

Ages 14+

Potensic®



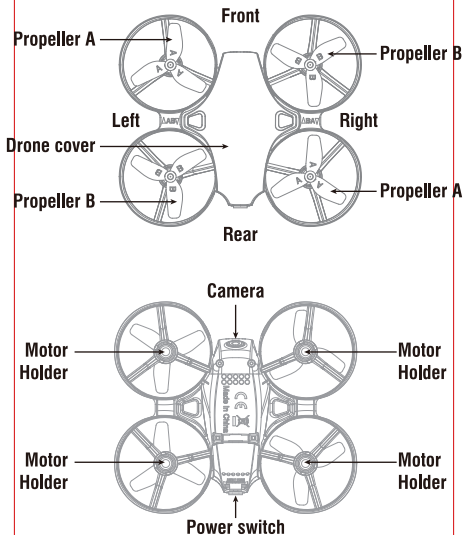
A20W Operation Guidance

Catalogue

Overview of drone and transmitter	3
Part loading and unloading	8
Precautions before flying	11
Flying procedures	12
Function introductions	17
To know your App	20
Display the photos and video	21
Assembly Parts List	21
Troubleshooting	23

Overview of drone and transmitter

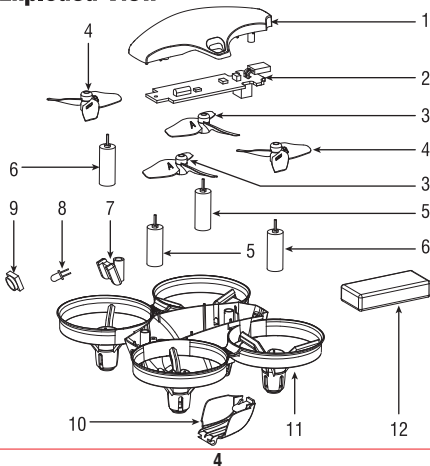
Drone



Main parameter

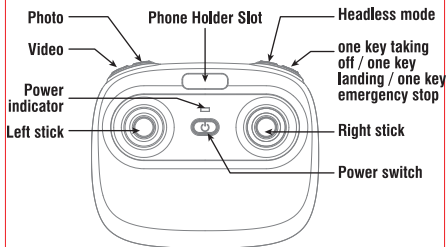
Drone size	90x80x32mm	Flying time	5~6 mins
Weight of drone	25.8g	The main motor	0615x4
Propeller diameter	Ø32mm	Remote control mode	2.4Ghz
The drone battery	3.7Vx180mAh	Flying distance	10~15 m
The charging time of the drone battery		40 mins	

Exploded View



NO.	Name	NO.	Name
1	Drone cover	7	Counterclockwise Motor
2	Camera Board	8	Pressure parts
3	Receiver Board	9	Battery cover
4	Propeller A	10	Drone bottom
5	Propeller B	11	Drone battery
6	Clockwise Motor		

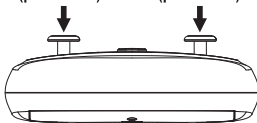
Transmitter



Notice: Taking photo and recording video are available after connecting with smart phone.

**Trimmer mode button
(press down)**

**high / medium / low speed
(press down)**



Key Function

Left stick: Move the Stick to forward / backward / left / right to fly the drone up / down / turn left / turn right.

Right stick: Move the Stick to forward / backward / left / right to fly the drone forward / backward / left / right.

Photo: Press the key to take one photo.

Video: Press down the button, start to record video. Press again to exit video recording.

Power switch: Press down the power switch to turn on the transmitter, press down again to turn off the transmitter.

Headless mode: Press the key to enter the headless mode;
Press again to exist.

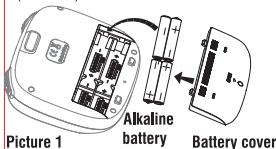
High/medium/low speed mode: Press the key to switch to High /Medium/ Low Speed.

Takeoff/landing/emergency stop key: After frequency pairing, press once and the drone will take off automatically. Press again and the drone will land automatically. Press and hold the button for more than 1 second for an emergency landing. The drone propellers will stop and land directly.

Trimmer Mode Button: Press this button and move the right stick to the required trimmer direction, then it will adjust the direction accordingly. Release the stick to end trimmer mode.

Transmitter Battery Installation

Open the battery cover of the transmitter, insert 4 AA batteries following the polarity indicators (Picture 1, battery is not included) and then screw it.(Picture 2)

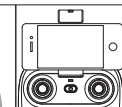
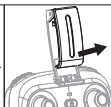


Notice:

1. Make sure the electrodes are correct.
2. Do not mix different kinds of batteries.
3. Do not mix different kinds of batteries.
4. Do not charge the non rechargeable battery

Phone Holder Installation Instruction

1. Take out the phone holder and insert into the transmitter(Picture 3).
2. Pull out upper lamp of the holder (Picture 4/5), put the phone obliquely into the holder,then release the clamp, and the phone will be fixed on the holder (Picture 6).
3. When take out the phone clip, you need to press the clip buckle behind the phone clip at the same time, so that the buckle can be closed and removed easily.



Notice: Do not pinch the buttons on the mobile phone.

Part loading and unloading

Charging Instruction for Drone Battery

1. Connect the drone battery with USB cable first and then choose one of the chargers as below shown to connect with USB plug.
2. The indicator light on the end of USB will become red and it will turn green when fully charged.

*** For faster charging, it is recommended to use an adapter with 5V 2A output**



Phone Charger



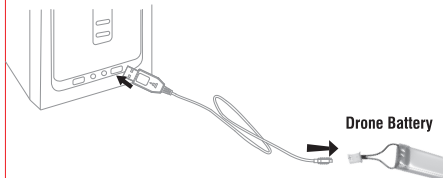
Power Bank



Computer Charging



Car Charger



Li-Po Battery Disposal & Recycling



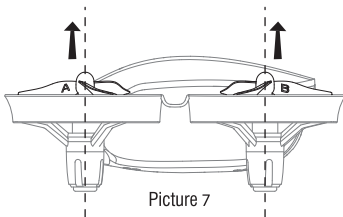
Wasted Lithium-Polymer batteries must not be placed with household trash. Please contact local environmental or waste agency or the supplier of your model or your nearest Li-Po battery recycling center.



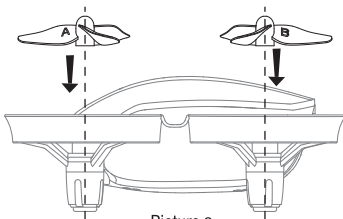
Assemble/Disassemble the Propellers

To disassemble, gently pull the propeller upward.(Picture 7)

To install the propeller, align and snap on the propeller blade to the motor.(Picture 8)



Picture 7

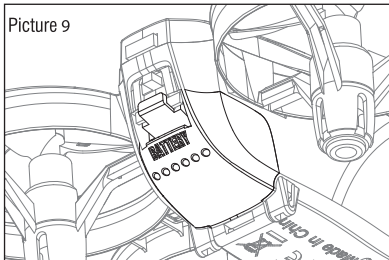


Picture 8

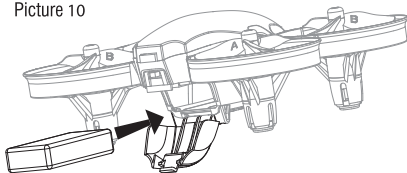
Drone battery installation

Open the battery cover, put the battery into the drone, and then buckle up the battery cover (Picture 9/10).

Picture 9



Picture 10



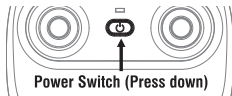
Precautions before flying

1. Make sure the transmitter and the battery of the drone are fully charged.
2. Before starting, please confirm that the left stick of the transmitter is in the middle position.
3. Please follow the correct steps to turn on the drone/transmitter. Before flight, turn on transmitter and then the drone. After flight, turn off the drone and then transmitter. Turning ON/OFF incorrectly may cause the drone to lose control.
4. Make sure to correctly install the battery, motor, etc.
5. Check the rotation direction of the propellers. The left front & right rear propeller A should rotate clockwise. The left rear & right front should rotate counterclockwise.
6. Improper operation may cause drone crash, which may cause a motor defect, prevent you from flying, and other issues. Please go to the local distributor to buy new parts for replacement so that the drone will return to its best

Flying steps

Syncing Frequencies

Turn on the transmitter and the power indicator light on it will flash rapidly.



Pull the left stick to the lowest position and then release. The power indicator on transmitter will flash slowly and the transmitter will beep, indicating successful frequency pairing



Turn on the drone. The drone body lights will stop flashing and turn a solid color, indicating successful frequency pairing and then enter the remote control mode.



It must be placed on a surface !

Take off

After calibration successfully, press this button, the drone will fly up and keep flying at an altitude of approximately 1.2 meters automatically.

Landing

Press it to land the drone automatically. (In this mode, DO NOT touch the left stick, otherwise it might do not work).



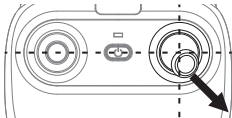
Emergency Landing

In an emergency situation, such as if it is about to hit people or obstacles, press the Take Off/ Landing / Emergency Stop Button and hold it for more than 1 second. The propellers will stop immediately and the drone will fall.

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

Calibration (This action is operated when flying abnormally)

Push the right stick as picture shown after successful frequency pairing . Please loose it when the drone body light flash rapidly , indicating that gyro calibration is completed.



Tips: Crashing the drone may cause the connection to fail, making the drone hard to control. If this occurs, try repairing and calibration. It must be placed on a surface!

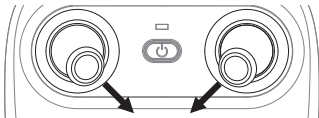
Unlocking/locking the motor

Unlock the motor:

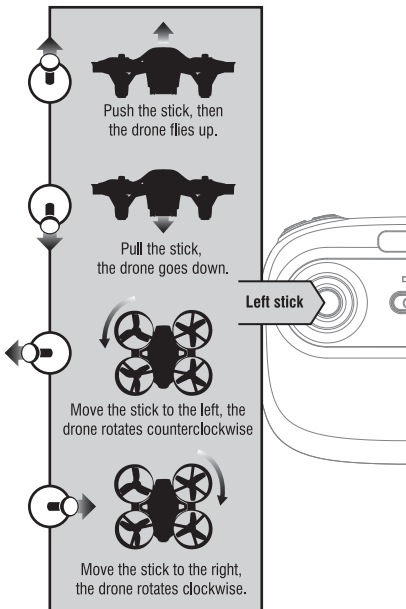
Move the left stick and right stick at the same time 45 degrees inward.

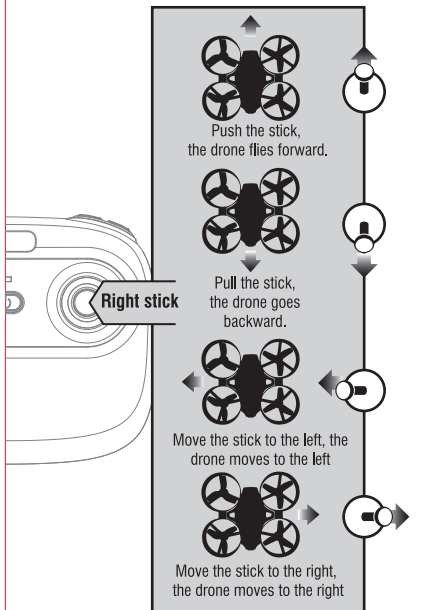
Lock the motor:

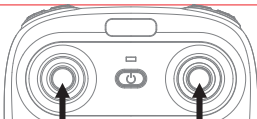
When the motor is working, it could be used to stop the motor urgently (Move the left stick and right stick at the same time 45 degrees inward).



Flight Control







Forward/Backward Trimmer

When flying, if the drone tilts forward , press the trimmer button, and push the right stick backward. Otherwise push forward.

Left/Right Tilts Trimmer

When flying, if the drone tilts to the left, press the trimmer button, and push the right stick to the right. Otherwise push to the left.

Left/Right Rotates Trimmer

When flying, if the drone head rotates to the left, press the trimmer button, and push left stick to right. Otherwise push to the left.

Functions Instruction

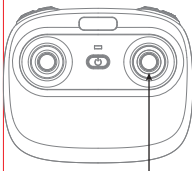
Altitude Hold Mode

Intelligent flight control system calculates the hovering position, makes it easier for beginners to control. Release the stick, the drone will keep hovering, capturing clear aerial photos & videos.

Notice: If there's propeller or motor is damaged, the constant height function will not work. Due to atmospheric pressure instability or unsuitable weather, the high altitude hold function will not work either.

High / Medium/Low Speed Mode Switch

Press down on the key, it will beep, this indicates the low speed mode "L";
Press down again, it will beep twice, for the middle speed mode "M";
Press down again, it'll beep three times, for the high speed mode "H".



**High / Medium/Low
Speed Mode Button**

Low Speed Mode "L"

It's suitable for the beginners to operate in calm weather, with no breeze.

Medium speed Mode "M"

It's suitable for those practicing (hobbyists) to operate, with or without breeze.

High Speed Mode "H"

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

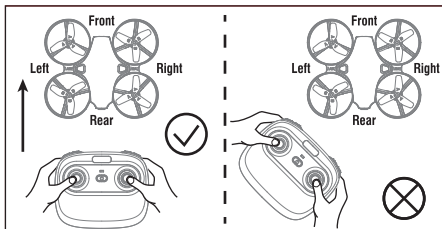
Headless Mode

The default setting is NOT Headless Mode.

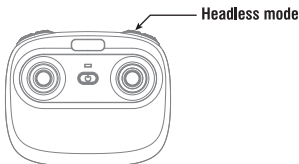
Under headless mode, the users can operate the drone without worrying about the orientation (left is left and right is right all the time, regardless of where your drone is pointing at). Headless Mode is designed for beginners, users who fly the drone in daylight or at far distances, or those with difficulty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

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

WARNING: THE DRONE SHOULD BE IN FRONT OF YOUR TRANSMITTER BEFORE ENTERING THIS MODEL. OR THE DRONE MIGHT LOSE CONTROL OR FLY AWAY.



* Press headless mode button to activate the function, at this time the LED light on the rear of drone keeps shiny for three times and stops for 1s; To exit the Headless Mode, press the button again, at this time the LED light on the rear of drone will turn a solid color.



Low Battery Alarm

When the transmitter or drone has a low battery, the transmitter will beep to remind the user to land the drone as soon as possible and replace the batteries. Or the drone might be out of control.

Out of Range Alarm

When the drone is out of range or almost at the max remote control distance, the transmitter will beep to remind the user to fly the drone back to suitable range as soon as possible or it may be out of control.

To know your APP

Download and install APP: Potensic

This software is suitable for mobile phones in the IOS and Android system, please surf the mobile phone application store website to download and install it.

1. The user of ISO mobile phone can surf Potensic in APP Stores to download.
2. The user of Android can surf Google play to search Potensic.
3. You can scan the QR code on the right or the QR code on the color box directly to download and install it.

How to connect the drone to phone via WiFi

- A. Insert the battery, and then place the drone on a flat surface.
- B. Go to phone Setting→WLAN(WiFi)→Select and connect to the WiFi"udirc*****".
- C. Open the APP" Potensic" and click "Start" to enter remote control interface to experience real time transmission.



Notice: For more details about App operation, please surf the "Help" in App first before entering the operation interface.







Display the photos and video

The photos and videos are stored in the phone local gallery, you can display in the phone directly. You also can display it in the APP through shortcut icon   to enter the media interface.

Notice: App must be authorized to access the phone gallery, if not, then may be unavailable to display the video and photos.

Assembly Parts List (Sold separately)

There are components for choice below. For your convenient purchase, we list each part for you, you can purchase ones you want from local distributor.

		
Drone Cover	Drone Bottom	Propeller A
		
Propeller B	Pressure Parts	Camera Plate



Receiver Board



Drone Battery



USB Cable



Forward motor
(Red and Blue wire)



Rehearsal motor
(Black and White wire)



Transmitter



Smartphone Holder

Statement

Our products are constantly improved, so designs and specifications are ready to change without notice.

All the information on this guidebook is carefully proofread, we make every effort to be accurate. If any wrong printing, our company reserves the right of final interpretation.

Troubleshooting

No.	Problem	Problem Cause	Solution
1	The transmitter indicator light is off	1. Low battery.	1. Replace the batteries with the same type.
		2. Mixed battery positive and negative pole.	2. refer to the instructions of battery installation, install them.
		3. Poor Connection.	3. Clear out the dirt between the battery and the cells.
2	The transmitter can't connect to the drone.	1. The indicator lights don't work.	1. Refer to the solutions above.
		2. There's interference signals nearby.	2. Turn off and turn on the drone and transmitter again.
		3. Incorrect operation.	3. Operate it according to the instructions.
		4. Damage caused by repeated heavy impact on transmitter or drone.	4. To purchase new ones or replace in time from the local distributor.
3	Lack of power or unable to fly.	1. The propellers are severe deformation.	1. Replace new propeller with the same type.
		2. Low battery.	2. Charge the battery according to the instruction.
		3. Incorrect installation of propellers.	3. Refer to the instructions, replace the right and new propellers.

4	Can't hover and stop to one side.	1. The drone is not calibrated.	1. Refer to the Calibration Step in the guidebook.
		2. Propellers are deformed.	2. Replace the new propellers with the same type.
		3. Motor seat is not vertical after deformation.	3. Replace the new components of motor seat.
		4. The gyroscope did not reset after a violent impact.	4. Place the drone on the horizontal ground for about 10 seconds or restart the drone, then operate it according to the instructions.
		5. Motor is damaged.	5. Refer to the instruction, replace the right motor.
5	The indicator lights don't work.	1. Low battery.	1. Charge the battery refer to the instruction.
		2. Battery expired or over-charged protection.	2. Purchase new batteries from the local distributor or charge the battery according to the procedures.
		3. Poor contact.	3. Unplug the power plug and insert again correctly.
6	Unable to set the height.	1. Severe propeller deformation.	1. Replace new propeller.
		2. Motor damage.	2. Replace new motor.
		3. Instability of atmospheric pressure.	3. Refer to the fixed height mode in the guide.
7	Hard to control by cellphone.	Not experienced enough.	Practice and read the cellphone controlling instruction carefully.

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.

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

FCC Notice

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) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.



MADE IN CHINA



www.ipotensic.com