RED HERON HD+

With 120° wide-angle 720P HD Camera

USER MANUAL



U49C

FOR MORE INFORMATION

Visit us online at **force1rc.com** for product information, replacement parts, and flight tutorials.

ATTENTION:
BEFORE FLYING YOUR DRONE, PLEASE WATCH THIS FLIGHT INSTRUCTION VIDEO.

https://youtu.be/tk3qzsUwoWs

FORCE1

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WELCOME!

Welcome to the Force1 Team, and thank you for your Force1 drone purchase. Please read this manual carefully before drone operation.

(1) This drone is not a toy! It's a pro-level drone suitable for experienced RC drone users aged 14 years and older. You accept all liability for operation.

(2) FAA rules apply. Visit faa.gov for more information. Please download the B4UFLY mobile app for the most up-to-date zoning info, and heed all local government ordinances.

(3) The flying field must be legally approved by your local government.

(4) This drone does not have a serial number, and weighs approximately 240 grams.

Any questions? We'd love to hear from you! Please include your order number when you contact us at support@force1rc.com for fast, friendly service.

***Please use only original Force1 parts and accessories.**
***Please keep the packaging and this user manual for future reference.**

SAFETY PRECAUTIONS

This drone is suitable for experienced RC drone operators aged 14 years and older. It contains small parts, and should be kept out of reach of small children.

Please follow these safety procedures:

(1) Flight Zone
FAA rules apply. Visit faa.gov for more information. Please download the B4UFLY mobile app for the most up-to-date zoning info, and heed all local government ordinances.

(2) Avoid Moisture
Humidity and water can damage your drone, which in turn may cause accidents.

(3) Fly Safely
Please operate your drone as your skill level allows. User fatigue, impairment and improper operation can cause accidents.

(4) Avoid Moving Parts & Hot Motors
Do not touch propellers, motors or other moving parts while your drone is on.

(5) Avoid Heat
Keep your drone away from heat and prolonged exposure to direct sunlight to avoid damage.

LI-PO BATTERY CARE

Avoid Overheating
Your batteries will sometimes be warm/hot to the touch after use. This is normal, but beware that battery components will fail if not allowed to cool down between uses. Also, do not leave batteries exposed to direct sunlight.

Store Properly
Store batteries at room temperature, between 5C°/40°F and 27°C/80°F.

Use Carefully
- Leave time between charging and using the battery
- To extend the lifetime of the battery, always keep about 20% of the power remaining in the drone battery (rather than completely draining it)
- If the battery is pushed beyond its limits, the battery could get hot and the performance will drop
- When using the battery for a long time, the battery will increase in temperature. If it is sealed, the air inside will inflate rapidly causing further heating

Charging
- DO NOT overcharge the battery; never charge batteries unattended, and stop charging as soon as your batteries indicate they are charged
- DO NOT attempt to charge batteries that appear damaged in any way (cracking, swelling, discoloration, etc.)
- If you feel a battery isn't charging properly, try using another charger if possible. If you find your battery or charger is defective, please visit force1rc.com for a replacement, or email us at support@force1rc.com
- To inspect a battery, remove it from the device and examine the battery, battery pins and contacts. If you notice damage, please visit force1rc.com for a replacement, or email us at support@force1rc.com
- Check your battery and connections after every crash
- Please use genuine factory parts and replacements from force1rc.com



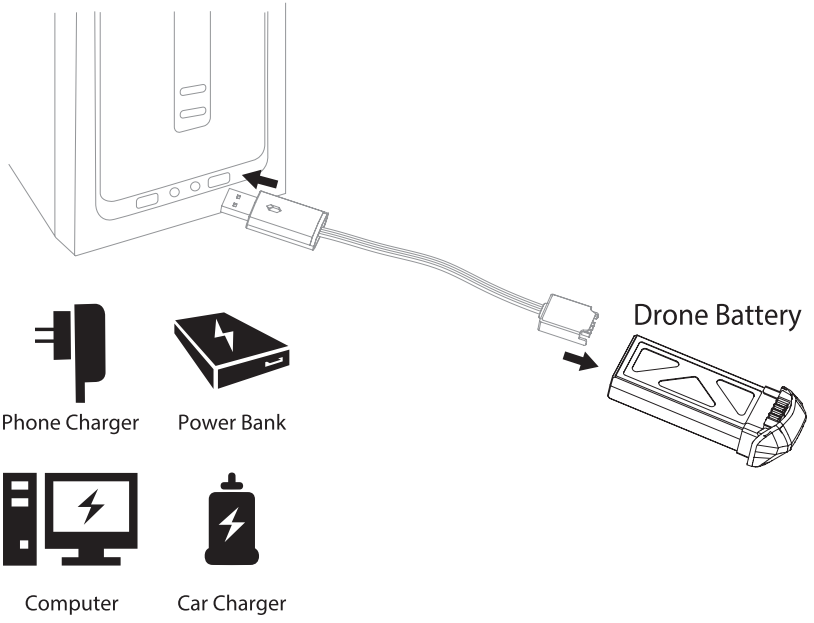
LI-PO BATTERY DISPOSAL & RECYCLING

Do not put lithium-polymer batteries in household trash.
Please contact your local waste management agency or LI-PO battery recycling center for more info.



DRONE BATTERY CHARGING

1. Connect the drone battery with USB cable first and then choose one of the methods below to connect with USB plug.
2. The red USB indicator light turns on when charging and the light turns green when fully charged.



WARNING:
DO NOT LEAVE BATTERY CHARGING UNSUPERVISED.

BOX CONTENTS



DRONE



TRANSMITTER



2 x 7.4v 1000mAh LiPo BATTERY



PROPELLERS (4)



USB CHARGER CABLE



SD CARD



MICRO USB CABLE

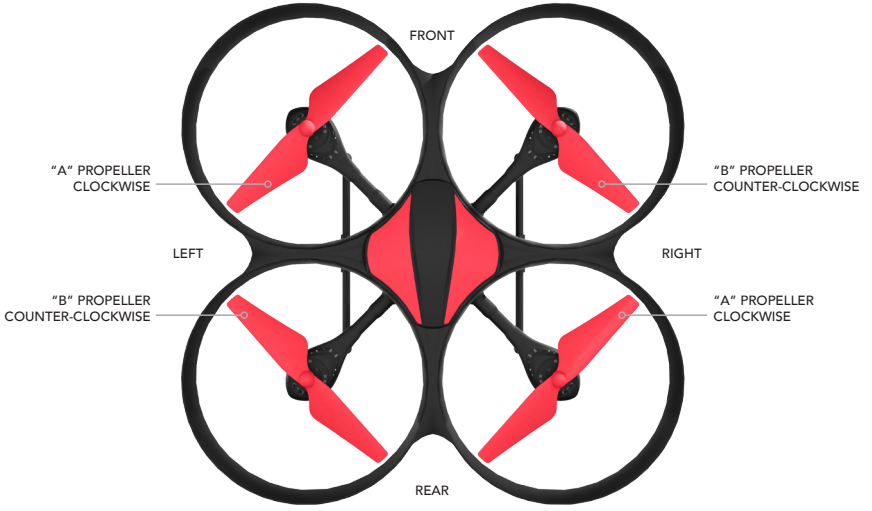


USB SD CARD READER



DRONE TOOLS

DRONE OVERVIEW



TRANSMITTER OVERVIEW





TRANSMITTER BATTERY INSTALLATION

Open the battery cover and insert 4 AA batteries as shown below (not included).



FIGURE 1



FIGURE 2

CAUTION:

- The transmitter needs 4 AA batteries to work
- Insert batteries in correct polarity (+) and (-)
- Don't mix old and new batteries
- Don't mix alkaline, standard (carbon-zinc) and rechargeable (nickel-cadmium) batteries
- Remove rechargeable batteries before charging
- Only charge batteries under adult supervision
- Remove spent batteries from the transmitter
- Regularly inspect the charging cable, cord, plug, enclose and other parts; if you notice damage, please include your order number when you contact us at support@force1rc.com for fast, friendly service, or visit Force1rc.com for a replacement

DRONE ASSEMBLY

PROPELLERS REMOVAL/INSTALLATION

REMOVAL

Use the screwdriver to remove set screw, then lift propeller up (Fig. 7).

INSTALLATION

Replace with a new propeller with the same rotation direction. Reinsert the screw into the hole (Fig. 8), then tighten the screw in clockwise.

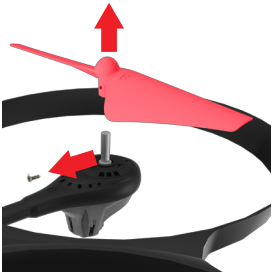


FIGURE 7

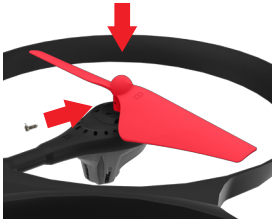


FIGURE 8

NOTE

- Be sure to install the correct propellers matching A and B
- Be careful with the propellers, as they can be sharp
- Purchase extra propellers at Force1rc.com

MOTOR REPLACEMENT

REMOVAL

Rotate the screwdriver counter-clockwise to loosen the screws (Fig. 9). Remove the screws, disconnect the wire (Fig. 10) and take out the defective motor.

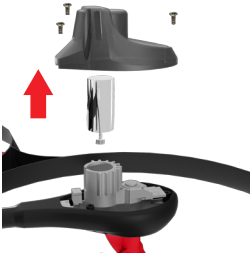


FIGURE 9



FIGURE 10

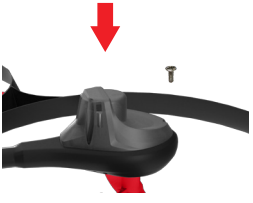


FIGURE 11

INSTALLATION

Replace the motor, ensuring it is the correct rotation. Connect the motor wire (Fig. 10), put on the cover and tighten the screws in a clockwise direction (Fig. 11).

CAUTION: Ensure you install the correct motor (clockwise or counter-clockwise) to replace the non-working motor; otherwise the drone will not work.

DRONE ASSEMBLY

BATTERY INSTALLATION

Install the battery to the mounted box in the drone (Fig. 12). When you install the battery, you need to press down the clip and then push the battery until fully secured.

To remove the battery, gently push down on the battery clip, keep it pressed and then slide the battery out (Fig. 13).

NOTE:

Please ensure the battery sticker is facing up when inserting the battery.



FIGURE 12



FIGURE 13

LANDING GEAR INSTALLATION

Install the left and right landing gear to the bottom housing position (Fig. 14), then use the screwdriver to tighten the screws in the clockwise direction.



FIGURE 14

DRONE ASSEMBLY

CAMERA INSTALLATION

Insert the camera clip into the bottom of the drone (Fig. 15), and then push the camera in (Fig. 16).



FIGURE 15



FIGURE 16

CAMERA WIRE CONNECTION DIAGRAM

1. Insert the attached Micro USB Cord to the camera socket (Fig. 17).
2. Insert the Micro USB Cord into the bottom housing socket on the drone (Fig. 18).



FIGURE 17



FIGURE 18

QUICK START GUIDE

1. Turn on the transmitter switch and the power indicator light flashes rapidly. Push the left stick all the way down to the lowest position and then release (Fig. 19).

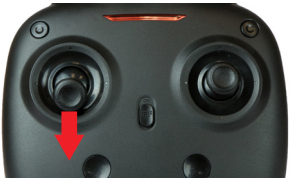


FIGURE 19

2. Install the battery in the mounted box in the drone, then power on the drone by pressing and holding the black button on the back of the drone, above the battery (Fig. 20).



FIGURE 20

3. Place the drone on a flat surface, facing away from you. Move the left and right sticks down and inward simultaneously (Fig. 21). Drone propellers will rotate, indicating it is unlocked.



FIGURE 21

4. The drone is ready to fly. See the Preflight Checklist and Basic Flight Controls before operating.

NOTE:

Follow the preflight operation steps on page 13 if your drone doesn't start or isn't performing properly.

PREFLIGHT CHECKLIST

1. Fly in an open area and abide by all local and federal guidelines. Check the FAA's B4UFLY mobile app for up-to-date drone flight info.
2. Make sure your drone and transmitter batteries are fully charged.
3. Put the left stick of the transmitter in the middle position.
4. Follow the Calibration instructions closely. Always turn ON your transmitter first before flying, and turn OFF the drone first when you're finished.
5. Make sure the connection is solid between your battery and motor; vibration may cause loosening.
6. Make sure the propellers are installed correctly and the motors are working normally after unlocking.
7. Make sure your drone is facing away from you.

PREFLIGHT OPERATION

CALIBRATION

Calibrate your drone before every use and after crashing for optimum flight.

1. Turn on the transmitter, push the left stick all the way down and then release (Fig. 22). The left stick will spring back automatically, and is now ready for pairing.
2. Power on the drone and place it on a flat, horizontal surface.
3. Push the right stick down and to the right, then release (Fig. 23). The drone body lights flash, which indicates the drone is calibrating. When the lights turn solid, the drone has been successfully calibrated. Do not move the left stick before calibration completion.

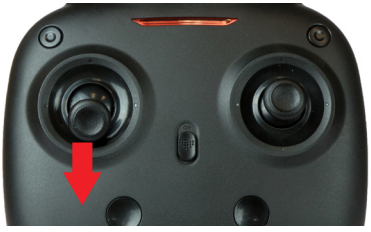


FIGURE 22



FIGURE 23

NOTE:

Recalibrate your drone after crashes if it is not performing properly.

PREFLIGHT OPERATION

FREQUENCY PAIRING

1. Turn on the transmitter power switch (Fig. 24) and the indicator light flashes rapidly. Push the left stick all the way down to the lowest position and then release (Fig. 25). The left stick will back to the middle position automatically. The power indicator light flashes slowly, which indicates the transmitter is ready for frequency pairing.

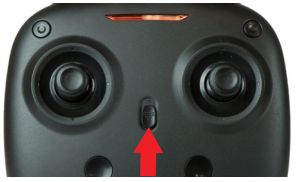


FIGURE 24

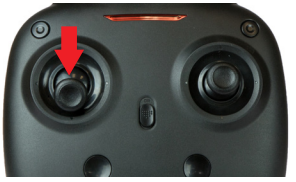


FIGURE 25

2. Install the battery in the mounted box in the drone, then power on the drone by pressing and holding the black button on the back of the drone, above the battery (Fig. 26).



FIGURE 26

3. Put the drone on a flat surface and watch for the drone lights to go from flashing to solid, which indicates successful frequency pairing.

NOTE:
Please make sure the drone is placed in a horizontal surface after powering it on for proper operation.

LOCK/UNLOCK YOUR DRONE

UNLOCK

Place the drone on a flat surface. Move the left and right sticks down and inward simultaneously (Fig. 27). Drone propellers will rotate, indicating it is unlocked and ready to fly.

LOCK

Move the left and right sticks down and outward simultaneously (Fig. 27). Propellers will stop rotating, and the drone will lock.

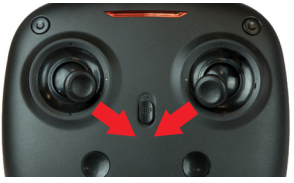


FIGURE 27

BASIC FLIGHT CONTROLS

HOVER UP AND DOWN

Push the **THROTTLE/RUDDER STICK** up to fly the drone up, and pull the **THROTTLE/RUDDER STICK** down to fly the drone down.





FLY FORWARD OR BACKWARD

Push the **DIRECTION CONTROL STICK** up to fly the drone forward, and pull the **DIRECTION CONTROL STICK** down to fly the drone backward.





FLY LEFT OR RIGHT

Move the **DIRECTION CONTROL STICK** to the left to fly the drone to the left, and move the **DIRECTION CONTROL STICK** to the right to fly the drone to the right.





ROTATE LEFT OR RIGHT

Move the **THROTTLE/RUDDER STICK** to the left to rotate the drone to the left, and move the **THROTTLE/RUDDER STICK** to the right to rotate the drone to the right.



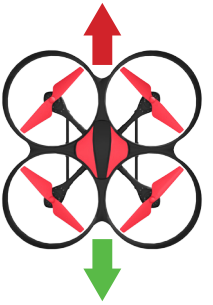


TRIM ADJUSTMENTS

FORWARD/BACKWARD TRIM

Press the TRIMMER MODE BUTTON and adjust using the DIRECTION CONTROL STICK. If the drone drifts forward when taking off, push backwards, or forwards if drone drifts backwards.

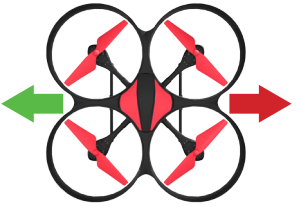




LEFT/RIGHT TRIM

Press the TRIMMER MODE BUTTON and adjust using the DIRECTION CONTROL STICK. If the drone drifts right when taking off, push left, or right if drone drifts to the left.





LEFT OR RIGHT ROTATION TRIM

Press the TRIMMER MODE BUTTON and adjust using the THROTTLE/RUDDER STICK. If the drone rotates right when taking off, push left, or right if drone rotates to the left.





FUNCTIONS

1-KEY & MANUAL TAKEOFF

1-KEY LIFT:

Press the 1-Key Lift / Land / Emergency Stop button (Fig. 28) after successful pairing. Your drone will rise and hover about 4 feet off the ground.

MANUAL TAKEOFF:

Push the left and right sticks as shown below to start the motors after successful pairing (Fig. 29). Then push the left stick up to take off.

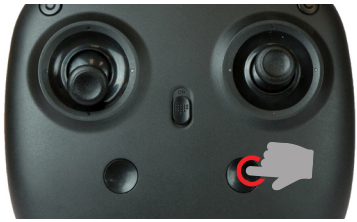


FIGURE 28

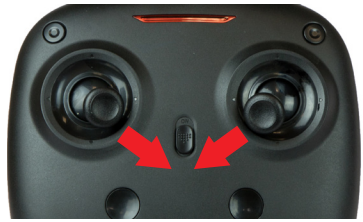


FIGURE 29

1-KEY & MANUAL LANDING

1-KEY LANDING:

Press the 1-Key Lift / Land / Emergency Stop button (Fig. 28) after successful pairing. Your drone will land automatically.

MANUAL LANDING:

Push the left stick all the way down (Fig. 30) and hold it until the drone lands and the motor stops.

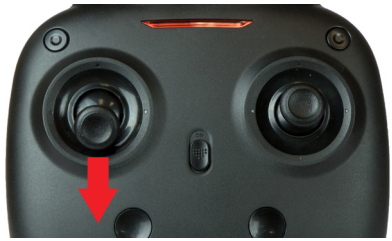


FIGURE 30

EMERGENCY STOP

Bring your drone down immediately by pressing the 1-Key Lift / Land / Emergency Stop button and holding it for more than 1 second – the propellers will stop and the drone will fall to the ground (Fig. 28).

NOTE:

Only use the Emergency Stop function in an emergency situation. The drone will lose power and fall from the sky immediately.

ALTITUDE HOLD MODE

Altitude Hold places your drone at a consistent altitude while allowing roll, pitch and yaw to be controlled normally. It makes it easier to control the drone for beginners and more stable for aerial photography.

Push the left stick up/down to fly the drone up/down at certain altitudes and then release the stick. The stick will return to the center position (Fig. 31). The drone will maintain its current altitude. Repeat the above steps if you want to change the drone altitude.

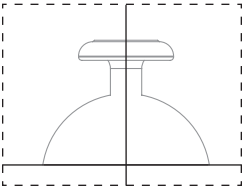


FIGURE 31

Note:

Altitude Hold can't be used when the blades are bent or damaged.

HIGH/MEDIUM/LOW SPEED MODE SWITCH

Press the Speed Mode button once for one beep, meaning Low Speed Mode (Fig. 32). Press again for two beeps, which indicates Medium Speed Mode. Press a third time for three beeps and High Speed Mode.

Low Speed Mode:
Suitable for beginners.

Medium Speed Mode:
Suitable for skilled pilots in a gentle breeze.

High Speed Mode:
Suitable for experts and aerial outdoor stunts.



FIGURE 32

HEADLESS MODE

Your drone has a front and back indicated by LED lights, colored propellers and camera placement. This is harder to tell at night, or when the drone is in the air. Headless Mode provides control according to your position, rather than which way the drone is facing.



FIGURE 33

Setting Headless Mode Drone Direction

Position the drone so it's facing away from you (Fig. 34). Press down on the Headless Mode button, and the drone's left and right LEDs should start flashing (Fig. 33). This indicates Headless Mode. Press again to exit the mode.

NOTE:

Don't change transmitter orientation during this process.

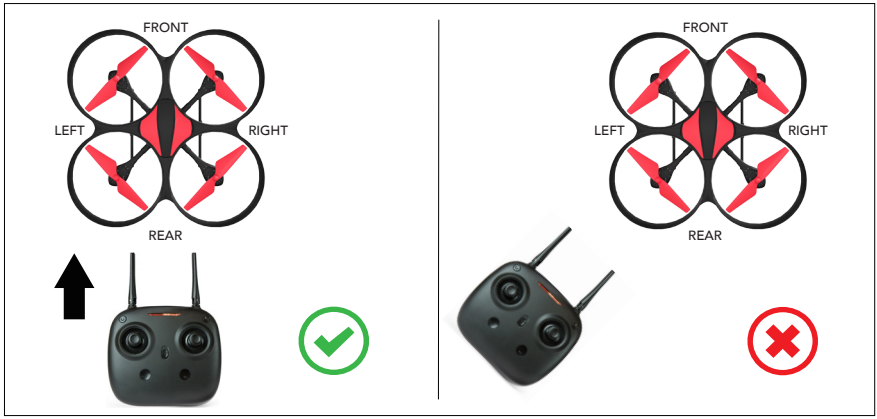


FIGURE 34

LOW BATTERY ALARM

When the drone battery is low, the transmitter will constantly beep to remind the user to land the drone as soon as possible. The flip function will turn off automatically when the drone battery is low.

OUT OF RANGE ALARM

When the drone is going to fly out of the max range, the transmitter will double beep continuously to alarm the user to fly the drone back immediately. Otherwise the drone may lose control and fly away.

MOTOR PROTECT FUNTION

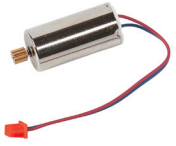
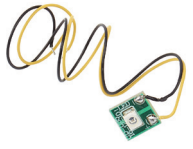
1. The motors will stop automatically if one gets stuck to keep them from being damaged. The LEDs will flash quickly when this happens.
2. Pull the left stick down all the way; the LEDs will turn solid and the motor protection will be released.

TROUBLESHOOTING

Problem	Problem Cause	Solution
The transmitter power indicator light is off.	1. Low batteries.	1. Replace all the transmitter batteries.
	2. The batteries' positive poles and negative poles are in reverse order.	2. Install the battery in accordance with the User Manual instructions and check polarity.
	3. Poor contact.	3. Clean the battery compartment with a dry microfiber cloth to remove dust and dirt.
The drone and transmitter are not pairing with each other.	1. The transmitter power indicator light is off.	1. Please see solutions under "The transmitter power indicator light is off".
	2. There is an interfering signal nearby.	2. Restart the drone and attempt to power on and pair.
	3. Proper steps not followed, missed step.	3. Check page 14 and closely follow all steps.
	4. An electronic component is damaged from frequent crashes.	4. Buy spare parts from force1rc.com and replace any damage parts.
The drone cannot fly.	1. The propeller is damaged.	1. Replace the damaged propeller(s).
	2. Low battery.	2. Charge the drone battery, plug the charged battery into the drone, and power on.
	3. Incorrect installation of propellers.	3. Check page 6 and 9 of the User Manual for proper instructions.
The drone cannot hover and/or tilts to one side.	1. Drone calibration was unsuccessful.	1. Refer to Page 13 for calibration instruction.
	2. A propeller is damaged.	2. Replace the damaged propeller(s).
	3. The motor casing/arm is damaged.	3. Replace the damaged motor casing/arm.
	4. The gyro did not reset after a crash.	4. Put the drone on flat ground for about 10 seconds or restart the drone to calibrate again (page 13).
	5. The motor is damaged.	5. Replace the motor (See page 9 for instructions).
The drone power indicator light is off.	1. Low battery.	1. Charge the drone battery, then re-insert battery into the drone.
	2. The battery is expired or no longer charging.	2. Buy a new battery from force1rc.com and replace the battery.
	3. Poor contact.	3. Disconnect the battery, make sure it's clean and has no bent/broken prongs then connect it to the drone again.
The camera is not working.	1. The camera wire has no contact with the camera box wire.	1. Check the wire and connection to ensure it's fully plugged in.
	2. There is an interfering signal nearby.	2. Unplug the camera wire and reconnect.
	3. Damaged camera.	3. Buy a new camera box from force1rc.com.

Please include your order number when contacting us at support@force1rc.com for fast, friendly service.

SPARE PARTS

			
Drone Housing 0001	Drone Bottom Housing 0002	A Propeller 0003	B Propeller 0004
			
Landing Gear 0005	Motor Cover Holder A 0006	Motor Cover Holder B 0007	Motor Bottom Holder 0008
			
Receiver Board Holder 0009	Transparent Motor Cover 0010	Camera 0011	AL Main Shaft 0012
			
Clockwise Motor 0013	Counter-clockwise Motor 0014	Receiver Board 0015	Power Board 0016
			
Camera Adapter Board 0017	Front LED Board 0018	Rear LED Board 0019	Micro USB Cable 0020

SPARE PARTS

			
Drone Battery 0021	USB Cable 0022	Gear 0023	SD Card 0024
			
SD Card Reader 0025	Hex Wrench 0026	Screwdriver 0027	Transmitter 0028

FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide residential protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not Installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception. If this device causes radio or TV interference, which can be determined by turning the device off and on, try to correct the interference using the following measures:

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

FCC WARNING

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void user's authority to operate this device.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. The device does not cause harmful interference, and
2. The device accepts interference, including interference that may cause undesired operation.

force1rc.com