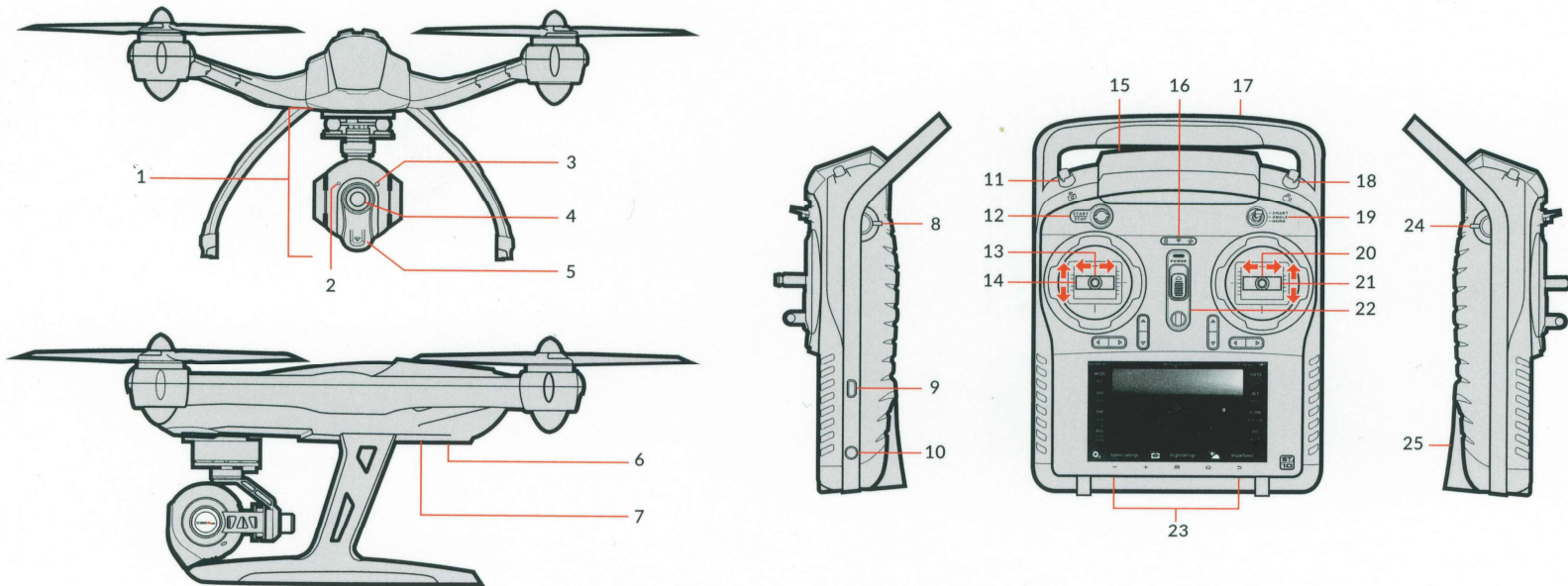


# TYPHOON

## Q500+

QUICKSTART GUIDE

## OVERVIEW



- |                                    |   |  |  |
|------------------------------------|---|--|--|
| 1 CGO2+ Gimbal Camera              | 10 Audio/Earphone Jack  | 17 2.4GHz Antenna (located inside the handle)  | 24 CGO2+ Pitch Angle/Position Control Slider |
| 2 Camera Microphone                | 11 Take Still Photo Button                                    | 18 Start/Stop Video Recording Button   | 25 SD Card Slot (located under the battery)  |
| 3 Camera LED Status Indicator      | 12 Start/Stop Motors Button                                   | 19 Flight Mode Selection Switch  |  |
| 4 Camera Lens                      | 13 Rudder/Yaw Control (for Mode 2 and Mode 1)                 | 20 Aileron/Roll Control (Mode 2 and Mode 1)  |  |
| 5 5.8GHz Antenna                   | 14 Throttle/Altitude Control (for Mode 2)                     | 21 Elevator/Pitch Control (Mode 2)   |  |
| 6 Main LED Status Indicator        | 15 5.8GHz Antenna (located inside the case)                   | 22 Throttle/Altitude Control (Mode 1)  |  |
| 7 Power Switch                     | 16 Status Indicators (for ST10+ battery, 5.8GHz WiFi and GPS) | 23 Power Switch  |  |
| 8 Proportional Control Rate Slider |   | 23 Volume and Navigation Touch-Activated Buttons Volume Down/VolumeUp/Menu/Home/Back |  |
| 9 USB Connector/Charging Port      |   |  |  |

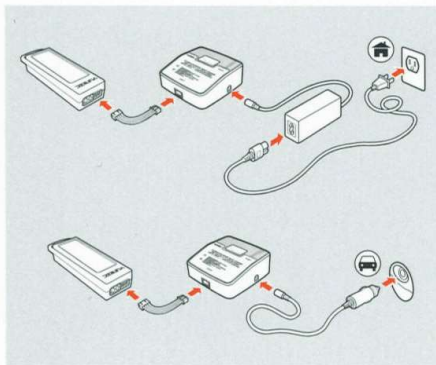


## IMPORTANT NOTE:

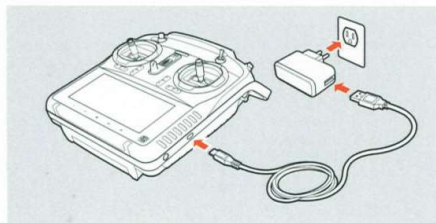
This Quick Start Guide is NOT intended to replace the content included in the instruction manual. You should read the instruction manual completely before proceeding.

### 1. CHARGING THE BATTERIES

Power the SC3500-3 charger from a 100-240V AC outlet using the AC adapter/power supply, or from a 12V DC accessory socket/cigarette lighter receptacle in a vehicle using the included adapter.

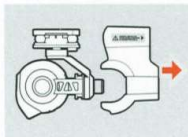


A green blinking LED indicates the charger is powered on and ready to charge, and a red blinking LED indicates the battery is charging. It will take approximately 2 hours to charge a fully discharged (not over-discharged) battery.

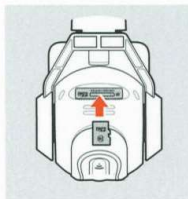


**WARNING:** All instructions and warnings must be followed exactly to prevent property damage and/or serious injury as the mishandling of Li-ion/LiPo batteries can result in fire.

### 2. PREPARING THE CGO2+



2.1 Remove the cover/lock from the rear of the CGO2+ by carefully sliding it backward.

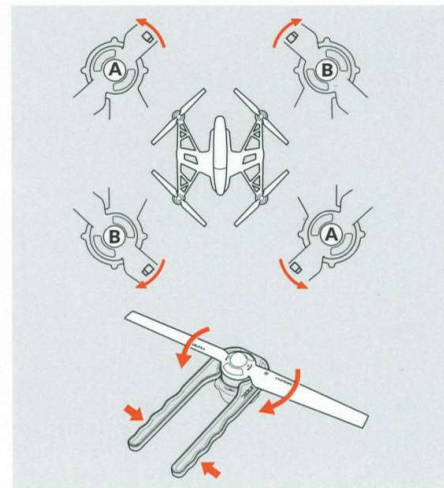


2.2 Insert the included 16GB card or any Class 10 microSD card from 16GB to 128GB.

2.3 Carefully remove the protective material from the camera lens.

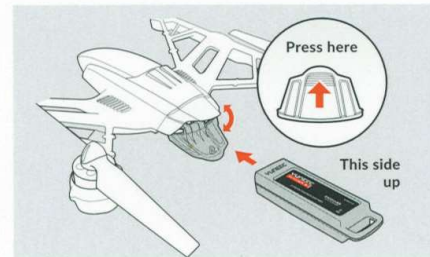
### 3. INSTALLING THE PROPELLERS

Install the corresponding A and B propellers in the positions shown by rotating them per the illustration and until they're secure. It may also be helpful to use the included tool to hold the motors while installing the propellers.



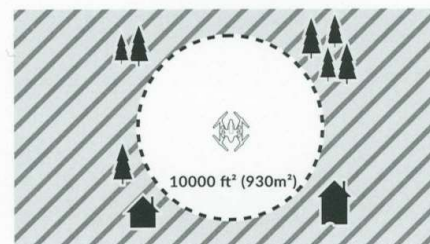
**CAUTION:** Do not over-tighten the propellers when using the tool.

### 4. INSTALLING THE BATTERY

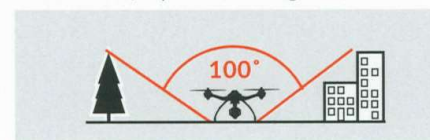


**NOTE:** If the door does not close, the battery is not inserted far enough to engage the connector properly.

### 5. PLACEMENT BEFORE TAKEOFF

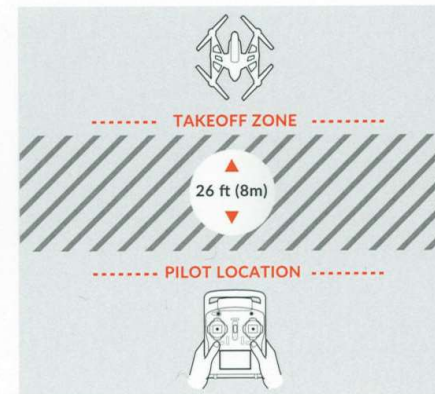


**WARNING:** Always operate TYPHOON in open areas (approximately 10000 square feet/930 square meters or more) that are free from people, vehicles, trees and other obstructions. Never fly near or above crowds, airports or buildings.



Never attempt to operate TYPHOON nearby tall buildings/obstructions that do not offer a clear view of the sky (a minimum clearance of 100°).

Be sure to place TYPHOON on a level and stable surface before powering ON the Controller and Aircraft.

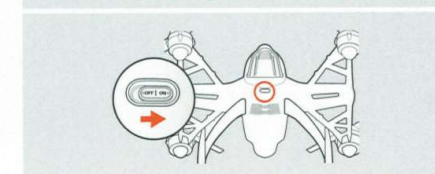



Step back approximately 26 feet (8 meters) behind TYPHOON.


### 6. POWERING ON/OFF

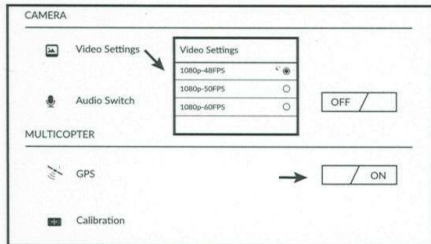
**NOTE:** ALWAYS turn the ST10+ on and allow it to boot up BEFORE turning TYPHOON on (and ALWAYS turn TYPHOON off BEFORE turning off the ST10+).

Place TYPHOON on a level and stable surface then slide the switch to the 'ON' position. DO NOT TOUCH OR MOVE TYPHOON UNTIL THE INITIALIZATION PROCESS IS COMPLETE. The main LED status indicator will glow solid green (Smart Mode) or solid purple (Angle/Pilot Mode) when initialization is complete (and TYPHOON GPS is locked).



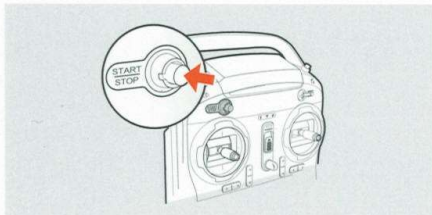
If indoor flight is needed, please turn off the GPS first. Press setting button  on ST10+ interface and switch off the GPS.

When the CGO2+ and ST10+, the multi-copter and ST10+ are bound, press , optional choices of video settings and Audio Switch will be shown above.



If calibration is needed before flight, Please press calibration button enables the user to enter Compass calibration or Accelerometer calibration. The detailed calibration operation can be referred to the User Manual on [www.yuneec.com](http://www.yuneec.com).

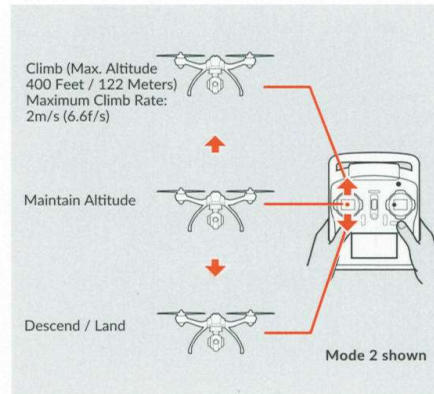
## 7. STARTING/STOPPING THE MOTORS



Step back approximately 26 feet (8 meters) behind TYPHOON. Press and hold the red START/STOP button for about 3 seconds to start, and about 2 seconds to stop the motors.

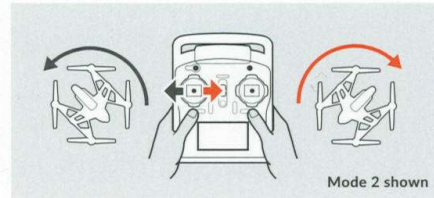
## 8. FLIGHT CONTROLS

To takeoff, slowly raise the left-hand stick to slightly above the center position. TYPHOON will takeoff and climb slowly (or raise the stick further until it does). Allow the stick to return to the center position when TYPHOON reaches the desired altitude.



## FLYING

Take your time learning how TYPHOON responds to various control inputs while flying. In Smart Mode TYPHOON will always move in the direction the right-hand control stick is pushed relative to the pilot and no matter which way the front/nose is pointed. In Angle (Pilot) Mode TYPHOON will move in the direction the control stick is pushed relative to the front/nose of the aircraft (and the 'angle' of movement is determined by how far you push the stick away from the center position). And please see the corresponding sections of this instruction manual for more information on Smart Mode and Angle (Pilot) Mode.



**IMPORTANT NOTE:** If at any time during flight you feel like TYPHOON is drifting out of/beyond your control, simply release both control sticks. TYPHOON will automatically self-level and will even hold its position (with a suitable GPS signal/lock) when both control sticks are centered. You can also activate Home Mode so TYPHOON automatically flies itself back to the home point and lands.

## LANDING

There are two ways to land TYPHOON:

1) Position TYPHOON above the area where you would like to land. Slowly lower the left-hand stick to below the center position. TYPHOON will descend slowly and land. After TYPHOON lands, press and hold the red START/STOP button until the motor stop.

2) Activate Home Mode and TYPHOON will automatically fly itself back to the home point and will land within a 10 foot (3 meter) diameter circle around it.

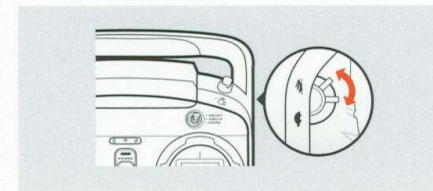
**WARNING:** Always land as soon as possible after the first level low voltage battery warning, or land immediately after the second level low voltage battery warning (as indicated by the vibrations and audible alerts from the ST10+, and by the Below Motor LED Status Indicators flashing rapidly). And if at any time the Aircraft Battery Voltage shown on the screen is below 10.7V, land TYPHOON immediately.

## AFTER LANDING

ALWAYS turn off TYPHOON BEFORE turning off the ST10+. Then remove the battery from TYPHOON and allow it to cool to ambient/room temperature before recharging.

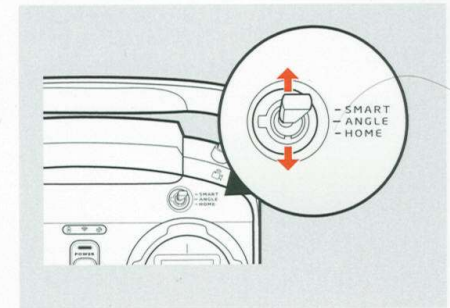
## 9. CONTROL RATE SLIDER

Set the overall climb/descend and directional control rates. Use the turtle position for the lowest control rates (best for first-time pilots and when flying between 5000 feet and 8000 feet Above Mean Sea Level). Use the rabbit position for the highest control rates (best for experienced pilots and only when flying below 5000 feet AMSL).



## 10. SELECTING A FLIGHT MODE

TYPHOON is programmed with three (3) flight modes that can be selected via the Flight Mode Selection Switch located just above the right-hand control stick.



1) When the flight mode switch is in the top position TYPHOON will be in Smart Mode.

2) When the flight mode switch is in the middle position TYPHOON will be in Angle (also known as Pilot) Mode.

3) When the flight mode switch is in the lowest position TYPHOON will be in Home Mode.

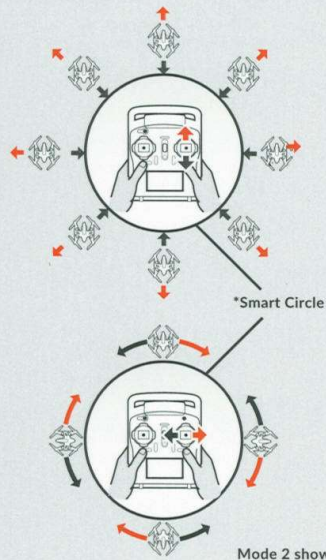
## 11. FLIGHT MODES

### SMART MODE

When the Flight Mode Selection Switch is the top position TYPHOON will be in Smart Mode. Although we recommend learning to fly TYPHOON in Angle (Pilot) Mode as soon as possible, Smart Mode is typically the best mode for first-time pilots to fly in and also features 'Follow Me'.



In Smart Mode TYPHOON will always move in the direction the right-hand control stick is pushed relative to the pilot and no matter which way the front/nose is pointed. So if you push the stick to the left TYPHOON will always move to the left, regardless of the direction the nose is pointing and even if it's spinning. This mode can also be helpful for pilots that lose orientation while flying in Angle (Pilot) Mode.

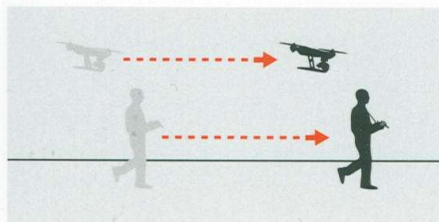
This illustration applies when the controller is pointed towards the aircraft



Additional Smart Mode Features:

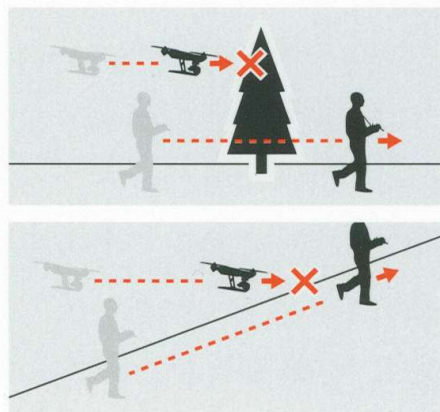
### FOLLOW ME FUNCTION

The Follow Me function allows the TYPHOON to follow the pilot, adjusting its location to the location of the ST10+. This function is enabled when ST10+ GPS positioning completes, and the TYPHOON is using shared GPS signal with the ST10+. At this time, you will see orange , and green follow in . When in Follow Me function, the TYPHOON will



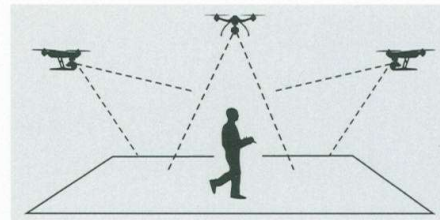
follow the movement of ST10+ if there is no extra operation on the ST10+. The flight status is also controllable when you operate ST10+ and CGO2+.

**IMPORTANT NOTE:** In Follow Me function, the aircraft will maintain a constant altitude and cannot detect obstacles. Pilots who change their altitude by for example, moving to higher ground, during flight should be mindful of this.




### WATCH ME FUNCTION

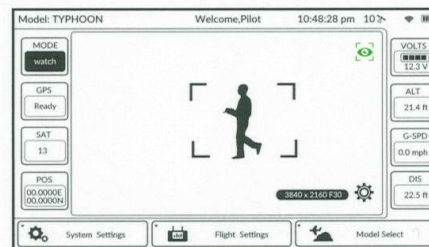
Watch Me function enables the camera to keep tracking the remote controller no matter where and how it moves as the camera can automatically tilt its angle according to the controller. Usually, the default function under Smart Mode is Follow Me. Watch Me function can be switched to by following steps:




In Watch Me function, the pilot will always be kept in the frame wherever he moves.



Watch Me/Follow Me Button: When in Smart Mode, press  to switch the TYPHOON between Watch Me and Follow me function. Follow Me function is the default setting, and the button is ORANGE. If it is GREY, it means ST10+ GPS isn't ready yet. Please wait.



Press , the button will change from ORANGE to GREEN. And now it is in Watch Me function.

**NOTE:** Once the TYPHOON is above 2m and out of Smart Circle during flying, the TYPHOON yaw direction will take the control itself. Camera lens will always point to you as long as Flight Mode Selection Switch is in Smart Mode. Please put the CGO2+ Pitch Angle/Position Control Slider in the middle position. If you want to trim camera angle up, then just move the Pitch Angle/Position Control Slider a bit up. If you want to trim camera angle down, just move the slider down.

### \*SMART CIRCLE

In most cases the Smart Circle will keep TYPHOON from coming within approximately 26 feet (8 meters) of you (as long as you position yourself at least 26 feet/8 meters behind TYPHOON).

### GEO-FENCE

The geo-fence is a virtual 'barrier' that will keep TYPHOON from traveling further than 300 feet (91 meters). Although this limit can be adjusted using the USB interface/programmer and software we strongly

recommend using the default limit at all times.

**WARNING:** Smart Mode only works when TYPHOON has a suitable GPS signal/lock. If you take off in Smart Mode and TYPHOON loses GPS signal/lock it will switch to Angle (Pilot) Mode automatically. This is why we strongly recommend learning to fly in Angle (Pilot) Mode as soon as possible. Otherwise, if you lose GPS signal/lock and are not able to properly control TYPHOON in Angle (Pilot) Mode the aircraft may crash or even 'fly away'.

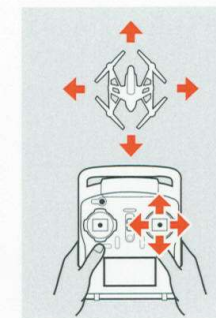
**IMPORTANT NOTE:** Crash damage and 'fly aways' are NOT covered under warranty.

**IMPORTANT NOTE:** When the ST10+ Personal Ground Station is connected to less than 6 satellites, the 'FOLLOW ME' feature will be disabled.

### ANGLE (PILOT) MODE

When the Flight Mode Selection Switch is the middle position TYPHOON will be in Angle (also known as Pilot) Mode.

Angle (Pilot) Mode is the mode preferred by experienced RC/drone pilots because TYPHOON will move in the direction the control stick is pushed relative to the front/nose of the aircraft. So if you push the right-hand stick to the left TYPHOON will bank toward the left side and move to the left. This means if the front/nose of TYPHOON is pointing away from you it will move to the left, but if the front/nose is pointing at you TYPHOON will move to the right.



Additional Angle (Pilot) Mode Feature:

### POSITION HOLD AND SELF-LEVELING

TYPHOON will automatically hold its position (with a suitable GPS signal/lock) and maintain a level attitude when the right-hand stick is centered.

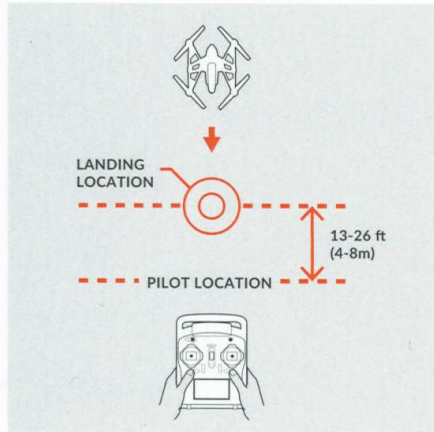
> Mode 2 shown

**WARNING:** If you do not properly control TYPHOON in Angle (Pilot) Mode the aircraft may crash or even 'fly away'.

**IMPORTANT NOTE:** Crash damage and 'fly aways' are NOT covered under warranty.

### HOME MODE

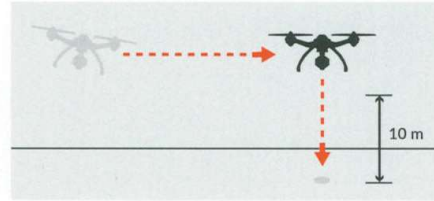
When the Flight Mode Selection Switch is in the bottom position TYPHOON will be in Home (also known as Return to Home) Mode.



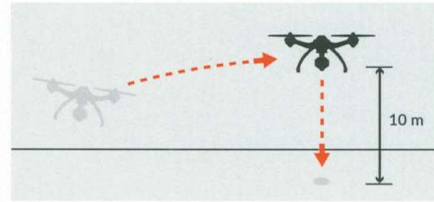
In Home Mode the GPS connectivity will fly back TYPHOON in a straight line in the direction of the pilots' current location, and automatically land within 13-26 ft (4-8m) of the pilot. This can be very helpful for first-time pilots who aren't quite ready to land TYPHOON themselves. It can also be helpful for pilots that lose orientation during flight; simply activate Home Mode until TYPHOON automatically moves toward the home position, and once you've confirmed orientation switch back to Angle (Pilot) Mode. And if TYPHOON ever loses the link with the ST10+ it will automatically enter Home Mode.

When Home Mode is activated TYPHOON will respond as follows:

A) When flying higher than 33 feet (10 meters) TYPHOON will maintain the current altitude, fly back to the home point, or active home point if the ST10+ has enough satellites for Follow Me, then descend vertically until it lands.



B) When flying lower than 33 feet (10 meters) TYPHOON will climb to 33 feet (10 meters) while flying back to the home point, or active home position, then will descend vertically until it lands.

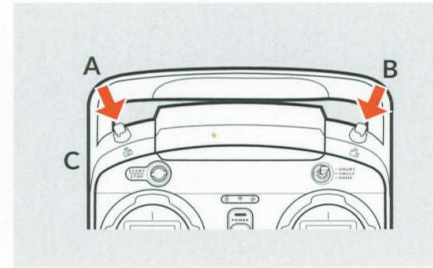


**CAUTION:** You must be certain there are no obstacles in the 'Return to Home' flight path otherwise TYPHOON may come into contact with them and crash. And while TYPHOON is in Home Mode you will have a limited amount of directional control. To help avoid obstacles we strongly recommend to switch to Smart or Angle Mode (then you can switch back to Home Mode).

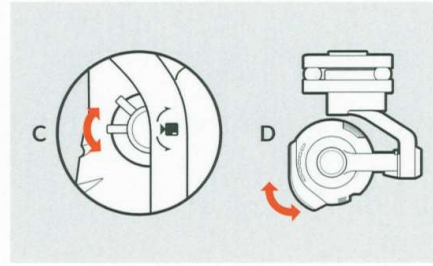
**WARNING:** Home Mode only works when TYPHOON has a suitable GPS signal/lock. If TYPHOON loses GPS signal/lock it will switch to Angle (Pilot) Mode automatically. This is why we strongly recommend learning to fly in Angle (Pilot) Mode as soon as possible. Otherwise, if you lose GPS signal/lock and are not able to properly control TYPHOON in Angle (Pilot) Mode the aircraft may crash or even 'fly away'.

**IMPORTANT NOTE:** Crash damage and 'fly aways' are NOT covered under warranty.

## 12. CAMERA CONTROLS



Take Still Photo = Button A  
Start/Stop Recording Video = Button B

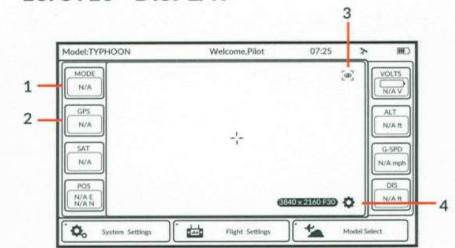


Use the slider (C) on the left side of the ST10+ to set the pitch/tilt position (D) of the CGO2+.

**CAUTION:** In ST10+, the default Camera Mode is CGO2+. You MUST stop recording video in order to take still photos. It will take 1-2 seconds to capture a still photo and before you can take another.

**CAUTION:** ALWAYS stop recording video before turning off TYPHOON/CGO2+ to avoid data loss. If you accidentally turn off TYPHOON/CGO2+ before you stop recording, re-insert microSDcard (if removed) and turn the system on again. Wait approximately 20 seconds until the camera LED starts to glow solid green indicating the last video file was recovered.

## 13. ST10+ DISPLAY



- 1) Flight Mode of Aircraft
- 2) GPS Status for Aircraft
- 3) Watch Me/Follow Me Button
- 4) In Flight Settings

**WARNING:** NEVER attempt to fly TYPHOON via First-Person View (FPV). Attempting to fly via FPV can result in a crash that will cause damage to the product, property and/or cause serious injury.

**IMPORTANT NOTE:** After flying, turn off TYPHOON BEFORE turning off the ST10+. Then remove the battery from TYPHOON and allow it to cool to ambient/room temperature before recharging.



Double tap the center of the screen to increase the size of the video viewing area.

Any information above might be changed due to the software update. For the latest documents, please check the official website.

THE FOLLOWING DOCUMENTS ARE AVAILABLE FOR DOWNLOAD AT

[WWW.YUNEEC.COM/SUPPORT](http://WWW.YUNEEC.COM/SUPPORT)

- The full TYPHOON Q500+ Manual
- Calibration Sheet
- LED Status Indication Sheet
- Graphic User Interface
- Firmware Updates
- Tutorial Videos

**YUNEEC**  
ELECTRIC AVIATION