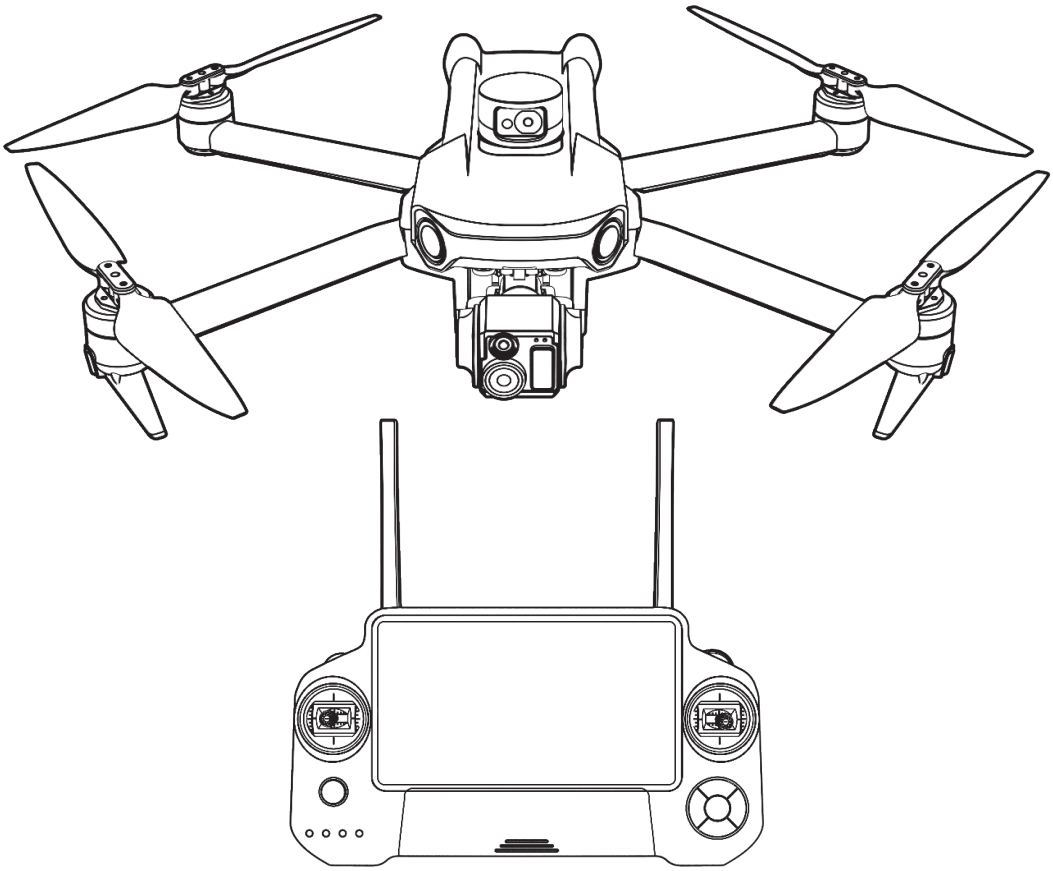
14+AGES

Android System Version

TODAMU WING 6S
INSTRUCTION MANUAL

GPS CAMERA DRONE



According to national regulations, the flight altitude must not exceed 120 meters. If one wishes to fly beyond 120 meters, they must report to the local Civil Aviation Administration.

Before using, please read the instruction manual in its entirety
(note that for some sections of learning, please read in detail).
Keep this instruction manual for future reference.

⚠ Prohibition Notice

To ensure the requirements of the electromagnetic environment of the aeronautical radio station, it is prohibited to use all kinds of model remote controllers and drones within a range of 10 kilometers on each side of the centerline of the airport runway, as well as within 20 kilometers at each end of the runway and civil aviation air routes. During the period when the relevant national authorities issue radio control orders, the use of model remote controllers and drones should be stopped as required.

Disclaimer and Safety Information

To make it more convenient and secure for you to use this product, please carefully read all the contents of this manual before using the product and keep this manual for future reference.

Disclaimer

1. To protect the legitimate rights and interests of users, please carefully read the instructions, disclaimers, and safety notices provided with this product before use.
2. This product is not suitable for individuals under the age of 14. Individuals aged 14 and under must use it under the supervision and guidance of an adult with or without drone flying experience.
3. By starting to use this product, you are deemed to have read, understood, acknowledged, and accepted all the terms and content of the instructions, disclaimers, and safety notices of this product.
4. During the use of this product, please strictly comply with and implement the requirements including but not limited to those in the instructions and safety notices. For any personal injury, accidents, property damage, legal disputes, and any other adverse events causing conflicts of interests due to violation of safety notice instructions or unforeseeable factors during use, users are responsible for related liabilities and losses, and the company will not assume any responsibility.
5. The company will not be liable for any actions directly or indirectly resulting from the use of this product that violate legal regulations.

Safety Instructions

1. This product is not suitable for individuals under the age of 14 and others who do not have full capacity for civil conduct.
2. This product features high-speed rotating propellers and powerful flight power, which poses certain risks during operation. Please do not approach or touch the product while it is running.
3. When using this product, please stay away from dangerous environments such as airports, railways, highways, high-rise buildings, and power lines.
4. When using this product, please stay away from environments with high electromagnetic interference such as mobile phone base stations and high-power transmission equipment.
5. When using this product, please stay away from all manned aircraft.
6. Do not use this product in harsh environments such as rain, thunderstorms, sandstorms, fog, snow, strong winds, low temperatures, etc.
7. This product is not waterproof. Do not operate this product near water bodies.
8. When operating this product, always maintain a safe distance of about 10 meters between the drone and people or animals.
9. Always keep the drone within the operator's line of sight during flight.
10. Do not hover or fly the product over crowds, and do not use it to scare others.
11. Do not operate this product near children's play areas.
12. Do not use this product to chase or interfere with the normal operation of vehicles.
13. In non-emergency situations, do not turn off the motors while the product is flying.
14. Do not use this product under the influence of alcohol, fatigue, medication, physical discomfort, etc.
15. Before each use, inspect the product for components' firmness, cracks and wear on the body and propellers, battery level, effectiveness of indicators, etc. If any abnormalities are found, stop using it immediately and replace the corresponding parts.
16. An unmanned aircraft with abnormal operation may cause accidents. Do not start the propellers or fly in a forced manner.
17. Do not attempt to stop any moving parts of the product during operation.
18. Do not modify the product or use it for purposes other than its original design.
19. Do not operate this product in no-fly zones specified by laws and regulations.

20. Due to the variety of materials used in aircraft, high temperatures can damage the internal structure of drones and lead to unpredictable consequences. Therefore, please keep drone equipment away from heat sources and avoid prolonged exposure to direct sunlight.
21. Please operate according to the product manual.
22. Please use original factory accessories for maintenance and replacement.
23. When lending to other personnel for operation, please ensure that the operators understand and comply with this safety notice.
24. Do not mix different types of batteries.
25. Do not use batteries that are swollen, leaking, or damaged.
26. Do not charge the battery near flammable materials (such as blankets, solid wood furniture, and boards, etc.).
27. Please use the original factory configured charging cable for charging, do not use other brands or damaged charging cables for charging.
28. Keep a safe distance from high-speed rotating propellers to avoid the risk of cutting or slashing injuries.
29. Do not use the model close to the ears! Misuse may cause hearing damage.
30. Use the aircraft in a place as far away as possible from other electrical devices and magnetic objects, as they may interfere with each other.
31. Do not short-circuit or crush the battery to avoid explosions.
32. The motor is a heating component, do not touch it to avoid the risk of burns.

Charging Precautions

1. All batteries carry certain risks that may cause unnecessary harm to people and property, so please use them carefully.
2. In case of battery leakage, avoid contact with the liquid on your skin and eyes. If it comes in contact with your skin, wash immediately with soap and water. If it gets into your eyes, rinse with plenty of water and seek medical attention immediately.
3. If the charger emits an unusual smell, noise, or smoke, unplug it immediately.

Charging Instructions

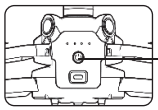
1. Please use the original charging cable to charge, do not use damaged or other brands of chargers.
2. Do not charge batteries that are swollen, leaking, or damaged.
3. Do not overcharge the battery. Once the battery is fully charged, unplug the charger.
4. Do not charge near flammable materials (carpets, wooden floors, solid wood furniture, etc.) or conductive surfaces. Keep the battery within sight during charging.
5. Do not charge immediately after the battery dissipates heat after use. Wait 10-15 minutes for the battery to cool down.
6. The temperature for battery charging should be between 0°C to 40°C.

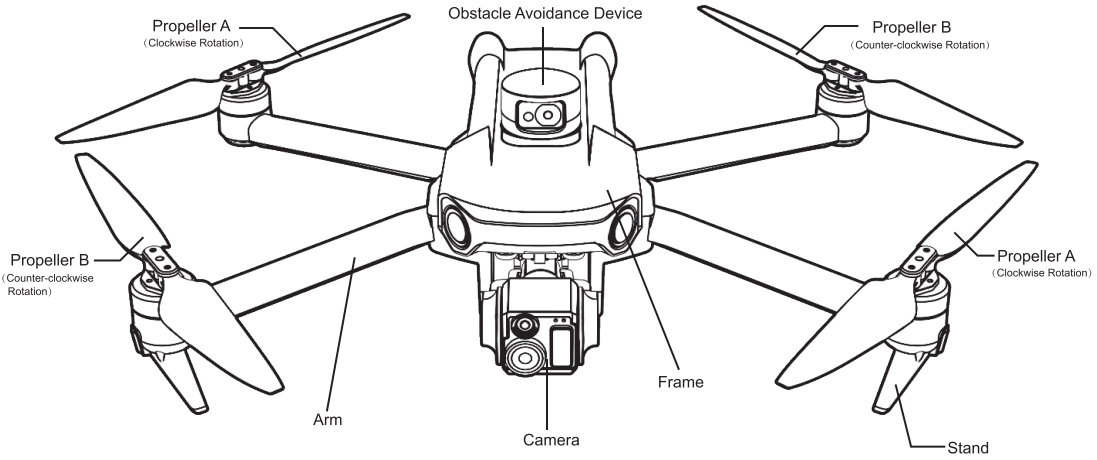
Recycling

This device is composed of electronic components and batteries. Regarding electronic waste, please handle it properly according to local waste disposal requirements.

Product Introduction

Aircraft Introduction



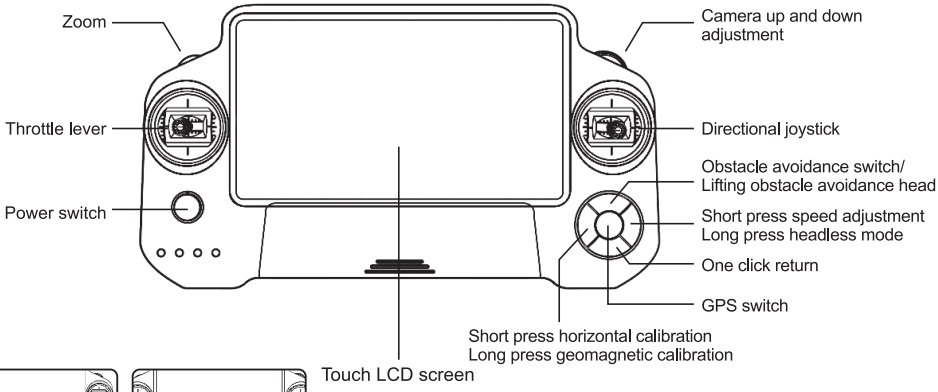


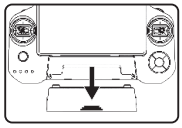
Note

When replacing the blades, ensure that each axis is installed with blade A/B consistently.

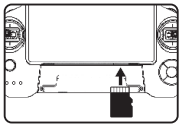
Note: Images are for reference only, please refer to the actual product.

Remote Control Introduction





1. Remove the remote control panel



2. Insert the memory card

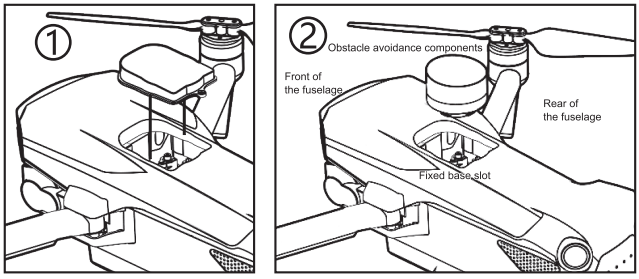
Low Battery Reminder: When the remote control's power drops below 7V, it will emit a "beep" low battery reminder sound, at which point the user needs to charge it promptly.

Installation Guide for External Obstacle Avoidance Components

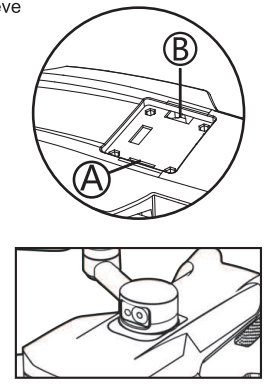
Note: The built-in obstacle avoidance device will only be installed if this configuration is purchased.
There are two types of obstacle avoidance heads: "external obstacle avoidance head" and "built-in lifting obstacle avoidance head"

Obstacle avoidance function

Obstacle avoidance technology, as a guarantee to increase the safety of drone flights, has been advancing rapidly with technological discoveries. During the flight process, drones collect information about the surrounding environment through their sensors, measure distances, and then make corresponding action commands to achieve the function of "obstacle avoidance."



Assembly diagram



Assembly completion diagram

Installation of obstacle avoidance components

1. Insert the signal plug wire (4PIN) of the obstacle avoidance head component into the left side Ⓐ seat of the body, making sure it is not inserted in the wrong direction;
2. Insert the steering plug wire (5PIN) of the obstacle avoidance head component into the right side Ⓑ seat of the base slot, making sure it is not inserted in the wrong direction;
3. Insert the component into the buckle inside the main body of the machine;
4. The obstacle avoidance device needs to work with the direction rod to operate the obstacle avoidance.

Obstacle avoidance operation method:

External obstacle avoidance: Press and hold the obstacle avoidance switch to activate the obstacle avoidance mode. When the obstacle avoidance mode is activated, the obstacle avoidance head will rotate according to the direction of the steering rod Release the steering lever, and the obstacle avoidance will automatically return to the correct position.

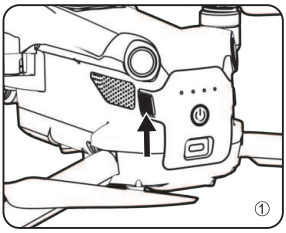
Built in lifting obstacle avoidance: Long press the obstacle avoidance switch, and the obstacle avoidance head will automatically rise. When the obstacle avoidance head rises, the obstacle avoidance mode will be turned on.Press and hold the obstacle avoidance switch again to turn off the obstacle avoidance mode

⚠ Note:

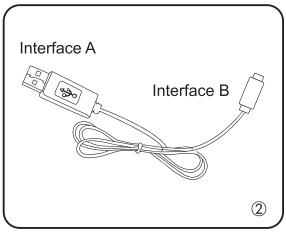
1. The obstacle avoidance system must be installed before powering on the aircraft, otherwise the obstacle avoidance function will be ineffective.
2. The obstacle avoidance function does not work when the aircraft is circling.
3. The obstacle avoidance function does not work when the aircraft is low on battery.
4. The obstacle avoidance function does not work when the aircraft is returning.

Charging and Battery Installation

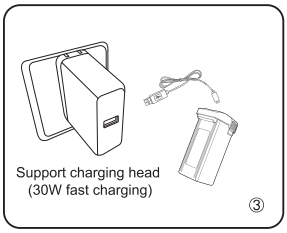
Aircraft Charging Instructions



1. Hold the handle and pull out the battery. (Refer to Figure 1)



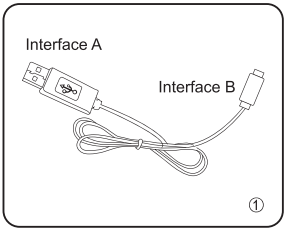
2. Connect the dedicated charging cable for charging. (Refer to Figure 2)



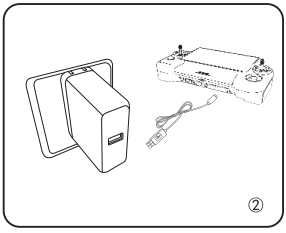
3. Insert the power adapter. (Refer to Figure 3)

As shown in the picture above, after disconnecting, connect the interface A to the charging head, plug in the smart battery and the light will light up once. When the smart battery is plugged in, the light will flash to indicate charging. After full charging, 4 lights will stay on. The charging time is about 180 minutes (using fast charging).

Remote Control Charging Instructions



1. Connect the dedicated charging cable for charging. (Refer to Figure 1)



2. Insert the power adapter. (Refer to Figure 2)

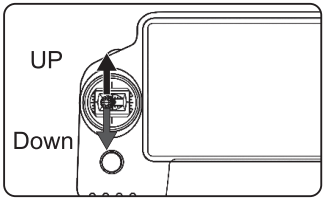
As shown in the picture above, after disconnecting, interface A is connected to the computer USB or mobile phone charger. At this time, the indicator light of the remote control lights up and flashes. If the light stays on, it means the remote control is fully charged; the charging time is about 240-300 minutes.

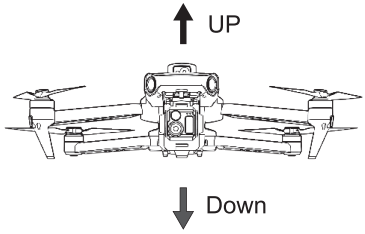
Function Introduction

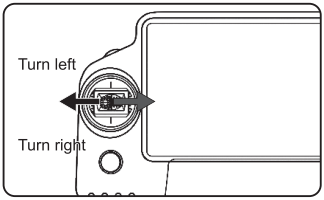
Joystick Introduction

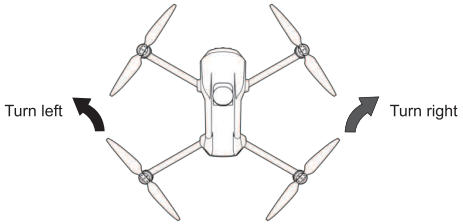
1. Left (Throttle) Joystick

(The left joystick controls the flight's altitude and left-right direction)



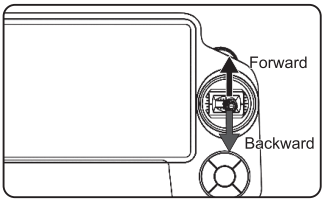


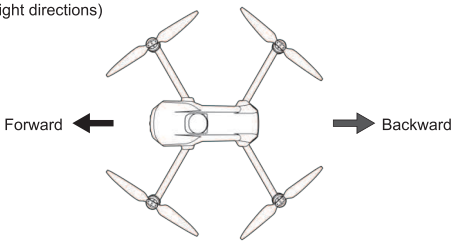


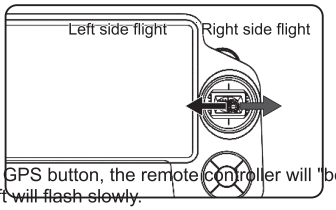


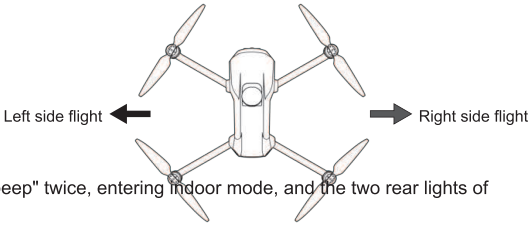
2. Right (direction) joystick

(The right joystick controls forward, backward, and left/right side flight directions)









3. Press the GPS button, the remote controller will "beep" twice, entering indoor mode, and the two rear lights of the aircraft will flash slowly.

GPS Fix Introduction

1. After the aircraft is successfully linked, it will take 1-3 minutes in an open and unobstructed environment. The two lights on the front of the aircraft are always on, and the lights on the back are on. The two lights flash slowly. When the last two lights turn solid, it means the GPS positioning is successful. At this time, press the two joysticks diagonally outward. Toggle the word "eight" to unlock the motor, the aircraft's blades will rotate slowly, and you can take off by pushing the throttle upward.
2. If the lights on the front and rear of the aircraft flash back and forth, it means that the current location is receiving signal interference and needs to be replaced. venue, or is not connected, you need to restart the aircraft and the remote controller to link again.
3. Press the GPS button, and the remote control will beep twice to enter indoor mode. The lights on the two arms behind the plane will change from slow flashing to a long red light.

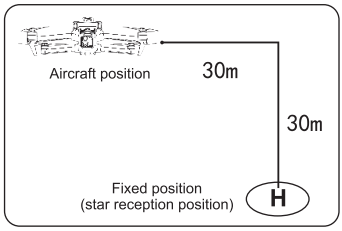
One-key Return

Three situations of one-click return:

1.Active Return: When one-click return is initiated, the remote controller will continuously emit "beep" sounds, and the aircraft will start returning to the takeoff point for landing. Approximately 10 seconds after the completion of one-key return, the remote controller will automatically stop the alarm sound.

2.Automatic Return: When the aircraft detects low first-level battery power, the rear red light of the aircraft will flash slowly. If the aircraft is flying below 30 meters from the ground, it will automatically ascend to a height of 30 meters from the ground and then return to the takeoff point within a radius of 20 meters and automatically descend to a height of approximately 20 meters from the ground.

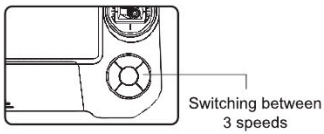
3.Forced Return: When the second-level low battery power is detected and the aircraft is below 30 meters from the ground, the aircraft will forcefully ascend to a height of 30 meters from the ground, then return to the airspace above the takeoff point and automatically land on the ground, stopping flight. (Note: During the forced return process, the remote controller cannot control the aircraft.)



Speed

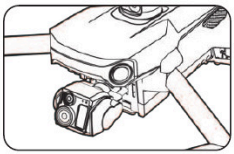
Short press the high and low speed switch button on the remote control to control the flight speed.

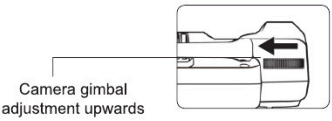
(One beep is the first gear, two beeps are the second gear, and three beeps are the third gear. The default setting is the slow gear when the computer is turned on)



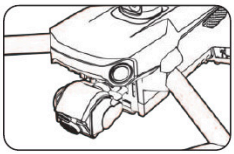
Camera gimbal adjustment

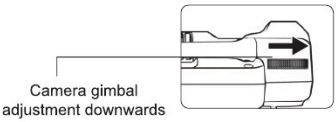
1. During flight, slide the camera gimbal control wheel on the remote control to the left to adjust the camera angle upwards.





2. During flight, slide the camera gimbal control wheel on the remote control to the right to adjust the camera angle downwards.

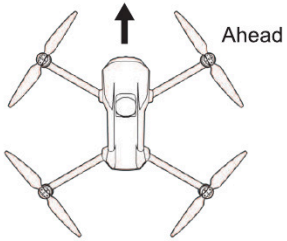




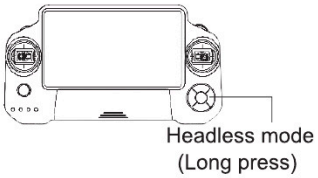
Note: After turning on the frequency, the camera will automatically calibrate. Remember not to manually adjust the camera!

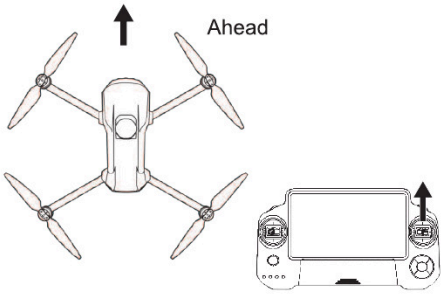
Headless Mode

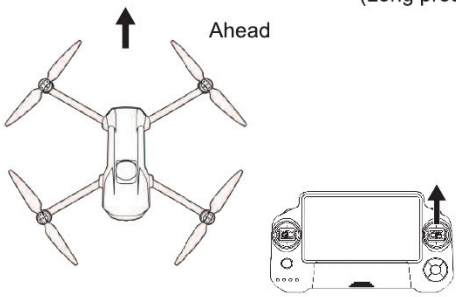
1. When you press and hold the headless mode button on the remote control, the antenna end of the remote control is in front of the heading, and the remote control emits a "beep" sound at the same time, indicating that the headless mode is turned on.

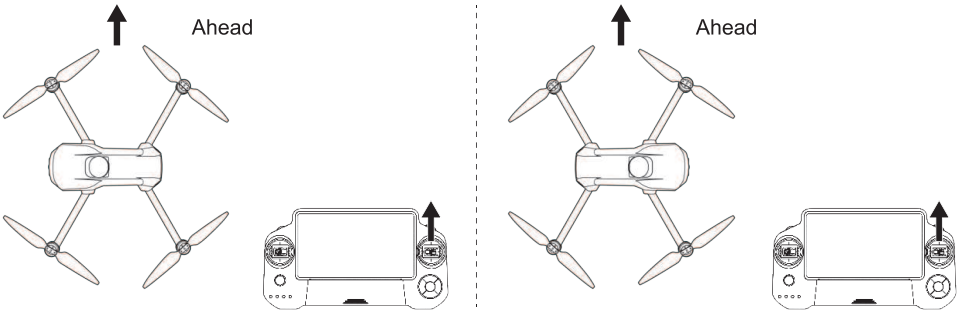


2. To exit the headless mode, press and hold the headless mode button again. The remote control will make a "beep" sound to exit the headless mode.









Safety Flight Guidelines

It is recommended to fly under the following conditions:

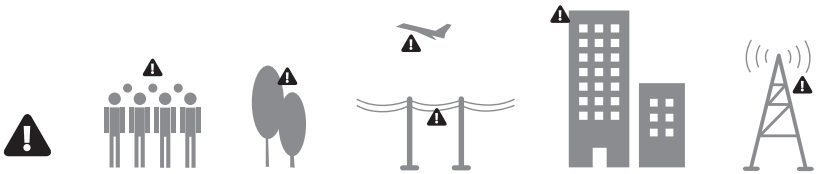


Fly in a wide open area

Strong GPS signal

Keep the aircraft within line of sight

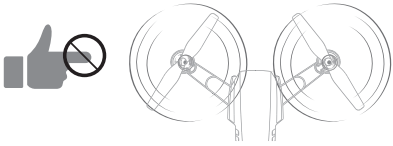
Fly at an altitude below 120 meters



It is recommended to avoid flying over or near crowds, trees, high-voltage power lines, buildings, airports or water bodies, as well as high-intensity power sources or base stations, as it may affect the compass on the aircraft.



Do not operate this product in adverse weather conditions such as rain, snow, fog, and wind speeds exceeding 10m/s or 22mph.



Stay away from rotating propellers and motors.

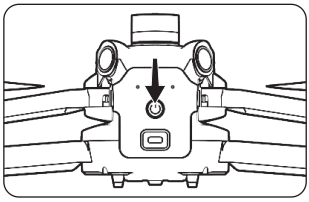


Prohibited to fly in areas where flying is not allowed.

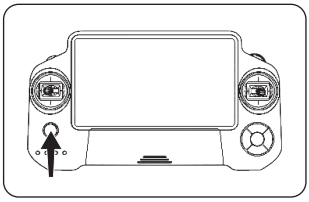
Understanding the safety guidelines is crucial for safe flight. Please read the safety guidelines carefully before flying.

Pre-flight Preparation

Frequency Pairing

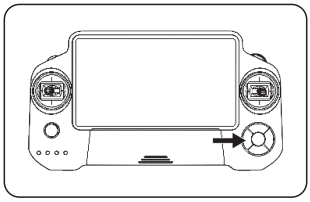


Long press the power button, all lights on the battery When it lights up, turn on the power of the aircraft.

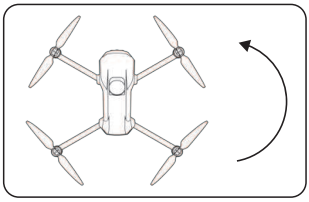


Short-press and then long-press the power switch of the remote controller until you hear two beeps. At this time, the power indicator light of the remote controller is always on, the front light of the aircraft is always on, and the rear light flashes slowly to indicate that the linking is completed. After successful linking, open the APP interface and the connection is successful.

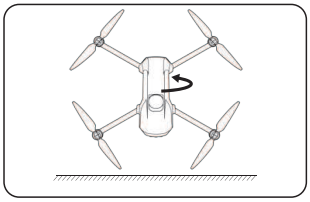
Calibrate the Magnetometer



Press and hold one button to correct the geomagnetic field. The remote control will make a beep sound and the front and rear lights will flash quickly.

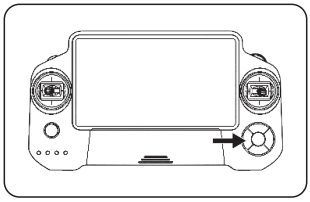


Hold the aircraft horizontally and rotate it counterclockwise until the remote control beeps, the front light flashes quickly and the rear light stays on.



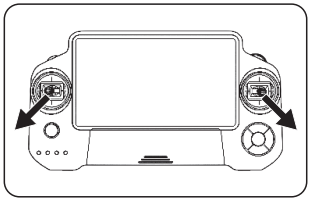
Rotate the body camera downwards and counterclockwise until the remote control beeps, the front light of the body is on and the rear light flashes slowly, indicating that the geomagnetic correction is successful.

Calibrate the Gyroscope



Press the one-key gyroscope calibration button briefly, the remote controller beeps once, the front and rear lights change from quick flashing to the front light staying on and the rear light flashing slowly, indicating successful gyroscope calibration.

Unlock

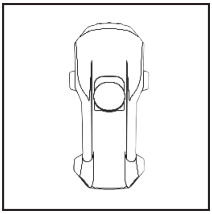


When the aircraft completes star collection, the LED light at the rear of the aircraft changes from slow flashing to bright, and the two joysticks are moved diagonally outward at the same time to unlock.

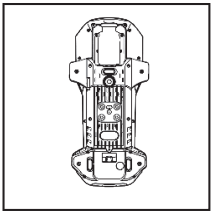
Special Reminder:

This product can be equipped with an airdrop configuration. The weight of the airdrop cannot exceed 300 grams, and it must be flown with a load in an open field and within the sight of no one. Our factory has nothing to do with any damage caused by overloading without permission!

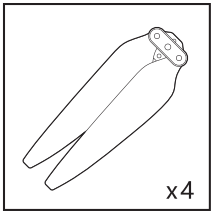
Components Diagram



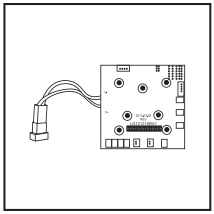
01. Nose cone



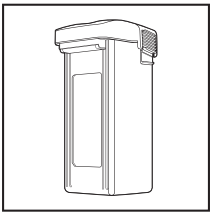
02. Bottom cover



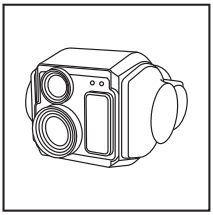
03. Propeller



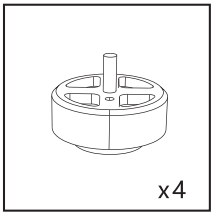
04. Receiver board



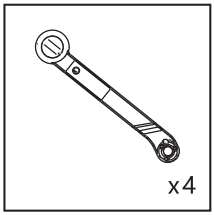
05. Lithium battery



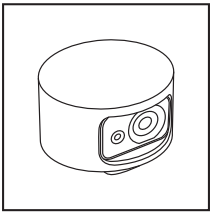
06. Camera



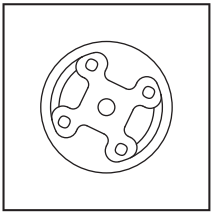
07. Brushless motor



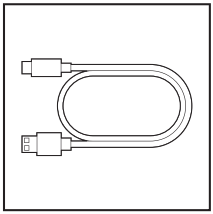
08. Shaft



09. Obstacle avoidance sensor



10. Motor cover



11. USB charging cable

TODAMU WING 6S

ANDROID SYSTEM

APP USER MANUAL

Screen Controller / App Interface Guide

User Guide

- Beginner's Guide
- Instruction
- Control Interface

1. Introduction to the Control Interface
2. Explanation of Control Interface Functions
3. Gesture Recognition Function

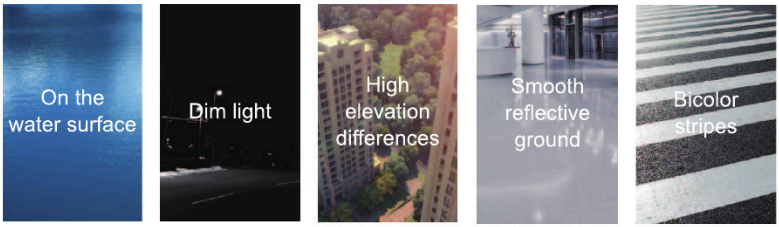
Connect the remote control

Turn on the remote control, switch on the aircraft power, wait for 1-2 minutes, the remote control LED light flashes slowly;At this time, waiting for the aircraft to synchronize frequencies, once synchronized, the remote control LED stays on.

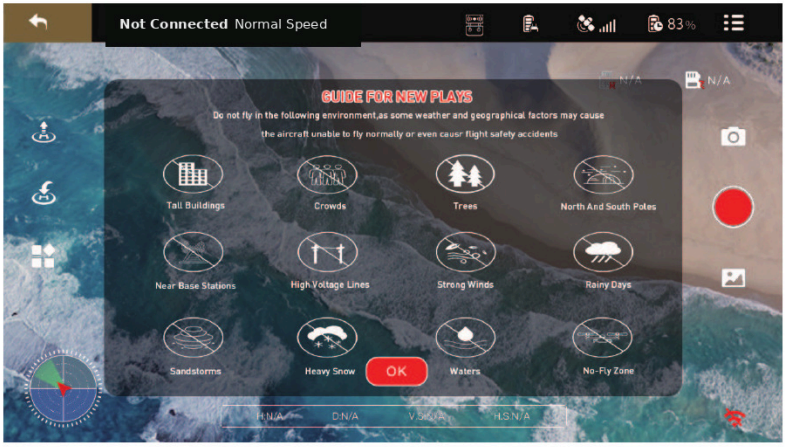
Friendly Reminder

Only one mobile APP is allowed to connect to an aircraft at the same time!

Note: When the aircraft is in the following environments, the downward optical flow positioning hover effect is poor, which will cause the aircraft to have difficulty flying smoothly, resulting in body shaking.



Beginner's Guide

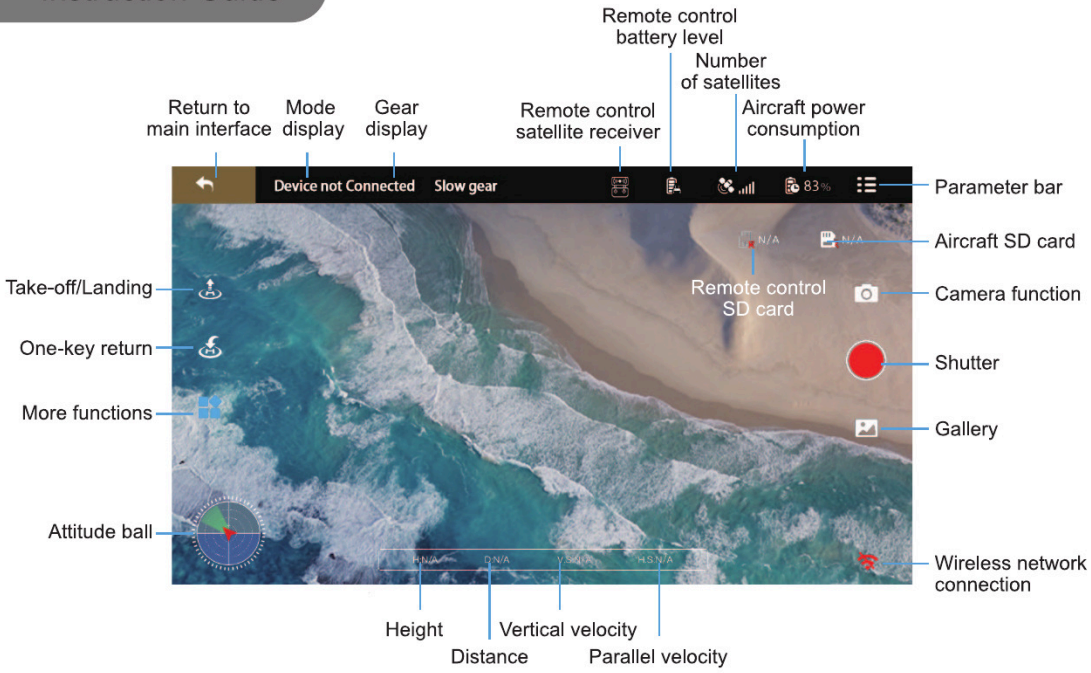


Guidance Instructions

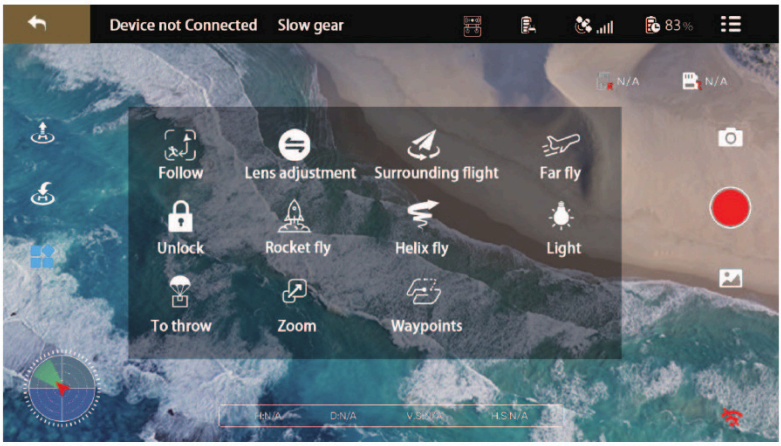


Click on "English" to enter the interface

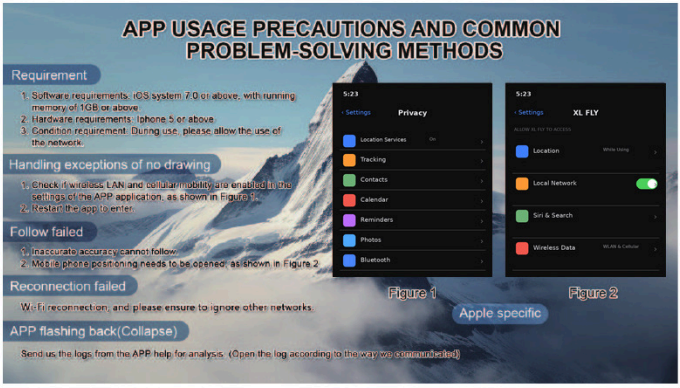
Instruction Guide



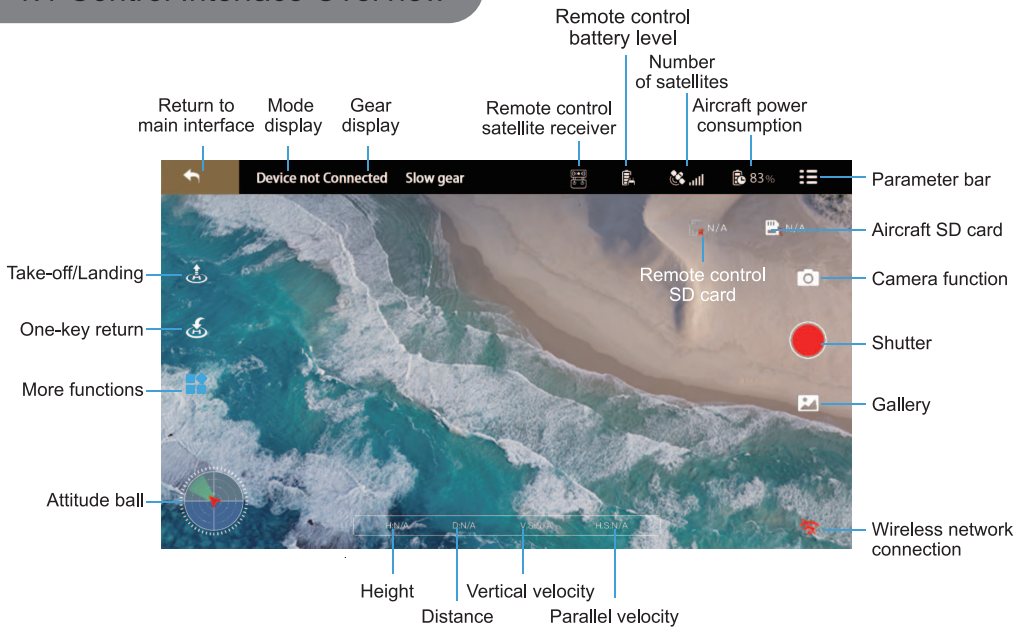
Guide Summary 2



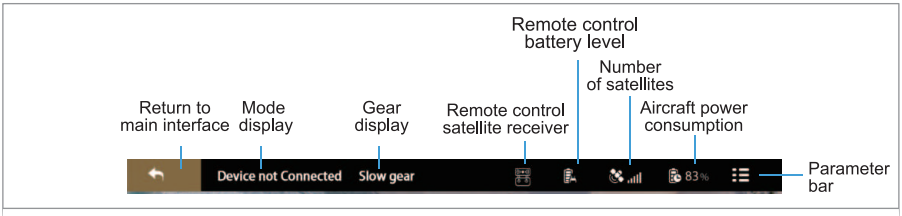
App Usage Notes



1.1 Control Interface Overview



1.2.1 Control Interface Function Description



Return to main interface: Return to the main interface of the APP.

Mode display: There are GPS mode and attitude mode (indoor mode). Default GPS mode upon startup, long press the GPS button to switch to attitude mode (indoor mode).

Gear display: Normal gear (slow gear), medium gear (second gear), fast gear (third gear)

Remote control satellite reception: When the remote control receives a satellite, it can locate the current location of the remote control and achieve GPS tracking function.

Remote control battery level: Remote control battery level status.

Number of satellites: Refers to the number of satellites received by the drone. In GPS mode, 8 or more satellites are required to unlock takeoff.

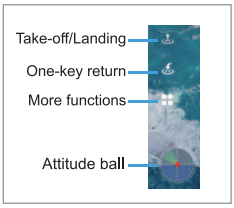
Aircraft power: Aircraft power status

(1) 2-4 grids represent normal battery levels, and the functions of returning, following, circling, and guiding flight can be operated normally in GPS mode.

(2) 1 grid indicates that the aircraft is currently in a low battery state and will perform an automatic return function: there is no following, circling, or guiding flight function in the low battery state.

Parameter Bar: Open or close the parameter settings dialog box.

1.2.2 Operation Interface Function Description



Take-off/Landing: Click after unlocking to achieve one-click takeoff or one-click landing.

One-key return : In GPS mode, click to achieve One-key return.

More Functions: Click to open more functions.

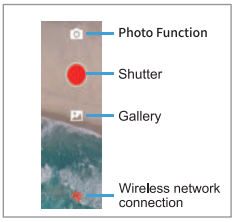


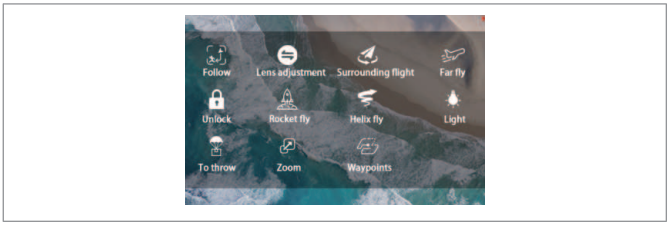
Photo Function: Click the button to select the photo function, video recording function, time-lapse shooting, or panoramic shooting.

Shutter: Click the button to start or stop taking photos or recording videos.

Gallery: Click the button to view the captured content.

Wireless network connection: When the remote control receives the satellite, it can only update the location of the remote control and the aircraft by connecting to the wireless network.

1.2.3 Operation Interface Function Description



Follow: Click this button and the aircraft will follow the phone in flight.

Lens adjustment: The angle of the lens servo can be adjusted

Surrounding flight: Set any point on the map, and the aircraft will orbit around the position obtained on the map.

Far fly: After opening, the aircraft will tilt back about 25 meters away from the target, paying attention to the space behind to avoid injury!

Unlock: Click the unlock button to start the drone motor.

Rocket fly: After opening, the aircraft will automatically ascend by about 15 meters. Pay attention to obstacles above to avoid injury!

Helix fly: After opening, the aircraft will automatically spiral upwards (with a maximum radius of about 15 meters), pay attention to the surrounding environment to avoid injury!

Light: After entering the lighting settings, there are various adjustable lighting effects that can be adjusted according to personal preferences for the drone lighting.

To throw: Press to unlock the drone's lock and drop the item you need to drop.

Zoom: When turned on, you can adjust the zoom factor of the lens view by adjusting the slider on the right. After enlarging the view, slide your finger on the screen to move the visible range of the view.

Waypoint: In GPS mode, the aircraft will fly according to the route selected on the map.

In case of an emergency, immediately interrupt the flight with the remote control!

Tips:

1. Noise

The noise measurement results of the rotary wing unmanned aerial vehicle of this product at hovering and typical flight speeds, normalized to takeoff A-weighted sound pressure level at a distance of 1 meter. The frequency range for noise testing is 20Hz to 20000Hz. During testing under flight conditions The speed of the unmanned aerial vehicle is 3m/s.

2. Lighting

The lighting purpose of this product is to distinguish the direction of the front and rear arm lights.

The front arm light is (green) straight ahead.

The rear arm light is (blue) directly behind in GPS mode and (red) directly behind in indoor mode.

Lamp language interpretation: None.

The lighting of our products is only used for decoration and beautification, as well as for identifying the direction of unmanned aerial vehicles.

Battery precautions

1.When charging, you must use a charger that meets the specifications.
2. Do not charge without anyone watching.
3. Do not overcharge.
4. Do not short circuit (the positive and negative poles are connected in reverse).
5. Please charge within 0-45℃.
6. When charging, please note that the charging desktop or platform can withstand heat and high temperatures. When charging, choose to charge on cement floor or in a flower pot filled with mud and sand.
7. At any time, the battery cell must not be overheated. When the temperature of the battery cell reaches 60℃, there will be safety hazards, or even combustion.
8. When charging, the battery is not accessible or placed directly on flammable items such as: paper, plastic, carpet, ethylene, leather, wood, or directly placed in the device to charge.
9. Do not over-discharge (the voltage after discharge of each battery cell is not less than 3.3V)) Over-discharge can easily damage the battery, such as swelling.
10. Do not splash battery fluid on your eyes or skin. If it is accidentally splashed, please wash it with clean water immediately. In severe cases, please seek medical treatment immediately.
11. Do not disassemble the battery and reorganize it or change the wiring at will, and do not directly contact the battery with liquid leakage.
12 Do not assemble batteries privately. It is dangerous to disassemble the old battery cells and reorganize them, or reorganize one battery cell after being disassembled with another set of batteries (no dedicated assembly instruments can easily cause short-circuit combustion).
13. If a collision occurs during use, please remove the battery and carefully check whether the battery and connector are normal, just in case.

Note: The battery may be hot and hot!

Lithium polymer battery (LiPo)

Lithium ion batteries are different from ordinary batteries in that they are wrapped in a thin layer of tin foil around their chemical substances, which can greatly reduce their weight but make them more fragile when faced with rough or inappropriate handling. Like all batteries, improper operation can cause fire and explosion.

- Chargers are not toys and should be properly stored;
- After the battery is fully charged, the charging wire should be unplugged in a timely manner to avoid overcharging and accelerating battery loss;
- When charging a rechargeable battery, it must be done under the supervision of an adult. During charging, it must be kept away from flammable materials. The guardian should not leave during charging. When sleeping at night, do not charge and place the battery properly;
- Please do not short-circuit or squeeze the battery to avoid explosion;
- Exhausted batteries should be promptly removed, and discarded batteries should not be thrown around;
- The power terminal should not be removed from the model, and the terminal should not be short circuited;
- Do not short-circuit, disassemble or put the battery into fire, and do not place the battery in high temperature or heated places (such as in fire or near electric heating devices);
- If not used for a long time, please remove the battery to avoid battery leakage and damage to this product;
- Do not place the battery in the model for charging, as this may cause the battery to catch fire and cause damage;
- If you plan to not use this product for a week or longer, please allow the battery to retain 50% of its capacity to increase its lifespan. Keep the battery at 50% of its capacity and charge it in half the time it takes to fully charge;
- Please use an adapter with 3C certification to connect to the factory provided single wire charging cable to charge the battery;
- Do not charge on flammable materials such as carpets to prevent fire;
- Lithium batteries need to be charged after being stored for more than three months to maintain voltage and ensure their expected lifespan. The battery is not needed, it needs to be removed and placed in an iron box and kept in a cool place.

Sound and noise testing		
Observation	Hover	Flying at 3m/s
Ground observation point (Vertically below)	81.5 dB (A)	78.0 dB (A)
Side observation point (Equal height plane)	79.0 dB (A)	74.5 dB (A)
Note: The measurement environment is a fully anechoic chamber.		



M A