



## PRECAUTIONS

#### Age Recommendation

 The SHIFT drone is not recommended for children below 14 years of age. Children below 14 years of age must be accompanied and supervised by an adult guardian when flying the drone.

#### **Compliance with Relevant Laws**

- When flying unmanned aerial vehicles (UAVs), you must observe the rules and regulations of the authorities having jurisdiction over the relevant airspace.
- The operation of drones is prohibited near airports and areas where manned aerial vehicles are flying at low altitudes. Borders and other areas where the operation of drones may result in security issues are classified as restricted. Please observe all guidelines concerning altitude limit, flight prohibition, and restricted zones.

### Pre-flight Inspection

- Make sure that the drone and controller batteries are fully charged. The charging status of the drone and controller can be checked using the SHIFT Drone application.
- Inspect the propellers. All propellers should be firmly fixed. Worn, cracked, bent or damaged propellers must be replaced.
- Make sure that the intelligent vision (camera) on the front side of the drone, and the lenses and sensors of the bottom sensor system are clean and free of stains.
- Pay special attention to the battery level of the drone and controller, and take the necessary safety measures when the drone, controller, or mobile application gives a warning. Read the "Emergency Measures" section.
- Check that the intended flight path is free of obstacles such as people, animals, trees, and buildings (This product lacks functions such as return-to-home, and collision avoidance or speed control based on obstacle detection).
- · Do not fly the drone in areas under the influence of strong magnetic fields or magnets.
- The recommended flight conditions are mild weather conditions with a temperature between 0°C-40°C (32°F-104°F). Be wary of sudden changes in wind direction or weather. Do not use the aircraft in adverse weather conditions such as rain, snow, fog, and wind.

### **Precautions During Flight**

- Only use the genuine SHIFT RED propellers. Do not use together with propellers of other brands.
- Do not attempt to grab or touch propellers that are in operation. Doing so may result in serious injury.
- · Keep a safe distance away from the drone.
- The distance between the drone and user should be no more than 300 m (984 ft), and the drone should be controlled within visible range.
- The drone may not work properly when flying over highly reflective surfaces such as water- or snow-covered areas, or when flying in dark.
- Exercise caution right after flight as the motor and aircraft are heated up from operation.

- Using the controller in the proximity (within 30 cm [1.0 ft]) of other rings, metallic objects or magnetic materials, near electronic devices that employ wireless communication or run on motors, inside a steel-framed building, or within the influence of a utility pole or a wireless station may affect the detection range of the controller and controllability of the drone.
- In particular, a high density of Wi-Fi APs may disturb communications between the drone and application. Before using the application, check your Wi-Fi environment.
- When the drone is flying over a dark (below 300 lux) or extremely bright (over 100,000 lux) surface, or toward a bright light source, its flight performance may be affected. Check the surrounding brightness before operating the drone.

#### Precautions on Managing Drone and Controller Batteries

- · Always use genuine SHIFT LiPo batteries.
- · Inspect batteries before charging or use.
- If a battery has been shocked, or if you notice abnormal smell, heat, discoloration, deformation, or signs of leakage from it, never charge or use the defective battery.
- · Do not modify or disassemble the battery wiring.
- Do not touch battery terminals with a pointed tool such as tweezers or a needle. This may
  damage the battery and potentially cause a fire.
- The ideal temperature range for battery charging is 5°C-45 °C (41°F-113°F). Make sure that the battery temperature does not exceed 60°C (140°F). An overheated battery may cause serious damage or catch fire. Do not charge a battery near a heating apparatus or flammable material, inside a vehicle, and any other area exceeding 50°C (122°F).
- · Do not expose the batteries to moisture or direct sunlight.
- · Keep batteries out of reach of children.
- · Inserting the drone battery in the wrong direction may damage both the battery and drone.
- Exercise caution when handling the battery immediately after flight as it is heated up from operation.

#### Unauthorized Disassembly Prohibited

 Unauthorized disassembly, replacement of parts, and reassembly of the SHIFT drone and controller are strictly prohibited, except for the removal, installation, or replacement of propellers, protectors, or batteries. this is engineering Inc. shall not be included in any legal action or held liable for direct or indirect damage resulting from the aforementioned unauthorized changes to the drone or controller by the user. Where an unauthorized change has been made, the product shall not be covered by the warranty policy. Repairs may be denied or performed for a fee.

### Legal Responsibility for Footage

- Unauthorized recording or distribution of footage containing other persons falls under privacy infringement, and violators must assume legal responsibility. Prior permission must be obtained if using the SHIFT drone to take photos or videos of other persons, and saving or distributing such content.
- Unauthorized recording or distribution of footage containing private property falls under trespassing, and violators must assume legal responsibility. Always obtain permission in advance.

## HANDLING THE AIRCRAFT

### Powering On / Off

1. Press and hold the power button for two seconds and the aircraft will power on/off.



## **Charging Drone**

Connect the aircraft to a USB port using the provided USB cable to begin charging.

A certified USB adapter rated at 5 V and 1.5 A is recommended for charging. Connecting to a PC may cause delayed or unsuccessful charging.

# HANDLING THE CONTROLLER

With every change in the place of flight, users are recommended to turn the controller off and on again so that control sensitivity may be automatically recalibrated.

### Powering On / Off

- 1. Before turning on, place the controller ring at least 30 cm (1.0 ft) away from the controller stick.
- 2. Press and hold the power button for at least two seconds to turn on the controller.



- If automatic calibration is unsuccessful due to environmental factors, the controller gives a warning beep and powers off automatically.
- If the controller does not turn off properly, press the reset button on the bottom with a pin of appropriate thickness. Hold the pin vertically not to damage to the controller.

### Paring with Aircraft

When the aircraft and controller are ready for flight, they are automatically paired and the controller's LED indicator turns solid white.

If the LED indicator does not turn solid, the controller and aircraft have not been paired successfully. Turn off the aircraft and controller, and turn on again.

## **Charging Controller**

Connect the controller's USB port to a USB charger using the provided USB cable to begin charging.

A certified USB adapter rated at 5 V and 1.5 A is recommended for charging. Connecting to a PC may cause delayed or unsuccessful charging.

## CONTROLLING THE DRONE

### Taking Off

- 1. Place the drone level, horizontal to the ground and headed in the direction you are headed, and pair it with the controller.
- 2. Wear the control ring on your thumb, and wrap your hand gently around the control stick. For details on wearing the control ring and using the control stick, read "Flight control."
- Touch the center of the control pad with the ring for over one second, and the drone will take off while playing a takeoff melody. After takeoff, lift the ring off the pad.
- 4. When the drone succeeds in automatic takeoff, the front LED and power button LED on the drone blink once, and the drone stands by while hovering at a height of 1 m (3.3 ft).



#### Landing

- 1. While the drone is hovering, touch the center of the pad with the ring for over one second to initiate automatic landing. During landing, you cannot control the drone by moving the ring.
- 2. Once the drone comes to a complete stop, the controller vibrates and the motors stop automatically.



## Flight Control

 As shown in the figure, wear the ring on your left or right thumb with the thicker part facing downward. Wrap your other fingers around the control stick, and place your index finger on the jog button.



While the drone is hovering, press and hold the jog button to switch to flight mode. Ring control is enabled after the controller vibrates once.



When switching to flight mode using the jog button, the center of the ring on your thumb should be within 1 cm (0.04 in) around and above the center of the controller pad. If the ring is out of the range, the controller gives off a warning and fails in switching to flight mode.

- The drone flies proportionately to the height and direction of the ring. Move your ring-wearing thumb in the desired direction of flight, and the drone will fly in the same direction.
  - Your thumb with the ring should be at an adequate height above the controller pad to allow better control over the flight altitude.
  - The degree of acceleration or deceleration can be set proportionately to the distance moved by the ring.



4. When turning the head of the aircraft to the desired direction, turn the jog button accordingly.



- 5. If you press the jog button during flight, the controller vibrates once and the drone switches to hovering.
- 6. If the ring is out of the sensing range of the controller, the controller vibrates once and the drone automatically switches to hovering. The controller vibrates only in free flight mode, vibration intensity may vary with preference settings of the controller.



You can switch between free flight mode (default) and assist mode by holding the jog button during flight for over one second until the controller vibrates.

#### **Emergency Measures**

- Manual emergency stop
- The drone motors stop immediately when you press the jog button and power button on the controller at the same time.
  - Exercise caution as a manual stop in midflight may cause damage to the aircraft or personal injuries.



- Self-stopping of the drone
- In case of a sudden change in surroundings such as a temperature drop or battery shortage, you
  will be notified of an emergency both from the aircraft front LED and power button blinking twice
  repeatedly and from the controller vibrating and sounding.
- Then, you should perform a safe landing within 30 seconds. About one minute later, the drone
  enters self-stopping mode in which the drone keeps hovering and uncontrollable before it lands
  automatically in five seconds.
- Self-stopping of the controller
- In case of a sudden change in surroundings such as a temperature drop or battery shortage, you
  will be notified of an emergency from the controller vibrating and sounding.

Then, you should perform a safe landing within 30 seconds before the controller is powered off and the aircraft lands automatically.

The controller may be charged during use with a portable battery.

- Self-stopping due to weak signals
- In case of weak signals between the controller and drone due to interference, the controller gives
  off a warning sound and vibrates (1 time/2 seconds). Then, you should immediately perform a
  safe landing.
- When the signaling is completely lost, the controller vibrates (3 times/second) to declare an
  emergency and the drone switches to hovering before landing in five seconds.

# USING THE MOBILE APPLICATION

You can use the "SHIFT Drone" application to preview a drone video in real time, and try various flight modes for the drone to shoot from different perspectives.

#### Installation and Execution

- 1. Search "SHIFT Drone" in Google Play or App Store, and download the app to your smartphone.
- Turn on the drone, connect to SHIFT-DRONE-XXXXXXX from your smartphone's Wi-Fi settings, and run the application.

The initial password to connect to SHIFT-DRONE-XXXXXXXX is 1234567890. Please reset the password for security, and remember it for future use.

3. See below for details on the interface of the application.



The screenshots of the application interface provided in this User Manual are for illustration purposes only, and may not be an exact representation of the application.

4. To take photos and videos using the SHIFT Drone application, a micro SD card must be inserted in the aircraft. Remove the battery and insert a micro SD card in the designated direction. Use the provided micro SD card, or a micro SD card of video speed class 10 or UHS class 1 or higher with a capacity of no more than 32 GB.

Before removing the micro SD card, always check that the drone is powered off.

## Using Lezero Pilot Modes

Application "SHIFT Drone" offers various flight modes (Lezero Pilot modes) for users to take semiprofessional videos and photos. When in a flight mode, exercise caution against collisions and maintain at least 2 m (6.6 ft) away from the drone.

- 1. To start a Lezero Pilot mode, tap on the @ button, which stays active only when the drone is hovering.
- 2. Choose one of the eight Lezero Pilot modes while referring to the descriptions below.



- Orbit: The drone flies in orbit.
- Ø Dolly: The drone flies steadily from right to left.
- Oolly In: The drone starts far and moves near.
- Ø Dolly Out: The drone starts near and moves far.
- 6 Following: The drone flies while following the target.
- Horizontal Tracking: The drone tracks the target while in horizontal flight.
- Yaw Tracking: The drone performs a yaw rotation toward the target while flying in position.
- Hero: The drone flies while tracking the target, and orbits once when the target stops.
- Long-press the screen to begin free flight in the selected mode. While flying in the selected mode, you can take photos or videos.
- 4. A target must be designated in the Following, Horizontal Tracking, Yaw Tracking or Hero mode. Place the target in the center of the target box, and drag across the screen to designate the target. When the target is successfully designated, the border of the drag box changes from red to green and flight begins in the selected mode.



In Following or Hero mode, check that the drone altitude is at least 2 m (6.6 ft) before designating a target. The appropriate altitude for the selected mode is indicated by the (a) icon turning active.

The target must stand out from the background in terms of form and color to be successfully detected in a well-lit environment. The drone switches to hovering if the target is moving too fast or if tracking has failed due to obstacles. If the target falls inside the red drag box while maintaining a distance similar to the initial distance, tracking resumes after about two seconds.

5. To stop the selected Lezero Pilot mode, long-press the screen, or hold the controller's jog button.



This document is a shortened version of the User Manual to help quickly learn how to use the product. Please make sure to read the full version to avoid any misuse.