1. Fly in an open wide area without large obstacles like buildings, trees or electric wires within 100 feet as they may distort the GPS signals and you may crash the drone. Do not fly close to metal structures with strong magnetic fields.

2. Place the drone on a flat stable surface before take off. After powering on, the drone will start flight system checking and gimbal system checking by itself. Do not touch or move it during this process as it may result in a failure and errors in calibration.

3. The drone cannot take off until it connects to enough GPS satellites and the Transmitter / Smart Watch screen shows a “ (“. Do not start follow me flight mode until the watch gets a GPS signal strength of 10 and shows a “ (“. If the drone has a weak GPS signal, move to another area and try again.

4. Do not fly in strong winds, rains, lightning, snow or fog. Bad weather may weaken the GPS signals or even damage Recon.

5. Keep the drone 15 feet away from people or animals when it takes off.

6. Max flying range is 3,250 feet but it is recommended to keep within 500 feet. Do not fly across large obstacles. Always keep the drone within your line of sight.

7. If the drone suddenly deviates or keeps ascending (flying upward) due to surrounding interference, immediately press the “hover” and “land” button to force Recon to land.

8. If the drone crashes by mistake, press the land button or pull down the left flight stick to the lowest point to shut down the motors. Do not touch while the propellers are spinning.

9. Ensure all components are in good, working condition and fully charged before every flight.

10. Turn off the battery for the Recon, camera, and transmitter or smart watch after every use to save battery life.
Please go through the checklist of items below after unboxing:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recon Drone</td>
<td>x1</td>
</tr>
<tr>
<td>Memory Card</td>
<td>x1</td>
</tr>
<tr>
<td>Carrying Case</td>
<td>x1</td>
</tr>
<tr>
<td>Propeller</td>
<td>x4</td>
</tr>
<tr>
<td>Landing Skids</td>
<td>x2</td>
</tr>
<tr>
<td>Camera/Gimbal</td>
<td>x1</td>
</tr>
<tr>
<td>Smart Watch</td>
<td>x1</td>
</tr>
<tr>
<td>Transmitter</td>
<td>x1</td>
</tr>
<tr>
<td>Drone Battery</td>
<td>x1</td>
</tr>
<tr>
<td>Balance Charger &amp; Cables</td>
<td></td>
</tr>
<tr>
<td>Micro USB Cable</td>
<td>x1</td>
</tr>
<tr>
<td>Mini USB Cable</td>
<td></td>
</tr>
</tbody>
</table>

The box contents may vary occasionally due to different configurations. Subject to the description of the retail store or ordering page.
Charging Everything

Turn on the battery, transmitter and smart watch to check the battery levels.

Battery Running Times:
Drone Battery - 25 min.  Transmitter - 24 hours  Smart Watch - 1 hour  Camera - 70-90 min.

Insert the AC power cord into the balance charger and plug into a standard U.S. wall outlet. Connect the battery with the balance charger using the supplied charging cable. When the battery is charging, the LEDs will light and indicate the battery level.

The LEDs on the charger will flash one by one and indicate charging progress. When all 4 LEDs are on, the battery has been fully charged.

The transmitter and smart watch use the same type of USB cable to charge. The camera uses the large Mini USB cable to charge when not connected to drone.

Battery Charging Times:
Drone Battery - 2 hours  Transmitter - 6 hours  Smart Watch - 1 hour  Camera - 2 hours

Notes: Insert the charging cable into the correct position on battery. Otherwise, the battery will not charge and all 4 LEDs will flash continuously. When the transmitter and smart watch are charging, the screen will display a indicating the charging progress. The camera will start charging when a red light is on and is fully charged when the red light turns off.
Setup & Assembly Continued

Unfolding the Recon

Unfold the rear arms before unfolding the front arms. Each arm has a self locking mechanism, slowly twist each arm outward till the arms are fully extended and click into place.

To fold up Recon, firmly push the arms inward in the reverse order with the front arms folding in first and the rear arms last. The self locking mechanism will release each arm under pressure.

Attaching the Landing Skids

Match the landing skids with the skid mounts and push up into place. To dismount the skids, pull them down smoothly till removed.
Installing the Rotors

Attach the silver cap rotors onto the silver motors and secure them by twisting clockwise.

Attach the black cap rotors onto the black motors and secure them by twisting counter-clockwise.

Arrows around the rotor cap indicate the directions of tightening and loosening.

To release the rotors from the motors, just spin in the opposite direction.

Notes:
Make sure the rotors are tightened on the right motors before flying otherwise the drone may crash.
Setup & Assembly Cont.

Installing the Gimbal & Camera

Unscrew the camera strap from the gimbal.

Attach the camera into the gimbal frame (the camera lens is on the right). The USB port must line up and plug in to the camera from the side as shown. Fasten the camera strap with the two thumb screws.

Fit the gimbal board under the bottom front mount of the drone and push the upper part of the gimbal into place. To remove gimbal push out the tabs on each side of gimbal mount to release, gimbal will push out, remove carefully.

Notes:
Do not install or remove the gimbal while the drone is powered on. You may damage the gimbal.
**Installing & Removing the Recon Battery**

To install the battery pull up the spring button on the back of the drone. Align the battery with the drone, matching the battery plug with the power plug, slide the battery into the drone until it is locked in securely.

To remove the battery, pull up the spring button first and pull out the battery.

**Notes:**
Do not remove battery while powered on or the battery may be damaged.
Do not force the battery into frame if it gets stuck. Wiggle the battery a few times until the battery plug goes into the drones power plug.
Camera Instructions & Overview

1. Insert a memory card into the camera. The camera supports a maximum size of 64GB. The camera can only support 4K or 1080p 60FPS video with memory cards with a reading rate over 80MB/S.

2. Plug into Gimbal if using with drone and remove the camera lens cover.

3. The camera will automatically turn on when the drone is turned on. It will display “Waiting For Connect” on the LCD Display and send out a WiFi signal with the name “Recon_#######” Enter the password “1234567890” to connect.

4. Once connected to the camera, all settings can be changed through the app.

5. When done just turn off the drone and the camera will automatically shut off. Hold down the Power Button to power down when using by itself.

6. The photos or videos can be transferred to a computer via the memory card or in app via the media library directly to the smartphones photo library.

Notes:
1. Do not insert or take out the memory card while the camera is powered on. The card won’t go into the slot if inserted in the opposite position, or is flipped, do not force it.
2. The WiFi signal may be weakened when the camera power is low. The WiFi distance and image quality may vary on different mobile devices and different surroundings.
3. The camera can only support 4K or 1080p 60FPS video with memory cards with a reading rate over 80MB/S.
Recon Drone Live Feed App Instructions

1. Search “Recon Drone” on the Apple Store or Google Play and download it to your smartphone.

2. Turn on the Recon drone. Open the app on your phone and tap “WiFi Settings.” Connect your smartphone to the cameras WiFi signal and enter the password “1234567890” to connect.

3. Go back to the app and tap “Connect” to enter the live video interface.

4. Tap “Photo” or “Record” to switch to the shooting mode you want. Tap the shutter button to take photo or video.

5. Tap 📈 to go to Media Library and tap “save” to download the file to your mobile device.

6. Tap ✗ to exit the live video interface. Tap “Local” icon to check the local media you have downloaded from the camera.

Notes:
1. App requires android 4.2 or later and IOS 7.1 or later.
2. The app cannot film or shoot if there is no memory card inside the camera.
3. The video transmission range is around 650 feet depending on environment. The video may delay and the app may lose connection if the drone gets too far from your smartphone.
Transmitter Operations

Transmitter Overview & Binding to the Recon Drone

Code Binding Drone to Transmitter
The drone has already been binded to the transmitter included by default. The following code binding is not necessary unless the drone is going to be controlled with a new transmitter or if your current transmitter is having trouble connecting.

1. Turn on the drone and press the button underneath the gimbal to start binding.
2. Turn on the transmitter and hold the and at the same time until the screen displays “Binding ID=XXXX”.
3. The transmitter will connect with the drone when the screen enters the control interface.
Preparing the Smartphone Cradle

1. Push the cradle into the transmitter, twist the nut on the screw to secure and make the cradle face to you.
2. Adjust the cradle to your desired position, stretch the cradle clamp and attach your smartphone into the clamp.

Normal Mode & Advance Mode

Normal Mode
The default control mode is normal mode which requires a GPS signal strength of at least 6 to launch the drone.

Advanced Mode
Advanced mode allows the drone to take off without GPS signal connections and fly at a higher speed with a longer range.

To switch the control modes, hold \( \text{ON} \) and turn on the transmitter at the same time. Advanced mode is for experienced pilots only, start with normal mode.

Left Throttle Mode & Right Throttle Mode

The left stick is set to control the throttle by default. The throttle control can be switched to the right stick by holding \( \text{ON} \) and turning on the remote. To switch back to the left, turn on the remote and hold \( \text{ON} \).
Preparing for Flight using the Transmitter

1. Place Recon on a flat stable surface and turn on the drone by pressing & holding the power button on the battery pack. The drone will immediately start the flight system check and gimbal system check when the front red LEDs turn on and the rear blue LEDs quickly blink.

2. When the rear blue LEDs slowly blink and the drone makes a beep sound, this indicates that the flight system check is complete.

3. When the gimbal is level, facing down, and the drone makes a second beep sound, this indicates that the gimbal is ready.

4. Turn on the transmitter by pushing up the power switch. In a few seconds the transmitter will connect to the drone when the screen enters the control interface.

5. Wait until the drone gets a GPS signal strength of at least 6 and the screen displays a icon before take off. If the satellite signal strength is not stable, try it in another area.

**Warning:**
1. Do not touch or move the drone while it is system checking.
2. If the drone is idle for 10 minutes with the power on, it will begin emitting an alarm sound. To stop that sound, turn off the battery.

**Notes:**
Only one control device may be connected to Recon at any time. Do not attempt to pair the Smart Watch once the Transmitter as been connected. Doing so may result in the drone malfunctioning and possibly crashing.

**Warning:**
1. Do not touch or move the drone while it is system checking.
2. If the drone is idle for 10 minutes with the power on, it will begin emitting an alarm sound. To stop that sound, turn off the battery.
Transmitter Operations Cont.

Take Off

1. Activate the rotors by pushing the left stick to the lower right corner and hold it for 3 seconds.

2. While the rotors are spinning, push the stick up slowly to take off, put the stick back in the middle position afterward to hover in place. Tapping will also make the drone ascend to 15 feet high and hover in place autonomously.

Notes:
If the pilot doesn’t make the drone take off within 6 seconds after the motors are activated, the rotors will shut down and be locked.

Transmitter Flight Controls

1. To make the drone ascend, push the left stick up.

2. To make the drone descend, pull the left stick down.

3. To make the drone rotate left, push the left stick to the left.

4. To make the drone rotate right, push the left stick to the right.

5. To make the drone move forward, push the right stick up.

6. To make the drone move backward, pull the right stick down.

7. To make the drone move to the left, push the right stick to the left.

8. To make the drone move to the right, push the right stick to the right.

When the left stick is back at the center, the drone will hover at its current position.

Notes:
1. The red LEDs indicate the front of Recon. Always be aware of the orientation during fly. Pressing and holding can turn off the front red LED lights.
2. Slowly move the sticks to avoid sudden or unexpected changes of position.
Transmitter Operations Cont.

**Orbit Mode**

When the drone is in flight pressing and holding \[\textbullet\] will activate Orbit Mode. This mode autonomously moves the drone to maintain a 15ft. radius orbiting the point where you activated the mode. The drones front will point to the center of orbit at all times. Adjust the camera gimbal to get your target in frame.

During Orbit Mode, pulling the right stick to the left can make the orbit radius larger, pulling the right stick to the right can make the orbit radius smaller. Pressing \[\text{□} \text{□} \text{□} \text{□} \text{□} \] once will stop Orbit Mode.

**Gimbal Controls**

The left dial is used to control the pitch of the gimbal within 90 degree. The right dial is used to control the yaw of the gimbal within 180 degree.
Landing

1. Slowly push down on the throttle stick to make the drone land. Do not push down too hard or the drone may descend too fast and crash on the ground. After landing, push the throttle stick to the lowest point and hold it for 5 seconds to shut down the motors.

2. Pressing ↓ once will make the drone autonomously land at its current spot. The drone may bounce a few times when landing, this is normal. The motors will stop rotating 5 seconds after landing on the ground.

During auto landing, you can use the controls to reposition the drone if the landing area is not flat or safe.

Return Home

If the drone is lower than 50 feet in the air, pressing and holding ↓ will make the drone autonomously fly to 50 feet, slowly fly back to the take off point and land. If the drone is higher than 50 feet it will maintain current height and slowly fly back to the take off point and land.

If there is an obstacle in the way of returning home, you can still use the controls to adjust the positioning of the drone to return safely.
Notes:
Do not press two buttons at the same time as they may interfere with each other.
Press the hover button first before switching from one flight mode to another.

Code Binding Drone to Smart Watch
The drone has already been binded with the smart watch included by default. The following code binding is not necessary unless the drone is going to be controlled with a new smart watch or your current smart watch is having trouble connecting.

1. Turn on the drone and press the button underneath the gimbal to start binding.
2. Turn on the watch and hold the and at the same time until the smart watch displays “Binding ID=XXXX”.
3. The watch will connect with the drone when the smart watch screen enters the control interface.

Flight Height

Follow Me (press once)

Follow Me Mode

Power on/off (press & hold)

Recon GPS Strength

Gimbal Yaw Left (press & hold)

Gimbal Yaw Right (press & hold)

Gimbal Pitch Up/Down (Rotate Up/Down)

Gimbal Yaw Right (press & hold)

Hover (press once)

Activate Rotors (press & hold)

Return Home (press & hold)

Ascend (press once)

Auto Take Off (press once)

Auto Land (press once)

Follow Me Mode

Rotors Locked

Ready to fly

Stabilize

Watch GPS Strength

Recon Battery Level

Follow Me Mode

Joystick

Watch Battery Level

Time

Distance

Panoramic Mode (press once)

Orbit Mode (press & hold)

Follow Me Mode

Panoramic Mode

Orbit Mode

Flight Height

Recon GPS Strength

Watch GPS Strength

Follow Me (press once)

Power on/off (press & hold)
Preparing for Flight using the Smart Watch

1. Place Recon on a flat stable surface and turn on the drone by pressing & holding the power button on the battery pack. The drone will immediately start the flight system check and gimbal system check when the front red LEDs turn on and the rear blue LEDs quickly blink.

2. When the rear blue LEDs slowly blink and the drone makes a beep sound, this indicates that the flight system check is complete.

3. When the gimbal is level, facing down, and the drone makes a second beep sound, this indicates that the gimbal is ready.

4. Turn on the smart watch by holding the power button. In a few seconds the watch will connect to the drone when the screen enters the control interface.

5. Wait until the drone gets a GPS signal strength of at least 10 and the screen display a 🌍 icon before take off. If the satellite signal strength is not stable, try it in another area.

Notes:
Only one control device may be connected to Recon at any time. Do not attempt to pair the Transmitter once the Smart Watch as been connected. Doing so may result in the drone malfunctioning and possibly crashing.

Warning:
1. Do not touch or move the drone while it is system checking.
2. If the drone is idle for 10 minutes with the power on, it will begin emitting an alarm sound. To stop that sound, turn off the battery.
**Smart Watch Operations Cont.**

**Take Off**

Before take off, press and hold 

![Activate Rotors (press & hold)](activate_rotors_icon) to activate the drones four rotors. While the rotors are still rotating, pressing 

![Take Off (press once)](take_off_icon) will make the drone ascend to 15 feet high and hover in place autonomously.

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**Smart Watch Flight Controls**

1. Pushing the joystick up will make the drone fly forward. Pushing the joystick down will make the drone fly backward.

2. Pushing the stick to the left will make the drone fly to the left. Pushing the stick to the right will make the drone fly to the right.

3. Pressing 

![Joystick](joystick_icon) once will make the drone ascend autonomously until 100 feet high.

4. Pressing 

![Joystick](joystick_icon) once will make the drone descend autonomously until 15 feet high.

5. Pressing in the joystick will turn off the red LEDs on the drone.

When the joystick is released, Recon will autonomously hover in place. Pressing 

![Joystick](joystick_icon) will interrupt the drone during any function and make it hover in its place.
**Orbit Mode**

When the drone is in flight pressing and holding ![orbit_icon] will activate Orbit Mode. This mode autonomously moves the drone to maintain a 15ft. radius orbiting the point where you activated the mode. The drone's front will point to the center of orbit, adjust the camera's gimbal to get your perfect shot.

During Orbit Mode, pulling the joystick left or right can make the orbit larger or smaller. Pressing ![hover_icon] will stop Orbit Mode and make the drone hover in its place.

**Panoramic Mode (Auto Rotate)**

Pressing ![rotate_icon] once will make the drone rotate clockwise in place autonomously. Press ![stop_rotate_icon] to stop rotating. Panoramic Mode is not only used for panoramic photos (Use Recon Drone app to take photos/videos), but also to turn the orientation of the drone.

During this mode manually take pictures or video using the Recon Drone app on your smartphone. Panoramic Mode controls the drone's movement, not the camera.
Follow Me

After the Smart Watch gets a GPS signal strength of at least 8 and shows an “F”, press once to activate Follow Me mode. The drone will autonomously follow the Smart Watch when they are 15 feet away from one another at a speed of up to 44mph. The drone will face the Smart Watch during this mode, adjust the cameras gimbal to get your perfect shot.

When the Smart Watch stops moving, the drone will hover approximately 15 feet from the Smart Watch. Pressing will stop the Follow Me mode.

Notes:
Keep an eye on the following path and ensure there are no obstacles in the way. Do not move too fast when the drone is following you to reduce the chance of a lost connection with the Smart Watch.

Gimbal Control

Pressing and holding will make the gimbal yaw left. Pressing and holding will make the gimbal yaw right.

Turning the dial up will pitch the gimbal up. Turning the dial down pitch the gimbal down.
Smart Watch Operations Cont.

**Landing**

Pressing `Land` once will make Recon autonomously land at its current spot. The drone may bounce a few times when landing, this is normal. The rotors will stop rotating 5 seconds after landing on the ground.

During auto landing, you can use the joystick to reposition the drone if the landing area is not flat or safe.

**Return Home**

If the drone is lower than 50 feet in the air, pressing and holding `Return Home` will make the drone autonomously fly to 50 feet, slowly fly back to the take off point and land. If the drone is higher than 50 feet it will maintain current height and slowly fly back to the take off point and land.

If there is an obstacle in the way of returning home, you can still use the joystick to adjust the positioning of the drone to return safely.
1. Can the gimbal be stabilized after powering on?
   
   No, if the flight checking has failed move to a new area and try readying again.

2. Can the drone take off immediately after powering on?
   
   The drone is set not to take off if the flight checking is not completed or the drone does not get a strong enough GPS signal. Try Advanced Mode to lift these limits.

3. Why is the drone GPS signal strength low and connecting slowly?
   
   The GPS may be weakened by surroundings. Find a new open area and try again.

4. Why won't the camera shoot 4K video?
   
   The memory card is not fast enough to support 4K video. Replace the card with one that has a reading rate of over 80mb/s.

5. What is the max flight height of the drone?

   With transmitter, the height limit of normal mode is about 150 feet and advanced mode is 400 feet for safety concerns. The drone will automatically stop when reaching any limits.

6. What is the max flight range of the drone?

   Max control range of smart watch is 150 feet and transmitter is 3250 feet. If the drone moves out of the range and loses connection, it will hover and automatically return home.

7. What will happen if the transmitter or smart watch shut down?

   The drone will automatically return home.

8. Will the drone fall down when the battery runs out?

   When the battery becomes low, the drone will emit an audible alarm with red LEDs flashing and will automatically land at its current location.

9. Are the drone, smart watch or transmitter waterproof?

   No, it is better to keep all components away from any areas with water.

10. Can the drone fly in frozen weather?

    The lowest working temperature for a LiPo battery is 32°F. You can activate the rotors without propellers to warm up the battery for a while if the temperature is under 32°F.

11. Why does the App cut the video stream and say “Connection Error”?

    You may have moved the drone more than 650 feet away from your smartphone so the WiFi connection has been lost. Bring the drone back closer and tap “Reconnect” on the App to reconnect the WiFi connection.
Please note that the Recon 4K Follow Me Live Feed Drone is not a toy for children under the age of 14 and is recommended to be operated under adult supervision.

Do not fly the drone near no-fly zones according to your local laws and regulations. Adhere to all local and federal laws regarding piloting Drones and other Unmanned Aircraft Systems.

You are required to register this drone online @ registermyuas.faa.gov

Please read through and understand the user manual and make sure you master the various functions and flying before using in public areas.

World Tech Toys will not take any responsibilities of damage, injury or financial loss by user operation.