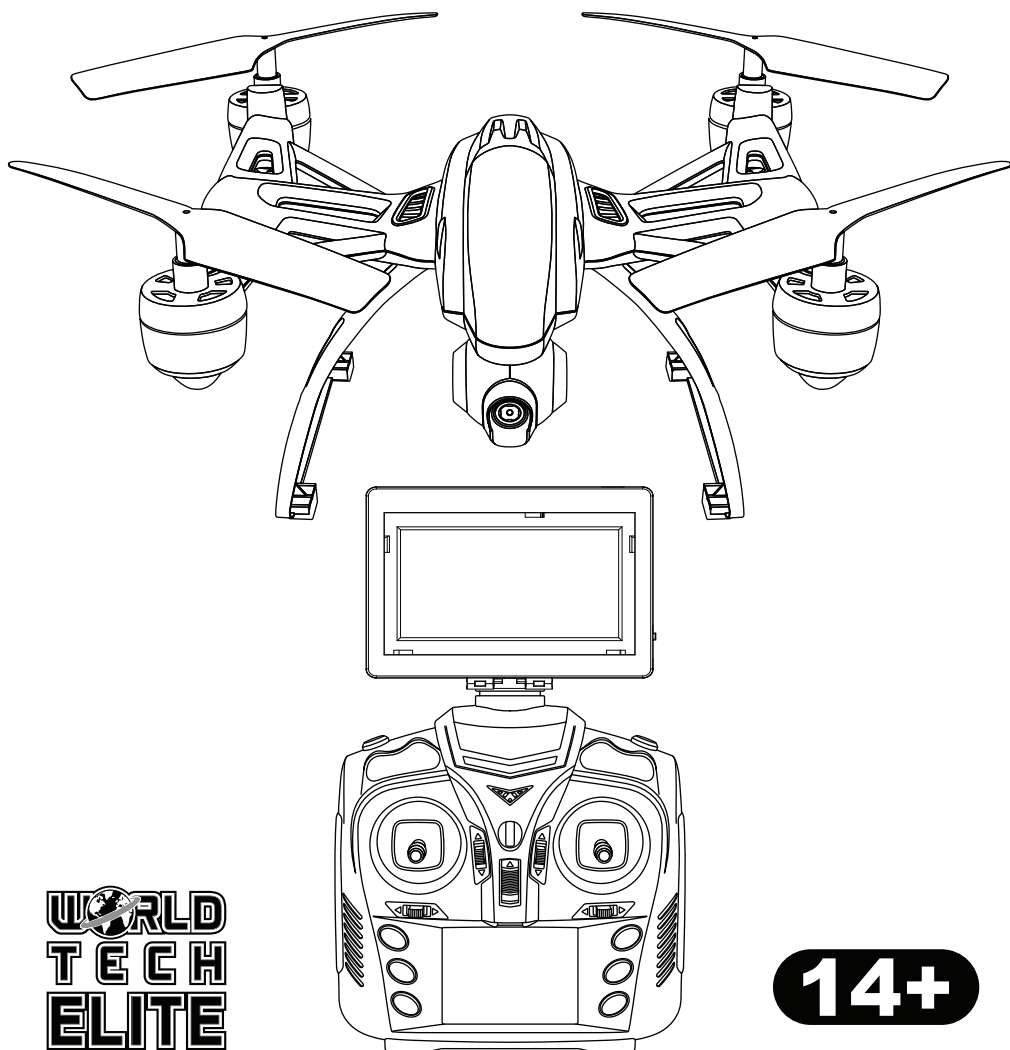


MINI ORION

LIVE FEED DRONE

LIVE FEED PICTURE / VIDEO CAMERA
2.4GHz 4.5CH RC DRONE

INSTRUCTION MANUAL



**WORLD
TECH
ELITE**

14+

INTRODUCTION

Thank you for purchasing this amazing World Tech Toys product. This drone is suitable for indoor and outdoor flight. Please carefully read the entire manual before operating this drone and keep it for reference in the future.

SAFETY & PRECAUTIONS

1. Important Instructions

- (1) This product is not a toy but a precision piece of equipment with integrated technologies of mechanics, electronic, air dynamics and radio frequencies. In order to avoid accidents, the operator must read these instructions carefully. Use safety precautions when operating, if operated incorrectly, serious physical injury and/or property loss may occur.
- (2) This product is suitable for operators with previous hobby flying experience, age 14 and up.
- (3) Only fly in a safe environment that is legal for remote control flying.
- (4) We do not take any responsibility for the operation and control of this device and related safety responsibilities.

2. Safety Instructions

- (1) Operate far away from obstacles and crowds.
This drone has uncertain flying speed and conditions which present potential danger. Fly away from people and animals, high buildings, high voltage wiring, etc. Avoid bad weather conditions, wind, rain, thunder, and other conditions to ensure a safe and fun flying environment.
- (2) Avoid high temperatures.
This drone is made of metal, carbon fiber, plastic, electronic components and other materials. Keep away from any heat source and avoid using in high temperatures such as hot sunny days to avoid transformation and broken parts resulting from the heat.

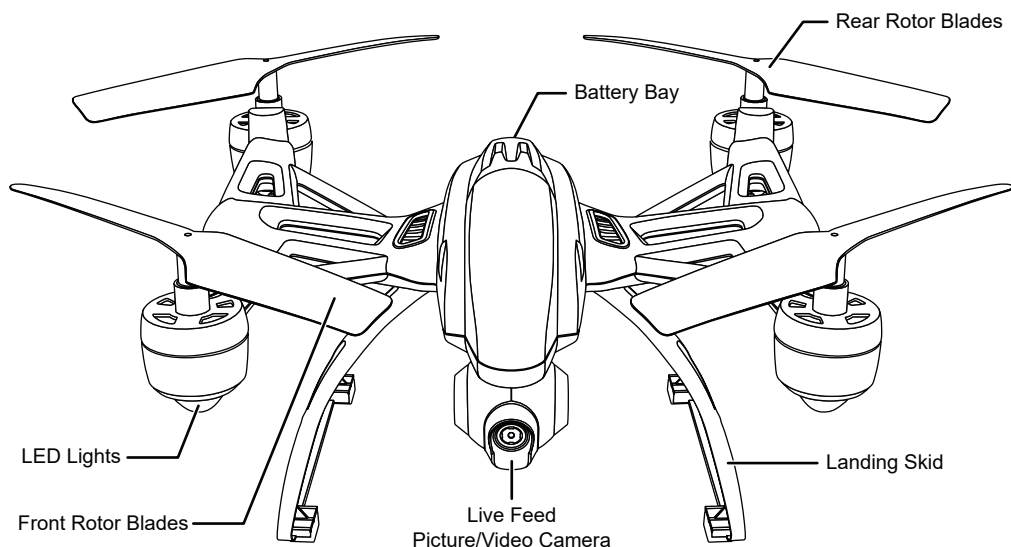
3. Flight Environment

The inside of this drone is integrated with precision electric and mechanical parts, avoid water and wet environments. Water can enter the aircraft and result in part breakdown and accidents may occur.

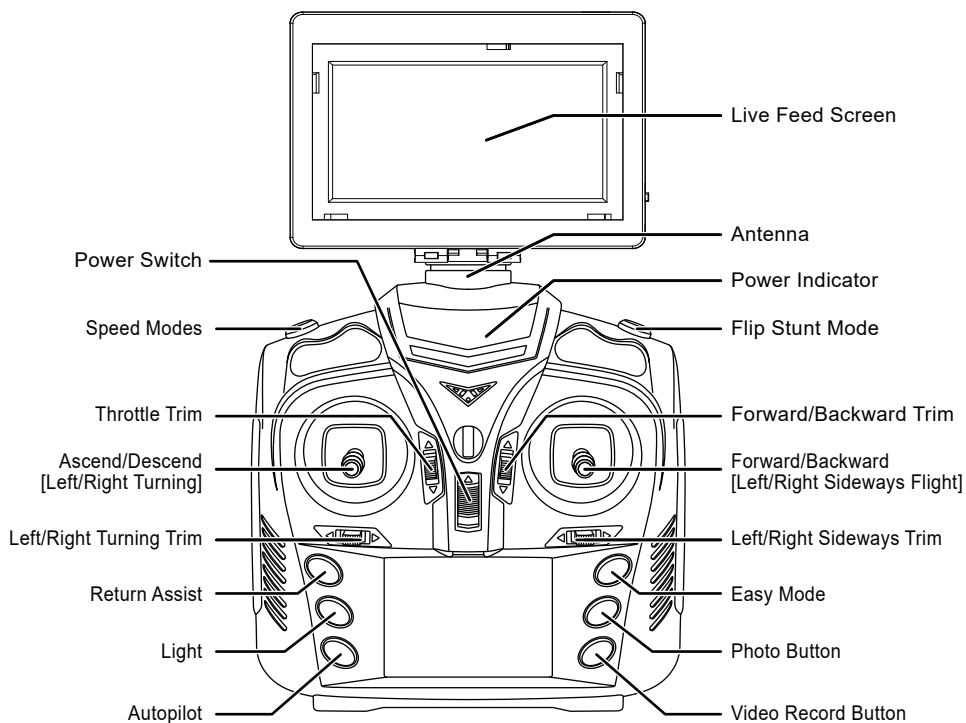
3. Attention Before Flying

- (1) It is recommended that the flying area is at least an area of 25ft x 25ft x 15ft.
- (2) Be sure that the transmitter and drone batteries are fully charged.
- (3) Be sure that the throttle is at its lowest position to avoid premature flight.
- (4) Before playing turn on the drone first, then turn on the transmitter. Incorrect operation may result in failure and the possible influencing of other devices in area.
- (5) Ensure that all plugs and wires are secure and in place, rocking during flight may loosen over time.

DRONE DIAGRAM

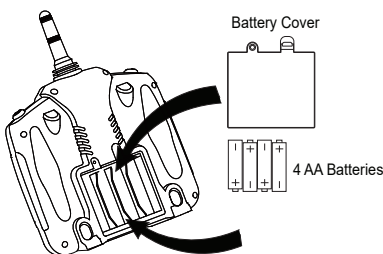


TRANSMITTER DIAGRAM



INSTALLING THE TRANSMITTER BATTERIES

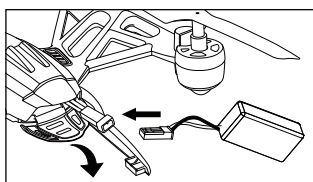
First remove the screw on the battery cover and remove the battery cover itself. Then install 4 AA batteries. Make sure they are installed with the correct polarity. Replace the battery cover and screw.



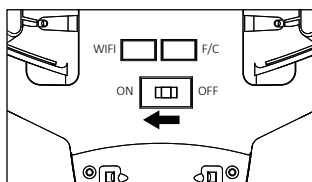
CAUTION:

1. Make sure the polarity of the batteries are correctly installed.
2. Do not mix old and new batteries.
3. Do not mix different types of batteries.

INSTALLING THE DRONE BATTERY

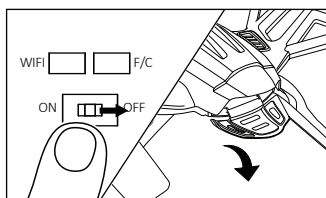


Open the battery compartment as shown. Connect the red plug on the battery to the power port inside. Insert battery into compartment and close the cover.

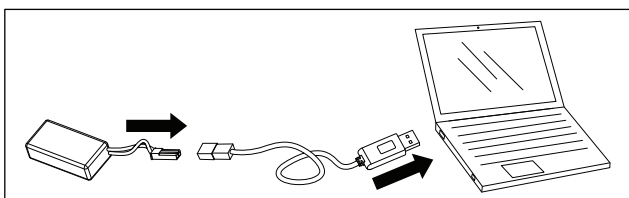


Locate the On/Off Switch on the underside of the drone. Switch to the ON position to power on the drone.

CHARGING THE DRONE BATTERY



Switch off the power and open the battery compartment. Disconnect the battery cable from the drone and remove the battery from the drone before charging.



Plug the included USB charging cable to a computer. The LED light on the USB charger will turn on. Connect the battery pack and the LED light will turn off. The LED light will turn back on when the battery is fully charged. A full charge will take approximately 60-70 minutes.

DO NOT CHARGE THE BATTERY OVERNIGHT
DO NOT CHARGE THE BATTERY WITHOUT SUPERVISION

BATTERY PACK SPECIFICATIONS

Battery Type	Battery Specification	Usage Duration	Charge Time
Li-Ion Battery	3.7V 600mAh	Flight Duration 6 minutes	Charging Time 60-70 minutes

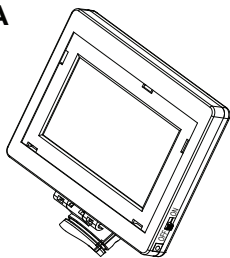
CAUTION WHILE CHARGING:

Do not charge with batteries still installed. Do not charge battery unsupervised. Do not immediately charge after use. Do not overcharge battery. **Ideal charge time is 60-70 minutes.** Overcharging can cause a catastrophic failure. Always charge on dry and ventilated areas away from any heat source or flammable materials. Always use the original USB charging cable provided. Promptly change and replace old or defective batteries.

INSTALLING THE LIVE FEED SCREEN

Live Feed Screen Parts

A



B

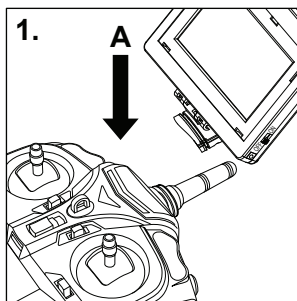


SCREWS



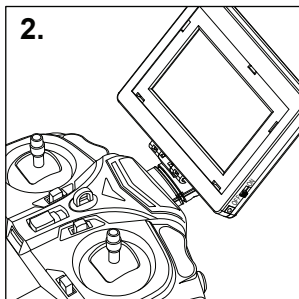
Follow the steps below to install the live feed screen onto the transmitter. Ensure that screen is secure to avoid damage to your screen or transmitter.

1.

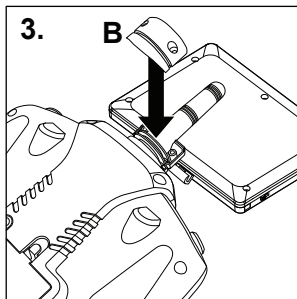


Take the Live Feed Screen Part A and slide it onto the antenna from the front of the transmitter as shown above.

2.

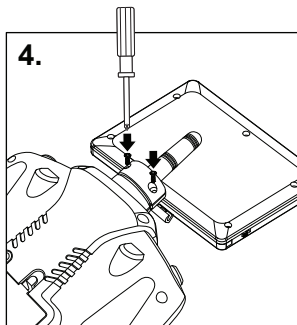


3.



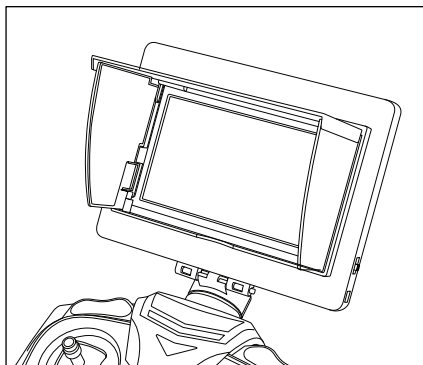
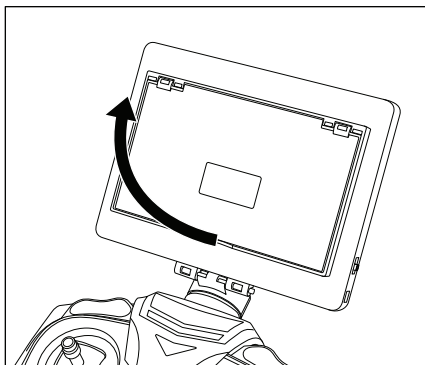
Flip the Transmitter over and slide the Live Feed Screen Part B onto the opposite side of the Part A as shown above.

4.

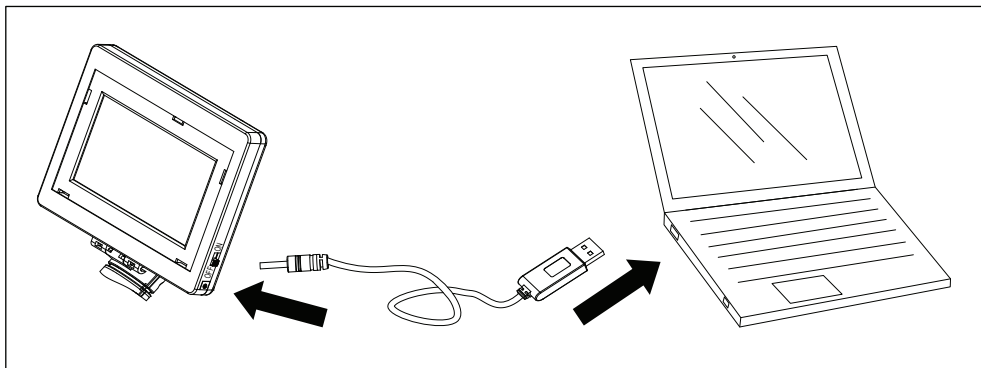


Take the 2 screws and firmly screw Part B into Part A.

LIVE FEED SCREEN SUN SHADE



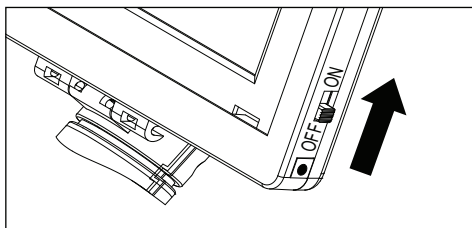
CHARGING THE LIVE FEED SCREEN



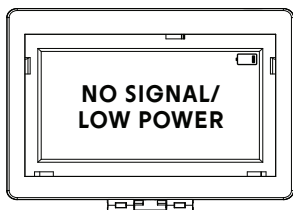
Plug the included USB charging cable into a computer. The LED light on the USB charger will turn on. Connect the live feed screen and the LED light will turn off while charging. The LED light will turn back on when the internal battery is fully charged. Charging will take approximately 80-90 minutes.

DO NOT CHARGE THE BATTERY OVERNIGHT
DO NOT CHARGE THE BATTERY WITHOUT SUPERVISION

HOW TO USE THE LIVE FEED SCREEN



Turn on the live feed screen by flipping the switch located on the lower right side of screen from OFF to ON. The screen will display "NO SIGNAL" until the drone is turned on and connected to the camera. Use the live feed screen to see your drones camera feed, photo and video info, as well as the battery level for the live feed screen. Below are the three screens you may see while operating the drone.

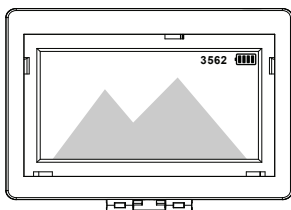


NO SIGNAL

This means the drone is not connected to the live feed screen. Turn on the drone to connect and see the live feed from camera.

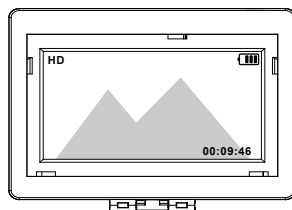
LOW POWER

This means the live feed screen battery is low and needs to be recharged. Turn off everything and charge the screen before using again.



PHOTOS

After taking a photo, a number will appear next to the screens battery level. This number indicates how many more photos can be taken based on space available on the installed memory card.

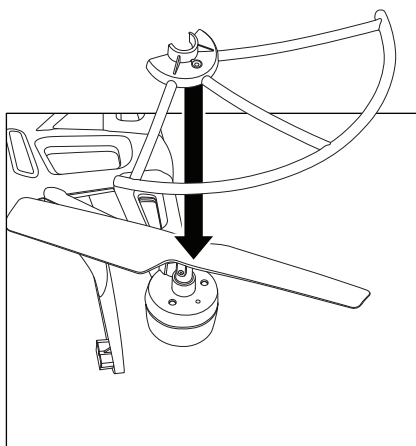
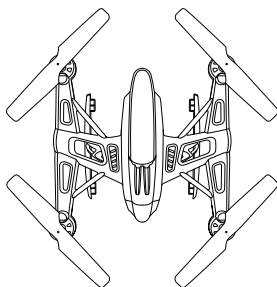
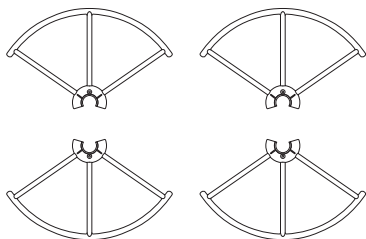


VIDEOS

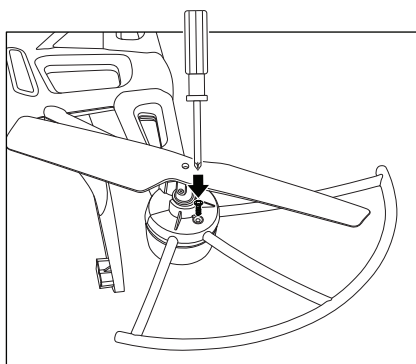
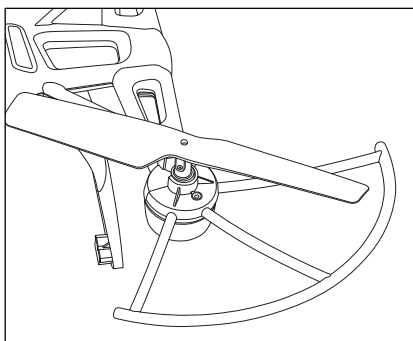
After taking a video, numbers will appear in the bottom right corner of the screen and "HD" will appear in the top left. This number indicates how long the current video has been recording for in **Hours:Minutes:Seconds**. After the recording has been stopped the number will change to how much video can be recorded based on space available on the installed memory card.

INSTALLING THE ROTOR GUARDS

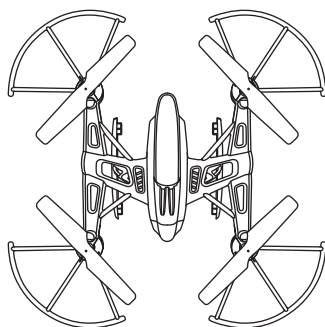
The drone comes with 4 rotor guards. The rotor guards are universal and can be installed anywhere on the drone.



Pop the rotor guard into place in as shown in the illustration above. Make sure the 2 pegs underneath the rotor guards line up with the 2 holes on the drone.

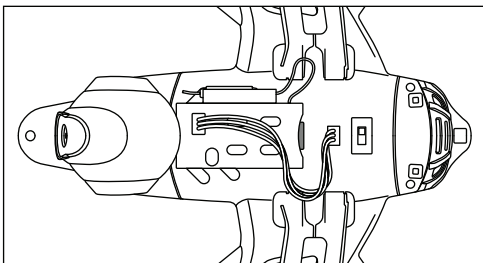
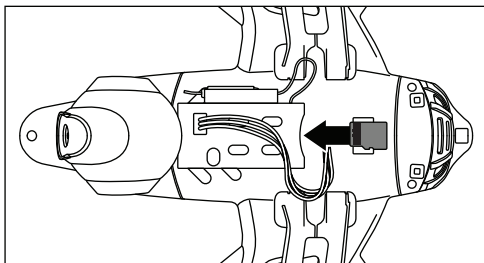


Firmly screw down the rotor guard with the included screws and screwdriver. Repeat the process for the other rotor guards.



The drone should look like the illustration above once all rotor guards are correctly installed.

INSTALLING THE MEMORY CARD

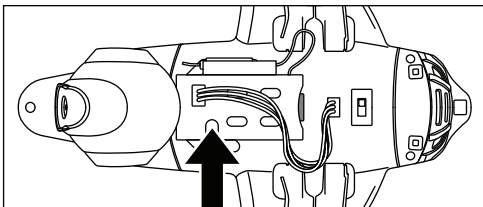


Memory Card Installation: The gold contact points on the memory card should be facing you. Insert the memory card into the slot, lightly press until the memory card clicks into place.

Removing Memory Card: Press the memory card to eject the card. If the drone is on you will see a steady **BLUE LED LIGHT** and a **BLINKING RED LED LIGHT** unless the memory card is properly inserted.

CAMERA INDICATOR LIGHT

The Camera indicator light is located underneath the drone's camera. The illustration to the right points out where it is located.



CAMERA INDICATOR LIGHT

- **BLUE:** Camera Standby Status
- **BLUE + RED:** Recording Video
- **BLUE + RED FLASHES ONCE:** Taking Photo

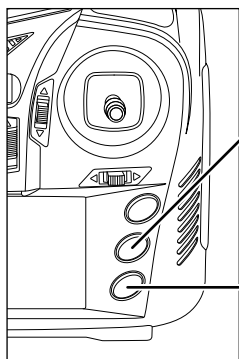


PHOTO
BUTTON

RECORD VIDEO
BUTTON

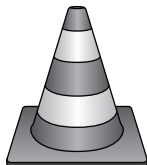
TAKING PHOTOS: Make sure both the remote and drone are on and you've gone through the syncing process first. Press the **Photo** button to take a single image. The remote will beep once and the RED LED on the camera will flash once to indicate a picture has been taken. The photos will be saved to the installed memory card. Photos taken are 1.92 megapixels (1600 x 1200 resolution) and saved in .jpeg format.

NOTE: Pictures cannot be taken while camera Recording Video.

RECORDING VIDEO: Make sure both the remote and drone are on and you've gone through the syncing process first. Press the **Record Video** button to start recording video, you should hear a single beep from the remote. Press the button again to stop recording, you will hear another single beep from the remote. The video will be saved to the installed memory card. Video is recorded at 720p 30fps in .avi format.

VIEWING VIDEO/PHOTO FILES ON THE COMPUTER

If you want to view your video or photo files from the drone on your computer, you'll have to transfer them over first. Videos and photos can be viewed using media players. If you are having issues viewing your drone videos, try downloading and viewing the video files with VLC media player.



VLC media player

<http://www.videolan.org/vlc/index.html>

Download the latest version for the operating system you are using and install the VLC program. Restart your computer if necessary.

Once the USB adapter with the memory card is plugged in, Windows AutoPlay will give you options to quickly access files saved, select "Open folder to view files" to go directly to the files location on card.

In Mac, locate the memory cards mounted image and open folder to access the saved files.

Right click video files and select "Open with" to select VLC media player and open and view video files.

To save time in the future select "Choose default program..." to select VLC as the program to open the selected file type. Once set files will automatically open in VLC media player when double clicked to open.

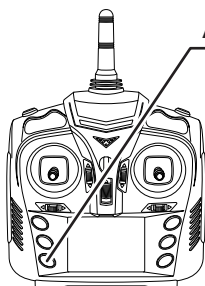
PREFLIGHT PREP / SYNCING THE DRONE TO THE REMOTE

1. Make sure the battery pack is connected, in the battery bay and the battery cover is closed securely.
2. Flip the switch on the bottom of the drone to the ON position and place the drone on a flat surface with no obstructions in its flight path. The drone's LED lights will begin to flash.
3. Turn on the Remote Control using the switch at the center of the remote. The remotes power indicator will start flashing.
4. Push the left joystick on the remote all the way down, then all the way up, then all the way back down again. The remote will beep twice and the LED lights on the drone and the power indicator light on the remote will stop flashing. This means the drone is paired. (If this does not occur, turn off the remote and drone and try again.
5. Once paired, the drone is ready to fly. All you need to do is press the AUTOPILOT button on the remote and the rotors will start to spin. Slowly press up the on throttle stick to take off. It is **STRONGLY** recommended that you use the drone outdoors during initial flights.

FLYING THE DRONE

Before flying the drone for the first time please read the instructions carefully and make sure you fully understand how to control your drone.

AUTOPILOT BUTTON



AUTOPILOT

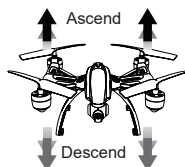
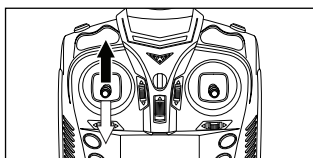
Once you've gone through the flight preparation, press the **AUTOPILOT** button once and the drone's rotor will start to spin. You can now slowly press up on the throttle stick and the drone will take off.

Once the drone is in the air, press the **AUTOPILOT** button again and the drone will slowly descend and land and the rotors will eventually stop spinning.

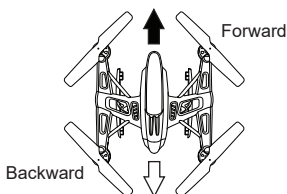
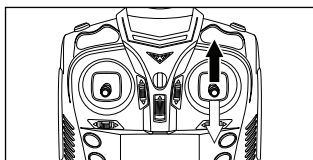
YOU MUST PRESS THE AUTOPILOT BUTTON TO START THE ROTORS SPINNING. YOU WILL NOT BE ABLE TO TAKE OFF UNTIL YOU PRESS THE AUTOPILOT BUTTON.

BASIC FLIGHT CONTROLS

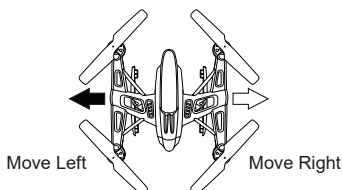
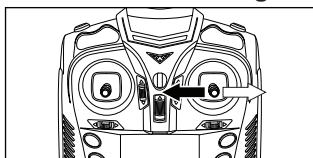
Throttle



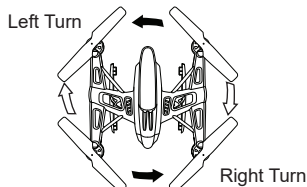
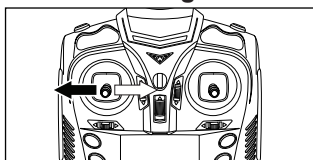
Forward/Backward



Move Left/Move Right

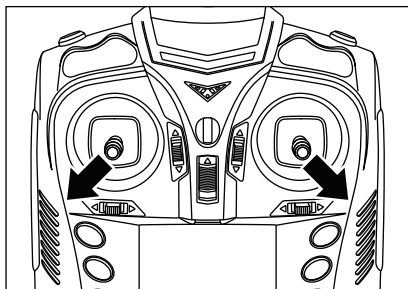


Left Turn/Right Turn



FLYING THE DRONE CONTINUED

EMERGENCY STOP



If the drone crashes or to avoid a collision you will need to do an EMERGENCY STOP.

Push the left joystick to the bottom left and push the right joystick to the bottom right at the same time and hold the position until the drone shuts down.

The rotor blades should stop immediately when performing an EMERGENCY STOP.

WARNING: The drone will fall to the ground if you perform the EMERGENCY STOP while the drone is in flight.

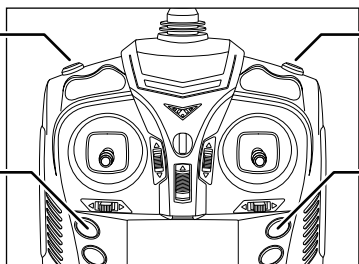
SPECIAL ACTIONS

SPEED CONTROL

FLIP STUNT MODE

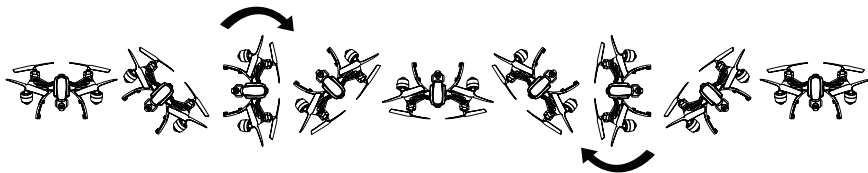
RETURN ASSIST

EASY MODE



SPEED CONTROL

The drone has 3 speed settings. Low, medium and high speed. The drone will always default to low speed when you first turn it on. Press the SPEED CONTROL button once and you will hear 2 beeps, meaning it is now on medium speed. Press the SPEED CONTROL button again and you will hear 3 beeps, meaning it is now on high speed. Press the button again to cycle back to low speed.



FLIP STUNT MODE

Have the drone hover at least 10 feet off the ground. Press the Flip Stunt Button and push the right joystick in the direction you want the drone to perform a single flip.

RETURN ASSIST

Press the RETURN ASSIST button once while the drone is in flight and the drone will slowly start to fly toward the pilot. You will still need to guide the drone with the right joysticks left and right movement to avoid any obstacles.

EASY MODE

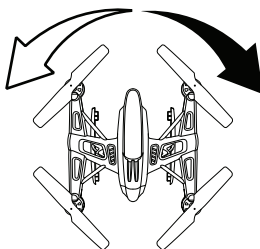
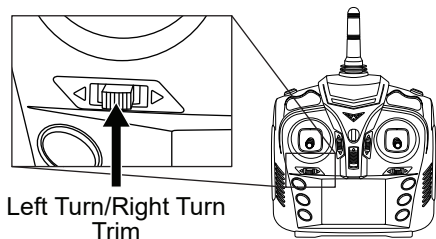
Simplifies drone flight use by limiting command directions based on your direction. Use Easy Mode when you are having difficulty telling which direction the drone is pointing because of distance. Press the Easy Mode button once to activate it. Press again to deactivate it.

ADJUSTING THE TRIM

When drone moves with no directional transmitter input, adjust the trim controls until hovering is stable.

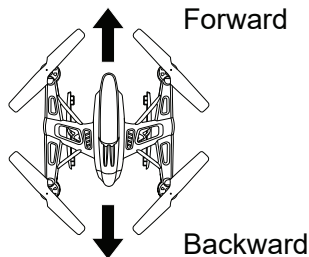
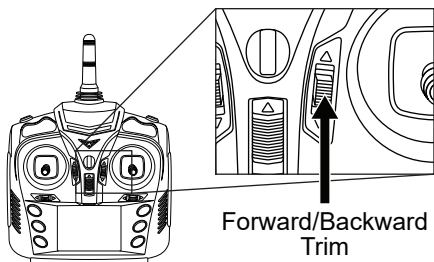
If the drone is spinning to the left, push the **Left Turn/Right Turn Trim button** to the **RIGHT** until the drone stops spinning.

If the drone is spinning to the right, push the **Left Turn/Right Turn Trim button** to the **LEFT** until the drone stops spinning.



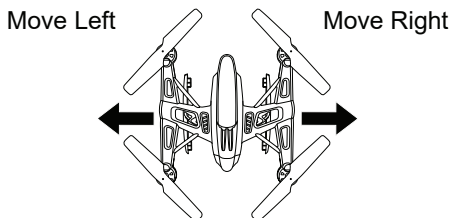
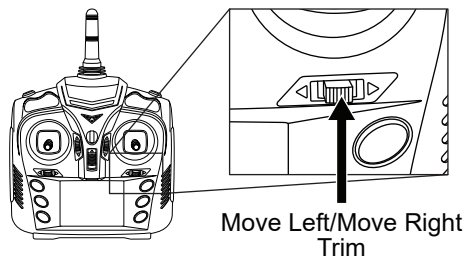
If the drone is moving forward, push the **Forward/Backward Trim button DOWN** until the drone stops moving forward.

If the drone is moving backward, push the **Forward/Backward Trim button UP** until the drone stops moving backward.



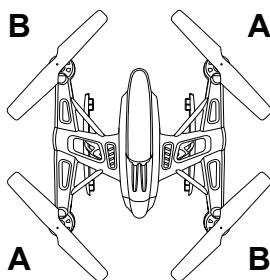
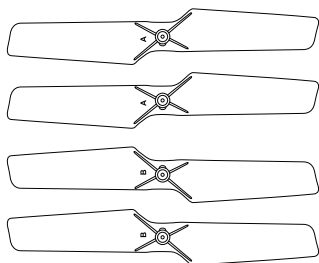
If the drone is moving left, push the **Move Left/Move Right Trim button** to the **RIGHT** until the drone stops moving left.

If the drone is moving right, push the **Move Left/Move Right Trim button** to the **LEFT** until the drone stops moving right.

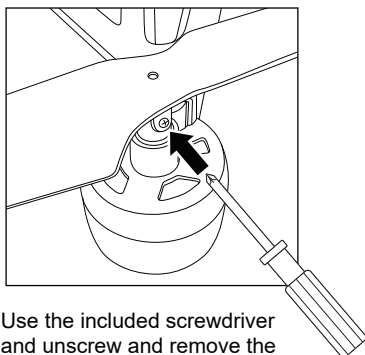


REPLACING THE ROTORS

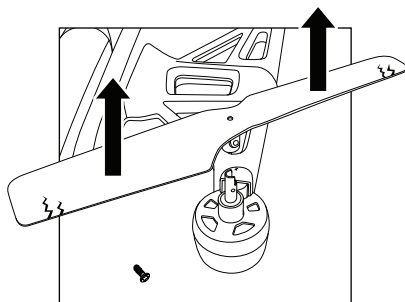
The rotors may become damaged during a collision. The drone comes with 4 spare rotors. Please replace damaged rotors immediately.



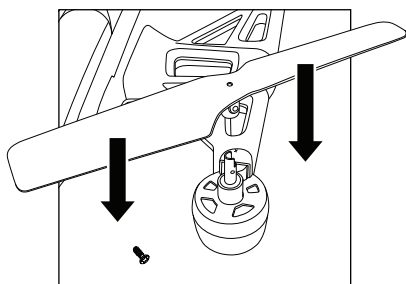
The drone comes with 2 A rotors and 2 B rotors. The A and B rotors need to be installed on specific locations on the drone for it to fly properly. Check the bottom of the rotors to see if they're either A or B rotors and use the illustration above to install them in the correct location.



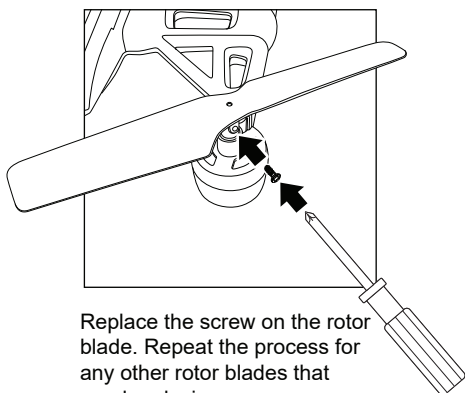
Use the included screwdriver and unscrew and remove the screw on the rotor blade.



Remove the damaged rotor blade. Make sure you don't misplace the screw.



Place the correct A or B rotor blade on top of the metal peg. Line up the hole on the peg with the hole on the rotor.



Replace the screw on the rotor blade. Repeat the process for any other rotor blades that need replacing.

POST FLIGHT

After you are done flying the Drone make sure the battery pack on the drone is disconnected and the transmitter power is turned off. If you are not going to use the drone for a long period of time, please remove the AA batteries to prevent the batteries from draining or leaking.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Drone is synced to the remote but the rotors won't start spinning.	You haven't "started" the drone by pressing the AUTOPILOT button.	Press the AUTOPILOT button once.
Drone is unresponsive. The Transmitter light keeps flashing.	Transmitter is not syncing with drone.	Go through the syncing process.
Drone is unresponsive.	Transmitter and or drone is not powered ON.	Turn both transmitter and drone ON.
	Transmitter batteries are installed incorrectly.	Install the batteries with the correct polarity.
	Transmitter batteries are drained.	Install fresh batteries to the transmitter.
Transmitter light is ON. Drone is unresponsive.	Drone's battery pack is drained.	Charge the drone's battery pack.
Drone's rotors spins but doesn't take off.	Rotor blades are damaged.	Replace the damaged rotor blades.
	Drone's battery pack is drained.	Charge the drone's battery pack.
	Drone is not on a flat surface.	Place the drone on a flat surface before attempting to take off.
Drone is shaking when flying.	Rotor blades are damaged.	Replace the damaged rotor blades.
Drone moves while hovering without transmitter input.	Trim needs to be adjusted.	Adjust the trim.
Drone still moves forward after adjusting the trim.	Gyroscope midpoint is off.	Turn off both transmitter and drone. Go through power on process and make sure you place the drone on a flat surface before taking off.

MADE IN CHINA

