TIKE

USER MANUAL

This User Manual is provided as an online page and will be updated without notice to improve performance and ease of use.

HELSEL

CONTENTS

STEP.01 CAUTION

- Do not place your hands inside the shell until the propeller has stopped completely.
- Don't fly towards people and animals when you control drones.
- Long hair can be dangerous because it gets caught in a rotating propeller. Wear or tie a hat during the flight.
- When removing the mounted shell, first remove the drone's battery or remove the propeller.
- When replacing a drone battery, keep the controls safe to prevent accidental operation by others
- Observe local laws and regulations when disposing of batteries.
- When replacing the drone's battery, store the controller in a safe place so that it cannot be inadvertently activated by someone else. to prevent others from inadvertently operating the drone.

The drone may become uncontrollable if you leave the signal control range of the controller.
Be careful not to deviate from the line of sight while operating.
Flying outdoors in windy conditions may cause degradation.
We recommend flying indoors.

- This product is designed for indoor use and is not wind resistant.
- Strong impacts may damage the outer shell.
- This product is not waterproof.
- Do not disassemble, replace or repair it with non-original parts.

STEP.01-2 Battery caution

- When charging the battery, be sure to use the special charger provided by HELSEL.
- When discharging, use the rotation of the drone's motor to discharge, and do not allow too long a discharge time to avoid damage to the battery, which is not guaranteed if the battery is damaged due to overdischarge.
- To prevent fire, do not charge in flammable or explosive environments.
- To maintain voltage and ensure expected life, the battery should be stored for more than 3 months before charging.

1. Do not disassemble or reassemble the battery.
2. Do not short the battery.
3. Do not charge near a fire, in direct sunlight, or in an environment below 0°C or above 45°C.
4. Do not immerse the battery in water or allow it to get wet.
5. Do not attempt to repair or disassemble the battery.
6. Do not nail, kick, step on, shock, or throw the battery.
7. Do not leave the battery unattended while charging.
8. Do not use under severe damage or deformation.
9. Do not solder directly on the battery.
10. Reverse charging or over discharging is prohibited.
11. Reverse charging or reverse connection is prohibited.
12. Do not connect the battery to a general charging socket or car charging terminal.
13. do not use in unspecified equipment.

Do not mix this battery with disposable batteries.

15. Do not exceed the specified charging time.

Do not place the battery in a microwave oven or high pressure vessel.

17. use a special charger for charging.
18. Use a dedicated cell balancer when charging.
19. Do not use in places with strong interference (high voltage lines, subway stations, railways, base stations, signal transmission towers, etc.).
20. If you notice any unpleasant odor or abnormal symptoms while using the battery, stop using it immediately and take safety precautions.
21. Keep out of the reach of children.

Use a dedicated charger and follow the charging instructions.

23. Please set to LiHV for charging, and there is no warranty for fire and damage caused by other settings.

Must read – Battery caution
https://www.helselgroup.com/ko/battery
Must read – Charging
https://www.helselgroup.com/ko/support-st450

Must Read

Battery precautions

STEP.02 TIKE RTF In the box

TIKE x1

Extra badges x1

Spare Propellers x1
* CW x2 | CCW x2

Battery x 1
* 1100mAh 3S 60C
* Cap x1

ST10 Controls x1

ST450 Chargers x1

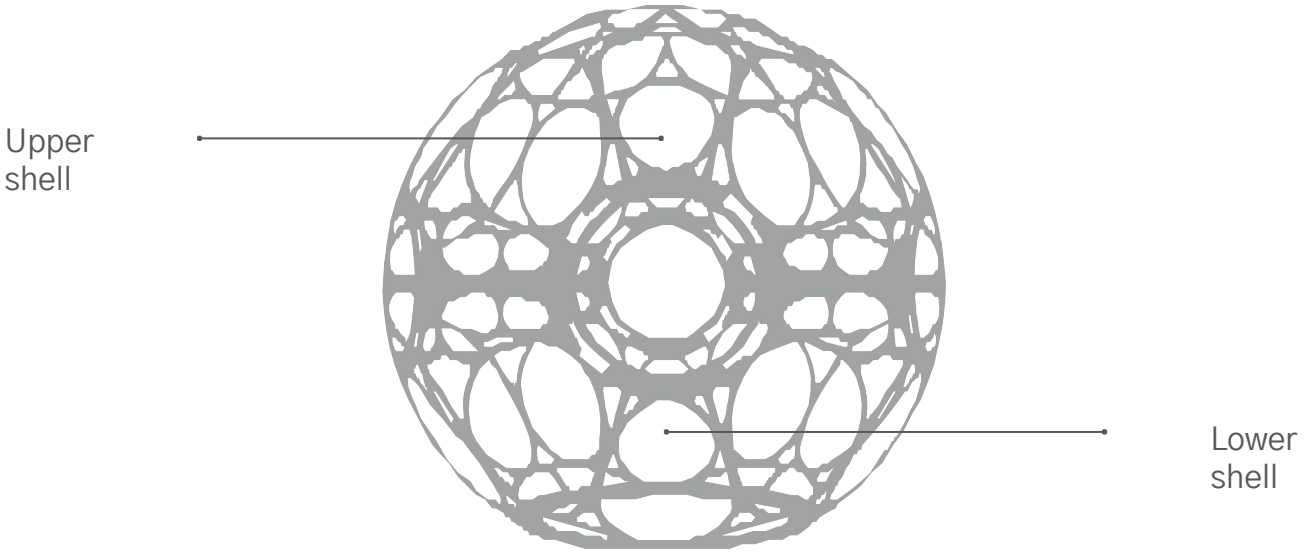
Connectors x1

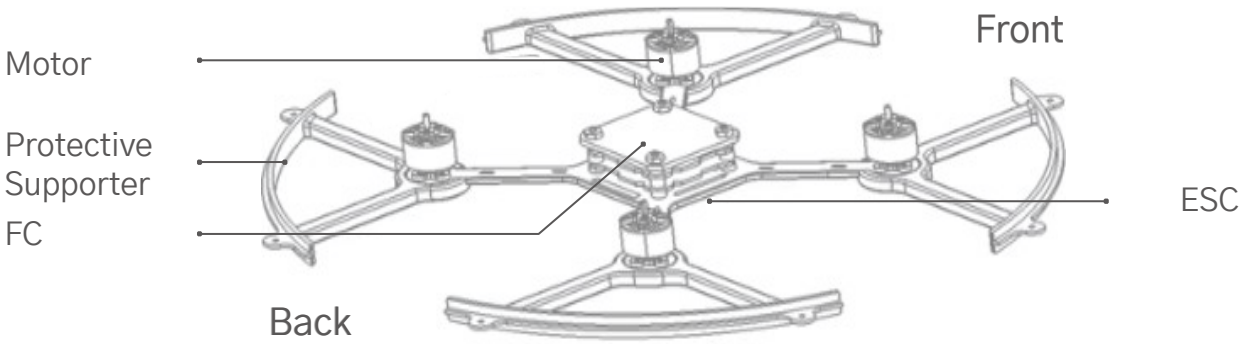
Velcro x 1
* Included for securing spare batteries

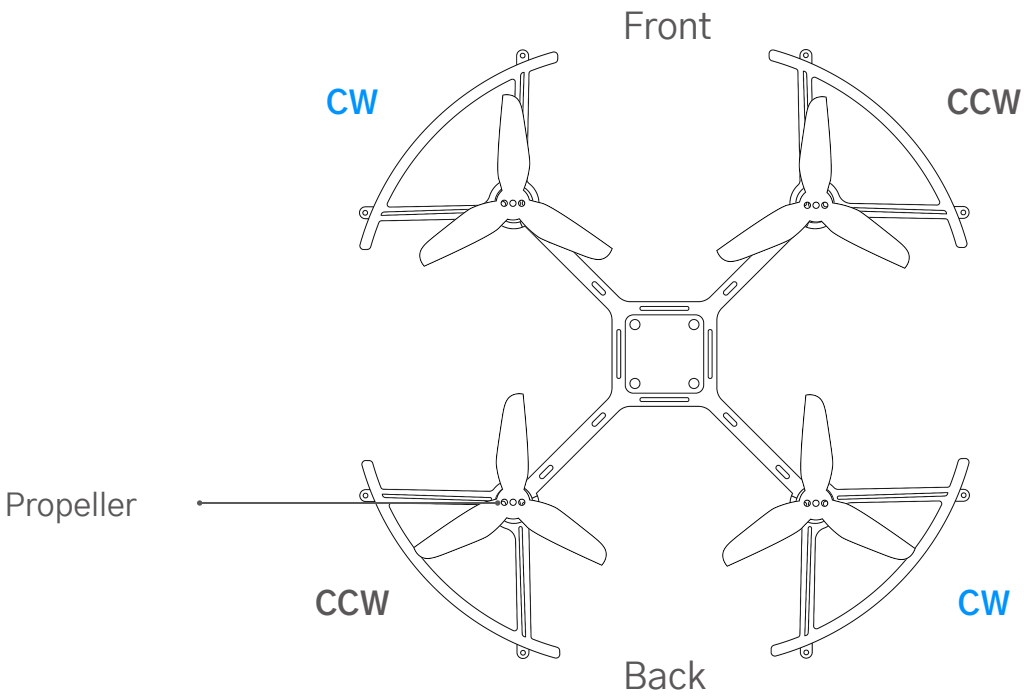
Screw set x1

Drivers x1

STEP.03 TIKE description





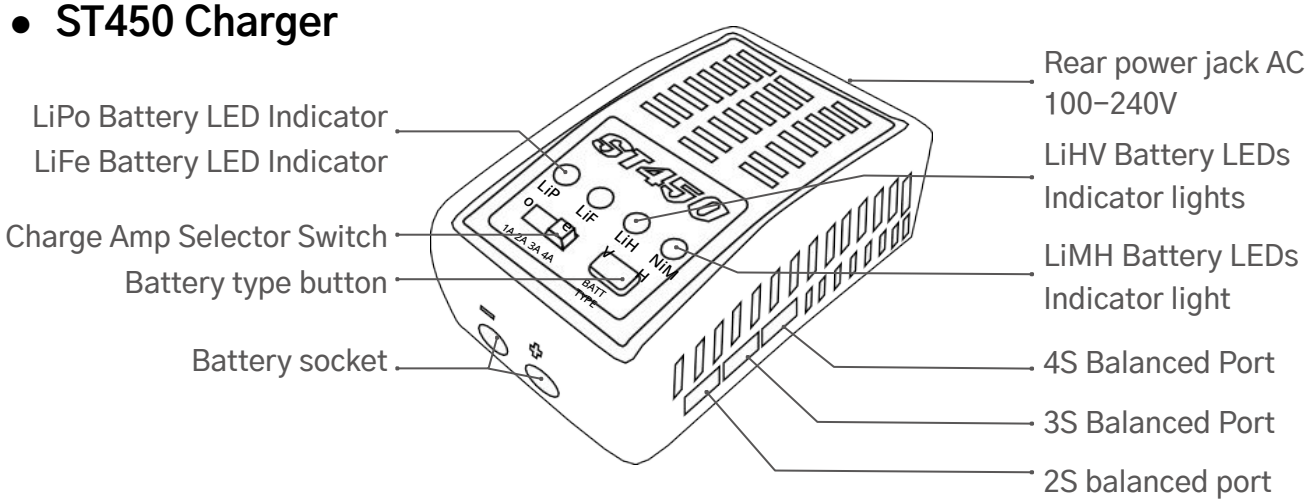


*Propeller Orientation Notation

STEP.04 Charger description

The ST450 100–240V AC balanced charger is capable of charging 2–4 cell LiPo and LiHV batteries in balanced mode and can charge up to 4A with 500W of power.

- **ST450 Charger**

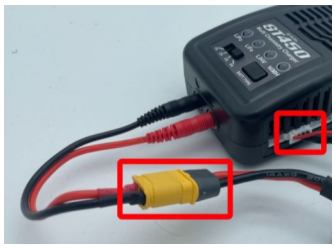


How to charge your battery – ECOFLUX 1100mAh 3S 11.1V 60C Battery usage criteria explained

(1) Connect the power cord to the charger.

(2) Plug the power cord into an outlet.

(3) Ready to charge when the LED flashes green and red. Press the 'LiPO' button and position the slider to '1A'.

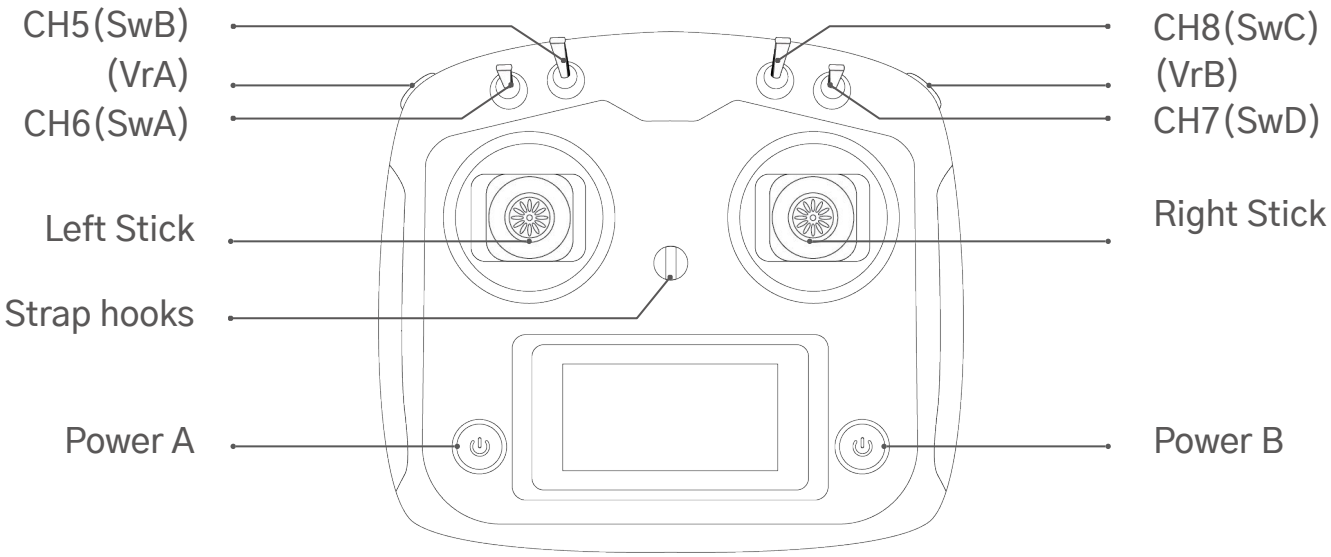


(4) Plug the battery's yellow XT60 connector and balance cable into the charger and the LED will light up to start charging.

Please be sure to set the correct charging mode as there is a risk of fire or explosion if the battery is charged in the wrong mode. The manufacturer is not responsible for any accidents caused by incorrect settings.

LED Indicator lights	Show capacity
Flashing green and red alternately	You're ready to charge.
Steady red light	The battery is charged to 25% of its capacity.
Blinks red	The battery has 25% to 50% of its capacity.
Steady yellow light	The battery has 50% to 70% of its capacity.
Blinks green	The battery has 70% to 99% of its capacity.
Steady green light	The battery is fully charged.

STEP.05 Guide to controller button names



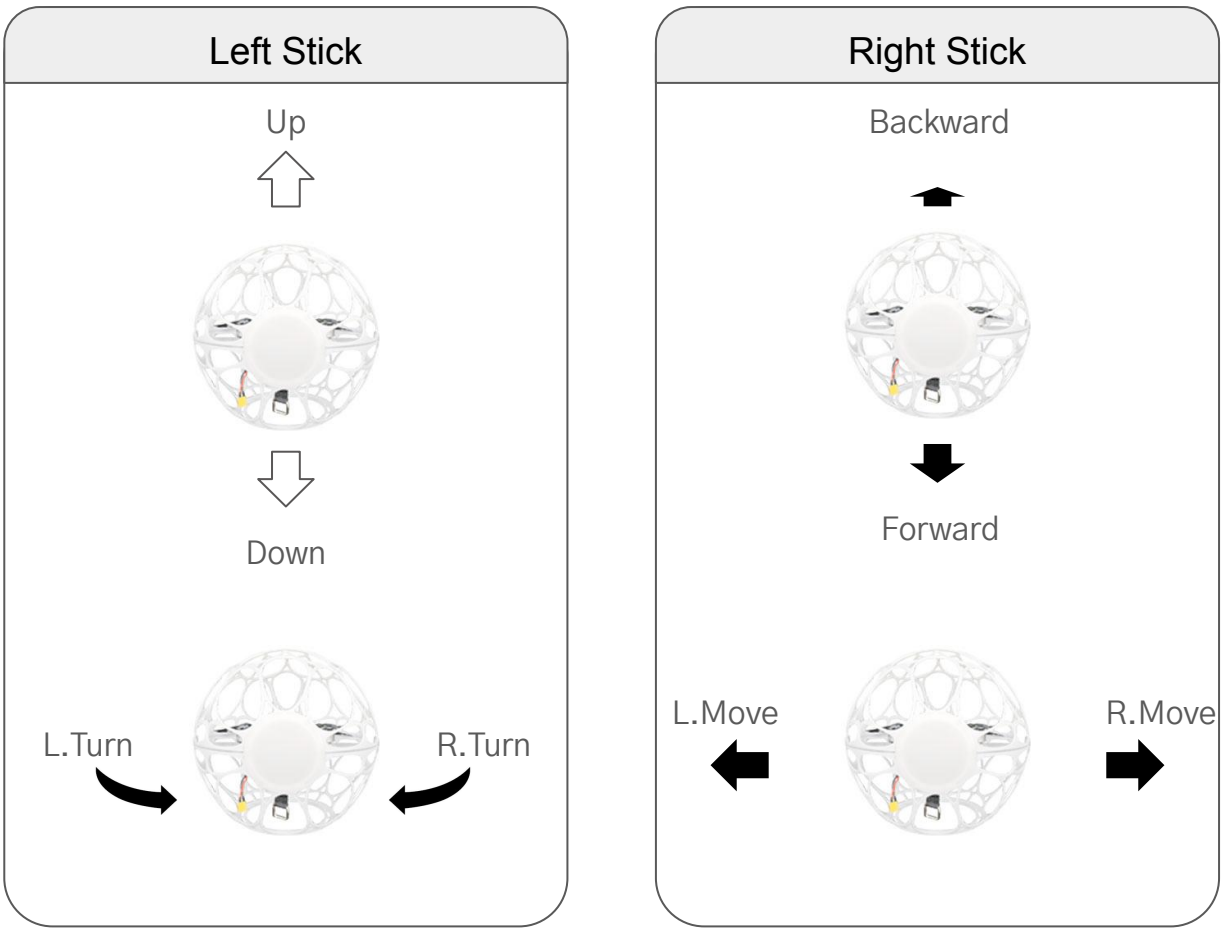
STEP.05-1 Guide to the Controller Default Keymap

Button	Function
Power A, B	Press simultaneously to power ON / OFF
Left Stick	Ascend, descend, rotate left and right (default mode 2)
Right Stick	Move forward/backward, left/right (default mode 2)
CH7(SwD)	Arming (Start)
CH5(SwB)	Change flight mode (Angle, Horizon, Turtle)

STEP.06 Flight controller mode descriptions

The mode of the controller is set to Mode 2 by default.

The controls for Mode 2 are shown below.

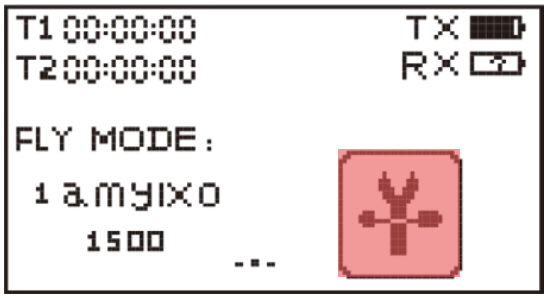


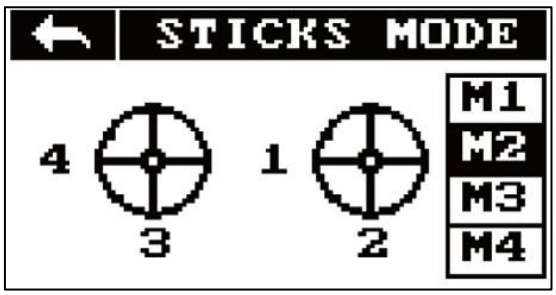
Stick Position	Direction of operation	Function	Drone movement
Left Stick	Up	Throttle	Ascend (drone goes up)
	Down	Throttle	Descend (drone descends)
	Left	Yaw	Turn Left (rotates counterclockwise)
	Right	Yaw	Turn Right (clockwise rotation)
Right Stick	Up	Pitch	Move forward
	Down	Pitch	Move backward
	Left	Roll	Move Left
	Right	Roll	Move right

STEP.6-1 Change controller mode

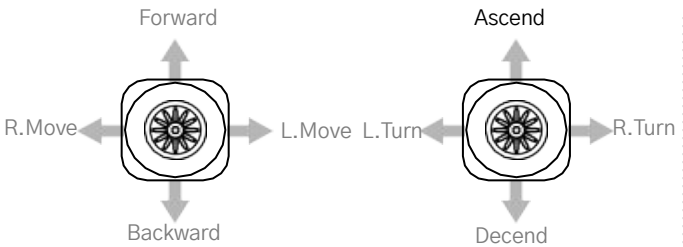
How to set up modes 1 and 2

: Press the buttons on the controller screen, then press SYSTEM (SYS) and select > STICKS MODE. M1 through M4 will appear, M1 on the right is Mode 1, press M2 to change to Mode 2.

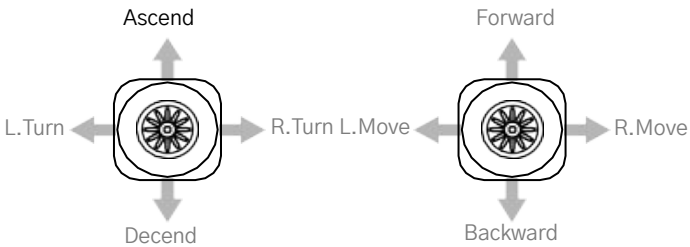




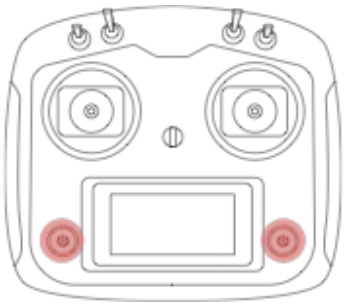
MODE 1



MODE 2



STEP.07 Turning on and off



Controller ON, OFF

: Press and hold the corresponding two buttons until the power is turned on. ON and OFF until the power is ON.

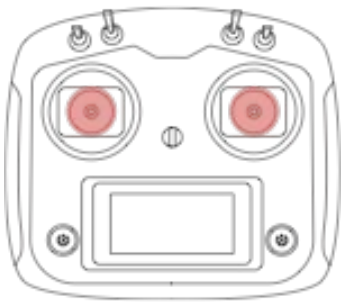
|Cautions|

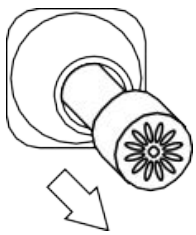
If you turn off the controller during flight or if it turns off automatically due to low battery in the controller, TIKE may fly out of control. Keep the controller's battery fully charged to prevent it from running low.

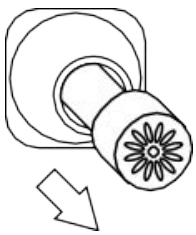
If TIKE's battery is below the warning voltage (low power), the 'TIKE' position LED will blink.

When you are finished flying, remove the TIKE battery and turn off the controller with both toggle switches in the up position. If the power does not turn off or does not turn on, make sure the toggle switches are all in the UP position.

STEP.08 Airframe connections and gyro compensation



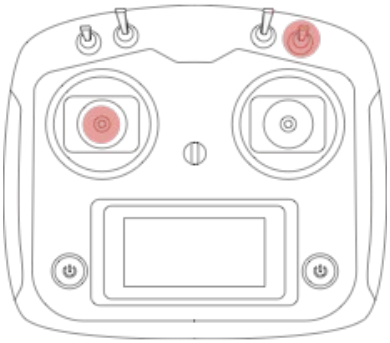




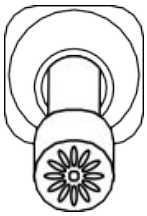
1. After powering on the controller, connect the batteries to the TIKE, place it horizontally on the ground after powering on, and when the Position LED lights up, simultaneously lower the left and right sticks of the controller to the lower right corner and hold for at least 3 seconds.
2. The position LED will then slowly blink.
3. When the position LED is blinking, leave the sticks in place.
4. After a few seconds of holding still, the position LEDs will stop blinking and the calibration is complete.

* It is recommended to calibrate before every takeoff.
* Do not touch the drone during calibration.

STEP.09 Start



Pic 1

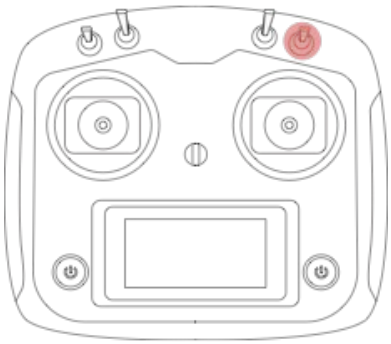


Pic 2

1) Move the left control stick to the lowest position, as shown in Figure 1, and the 4th toggle key [CH7(SwD)] to the bottom, as shown in Figure 2, and the motor will start immediately.
2) To take off, lift the left stick.

* TIKE does not have an altitude hold mode, so left stick neutral will increase altitude.

STEP.10 How to stop the motor



You can stop the motor using toggle #4 [CH7 (SwD)] as shown in the illustration. You can stop the motor in any situation, so stop the motor if a dangerous situation occurs.

* If you are disconnected from the aircraft, wait for about 5 circles before slowly landing on the ground.
* After landing, wait for about 4 motors to stop.

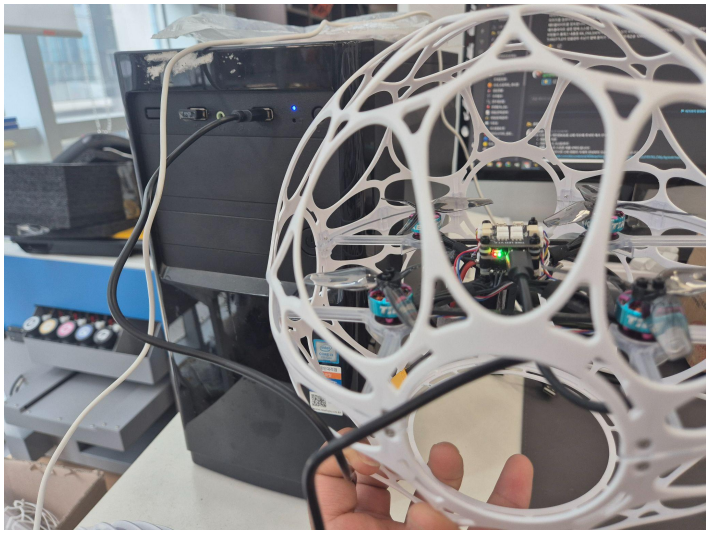
STEP.11 FAQ

Controls won't turn on.	If the batteries are not inserted correctly, the controller will not power up.	Follow the + and – markings on the battery compartment to make sure they are seated correctly, or try again with new batteries.
	Bad controller power button	A/S reception
	If the controller is not on	Position the power button to ON.
	If the toggle switch is down	Flip all toggle switches up.
The drone won't start.	Check the battery connection.	Check the connection status and connect in the correct direction.
	Make sure that the distance from the controls is within the limits.	Fly within a radius of 200M. It is recommended to fly in-view in an indoor environment that is not blocked.
	Make sure that the controls are not connected (binded).	Check the controls and try to reconnect them by checking the control connection instructions in the manual.
Starting/Un starting/ can't calibrate the IMU.	Check the status of your controller.	Turn on the controller and rebind it.
고도가 유지 되지 않아요.	Altimeter failure	A/S reception
	Transient operational failure due to excessive impact	Proceed with IMU calibration again.

It's soaring in altitude hold mode	Check to see if the propeller is broken.	Check and change it.
	TIKE is shaking too much and has been impacted	Cycle the power and try again.
	Change the motor.	A/S reception
The motor does not rotate.	Change the motor.	A/S reception
TIKE flight performanc e is strange.	Screws are loose	Tighten until it doesn't wobble.
	Broken center bracket	Check and change it.
	The propeller is severely damaged or mounted in the wrong orientation.	Check and change it.
Each switch is inoperative.	Poor contact on the switch	A/S reception
TIKE가 상승하지 않아요.	Low battery	Replacing the battery in your TIKE
	Low battery in the controller	Replacing the battery in the controller
모터가 멈추지 않아요.	Pull the throttle stick all the way in.	See How to stop a motor.

STEP.12 How to Check Betaflight Settings (1)

1. Connect the Tykey to your computer using a USB to 5-pin cable.



2. In the Betaflight "Setup" tab, check the system information

STEP.12 How to Check Betaflight Settings (2)

3. If the “RX_FAILSAFE” flag appears under the arming disable flags, it means either the receiver is not bound or the receiver is bound but not properly configured.

시스템 정보	
아밍 불가 플래그:	RX_FAILSAFE MSP DSHOT_TELEM
배터리 전압:	0.01 V
용량 소모량:	0 mAh
전류 소모:	0.00 A
RSSI:	0 dBm
CPU 온도:	30 °C

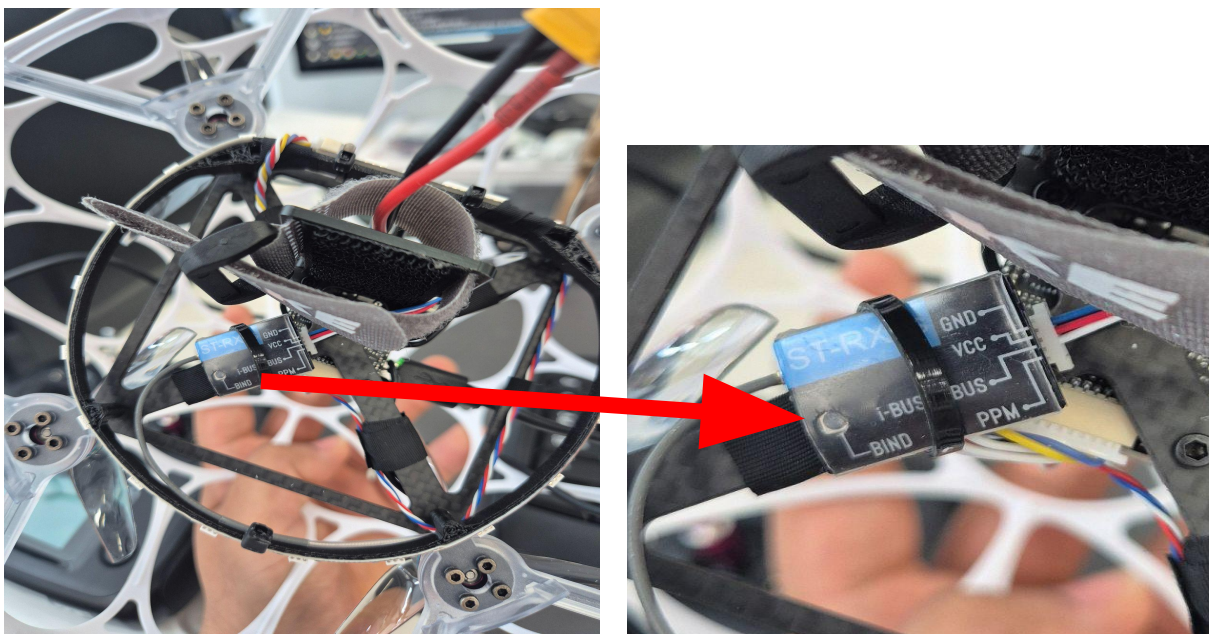
4. How to Set Up the Receiver:

Press and hold the BIND button shown in the image below for 3 seconds.

If the red LED blinks and then stays solid, it is in SBUS mode.

If the red LED continues blinking, it is in IBUS mode.

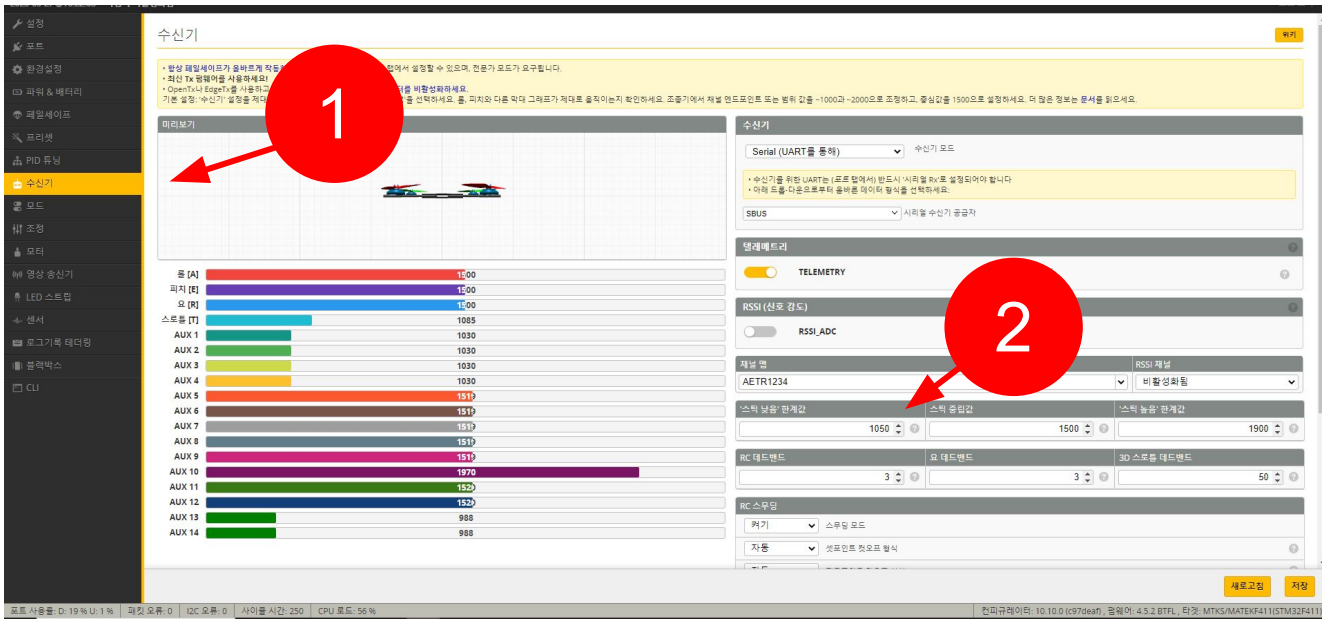
Tykey uses an SBUS receiver, so make sure the LED blinks and then turns solid.



STEP.12 How to Check Betaflight Settings (3)

5. If a THROTTLE input is detected, go to the "Receiver" tab and set the [Stick Low Threshold] to 1060.

After that, click Save, then disconnect the drone from your computer.



STEP.12 SPEC

Size	220*220*220 (mm)
Weight	≤172g(Battery not included) | ≤241g (Battery included)
Maximum Takeoff Weight	≤249g
Maximum flight time	≥ 8 minutes (hovering | using ECOFLUX 1100mAh battery)
Flight Speed	Can change to Betaflight
Suggested flight radius	Distance: within 200 m | Height: within 30 m
FC	HELSEL FC
ESC	4 in 1 25A
Battery	ECOFLUX 1100mAh 11.1V 3S 60C LiPo battery
Propellers	T3*2.5*3
Motor	Brushless motors
Shell Material	Polycarbonate
KC	R-R-cdr-TIKE

HELSEL

http://www.helsel.co.kr
http://www.helselgroup.com

Go to the A/S form