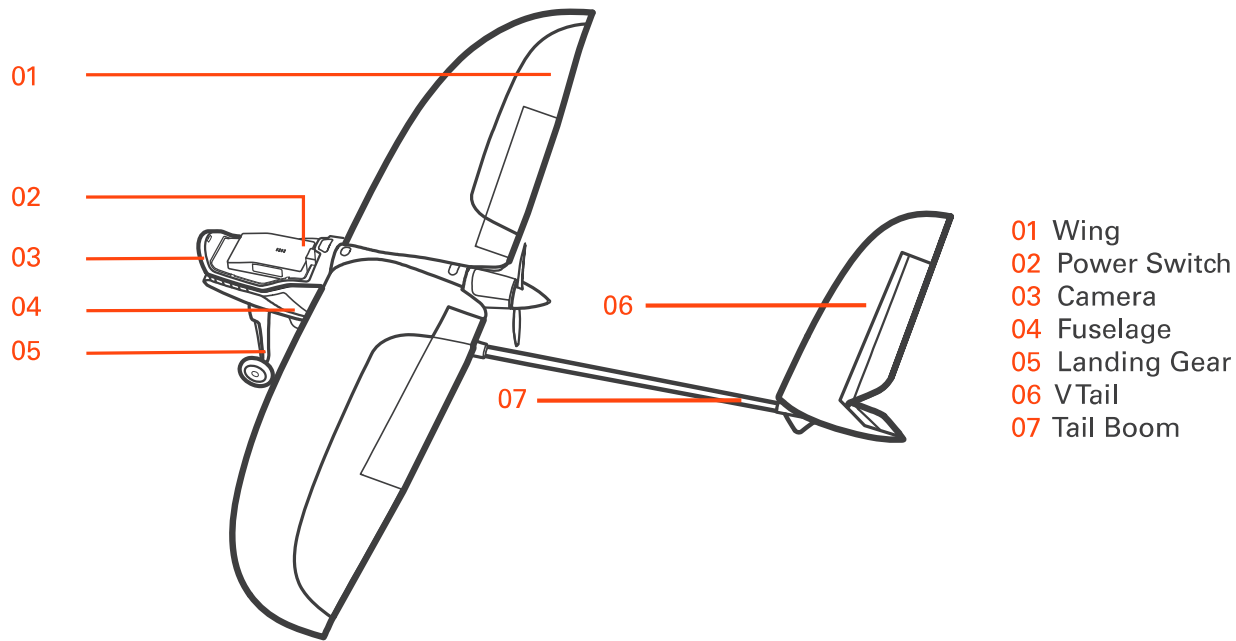


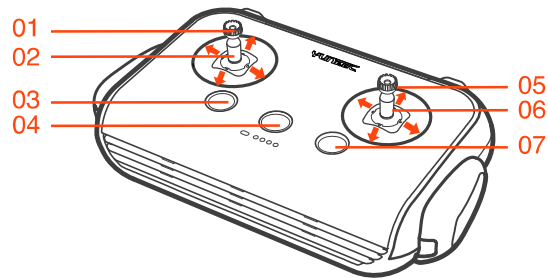
**FIREBIRD**  
**FPV**

QUICK START GUIDE V1.0

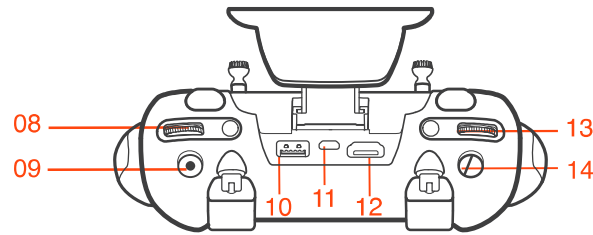
# INTRODUCTION AND OVERVIEW



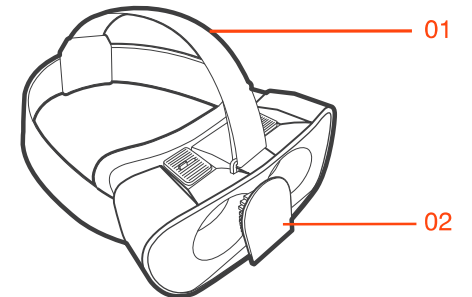
- 01 Wing
- 02 Power Switch
- 03 Camera
- 04 Fuselage
- 05 Landing Gear
- 06 VTail
- 07 Tail Boom



- 01 Throttle Control
- 02 Rudder/Yaw Control
- 03 B1: Auto Landing
- 04 B2: Power Switch
- 05 Elevator/Pitch Control
- 06 Aileron/Roll Control
- 07 B3: Return Home and Loiter Button



- 08 K1: Menu Option Slider
- 09 S2: Video Recording Button
- 10 Standard USB Port
- 11 Mini USB Port
- 12 HDMI Port
- 13 K2 Camera Control Slider
- 14 S1: Photo Button



- 01 Head Band
- 02 Buckle for Smartphone

## BEFORE FLIGHT

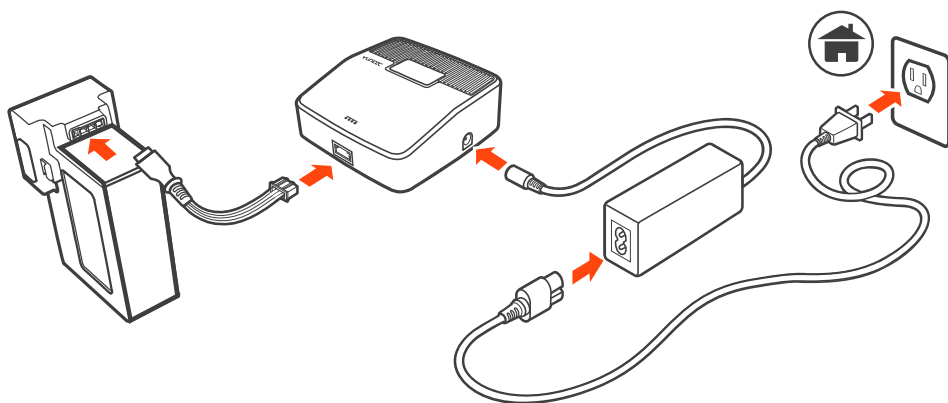
Find a safe and open outdoor area to fly. That area should be clear of objects and people for approximately 500 feet (150m) in all directions.

Download and install Yuneec Exp APP on your smart device.

Recommend that first flights are done without wearing the goggles. After getting used to the flight characteristics of the Firebird, install smart device in the goggles and try the full FPV experience.  
successful connection.

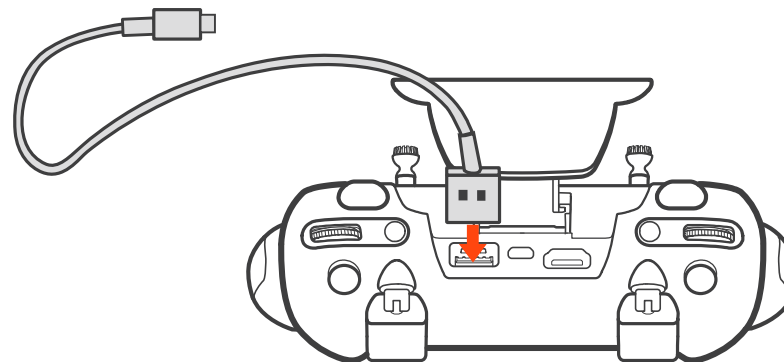
## CHARGING THE FLIGHT BATTERY AND ST10C

a. Charge flight battery using supplied charger.

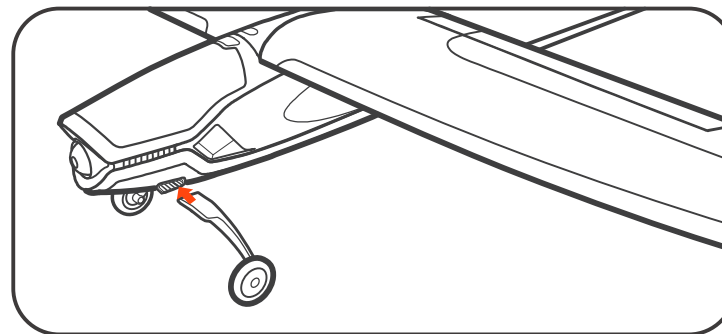


## ASSEMBLING THE FIREBIRD

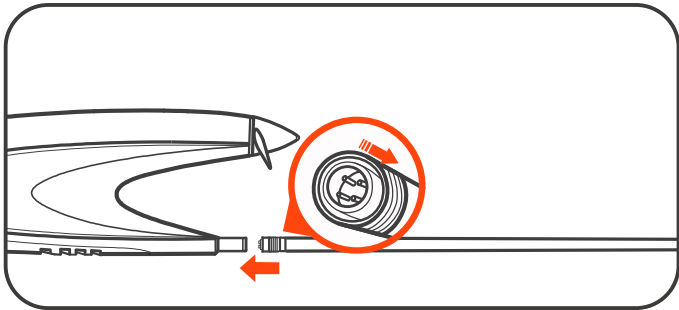
a. Insert landing gear.



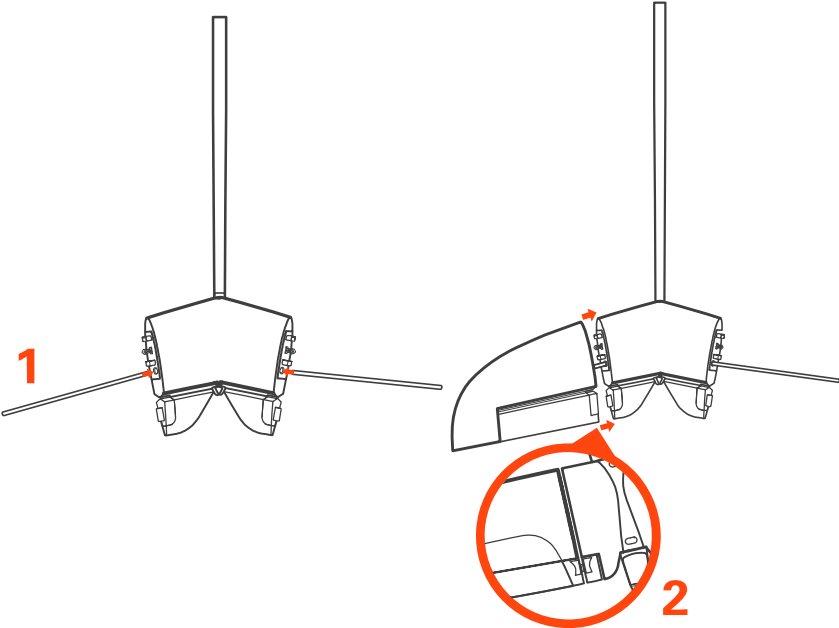
b. Charge ST10C using Mini USB.



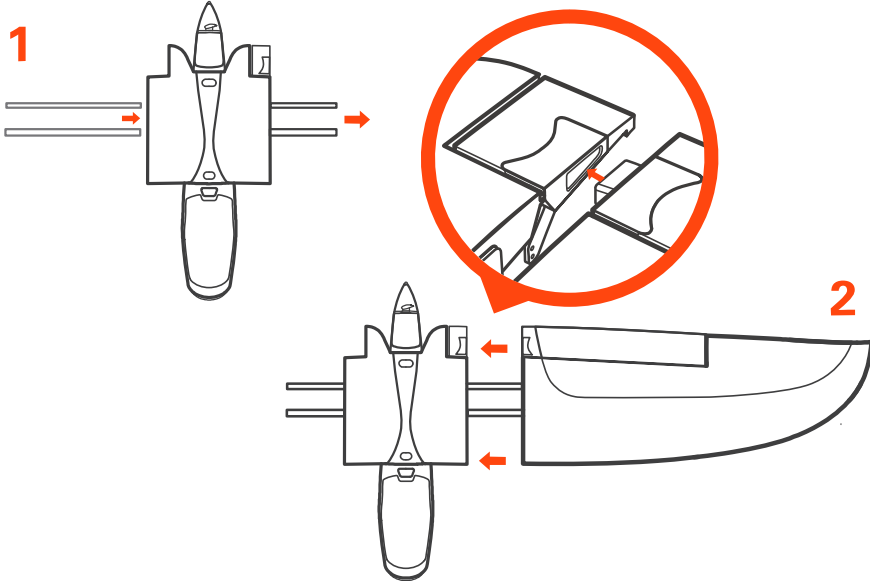
**b.** Install tail



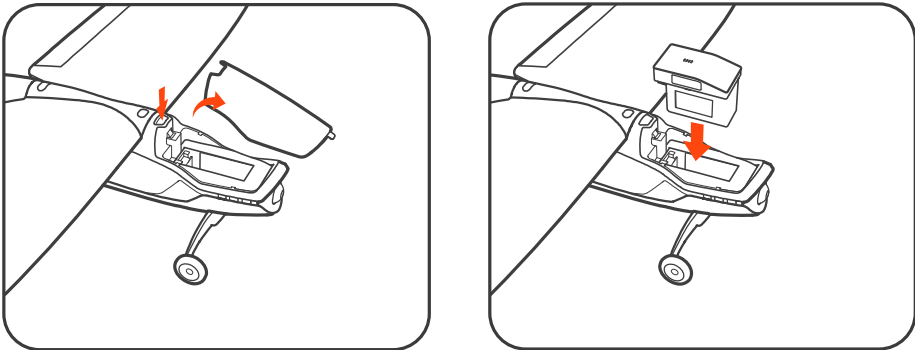
**c.** Install carbon tubes on tail and install outer tail panels.



**d.** Install carbon tubes on tail and install outer tail panels.

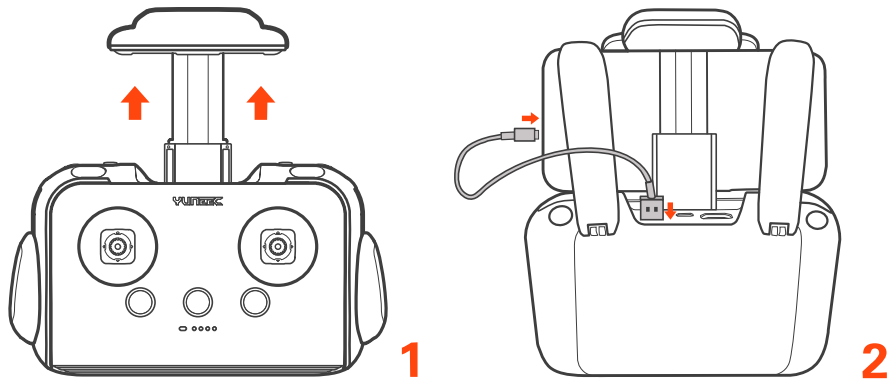


**e.** Install carbon tubes on tail and install outer tail panels.



## INSTALLING THE SMART DEVICE

- a. Pull out the smart phone holder from the ST10C.
- b. Put your smart phone on the holder.
- c. Plug one end of the connecting cable to the standard USB port in the ST10C, and the other end to the data port of your smart phone.



## TURNING ON THE FIREBIRD

### Power ON / OFF

- a. Place Firebird on a level and stable surface then long press the power switch on the ST10C until it boots up.
- b. Remove the battery compartment, press and hold the power switch on the battery and then close the battery compartment.

## NOTICE

To power off Firebird, short press the power switch until motor vibrates, then press and hold the power switch for 3 seconds.

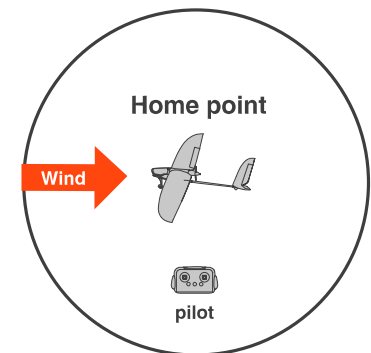
## GPS Lock

- a. After being powered on the Firebird will automatically seek satellite lock, both elevators will move back and forth.
- b. Wait several seconds up to a minute for Firebird to gain satellite lock. When it is ready the elevators will stop moving and the ST10C will have control of the Firebird, except the throttle joystick. The elevators will center when GPS lock is established.

## Set Home Point and Landing Direction

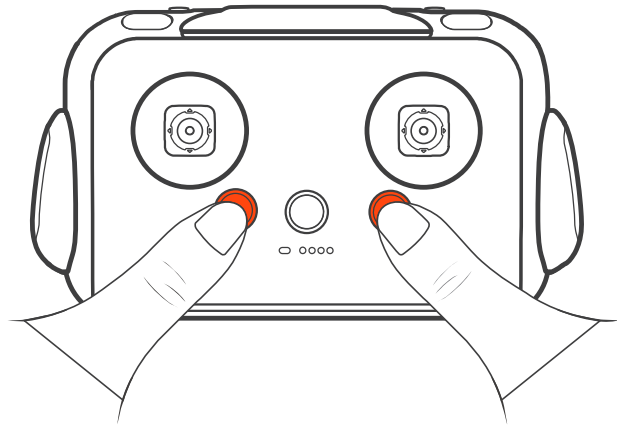
- a. Set the Firebird on the ground, upright on its wheels at the point that the Firebird will use as home for this flight and pointing in the same direction that the Firebird will land, which is always into the wind.

- b. It will target this point when Auto landing and it will circle this point when in Loiter and land in the same direction it is pointing now.



1640ft(500m) flying circle

**C.** Simultaneously press the Home and Auto Land buttons on the ST10C and hold for 4 seconds, until the control surfaces on the Firebird move back and forth indicating the home point and direction have been set.



## FLYING

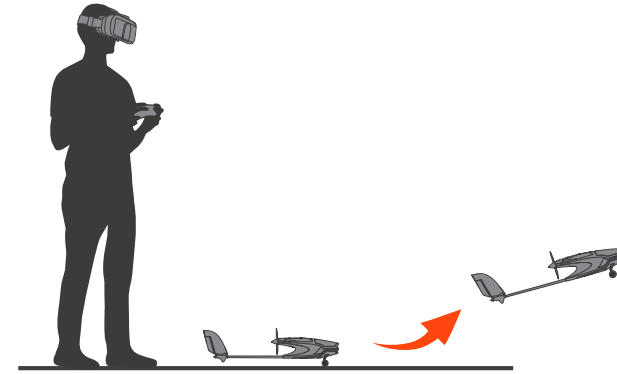
### NOTICE

Before flying, the Firebird must acquire GPS lock and Home point and Landing Direction must be set. Always fly in Safety Mode unless you are an experienced pilot.

### Takeoff

#### Ground Launch

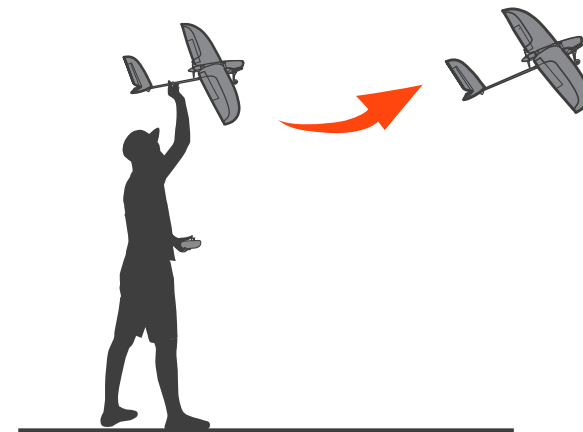
Place the Firebird in a large, open area with the Firebird's nose facing into to the wind. Slowly move the throttle stick to FULL (100%).



### Hand Launch

**a.** Hold the Firebird in your dominant hand and the ST10C in your other hand, Carefully increase the throttle control of the ST10C to FULL (100%).

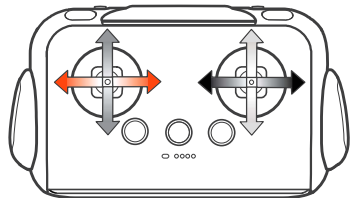
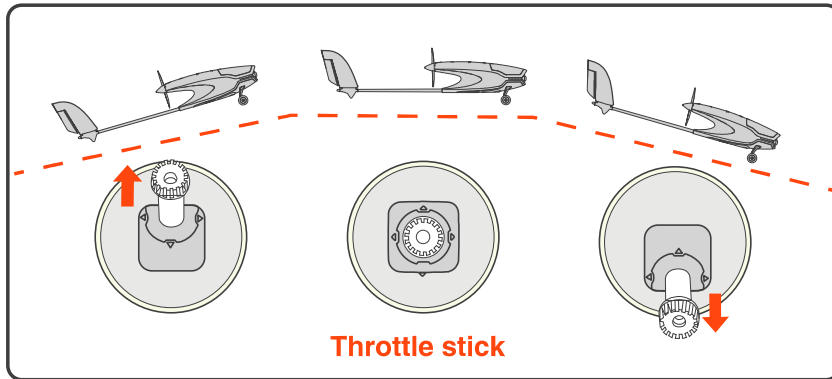
**b.** Throw the Firebird slightly nose up and directly into the wind FULL (100%).



**NOTICE:**

Safety Floor will prevent the Firebird from descending below the minimum altitude so it can be safely flown without concern of flying into the ground.

The Firebird will climb at 100% throttle, fly level at ½ throttle and gently descend at low throttle.



- Throttle Control**  
Push the left joystick forward to increase the speed of the Firebird, pull back to decrease the speed of the Firebird.
- Rudder Control**  
Push the left joystick to left and right, to control the left and right steering of the Firebird only in Acro Mode. In Safety and Stability modes the rudder is automatically applied when applying aileron control.
- Elevator Control**  
Pull the right joystick back to control the pitch up of the Firebird, push forward to control the pitch down of the Firebird.
- Aileron Control**  
Push the right joystick to left and right, to control rolling and turning left and right.

If you lose control, simply release the stick and the Firebird will level itself when in Safety or Stability Mode.

**Flight Mode**

Explore the flight characteristics of your Firebird. Make small, gentle control stick movements to learn how your Firebird responds.

**Safety Mode & Stability Mode**

Safety mode and Stability mode allow you to fly your Firebird manually, but self-level the roll and pitch axis.

**Acro Mode**

Acro Mode is a mode that provides rate based stabilization with attitude lock for advanced pilots.

**FPV Mode**

The FPV Goggles will synchronize with the movement of the Firebird to provide a first-person perspective flying experience.

**Loiter Mode**

The Firebird will automatically return to a point near takeoff area and circle at a safe altitude.

**Geo Fence**

Geo Fence will keep the Firebird within sight and prevent it from flying outside the 1640ft (500m) boundary.

## NOTICE

The Firebird has a maximum altitude limit of 400ft (122m), and will not climb above this altitude in all modes. To disable altitude limit see APP.

## LANDING

### Ground Launch

- a. Decrease the throttle and bring the Firebird's nose to the wind.
- b. Let it glide downward toward the take-off point until it lands safely.

## NOTICE

It is recommended for the experienced pilot.

### Auto Landing

Press and hold the landing button for about 3 seconds. The Firebird will enter Autoland and land itself.

## NOTICE

Control interrupts can alter the course to avoid obstacles by moving the aileron or elevator stick. The Firebird will respond to these commands and then return to Auto landing when sticks are released.

## AFTER FLIGHT

Turn off and remove flight battery from the Firebird.  
Power off the ST10C.  
Inspect Firebird for damage.  
Make notes from flight experience and plan for future flights.

## LED STATUS INDICATIONS

### START-UP

Binding mode	flash orange (5 times per second)
Binding fails	flash white (1 time per second)
In a No-Fly Zone	flash red and white alternately per second

### BEFORE & DURING FLIGHT

In Safety Mode	flash green once per second
In Stability Mode	flash blue and green alternately per second
In Acro Mode	flash blue once per second
In Loiter Mode	flash green rapidly 3 times and green once slowly per second
In Auto Landing	flash green rapidly 3 times and green once slowly per second

### LOW VOLTAGE BATTERY WARNING

First Level Low Voltage Warning	flash red once per second
Second Level Low Voltage Warning	flash red twice per second



## LED Status Indications & Flight Control Surfaces Movement

GPS lock failed	V tail control surface swings slowly	Flash purple once per second
GPS lock but Home point not set	Throttle pause when throttle joystick is advanced	Purple and green flash alternately per second
GPS and Home point locked. Ready to fly	Elevators pitch up and down/wag quickly for 3 times	Current flight mode:  Safety Mode -- flash green once per second Stability Mode -- flash blue and green alternately per second Acro Mode -- flash blue once per second
Compass calibration mode entered	Ailerons roll up and down	Flash red and green alternately per second

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**DISCLAIMER AND SAFETY PRECAUTIONS**

caused by hazardous use without sufficient practical experience. Damage and/or injury as well as violation of legal regulations caused by flying in legally defined no-fly zones. Further losses which do not fall within the scope of use defined by Yuneec Electric Aviation as improper. This product is designed for both professional use and personal, private use. The national and international laws and regulations in force as the time of taking off must be adhered to.

## **COLLECTION AND PROCESSING OF DATA**

Yuneec may collect navigation information such as GPS data to help improve our products. We may also collect Depth Map information and Infrared Image information from your drone delivered to our service center for repair and maintenance service or any other service. We may also collect other information such as device information, server log information, etc. We may also collect personal information used in registration if you choose to become a registered user and any other information user provided to Yuneec. We may also collect information which user send to other users, and the recipients and senders of such information. legal rights of ourselves or any others. We reserve the right to disclose your information if required to do so by law or in the good-faith belief that such disclosure is needed to comply with applicable laws, for example in response to a court order, judicial subpoena, warrant or request from government, or otherwise cooperating with government agencies or law enforcement. We also reserve the right to disclose your information that we believe in good faith is necessary or appropriate to: (i) protect ourselves or others from fraudulent, unlawful, or abusive activities; (ii) take precautions against potential liability;

(iii) protect the security of the Yuneec Apps embedded into or downloaded onto your drone or any associated equipment and services; (iv) protect the legal rights of ourselves or any others. Any information we collected maybe disclosed or transferred to an acquirer, successor or assignee as part of any potential merger, acquisition, debt financing or other activities that involves transfer of business assets. We may make the aggregated non-personal information of the users available to third parties for various purposes, including (i) complying with various report obligations; (ii) marketing efforts; (iii) analyzing product safety; (iv) understanding and analyzing our users' interests, habits, usage pattern for certain functionalities, services, content, etc.

## **BATTERY WARNINGS AND USAGE GUIDELINES**

### **WARNING**

Lithium Polymer (LiPo) batteries are significantly more volatile than alkaline, NiCd or NiMH batteries. All instructions and warnings must be followed exactly to prevent property damage and/or serious injury as the mishandling of LiPo batteries can result in fire. By handling, charging or using the included LiPo battery you assume all risks associated with LiPo batteries. If you do not agree with these conditions please return the complete product in new, unused condition to the place of purchase immediately. You must always charge the LiPo battery in a safe, well-ventilated area away from flammable materials. Never charge the LiPo battery unattended at any time. When charging the battery you must always remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur. After flying/discharging the LiPo battery you must allow it to cool to ambient/room temperature before recharging. To charge the LiPo battery you must use only the included charger

or a suitably compatible LiPo battery charger. Failure to do so may result in a fire causing property damage and/or serious injury.

If at any time the LiPo battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.

Do not over-discharge the LiPo battery. Discharging the battery too low can cause damage to the battery resulting in reduced power, flight duration or failure of the battery entirely. LiPo cells should not be discharged to below 3.0V each under load.

Store the LiPo battery at room temperature and in a dry area for best results.

When charging, transporting or temporarily storing the LiPo battery the temperature range should be from approximately 40–120° F (5–49° C). Do not store the battery or aircraft in a hot garage, car or direct sunlight. If stored in a hot garage or car the battery can be damaged or even catch fire.

Never leave batteries, chargers and power supplies unattended during use.

Never attempt to charge low voltage, ballooned/swollen, damaged or wet batteries.

Never allow children under 14 years of age to charge batteries.

Never charge a battery if any of the wire leads have been damaged or shorted.

Never attempt to disassemble the battery, charger or power supply.

Never drop batteries, chargers or power supplies.

Always inspect the battery, charger and power supply before charging.

Always ensure correct polarity before connecting batteries, chargers and power supplies.

Always disconnect the battery after charging.

Always terminate all processes if the battery, charger or power supply malfunctions.

## GENERAL SAFETY PRECAUTIONS AND WARNINGS

### WARNING

Failure to use this product in the intended manner as described in the quick start guide and instruction manual can result in damage to the product, property and/or cause serious injury. A Radio Controlled (RC) multirotor aircraft, APV platform, drone, etc. is not a toy! If misused it can cause serious bodily harm and damage to property.

### WARNING

As the user of this product you are solely and wholly responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others. Keep your hands, face and other parts of your body away from the spinning propellers/rotor blades and other moving parts at all times. Keep items that could impact or become entangled away from the propellers/rotor blades including debris, parts, tools, loose clothing, etc.

Always operate your aircraft in open areas that are free from people, vehicles and other obstructions.

Never fly near or above crowds, airports or buildings.

To ensure proper operation and safe flight performance never attempt to operate your aircraft nearby buildings or other obstructions that do not offer a clear view of the sky and can restrict GPS reception.

Do not attempt to operate your aircraft in areas with potential magnetic and/or radio interference including areas nearby broadcast towers, power transmission stations, high voltage power lines, etc.

Always keep a safe distance in all directions around your aircraft to avoid collisions and/or injury. This aircraft is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.

To ensure proper and safe operation of the automatic landing function in Return Home Mode you must start the motors with the aircraft in a open space and achieve a proper GPS lock.

Do not attempt to operate your aircraft with any worn and/or damaged components, parts, etc. including, but not limited to, damaged propellers/rotor blades, old batteries, etc.

Never operate your aircraft in poor or severe weather conditions including heavy winds, precipitation, lightning, etc.

Always begin to operate your aircraft with a fully charged battery. 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.

Always operate your aircraft when the voltage of the battery in the transmitter/personal ground station is in a safe range (as indicated by the LED status indicator light of the transmitter/personal ground station).

Always keep the aircraft in clear line of sight and under control, and keep the transmitter/personal ground station powered on while the aircraft is powered on.

Always move the throttle control stick down fully and turn off the power in the event the propellers/rotor blades come into contact with any objects.

Always allow components and parts to cool after use before touching them and flying again.

Always remove batteries after use and store/transport them per the corresponding guidelines.

Avoid water exposure to all electronic components, parts, etc. not specifically designed and protected for use in water. Moisture causes damage to electronic components and parts.

Never place any portion of the aircraft or any related accessories, components or parts in your mouth as doing so could cause serious injury or even death.

Always keep chemicals, small parts and electronic components out of the reach of children.

Carefully follow the instructions and warnings included with this aircraft and any related accessories, components or parts (including,

but not limited to, chargers, rechargeable batteries, etc.).

## **GIMBAL CAMERA WARNINGS AND USAGE GUIDELINES**

### **NOTICE**

For the latest product information, please check our official website: [www.yuneec.com](http://www.yuneec.com).

### **WARNING**

Do not expose the lens of the gimbal camera to extreme light sources.

Do not operate the gimbal camera in the rain or in environments with high humidity.

Do not try to repair the gimbal camera. Repairs must go to an authorized service center.

### **WARNING**

Read the entire instruction manual to become familiar with the features of the product before operating.

Do not use with incompatible components or alter this product in any way outside of the instructions provided by Yuneec.

Failure to use this product in the intended manner as described in instruction manual can result in damage to the product, property and/or cause serious injury.

## **FCC STATEMENT**

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in

accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

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.

## NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Any changes or modifications not expressly approved by user's authority to operate this equipment.

## RF EXPOSURE WARNING

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

## IC RADIATION EXPOSURE STATEMENT FOR CANADA

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limit set forth for an uncontrolled environment.

Cet équipement respecte les limites d'exposition aux rayonnements IC déniées pour un environnement non contrôlé.

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.  
Installation et mise en œuvre de ce matériel devrait avec une distance minimale entre 20 cm et ton corps.

## **NCC WARNING STATEMENT**

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

## **CE WARNING STATEMENT**

This device meets the EU requirements on the limitation of the general public to electromagnetic fields by way of health protection.

EU Operation Frequency (The Maximum Transmitted Power)

ST10C:

2.4G: 2405-2475MHz (20dBm)

5G Wifi: 5560-5580MHz (27dBm), 5680-5700MHz (27dBm)

Firebird:

2.4G: 2405-2475MHz (20dBm)

## **EU COMPLIANCE STATEMENT**

Hereby, Yuneec International (China) Co., Ltd. declares that this device is in compliance with the essential requirements and other relevant provisions of the RED Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address: <http://yuneec/de-downloads>

Please visit the address above and enter into corresponding product page.



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## DISCLAIMER

Yuneec Electric Aviation cannot be held liable for any damage, injury or for use of the product in violation with legal regulations, especially in the following circumstances: Damage and/or injury as well violation of legal regulations resulting from a failure to comply with the operating instructions or the instructions at [www.yuneec.com](http://www.yuneec.com), product information, user manual and other legally binding information.

Damage and/or injury as well violation of legal regulations brought about by the influence of alcohol, drugs, medication or other narcotics which may impact on the concentration of the user.

The same applies to illnesses effecting the concentration of the user (dizziness, tiredness, nausea etc.) or other factors compromising mental and physical capabilities.

Intentionally caused damage, injury or violation of legal regulations. Any request for compensation caused by an accident resulting from use of the product.

Damage and/or injury as well as violation of legal regulations caused by use of the product in a no-fly zone, e.g. next to an airfield, above a motorway or a natural conservation area.

Malfunction of the product caused by retrofitting or replacement with components which did not come from Yuneec Electric Aviation.

Damage and/or injury caused by the use of replica parts (non-original parts).

Damage and/or injury as well as violation of legal regulations caused by incorrect operation or misjudgment.

Damage and/or injury caused by damaged spare parts or not using original Yuneec Electric Aviation spare parts.

Damage and/or injury as well as violation of legal regulations caused by ignoring the low voltage battery warning.

Damage and/or injury caused by knowingly and negligibly flying with a damaged model or one which is unfit to fly, e.g. due to dirt, water penetration, coarse particles, oil or a model which has not been correctly or completely assembled or if the main components exhibit visible damage, defects or missing parts.

Damage and/or injury as well as violation of legal regulations caused by ignoring the low voltage battery warning.

Damage and/or injury caused by knowingly and negligibly flying with a damaged model or one which is unfit to fly, e.g. due to dirt, water penetration, coarse particles, oil or a model which has not been correctly or completely assembled or if the main components exhibit visible damage, defects or missing parts.

Damage and/or injury as well as violation of legal regulations caused by operating the model in a magnetic field (e.g. high voltage lines, electricity/ transformer stations, radio towers, mobile phone masts etc.), a strong wireless signal environment, no-fly zones, poor visibility and in the event of vision impairments or other impacts on the pilot which are left unchecked etc.

Damage and/or injury brought about through a violation of the legal regulations for operating the model, in unsuitable weather conditions, e.g. rain, wind, snow, hail, storms, hurricanes etc.

Damage and/or injury as well as violation of legal regulations caused by force majeure, e.g. collision, fire, explosion, flooding, tsunami, landslide, avalanche, earthquake or other forces of nature.

Damage and/or injury as well as violation of legal regulations caused by the illegal or immoral use of the model, e.g. capturing videos or recording data which infringes upon/harms the privacy of other people.

Damage and/or injury as well as violation of legal regulations caused by incorrect use of the batteries, protection systems, chargers or aircraft.

Consequential damage caused by the incorrect operation of any kind of system components and accessory parts, especially memory cards, whereby image or video material from the camera can become defect.

Any non-compliance with legal obligations, personal injury, material damage and environmental damage caused by use and a failure to comply with the local laws and regulations.

Damage and / or injury as well as violation of legal regulations