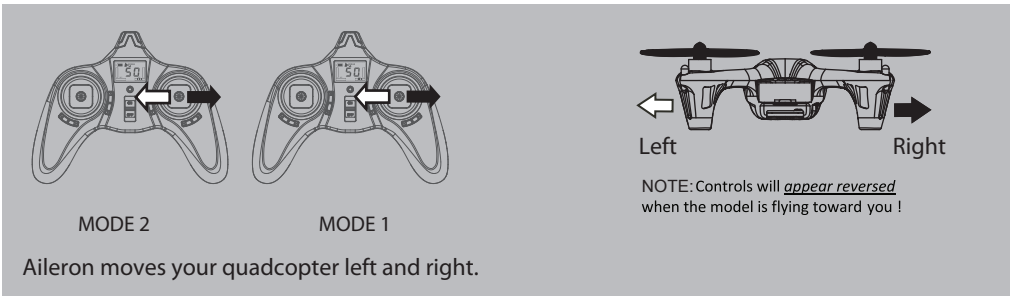
MODE 2   MODE 1

Up

Down
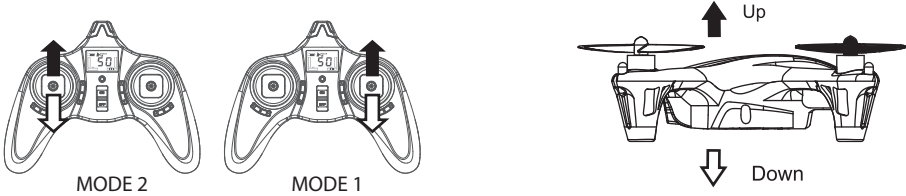
Throttle increases/decreases the flying height of your quadcopter.

Right rotation

Left rotation

MODE 2   MODE 1
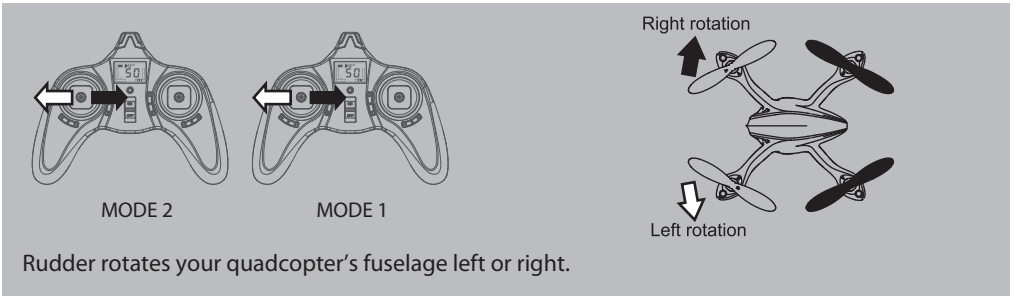
Rudder rotates your quadcopter's fuselage left or right.

MODE 2   MODE 1
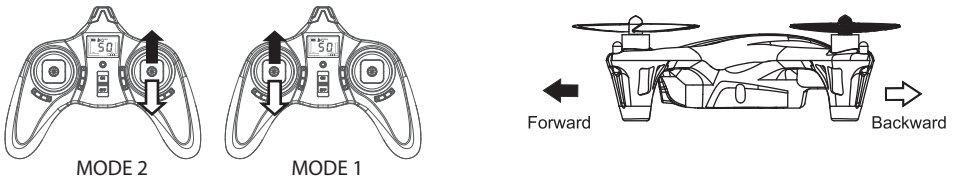
Forward   Backward

Elevator moves your quadcopter forward and backward.

MODE 2   MODE 1

Left   Right

NOTE: Controls will *appear reversed* when the model is flying toward you !

Aileron moves your quadcopter left and right.