

Ages 14+

LOBIT 100C

Mini Cam



Please read the instructions carefully before use.



DROGEN

LOBIT

Intro

Thank you for purchasing DROGEN products. DROGEN Lobit 100C is designed as an easy-to-use, full-featured RC model, capable of hovering and aerobatic flight maneuvers.

Please read the instruction manual carefully and follow all the instructions.

Be sure to retain the manual for future reference, routine maintenance and tuning.

Safety Notes

- Be cautious that this product is not designed for children under 14 years of age.
- Improper use of this product will result in serious injury.
Be aware of your personal safety, safety of others and your surrounding environment.
- Keep Lobit out of reach of children.
- It is recommended that beginners learn to fly with more experienced pilots before attempting to fly Lobit 100C for the first time.
- Do not operate Lobit 100C near buildings, crowds of people, or trees to ensure the safety of yourself, others and your Lobit 100C.
- Lobit 100C contains many precision electrical components.
Store the battery and Lobit in a dry area at room temperature. Exposure to water or moisture may cause malfunction resulting in loss of responsiveness, or a crash.
- For safety, only use the included DROGEN spare parts for replacement.
- When in operation, propellers will be spinning at high speed.
The propellers are capable of inflicting serious injury or damage to property.
Be careful to keep your body and loose clothing away from the propellers.
- Never take your eyes off Lobit 100C or leave it unattended while it is turned on.
Stop operating immediately if Lobit 100C flies out of your sight.

Safety checks before flying

Carefully check all the parts of Lobit 100C. Broken parts will pose a risk of injury and hazard. If any problem is found before flight, do not fly Lobit 100C. Check with call centers and local agencies.

- Before operating, check that the batteries of the transmitter and Lobit 100C are charged for the flight.
- Before turning on the transmitter, check that the throttle stick is pulled completely down.
- 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 Lobit 100C, always turn on the transmitter first and then turn on Lobit 100C.
Also, when turning off Lobit 100C, always turn off Lobit 100C first and then turn off the transmitter.

Safety advisory notice for 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 it 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 signs 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.
- 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 repair the Lipo battery.

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.



Charging the Lipo battery

3.7V 520mAh Lipo Battery

How to charge : Connect USB slot with USB charger, then connect the USB charger to a computer or other USB connector, such as a smart phone charger.

The LED lights up while charging and turns off when charging is complete.

The voltage of the USB is $+5 \pm 0.5\text{V}$. The charging time is around 40 mins and the flying time is around 7 mins.



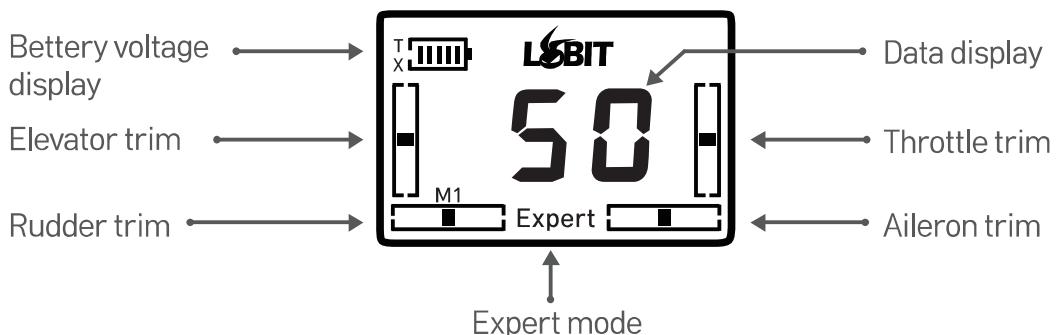
- Take out the battery with the battery compartment when you storage it.
- Always power off Lobit 100F when you charge the battery.

Safety Advisory Notice for storing Lipo battery

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 the battery runs down, replace it.

MODE 1 Transmitter

Main Menu

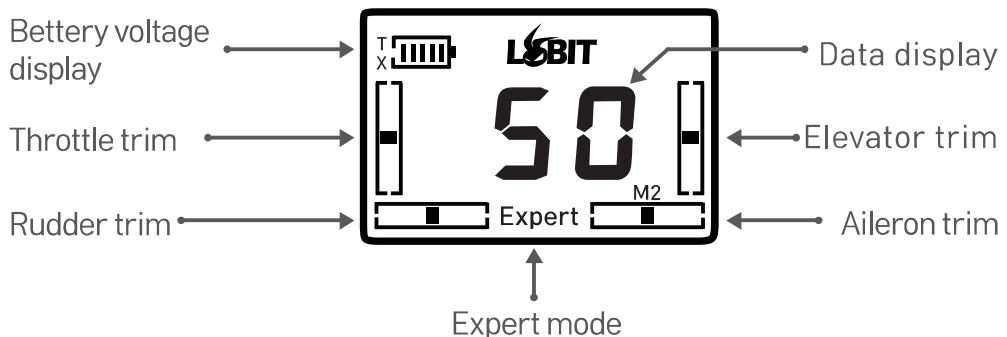


Input Key Function

Throttle / Aileron Stick	Move the stick forward or backward to make Lobit 100C ascend or descend. Move the stick left or right to make Lobit 100C roll left or right.
Elevator / Rudder Stick	Move the stick forward or backward to make Lobit 100C move forward and move backward. Move the stick left or right to make Lobit 100C yaw left or right.
Aileron Trim	Aileron trim adjusts for left and right drift.
Elevator Trim	Elevator trim adjusts for forward and backward drift.
Rudder Trim	Rudder trim adjusts for drift of left and right rotation or yaw.
Throttle Trim	Throttle trim is normally left at neutral. The lower trim turns LEDs on and off.
Power Switch	Push to ON to turn on the transmitter. Push to OFF to turn off.
Photo / Video	Press photo button to shoot a photo. Press video button to start recording videos and press again to stop recording.

— MODE 2 Transmitter

Main Menu



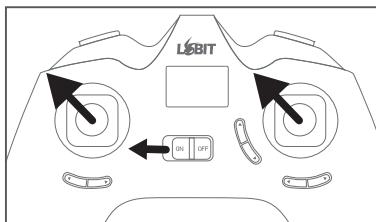
Input Key Function

Throttle / Rudder Stick	Move the stick forward or backward to make L0BIT 100C ascend or descend. Move the stick left or right to yaw L0BIT 100F.
Elevator / Aileron Stick	Move the stick forward or backward to make L0BIT 100C move forward and move backward. Move the stick left or right to make L0BIT 100F roll left or right.
Aileron Trim	Aileron trim adjusts for left and right drift.
Elevator Trim	Elevator trim adjusts for forward and backward drift.
Rudder Trim	Rudder trim adjusts for drift of left and right rotation or yaw.
Throttle Trim	Throttle trim normally left at neutral. The lower trim turns LEDs on and off.
Power Switch	Push to ON to turn on the transmitter. Push to OFF to turn off.
Photo / Video	Press photo button to shoot a photo. Press video button to start recording videos and press again to stop the recording.

— Changing mode and transmitter stick calibration

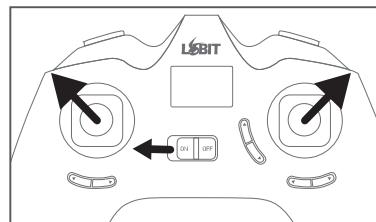
You can change the mode as you like by following the instructions below.

**STEP
1**



MODE 2

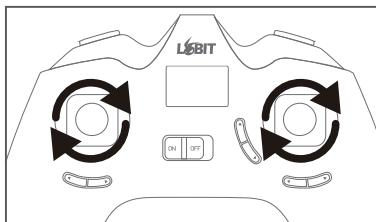
Push both sticks to the upper left position and hold.
Then power on the transmitter.



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.

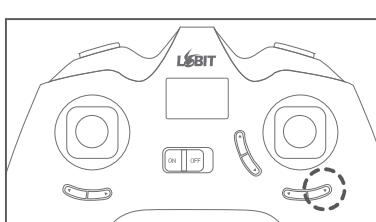
**STEP
2**



MODE 1 / MODE 2

Rotate both sticks twice.

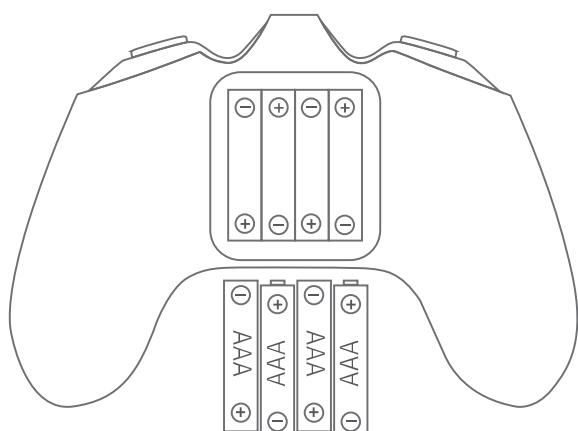
**STEP
3**



MODE 1 / MODE 2

Hold down any trim until the LED on the transmitter blinks red, indicating a successful calibration.

— Transmitter battery installation

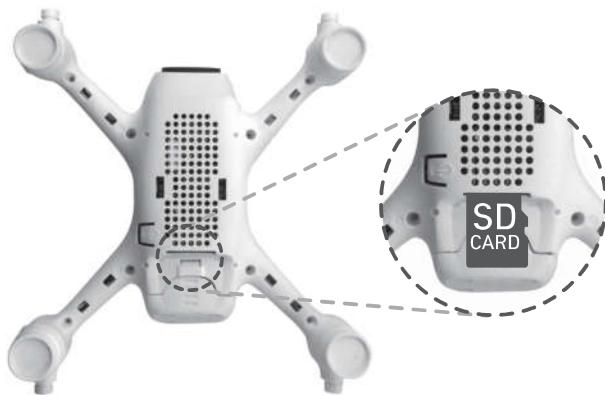


⚠ Notice

- Do not mix old and new batteries.
- Do not mix different types of batteries.
- Do not charge non-rechargeable batteries.
- Install 4 X AAA batteries according to the correct polarities.

— Camera recoding

Use power button to record videos



STEP 1 When the transmitter and Lobit 100C are paired, the red and blue lights situated inside the SD card slot will both come on. The camera may take several seconds to recognize the SD card. When the red light goes off, the Lobit 100C is ready to record.

STEP 2 Press the button on the side of the Lobit 100C (near the SD card slot) to start recording. A red light inside the SD card slot will blink and the two red LEDs on the Lobit 100C will blink alternately when recording starts.

STEP 3 Press the button again to stop recording. The red lights will stop blinking and the video will be saved.

Pressing the power button for 2 seconds will power off the Lobit 100C.

Transmitter button to record videos / take photos

You can also start recording/ taking photos by using the transmitter buttons. See below.

Photo Press the left button on the top of the transmitter to shoot a photo. The red LEDs on the Lobit 100C will blink one time.

Video Press the right button on the top of the transmitter to start recording videos. The red LEDs on the Lobit 100C will blink alternately. Press again to stop recording.

* Power off both the transmitter and the Lobit 100C before inserting or removing the SD card.

* If you don't want to save the video, just power off Lobit 100C before you press the button again.

Fly the Lobit 100C

Power-on Safety Mode

Your Lobit 100C's transmitter is designed with a Power-On safety feature that ensures Lobit 100C's motor will not start unless it detects a suitable control signal when the Lipo battery is connected.



Power on the transmitter and the screen will show data. Do not move any other stick or trim before the transmitter and Lobit 100C had finish pairing, or Lobit 100C will drift.

Press the power button under the Lobit 100C. Make sure the battery compartment pushed in to the bottom.

Put Lobit 100C on a level surface before flight, or Lobit 100C will drift.



LED Indicators

After a “beep”, the red LED lights on the Lobit 100C turn steadily, indicating successful pairing.

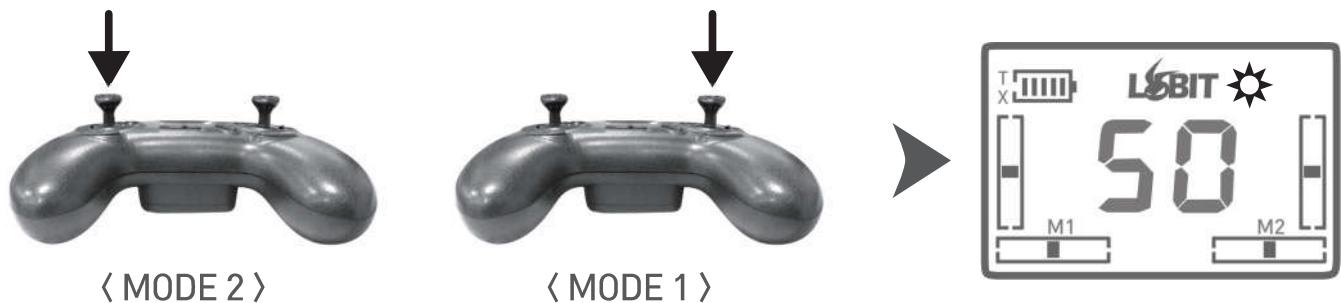


< Low Battery Alarm >

The two red LEDs will blink at the same time and Lobit 100C will descend and land down automatically to 5 meters or lower from the takeoff point when Lobit 100C battery is low.

Headless Mode

Headless mode means Lobit 100C will default any direction as its head in front of the transmitter. The blue lights on Lobit 100C will blink and a star icon shows on the LCD screen when Lobit 100C is in headless mode.



Press the Throttle stick briefly to switch on / off headless mode.

Press the Throttle stick to enter headless mode, indicated by two “beeps”.
Press the Throttle stick again to exit headless mode, indicated by one “beep”.

Start / Stop the motors

When you need to stop the motors quickly, you can use both sticks to stop the motors.



< Start the motors >

Pull the two sticks as the picture shows.
(The right stick to bottom left and the left stick to bottom right.)

< Stop the motors >

Pull the two sticks as the picture shows.
(The right stick to bottom right and the left stick to bottom left)

* You can also use the throttle stick to start/stop the motors. Lobit 100C will ascend or descend slowly.

* Always stop the motors before power off the transmitter.

If you power off the transmitter first, the motors will keep on for 3-4 minutes and Lobit 100C will land down slowly.

Controlling transmitter sticks

Controlling

* To avoid loss of control , always move the transmitter sticks slowly



Throttle increases /decreases the flying height of your the Lobit 100C.
The Lobit 100C can hold the altitude in the air.



Push the throttle stick up and the Lobit 100C will rise. Release the stick to the central position, the Lobit 100C will hover automatically and hold its altitude. Pull the stick down and the Lobit 100C will fall. However, the changes of barometer sensors as well as earth magnetic field sensors may influence your Lobit's altitude.

Rudder rotates your Lobit 100C left or right.



Elevator moves Lobit 100C forward and backward.



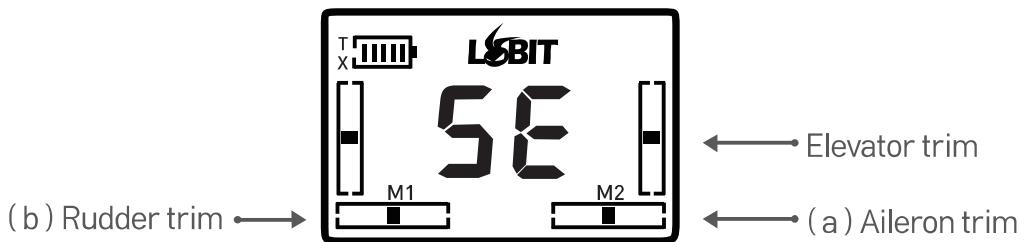
Aileron moves Lobit 100C left and right.



* Notice : When you exit the headless mode, controls will appear reversed if Lobit 100C is flying towards you!

Advanced performance setup

Reverse Setup



< Elevator Reverse Setup >

Pull the throttle stick to the lowest position.

Press and hold the elevator stick for 1 second to enter the settings menu.

The LCD will display “SE”. Press the elevator trim up or down to reverse the channel and then press and hold the elevator stick for 2 seconds to confirm and exit.

< Aileron and Rudder Reverse Setup >

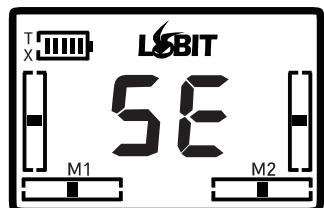
Pull the throttle stick to the lowest position.

Press and hold the elevator stick for 1 second to enter the setting menu.

Press (a) Aileron trim / (b)Rudder trim left or right to reverse the channel and then press and hold the elevator stick for 2 seconds to confirm and exit.

Normal and Expert Flight modes

Lobit 100C is factory set for Normal mode flying, and it will always power up in Normal mode. Though fast and responsive in Normal mode, Lobit 100C has even greater performance capability when Expert mode is activated.



< Normal mode >

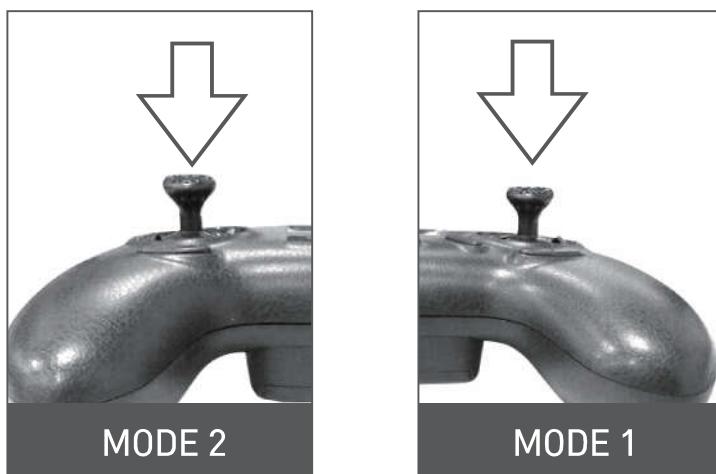


< Expert mode >

Press the elevator stick to activate Expert mode (Lobit 100C and transmitter must both be on). Two beeps indicate Expert mode one beep indicates Normal mode.

The LCD will display “EXPERT” when in Expert mode.

Sensitivity Setup



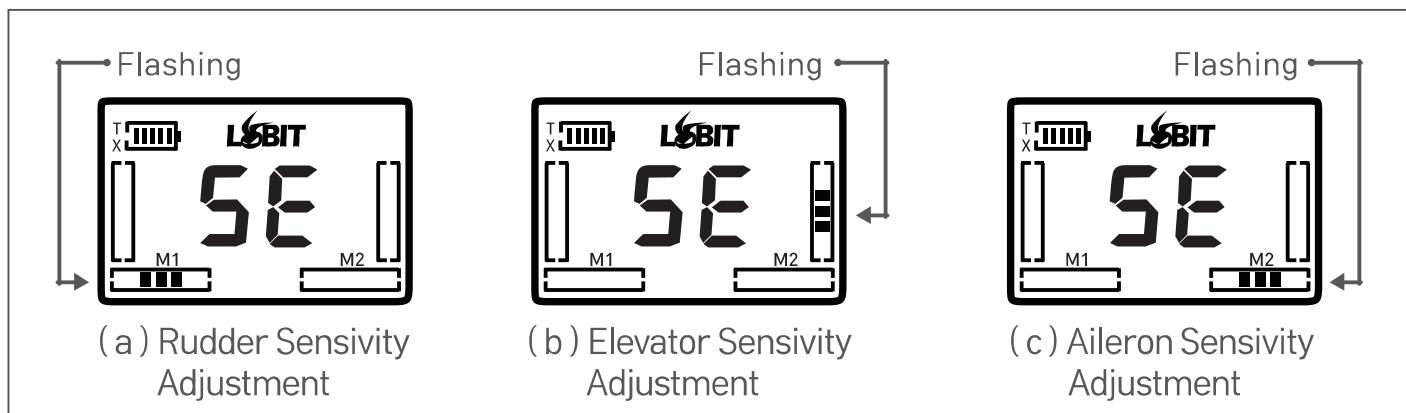
Pull the throttle sticks to the lowest position.

Hold down the elevator stick for 1 second to enter the setup (SE) menu.

Press the base of the throttle stick and the three-point dotted line starts to flash.

Press it again to switch to different channels. Use the (a) Rudder Trim, (b) Elevator Trim, or (c) Aileron Trim to change the sensitivity values shown on the LCD and then hold down the elevator stick for 2 seconds to confirm or exit.

LoBit 100C control sensitivity increases with higher value.



You can also adjust sensitivity in Expert Mode following the Normal Mode procedure controls.



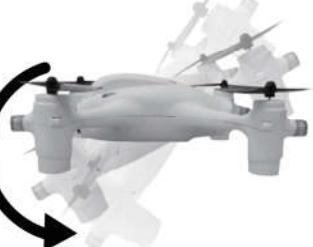
3 dots displayed in Normal (Sensitivity range 20–60%)

5 dots displayed in Export (Sensitivity range 60–100%)

* Press the Elevator stick to switch between Normal Mode and Expert Mode at any time.

Aerial flip

Press and hold down the throttle stick for 1 second to enter Flip mode, indicated by “beeps”. The beeps will last for 2 seconds. In this 2 seconds, push the accordance sticks to perform the flips.

	MODE 2	MODE 1	
Left Flip			
	Push the aileron stick to the left. Release the stick to the center position after the flip.		
Right Flip			
	Push the aileron stick to the right. Release the stick to the center after the flip.		
Forward Flip			
	Pull the elevator stick forward. Release the stick to the center after the flip.		
Backward Flip			
	Push the elevator stick backward. Release the stick to the center after the flip.		

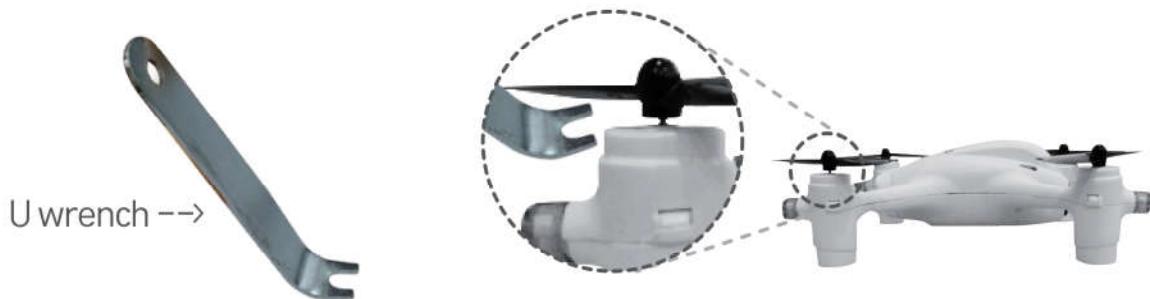
* Notice : When Lobit 100C battery is low, performing flip is not possible.

Replacing propellers

Lobit 100C's propellers are not identical. Each propeller is labelled with an 「A」 or 「B」. When installing replacement propellers, be sure to install as shown below. Lobit 100C will not fly but will flip and crash if the propellers are not installed correctly.



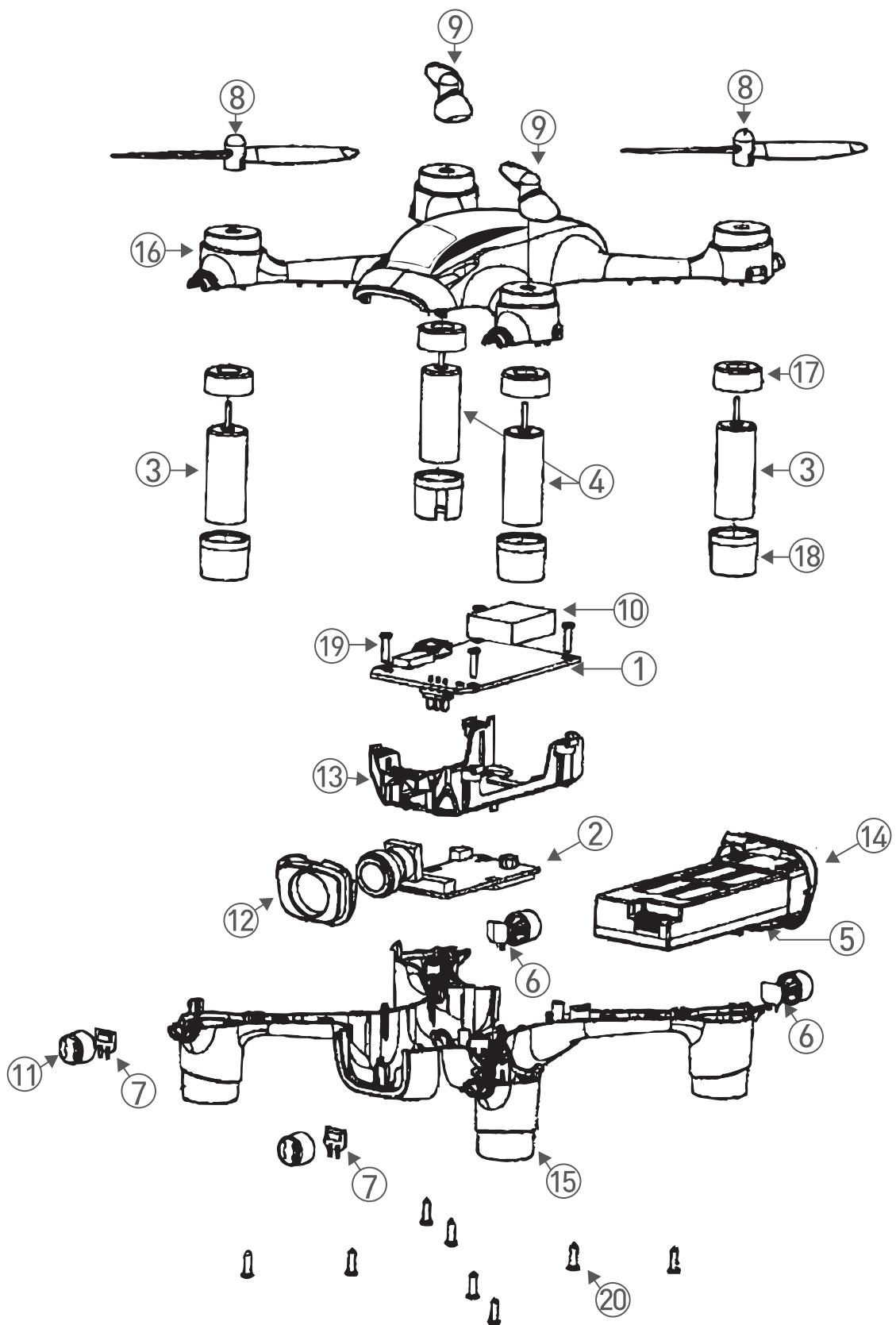
Remove Propellers : Hold the propeller, insert the U wrench under the propeller, pull up and the propeller will easily come off the motor shaft.



Install Propellers : Pinch the propeller hub, align the hole to the motor shaft and press it straight down firmly but gently.



Exploded view



No.	Part Name	QTY
1	RX	1
2	1080P Camera PCB module	1
3	820 motor (clockwise)	2
4	820 motor (counterclockwise)	2
5	Lipo battery	1
6	Red LED	2
7	Blue LED	2
8	Black propeller A	2
9	Black propeller B	2
10	Barometer sponge	1
11	Transparent lampshade	4
12	Camera cap	1
13	Battery compartment	1
14	Battery compartment cover	1
15	Lower shell	1
16	Upper shell	1
17	Motor upper rubber set	4
18	Motor lower rubber set	4
19	Screw	4
20	Screw	8

Troubleshooting

1. Transmitter and Lobit 100C do not pair.

Bring the transmitter close to Lobit 100C during binding.

Make sure you do not move the transmitter stick or trim during initial power-on.

2. Transmitter LED suddenly goes out.

Replace the AAA batteries in the transmitter.

3. Transmitter display is not showing the setting interface after holding down the Elevator stick for 2 seconds.

The throttle stick needs to be in the fully down position.

4. Gyro is not working well.

- (1) Battery voltage is too low.
- (2) Pair Lobit 100C with the transmitter again.
- (3) Land Lobit 100C with the throttle stick in the fully down position for 3 seconds and then take off again.

5. Lobit 100C won't perform flips.

- (1) Press and hold down the throttle stick for 1 second to enter into flip mode.
Do not flip when the transmitter “beeps”.
- (2) Lipo power is too low. Recharge Lobit 100C.

6. Lobit 100C is shaking and making noise.

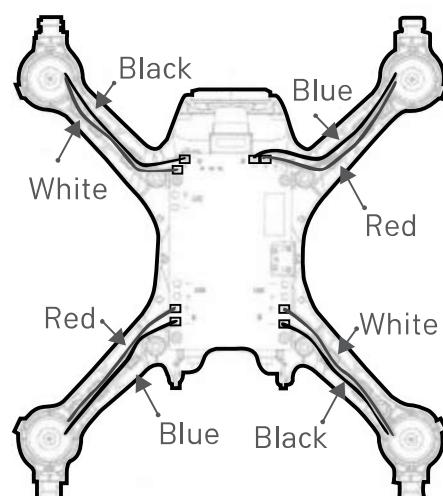
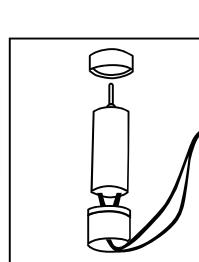
Check that the motors, canopy, body and propellers are all properly positioned.

7. Cannot take off.

- (1) Make sure the propellers are installed correctly. The propellers are marked with “A” (clockwise) and “B” (counterclockwise).
Refer to the Top View picture below for the correct orientation.



⟨ Top View ⟩



⟨ Bottom View ⟩

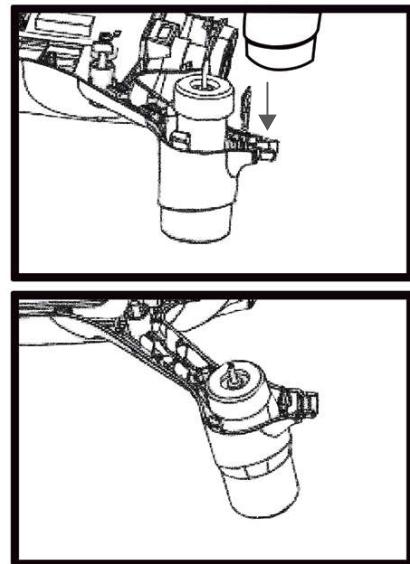
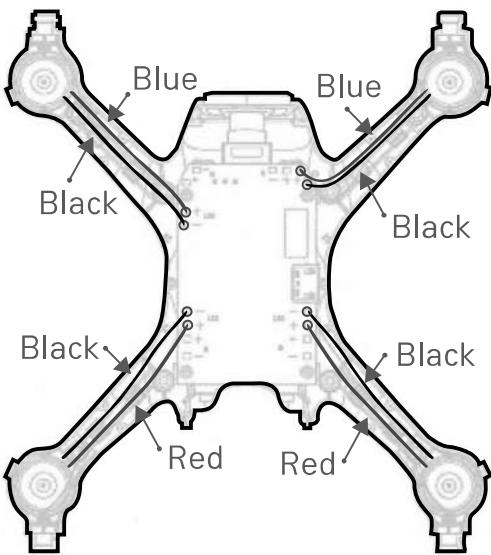
- (2) Make sure that each motor is installed correctly. There are two different motors with different motor wire colors. Refer to the Bottom View picture below for the correct order.

8. Removing and installing LEDs

Removal : Unscrew and remove the upper shell and the motors.

Then desolder the thinner LED wires.

Installation : Solder the red / blue wire onto the anode / positive (+) lead of the LED and the black wire on to the Cathode / negative(-) lead of the LED.
Press the LED wires into the leg slots, then press the motor wires into the leg lots.
Install the upper shell by screws.
You can tell apart the color of the LED lights by the color of the LED Wire ; red wire is the red LED, blue wire is the blue LED.



9. The motors do not spin freely after a crash

Press the shaft down from the top of the propeller and motor to remove any objects, or replace the motor.

10. One or more motors stop working.

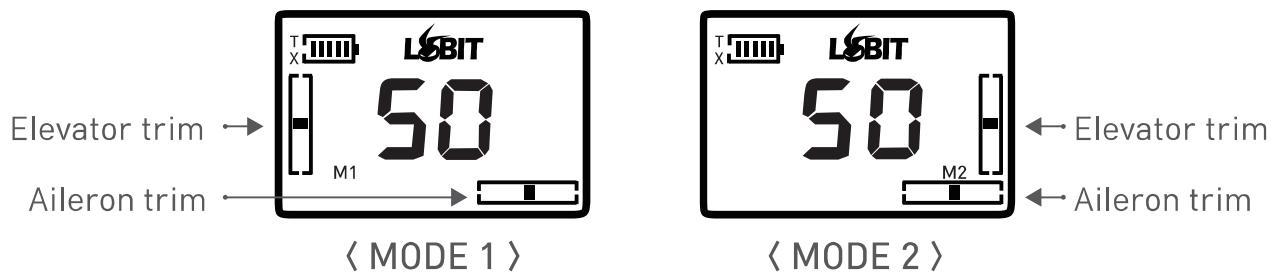
- (1) Spin the propellers to see if it jammed the motors, make sure the propellers can spin normally.
- (2) Resolder any broken motor connections.
- (3) Replace the motor.

11. Lobot 100C always drifts to one direction.

Calibrate the accelerometer as follow.

- (1) Before calibrating the accelerometer, make sure that the propellers, motors and body are in good condition with the battery fully charged.
Ensure that the battery inserted into the battery compartment correctly.
Pair Lobot 100C and transmitter, then put Lobot 100C in Expert mode.

(2) Set both the aileron and elevator trim to the middle so that the LCD displays 50.



(3) Pull the throttle stick fully down and move the rudder stick to the lower right position. Quickly move the aileron stick to the left and right repeatedly until the LED lights blink, indicating successful calibration.
This calibration will reduce excessive drifting when doing level yaw turns.



(4) If Lobit 100C still drifts to one side, add a few sheets of paper (the number of sheets will vary depending on the amount of drift) to the side of Lobit 100C that drifts. The paper will help counterbalance and create a level offset angle.



12. The camera can't record.

- (1) The SD card may not be recognized by Lobit 100C. Please use brand HD SD card (2-16G, class 4-6).
- (2) The camera module may be defective. Replace it.

Spare part Chart



Body Shell
Product Code : T01C01



Battery set
Product Code : T01C02



HD camera module
Product Code : T01C03



Linkage cables
Product Code : T01C04



Screw set
Product Code : T01C05



Propeller set
Product Code : T01A01



Motor set
Product Code : T01A02



Blue LED
Product Code : T01A03



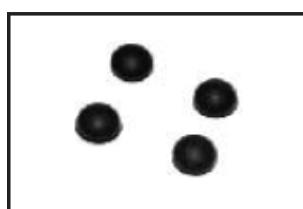
Red LED
Product Code : T01A04



Receiver PCBA board
Product Code : T01A05



Motor sleeve set
Product Code : T01A06



Rubber feet
Product Code : T01A07



Charger
Product Code : T01A08



U wrench
Product Code : T01A09



Crash pack
Product Code : T01C06



Lipo battery charger
Product Code : T01A10



Transmitter
Product Code : T01C07

FCC Statement

NOTICE:

This device complies with part 15 of the FCC Rules

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Product warranty

Thank you for choosing Lobit 100C.

Please read the instruction manual carefully before use.

Free repair may not be provided if you do not have this warranty.

Warnings and precautions in this instruction manual are provided to keep your safety and to prevent any property damages. If any problem happens, please read the instruction manual. You can also make an inquiry by visiting stores, agencies and service centers.

Damages which are made while your Lobit 100C is being used properly as the manual instructs, can be repaired for free under product warranty period which lasts for 3 months.

Product warranty period : 3 months after initial purchase

Inquiry : 82)70-5066-4097

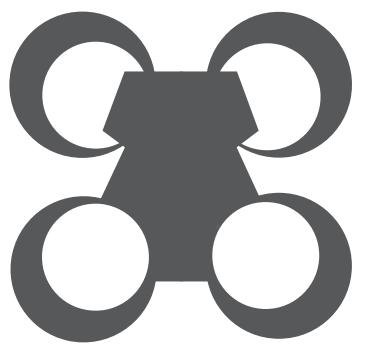
Service Center : 82)70-5066-1232

Home page : www.lobit.co.kr

Company address : D-1004, Smartyvalley, Songdomirae-ro 3, Yeonsu-gu, Incheon, Korea.

All the warnings and precautions given in the instruction manual are provided to prevent any accidents, property damages and etc. from happening. Therefore, please read the instruction manual very carefully before use. Keep the instruction manual where it can be easily reached and found. If any problem is found during use, refer to the instruction manual or please make an inquiry to agencies, vendors and service centers. If Lobit 100C is broken while it is being used properly as the instruction manual states, free repair will be provided under product warranty period which lasts for 3 months.

You can make after-service inquiries to www.lobit.co.kr



DROGEN

WWW.LOBIT.CO.KR

Serial Number