

Ages 14+

Potensic



A20

Operations Guide



CAUTION

This toy is recommended for children 14 years of age and older. To ensure that the child's play is both safe and fun, please read the operating instruction and the general safety rules with your child.

Keep eyes, face, fingers and hair away from the rotor blade, tail blade and gear, as they will rotate at very high speed while the aircraft is flying.

Adult supervision is recommended when the aircraft is being operated.

WARNING

Warning: The product should only be used by adults and children over 14 years. Adult supervision is required for children under 14 years.

Hinweis: Dieses Produkt ist für die Erwachsene und die Kinder ab 14 Jahren. Die Kinder unter 14 Jahren müssen von Erwachsenen beaufsichtigt werden.

Avertissement: Ce produit est destiné aux adultes et aux enfants de plus de 14 ans. Les enfants de moins de 14 ans doivent être surveillés par des adultes.

Avvertimento: questo prodotto è destinato all'uso per i adulti e bambini di età superiore ai 14 anni. I bambini di età inferiore ai 14 anni devono essere sorvegliati da un adulto.

Advertencia: Este producto es para adultos y niños mayores de 14 años. Los niños menores de 14 años deben ser supervisados por adultos.

警告: この製品は、大人と14歳以上の子供には使用対象です。 14歳未満の子供は大人の監視が必要です。



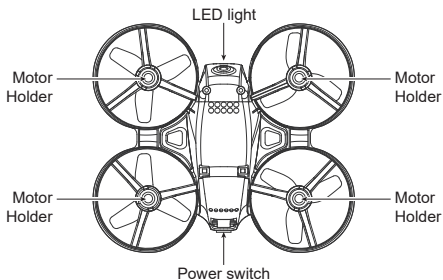
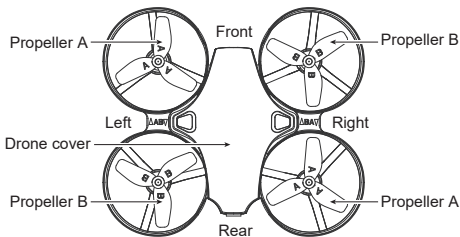
DANGER!
Only suitable
for age 14+

WARNING!

Rotating parts may cause injury.

General View

1. Drone

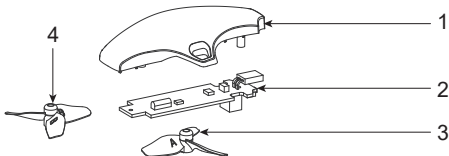


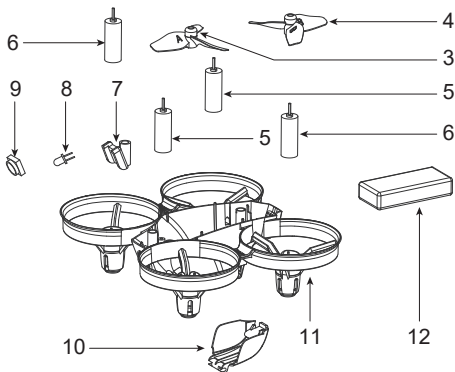
2. Specifications

Drone size	90x80x32mm	Flight time	5~6 mins
Weight of drone	25.8g	The main motor	0615x4
Propeller diameter	Ø32mm	Remote control mode	2.4Ghz
Drone battery	3.7Vx180mAh	Flying distance	10~15 m
Charging time of drone battery		40 mins	

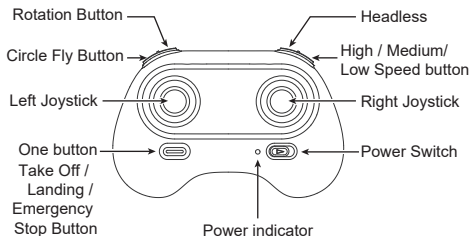
3. Overview Chart

NO.	Name	NO.	Name
1	Drone cover	7	Counterclockwise Motor
2	Receiver Board	8	LED light
3	Propeller A	9	Light shade
4	Propeller B	10	Battery cover
5	Forward motor	11	Drone bottom
6	Rehearsal motor	12	Drone battery

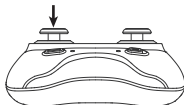




4. Remote Control



**Flip mode button (press) /
Fine tuning mode button (long press)**

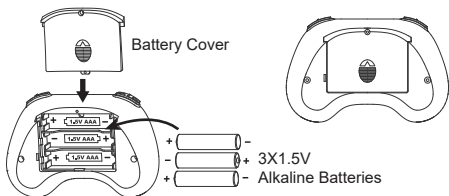


5. Introduction to Button Functions

Left Joystick	Move the joystick forward / backward / left / right to make the drone fly upward / downward / left / right
Right Joystick	Move the joystick forward / backward / left / right to make the drone fly forward / backward / left / right.
Power Switch	Toggle the power switch button to the right to turn on the remote control and turn off the power when returning.
Headless Mode	Press the button to enter the headless mode; Press again to exit.
High / Medium / Low Speed Button	Press the button to switch to High / Medium / Low Speed.
Take Off / Landing / Emergency Stop Button	After frequency pairing, press once and the drone will take off automatically. Press it once again and the drone will land automatically. Press and hold the button for more than 1 second for an emergency landing. The drone's propellers will stop and land immediately.
Fine-tuning Button	Press this button to move the right joystick to the wanted fine-tuning direction, then it will adjust the direction accordingly. Release the joystick to end fine-tuning mode.

6. Remote Control Battery Installation

Open the battery cover of the remote control, insert 3 AAA batteries according to the instructions (as shown below, batteries are not included), and then close the battery cover.



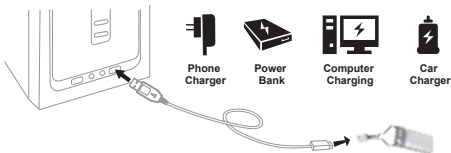
Notice:

1. Make sure the electrodes are correct.
2. Do not mix new and old batteries.
3. Do not mix different types of batteries.
4. Do not charge non-rechargeable batteries.

Parts Installation

1. Charging Instruction for Drone Battery

1. Connect the drone battery with USB cable first and then select a charger as shown in the picture below, and connect it with the USB plug.
2. During charging, the red USB indicator is always on, and the indicator turns green when charging is complete.



* For faster charging, it is recommended to use an adapter with an output current of 5V 2A (not included) to charge the battery.

Li-po Battery Disposal & Recycling



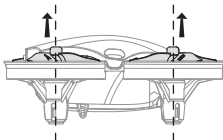
Disposed lithium polymer batteries must not be placed with household garbage. Please contact your local environmental protection, waste disposal agency, supplier of your model, or your nearest lithium polymer battery recycling center.



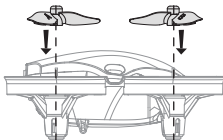
2. Assemble / Disassemble the Propellers

To disassemble, gently lift the propeller upward. (Picture 1)

To install the propeller, align and snap the propeller blades onto the motor. (Picture 2)



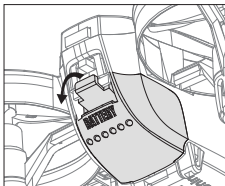
Picture 1



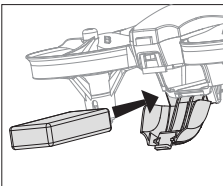
Picture 2

3. Battery Loading and Unloading Diagram

Buckle down the battery cover, put the battery into the drone, and then buckle up the battery cover (Picture 3 / 4).



Picture 3



Picture 4

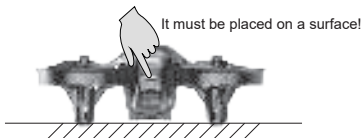
4. Pre-flight Precautions

1. Make sure the remote control and the battery of the drone are fully charged.
2. Before starting, please confirm that the left joystick of the remote control is in the middle position.
3. Please turn on the drone first before flying, and then turn on the remote control. After the flight, turn off the drone and then turn off the remote control. Incorrect turning on / off may result in loss of control of the drone.
4. Make sure to correctly install the battery, motor, etc.
5. Improper operation may cause the drone to crash, which may result in a defective motor that renders the drone unable to fly, and other issues. Please visit your local retailer to purchase new parts for replacement to restore the drone to optimal condition.

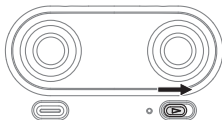
Flight Steps

1. Frequency Pairing

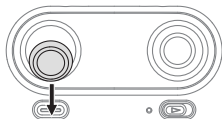
When the drone is turned on, the light on the fuselage will flash rapidly. When the light flashes slowly, it indicates that frequency pairing is entered.



Turn on the remote control, the power indicator lights up and flashes rapidly.



Pull the left joystick down to the lowest position and then release it. The power indicator on the remote control will turn to solid color and the remote control will beep, indicating successful frequency pairing.



2. Take Off

After a successful calibration, press this button and the drone will automatically take off and remain at an altitude of approximately 1.2 meters.

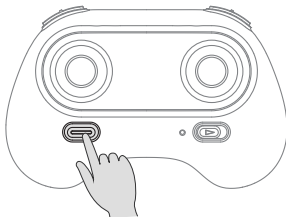
3. Landing

Press this button to land the drone automatically. (When pressing this button, do not touch the left joystick, otherwise it may not work).

4. Emergency Landing

If the drone is about to hit a person or an obstacle, press and hold the takeoff / landing / emergency stop button for more than 1s. The propellers will stop and the drone will fall down immediately.

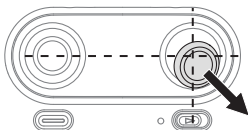
Tip: Do not activate this function unless in emergency situation. Because the drone will fall when the motors stop working.



5. Calibration

(This function is used in case of flight abnormalities)

Push the right joystick as picture shown after successful frequency pairing (Do not push the left joystick until then). Please release it when the drone front body indicator light flash 3 times and turn to solid color, indicating that calibration is completed.



Tip: A crash may cause a failed connection, making the drone difficult to control. If this happens, try to repair and recalibrate. The drone must be placed on a horizontal surface.

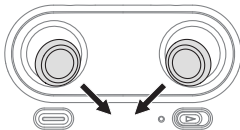
6. Unlocking / Locking the Motor

Unlock the motor:

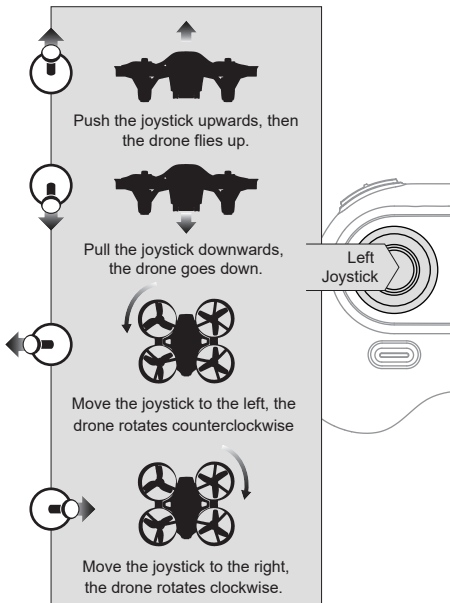
Move the left joystick and right joystick inward 45 degrees at the same time.

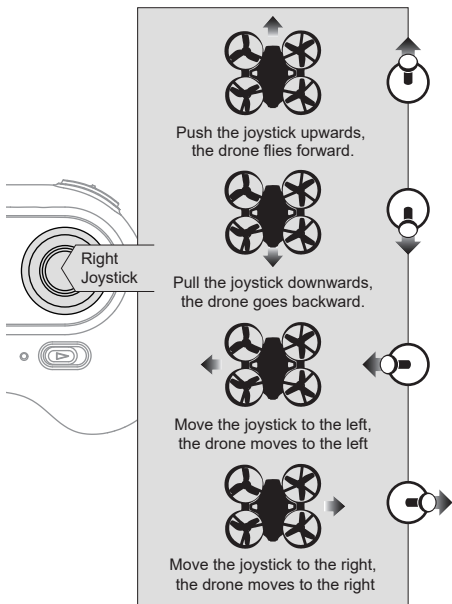
Lock the motor:

This function can be used to stop the motor in an emergency (move the left joystick and right joystick inward 45 degrees at the same time).



7. Flight Control





8. Stunt Flying

Rotation Mode:

Short press the rotation button to start / quit the rotation mode, the remote control will beep at this time.

Rotation Button



Circle Fly Mode:

Short press the circle button to start / quit circle fly mode, then the remote control will beep.

Circle Fly Button



In this mode, the drone will start hovering along a circular track.

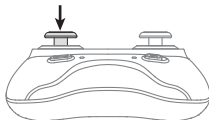
Tips:

1. In this mode, you are only able to control the ascent and descent of the drone.
2. When you move the steering joystick, the drone will immediately exit this flight mode.

9. 3D Flip

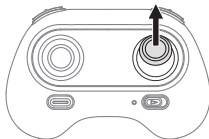
Step 1:

Short press the left joystick to start the flip mode, at this time the remote control emits a continuous "beep" sound.



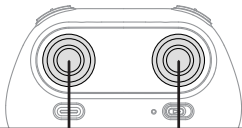
Step 2:

Push the right joystick forward and the drone will immediately flip forward 360°.



Tips:

If you want to flip in another direction, push the right joystick to another direction.



Forward and Backward Fine-tuning

While in flight, if the drone tilts forward, press down the fine-tuning button, and push the right joystick backwards. Otherwise push forwards.

Left / Right Rotates Fine-tuning

While in flight, if the drone head rotates to the left, press the fine-tuning button, and push left joystick to right. Otherwise push to the left.

Left / Right Tilts Fine-tuning

While in flight, if the drone tilts to the left, press the fine-tuning button, and push the right joystick to the right. Otherwise push to the left.

Functions Mode

1. Altitude Hold Mode

Intelligent flight control system calculates the hovering position, makes it easier for beginners to control.

Note:

If there's propeller or motor is damaged, the constant height function will not work. The altitude hold function will also not work due to unstable atmospheric pressure or unsuitable weather.

2. High / Medium / Low Speed Mode Switch

1. Low Speed Mode (Mode 1)

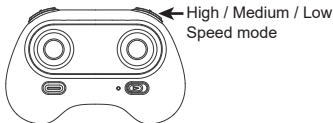
This is for beginners to operate in calm, breeze-free weather.

2. Medium speed Mode (Mode 2)

It is suitable for those who practice operating (hobbyists) with or without a breeze.

3. High Speed Mode (Mode 3)

It's suitable for the professionals in most outdoor wind conditions.



Note: The default setting is Medium Speed.

3. Headless Mode

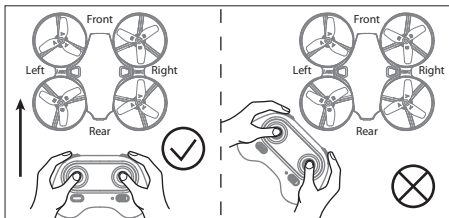
The default setting is Non-headless Mode

Under headless mode, the users can operate the drone without worrying about the orientation (left is left and right is right all the time, regardless of where your drone is pointing at). Headless Mode is designed for beginners, users who fly the drone in daylight or at far distances, or those with difficulty identifying the drone orientation.

You can activate the headless mode function before taking off or in flight. Flying under headless mode, the direction of your drone should be aligned with you. DO NOT change the direction of your remote control, keep it flying in front of you all the time. (The picture below).

Warning:

Before entering this mode, the drone must be in front of your remote control, otherwise the drone may lose control or fly away.



* Press headless mode button to activate the function, then the LED light at the rear of the drone will keep flashing 3 times and stop for 1 second. To exit the Headless Mode, press the button again, at this time the LED light on the rear of drone will turn to solid color.



Low Battery Alarm

When the battery of the remote control is low, it will beep to remind the users to land the drone and replace the battery as soon as possible. Otherwise, the drone may lose control. When the drone's battery is low, the LED light at the rear of the drone will keep flashing once and then stop for 1 second.

Out of Range Alarm

When the drone is out of range or close to the maximum remote control distance, the LED light on the rear of drone will keep flashing twice and stop for 1 second. Please fly the drone back to the proper range as soon as possible, otherwise it may lose control.

Spare Parts (Sold separately)

For your convenience, spare parts are listed for your selection. They can be purchased from your local vendor.

		
Drone Cover	Drone Bottom	Propeller A/B
		
Lampshade	Pressure Parts	Receiver Board
		
LED Light	Drone Battery	USB Cable
		
Clockwise Motor (Red and Blue wire)	Counterclockwise Motor (Black and White wire)	Remote Control

Important Notice

Our products are always being improved and designs and specifications are subject to change without notice.

All information in this manual has been carefully checked for accuracy, and we reserve the right of final interpretation in the event of any typographical errors.

Troubleshooting

Problem	Problem Cause	Solution
Indicator light of the remote control is off	<ol style="list-style-type: none"> 1. Low battery. 2. The positive and negative poles of the battery are in reverse order. 3. Poor Connection. 	<ol style="list-style-type: none"> 1. Replace the remote control battery. 2. Install the battery in accordance with the user manual. 3. Clean the dirt between the battery and the battery slice.
Fail to pair the drone with remote control	<ol style="list-style-type: none"> 1. Indicator light is off. 2. There is interfering signal nearby. 3. Mis-operation. 4. The electronic component is damaged for frequent crash. 	<ol style="list-style-type: none"> 1. The same as above 1.2.3. 2. Turn off and turn on the drone and remote control again. 3. Operate the drone step by step in accordance with the user manual. 4. Purchase spare parts from local seller to replace damaged parts.
The drone is underpowered or can not fly	<ol style="list-style-type: none"> 1. The propeller seriously deformed. 2. Low battery. 3. Incorrect installation of propeller. 	<ol style="list-style-type: none"> 1. Replace the propeller. 2. Recharge the drone battery. 3. Install the propeller in accordance with the user manual.
The drone could not hover and tilts to one side	<ol style="list-style-type: none"> 1. The propeller seriously deformed. 2. The motor holder deformed. 3. The gyro did not reset after violent impact. 4. The motor is damaged. 	<ol style="list-style-type: none"> 1. Replace propeller. 2. Replace the motor holder. 3. Put the drone on the flat surface for about 10s or restart the the drone and calibrate it again. 4. Replace the motor.
Indicator light of the drone is off	<ol style="list-style-type: none"> 1. Low battery. 2. The battery is expired or over discharge protection. 	<ol style="list-style-type: none"> 1. Recharge the drone battery. 2. Purchase a new battery from local seller to replace the battery or charge the battery in accordance with the use manual.

FCC

NOTE: 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 reasonable 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, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Potensic

Model:	A20
Operation Frequency:	2.4G
Rating:	3.7V 180mAh(Li-Po Battery)
Battery charging time:	About 40 mins
Remote transmitter frequency:	2.4G
Input:	5V = 2A
Manufacturer:	Shenzhen Deepsea Excellence Technology Co., Ltd.
Address:	5th Floor, Building 7, Hongfa High-tech Park, Keji 4th Road, Shiyuan Street, Baoan District, Shenzhen

EC REP 1: DST Co., Ltd. Fifth Floor 3 Gower Street, London, WC1E 6HA, UK

EC REP 2: Like Sun GmbH. Planckstr.59, 45147 Essen, Germany

FCC ID: ZKWUA221803001

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